



# State Energy Data Report 1999



Energy Information Administration

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## **State Energy Data Report 1999**

### **Consumption Estimates**

The *State Energy Data Report 1999* presents estimates of annual energy consumption at the State and national levels by major economic sector and by principal energy type for 1960, 1965, 1970, 1975, 1980, 1985 and 1990 through 1999. Included in the report are documentation describing how the estimates were made for each type of energy, the source references for all input data, and a summary of changes from the *State Energy Data Report 1997*, which was published in September 1999.

Publication of this report is in keeping with responsibilities given to the Energy Information Administration (EIA) in Public Law 95-91 (Department of Energy Organization Act), which states, in part, in Section 205(a)(2), that:

The Administrator shall be responsible for carrying out a central, comprehensive, and unified energy data and information program which will collect, evaluate, assemble, analyze, and disseminate data and information....

### **Contacts**

The *State Energy Data Report* is prepared by the Integrated Energy Statistics Division of the Office of Energy Markets and End Use, Energy Information Administration, under the direction of Katherine E. Seiferlein, 202-586-5695 (kitty.seiferlein@eia.doe.gov).

Questions concerning the contents of the *State Energy Data Report* may be referred to Julia F. Hutchins (202-586-5138 or julia.hutchins@eia.doe.gov) or Roy M. Stanley (202-586-5839 or roy.stanley@eia.doe.gov).

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# **State Energy Data Report 1999**

## **Consumption Estimates**

**May 2001**

**Energy Information Administration**  
Office of Energy Markets and End Use  
U.S. Department of Energy  
Washington, DC 20585

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# Contents

	<i>Page</i>
<b>Introduction</b> . . . . .	1
<b>Tables</b>	
1999 Summaries . . . . .	7
United States Summaries: Selected Years 1960 through 1999 . . . . .	19
State Summaries: Selected Years 1960 through 1999 . . . . .	27
(Listed alphabetically by State)	
<b>Appendices</b>	
A. Documentation . . . . .	335
Section 1. Documentation Guide . . . . .	335
Section 2. Coal . . . . .	339
Anthracite . . . . .	339
Bituminous Coal and Lignite . . . . .	343
Net Imports of Coal Coke . . . . .	348
Section 3. Natural Gas . . . . .	351
Section 4. Petroleum . . . . .	355
Petroleum Overview . . . . .	355
Asphalt and Road Oil . . . . .	355
Aviation Gasoline . . . . .	359
Distillate Fuel . . . . .	360
Jet Fuel . . . . .	367
Kerosene . . . . .	372
Liquefied Petroleum Gases . . . . .	375
Lubricants . . . . .	380
Motor Gasoline . . . . .	382
Petroleum Coke . . . . .	385
Residual Fuel . . . . .	388
Other Petroleum Products . . . . .	393
Petroleum Summaries . . . . .	402

	<i>Page</i>
A. Documentation (Continued)	
Section 5. Renewable Energy . . . . .	405
Section 6. Electricity . . . . .	421
Section 7. Total Energy . . . . .	431
B. Combined State Energy Data System Variables . . . . .	433
C. Thermal Conversion Factors . . . . .	469
D. Resident Population . . . . .	487
E. Metric and Other Physical Conversion Factors . . . . .	493
F. Carbon Dioxide Emission Factors for Coal, 1980 through 1999 . . . . .	497
G. Summary of Changes Since the <i>State Energy Data Report 1997</i> . . . . .	503
H. State Data in EIA Reports . . . . .	511
<b>Glossary</b> . . . . .	<b>517</b>

# Introduction

## Purpose

The *State Energy Data Report (SEDR)* provides annual time series estimates of State-level energy consumption by major economic sectors. The estimates are developed in the Combined State Energy Data System (CSEDS), which is maintained and operated by the Energy Information Administration (EIA). The goal in maintaining CSEDS is to create historical time series of energy consumption by State that are defined as consistently as possible over time and across sectors. CSEDS exists for two principal reasons: (1) to provide State energy consumption estimates to Members of Congress, Federal and State agencies, and the general public and (2) to provide the historical series necessary for EIA's energy models.

## System and Report

Efforts are made to ensure that the sums of the State data equal the national totals as closely as possible for each energy type and end-use sector as published in other EIA publications. Estimates in this *State Energy Data Report (SEDR)* are generally comparable to the statistics in the *Annual Energy Review 1999* and the *Monthly Energy Review*, March 2001.

Due to page-size constraints, *SEDR* tables show data for selected years from 1960 through 1989; however, data for all years 1960 forward are maintained in CSEDS, are included in the data files available via Internet, and are covered by the documentation in this report.

Extensive documentation follows the data tables in this report. Appendix A describes how the estimates were derived for each individual energy source and lists the sources of all data series. Appendix B lists alphabetically all of the variable names and formulas used. Appendix C lists the

conversion factors used to convert physical units into British thermal units and cites the sources for those factors. Appendix D provides the State resident population statistics that are used in per capita calculations. Appendix E provides metric and other physical conversion factors for measures used in energy analyses. Appendix F contains carbon dioxide emission factors. Appendix G summarizes the changes made since the last report, which was released in September 1999. Appendix H lists other EIA reports containing State-level data.

## Improvements

The methods used to estimate several of the consumption series were refined in this version of CSEDS. Although U.S. total petroleum coke consumption at petroleum refineries remains the same, a more accurate allocating series is used to estimate the State values for 1960 forward. Electricity imports and exports are estimated using less complex methodology assumptions for 1990 forward. Motor gasoline consumption is converted from barrels to British thermal units by using new factors that vary annually for 1994 forward. Estimates of nonutility power producers' electricity generation from renewable energy sources are revised in this report to include estimates for smaller generators and to represent net generation rather than the gross generation previously available.

**Appendix G.** Detailed information about all data revisions in this edition of *SEDR* is contained in Appendix G. All data with revisions since the last edition of CSEDS that are large enough to be seen in the report tables' level of rounding are preceded with an "R" in the report tables.



## Data

**Estimation Methodologies.** CSEDS develops estimates of energy consumption by principal energy sources and major end-use sectors, by State, for a 40-year period. Energy consumption is estimated by using data from

existing surveys of energy suppliers that report consumption, sales, or distribution of energy at the State level. Most of the CSEDS estimates rely directly on collected State-level consumption data. (See box below that summarizes the status of current data sources used.) Some consumption estimates in CSEDS are based on a variety of surrogate measures. The measures were selected principally on the basis of applicability as an

### Collected Data and Estimated Values in CSEDS

**Coal.** U.S. anthracite, bituminous coal and lignite, and total coal consumption data by sector are taken directly from EIA's *Quarterly Coal Report (QCR)* or are unpublished data from EIA's Weekly Coal Production database. Total coal consumption by State and for most sectors is from the *QCR*, except where values are withheld and must be estimated. The State-level disaggregation of the *QCR*'s combined residential and commercial sector and the combined anthracite and bituminous coal and lignite use in all sectors (except electric utilities) are estimates. Data on electric utility coal consumption by State and coal type are data from the Form EIA-759, "Monthly Power Plant Report," database.

**Natural Gas.** Natural gas consumption by State and sector come directly from the EIA's *Natural Gas Annual (NGA)*. Natural gas consumed as lease fuel and plant fuel and natural gas delivered to industrial consumers are combined in CSEDS as industrial sector consumption. Natural gas consumed as vehicle fuel and pipeline fuel are combined in CSEDS as transportation sector consumption.

**Petroleum.** U.S. total consumption for each petroleum product is the "product supplied" data from EIA's *Petroleum Supply Annual*. State values for distillate fuel and residual fuel consumption at electric utilities are unpublished data from EIA's Form EIA-759 database. All other State and sector values for consumption of petroleum products are estimates based on sales data from several sources.

**Renewable Energy.** • Residential and commercial sectors consumption of wood, geothermal, and solar energy are estimated. • Industrial consumption of hydroelectric power is data collected by the Federal Power Commission for 1960 through 1978, CSEDS' estimates for 1979 through 1989, and data collected by EIA on Form EIA-867, "Annual Nonutility Power Producer Report," for nonutility power production for 1989 through 1997 and Form EIA-860B, "Annual Electric Generator Report-Nonutility" for 1998 and 1999. Industrial consumption of geothermal, wind, solar thermal, and photovoltaic energy is also collected on Form EIA-867 and Form EIA-860B. An additional portion of industrial consumption of wood, waste, and geothermal energy is estimated. • State-level transportation use of ethanol is estimated, although the U.S. data are collected on several forms and reported in EIA's *Renewable Energy Annual*. • All sources of renewable energy used for electricity generation at electric utilities (i.e., wood and waste, hydroelectric power, geothermal, wind, solar thermal, and photovoltaic energy) by State are from EIA's *Electric Power Annual (EPA)* or are unpublished data from the Form EIA-759 database.

**Nuclear Electric Power.** Nuclear electricity generation by State is from the *EPA*.

**Electricity.** Electricity consumption is sales data by sector and State from the *EPA* with one exception. The *EPA* "Other" category is allocated to the transportation and commercial sectors in each State by estimation.

**Electrical System Energy Losses and Net Interstate Flow of Electricity.** These series are estimated in CSEDS.

indicator of consumption, availability, continuity over time, and consistency. For instance, for petroleum, “product supplied” is a surrogate for consumption and is derived by summing field and refinery production, plus imports, minus exports, plus or minus changes in stocks. State-level sales survey data are used to disaggregate the national petroleum product supplied totals to the States. The measures of consumption and estimation methodologies are explained in detail under each energy source in Appendix A.

Methods are also applied to estimate State electrical system energy losses that are not available from any survey. See the box below for a discussion

about losses and how they are reflected in *SEDR* tables. U.S. total electrical system energy losses are allocated to each individual State’s end-use sectors in proportion to the sectors’ electricity sales. The estimation method does not separately identify electrical system energy losses from interstate flow of electricity. Therefore, specific estimates are developed for Alaska and Hawaii and for the 48 contiguous States.

**Data Sources.** The original source documents cited in Appendix A include descriptions of the data collection methodologies, universes, imputation or adjustment techniques (if any), and errors associated with the processes. Due to the numerous collection forms and procedures

### Energy Consumption Measures—Total and Site

Sources of energy can be categorized as primary and secondary. Primary sources of energy, such as coal, petroleum, and natural gas are consumed directly. Electricity is a secondary form of energy that is created from primary energy sources. The amount of electricity actually consumed by the end user (site consumption) does not include the energy lost in the generation and delivery of the electricity to the point of use.

Primary sources of energy are measured in applicable physical units. Coal is measured by the short ton (equal to 2,000 pounds); petroleum, by the barrel (equivalent to 42 gallons); and natural gas, by the cubic foot. Energy sources are also measured by their heat content, generally expressed in British thermal units (Btu). For example, in 1999, the average short ton of bituminous coal and lignite consumed at electric utilities contained 20.3 million Btu (Table C13), the average barrel of distillate fuel contained 5.825 million Btu (page 482), and the average cubic foot of natural gas consumed at electric utilities contained 1,019 Btu (Table C3).

Electricity, a secondary form of energy, can also be measured in physical units, commonly kilowatthours, and by heat content. The

conventional thermal conversion factor for electricity consumed by the end user (site consumption) is 3,412 Btu per kilowatthour.

In 1999 electric utilities consumed 33.4 quadrillion Btu of primary energy in order to provide 11.0 quadrillion Btu of electricity for sale. These data indicate that 67 percent of the primary (embodied) energy in the fuels consumed to generate the electricity was used (or “lost”) in converting the primary energy to electricity and transmitting and distributing the electricity to the consumers, and 33 percent was used as site (point-of-use) electricity by consumers.

In evaluating energy consumption in this report, tables titled “Total Energy Consumption” include all primary energy sources, including those used to generate electricity; the electricity generated is not included. Tables showing “Total End-Use Sector Consumption” include columns for the primary sources and electricity that are consumed by the sector, as well as a column for the estimated energy lost in the electrical system processes. The “Total” column in those tables includes all energy consumed by the sector and the associated energy lost in the generation and transmission of electricity. The column titled “Net” is site energy consumption—that is, the sum of the primary sources and electricity, excluding the electrical system energy losses.

associated with those reports, it is not possible to develop a meaningful numerical estimate of the overall errors of the integrated data published here.

Reliable, consistent series for long periods of time—especially in the earlier years—are difficult to develop, and estimates and assumptions must be applied to fill data gaps and to maintain definitional consistency. Although CSEDS incorporates the most consistent series and procedures possible, users of this report should recognize the limitations of the data that are due to changing and inadequate data sources.

In reports prepared by the Bureau of Mines in the late 1960's and early 1970's, petroleum consumption was equated to demand. Later, consumption was equated to apparent demand and, more recently, to product supplied. Changes in surveys and reduction of data collections, especially after 1978, disturbed the continuity of some petroleum consumption series, most notably for distillate fuel, residual fuel, kerosene, and liquefied petroleum gases. These and other data inconsistencies are explained in detail under "Additional Notes" for each energy source in Appendix A. All data series with recognized data inconsistencies are footnoted in the *SEDR* tables.

## Comparison with Other Energy Consumption Reports

EIA conducts numerous energy-related surveys. In general, the surveys can be divided into two broad groups. One group of surveys, called supply surveys, is directed to the suppliers and marketers of specific energy sources. Those surveys measure the quantities of specific fuels supplied to the market. The results of supply surveys are combined and published in a number of EIA publications, including the *Monthly Energy Review* and *SEDR*. The second group of surveys, called energy consumption surveys, gathers information directly from end users of energy. Although there are some elements in common, the supply survey data and the consumption survey data have substantially different approaches, capabilities, and objectives. Thus, care must be taken in analyzing *SEDR* data in conjunction with consumption survey data for the following reasons:

- *SEDR* is designed to be a broad accounting of energy consumption, covering all energy use and splitting it into major sectors as clearly as possible. The energy consumption surveys are designed to be

comprehensive and representative within individual sectors. However, the sectors are restricted for purposes of creating relatively homogeneous, well-defined populations and for aiding in sampling and data collection. For example, the Commercial Buildings Energy Consumption Survey covers only energy consumption in commercial buildings, while CSEDS includes other commercial consumption, such as street lighting and public services; and the Manufacturing Energy Consumption Survey covers only manufacturing establishments, while CSEDS includes other industrial energy consumption (i.e., mining, construction, agriculture, fisheries, and forestry). Further, the consumption surveys do not cover all energy-using sectors. Therefore, energy consumption surveys cannot be summed together to account for all energy use.

- Energy consumption surveys provide user characteristics that allow for both macro-level (for major sectoral sub-populations) and micro-level (at the unit of data collection) interpretive analysis. The surveys of energy consumption by residential households from the Residential Energy Consumption Survey (Form EIA-457 series) and by commercial buildings from the Commercial Buildings Energy Consumption Survey (Form EIA-871 series) provide detailed information about the energy end users, their size, their stock of energy-consuming equipment and appliances, and their total energy consumption and expenditures. The Manufacturing Energy Consumption Survey (Form EIA-846 series) collects consumption by type of use and fuel switching capability from manufacturing establishments grouped by manufacturing classification. CSEDS, on the other hand, provides limited characterization of the end users of energy but greater geographic and energy product detail, as well as annual historical time series.
- Sectoral classification in CSEDS is generally based on supplier classifications of customer accounts, by whatever means suppliers choose to use. (See discussion in next section.) Sectoral classification for the energy consumption surveys is based upon a categorization, verified by end user, of the primary economic activity of the data collection unit (household, building, or establishment).
- The energy consumption surveys provide data at national and Census region and/or Census division levels, whereas the estimates in CSEDS are on national and State levels.

- The reference periods are also different in that CSEDS covers calendar years from 1960 through 1999, while the consumption surveys are for selected years, and the residential end-use surveys taken prior to 1987 cover a heating season year (i.e., April through March). Beginning with the 1987 residential end-use survey, the reference period is a calendar year.

For a more detailed description of the differences between CSEDS and the energy consumption surveys, see the EIA analysis report *Energy Consumption by End-Use Sector: A Comparison of Measures by Consumption and Supply Surveys*, DOE/EIA-0533, April 1990.

## Energy Consuming Sectors

The consumption estimates in CSEDS are based on data collected by various surveys that do not necessarily define the consuming sectors exactly the same way. Appendix A of this report describes in detail for each energy source how the collected data series are combined and assigned to CSEDS consuming sectors. To the degree possible, energy consumption in this report has been assigned to the five sectors according to the following general definitions:

- **Residential Sector:** An energy-consuming sector that consists of living quarters for private households. Common uses of energy associated with this sector include space heating, water heating, air conditioning, lighting, refrigeration, cooking, and running a variety of other appliances. The residential sector excludes institutional living quarters.
- **Commercial Sector:** An energy-consuming sector that consists of service-providing facilities and equipment of: businesses; Federal, State, and local governments; and other private and public organizations, such as religious, social, or fraternal groups. The commercial sector includes institutional living quarters. Common uses of energy associated with this sector include space heating, water heating, air conditioning, lighting, refrigeration, cooking, and running a wide variety of other equipment.

- **Industrial Sector:** An energy-consuming sector that consists of all facilities and equipment used for producing, processing, or assembling goods. The industrial sector encompasses the following types of activity: manufacturing; agriculture, forestry, and fisheries; mining; and construction. Overall energy use in this sector is largely for process heat and cooling and powering machinery, with lesser amounts used for facility heating, air conditioning, and lighting. Fossil fuels are also used as raw material inputs to manufactured products. In this report, nonutility power producers are included in the industrial sector.

- **Transportation Sector:** An energy-consuming sector that consists of all vehicles whose primary purpose is transporting people and/or goods from one physical location to another. Included are automobiles; trucks; buses; motorcycles; trains, subways, and other rail vehicles; aircraft; and ships, barges, and other waterborne vehicles. Vehicles whose primary purpose is not transportation (e.g., construction cranes and bulldozers, farming vehicles, and warehouse tractors and forklifts) are classified in the sector of their primary use. In this report, natural gas used in the operation of natural gas pipelines is included in the transportation sector.

- **Electric Utility Sector:** The electric utility sector consists of privately and publicly owned establishments that generate, transmit, distribute, or sell electricity primarily for use by the public and that meet the definition of an electric utility. Nonutility power producers are not included in the electric utility sector.

**Sector Definition Discrepancies.** Although the end-use allocations are made according to these aggregations as closely as possible, some data are collected by using different classifications. For example, electric utilities may classify commercial and industrial users by the quantity of electricity purchased rather than by the business activity of the purchaser. Natural gas used in agriculture, forestry, and fisheries was collected and reported in the commercial sector through 1995. Beginning with 1996 data, deliveries of natural gas for agriculture, forestry, and fisheries are reported in the industrial sector instead. Another example is master-metered condominiums and apartments and buildings with a combination of residential and commercial units. In many cases, the metering and billing practices cause residential energy usage of electricity, natural gas, or fuel oil to be included in the commercial sector. No adjustments for these discrepancies were made.

CSEDS does not provide further disaggregated end-use consumption estimates. For example, the industrial sector cannot be broken down into the chemical or rubber industries, all manufacturing, or agriculture. The input series for the system are provided in broad end-use categories from the

data collection forms and are not available by the individual components. Additional disaggregated regional information, such as counties or cities, are also not available from CSEDS.

## **1999 Summaries**



**Table 1. Energy Consumption Estimates by Source and End-Use Sector, 1999**  
(Trillion Btu)

State	Total Energy <sup>b</sup>	Sources							End-Use Sectors <sup>a</sup>				
		Coal <sup>c</sup>	Natural Gas <sup>d</sup>	Petroleum	Nuclear Electric Power	Hydro-electric Power <sup>e</sup>	Wood and Waste	Other <sup>f</sup>	Net Interstate Flow of Electricity/Losses <sup>g</sup>	Residential	Commercial	Industrial <sup>b</sup>	Transportation
Alabama	2,004.8	855.4	344.5	550.9	328.2	80.3	197.8	0.2	-352.4	341.0	226.3	976.7	460.7
Alaska	694.7	10.9	420.0	253.4	0.0	8.5	1.9	0.1	0.0	47.7	63.1	385.9	198.0
Arizona	1,219.8	403.5	163.2	497.0	323.1	104.3	12.0	4.1	-287.4	279.0	266.7	221.6	452.5
Arkansas	1,203.7	266.9	265.5	384.1	137.2	27.9	185.8	1.2	-65.0	193.3	123.8	589.4	297.2
California	8,375.4	64.0	2,182.4	3,383.2	354.5	425.0	162.3	377.6	1,420.6	1,416.2	1,236.5	2,823.7	2,898.9
Colorado	1,155.5	355.2	318.2	425.5	0.0	16.6	10.3	0.8	29.0	261.4	255.1	273.1	365.9
Connecticut	839.3	0.1	135.0	440.1	134.6	14.3	43.5	0.3	65.7	245.2	196.8	162.4	234.9
Delaware	278.8	35.9	58.1	140.8	0.0	0.0	2.0	0.1	42.0	56.0	44.8	107.4	70.6
Dist. of Col.	169.8	0.1	32.9	33.6	0.0	0.0	1.3	(s)	101.8	33.5	106.2	3.7	26.5
Florida	3,852.9	671.6	541.7	1,912.0	334.9	1.5	159.0	32.7	199.4	1,017.8	809.5	679.8	1,345.8
Georgia	2,798.1	789.6	340.6	1,044.4	334.4	28.0	254.8	0.3	6.1	553.1	416.3	957.3	871.4
Hawaii	241.4	3.1	2.9	213.7	0.0	1.2	14.6	6.0	0.0	23.0	24.8	71.3	122.3
Idaho	518.3	7.9	71.5	169.9	0.0	139.6	28.1	1.3	99.9	95.9	86.9	209.8	125.7
Illinois	3,882.6	836.9	1,057.5	1,340.2	868.3	1.5	38.1	0.7	-260.5	897.4	722.0	1,272.6	990.5
Indiana	2,735.8	1,450.6	577.3	899.3	0.0	4.2	18.7	1.1	-215.4	483.6	300.7	1,306.2	645.4
Iowa	1,121.7	416.0	235.7	418.8	38.7	10.2	15.2	3.7	-16.3	222.5	158.5	463.3	277.5
Kansas	1,050.0	328.8	302.2	436.7	97.3	0.1	6.4	0.3	-121.7	200.9	169.2	392.2	287.8
Kentucky	1,830.2	885.1	220.1	726.1	0.0	26.5	10.7	0.6	-38.9	315.9	219.0	851.1	444.2
Louisiana	3,615.4	227.8	1,558.0	1,452.0	139.3	8.3	142.1	0.5	87.3	325.0	236.5	2,249.0	804.9
Maine	528.6	2.9	6.2	250.4	0.0	81.4	122.0	0.1	46.7	97.6	57.6	260.2	113.2
Maryland	1,378.2	303.5	201.4	584.1	141.4	14.7	36.9	0.2	95.9	358.6	337.1	277.4	405.1
Massachusetts	1,569.1	13.0	355.5	639.1	47.5	15.0	55.3	0.4	437.5	411.7	325.2	391.4	440.8
Michigan	3,239.6	822.6	930.2	1,097.9	155.0	11.2	89.4	1.4	139.9	744.3	568.1	1,082.5	844.8
Minnesota	1,675.3	336.0	346.3	661.0	141.5	58.5	67.3	5.6	43.4	340.2	217.9	617.7	499.6
Mississippi	1,208.5	137.7	346.2	483.3	89.5	0.1	65.7	0.3	85.7	202.6	145.6	451.4	408.9
Missouri	1,768.0	686.1	269.6	780.6	91.2	18.0	12.3	0.2	-90.2	431.7	334.1	379.6	622.6
Montana	412.4	173.9	63.6	173.8	0.0	143.1	16.0	0.3	-158.1	61.8	48.0	196.1	106.5
Nebraska	602.0	195.9	121.3	246.0	107.2	18.0	3.7	0.3	-89.9	130.0	111.3	166.2	194.4
Nevada	615.3	179.7	156.7	220.9	0.0	29.3	3.9	31.5	-6.7	122.4	97.1	198.0	197.8
New Hampshire	335.4	35.3	20.5	188.3	92.2	24.5	31.0	1.9	-64.1	81.9	56.2	96.9	100.5
New Jersey	2,588.7	68.2	640.9	1,235.6	307.8	-1.3	38.2	0.7	298.7	539.9	540.8	644.7	863.3
New Mexico	635.0	298.0	224.7	257.4	0.0	2.5	4.4	1.2	-153.1	93.2	105.6	202.4	233.9
New York	4,283.0	188.2	1,251.1	1,653.2	393.2	265.3	173.6	0.9	368.1	1,092.3	1,216.1	994.9	979.6
North Carolina	2,446.9	707.7	228.6	937.2	398.6	39.9	73.9	0.4	60.6	562.7	439.5	753.7	690.9
North Dakota	365.7	411.6	58.9	122.6	0.0	28.2	2.1	0.2	-255.1	54.2	42.6	186.4	82.4
Ohio	4,323.4	1,379.0	878.1	1,339.8	174.5	4.4	326.6	0.9	220.3	866.7	632.1	1,855.3	969.2
Oklahoma	1,377.5	333.5	543.0	499.7	0.0	31.8	20.4	0.1	-51.0	259.1	197.7	518.2	402.5
Oregon	1,109.2	38.6	219.3	391.6	0.0	475.3	35.5	2.2	-53.4	238.4	190.5	352.1	328.2
Pennsylvania	3,715.5	1,142.7	696.2	1,385.3	755.5	15.6	94.5	1.0	-375.1	858.6	582.6	1,290.4	983.9
Rhode Island	261.1	(s)	86.1	98.7	0.0	10.0	4.1	(s)	56.4	66.0	52.2	77.0	65.9
South Carolina	1,493.0	402.6	162.5	466.9	539.8	7.1	80.4	0.2	-166.5	288.1	210.3	618.2	376.4
South Dakota	239.0	45.9	36.0	115.0	0.0	70.9	1.8	0.4	-31.6	53.3	39.2	62.2	84.3
Tennessee	2,070.5	625.8	285.8	712.7	289.2	74.0	48.3	0.1	34.5	441.5	328.1	710.8	590.1
Texas	11,501.0	1,534.7	3,982.4	5,565.3	390.5	12.9	67.8	4.5	-46.1	1,323.3	1,147.2	6,481.5	2,549.0
Utah	693.9	382.4	168.5	262.2	0.0	13.0	5.4	3.8	-141.4	127.5	120.2	235.1	211.1
Vermont	165.0	2.0	8.1	84.5	43.1	60.8	9.2	0.2	-69.6	42.6	29.4	39.9	53.2
Virginia	2,227.3	401.6	275.2	864.3	300.6	-5.6	116.4	0.5	274.2	494.4	462.8	614.4	655.7
Washington	2,240.8	96.4	277.4	878.2	64.7	988.4	86.6	0.7	-185.4	435.7	332.0	855.9	617.3
West Virginia	735.4	976.6	147.4	219.5	0.0	9.6	5.8	0.1	-623.6	141.9	101.0	310.8	181.6
Wisconsin	1,810.5	471.6	378.5	667.5	122.1	23.2	96.8	0.4	49.0	375.8	285.4	717.4	431.8
Wyoming	421.8	494.6	101.7	155.7	0.0	12.1	1.1	0.8	-344.2	35.9	42.1	224.0	119.8
United States	95,682.4	20,498.0	22,294.9	37,960.1	7,735.6	3,449.3	3,101.2	492.9	0.0	18,382.3	15,058.5	35,917.1	26,324.6

<sup>a</sup> End-use sector data include electricity sales and associated electrical system energy losses.

<sup>b</sup> U.S. total energy and U.S. industrial sector include 57.7 trillion Btu of net imports of coal coke that is not allocated to the States. State and U.S. totals include 92.6 trillion Btu of net imports of electricity generated from nonrenewable energy sources not shown in "Sources" columns. See data in appendix Table A8.

<sup>c</sup> All coal except that which is both consumed by nonutility wholesale power producers and cogeneration plants and not reported in the end-use sectors. The U.S. total of the missing quantity is 1,042 trillion Btu.

<sup>d</sup> Includes supplemental gaseous fuels.

<sup>e</sup> Includes net imports of hydroelectricity. A negative number in this column results from pumped storage for which, overall, more electricity is expended than created to provide electricity during peak demand periods.

<sup>f</sup> "Other" is electricity generated from geothermal, wind, photovoltaic, and solar thermal energy. It includes

net imports of electricity generated from geothermal energy.

<sup>g</sup> Net interstate flow of electricity is the difference between the amount of energy in the electricity sold within a State (including associated losses) and the energy input at the electric utilities within the State. A positive number indicates that more electricity (including associated losses) came into the State than went out of the State during the year; conversely, a negative number indicates that more electricity (including associated losses) went out of the State than came into the State.

(s)=Less than 0.05 trillion Btu.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.



Table 2. Energy Consumption Estimates in Physical Units, 1999

State	Coal Million Short Tons	Natural Gas <sup>a</sup> Billion Cubic Feet	Petroleum											Nuclear Electric Power Billion Kilowatthours
			Asphalt and Road Oil	Aviation Gasoline	Distillate Fuel	Jet Fuel	Kerosene	LPG	Lubricants	Motor Gasoline	Residual Fuel	Other <sup>b</sup>	Total	
			Million Barrels											
Alabama	38.2	332.8	4.6	0.1	24.8	2.0	0.1	7.0	1.1	57.7	1.8	3.6	102.7	30.9
Alaska	0.7	420.0	0.1	0.5	8.2	23.6	(s)	0.3	0.1	6.4	1.1	4.2	44.7	0.0
Arizona	19.7	160.8	3.8	0.2	18.9	9.6	(s)	1.8	0.6	54.9	(s)	1.8	91.7	30.4
Arkansas	15.3	260.6	1.0	0.1	18.4	4.6	0.1	6.0	0.7	33.7	0.1	7.5	72.2	12.9
California	2.8	2,145.9	20.4	0.8	74.7	98.7	0.3	12.2	5.2	337.8	28.6	39.2	617.8	33.4
Colorado	18.2	315.9	2.1	0.2	16.3	7.8	(s)	3.0	0.7	47.1	(s)	1.9	79.0	0.0
Connecticut	(s)	131.8	0.7	(s)	22.5	2.5	0.4	1.7	0.5	36.3	10.6	4.4	79.5	12.7
Delaware	1.4	56.0	0.2	(s)	3.4	0.1	0.2	1.1	0.1	9.3	5.5	5.3	25.2	0.0
Dist. of Col.	(s)	32.2	(s)	(s)	1.4	0.0	0.2	(s)	0.1	4.0	0.4	0.0	6.2	0.0
Florida	27.3	519.4	3.7	0.6	47.6	29.0	0.3	7.2	1.5	173.5	66.0	15.6	345.0	31.5
Georgia	33.5	331.6	7.4	0.1	42.3	15.3	0.3	6.9	1.3	109.9	2.6	6.9	193.2	31.5
Hawaii	0.1	2.7	0.4	0.1	4.5	9.5	(s)	0.4	0.1	9.0	11.1	2.1	37.0	0.0
Idaho	0.4	68.9	3.1	0.1	9.8	0.9	(s)	1.0	0.2	15.9	(s)	(s)	30.8	0.0
Illinois	42.1	1,034.7	11.3	0.2	43.8	18.2	0.7	22.6	3.7	118.8	0.6	30.6	250.4	81.7
Indiana	66.2	567.1	7.5	0.1	39.8	11.2	1.5	6.7	1.9	72.6	0.7	22.0	164.0	0.0
Iowa	23.4	231.3	2.9	0.1	19.5	0.9	0.1	18.7	0.8	37.0	0.1	2.6	82.7	3.6
Kansas	19.0	303.1	2.4	0.2	15.5	3.5	0.4	21.7	1.1	33.6	0.6	7.6	86.5	9.2
Kentucky	37.9	213.3	4.2	(s)	27.3	7.0	1.1	9.3	1.1	51.0	0.1	33.5	134.5	0.0
Louisiana	14.0	1,495.2	1.5	0.1	36.4	34.0	0.1	75.1	2.1	49.7	26.4	55.0	280.5	13.1
Maine	0.1	6.1	0.3	(s)	15.1	0.9	1.7	1.1	0.2	16.2	7.8	1.2	44.6	0.0
Maryland	11.8	194.8	4.4	(s)	22.4	3.9	0.8	2.1	0.8	56.9	8.6	6.2	106.1	13.3
Massachusetts	0.5	339.2	1.0	0.1	33.2	8.1	0.4	2.3	0.9	63.4	2.7	5.5	117.6	4.5
Michigan	38.2	913.8	6.7	0.3	31.8	9.1	0.7	15.3	3.5	121.0	2.6	16.3	207.2	14.6
Minnesota	18.8	339.8	7.7	0.1	23.8	12.6	0.1	8.7	1.2	59.9	0.7	7.3	122.1	13.3
Mississippi	6.2	334.2	3.3	0.1	18.1	9.7	0.1	5.3	0.7	38.4	6.0	6.6	88.3	8.4
Missouri	37.9	266.2	5.0	0.1	35.9	12.8	0.1	12.7	1.7	71.2	0.2	6.5	146.0	8.6
Montana	10.3	62.1	2.6	0.1	8.7	0.8	(s)	0.5	0.3	11.8	(s)	5.9	30.7	0.0
Nebraska	11.5	121.4	1.9	0.1	17.4	1.6	(s)	3.7	0.4	20.5	0.1	(s)	45.5	10.1
Nevada	8.0	151.5	0.8	0.1	8.3	8.4	(s)	1.4	0.1	21.6	0.1	0.1	40.8	0.0
New Hampshire	1.3	20.3	0.3	(s)	9.0	0.8	0.4	2.4	0.1	15.7	3.5	2.6	34.8	8.7
New Jersey	2.6	616.8	10.7	0.1	37.3	36.3	1.7	7.6	2.5	91.8	9.9	25.9	223.9	29.0
New Mexico	16.3	229.5	1.9	0.1	12.0	2.7	(s)	4.1	0.4	22.2	0.2	4.4	48.0	0.0
New York	7.2	1,218.2	6.3	0.1	73.1	9.1	3.1	7.3	2.2	133.6	36.8	26.9	298.5	37.0
North Carolina	28.4	220.8	4.6	0.2	32.5	6.8	2.2	11.9	1.3	97.4	5.2	13.5	175.6	37.5
North Dakota	31.3	56.4	2.1	(s)	7.3	0.4	(s)	2.7	0.2	8.7	0.1	1.1	22.7	0.0
Ohio	57.6	846.7	14.1	0.2	48.8	16.5	1.5	12.9	4.0	120.9	1.4	26.1	246.5	16.4
Oklahoma	19.1	530.8	1.7	0.1	22.2	6.6	(s)	9.2	1.4	43.6	0.1	8.6	93.6	0.0
Oregon	2.2	208.6	3.6	0.2	14.8	6.4	0.2	1.2	0.8	36.5	3.1	4.0	70.8	0.0
Pennsylvania	45.3	672.0	5.0	0.2	64.2	15.9	3.1	5.7	4.3	117.4	13.4	21.7	250.9	71.1
Rhode Island	(s)	84.2	0.3	(s)	5.5	1.1	0.1	0.5	0.1	9.6	0.8	0.1	18.1	0.0
South Carolina	15.8	157.6	2.2	0.1	19.0	1.5	0.7	3.9	0.6	52.8	2.1	3.9	86.7	50.8
South Dakota	2.6	35.8	1.9	0.1	6.0	0.8	(s)	2.0	0.2	10.3	0.1	(s)	21.3	0.0
Tennessee	26.6	278.3	5.9	0.1	27.1	11.8	0.5	4.7	1.3	69.8	0.1	9.6	131.0	27.2
Texas	102.5	3,859.0	8.4	0.8	106.3	104.9	0.2	445.2	5.7	243.0	21.7	221.5	1,157.8	36.8
Utah	16.3	159.7	2.4	0.1	10.6	7.4	(s)	1.0	0.3	23.1	0.1	2.6	47.6	0.0
Vermont	0.1	8.0	0.2	(s)	5.6	0.1	0.4	1.6	0.1	7.7	0.3	0.0	15.9	4.1
Virginia	15.8	265.1	4.8	0.1	37.1	9.3	1.9	4.6	1.0	84.8	8.1	6.7	158.4	28.3
Washington	5.8	263.7	4.1	0.3	20.3	22.2	0.1	4.5	0.7	63.2	9.6	32.4	157.4	6.1
West Virginia	39.4	139.7	0.8	(s)	12.2	0.2	0.6	1.1	0.7	19.5	0.1	4.8	40.0	0.0
Wisconsin	25.3	374.0	6.2	0.1	28.3	3.4	0.1	11.0	1.1	59.0	1.2	14.8	125.2	11.5
Wyoming	27.7	96.7	1.2	0.2	14.9	0.2	(s)	0.5	0.2	7.9	(s)	2.4	27.5	0.0
United States	992.6	21,694.5	199.6	7.8	1,303.8	610.5	26.6	801.2	61.8	3,077.2	303.0	733.1	7,124.6	728.2

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> "Other" is the subtotal of 16 petroleum products consumed in the industrial sector. See a full description in Appendix A, Section 4, "Other Petroleum Products."  
(s)=Less than 0.05.

Notes: • Totals may not equal sum of components due to independent rounding. • Total electricity generation by electric utilities from hydroelectric power, wood and waste, and geothermal, wind, photovoltaic,

and solar thermal energy in billion kilowatthours are not shown in this table. Wood and waste used by the industrial sector for electricity generation and other purposes are not available in physical units. The Btu equivalents are shown in Table 3.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.



**Table 4. Residential Energy Consumption Estimates, 1999**  
(Trillion Btu)

State	Coal	Natural Gas <sup>a</sup>	Petroleum				Wood	Geothermal	Solar <sup>b</sup>	Electricity	Net Energy	Electrical System Energy Losses <sup>c</sup>	Total <sup>b</sup>
			Distillate Fuel	Kerosene	LPG	Total							
Alabama .....	0.2	44.2	(s)	0.2	16.9	17.2	6.2	(s)	0.1	92.3	160.2	180.8	341.0
Alaska .....	3.0	17.6	7.0	0.1	0.8	7.9	1.5	(s)	(s)	6.4	36.4	11.3	47.7
Arizona .....	0.0	33.5	(s)	(s)	5.1	5.2	9.2	(s)	3.8	76.8	128.4	150.5	279.0
Arkansas .....	0.0	36.9	(s)	0.2	10.9	11.2	2.2	0.2	1.0	47.9	99.4	93.9	193.3
California .....	0.2	578.6	0.6	1.1	20.7	22.3	35.6	0.1	19.0	256.9	912.8	503.4	1,416.2
Colorado .....	0.8	112.4	0.1	0.1	7.3	7.4	7.9	0.1	0.2	44.8	173.6	87.8	261.4
Connecticut .....	0.1	39.3	75.6	1.0	4.3	80.9	7.4	(s)	0.3	39.6	167.5	77.7	245.2
Delaware .....	(s)	9.5	5.3	0.7	3.4	9.4	1.3	0.1	(s)	12.1	32.4	23.6	56.0
Dist. of Col. ....	0.1	14.4	1.2	(s)	(s)	1.3	1.1	0.0	(s)	5.6	22.5	11.0	33.5
Florida .....	0.1	14.4	0.6	0.9	16.0	17.5	6.0	1.6	30.6	320.2	390.4	627.4	1,017.8
Georgia .....	0.2	101.4	0.3	1.4	14.8	16.5	13.0	0.1	0.2	142.5	273.9	279.2	553.1
Hawaii .....	0.0	0.6	(s)	(s)	1.2	1.2	0.0	0.0	1.3	9.2	12.2	10.7	23.0
Idaho .....	0.4	18.6	3.1	(s)	2.7	5.8	2.3	(s)	(s)	23.2	50.4	45.5	95.9
Illinois .....	1.5	455.0	2.7	2.9	23.6	29.2	10.9	0.4	0.2	135.2	632.5	264.9	897.4
Indiana .....	2.7	154.2	5.6	7.5	16.1	29.2	5.7	0.8	(s)	98.3	291.0	192.6	483.6
Iowa .....	3.2	72.8	2.8	0.1	18.9	21.9	4.6	0.1	(s)	40.5	143.1	79.3	222.5
Kansas .....	0.1	67.8	0.1	2.0	12.1	14.1	4.3	(s)	(s)	38.7	125.0	75.9	200.9
Kentucky .....	3.4	61.1	2.8	4.9	10.1	17.8	5.6	0.4	(s)	76.9	165.2	150.7	315.9
Louisiana .....	0.0	47.0	(s)	0.4	6.8	7.2	3.7	0.2	0.1	90.2	148.4	176.7	325.0
Maine .....	(s)	1.0	43.6	8.7	3.4	55.7	3.3	(s)	0.1	12.6	72.9	24.8	97.6
Maryland .....	0.4	77.4	27.3	3.0	6.0	36.3	8.6	0.1	(s)	79.6	202.5	156.0	358.6
Massachusetts ....	0.4	110.8	104.4	1.0	5.5	110.9	13.7	(s)	0.2	59.3	295.4	116.3	411.7
Michigan .....	0.2	365.6	15.9	3.4	38.9	58.2	9.5	0.9	0.3	104.6	539.3	205.0	744.3
Minnesota .....	0.1	121.2	11.1	0.2	17.5	28.9	7.6	0.2	0.3	61.4	219.8	120.3	340.2
Mississippi .....	0.0	25.5	(s)	0.1	8.4	8.5	3.7	(s)	(s)	55.7	93.5	109.1	202.6
Missouri .....	1.8	113.6	1.6	0.3	24.8	26.7	9.0	0.1	0.1	94.7	246.1	185.6	431.7
Montana .....	(s)	20.1	1.5	(s)	1.2	2.7	1.8	0.1	(s)	12.5	37.3	24.5	61.8
Nebraska .....	0.0	40.6	0.4	(s)	6.2	6.6	2.7	0.1	(s)	27.1	77.0	53.0	130.0
Nevada .....	0.0	29.7	0.7	(s)	3.2	4.0	3.4	0.2	0.4	28.6	66.3	56.1	122.4
New Hampshire ..	(s)	6.7	26.5	2.1	6.8	35.5	2.9	(s)	(s)	12.4	57.5	24.3	81.9
New Jersey .....	0.1	217.7	57.2	1.5	6.8	65.5	8.1	0.1	0.6	83.8	375.8	164.1	539.9
New Mexico .....	(s)	34.6	0.1	0.1	7.4	7.6	3.4	(s)	0.5	15.9	62.1	31.1	93.2
New York .....	1.8	380.9	166.0	13.2	17.0	196.2	79.4	0.1	0.6	146.4	805.4	286.9	1,092.3
North Carolina ....	1.3	54.7	17.4	11.3	23.3	51.9	13.7	0.2	0.2	148.9	270.9	291.8	562.7
North Dakota .....	0.7	11.0	2.6	0.1	5.2	7.9	1.1	0.1	(s)	11.3	32.1	22.1	54.2
Ohio .....	1.9	330.0	18.2	7.3	27.1	52.6	10.7	0.6	0.1	159.1	555.0	311.7	866.7
Oklahoma .....	(s)	62.9	(s)	0.1	8.3	8.3	3.0	(s)	0.1	62.4	136.8	122.3	259.1
Oregon .....	0.0	40.7	3.8	0.5	2.0	6.2	8.3	0.2	0.7	61.6	117.7	120.7	238.4
Pennsylvania .....	9.0	250.2	112.3	14.3	13.5	140.1	13.1	0.3	0.5	150.6	563.6	295.0	858.6
Rhode Island .....	(s)	17.0	18.5	0.3	0.9	19.7	2.3	(s)	(s)	9.1	48.2	17.8	66.0
South Carolina ....	2.0	26.5	2.9	3.1	7.2	13.2	6.9	0.1	(s)	80.9	129.6	158.4	288.1
South Dakota .....	(s)	11.8	1.8	(s)	5.0	6.9	1.2	0.1	(s)	11.3	31.3	22.1	53.3
Tennessee .....	0.8	60.6	1.2	2.4	11.0	14.6	7.7	(s)	0.1	120.9	204.7	236.8	441.5
Texas .....	0.1	182.4	(s)	0.2	32.9	33.1	10.3	0.3	0.6	370.5	597.3	726.0	1,323.3
Utah .....	0.9	58.6	0.5	(s)	1.1	1.7	3.3	(s)	(s)	21.3	85.8	41.7	127.5
Vermont .....	(s)	2.6	11.8	1.5	4.9	18.2	1.5	(s)	(s)	6.8	29.2	13.4	42.6
Virginia .....	1.1	71.7	29.0	8.8	10.6	48.4	11.7	0.2	0.1	122.1	255.2	239.2	494.4
Washington .....	0.1	75.4	6.5	0.5	7.3	14.3	14.2	(s)	0.3	112.0	216.3	219.4	435.7
West Virginia .....	1.4	33.1	2.8	3.1	2.6	8.5	3.3	(s)	(s)	32.3	78.7	63.2	141.9
Wisconsin .....	1.4	129.1	17.2	0.3	25.3	42.8	5.2	0.1	0.2	66.5	245.4	130.4	375.8
Wyoming .....	0.7	12.7	0.2	(s)	0.9	1.1	1.0	(s)	(s)	6.9	22.3	13.5	35.9
United States .....	42.4	4,855.8	811.2	111.2	533.7	1,456.1	404.0	8.5	63.5	3,906.5	10,736.7	7,645.6	18,382.3

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> Includes small amounts of solar thermal and photovoltaic energy consumed by the commercial sector that cannot be separately identified. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>c</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

(s)=Less than 0.05 trillion Btu.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 5. Commercial Energy Consumption Estimates, 1999**  
(Trillion Btu)

State	Coal	Natural Gas <sup>a</sup>	Petroleum						Wood	Geothermal	Electricity	Net Energy	Electrical System Energy Losses <sup>b</sup>	Total <sup>c</sup>
			Distillate Fuel	Kerosene	LPG	Motor Gasoline	Residual Fuel	Total						
Alabama .....	0.4	28.6	3.2	(s)	3.0	0.2	0.0	6.5	0.9	0.0	64.2	100.5	125.8	226.3
Alaska .....	5.6	27.7	4.5	(s)	0.1	0.5	0.0	5.1	0.2	(s)	8.8	47.5	15.6	63.1
Arizona .....	0.0	31.9	3.3	(s)	0.9	0.2	0.0	4.4	1.3	(s)	77.4	115.0	151.7	266.7
Arkansas .....	0.0	28.4	1.5	(s)	1.9	0.1	0.0	3.6	0.3	0.0	30.9	63.2	60.6	123.8
California .....	0.4	249.1	9.5	0.2	3.6	1.2	0.0	14.5	5.0	0.5	326.8	596.3	640.2	1,236.5
Colorado .....	1.5	63.9	5.4	0.1	1.3	0.9	(s)	7.6	1.1	0.2	61.1	135.4	119.8	255.1
Connecticut .....	(s)	48.7	15.5	0.5	0.8	4.1	1.6	22.4	1.0	0.0	42.1	114.3	82.6	196.8
Delaware .....	(s)	6.5	1.9	0.3	0.6	0.1	0.8	3.6	0.2	0.0	11.6	22.0	22.8	44.8
Dist. of Col. ....	0.1	18.2	2.0	1.3	(s)	0.1	(s)	3.4	0.2	0.0	28.5	50.3	55.8	106.2
Florida .....	0.1	37.8	10.5	0.3	2.8	1.3	0.1	15.1	0.8	0.5	255.2	309.5	500.0	809.5
Georgia .....	0.3	44.7	7.1	0.2	2.6	0.7	(s)	10.7	1.8	(s)	121.3	178.8	237.6	416.3
Hawaii .....	0.0	1.8	0.9	(s)	0.2	0.1	(s)	1.2	0.0	(s)	10.0	13.1	11.8	24.8
Idaho .....	0.8	13.1	3.4	(s)	0.5	0.2	0.0	4.1	0.3	0.4	23.0	41.8	45.1	86.9
Illinois .....	2.7	192.7	7.8	0.5	4.2	0.8	0.6	13.8	1.5	0.0	172.8	383.5	338.6	722.0
Indiana .....	4.9	75.0	6.8	0.2	2.8	1.0	(s)	10.9	0.8	0.2	70.6	162.4	138.3	300.7
Iowa .....	6.0	45.8	2.6	(s)	3.3	2.3	0.0	8.2	0.6	0.2	33.0	93.8	64.6	158.5
Kansas .....	0.1	39.5	2.5	(s)	2.1	0.3	0.0	5.0	0.6	0.2	41.8	87.2	81.9	169.2
Kentucky .....	6.3	37.0	5.8	0.4	1.8	0.2	(s)	8.2	0.8	0.2	56.3	108.7	110.3	219.0
Louisiana .....	0.0	25.6	3.1	0.1	1.2	0.2	0.0	4.6	0.5	0.2	69.4	100.4	136.1	236.5
Maine .....	(s)	2.6	16.4	0.8	0.6	0.1	0.8	18.6	0.5	0.0	12.1	33.8	23.7	57.6
Maryland .....	0.7	60.0	13.0	1.4	1.1	0.2	0.4	16.0	1.2	0.0	87.6	165.6	171.6	337.1
Massachusetts ....	0.5	68.3	22.4	1.3	1.0	0.3	8.9	33.9	1.9	0.2	74.4	179.4	145.8	325.2
Michigan .....	0.3	186.9	7.4	0.2	6.9	0.9	(s)	15.4	1.3	0.2	123.0	327.2	240.9	568.1
Minnesota .....	0.2	89.7	4.7	0.1	3.1	0.3	1.2	9.4	1.1	0.0	39.7	140.1	77.8	217.9
Mississippi .....	0.0	21.1	1.5	0.2	1.5	0.2	0.0	3.4	0.5	0.2	40.7	65.9	79.7	145.6
Missouri .....	3.3	64.0	5.4	0.1	4.4	1.6	0.2	11.7	1.3	0.0	85.8	166.0	168.0	334.1
Montana .....	(s)	12.4	0.9	(s)	0.2	0.1	(s)	1.2	0.3	0.1	11.5	25.5	22.5	48.0
Nebraska .....	0.0	27.6	1.2	(s)	1.1	0.1	(s)	2.4	0.4	0.2	27.3	57.9	53.5	111.3
Nevada .....	0.0	23.4	1.3	(s)	0.6	0.1	0.1	2.0	0.5	0.5	23.9	50.3	46.8	97.1
New Hampshire ..	(s)	7.3	8.4	0.2	1.2	0.1	0.9	10.8	0.4	0.0	12.7	31.3	24.9	56.2
New Jersey .....	(s)	170.2	24.1	7.1	1.2	0.4	4.5	37.2	1.1	0.0	112.2	320.9	219.9	540.8
New Mexico .....	0.1	26.6	1.8	(s)	1.3	0.1	0.0	3.2	0.5	0.1	25.4	55.8	49.7	105.6
New York .....	2.6	370.1	81.7	3.9	3.0	1.0	56.2	145.7	11.1	0.2	231.9	761.8	454.4	1,216.1
North Carolina ....	2.4	39.4	12.7	1.0	4.1	1.6	0.8	20.2	1.9	0.0	126.9	190.8	248.7	439.5
North Dakota .....	1.3	10.5	1.2	(s)	0.9	0.1	0.1	2.4	0.2	0.1	9.5	24.0	18.7	42.6
Ohio .....	3.4	173.8	9.6	0.7	4.8	0.9	0.0	16.0	1.5	0.2	147.7	342.7	289.5	632.1
Oklahoma .....	(s)	40.4	1.9	0.1	1.5	0.2	0.0	3.6	0.4	0.0	51.7	96.3	101.4	197.7
Oregon .....	0.0	30.1	2.9	0.2	0.3	0.2	0.4	3.9	1.2	0.3	52.4	87.9	102.6	190.5
Pennsylvania .....	8.1	148.4	27.8	2.0	2.4	1.0	4.1	37.2	1.8	0.2	130.7	326.5	256.1	582.6
Rhode Island .....	(s)	12.1	3.0	0.2	0.2	(s)	2.8	6.2	0.3	0.0	11.3	30.0	22.2	52.2
South Carolina ....	3.8	21.2	6.1	0.2	1.3	0.2	0.1	7.8	1.0	0.0	59.7	93.4	116.9	210.3
South Dakota .....	(s)	9.6	1.1	(s)	0.9	0.1	0.1	2.1	0.2	0.3	9.1	21.3	17.9	39.2
Tennessee .....	1.6	52.8	5.1	0.3	1.9	0.3	0.0	7.6	1.1	0.0	89.6	152.6	175.6	328.1
Texas .....	0.1	178.1	16.3	0.3	5.8	0.9	0.0	23.3	1.4	0.2	319.0	522.2	625.0	1,147.2
Utah .....	1.7	32.0	3.9	(s)	0.2	0.1	0.1	4.3	0.5	0.2	27.5	66.3	54.0	120.2
Vermont .....	(s)	2.3	5.5	0.2	0.9	(s)	0.5	7.2	0.2	0.0	6.6	16.4	13.0	29.4
Virginia .....	2.0	63.7	16.8	1.8	1.9	0.9	1.4	22.7	1.6	0.2	125.9	216.1	246.6	462.8
Washington .....	0.3	53.4	3.3	0.1	1.3	1.7	0.2	6.5	2.0	0.3	91.1	153.5	178.5	332.0
West Virginia .....	2.7	28.8	1.9	0.4	0.5	0.1	0.0	2.8	0.5	(s)	22.4	57.1	43.9	101.0
Wisconsin .....	2.5	82.7	7.7	(s)	4.5	0.4	1.3	13.9	0.7	0.0	62.7	162.6	122.9	285.4
Wyoming .....	1.2	10.3	2.4	(s)	0.2	(s)	0.0	2.6	0.1	0.6	9.2	24.1	18.0	42.1
United States .....	68.6	3,135.7	416.6	26.9	94.2	28.4	88.0	654.2	56.6	7.5	3,766.2	7,688.9	7,369.7	15,058.5

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>c</sup> Small amounts of solar thermal and photovoltaic energy consumed in the commercial sector cannot be separately identified and are included in residential consumption.

(s)=Less than 0.05 trillion Btu.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.



**Table 7. Transportation Energy Consumption Estimates, 1999**  
(Trillion Btu)

State	Coal	Natural Gas <sup>a</sup>	Petroleum								Ethanol <sup>b</sup>	Electricity	Net Energy	Electrical System Energy Losses <sup>c</sup>	Total
			Aviation Gasoline	Distillate Fuel	Jet Fuel	LPG	Lubricants	Motor Gasoline	Residual Fuel	Total					
Alabama	0.0	22.9	0.5	118.4	11.1	0.1	3.1	298.0	6.5	437.8	(s)	0.0	460.7	0.0	460.7
Alaska	0.0	4.5	2.7	21.5	134.1	(s)	0.6	32.9	1.7	193.5	0.4	0.0	198.0	0.0	198.0
Arizona	0.0	19.0	0.8	92.0	54.6	0.1	2.2	283.9	0.0	433.5	1.3	0.0	452.5	0.0	452.5
Arkansas	0.0	9.1	0.6	84.5	25.9	1.7	2.8	172.6	0.0	288.0	0.0	0.0	297.2	0.0	297.2
California	0.0	12.9	4.2	373.3	559.5	1.4	18.0	1,749.0	175.3	2,880.6	4.9	1.8	2,895.3	3.6	2,898.9
Colorado	0.0	8.4	1.0	67.8	44.2	0.3	2.6	241.5	0.0	357.4	4.5	(s)	365.8	(s)	365.9
Connecticut	0.0	0.8	0.2	34.4	13.9	0.1	1.6	183.9	0.1	234.2	0.3	0.0	234.9	0.0	234.9
Delaware	0.0	0.1	0.1	8.6	0.6	(s)	0.4	47.7	13.2	70.6	0.0	0.0	70.6	0.0	70.6
Dist. of Col.	0.0	0.3	(s)	3.6	0.0	(s)	0.3	20.5	0.0	24.5	0.0	0.6	25.3	1.2	26.5
Florida	0.0	7.2	3.0	210.3	164.3	0.5	5.2	897.5	57.4	1,338.1	0.1	0.2	1,345.4	0.4	1,345.8
Georgia	0.0	9.1	0.8	196.7	86.8	0.4	4.0	566.9	5.7	861.3	0.0	0.3	870.8	0.7	871.4
Hawaii	0.0	0.0	0.3	9.1	53.7	0.0	0.5	45.8	12.9	122.3	0.0	0.0	122.3	0.0	122.3
Idaho	0.0	4.7	0.3	34.0	4.9	(s)	0.9	80.8	0.0	121.0	0.0	0.0	125.7	0.0	125.7
Illinois	0.0	55.3	0.9	202.6	103.4	1.2	9.7	612.7	0.2	930.8	20.3	1.5	987.5	2.9	990.5
Indiana	0.0	14.6	0.6	186.4	63.5	0.1	4.4	373.7	1.9	630.6	9.0	0.1	645.3	0.1	645.4
Iowa	0.0	7.9	0.4	74.9	5.0	(s)	3.4	185.9	0.0	269.6	6.7	(s)	277.5	(s)	277.5
Kansas	0.0	31.6	1.2	60.5	19.7	0.1	3.9	170.7	0.1	256.2	0.5	0.0	287.8	0.0	287.8
Kentucky	0.0	17.2	0.2	122.9	39.5	0.1	3.3	261.0	0.0	427.0	0.3	0.0	444.2	0.0	444.2
Louisiana	0.0	50.0	0.4	147.4	192.9	0.1	4.6	255.9	153.5	754.9	0.1	(s)	804.9	(s)	804.9
Maine	0.0	0.0	0.2	22.2	4.9	(s)	0.8	83.7	1.4	113.2	0.0	(s)	113.2	(s)	113.2
Maryland	0.0	3.4	0.2	73.3	22.3	(s)	2.0	295.0	7.4	400.3	0.2	0.5	404.1	1.0	405.1
Massachusetts	0.0	2.8	0.5	57.0	45.8	0.6	3.0	328.7	0.2	435.7	0.0	0.8	439.2	1.6	440.8
Michigan	0.0	23.3	1.4	132.7	51.7	1.3	9.5	624.5	0.3	821.4	3.4	(s)	844.7	(s)	844.8
Minnesota	0.0	22.5	0.7	93.4	71.4	(s)	5.1	306.5	(s)	477.1	19.5	0.0	499.6	0.0	499.6
Mississippi	0.0	66.1	0.4	81.2	54.8	1.2	2.0	196.2	6.9	342.7	0.0	0.0	408.9	0.0	408.9
Missouri	0.0	6.8	0.4	172.0	72.3	0.2	6.0	364.6	(s)	615.6	1.4	0.1	622.5	0.1	622.6
Montana	0.0	6.1	0.6	34.7	4.7	(s)	1.3	59.1	0.0	100.4	(s)	0.0	106.5	0.0	106.5
Nebraska	0.0	2.9	0.4	76.9	8.9	0.1	2.2	103.1	0.0	191.5	2.1	0.0	194.4	0.0	194.4
Nevada	0.0	0.9	0.4	36.9	47.4	(s)	0.5	111.7	0.0	196.9	2.3	0.0	197.8	0.0	197.8
New Hampshire	0.0	(s)	0.1	14.5	4.6	(s)	0.4	80.8	(s)	100.5	0.0	0.0	100.5	0.0	100.5
New Jersey	0.0	4.3	0.5	120.9	206.1	(s)	4.6	476.6	48.9	857.6	0.7	0.5	862.4	0.9	863.3
New Mexico	0.0	47.4	0.4	55.5	15.4	0.1	1.4	113.7	0.0	186.5	2.0	0.0	233.9	0.0	233.9
New York	0.0	8.6	0.4	147.5	51.7	0.1	6.8	690.6	47.1	944.2	1.2	9.1	961.9	17.7	979.6
North Carolina	0.0	10.9	0.9	132.6	38.6	0.3	4.1	502.6	1.0	680.0	3.0	0.0	690.9	0.0	690.9
North Dakota	0.0	9.9	0.2	26.0	2.3	(s)	1.0	43.0	0.0	72.5	0.4	0.0	82.4	0.0	82.4
Ohio	0.0	18.5	1.2	222.5	93.3	0.7	9.2	623.2	0.1	950.2	19.6	0.2	968.9	0.3	969.2
Oklahoma	0.0	24.5	0.5	111.7	37.3	0.2	5.0	223.3	0.0	378.0	0.0	0.0	402.5	0.0	402.5
Oregon	0.0	10.9	0.8	70.2	36.5	0.1	3.4	188.0	18.0	317.0	1.1	0.1	328.0	0.2	328.2
Pennsylvania	0.0	37.3	1.0	197.6	90.4	0.3	8.4	607.0	37.8	942.6	1.0	1.3	981.3	2.6	983.9
Rhode Island	0.0	0.3	0.1	9.3	6.0	(s)	0.4	49.8	(s)	65.6	0.0	0.0	65.9	0.0	65.9
South Carolina	0.0	3.7	0.5	85.8	8.7	0.1	1.7	273.0	2.8	372.7	0.0	0.0	376.4	0.0	376.4
South Dakota	0.0	6.1	0.3	21.1	4.4	(s)	1.0	51.5	0.0	78.2	1.8	0.0	84.3	0.0	84.3
Tennessee	0.0	25.9	0.6	131.7	67.0	0.2	4.3	360.3	0.0	564.2	0.0	(s)	590.1	(s)	590.1
Texas	0.0	73.0	4.0	479.2	594.8	1.3	12.3	1,252.3	131.9	2,475.8	4.8	0.1	2,548.8	0.1	2,549.0
Utah	0.0	2.8	0.4	45.1	42.2	0.1	1.2	119.2	0.0	208.2	0.9	(s)	211.1	(s)	211.1
Vermont	0.0	(s)	0.1	12.3	0.8	(s)	0.3	39.7	0.0	53.2	0.0	0.0	53.2	0.0	53.2
Virginia	0.0	8.3	0.5	142.3	52.8	(s)	3.4	438.1	9.2	646.5	2.8	0.3	655.1	0.6	655.7
Washington	0.0	8.2	1.4	95.9	125.6	(s)	3.2	325.2	57.4	608.9	2.5	0.1	617.1	0.1	617.3
West Virginia	0.0	31.5	0.1	46.9	1.0	(s)	1.6	100.5	0.0	150.1	(s)	0.0	181.6	0.0	181.6
Wisconsin	0.0	4.2	0.7	101.0	19.3	0.2	3.4	303.0	(s)	427.6	2.5	(s)	431.8	(s)	431.8
Wyoming	0.0	14.5	1.2	62.4	1.0	(s)	1.0	39.8	0.0	105.3	0.0	0.0	119.8	0.0	119.8
United States	0.0	761.1	39.2	5,160.9	3,461.8	13.5	182.1	15,855.4	798.9	25,511.8	121.6	17.5	26,290.3	34.3	26,324.6

<sup>a</sup> Includes supplemental gaseous fuels. Transportation use of natural gas is gas consumed in the operation of pipelines, primarily in compressors, and gas consumed as vehicle fuel.

<sup>b</sup> Ethanol blended into motor gasoline is included in motor gasoline, but is also shown separately to display the use of renewable energy by the transportation sector. It is counted only once in the total.

<sup>c</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for

electrical system energy losses.

(s)=Less than 0.05 trillion Btu.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 8. Estimates of Energy Input at Electric Utilities, 1999**  
(Trillion Btu)

State	Coal	Natural Gas <sup>a</sup>	Petroleum				Nuclear Electric Power	Hydroelectric Power <sup>d</sup>	Wood and Waste	Geothermal Energy <sup>e</sup>	Other <sup>f</sup>	Total <sup>g</sup>
			Heavy Oil <sup>b</sup>	Light Oil <sup>c</sup>	Petroleum Coke	Total						
Alabama .....	732.9	21.1	0.0	1.7	0.0	1.7	328.2	80.3	0.0	0.0	0.0	1,164.2
Alaska .....	2.2	30.5	5.3	3.6	0.0	8.9	0.0	8.5	0.0	0.0	0.0	50.1
Arizona .....	390.3	51.4	0.1	0.4	0.0	0.5	323.1	104.3	0.0	0.0	0.0	869.6
Arkansas .....	259.1	41.0	0.6	1.0	0.0	1.6	137.2	27.9	0.0	0.0	0.0	466.7
California .....	0.0	145.5	0.0	0.7	0.0	0.7	354.5	409.4	1.5	33.1	0.1	950.6
Colorado .....	345.2	19.8	(s)	0.4	0.0	0.4	0.0	15.3	0.0	0.0	0.0	380.7
Connecticut .....	0.0	13.4	62.1	0.8	0.0	62.9	134.6	13.7	4.8	0.0	0.0	235.3
Delaware .....	32.2	19.5	11.6	1.2	0.0	12.8	0.0	0.0	0.0	0.0	0.0	64.6
Dist. of Col. ....	0.0	0.0	2.8	0.6	0.0	3.4	0.0	0.0	0.0	0.0	0.0	3.4
Florida .....	641.7	333.3	333.6	18.4	27.9	379.9	334.9	1.5	0.2	0.0	0.0	1,691.5
Georgia .....	739.7	21.2	2.5	6.0	0.0	8.4	334.4	27.7	0.0	0.0	0.0	1,131.4
Hawaii .....	0.0	0.0	54.5	14.8	0.0	69.2	0.0	0.2	0.0	0.0	(s)	69.4
Idaho .....	0.0	0.0	0.0	(s)	0.0	(s)	0.0	129.4	0.0	0.0	0.0	129.5
Illinois .....	688.3	41.6	1.7	2.6	0.6	4.9	864.2	0.5	0.7	0.0	0.0	1,600.2
Indiana .....	1,170.4	7.9	0.0	3.2	6.5	9.7	0.0	4.2	0.0	0.0	0.0	1,192.2
Iowa .....	344.5	5.3	0.0	1.7	0.0	1.7	38.7	10.1	0.2	0.0	(s)	400.3
Kansas .....	325.9	36.2	2.1	1.7	0.0	3.8	97.3	(s)	0.0	0.0	0.0	463.2
Kentucky .....	804.1	5.7	0.0	1.3	0.0	1.3	0.0	26.5	0.0	0.0	0.0	837.5
Louisiana .....	226.8	332.8	3.7	0.3	0.0	4.0	139.3	0.0	0.0	0.0	0.0	702.9
Maine .....	0.0	0.0	7.1	0.1	0.0	7.1	0.0	47.9	0.0	0.0	0.0	73.9
Maryland .....	283.0	17.1	41.6	2.9	0.0	44.5	141.4	14.7	0.0	0.0	0.0	500.7
Massachusetts ....	11.2	8.4	1.3	2.3	0.0	3.6	20.5	11.9	0.0	0.0	0.0	61.3
Michigan .....	705.0	31.1	13.3	2.9	0.4	16.6	155.0	10.3	0.0	0.0	0.0	910.0
Minnesota .....	304.0	6.7	(s)	1.2	7.6	8.8	141.5	55.2	4.3	0.0	0.0	536.2
Mississippi .....	133.2	104.4	30.9	0.4	0.0	31.3	89.5	0.0	0.0	0.0	0.0	358.4
Missouri .....	654.0	19.5	(s)	4.1	0.0	4.1	91.2	18.0	0.5	0.0	0.0	787.4
Montana .....	172.0	0.3	0.0	0.2	0.0	0.2	0.0	119.9	0.0	0.0	0.0	292.2
Nebraska .....	190.7	4.5	(s)	0.4	0.0	0.4	107.2	18.0	0.0	0.0	0.0	320.2
Nevada .....	174.8	67.5	0.2	0.2	0.0	0.4	0.0	29.0	0.0	0.0	0.0	271.8
New Hampshire ..	35.2	0.6	16.5	0.2	0.0	16.7	92.2	13.4	0.0	0.0	0.0	163.9
New Jersey .....	67.9	33.7	4.3	3.0	0.0	7.3	307.8	-1.5	0.0	0.0	0.0	415.2
New Mexico .....	296.3	36.0	0.0	0.4	0.0	0.4	0.0	2.5	0.0	0.0	0.0	335.3
New York .....	115.0	186.2	116.1	10.3	0.0	126.4	393.2	228.9	(s)	0.0	0.0	1,039.2
North Carolina ....	660.0	10.9	0.0	3.7	0.0	3.7	398.6	27.5	0.0	0.0	0.0	1,100.7
North Dakota .....	321.3	0.0	0.0	0.5	0.0	0.5	0.0	28.2	0.0	0.0	0.0	347.1
Ohio .....	1,242.4	11.4	0.0	5.7	0.0	5.7	174.5	4.4	0.0	0.0	0.0	1,438.4
Oklahoma .....	316.4	174.6	(s)	0.1	0.0	0.1	0.0	31.8	0.0	0.0	0.0	522.9
Oregon .....	38.6	23.6	0.0	0.1	0.0	0.1	0.0	471.1	0.0	0.0	0.0	533.5
Pennsylvania .....	862.0	10.7	27.8	6.8	4.3	39.0	753.0	12.0	0.0	0.0	0.0	1,676.5
Rhode Island .....	0.0	0.0	0.0	0.1	0.0	0.1	0.0	9.9	0.0	0.0	0.0	15.8
South Carolina ....	350.1	5.3	1.6	3.2	0.0	4.8	539.8	6.7	0.0	0.0	0.0	906.7
South Dakota .....	37.3	2.5	0.0	0.3	0.0	0.3	0.0	70.9	0.0	0.0	0.0	111.6
Tennessee .....	540.2	3.6	0.0	6.1	0.0	6.1	289.2	67.2	0.0	0.0	0.0	906.3
Texas .....	1,467.3	1,232.6	0.1	1.6	0.0	1.7	390.5	12.9	0.0	0.0	(s)	3,093.9
Utah .....	339.1	6.8	0.0	0.3	0.0	0.3	0.0	12.9	0.0	3.3	0.0	362.3
Vermont .....	0.0	0.3	0.0	0.4	0.0	0.4	43.1	52.7	2.1	0.0	0.1	125.4
Virginia .....	315.7	24.7	27.6	2.8	0.0	30.4	300.6	-6.3	0.0	0.0	0.0	665.2
Washington .....	93.9	7.1	0.0	0.1	0.0	0.1	64.7	983.0	2.8	0.0	0.0	1,185.3
West Virginia .....	892.3	0.4	0.0	1.9	0.0	1.9	0.0	3.1	0.0	0.0	0.0	897.7
Wisconsin .....	427.5	14.2	0.0	2.0	1.2	3.2	122.1	20.6	3.5	0.0	0.0	592.6
Wyoming .....	450.4	0.2	0.0	0.5	0.0	0.5	0.0	12.1	0.0	0.0	0.0	463.2
United States .....	18,200.3	3,171.1	768.9	125.4	48.4	942.7	7,702.1	3,248.1	20.6	36.3	0.3	33,414.0

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> Heavy oil includes fuel oil nos. 4, 5, and 6 and residual fuel oils.

<sup>c</sup> Light oil includes fuel oil nos. 1 and 2, kerosene, and jet fuel.

<sup>d</sup> Includes net imports of hydroelectricity. A negative number in this column results from pumped storage for which, overall, more electricity is expended than created to provide electricity during peak demand periods.

<sup>e</sup> Includes net imports of electricity generated from geothermal energy.

<sup>f</sup> "Other" is electricity generated for distribution from wind, photovoltaic, and solar thermal energy.

<sup>g</sup> Includes 92.6 trillion Btu of net imports of electricity generated from nonrenewable energy sources not shown in other columns. See data in appendix Table A8.

(s)=Number less than 0.05.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 9. Energy Consumption by Sector, Ranked by State, 1999**

Rank	Residential Sector		Commercial Sector		Industrial Sector		Transportation Sector		Total Consumption	
	State	Trillion Btu	State	Trillion Btu	State	Trillion Btu	State	Trillion Btu	State	Trillion Btu
1	California	1,416.2	California	1,236.5	Texas	6,481.5	California	2,898.9	Texas	11,501.0
2	Texas	1,323.3	New York	1,216.1	California	2,823.7	Texas	2,549.0	California	8,375.4
3	New York	1,092.3	Texas	1,147.2	Louisiana	2,249.0	Florida	1,345.8	Ohio	4,323.4
4	Florida	1,017.8	Florida	809.5	Ohio	1,855.3	Illinois	990.5	New York	4,283.0
5	Illinois	897.4	Illinois	722.0	Indiana	1,306.2	Pennsylvania	983.9	Illinois	3,882.6
6	Ohio	866.7	Ohio	632.1	Pennsylvania	1,290.4	New York	979.6	Florida	3,852.9
7	Pennsylvania	858.6	Pennsylvania	582.6	Illinois	1,272.6	Ohio	969.2	Pennsylvania	3,715.5
8	Michigan	744.3	Michigan	568.1	Michigan	1,082.5	Georgia	871.4	Louisiana	3,615.4
9	North Carolina	562.7	New Jersey	540.8	New York	994.9	New Jersey	863.3	Michigan	3,239.6
10	Georgia	553.1	Virginia	462.8	Alabama	976.7	Michigan	844.8	Georgia	2,798.1
11	New Jersey	539.9	North Carolina	439.5	Georgia	957.3	Louisiana	804.9	Indiana	2,735.8
12	Virginia	494.4	Georgia	416.3	Washington	855.9	North Carolina	690.9	New Jersey	2,588.7
13	Indiana	483.6	Maryland	337.1	Kentucky	851.1	Virginia	655.7	North Carolina	2,446.9
14	Tennessee	441.5	Missouri	334.1	North Carolina	753.7	Indiana	645.4	Washington	2,240.8
15	Washington	435.7	Washington	332.0	Wisconsin	717.4	Missouri	622.6	Virginia	2,227.3
16	Missouri	431.7	Tennessee	328.1	Tennessee	710.8	Washington	617.3	Tennessee	2,070.5
17	Massachusetts	411.7	Massachusetts	325.2	Florida	679.8	Tennessee	590.1	Alabama	2,004.8
18	Wisconsin	375.8	Indiana	300.7	New Jersey	644.7	Minnesota	499.6	Kentucky	1,830.2
19	Maryland	358.6	Wisconsin	285.4	South Carolina	618.2	Alabama	460.7	Wisconsin	1,810.5
20	Alabama	341.0	Arizona	266.7	Minnesota	617.7	Arizona	452.5	Missouri	1,768.0
21	Minnesota	340.2	Colorado	255.1	Virginia	614.4	Kentucky	444.2	Minnesota	1,675.3
22	Louisiana	325.0	Louisiana	236.5	Arkansas	589.4	Massachusetts	440.8	Massachusetts	1,569.1
23	Kentucky	315.9	Alabama	226.3	Oklahoma	518.2	Wisconsin	431.8	South Carolina	1,493.0
24	South Carolina	288.1	Kentucky	219.0	Iowa	463.3	Mississippi	408.9	Maryland	1,378.2
25	Arizona	279.0	Minnesota	217.9	Mississippi	451.4	Maryland	405.1	Oklahoma	1,377.5
26	Colorado	261.4	South Carolina	210.3	Kansas	392.2	Oklahoma	402.5	Arizona	1,219.8
27	Oklahoma	259.1	Oklahoma	197.7	Massachusetts	391.4	South Carolina	376.4	Mississippi	1,208.5
28	Connecticut	245.2	Connecticut	196.8	Alaska	385.9	Colorado	365.9	Arkansas	1,203.7
29	Oregon	238.4	Oregon	190.5	Missouri	379.6	Oregon	328.2	Colorado	1,155.5
30	Iowa	222.5	Kansas	169.2	Oregon	352.1	Arkansas	297.2	Iowa	1,121.7
31	Mississippi	202.6	Iowa	158.5	West Virginia	310.8	Kansas	287.8	Oregon	1,109.2
32	Kansas	200.9	Mississippi	145.6	Maryland	277.4	Iowa	277.5	Kansas	1,050.0
33	Arkansas	193.3	Arkansas	123.8	Colorado	273.1	Connecticut	234.9	Connecticut	839.3
34	West Virginia	141.9	Utah	120.2	Maine	260.2	New Mexico	233.9	West Virginia	735.4
35	Nebraska	130.0	Nebraska	111.3	Utah	235.1	Utah	211.1	Alaska	694.7
36	Utah	127.5	District of Columbia	106.2	Wyoming	224.0	Alaska	198.0	Utah	693.9
37	Nevada	122.4	New Mexico	105.6	Arizona	221.6	Nevada	197.8	New Mexico	635.0
38	Maine	97.6	West Virginia	101.0	Idaho	209.8	Nebraska	194.4	Nevada	615.3
39	Idaho	95.9	Nevada	97.1	New Mexico	202.4	West Virginia	181.6	Nebraska	602.0
40	New Mexico	93.2	Idaho	86.9	Nevada	198.0	Idaho	125.7	Maine	528.6
41	New Hampshire	81.9	Alaska	63.1	Montana	196.1	Hawaii	122.3	Idaho	518.3
42	Rhode Island	66.0	Maine	57.6	North Dakota	186.4	Wyoming	119.8	Wyoming	421.8
43	Montana	61.8	New Hampshire	56.2	Nebraska	166.2	Maine	113.2	Montana	412.4
44	Delaware	56.0	Rhode Island	52.2	Connecticut	162.4	Montana	106.5	North Dakota	365.7
45	North Dakota	54.2	Montana	48.0	Delaware	107.4	New Hampshire	100.5	New Hampshire	335.4
46	South Dakota	53.3	Delaware	44.8	New Hampshire	96.9	South Dakota	84.3	Delaware	278.8
47	Alaska	47.7	North Dakota	42.6	Rhode Island	77.0	North Dakota	82.4	Rhode Island	261.1
48	Vermont	42.6	Wyoming	42.1	Hawaii	71.3	Delaware	70.6	Hawaii	241.4
49	Wyoming	35.9	South Dakota	39.2	South Dakota	62.2	Rhode Island	65.9	South Dakota	239.0
50	District of Columbia	33.5	Vermont	29.4	Vermont	39.9	Vermont	53.2	District of Columbia	169.8
51	Hawaii	23.0	Hawaii	24.8	District of Columbia	3.7	District of Columbia	26.5	Vermont	165.0
	United States	18,382.3	United States	15,058.5	United States	35,917.1	United States	26,324.6	United States	95,682.4

Source: Combined State Energy Data System 1999.



Table 10. Energy Consumption by Source and Total Consumption per Capita, Ranked by State, 1999

Rank	Coal		Natural Gas		Petroleum		Electricity <sup>a</sup>		Total Consumption per Capita	
	State	Trillion Btu	State	Trillion Btu	State	Trillion Btu	State	Trillion Btu	State	Million Btu
1	Texas	1,534.7	Texas	3,982.4	Texas	5,565.3	Texas	1,029.9	Alaska	1,121.5
2	Indiana	1,450.6	California	2,182.4	California	3,383.2	California	801.2	Wyoming	879.4
3	Ohio	1,379.0	Louisiana	1,558.0	Florida	1,912.0	Florida	639.0	Louisiana	826.9
4	Pennsylvania	1,142.7	New York	1,251.1	New York	1,653.2	Ohio	560.5	North Dakota	577.1
5	West Virginia	976.6	Illinois	1,057.5	Louisiana	1,452.0	New York	475.6	Texas	573.8
6	Kentucky	885.1	Michigan	930.2	Pennsylvania	1,385.3	Illinois	452.7	Arkansas	471.8
7	Alabama	855.4	Ohio	878.1	Illinois	1,340.2	Pennsylvania	439.7	Montana	467.1
8	Illinois	836.9	Pennsylvania	696.2	Ohio	1,339.8	North Carolina	392.4	Kentucky	462.1
9	Michigan	822.6	New Jersey	640.9	New Jersey	1,235.6	Georgia	384.4	Indiana	460.3
10	Georgia	789.6	Indiana	577.3	Michigan	1,097.9	Michigan	354.8	Alabama	458.8
11	North Carolina	707.7	Oklahoma	543.0	Georgia	1,044.4	Washington	337.9	Mississippi	436.5
12	Missouri	686.1	Florida	541.7	North Carolina	937.2	Indiana	330.1	Maine	421.9
13	Florida	671.6	Alaska	420.0	Indiana	899.3	Tennessee	317.9	Idaho	414.1
14	Tennessee	625.8	Wisconsin	378.5	Washington	878.2	Virginia	317.4	Oklahoma	410.2
15	Wyoming	494.6	Massachusetts	355.5	Virginia	864.3	Alabama	274.3	West Virginia	407.0
16	Wisconsin	471.6	Minnesota	346.3	Missouri	780.6	Kentucky	269.9	Kansas	395.6
17	Iowa	416.0	Mississippi	346.2	Kentucky	726.1	Louisiana	267.0	Iowa	390.9
18	North Dakota	411.6	Alabama	344.5	Tennessee	712.7	South Carolina	250.1	Washington	389.3
19	Arizona	403.5	Georgia	340.6	Wisconsin	667.5	New Jersey	241.2	South Carolina	384.2
20	South Carolina	402.6	Colorado	318.2	Minnesota	661.0	Missouri	235.6	Ohio	384.1
21	Virginia	401.6	Kansas	302.2	Massachusetts	639.1	Wisconsin	216.8	Tennessee	377.6
22	Utah	382.4	Tennessee	285.8	Maryland	584.1	Maryland	201.6	Delaware	370.0
23	Colorado	355.2	Washington	277.4	Alabama	550.9	Arizona	196.7	New Mexico	365.0
24	Minnesota	336.0	Virginia	275.2	Oklahoma	499.7	Minnesota	195.8	Nebraska	361.3
25	Oklahoma	333.5	Missouri	269.6	Arizona	497.0	Massachusetts	168.6	Georgia	359.3
26	Kansas	328.8	Arkansas	265.5	Mississippi	483.3	Oregon	162.2	Minnesota	350.8
27	Maryland	303.5	Iowa	235.7	South Carolina	466.9	Oklahoma	159.5	Wisconsin	344.8
28	New Mexico	298.0	North Carolina	228.6	Connecticut	440.1	Mississippi	150.1	Nevada	340.1
29	Arkansas	266.9	New Mexico	224.7	Kansas	436.7	Colorado	138.4	Oregon	334.5
30	Louisiana	227.8	Kentucky	220.1	Colorado	425.5	Arkansas	135.8	Michigan	328.4
31	Nebraska	195.9	Oregon	219.3	Iowa	418.8	Iowa	129.8	District of Columbia	327.1
32	New York	188.2	Maryland	201.4	Oregon	391.6	Kansas	115.4	South Dakota	326.0
33	Nevada	179.7	Utah	168.5	Arkansas	384.1	Connecticut	101.7	Utah	325.8
34	Montana	173.9	Arizona	163.2	Utah	262.2	West Virginia	92.6	Virginia	324.1
35	Mississippi	137.7	South Carolina	162.5	New Mexico	257.4	Nevada	89.6	Missouri	323.3
36	Washington	96.4	Nevada	156.7	Alaska	253.4	Nebraska	77.8	Illinois	320.1
37	New Jersey	68.2	West Virginia	147.4	Maine	250.4	Idaho	77.5	North Carolina	319.8
38	California	64.0	Connecticut	135.0	Nebraska	246.0	Utah	74.7	New Jersey	317.9
39	South Dakota	45.9	Nebraska	121.3	Nevada	220.9	New Mexico	61.6	Pennsylvania	309.8
40	Oregon	38.6	Wyoming	101.7	West Virginia	219.5	Montana	45.3	Colorado	284.9
41	Delaware	35.9	Rhode Island	86.1	Hawaii	213.7	Maine	40.8	New Hampshire	279.2
42	New Hampshire	35.3	Idaho	71.5	New Hampshire	188.3	Wyoming	40.2	Vermont	277.9
43	Massachusetts	13.0	Montana	63.6	Montana	173.8	Delaware	36.0	Maryland	266.5
44	Alaska	10.9	North Dakota	58.9	Idaho	169.9	District of Columbia	35.5	Rhode Island	263.5
45	Idaho	7.9	Delaware	58.1	Wyoming	155.7	New Hampshire	33.7	Connecticut	255.7
46	Hawaii	3.1	South Dakota	36.0	Delaware	140.8	Hawaii	32.0	Arizona	255.3
47	Maine	2.9	District of Columbia	32.9	North Dakota	122.6	North Dakota	31.1	Florida	255.0
48	Vermont	2.0	New Hampshire	20.5	South Dakota	115.0	South Dakota	27.0	Massachusetts	254.1
49	District of Columbia	0.1	Vermont	8.1	Rhode Island	98.7	Rhode Island	24.4	California	252.7
50	Connecticut	0.1	Maine	6.2	Vermont	84.5	Vermont	18.9	New York	235.4
51	Rhode Island	0.0	Hawaii	2.9	District of Columbia	33.6	Alaska	18.1	Hawaii	203.7
	United States	20,498.0	United States	22,294.9	United States	37,960.1	United States	11,300.8	United States	350.9

<sup>a</sup> Electricity sold to end users, not including the losses incurred in the generation, transmission, and distribution of the electricity.

Source: Combined State Energy Data System 1999.

## **United States Summaries**



**Table 11. Energy Consumption Estimates by Source, Selected Years 1960-1999, United States**

Year	Coal <sup>a</sup>	Net Imports of Coal Coke	Natural Gas <sup>b</sup>	Petroleum											Nuclear Electric Power	Hydro-electric Power <sup>d,e</sup>	Wood and Waste	Other <sup>d,f</sup>	Total <sup>g</sup>
				Asphalt and Road Oil	Aviation Gasoline	Distillate Fuel	Jet Fuel	Kero-sene	LPG	Lubri-cants	Motor Gasoline	Residual Fuel	Other <sup>c</sup>	Total					
				Million Short Tons	Billion Cubic Feet	Million Barrels													
1960	398	(s)	11,967	111	59	685	136	99	227	43	1,453	559	214	3,586	1	154	—	—	—
1965	472	-1	15,280	134	44	776	220	98	307	47	1,676	587	313	4,202	4	197	—	—	—
1970	523	-2	21,139	163	20	927	353	96	447	50	2,111	804	393	5,364	22	253	—	—	—
1975	563	1	19,538	153	14	1,041	365	58	486	50	2,436	899	455	5,958	173	309	—	—	—
1980	703	-1	19,877	145	13	1,049	391	58	538	58	2,408	918	665	6,242	251	300	—	—	—
1985	818	-1	17,281	155	10	1,047	445	42	584	53	2,493	439	473	5,740	384	325	—	—	—
1990	895	(s)	18,716	176	9	1,103	556	16	568	60	2,641	449	625	6,201	577	R <sup>h</sup> 299	—	—	—
1991	888	(s)	19,035	162	8	1,066	537	17	616	53	2,623	423	594	6,101	613	R <sup>h</sup> 298	—	—	—
1992	892	1	19,544	166	8	1,090	532	15	642	54	2,660	401	665	6,234	619	R <sup>h</sup> 268	—	—	—
1993	926	1	20,279	173	8	1,110	536	18	633	55	2,729	394	635	6,291	610	R <sup>h</sup> 299	—	—	—
1994	930	R <sup>2</sup>	20,708	177	8	1,154	557	18	686	58	2,774	373	662	6,467	640	R <sup>h</sup> 287	—	—	—
1995	941	R <sup>2</sup>	21,581	178	8	1,170	553	20	693	57	2,843	311	637	6,469	673	R <sup>h</sup> 335	—	—	—
1996	983	R <sup>1</sup>	R <sup>h</sup> 21,966	177	7	1,232	578	23	736	55	2,888	311	695	6,701	675	R <sup>h</sup> 373	—	—	—
1997	1,008	R <sup>2</sup>	R <sup>h</sup> 21,959	184	8	1,254	583	24	744	58	2,926	291	724	6,796	629	R <sup>h</sup> 378	—	—	—
1998	1,012	3	21,279	190	7	1,263	592	28	713	61	3,012	324	714	6,905	674	341	—	—	—
1999	993	2	21,694	200	8	1,304	611	27	801	62	3,077	303	733	7,125	728	333	—	—	—

  

Trillion Btu																			
1960	9,830	-6	12,385	734	298	3,992	739	563	912	259	7,631	3,517	1,276	19,919	6	1,657	1,320	1	45,113
1965	11,582	-18	15,779	890	222	4,519	1,215	553	1,232	286	8,806	3,691	1,833	23,246	43	2,058	1,335	4	54,029
1970	12,269	-58	21,693	1,082	100	5,401	1,973	544	1,689	301	11,091	5,057	2,283	29,522	239	2,654	1,431	11	67,761
1975	12,656	14	19,977	1,014	71	6,061	2,047	329	1,807	304	12,798	5,649	2,651	32,732	1,900	3,219	1,499	70	72,066
1980	15,461	-35	20,384	962	64	6,110	2,190	329	1,976	354	12,648	5,772	3,799	34,204	2,739	3,118	R <sup>h</sup> 2,485	110	R <sup>h</sup> 78,466
1985	17,540	-13	17,843	1,029	50	6,098	2,497	236	2,103	322	13,098	2,759	2,733	30,925	4,149	3,398	R <sup>h</sup> 2,813	198	R <sup>h</sup> 76,852
1990	18,997	5	19,280	1,170	45	6,422	3,129	88	2,059	362	13,872	2,820	3,584	33,552	6,162	R <sup>h</sup> 3,110	R <sup>h</sup> 2,584	R <sup>h</sup> 449	R <sup>h</sup> 84,058
1991	18,754	R <sup>10</sup>	19,605	1,077	42	6,210	3,025	96	2,227	324	13,781	2,657	3,407	32,846	6,580	R <sup>h</sup> 3,112	R <sup>h</sup> 2,614	R <sup>h</sup> 460	R <sup>h</sup> 84,039
1992	18,846	R <sup>35</sup>	20,139	1,102	41	6,351	3,001	86	2,328	330	13,973	2,518	3,794	33,525	6,608	R <sup>h</sup> 2,775	R <sup>h</sup> 2,748	R <sup>h</sup> 471	R <sup>h</sup> 85,200
1993	19,483	R <sup>27</sup>	20,848	1,149	38	6,466	3,028	103	2,282	337	14,335	2,479	3,626	33,842	6,520	R <sup>h</sup> 3,077	R <sup>h</sup> 2,694	R <sup>h</sup> 489	R <sup>h</sup> 87,031
1994	19,511	R <sup>58</sup>	21,313	1,173	38	6,723	3,154	101	2,494	352	R <sup>h</sup> 14,511	2,342	3,781	R <sup>h</sup> 34,670	6,838	R <sup>h</sup> 2,958	R <sup>h</sup> 2,817	R <sup>h</sup> 496	R <sup>h</sup> 88,802
1995	19,679	R <sup>61</sup>	22,189	1,178	40	6,818	3,132	112	2,512	346	R <sup>h</sup> 14,825	1,955	3,639	R <sup>h</sup> 34,556	7,177	R <sup>h</sup> 3,453	R <sup>h</sup> 2,939	R <sup>h</sup> 439	R <sup>h</sup> 90,614
1996	20,520	R <sup>23</sup>	22,598	1,176	37	7,175	3,274	128	2,660	335	R <sup>h</sup> 15,064	1,952	3,958	R <sup>h</sup> 35,759	7,168	R <sup>h</sup> 3,860	R <sup>h</sup> 3,030	R <sup>h</sup> 455	R <sup>h</sup> 93,522
1997	20,986	R <sup>46</sup>	R <sup>h</sup> 22,677	1,224	40	7,304	3,308	136	2,690	354	R <sup>h</sup> 15,254	1,828	4,127	R <sup>h</sup> 36,266	6,678	R <sup>h</sup> 3,919	R <sup>h</sup> 2,880	R <sup>h</sup> 429	R <sup>h</sup> 93,991
1998	21,014	67	22,012	1,263	35	7,359	3,357	162	2,575	371	15,701	2,036	4,075	36,934	7,157	3,523	2,886	433	94,078
1999	20,498	58	22,295	1,324	39	7,595	3,462	151	2,897	375	16,036	1,905	4,177	37,960	7,736	3,449	3,101	493	95,682

<sup>a</sup> All coal except that consumed by nonutility wholesale power producers and cogeneration plants and not reported in the end-use sectors. The missing quantity ranges from 1 million short tons (17 trillion Btu) in 1989 to 52 million short tons (1,042 trillion Btu) in 1999.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products consumed in the industrial sector. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> The continuity of these data series estimates may be affected by the changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>e</sup> Through 1988, includes all net imports of electricity. From 1989, includes only the portion of net imports of electricity that is derived from hydroelectric power.

<sup>f</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. From 1989, includes net imports of

electricity generated from geothermal energy.

<sup>g</sup> From 1989, "Total" does not equal the sum of the columns. Net imports of electricity generated from nonrenewable energy sources (shown in appendix Table A8) is included in the total but not in any other columns.

<sup>h</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

R=Revised data. — =Not applicable.

(s)=Less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 12. Residential Energy Consumption Estimates, Selected Years 1960-1999, United States**

Year	Coal <sup>a</sup> Million Short Tons	Natural Gas <sup>a</sup> Billion Cubic Feet	Petroleum				Wood Million Cords	Geothermal	Solar <sup>c</sup>	Electricity <sup>b</sup> Billion Kilowatthours	Net Energy	Electrical System Energy Losses <sup>d</sup>		
			Distillate Fuel <sup>b</sup>	Kerosene <sup>b</sup>	LPG <sup>b</sup>	Total						Billion Kilowatthours	Billion Kilowatthours	Total
1960	17	3,103	269	62	85	417	31	—	—	201	—	502	—	
1965	11	3,903	294	59	108	461	23	—	—	291	—	695	—	
1970	7	4,837	322	53	153	528	20	—	—	466	—	1,131	—	
1975	4	4,924	310	28	142	481	21	—	—	588	—	1,419	—	
1980	3	4,752	226	19	88	333	43	—	—	717	—	1,746	—	
1985	3	4,433	171	28	91	290	45	—	—	794	—	1,866	—	
1990	3	4,391	144	11	101	256	29	—	—	924	—	R 2,022	—	
1991	2	4,556	143	13	108	263	31	—	—	955	—	R 2,076	—	
1992	2	4,690	148	11	106	265	32	—	—	936	—	R 1,995	—	
1993	2	4,956	157	13	111	281	27	—	—	995	—	R 2,099	—	
1994	2	4,848	151	11	109	271	27	—	—	1,008	—	R 2,103	—	
1995	2	4,850	152	13	112	276	30	—	—	1,043	—	R 2,172	—	
1996	2	5,241	160	16	R 131	R 306	30	—	—	1,082	—	R 2,254	—	
1997	3	4,984	155	16	R 127	R 298	R 21	—	—	1,076	—	R 2,236	—	
1998	2	4,520	134	19	120	273	19	—	—	1,128	—	2,327	—	
1999	2	4,724	139	20	148	306	20	—	—	1,145	—	2,241	—	

  

Trillion Btu													
1960	408	3,212	1,568	354	343	2,265	627	0	0	687	7,199	1,711	8,911
1965	254	4,019	1,713	334	434	2,481	468	0	0	993	8,215	2,372	10,587
1970	153	4,953	1,878	298	579	2,755	401	0	0	1,591	9,853	3,858	13,711
1975	85	5,024	1,807	161	528	2,495	425	0	0	2,007	10,036	4,843	14,879
1980	60	4,855	1,316	107	325	1,748	R 860	0	0	2,448	R 9,972	5,958	R 15,929
1985	69	4,566	998	159	327	1,483	900	0	0	2,709	9,728	6,366	16,093
1990	62	4,519	837	64	365	1,266	582	e 6	Re 56	3,153	Re 9,643	R 6,898	Re 16,541
1991	56	4,685	832	72	389	1,293	613	6	R 58	3,260	R 9,971	R 7,085	R 17,056
1992	57	4,821	865	65	382	1,312	645	6	R 60	3,193	R 10,095	R 6,806	R 16,901
1993	57	5,097	913	76	399	1,387	548	7	R 62	3,394	R 10,551	R 7,163	R 17,714
1994	55	4,980	880	65	395	1,340	537	6	R 64	3,441	R 10,423	7,174	R 17,598
1995	53	4,984	883	74	404	1,361	596	7	R 65	3,557	R 10,623	R 7,409	R 18,033
1996	54	5,390	930	89	R 473	R 1,492	595	7	R 66	3,693	R 11,298	R 7,690	R 18,988
1997	58	5,125	900	93	R 461	R 1,454	R 428	R 7	R 65	3,671	R 10,807	R 7,628	R 18,435
1998	44	4,669	782	108	434	1,324	377	8	65	3,848	10,334	7,940	18,274
1999	42	4,856	811	111	534	1,456	404	9	63	3,906	10,737	7,646	18,382

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> Includes small amounts of solar thermal and photovoltaic energy consumed by the commercial sector that cannot be separately identified. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 13. Commercial Energy Consumption Estimates, Selected Years 1960-1999, United States**

Year	Coal <sup>a</sup> Million Short Tons	Natural Gas <sup>a</sup> Billion Cubic Feet	Petroleum						Wood Million Cords	Geothermal	Electricity <sup>b</sup> Billion Kilowatthours	Net Energy	Electrical System Energy Losses <sup>c</sup> Billion Kilowatthours	Total <sup>d</sup>
			Distillate Fuel <sup>b</sup>	Kerosene <sup>b</sup>	LPG <sup>b</sup>	Motor Gasoline	Residual Fuel <sup>b</sup>	Total						
			Million Barrels											
1960	24	1,020	85	8	15	13	89	210	1	—	159	—	396	—
1965	15	1,444	92	9	19	15	103	238	(s)	—	231	—	552	—
1970	9	2,399	101	11	27	16	114	269	(s)	—	352	—	854	—
1975	6	2,508	101	9	25	17	78	230	(s)	—	468	—	1,130	—
1980	4	2,611	89	7	16	20	90	222	1	—	559	—	1,359	—
1985	5	2,432	107	6	16	18	36	184	R <sub>1</sub>	—	689	—	1,620	—
1990	4	2,623	84	2	18	21	37	162	R <sub>2</sub>	—	838	—	1,834	—
1991	4	2,729	83	2	19	16	34	154	R <sub>2</sub>	—	855	—	R <sub>1</sub> ,859	—
1992	4	2,803	80	2	19	15	30	146	R <sub>2</sub>	—	850	—	R <sub>1</sub> ,812	—
1993	4	2,862	80	2	20	6	28	135	2	—	885	—	R <sub>1</sub> ,867	—
1994	4	2,895	80	3	19	5	28	135	2	—	913	—	1,904	—
1995	4	3,031	79	4	20	3	23	129	2	—	953	—	R <sub>1</sub> ,985	—
1996	4	3,158	82	4	R <sub>23</sub>	5	22	R <sub>136</sub>	2	—	980	—	R <sub>2</sub> ,040	—
1997	4	R <sub>3</sub> ,215	77	4	R <sub>22</sub>	8	18	R <sub>130</sub>	2	—	1,026	—	R <sub>2</sub> ,133	—
1998	3	2,999	73	5	21	7	14	121	2	—	1,067	—	2,201	—
1999	3	3,049	72	5	26	5	14	122	3	—	1,104	—	2,160	—
<b>Trillion Btu</b>														
1960	572	1,056	494	48	61	67	559	1,228	12	0	543	3,410	1,352	4,762
1965	357	1,483	534	54	77	77	645	1,386	9	0	789	4,024	1,884	5,908
1970	217	2,455	587	61	102	86	714	1,551	8	0	1,201	5,432	2,913	8,345
1975	123	2,556	587	49	93	89	492	1,310	8	0	1,598	5,595	3,856	9,451
1980	87	2,666	518	41	57	107	565	1,287	21	0	1,906	5,967	4,638	10,605
1985	107	2,503	625	33	58	96	228	1,039	R <sub>24</sub>	0	2,351	R <sub>6</sub> ,025	5,526	R <sub>11</sub> ,551
1990	93	2,698	487	12	64	111	233	907	R <sub>37</sub>	e <sub>3</sub>	2,860	R <sub>e</sub> 6,598	R <sub>6</sub> ,259	R <sub>e</sub> 12,857
1991	84	2,807	482	12	69	85	213	861	R <sub>39</sub>	3	2,918	R <sub>6</sub> ,713	R <sub>6</sub> ,342	R <sub>13</sub> ,055
1992	86	2,883	464	11	67	80	191	813	R <sub>42</sub>	3	2,900	R <sub>6</sub> ,728	R <sub>6</sub> ,181	R <sub>12</sub> ,909
1993	86	2,944	464	14	70	30	175	753	44	3	3,019	6,848	R <sub>6</sub> ,371	R <sub>13</sub> ,219
1994	83	2,978	464	19	70	25	175	753	45	4	3,116	6,978	R <sub>6</sub> ,496	R <sub>13</sub> ,474
1995	80	3,117	460	22	71	18	144	715	45	5	3,252	7,214	R <sub>6</sub> ,774	R <sub>13</sub> ,988
1996	82	3,250	476	21	R <sub>84</sub>	27	140	R <sub>747</sub>	49	5	3,344	R <sub>7</sub> ,477	R <sub>6</sub> ,962	R <sub>14</sub> ,439
1997	87	R <sub>3</sub> ,306	446	25	R <sub>81</sub>	43	114	R <sub>709</sub>	R <sub>47</sub>	6	3,502	R <sub>7</sub> ,656	R <sub>7</sub> ,278	R <sub>14</sub> ,934
1998	66	3,097	423	31	77	39	91	660	47	7	3,641	7,518	7,511	15,029
1999	69	3,136	417	27	94	28	88	654	57	7	3,766	7,689	7,370	15,059

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>d</sup> Small amounts of solar thermal and photovoltaic energy consumed in the commercial sector cannot be separately identified and are included in residential consumption.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 14. Industrial Energy Consumption Estimates, Selected Years 1960-1999, United States**

Year	Coal Million Short Tons	Net Imports of Coal Coke (s)	Natural Gas <sup>a</sup> Billion Cubic Feet	Petroleum									Hydro-electric Power <sup>b</sup> Billion kWh	Wood and Waste	Other <sup>b,d</sup>	Electricity <sup>b</sup>		Electrical System Energy Losses <sup>e</sup> Billion kWh	Total
				Asphalt and Road Oil <sup>b</sup>	Distillate Fuel <sup>b</sup>	Kero-sene <sup>b</sup>	LPG <sup>b</sup>	Lubri-cants <sup>b</sup>	Motor Gasoline	Residual Fuel <sup>b</sup>	Other <sup>c</sup>	Total				Billion kWh	Net Energy		
1960	177	(s)	5,771	111	174	28	122	18	73	252	214	991	4	—	—	324	—	807	—
1965	201	-1	7,112	134	197	29	172	23	65	252	313	1,185	3	—	—	429	—	1,024	—
1970	187	-2	9,249	163	211	33	255	26	55	258	390	1,390	3	—	—	571	—	1,383	—
1975	147	1	8,365	153	230	21	308	25	43	240	455	1,474	3	—	—	688	—	1,659	—
1980	127	-1	8,198	145	227	32	429	30	30	215	664	1,772	3	—	—	815	—	1,983	—
1985	116	-1	6,867	155	204	8	469	27	41	119	472	1,495	3	—	—	837	—	1,965	—
1990	115	(s)	8,255	176	203	2	444	31	35	66	621	1,578	R f 10	—	—	946	—	2,068	—
1991	109	(s)	8,360	162	196	2	484	27	37	53	591	1,552	R 9	—	—	947	—	R 2,056	—
1992	106	1	8,698	166	196	2	513	28	37	62	660	1,664	R 9	—	—	973	—	R 2,072	—
1993	106	1	9,153	173	189	2	498	29	34	72	629	1,625	R 11	—	—	977	—	2,061	—
1994	107	R 2	9,291	177	190	3	549	30	37	68	658	1,711	R 13	—	—	1,008	—	2,100	—
1995	106	R 2	9,800	178	184	3	557	29	38	54	633	1,677	R 15	—	—	1,013	—	R 2,108	—
1996	103	R 1	10,120	177	193	3	R 578	28	38	54	691	R 1,764	R 16	—	—	1,030	—	R 2,144	—
1997	101	R 2	R 10,036	184	195	3	R 590	30	41	47	717	R 1,807	R 18	—	—	1,033	—	R 2,144	—
1998	96	3	9,861	190	191	4	567	31	38	39	705	1,766	14	—	—	1,040	—	2,145	—
1999	94	2	10,067	200	185	2	624	32	29	40	725	1,837	19	—	—	1,058	—	2,070	—

  

Trillion Btu																			
1960	4,548	-6	5,973	734	1,016	161	489	107	381	1,584	1,276	5,748	39	680	0	1,107	18,089	2,754	20,843
1965	5,134	-18	7,350	890	1,150	165	688	137	342	1,582	1,833	6,789	33	855	0	1,463	21,606	3,493	25,099
1970	4,664	-58	9,498	1,082	1,226	185	964	155	288	1,624	2,264	7,788	34	1,019	0	1,948	24,892	4,720	29,612
1975	3,658	14	8,571	1,014	1,339	119	1,144	149	223	1,509	2,649	8,148	32	1,063	0	2,346	23,832	5,660	29,492
1980	3,155	-35	8,409	962	1,324	181	1,577	182	158	1,349	3,794	9,527	33	1,600	0	2,781	R 25,471	6,764	32,235
1985	2,777	-13	7,096	1,029	1,186	44	1,690	166	218	748	2,726	7,808	33	R 1,875	0	2,855	R 22,430	6,706	R 29,136
1990	2,754	5	8,520	1,170	1,181	12	1,608	186	185	417	3,559	8,319	R f 100	R 1,944	R f 193	3,226	R f 25,061	R 7,056	R f 32,117
1991	2,600	R 10	8,637	1,077	1,139	11	1,749	167	193	336	3,386	8,058	R 99	R 1,940	R 209	3,230	R 24,783	R 7,016	R 31,799
1992	2,512	R 35	8,996	1,102	1,144	10	1,860	170	194	391	3,764	8,636	R 97	R 2,040	R 214	3,319	R 25,848	R 7,071	R 32,919
1993	2,500	R 27	9,420	1,149	1,100	13	1,794	173	180	452	3,589	8,450	R 117	R 2,082	R 241	3,334	R 26,170	R 7,031	R 33,202
1994	2,507	R 58	9,590	1,173	1,109	17	1,997	181	R 192	425	3,755	8,849	R 135	R 2,214	R 252	3,439	R 27,045	R 7,165	R 34,210
1995	2,500	R 61	10,109	1,178	1,074	15	2,019	178	R 200	342	3,616	R 8,623	R 151	R 2,281	R 245	3,455	R 27,425	R 7,192	R 34,617
1996	2,423	R 23	10,446	1,176	1,127	18	R 2,089	173	R 200	341	3,937	R 9,061	R 169	R 2,366	R 254	3,516	R 28,257	R 7,314	R 35,571
1997	2,375	R 46	R 10,438	1,224	1,136	19	R 2,134	182	R 212	297	4,085	R 9,288	R 183	R 2,385	R 236	3,523	R 28,475	R 7,317	R 35,792
1998	2,252	67	10,256	1,263	1,115	22	2,048	191	199	244	4,022	9,105	150	2,441	243	3,549	28,064	7,318	35,382
1999	2,187	58	10,371	1,324	1,080	13	2,256	193	152	249	4,128	9,395	201	2,620	410	3,611	28,853	7,064	35,917

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>e</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for

electrical system energy losses.

<sup>f</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

R=Revised data.

kWh=kilowatthours. — =Not applicable.

(s)=Less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 15. Transportation Energy Consumption Estimates, Selected Years 1960-1999, United States**

Year	Coal Million Short Tons	Natural Gas <sup>a</sup> Billion Cubic Feet	Petroleum								Ethanol <sup>c</sup> Million Barrels	Electricity <sup>b</sup> Billion Kilowatthours	Net Energy	Electrical System Energy Losses <sup>d</sup> Billion Kilowatthours	Total <sup>c</sup>
			Aviation Gasoline <sup>b</sup>	Distillate Fuel <sup>b</sup>	Jet Fuel <sup>b</sup>	LPG <sup>b</sup>	Lubricants <sup>b</sup>	Motor Gasoline	Residual Fuel <sup>b</sup>	Total					
			Million Barrels												
1960	3	347	59	153	136	5	25	1,367	134	1,880	0	3	—	8	—
1965	1	501	44	188	220	8	24	1,596	123	2,203	0	3	—	7	—
1970	(s)	722	20	269	353	12	24	2,040	121	2,839	0	3	—	8	—
1975	(s)	583	14	364	362	11	26	2,377	113	3,267	0	3	—	7	—
1980	0	635	13	480	389	5	28	2,357	222	3,494	0	3	—	8	—
1985	0	504	10	550	445	8	26	2,434	125	3,597	R e 15	4	—	10	—
1990	0	660	9	658	556	6	29	2,584	164	4,005	R 18	5	—	10	—
1991	0	602	8	631	537	6	26	2,570	164	3,943	R 21	5	—	10	—
1992	0	588	8	654	532	5	26	2,608	172	4,006	R 23	5	—	10	—
1993	0	625	8	672	536	5	27	2,689	145	4,082	R 27	5	—	10	—
1994	0	687	8	717	557	9	28	2,733	143	4,194	R 31	5	—	10	—
1995	0	703	8	740	553	5	28	2,801	147	4,281	R 33	5	—	10	—
1996	0	714	7	780	578	4	27	2,845	138	4,378	R 24	5	—	10	—
1997	0	756	8	813	583	4	28	2,877	116	4,429	R 30	5	—	10	—
1998	0	641	7	843	592	5	30	2,967	114	4,557	33	5	—	10	—
1999	0	741	8	886	611	4	30	3,043	127	4,708	34	5	—	10	—

**Trillion Btu**

1960	76	359	298	892	739	20	152	7,183	844	10,126	0	10	10,572	26	10,598
1965	16	518	222	1,093	1,215	33	149	8,386	770	11,868	0	10	12,412	24	12,435
1970	7	740	100	1,569	1,973	44	147	10,716	761	15,310	0	11	16,068	26	16,094
1975	1	595	71	2,121	2,029	42	155	12,485	711	17,614	0	10	18,219	24	18,244
1980	0	650	64	2,795	2,179	17	172	12,383	1,398	19,009	0	11	19,669	27	19,696
1985	0	521	50	3,204	2,497	28	156	12,784	786	19,504	R e 52	14	e 20,039	33	e 20,072
1990	0	683	45	3,831	3,129	22	176	13,575	1,030	21,808	R 63	16	22,507	35	22,543
1991	0	622	42	3,678	3,025	20	157	13,503	1,032	21,456	R 73	16	22,094	35	22,130
1992	0	609	41	3,810	3,001	18	161	13,699	1,082	21,812	R 83	16	22,437	34	22,471
1993	0	644	38	3,913	3,028	19	163	14,126	913	22,201	R 97	16	22,861	34	22,895
1994	0	708	38	4,175	3,154	32	171	R 14,293	896	R 22,760	R 109	17	R 23,485	36	R 23,520
1995	0	726	40	4,311	3,132	17	168	R 14,607	925	R 23,199	R 117	17	R 23,942	35	R 23,977
1996	0	737	37	4,543	3,274	15	163	R 14,837	866	R 23,735	R 84	17	R 24,489	35	R 24,524
1997	0	R 785	40	4,734	3,308	13	172	R 14,999	726	R 23,993	R 106	17	R 24,795	35	R 24,830
1998	0	662	35	4,911	3,357	17	180	15,463	716	24,679	117	17	25,358	35	25,393
1999	0	761	39	5,161	3,462	13	182	15,855	799	25,512	122	17	26,290	34	26,325

<sup>a</sup> Includes supplemental gaseous fuels. Transportation use of natural gas is gas consumed in the operation of pipelines, primarily in compressors, and, since 1990, is also gas consumed as vehicle fuel.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> Ethanol blended into motor gasoline, which is accounted for under motor gasoline, is shown separately here to display the use of renewable energy by the transportation sector and is included only once in the total.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1980 and 1981 due to the expanded coverage of renewable energy sources beginning in 1981.

R=Revised data.

— =Not applicable.

(s)=Less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.



**Table 16. Estimates of Energy Input at Electric Utilities, Selected Years 1960-1999, United States**

Year	Coal Million Short Tons	Natural Gas <sup>a</sup> Billion Cubic Feet	Petroleum				Nuclear Electric Power	Hydroelectric Power <sup>e</sup>	Wood and Waste	Geothermal Energy <sup>f</sup>	Other <sup>b,g</sup>	Total <sup>h</sup>
			Heavy Oil <sup>b,c</sup>	Light Oil <sup>b,d</sup>	Petroleum Coke <sup>b</sup>	Total						
			Million Barrels									
1960	177	1,725	84	4	0	88	1	150	(s)	(s)	0	—
1965	245	2,321	110	5	0	115	4	194	(s)	(s)	0	—
1970	320	3,932	311	24	3	339	22	250	(s)	1	0	—
1975	406	3,158	467	39	(s)	506	173	306	(s)	3	0	—
1980	569	3,682	391	29	1	421	251	297	(s)	5	0	—
1985	694	3,044	159	15	1	175	384	322	1	9	(s)	—
1990	774	2,787	181	15	4	200	577	R 289	2	9	(s)	—
1991	772	2,789	171	14	4	188	613	R 289	2	9	(s)	—
1992	780	2,766	136	12	5	152	619	R 259	2	9	(s)	—
1993	814	2,682	149	13	6	169	610	R 287	2	8	(s)	—
1994	817	2,987	135	16	4	155	640	R 274	2	8	(s)	—
1995	829	3,197	87	16	4	106	673	R 320	2	6	(s)	—
1996	875	2,732	96	17	3	117	675	R 357	2	6	(s)	—
1997	900	2,968	110	15	7	132	629	R 361	2	5	(s)	—
1998	911	3,258	157	22	9	187	674	326	2	5	(s)	—
1999	894	3,113	122	22	8	152	725	314	2	2	(s)	—
<b>Trillion Btu</b>												
1960	4,227	1,785	530	22	0	553	6	1,618	2	1	0	8,191
1965	5,821	2,408	693	29	0	722	43	2,025	3	4	0	11,027
1970	7,228	4,048	1,958	141	19	2,117	239	2,620	4	11	0	16,267
1975	8,789	3,232	2,937	226	2	3,166	1,900	3,187	2	70	0	20,345
1980	12,158	3,804	2,459	169	5	2,634	2,739	3,085	4	110	0	24,533
1985	14,586	3,157	998	85	7	1,090	4,149	3,365	14	198	(s)	26,560
1990	16,088	2,861	1,139	86	25	1,250	6,161	R 3,010	22	192	(s)	R 29,505
1991	16,012	2,854	1,076	80	22	1,178	6,579	R 3,013	21	185	(s)	R 29,902
1992	16,192	2,829	854	67	30	951	6,607	R 2,678	22	188	(s)	R 29,521
1993	16,841	2,744	939	77	37	1,052	6,519	R 2,960	21	177	(s)	R 30,364
1994	16,867	3,057	847	95	26	968	6,837	R 2,823	21	170	(s)	R 30,884
1995	17,045	3,253	544	91	23	658	7,177	R 3,303	17	118	(s)	R 31,692
1996	17,961	2,774	606	98	21	725	7,168	R 3,691	20	123	(s)	R 32,571
1997	18,467	3,023	692	88	42	822	6,678	R 3,736	R 21	115	(s)	R 32,971
1998	18,651	3,328	984	128	53	1,166	7,157	3,373	21	110	(s)	33,858
1999	18,200	3,171	769	125	48	943	7,702	3,248	21	36	(s)	33,414

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> Prior to 1980, based on oil used in steam plants. Since 1980, heavy oil includes fuel oil nos. 4, 5, and 6 and residual fuel oils.

<sup>d</sup> Prior to 1980, based on oil used in internal combustion and gas turbine engine plants. Since 1980, light oil includes fuel oil nos. 1 and 2, kerosene, and jet fuel.

<sup>e</sup> Through 1988, includes all net imports of electricity. From 1989, includes only the portion of net imports of electricity that is derived from hydroelectric power.

<sup>f</sup> From 1989, includes net imports of electricity generated from geothermal energy.

<sup>g</sup> "Other" is electricity generated for distribution from wind, photovoltaic, and solar thermal energy.

<sup>h</sup> From 1989, includes net imports of electricity generated from nonrenewable energy sources not shown in other columns. See data in appendix Table A8.

R=Revised data.

— =Not applicable.

(s)=Less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

## **State Summaries**



**Table 17. Energy Consumption Estimates by Source, Selected Years 1960-1999, Alabama**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum											Nuclear Electric Power	Hydro-electric Power <sup>d</sup>	Wood and Waste	Other <sup>a,e</sup>	Net Inter-state Flow of Electricity/Losses <sup>f</sup>	Total <sup>g</sup>
			Asphalt & Road Oil <sup>a</sup>	Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	Kero-sene <sup>a</sup>	LPG <sup>a</sup>	Lubri-cants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Other <sup>a,c</sup>	Total						
			Thousand Barrels															Million kWh	
1960	15,579	184	2,160	280	5,393	1,126	1,046	3,211	661	24,578	4,292	752	43,498	0	6,239	—	—	-19,803	—
1965	21,473	229	2,749	446	5,251	1,156	908	4,207	741	28,919	2,553	2,142	49,072	0	7,103	—	—	-32,017	—
1970	27,653	298	3,176	349	8,512	1,799	1,310	7,583	812	37,003	3,290	2,877	66,710	0	7,632	—	—	-21,654	—
1975	26,609	264	2,706	249	14,697	1,707	673	6,540	1,049	45,174	12,953	3,910	89,656	2,722	12,213	—	—	-28,518	—
1980	27,042	269	3,132	248	15,190	2,048	1,253	4,949	992	44,296	7,296	4,532	83,937	23,497	9,408	—	—	-68,842	—
1985	27,145	219	3,757	172	16,278	3,516	108	3,648	903	43,476	2,249	6,215	80,323	14,317	6,886	—	—	-51,090	—
1990	27,640	244	4,321	116	25,436	1,899	64	4,160	1,016	49,199	3,970	6,693	96,874	12,052	R <sup>h</sup> 10,367	—	—	R <sup>h</sup> -35,804	—
1991	29,349	254	5,286	109	23,909	2,292	96	3,807	909	49,527	3,554	5,895	95,385	15,875	R <sup>h</sup> 10,758	—	—	R <sup>h</sup> -58,232	—
1992	31,510	279	4,943	106	24,432	2,108	83	3,968	927	50,605	3,907	5,996	97,074	19,397	R <sup>h</sup> 10,260	—	—	R <sup>h</sup> -74,960	—
1993	33,047	292	4,984	103	22,990	1,973	80	5,033	944	51,956	4,059	6,045	98,167	17,823	R <sup>h</sup> 9,034	—	—	R <sup>h</sup> -77,379	—
1994	31,473	289	5,059	110	25,410	3,472	72	5,132	986	53,226	3,432	6,313	103,212	20,480	R <sup>h</sup> 11,429	—	—	R <sup>h</sup> -74,453	—
1995	34,309	322	4,994	97	23,087	3,843	121	5,115	969	55,472	3,158	6,017	102,873	20,752	R <sup>h</sup> 9,502	—	—	R <sup>h</sup> -80,027	—
1996	37,052	326	5,704	93	23,107	3,508	121	R <sup>h</sup> 4,845	941	54,999	3,207	R <sup>h</sup> 3,647	R <sup>h</sup> 100,172	29,708	11,082	—	—	R <sup>h</sup> -118,778	—
1997	36,434	322	5,467	103	21,383	2,183	127	R <sup>h</sup> 4,269	994	55,694	2,595	R <sup>h</sup> 3,838	R <sup>h</sup> 96,652	29,573	R <sup>h</sup> 11,521	—	—	R <sup>h</sup> -110,239	—
1998	36,448	328	4,455	82	21,284	3,522	101	3,252	1,040	57,416	1,531	3,525	96,207	28,663	10,565	—	—	-99,670	—
1999	38,173	333	4,597	102	24,833	1,963	83	7,025	1,051	57,669	1,754	3,599	102,676	30,892	7,760	—	—	-103,287	—

  

Trillion Btu																			
1960	395.4	190.7	14.3	1.4	31.4	6.1	5.9	12.9	4.0	129.1	27.0	4.5	236.6	0.0	67.1	45.7	0.0	-67.6	868.0
1965	533.1	236.9	18.2	2.3	30.6	6.2	5.2	16.9	4.5	151.9	16.0	12.7	264.4	0.0	74.2	47.6	0.0	-109.2	1,047.2
1970	675.6	307.8	21.1	1.8	49.6	9.9	7.4	28.7	4.9	194.4	20.7	16.9	355.3	0.0	80.1	52.4	0.0	-73.9	1,397.2
1975	640.1	271.7	18.0	1.3	85.6	9.4	3.8	24.3	6.4	237.3	81.4	23.1	490.6	30.0	127.1	57.6	0.0	-97.3	1,519.7
1980	661.0	278.4	20.8	1.3	88.5	11.3	7.1	18.2	6.0	232.7	45.9	26.2	457.9	256.3	97.7	R <sup>h</sup> 135.0	0.0	-234.9	R <sup>h</sup> 1,651.4
1985	662.9	227.8	24.9	0.9	94.8	19.7	0.6	13.1	5.5	228.4	14.1	35.3	437.4	154.8	71.9	R <sup>h</sup> 172.4	0.0	-174.3	R <sup>h</sup> 1,552.8
1990	678.3	251.0	28.7	0.6	148.2	10.6	0.4	15.1	6.2	258.4	25.0	37.2	530.2	128.7	R <sup>h</sup> 107.8	R <sup>h</sup> 151.7	R <sup>h</sup> 0.2	-122.2	R <sup>h</sup> 1,725.8
1991	719.8	260.7	35.1	0.6	139.3	12.6	0.5	13.8	5.5	260.2	22.3	33.0	522.9	170.5	112.3	R <sup>h</sup> 154.2	R <sup>h</sup> 0.2	R <sup>h</sup> -198.7	R <sup>h</sup> 1,741.9
1992	770.5	286.6	32.8	0.5	142.3	11.7	0.5	14.4	5.6	265.8	24.6	33.2	531.4	207.1	106.1	R <sup>h</sup> 159.4	R <sup>h</sup> 0.2	R <sup>h</sup> -255.8	R <sup>h</sup> 1,805.5
1993	808.4	301.1	33.1	0.5	133.9	11.0	0.5	18.1	5.7	272.9	25.5	33.6	534.8	190.4	93.1	R <sup>h</sup> 185.4	R <sup>h</sup> 0.2	R <sup>h</sup> -264.0	R <sup>h</sup> 1,849.4
1994	770.6	297.5	33.6	0.6	148.0	19.6	0.4	18.7	6.0	R <sup>h</sup> 278.4	21.6	35.1	R <sup>h</sup> 561.8	218.6	117.9	R <sup>h</sup> 223.9	0.2	R <sup>h</sup> -254.0	R <sup>h</sup> 1,936.5
1995	826.5	330.9	33.1	0.5	134.5	21.8	0.7	18.5	5.9	R <sup>h</sup> 289.3	19.9	33.4	R <sup>h</sup> 557.5	221.2	98.0	R <sup>h</sup> 239.6	0.2	R <sup>h</sup> -273.1	R <sup>h</sup> 2,000.7
1996	887.5	336.3	37.9	0.5	134.6	19.9	0.7	R <sup>h</sup> 17.5	5.7	R <sup>h</sup> 286.9	20.2	R <sup>h</sup> 20.7	R <sup>h</sup> 544.5	315.6	R <sup>h</sup> 114.6	R <sup>h</sup> 198.2	0.2	R <sup>h</sup> -405.3	R <sup>h</sup> 1,991.5
1997	858.8	335.5	36.3	0.5	124.6	12.4	0.7	R <sup>h</sup> 15.4	6.0	R <sup>h</sup> 290.3	16.3	R <sup>h</sup> 21.9	R <sup>h</sup> 524.4	314.2	R <sup>h</sup> 119.3	R <sup>h</sup> 159.7	0.2	R <sup>h</sup> -376.1	R <sup>h</sup> 1,935.9
1998	853.4	340.9	29.6	0.4	124.0	20.0	0.6	11.8	6.3	299.3	9.6	20.0	521.4	304.5	109.3	151.0	0.2	-340.1	1,940.6
1999	855.4	344.5	30.5	0.5	144.7	11.1	0.5	25.4	6.4	300.5	11.0	20.3	550.9	328.2	80.3	197.8	0.2	-352.4	2,004.8

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products consumed in the industrial sector. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>e</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>f</sup> Net interstate flow of electricity is the difference between the amount of energy in the electricity sold within a State (including associated losses) and the energy input at the electric utilities within the State. A positive number

indicates that more electricity (including associated losses) came into the State than went out of the State during the year; conversely, a negative number indicates that more electricity (including associated losses) went out of the State than came into the State.

<sup>g</sup> From 1989, "Total" does not equal the sum of the columns. Net imports of electricity generated from nonrenewable energy sources (shown in appendix Table A8) is included in the total but not in any other columns.

<sup>h</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

kWh=kilowatthours. R=Revised data. — =Not applicable.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 18. Residential Energy Consumption Estimates, Selected Years 1960-1999, Alabama**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum				Wood Thousand Cords	Geothermal	Solar <sup>c</sup>	Electricity <sup>a</sup> Million Kilowatthours	Net Energy	Electrical System Energy Losses <sup>d</sup> Million Kilowatthours	Total
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Total							
1960	96	41	36	163	2,101	2,300	1,084	—	—	4,129	—	10,271	—
1965	35	48	24	169	2,672	2,865	765	—	—	6,150	—	14,684	—
1970	44	56	36	236	4,920	5,192	515	—	—	11,527	—	27,935	—
1975	7	52	74	134	3,916	4,124	530	—	—	13,409	—	32,345	—
1980	80	52	13	198	2,589	2,800	521	—	—	16,469	—	40,047	—
1985	43	44	34	73	2,088	2,194	1,302	—	—	17,182	—	40,368	—
1990	37	45	25	38	2,688	2,752	757	—	—	20,719	—	R 45,324	—
1991	6	46	18	61	2,312	2,391	797	—	—	21,293	—	R 46,290	—
1992	31	50	11	30	2,213	2,254	839	—	—	21,137	—	R 45,080	—
1993	14	51	14	43	2,861	2,919	R 634	—	—	22,628	—	R 47,793	—
1994	4	50	13	29	2,798	2,840	R 622	—	—	23,159	—	R 48,330	—
1995	3	50	9	66	2,849	2,924	R 690	—	—	24,314	—	R 50,693	—
1996	15	57	9	64	2,922	2,995	R 689	—	—	25,634	—	R 53,422	—
1997	25	48	29	57	R 3,008	R 3,094	R 329	—	—	24,893	—	R 51,780	—
1998	3	47	4	40	2,591	2,636	290	—	—	27,327	—	56,452	—
1999	8	43	6	44	4,669	4,719	310	—	—	27,048	—	52,995	—
<b>Trillion Btu</b>													
1960	2.4	42.3	0.2	0.9	8.4	9.6	21.7	0.0	0.0	14.1	90.0	35.0	125.0
1965	0.9	49.7	0.1	1.0	10.7	11.8	15.3	0.0	0.0	21.0	98.7	50.1	148.8
1970	1.1	57.5	0.2	1.3	18.6	20.1	10.3	0.0	0.0	39.3	128.3	95.3	223.7
1975	0.2	53.8	0.4	0.8	14.5	15.7	10.6	0.0	0.0	45.8	126.1	110.4	236.4
1980	1.9	54.1	0.1	1.1	9.5	10.7	10.4	0.0	0.0	56.2	133.3	136.6	270.0
1985	1.1	45.4	0.2	0.4	7.5	8.1	26.0	0.0	0.0	58.6	139.2	137.7	276.9
1990	0.9	46.7	0.1	0.2	9.7	10.1	15.1	e (s)	e 0.1	70.7	e 143.7	154.6	R e 298.4
1991	0.1	47.4	0.1	0.3	8.4	8.8	15.9	(s)	R 0.2	72.7	145.1	R 157.9	R 303.0
1992	0.8	51.0	0.1	0.2	8.0	8.3	16.8	(s)	R 0.2	72.1	149.1	R 153.8	R 302.9
1993	0.3	52.9	0.1	0.2	10.3	10.6	12.7	(s)	R 0.2	77.2	R 154.0	163.1	317.0
1994	0.1	51.3	0.1	0.2	10.2	10.4	12.4	(s)	R 0.2	79.0	R 153.4	164.9	R 318.3
1995	0.1	51.0	0.1	0.4	10.3	10.7	13.8	(s)	R 0.2	83.0	R 158.8	R 173.0	R 331.7
1996	0.4	58.4	0.1	0.4	10.6	11.0	13.8	(s)	R 0.2	87.5	R 171.2	R 182.3	R 353.4
1997	0.6	50.5	0.2	0.3	R 10.9	R 11.4	R 6.6	(s)	0.1	84.9	R 154.2	R 176.7	R 330.8
1998	0.1	48.3	(s)	0.2	9.4	9.6	5.8	(s)	0.1	93.2	157.2	192.6	349.8
1999	0.2	44.2	(s)	0.2	16.9	17.2	6.2	(s)	0.1	92.3	160.2	180.8	341.0

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Includes small amounts of solar thermal and photovoltaic energy consumed by the commercial sector that cannot be separately identified. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 19. Commercial Energy Consumption Estimates, Selected Years 1960-1999, Alabama**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum					Wood	Geothermal	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>c</sup>	Total <sup>d</sup>	
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>							Total
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels					Thousand Cords	Million Kilowatthours	Million Kilowatthours				
1960	178	17	264	294	371	327	(s)	1,257	21	—	2,390	—	5,944	—
1965	64	32	175	306	472	327	(s)	1,280	14	—	3,443	—	8,221	—
1970	83	36	264	426	868	391	(s)	1,950	10	—	5,144	—	12,467	—
1975	13	33	547	242	691	453	1	1,934	10	—	6,493	—	15,662	—
1980	148	29	641	176	457	258	3	1,535	13	—	7,190	—	17,484	—
1985	80	26	1,290	16	368	251	514	2,439	R 35	—	8,805	—	20,688	—
1990	68	24	1,088	11	474	258	614	2,445	R 48	—	11,589	—	R 25,353	—
1991	11	24	982	15	408	160	244	1,809	R 51	—	11,948	—	R 25,975	—
1992	58	25	1,030	17	391	138	0	1,576	R 55	—	11,554	—	R 24,642	—
1993	26	26	918	13	505	41	0	1,477	51	—	11,906	—	R 25,148	—
1994	7	26	1,071	11	494	41	1	1,617	52	—	12,503	—	R 26,093	—
1995	5	26	532	10	503	42	3	1,089	52	—	12,845	—	R 26,782	—
1996	29	29	488	9	516	42	1	1,055	R 56	—	13,948	—	R 29,067	—
1997	47	32	383	9	R 531	41	0	R 964	R 36	—	17,043	—	R 35,452	—
1998	6	26	389	21	457	41	0	909	36	—	18,307	—	37,818	—
1999	15	28	557	6	824	41	0	1,427	44	—	18,820	—	36,875	—

  

Trillion Btu														
1960	4.4	18.1	1.5	1.7	1.5	1.7	(s)	6.4	0.4	0.0	8.2	37.5	20.3	57.8
1965	1.6	33.0	1.0	1.7	1.9	1.7	(s)	6.4	0.3	0.0	11.7	53.0	28.0	81.1
1970	2.0	37.4	1.5	2.4	3.3	2.1	(s)	9.3	0.2	0.0	17.6	66.4	42.5	108.9
1975	0.3	34.4	3.2	1.4	2.6	2.4	(s)	9.5	0.2	0.0	22.2	66.6	53.4	120.0
1980	3.6	29.5	3.7	1.0	1.7	1.4	(s)	7.8	0.3	0.0	24.5	65.6	59.7	125.3
1985	2.0	26.8	7.5	0.1	1.3	1.3	3.2	13.5	R 0.7	0.0	30.0	R 73.0	70.6	R 143.6
1990	1.7	25.0	6.3	0.1	1.7	1.4	3.9	13.3	R 1.0	e 0.0	39.5	R e 80.5	86.5	R e 167.0
1991	0.3	24.4	5.7	0.1	1.5	0.8	1.5	9.7	R 1.0	0.0	40.8	R 76.1	R 88.6	R 164.7
1992	1.4	25.9	6.0	0.1	1.4	0.7	0.0	8.2	R 1.1	0.0	39.4	R 76.1	R 84.1	R 160.2
1993	0.6	26.5	5.3	0.1	1.8	0.2	0.0	7.5	1.0	0.0	40.6	76.2	85.8	R 162.0
1994	0.2	26.3	6.2	0.1	1.8	0.2	(s)	8.3	1.0	0.0	42.7	78.5	89.0	167.5
1995	0.1	27.0	3.1	0.1	1.8	0.2	(s)	5.2	1.0	0.0	43.8	77.2	R 91.4	R 168.6
1996	0.7	30.0	2.8	0.1	1.9	0.2	(s)	5.0	1.1	0.0	47.6	84.4	R 99.2	R 183.5
1997	1.2	33.7	2.2	0.1	1.9	0.2	0.0	4.4	R 0.7	0.0	58.2	R 98.2	R 121.0	219.1
1998	0.2	26.7	2.3	0.1	1.7	0.2	0.0	4.3	0.7	0.0	62.5	94.3	129.0	223.3
1999	0.4	28.6	3.2	(s)	3.0	0.2	0.0	6.5	0.9	0.0	64.2	100.5	125.8	226.3

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>d</sup> Small amounts of solar thermal and photovoltaic energy consumed in the commercial sector cannot be separately identified and are included in residential consumption.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

—=Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

Table 20. Industrial Energy Consumption Estimates, Selected Years 1960-1999, Alabama

Year	Coal	Natural Gas <sup>a</sup>	Petroleum									Hydro-electric Power <sup>b</sup>	Wood and Waste	Other <sup>b,d</sup>	Electricity <sup>b</sup>	Net Energy	Electrical System Energy Losses <sup>e</sup>	Total
			Asphalt and Road Oil <sup>b</sup>	Distillate Fuel <sup>b</sup>	Kero-sene <sup>b</sup>	LPG <sup>b</sup>	Lubri-cants <sup>b</sup>	Motor Gasoline	Residual Fuel <sup>b</sup>	Other <sup>b,c</sup>	Total							
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels									Million kWh	Million kWh	Million kWh				
1960	7,904	109	2,160	2,511	589	708	265	382	2,014	752	9,380	26	—	—	8,966	—	22,301	—
1965	8,774	132	2,749	1,962	434	1,020	311	372	945	2,142	9,935	25	—	—	13,636	—	32,559	—
1970	11,177	171	3,176	2,833	648	1,696	391	204	1,611	2,428	12,987	25	—	—	18,041	—	43,720	—
1975	9,288	156	2,706	4,475	297	1,846	440	198	5,814	3,910	19,686	25	—	—	20,473	—	49,384	—
1980	7,221	171	3,132	3,356	879	1,857	506	104	3,787	4,532	18,154	24	—	—	26,708	—	64,945	—
1985	5,476	138	3,757	3,671	19	1,031	461	507	96	6,215	15,758	24	—	—	24,179	—	56,806	—
1990	5,525	156	4,321	6,740	15	901	519	443	451	6,693	20,083	<sup>f</sup> 0	—	—	27,618	—	<sup>R</sup> 60,416	—
1991	5,633	163	5,286	5,423	21	994	464	408	85	5,895	18,575	0	—	—	27,985	—	<sup>R</sup> 60,838	—
1992	6,433	182	4,943	5,396	35	1,279	473	435	371	5,996	18,928	0	—	—	29,476	—	<sup>R</sup> 62,866	—
1993	5,474	195	4,984	4,587	23	1,551	482	583	775	6,045	19,029	0	—	—	30,524	—	<sup>R</sup> 64,470	—
1994	5,646	195	5,059	5,115	32	1,646	503	634	1,080	6,313	20,382	0	—	—	31,919	—	<sup>R</sup> 66,612	—
1995	5,543	218	4,994	3,635	45	1,670	495	674	512	6,017	18,041	0	—	—	32,847	—	<sup>R</sup> 68,485	—
1996	5,792	215	5,704	4,465	48	<sup>R</sup> 1,330	480	678	717	<sup>R</sup> 3,647	<sup>R</sup> 17,068	0	—	—	33,523	—	<sup>R</sup> 69,862	—
1997	5,521	211	5,467	3,145	61	<sup>R</sup> 661	507	719	612	<sup>R</sup> 3,838	<sup>R</sup> 15,010	0	—	—	32,617	—	<sup>R</sup> 67,847	—
1998	4,965	210	4,455	2,559	40	187	531	519	652	3,525	12,467	0	—	—	33,539	—	69,286	—
1999	4,722	220	4,597	3,647	34	1,517	537	443	713	3,599	15,085	0	—	—	34,533	—	67,661	—
Trillion Btu																		
1960	209.9	112.8	14.3	14.6	3.3	2.8	1.6	2.0	12.7	4.5	55.9	0.3	23.6	0.0	30.6	433.0	76.1	509.1
1965	232.0	136.0	18.2	11.4	2.5	4.1	1.9	2.0	5.9	12.7	58.7	0.3	32.1	0.0	46.5	505.5	111.1	616.6
1970	291.4	176.5	21.1	16.5	3.7	6.4	2.4	1.1	10.1	14.2	75.4	0.3	41.9	0.0	61.6	647.0	149.2	796.1
1975	238.8	160.0	18.0	26.1	1.7	6.9	2.7	1.0	36.6	23.1	115.9	0.3	46.8	0.0	69.9	631.7	168.5	800.2
1980	187.0	176.3	20.8	19.6	5.0	6.8	3.1	0.5	23.8	26.2	105.8	0.2	<sup>R</sup> 124.3	0.0	91.1	<sup>R</sup> 684.7	221.6	<sup>R</sup> 906.3
1985	140.4	143.0	24.9	21.4	0.1	3.7	2.8	2.7	0.6	35.3	91.5	0.2	<sup>R</sup> 145.6	0.0	82.5	<sup>R</sup> 603.2	193.8	<sup>R</sup> 797.1
1990	143.3	160.0	28.7	39.3	0.1	3.3	3.1	2.3	2.8	37.2	116.8	<sup>f</sup> 0.0	<sup>R</sup> 135.6	<sup>f</sup> 0.0	94.2	<sup>R</sup> 650.0	206.1	<sup>R</sup> 856.2
1991	145.5	167.9	35.1	31.6	0.1	3.6	2.8	2.1	0.5	33.0	108.9	0.0	<sup>R</sup> 137.3	0.0	95.5	<sup>R</sup> 655.0	<sup>R</sup> 207.6	<sup>R</sup> 862.6
1992	165.6	187.0	32.8	31.4	0.2	4.6	2.9	2.3	2.3	33.2	109.8	0.0	<sup>R</sup> 141.5	0.0	100.6	<sup>R</sup> 704.5	<sup>R</sup> 214.5	<sup>R</sup> 919.0
1993	141.6	201.0	33.1	26.7	0.1	5.6	2.9	3.1	4.9	33.6	110.0	0.0	<sup>R</sup> 171.7	0.0	104.1	<sup>R</sup> 728.3	220.0	<sup>R</sup> 948.3
1994	146.2	200.7	33.6	29.8	0.2	6.0	3.1	3.3	6.8	35.1	<sup>R</sup> 117.7	0.0	<sup>R</sup> 210.4	0.0	108.9	<sup>R</sup> 784.0	227.3	<sup>R</sup> 1,011.3
1995	144.1	224.7	33.1	21.2	0.3	6.1	3.0	3.5	3.2	33.4	<sup>R</sup> 103.7	0.0	<sup>R</sup> 224.7	0.0	112.1	<sup>R</sup> 809.4	<sup>R</sup> 233.7	<sup>R</sup> 1,043.0
1996	150.1	221.9	37.9	26.0	0.3	<sup>R</sup> 4.8	2.9	<sup>R</sup> 3.5	4.5	<sup>R</sup> 20.7	<sup>R</sup> 100.6	0.0	<sup>R</sup> 183.3	0.0	114.4	<sup>R</sup> 770.2	<sup>R</sup> 238.4	<sup>R</sup> 1,008.6
1997	142.5	219.4	36.3	18.3	0.3	<sup>R</sup> 2.4	3.1	<sup>R</sup> 3.7	3.8	<sup>R</sup> 21.9	<sup>R</sup> 89.9	<sup>R</sup> 0.0	<sup>R</sup> 152.4	0.0	111.3	<sup>R</sup> 715.5	<sup>R</sup> 231.5	<sup>R</sup> 947.0
1998	128.1	218.5	29.6	14.9	0.2	0.7	3.2	2.7	4.1	20.0	75.4	0.0	144.5	0.0	114.4	680.9	236.4	917.3
1999	121.9	227.6	30.5	21.2	0.2	5.5	3.3	2.3	4.5	20.3	87.8	0.0	190.7	(s)	117.8	745.8	230.9	976.7

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>e</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>f</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

R=Revised data.

kWh=kilowatthours. — =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 21. Transportation Energy Consumption Estimates, Selected Years 1960-1999, Alabama**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum								Ethanol <sup>c</sup> Thousand Barrels	Electricity <sup>a</sup> Million Kilowatthours	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total <sup>c</sup>
			Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	LPG <sup>a</sup>	Lubricants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total				Million Kilowatthours	
			Thousand Barrels												
1960	137	8	280	2,582	1,126	31	396	23,869	2,278	30,562	0	0	—	0	—
1965	29	12	446	3,090	1,156	43	430	28,220	1,608	34,993	0	0	—	0	—
1970	18	20	349	5,353	1,799	98	421	36,408	1,679	46,107	0	0	—	0	—
1975	2	17	249	9,087	1,707	87	609	44,523	7,039	63,300	0	0	—	0	—
1980	0	16	248	11,049	2,048	46	486	43,934	3,506	61,318	0	0	—	0	—
1985	0	11	172	11,195	3,516	161	442	42,718	1,640	59,844	R e 369	0	—	0	—
1990	0	15	116	17,450	1,899	96	497	48,498	2,905	71,462	R 467	0	—	0	—
1991	0	16	109	17,323	2,292	94	445	48,959	3,225	72,448	R 465	0	—	0	—
1992	0	19	106	17,854	2,108	85	454	50,031	3,536	74,174	R 745	0	—	0	—
1993	0	16	103	17,341	1,973	117	462	51,332	3,283	74,612	R 394	0	—	0	—
1994	0	15	110	18,992	3,472	193	483	52,551	2,352	78,152	R 424	0	—	0	—
1995	0	20	97	18,730	3,843	93	475	54,756	2,644	80,638	R 581	(s)	—	(s)	—
1996	0	19	93	17,845	3,508	R 78	461	54,279	2,490	R 78,754	R 101	(s)	—	(s)	—
1997	0	21	103	17,597	2,183	R 68	487	54,934	1,982	R 77,354	R 99	0	—	0	—
1998	0	20	82	17,859	3,522	17	509	56,856	878	79,723	82	0	—	0	—
1999	0	22	102	20,328	1,963	15	515	57,185	1,042	81,149	11	0	—	0	—
<b>Trillion Btu</b>															
1960	3.4	7.9	1.4	15.0	6.1	0.1	2.4	125.4	14.3	164.7	0.0	0.0	176.0	0.0	176.0
1965	0.7	12.4	2.3	18.0	6.2	0.2	2.6	148.2	10.1	187.6	0.0	0.0	200.7	0.0	200.7
1970	0.4	20.5	1.8	31.2	9.9	0.4	2.6	191.3	10.6	247.6	0.0	0.0	268.5	0.0	268.5
1975	(s)	17.3	1.3	52.9	9.4	0.3	3.7	233.9	44.3	345.8	0.0	0.0	363.1	0.0	363.1
1980	0.0	17.0	1.3	64.4	11.3	0.2	2.9	230.8	22.0	332.9	0.0	0.0	349.9	0.0	349.9
1985	0.0	11.5	0.9	65.2	19.7	0.6	2.7	224.4	10.3	323.7	R e 1.3	0.0	e 335.2	0.0	e 335.2
1990	0.0	15.1	0.6	101.6	10.6	0.3	3.0	254.8	18.3	389.2	R 1.7	0.0	404.2	0.0	404.2
1991	0.0	16.9	0.6	100.9	12.6	0.3	2.7	257.2	20.3	394.6	R 1.6	0.0	411.5	0.0	411.5
1992	0.0	19.2	0.5	104.0	11.7	0.3	2.8	262.8	22.2	404.3	R 2.6	0.0	423.5	0.0	423.5
1993	0.0	16.0	0.5	101.0	11.0	0.4	2.8	269.6	20.6	406.0	R 1.4	0.0	422.1	0.0	422.1
1994	0.0	15.4	0.6	110.6	19.6	0.7	2.9	R 274.8	14.8	R 424.0	R 1.5	0.0	R 439.4	0.0	R 439.4
1995	0.0	20.7	0.5	109.1	21.8	0.3	2.9	R 285.6	16.6	R 436.7	R 2.1	(s)	R 457.4	(s)	R 457.4
1996	0.0	19.8	0.5	103.9	19.9	0.3	2.8	R 283.1	15.7	R 426.2	R 0.4	(s)	R 445.9	(s)	R 445.9
1997	0.0	21.5	0.5	102.5	12.4	R 0.2	3.0	R 286.4	12.5	R 417.4	R 0.4	0.0	R 439.0	0.0	R 439.0
1998	0.0	20.7	0.4	104.0	20.0	0.1	3.1	296.3	5.5	429.4	0.3	0.0	450.1	0.0	450.1
1999	0.0	22.9	0.5	118.4	11.1	0.1	3.1	298.0	6.5	437.8	(s)	0.0	460.7	0.0	460.7

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels. Transportation use of natural gas is gas consumed in the operation of pipelines, primarily in compressors, and, since 1990, is also gas consumed as vehicle fuel.

<sup>c</sup> Ethanol blended into motor gasoline, which is accounted for under motor gasoline, is shown separately here to display the use of renewable energy by the transportation sector and is included only once in the total.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1980 and 1981 due to the expanded coverage of renewable energy sources beginning in 1981.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.



**Table 22. Estimates of Energy Input at Electric Utilities, Selected Years, 1960-1999, Alabama**

Year	Coal Thousand Short Tons	Natural Gas <sup>a</sup> Billion Cubic Feet	Petroleum				Nuclear Electric Power	Hydroelectric Power <sup>e</sup>	Wood and Waste	Geothermal Energy	Other <sup>b,f</sup>	Total <sup>g</sup>
			Heavy Oil <sup>b,c</sup>	Light Oil <sup>b,d</sup>	Petroleum Coke <sup>b</sup>	Total						
	Thousand Barrels				Million Kilowatthours							
1960	7,264	9	0	(s)	0	(s)	0	6,213	0	0	0	—
1965	12,572	6	0	0	0	0	0	7,078	0	0	0	—
1970	16,331	15	0	26	448	474	0	7,607	0	0	0	—
1975	17,301	6	99	514	0	613	2,722	12,188	0	0	0	—
1980	19,593	1	0	131	0	131	23,497	9,385	0	0	0	—
1985	21,545	1	0	88	0	88	14,313	6,862	0	0	0	—
1990	22,010	4	0	133	0	133	12,052	10,367	0	0	0	—
1991	23,700	4	0	163	0	163	15,875	10,758	0	0	0	—
1992	24,988	3	0	141	0	141	19,397	10,260	0	0	0	—
1993	27,533	5	0	130	0	130	17,823	9,034	0	0	0	—
1994	25,817	4	0	220	0	220	20,480	11,429	0	0	0	—
1995	28,759	7	0	181	0	181	20,752	9,502	0	0	0	—
1996	31,216	6	0	299	0	299	29,708	11,082	0	0	0	—
1997	30,841	10	0	230	0	230	29,573	11,521	0	0	0	—
1998	31,473	26	0	472	0	472	28,663	10,565	0	0	0	—
1999	33,428	21	0	295	0	295	30,892	7,760	0	0	0	—

  

Trillion Btu												
1960	175.3	9.7	0.0	(s)	0.0	(s)	0.0	66.9	0.0	0.0	0.0	251.8
1965	298.0	5.8	0.0	0.0	0.0	0.0	0.0	74.0	0.0	0.0	0.0	377.7
1970	380.7	15.9	0.0	0.2	2.7	2.9	0.0	79.8	0.0	0.0	0.0	479.3
1975	400.7	6.2	0.6	3.0	0.0	3.6	30.0	126.8	0.0	0.0	0.0	567.4
1980	468.5	1.6	0.0	0.8	0.0	0.8	256.3	97.5	0.0	0.0	0.0	824.6
1985	519.5	1.2	0.0	0.5	0.0	0.5	154.8	71.7	0.0	0.0	0.0	747.6
1990	532.4	4.2	0.0	0.8	0.0	0.8	128.7	107.8	0.0	0.0	0.0	773.9
1991	573.9	4.2	0.0	0.9	0.0	0.9	170.5	112.3	0.0	0.0	0.0	861.7
1992	602.8	3.4	0.0	0.8	0.0	0.8	207.1	106.1	0.0	0.0	0.0	920.3
1993	665.9	4.7	0.0	0.8	0.0	0.8	190.4	93.1	0.0	0.0	0.0	954.8
1994	624.1	3.9	0.0	1.3	0.0	1.3	218.6	117.9	0.0	0.0	0.0	965.8
1995	682.2	7.5	0.0	1.1	0.0	1.1	221.2	98.0	0.0	0.0	0.0	1,009.9
1996	736.3	6.3	0.0	1.7	0.0	1.7	315.6	<sup>R</sup> 114.6	0.0	0.0	0.0	1,174.5
1997	714.5	10.3	0.0	1.3	0.0	1.3	314.2	<sup>R</sup> 119.3	0.0	0.0	0.0	<sup>R</sup> 1,159.6
1998	725.1	26.7	0.0	2.8	0.0	2.8	304.5	109.3	0.0	0.0	0.0	1,168.3
1999	732.9	21.1	0.0	1.7	0.0	1.7	328.2	80.3	0.0	0.0	0.0	1,164.2

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> Prior to 1980, based on oil used in steam plants. Since 1980, heavy oil includes fuel oil nos. 4, 5, and 6 and residual fuel oils.

<sup>d</sup> Prior to 1980, based on oil used in internal combustion and gas turbine engine plants. Since 1980, light oil includes fuel oil nos. 1 and 2, kerosene, and jet fuel.

<sup>e</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>f</sup> "Other" is electricity generated for distribution from wind, photovoltaic, and solar thermal energy.

<sup>g</sup> If applicable, from 1989, includes net imports of electricity generated from nonrenewable energy sources not shown in other columns. See data in appendix Table A8.

<sup>R</sup> = Revised data.

— = Not applicable.

(s) = Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 23. Energy Consumption Estimates by Source, Selected Years 1960-1999, Alaska**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum											Nuclear Electric Power	Hydro-electric Power <sup>d</sup>	Wood and Waste	Other <sup>a,e</sup>	Net Inter-state Flow of Electricity/Losses <sup>f</sup>	Total <sup>g</sup>
			Asphalt & Road Oil <sup>a</sup>	Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	Kero-sene <sup>a</sup>	LPG <sup>a</sup>	Lubri-cants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Other <sup>a,c</sup>	Total						
			Thousand Barrels															Million kWh	
1960	376	2	47	1,032	2,636	1,972	90	46	7	1,657	711	0	8,197	0	290	—	—	0	—
1965	525	8	132	293	3,788	3,005	10	91	41	2,450	881	284	10,975	0	350	—	—	0	—
1970	740	64	274	462	5,100	6,735	33	151	60	2,621	1,020	523	16,979	0	363	—	—	0	—
1975	868	85	319	466	7,090	7,420	123	211	145	4,179	1,075	771	21,800	0	357	—	—	0	—
1980	273	153	309	498	6,677	9,618	19	191	115	3,676	371	1,446	22,919	0	539	—	—	0	—
1985	733	213	485	490	10,356	15,231	7	331	104	5,638	3,072	R 5,925	R 41,639	0	748	—	—	0	—
1990	784	343	269	491	11,592	17,367	3	384	117	5,854	429	4,582	41,088	0	R <sup>h</sup> 975	—	—	0	—
1991	802	367	259	618	9,805	17,116	8	402	105	5,108	593	2,312	36,326	0	R 897	—	—	0	—
1992	792	383	264	459	10,408	14,720	1	393	107	5,881	765	3,377	36,376	0	R 918	—	—	0	—
1993	863	378	43	410	9,354	14,693	5	238	109	5,976	728	3,028	34,584	0	R 1,304	—	—	0	—
1994	796	367	66	171	8,027	16,080	11	252	114	6,542	728	3,375	35,366	0	R 1,346	—	—	0	—
1995	815	430	83	389	10,378	16,921	1	272	112	7,148	754	3,195	39,253	0	R 1,373	—	—	0	—
1996	706	448	26	142	8,552	18,652	1	R 241	109	6,735	912	4,138	R 39,508	0	R 1,267	—	—	0	—
1997	740	425	55	407	9,936	21,099	1	R 326	115	6,312	867	4,104	R 43,221	0	R 1,100	—	—	0	—
1998	693	435	65	152	10,841	21,865	1	320	120	6,737	828	4,056	44,988	0	1,114	—	—	0	—
1999	694	420	131	529	8,237	23,612	17	266	122	6,426	1,114	4,217	44,671	0	817	—	—	0	—

  

Trillion Btu																			
1960	7.2	2.0	0.3	5.2	15.4	10.6	0.5	0.2	(s)	8.7	4.5	0.0	45.4	0.0	3.1	3.7	0.0	0.0	61.4
1965	9.9	7.7	0.9	1.5	22.1	16.5	0.1	0.4	0.3	12.9	5.5	1.7	61.7	0.0	3.7	4.9	0.0	0.0	87.8
1970	13.2	64.0	1.8	2.3	29.7	37.7	0.2	0.6	0.4	13.8	6.4	3.1	96.0	0.0	3.8	5.0	0.0	0.0	182.0
1975	15.3	85.2	2.1	2.4	41.3	41.7	0.7	0.8	0.9	22.0	6.8	4.6	123.1	0.0	3.7	4.9	0.0	0.0	232.2
1980	4.3	153.8	2.1	2.5	38.9	54.0	0.1	0.7	0.7	19.3	2.3	8.7	129.3	0.0	5.6	R 3.1	0.0	0.0	296.1
1985	11.6	214.0	3.2	2.5	60.3	85.8	(s)	1.2	0.6	29.6	19.3	R 35.3	R 237.9	0.0	7.8	R 3.8	(s)	0.0	R 475.1
1990	12.4	326.8	1.8	2.5	67.5	97.9	(s)	1.4	0.7	30.8	2.7	27.2	232.5	0.0	<sup>h</sup> 10.1	R 8.8	<sup>h</sup> 0.1	0.0	R <sup>h</sup> 590.7
1991	12.7	368.0	1.7	3.1	57.1	96.1	(s)	1.5	0.6	26.8	3.7	14.1	204.9	0.0	9.4	R 4.5	0.1	0.0	R 599.5
1992	12.5	383.9	1.8	2.3	60.6	82.9	(s)	1.4	0.6	30.9	4.8	20.3	205.7	0.0	9.5	R 9.6	0.1	0.0	R 621.2
1993	13.6	376.0	0.3	2.1	54.5	83.2	(s)	0.9	0.7	31.4	4.6	18.4	196.0	0.0	13.4	R 7.1	0.1	0.0	R 606.2
1994	12.6	367.6	0.4	0.9	46.8	91.2	0.1	0.9	0.7	R 34.2	4.6	20.4	R 200.1	0.0	13.9	R 9.7	0.1	0.0	R 603.9
1995	12.9	432.8	0.5	2.0	60.5	95.9	(s)	1.0	0.7	R 37.3	4.7	19.3	R 221.9	0.0	R 14.2	R 8.6	0.1	0.0	R 690.4
1996	11.2	443.6	0.2	0.7	49.8	105.8	(s)	0.9	0.7	R 35.1	5.7	24.9	R 223.7	0.0	13.1	R 8.3	0.1	0.0	R 699.9
1997	11.7	425.4	0.4	2.1	57.9	119.6	(s)	R 1.2	0.7	R 32.9	5.4	24.6	244.8	0.0	R 11.4	R 3.8	0.1	0.0	R 697.1
1998	10.9	434.4	0.4	0.8	63.2	124.1	(s)	1.2	0.7	35.1	5.2	24.5	255.2	0.0	11.5	1.8	0.1	0.0	713.8
1999	10.9	420.0	0.9	2.7	48.0	134.1	0.1	1.0	0.7	33.5	7.0	25.5	253.4	0.0	8.5	1.9	0.1	0.0	694.7

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products consumed in the industrial sector. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>e</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>f</sup> Net interstate flow of electricity is the difference between the amount of energy in the electricity sold within a State (including associated losses) and the energy input at the electric utilities within the State. A positive number

indicates that more electricity (including associated losses) came into the State than went out of the State during the year; conversely, a negative number indicates that more electricity (including associated losses) went out of the State than came into the State.

<sup>g</sup> From 1989, "Total" does not equal the sum of the columns. Net imports of electricity generated from nonrenewable energy sources (shown in appendix Table A8) is included in the total but not in any other columns.

<sup>h</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

kWh=kilowatthours. R=Revised data. — =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 24. Residential Energy Consumption Estimates, Selected Years 1960-1999, Alaska**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum				Wood Thousand Cords	Geothermal	Solar <sup>c</sup>	Electricity <sup>a</sup> Million Kilowatthours	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Total						Million Kilowatthours	
	Thousand Barrels												
1960	22	(s)	866	0	36	902	90	—	—	151	—	539	—
1965	12	1	1,110	10	77	1,197	80	—	—	292	—	1,139	—
1970	8	6	1,362	19	77	1,458	65	—	—	527	—	2,073	—
1975	6	10	1,621	91	69	1,781	71	—	—	898	—	3,227	—
1980	0	8	1,172	0	58	1,231	63	—	—	1,092	—	4,397	—
1985	153	13	1,310	1	192	1,503	83	—	—	1,674	—	4,834	—
1990	173	14	1,745	3	300	2,048	109	—	—	1,661	—	R 4,430	—
1991	176	14	1,597	8	323	1,928	114	—	—	1,603	—	R 3,919	—
1992	180	14	1,606	1	319	1,925	120	—	—	1,640	—	R 3,600	—
1993	197	14	1,277	1	192	1,470	97	—	—	1,629	—	R 3,960	—
1994	182	15	1,254	10	151	1,416	95	—	—	1,688	—	R 4,020	—
1995	183	15	1,494	(s)	157	1,650	106	—	—	1,713	—	R 4,109	—
1996	166	16	1,312	(s)	195	1,507	106	—	—	1,766	—	R 4,187	—
1997	176	15	1,453	(s)	R 123	R 1,576	R 78	—	—	1,726	—	R 4,194	—
1998	185	16	1,542	1	98	1,641	69	—	—	1,768	—	3,432	—
1999	194	18	1,203	17	213	1,433	74	—	—	1,866	—	3,311	—
<b>Trillion Btu</b>													
1960	0.4	0.2	5.0	0.0	0.1	5.2	1.8	0.0	0.0	0.5	8.1	1.8	10.0
1965	0.2	1.5	6.5	0.1	0.3	6.8	1.6	0.0	0.0	1.0	11.1	3.9	15.0
1970	0.1	6.2	7.9	0.1	0.3	8.3	1.3	0.0	0.0	1.8	17.8	7.1	24.9
1975	0.1	10.4	9.4	0.5	0.3	10.2	1.4	0.0	0.0	3.1	25.2	11.0	36.2
1980	0.0	7.9	6.8	0.0	0.2	7.0	1.3	0.0	0.0	3.7	20.0	15.0	35.0
1985	2.4	13.3	7.6	(s)	0.7	8.3	1.7	0.0	0.0	5.7	31.5	16.5	48.0
1990	2.7	13.4	10.2	(s)	1.1	11.3	2.2	<sup>e</sup> (s)	<sup>e</sup> (s)	5.7	<sup>e</sup> 35.3	15.1	<sup>e</sup> 50.4
1991	2.8	13.6	9.3	(s)	1.2	10.5	2.3	(s)	(s)	5.5	34.7	13.4	48.0
1992	2.8	14.4	9.4	(s)	1.2	10.5	2.4	(s)	(s)	5.6	35.8	12.3	48.0
1993	3.1	13.8	7.4	(s)	0.7	8.1	1.9	(s)	(s)	5.6	32.5	13.5	R 46.1
1994	2.9	14.9	7.3	0.1	0.5	7.9	1.9	(s)	(s)	5.8	33.4	13.7	47.1
1995	2.9	15.3	8.7	(s)	0.6	9.3	2.1	(s)	(s)	5.8	35.5	14.0	49.5
1996	2.6	16.0	7.6	(s)	0.7	8.3	2.1	(s)	(s)	6.0	35.1	14.3	49.4
1997	2.8	15.1	8.5	(s)	R 0.4	R 8.9	R 1.6	(s)	(s)	5.9	R 34.3	14.3	R 48.6
1998	2.9	15.6	9.0	(s)	0.4	9.3	1.4	(s)	(s)	6.0	35.3	11.7	47.0
1999	3.0	17.6	7.0	0.1	0.8	7.9	1.5	(s)	(s)	6.4	36.4	11.3	47.7

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Includes small amounts of solar thermal and photovoltaic energy consumed by the commercial sector that cannot be separately identified. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 25. Commercial Energy Consumption Estimates, Selected Years 1960-1999, Alaska**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum						Wood	Geothermal	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>c</sup>	Total <sup>d</sup>
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels						Thousand Cords	Million Kilowatthours	Million Kilowatthours			
1960	42	0	268	0	6	130	464	868	2	—	99	—	354	—
1965	22	2	344	0	14	253	751	1,361	2	—	267	—	1,043	—
1970	15	13	422	0	14	246	807	1,488	1	—	478	—	1,882	—
1975	11	14	502	0	12	415	558	1,487	1	—	657	—	2,362	—
1980	0	17	577	0	10	258	4	849	2	—	728	—	2,932	—
1985	284	20	926	3	34	268	0	1,231	R 2	—	1,898	—	5,480	—
1990	321	22	1,176	(s)	53	52	0	1,281	R 7	—	2,133	—	R 5,688	—
1991	328	21	974	(s)	57	88	0	1,119	R 7	—	2,187	—	R 5,347	—
1992	334	21	1,376	(s)	56	57	0	1,490	R 8	—	2,195	—	R 4,817	—
1993	366	20	1,211	(s)	34	8	0	1,253	8	—	2,245	—	R 5,456	—
1994	338	21	1,184	(s)	27	10	0	1,221	8	—	2,334	—	R 5,558	—
1995	340	25	763	(s)	28	21	0	812	8	—	2,372	—	R 5,691	—
1996	309	27	804	(s)	34	294	0	1,132	9	—	2,429	—	R 5,758	—
1997	327	27	744	(s)	R 22	71	0	R 837	R 9	—	2,359	—	R 5,732	—
1998	344	27	985	(s)	17	116	0	1,118	9	—	2,508	—	4,870	—
1999	359	28	775	1	38	88	0	902	10	—	2,583	—	4,584	—
<b>Trillion Btu</b>														
1960	0.8	0.0	1.6	0.0	(s)	0.7	2.9	5.2	(s)	0.0	0.3	6.3	1.2	7.6
1965	0.4	2.3	2.0	0.0	0.1	1.3	4.7	8.1	(s)	0.0	0.9	11.8	3.6	15.3
1970	0.3	12.6	2.5	0.0	0.1	1.3	5.1	8.9	(s)	0.0	1.6	23.4	6.4	29.8
1975	0.2	14.5	2.9	0.0	(s)	2.2	3.5	8.7	(s)	0.0	2.2	25.6	8.1	33.7
1980	0.0	16.6	3.4	0.0	(s)	1.4	(s)	4.8	(s)	0.0	2.5	23.8	10.0	33.8
1985	4.5	20.5	5.4	(s)	0.1	1.4	0.0	6.9	(s)	0.0	6.5	38.4	18.7	57.1
1990	5.1	20.5	6.8	(s)	0.2	0.3	0.0	7.3	R 0.1	e (s)	7.3	R e 40.3	19.4	R e 59.7
1991	5.2	20.9	5.7	(s)	0.2	0.5	0.0	6.3	R 0.1	(s)	7.5	R 40.1	18.2	R 58.3
1992	5.3	21.3	8.0	(s)	0.2	0.3	0.0	8.5	R 0.2	(s)	7.5	R 42.8	16.4	R 59.3
1993	5.8	19.9	7.1	(s)	0.1	(s)	0.0	7.2	0.2	(s)	7.7	40.7	18.6	59.3
1994	5.3	20.7	6.9	(s)	0.1	0.1	0.0	7.0	0.2	(s)	8.0	41.2	19.0	60.2
1995	5.4	25.1	4.4	(s)	0.1	0.1	0.0	4.7	0.2	(s)	8.1	43.4	19.4	62.9
1996	4.9	27.0	4.7	(s)	0.1	1.5	0.0	R 6.3	0.2	(s)	8.3	46.7	19.6	66.4
1997	5.2	26.9	4.3	(s)	0.1	0.4	0.0	4.8	R 0.2	(s)	8.0	45.1	R 19.6	64.7
1998	5.4	27.1	5.7	(s)	0.1	0.6	0.0	6.4	0.2	(s)	8.6	47.6	16.6	64.2
1999	5.6	27.7	4.5	(s)	0.1	0.5	0.0	5.1	0.2	(s)	8.8	47.5	15.6	63.1

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>d</sup> Small amounts of solar thermal and photovoltaic energy consumed in the commercial sector cannot be separately identified and are included in residential consumption.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 26. Industrial Energy Consumption Estimates, Selected Years 1960-1999, Alaska**

Year	Coal Thousand Short Tons	Natural Gas <sup>a</sup> Billion Cubic Feet	Petroleum									Hydro-electric Power <sup>b</sup> Million kWh	Wood and Waste	Other <sup>b,d</sup>	Electricity <sup>b</sup>		Electrical System Energy Losses <sup>e</sup> Million kWh	Total
			Asphalt and Road Oil <sup>b</sup>	Distillate Fuel <sup>b</sup>	Kero-sene <sup>b</sup>	LPG <sup>b</sup>	Lubri-cants <sup>b</sup>	Motor Gasoline	Residual Fuel <sup>b</sup>	Other <sup>b,c</sup>	Total				Million kWh	Net Energy		
			Thousand Barrels															
1960	256	2	47	878	90	4	4	0	229	0	1,252	0	—	—	45	—	162	—
1965	339	2	132	1,238	0	(s)	1	83	60	284	1,798	0	—	—	59	—	229	—
1970	467	19	274	1,923	14	60	1	107	73	523	2,975	0	—	—	101	—	398	—
1975	594	40	319	2,117	32	130	24	106	31	771	3,530	0	—	—	485	—	1,743	—
1980	0	100	309	1,784	19	119	21	111	14	1,446	3,823	0	—	—	757	—	3,048	—
1985	0	140	485	1,762	4	91	19	406	2,577	R 5,925	R 11,269	0	—	—	417	—	1,203	—
1990	0	271	269	1,584	(s)	25	21	55	118	4,582	6,654	f 0	—	—	459	—	R 1,225	—
1991	0	299	259	1,954	(s)	17	19	57	280	2,312	4,898	0	—	—	466	—	1,139	—
1992	0	316	264	1,973	(s)	14	19	58	302	3,377	6,006	0	—	—	504	—	1,107	—
1993	2	313	43	1,573	4	10	20	40	303	3,028	5,021	0	—	—	501	—	1,218	—
1994	5	300	66	1,506	(s)	70	20	57	346	3,375	5,441	0	—	—	511	—	R 1,218	—
1995	0	358	83	2,287	(s)	85	20	62	381	3,195	6,113	0	—	—	546	—	R 1,311	—
1996	2	371	26	2,541	(s)	R 9	20	64	394	4,138	R 7,192	0	—	—	584	—	1,385	—
1997	2	345	55	2,816	(s)	R 180	21	54	141	4,104	R 7,371	0	—	—	756	—	R 1,836	—
1998	1	358	65	3,315	(s)	204	22	79	0	4,056	7,741	0	—	—	818	—	1,588	—
1999	1	340	131	1,950	(s)	16	22	25	0	4,217	6,360	0	—	—	844	—	1,497	—

  

Trillion Btu																		
1960	5.0	1.9	0.3	5.1	0.5	(s)	(s)	0.0	1.4	0.0	7.4	0.0	1.8	0.0	0.2	16.2	0.6	16.8
1965	6.5	1.8	0.9	7.2	0.0	(s)	(s)	0.4	0.4	1.7	10.6	0.0	3.2	0.0	0.2	22.3	0.8	23.1
1970	8.5	19.6	1.8	11.2	0.1	0.2	(s)	0.6	0.5	3.1	17.5	0.0	3.7	0.0	0.3	49.6	1.4	51.0
1975	10.5	40.4	2.1	12.3	0.2	0.5	0.1	0.6	0.2	4.6	20.6	0.0	3.5	0.0	1.7	76.7	5.9	82.6
1980	0.0	100.3	2.1	10.4	0.1	0.4	0.1	0.6	0.1	8.7	22.5	0.0	1.8	0.0	2.6	127.1	10.4	137.5
1985	0.0	140.7	3.2	10.3	(s)	0.3	0.1	2.1	16.2	R 35.3	R 67.6	0.0	2.1	0.0	1.4	R 211.7	4.1	R 215.8
1990	0.0	256.7	1.8	9.2	(s)	0.1	0.1	0.3	0.7	27.2	39.5	f 0.0	R 6.4	f (s)	1.6	R f 304.2	4.2	R f 308.4
1991	0.0	299.5	1.7	11.4	(s)	0.1	0.1	0.3	1.8	14.1	29.5	0.0	R 2.1	(s)	1.6	R 332.6	3.9	R 336.5
1992	0.0	316.3	1.8	11.5	(s)	0.1	0.1	0.3	1.9	20.3	35.9	0.0	R 7.0	(s)	1.7	R 361.0	3.8	R 364.7
1993	(s)	311.5	0.3	9.2	(s)	(s)	0.1	0.2	1.9	18.4	30.1	0.0	R 5.0	(s)	1.7	R 348.3	4.2	R 352.5
1994	0.1	299.9	0.4	8.8	(s)	0.3	0.1	0.3	2.2	20.4	32.4	0.0	R 7.6	(s)	1.7	R 341.8	4.2	R 346.0
1995	0.0	360.0	0.5	13.3	(s)	0.3	0.1	0.3	2.4	19.3	36.3	0.0	R 6.3	(s)	1.9	R 404.6	4.5	R 409.1
1996	(s)	367.4	0.2	14.8	(s)	(s)	0.1	0.3	2.5	24.9	42.8	0.0	R 6.0	(s)	2.0	R 418.3	4.7	R 423.0
1997	(s)	344.9	0.4	16.4	(s)	R 0.6	0.1	0.3	0.9	24.6	R 43.4	0.0	R 2.0	(s)	2.6	R 392.9	6.3	R 399.1
1998	(s)	357.4	0.4	19.3	(s)	0.7	0.1	0.4	0.0	24.5	45.5	0.0	0.2	(s)	2.8	406.0	5.4	411.4
1999	(s)	339.7	0.9	11.4	(s)	0.1	0.1	0.1	0.0	25.5	38.0	0.0	0.2	0.0	2.9	380.8	5.1	385.9

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>e</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>f</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

R=Revised data.

kWh=kilowatthours. — =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 27. Transportation Energy Consumption Estimates, Selected Years 1960-1999, Alaska**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum								Ethanol <sup>c</sup>	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total <sup>c</sup>
			Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	LPG <sup>a</sup>	Lubricants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total				Million Kilowatthours	
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels								Thousand Barrels	Million Kilowatthours	Million Kilowatthours	Total <sup>c</sup>	
1960	5	(s)	1,032	528	1,972	0	3	1,527	15	5,077	0	0	—	0	—
1965	1	0	293	789	3,005	(s)	40	2,113	66	6,307	0	0	—	0	—
1970	1	17	462	1,000	6,735	1	59	2,267	135	10,659	0	0	—	0	—
1975	(s)	(s)	466	2,157	7,420	0	121	3,658	484	14,305	0	0	—	0	—
1980	0	(s)	498	2,605	9,618	4	94	3,306	0	16,125	0	0	—	0	—
1985	0	5	490	5,840	15,231	14	86	4,964	19	26,643	<sup>e</sup> 0	0	—	0	—
1990	0	2	491	6,601	17,367	6	96	5,747	140	30,448	0	0	—	0	—
1991	0	3	618	4,750	17,116	4	86	4,963	73	27,611	0	0	—	0	—
1992	0	3	459	4,845	14,720	4	88	5,766	316	26,199	0	0	—	0	—
1993	0	3	410	4,754	14,693	2	90	5,928	119	25,995	0	0	—	0	—
1994	0	3	171	3,510	16,080	4	94	6,475	102	26,435	<sup>R</sup> 1	0	—	0	—
1995	0	2	389	5,243	16,921	2	92	7,065	116	29,828	<sup>R</sup> 184	0	—	0	—
1996	0	2	142	3,239	18,652	4	89	6,377	4	28,507	<sup>R</sup> 210	0	—	0	—
1997	0	5	407	4,325	21,099	<sup>R</sup> 2	94	6,187	2	<sup>R</sup> 32,116	<sup>R</sup> 170	0	—	0	—
1998	0	6	152	4,465	21,865	1	99	6,543	8	33,133	100	0	—	0	—
1999	0	4	529	3,684	23,612	(s)	100	6,312	276	34,513	113	0	—	0	—

  

Trillion Btu															
1960	0.1	(s)	5.2	3.1	10.6	0.0	(s)	8.0	0.1	27.1	0.0	0.0	27.1	0.0	27.1
1965	(s)	0.0	1.5	4.6	16.5	(s)	0.2	11.1	0.4	34.4	0.0	0.0	34.4	0.0	34.4
1970	(s)	17.4	2.3	5.8	37.7	(s)	0.4	11.9	0.9	59.0	0.0	0.0	76.4	0.0	76.4
1975	(s)	0.1	2.4	12.6	41.7	0.0	0.7	19.2	3.0	79.6	0.0	0.0	79.7	0.0	79.7
1980	0.0	0.1	2.5	15.2	54.0	(s)	0.6	17.4	0.0	89.7	0.0	0.0	89.8	0.0	89.8
1985	0.0	5.2	2.5	34.0	85.8	0.1	0.5	26.1	0.1	149.0	<sup>e</sup> 0.0	0.0	<sup>e</sup> 154.2	0.0	<sup>e</sup> 154.2
1990	0.0	1.6	2.5	38.4	97.9	(s)	0.6	30.2	0.9	170.5	0.0	0.0	172.2	0.0	172.2
1991	0.0	2.6	3.1	27.7	96.1	(s)	0.5	26.1	0.5	154.0	0.0	0.0	156.6	0.0	156.6
1992	0.0	2.9	2.3	28.2	82.9	(s)	0.5	30.3	2.0	146.3	0.0	0.0	149.2	0.0	149.2
1993	0.0	2.8	2.1	27.7	83.2	(s)	0.5	31.1	0.7	145.4	0.0	0.0	148.3	0.0	148.3
1994	0.0	3.0	0.9	20.4	91.2	(s)	0.6	<sup>R</sup> 33.9	0.6	<sup>R</sup> 147.6	(s)	0.0	<sup>R</sup> 150.6	0.0	<sup>R</sup> 150.6
1995	0.0	2.4	2.0	30.5	95.9	(s)	0.6	<sup>R</sup> 36.8	0.7	<sup>R</sup> 166.6	0.6	0.0	<sup>R</sup> 169.0	0.0	<sup>R</sup> 169.0
1996	0.0	2.0	0.7	18.9	105.8	(s)	0.5	<sup>R</sup> 33.3	(s)	<sup>R</sup> 159.2	0.7	0.0	<sup>R</sup> 161.2	0.0	<sup>R</sup> 161.2
1997	0.0	4.9	2.1	25.2	119.6	(s)	0.6	<sup>R</sup> 32.3	(s)	<sup>R</sup> 179.7	0.6	0.0	<sup>R</sup> 184.7	0.0	<sup>R</sup> 184.7
1998	0.0	5.6	0.8	26.0	124.1	(s)	0.6	34.1	(s)	185.6	0.4	0.0	191.2	0.0	191.2
1999	0.0	4.5	2.7	21.5	134.1	(s)	0.6	32.9	1.7	193.5	0.4	0.0	198.0	0.0	198.0

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels. Transportation use of natural gas is gas consumed in the operation of pipelines, primarily in compressors, and, since 1990, is also gas consumed as vehicle fuel.

<sup>c</sup> Ethanol blended into motor gasoline, which is accounted for under motor gasoline, is shown separately here to display the use of renewable energy by the transportation sector and is included only once in the total.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1980 and 1981 due to the expanded coverage of renewable energy sources beginning in 1981.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

Table 28. Estimates of Energy Input at Electric Utilities, Selected Years, 1960-1999, Alaska

Year	Coal	Natural Gas <sup>a</sup>	Petroleum				Nuclear Electric Power	Hydroelectric Power <sup>e</sup>	Wood and Waste	Geothermal Energy	Other <sup>b,f</sup>	Total <sup>g</sup>
			Heavy Oil <sup>b,c</sup>	Light Oil <sup>b,d</sup>	Petroleum Coke <sup>b</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels				Million Kilowatthours					
1960	52	0	3	95	0	99	0	290	0	0	0	—
1965	151	2	4	308	0	312	0	350	0	0	0	—
1970	249	8	5	394	0	399	0	363	0	0	0	—
1975	257	20	1	694	0	696	0	357	0	0	0	—
1980	273	29	353	538	0	891	0	539	0	0	0	—
1985	296	34	476	518	0	994	0	748	0	0	(s)	—
1990	290	34	171	486	0	658	0	975	0	0	0	—
1991	298	31	240	530	0	769	0	R 897	0	0	0	—
1992	277	29	147	608	0	755	0	918	0	0	0	—
1993	298	28	306	538	0	845	0	R 1,304	0	0	0	—
1994	271	29	281	573	0	854	0	R 1,346	0	0	0	—
1995	293	30	257	592	0	849	0	R 1,373	0	0	0	—
1996	229	31	515	655	0	1,171	0	1,267	0	0	0	—
1997	235	34	723	598	0	1,321	0	1,100	0	0	0	—
1998	162	29	821	535	0	1,355	0	1,114	0	0	0	—
1999	140	31	838	626	0	1,464	0	817	0	0	0	—
Trillion Btu												
1960	0.9	0.0	(s)	0.6	0.0	0.6	0.0	3.1	0.0	0.0	0.0	4.6
1965	2.7	2.2	(s)	1.8	0.0	1.8	0.0	3.7	0.0	0.0	0.0	10.3
1970	4.3	8.2	(s)	2.3	0.0	2.3	0.0	3.8	0.0	0.0	0.0	18.6
1975	4.5	19.7	(s)	4.0	0.0	4.1	0.0	3.7	0.0	0.0	0.0	32.0
1980	4.3	28.9	2.2	3.1	0.0	5.4	0.0	5.6	0.0	0.0	0.0	44.2
1985	4.7	34.4	3.0	3.0	0.0	6.0	0.0	7.8	0.0	0.0	(s)	52.9
1990	4.6	34.6	1.1	2.8	0.0	3.9	0.0	10.1	0.0	0.0	0.0	53.2
1991	4.7	31.4	1.5	3.1	0.0	4.6	0.0	9.4	0.0	0.0	0.0	50.0
1992	4.4	29.0	0.9	3.5	0.0	4.5	0.0	9.5	0.0	0.0	0.0	47.3
1993	4.7	28.0	1.9	3.1	0.0	5.1	0.0	13.4	0.0	0.0	0.0	51.2
1994	4.3	29.0	1.8	3.3	0.0	5.1	0.0	13.9	0.0	0.0	0.0	52.3
1995	4.6	29.9	1.6	3.4	0.0	5.1	0.0	R 14.2	0.0	0.0	0.0	53.7
1996	3.6	31.2	3.2	3.8	0.0	7.1	0.0	13.1	0.0	0.0	0.0	55.0
1997	3.7	33.5	4.5	3.5	0.0	8.0	0.0	R 11.4	0.0	0.0	0.0	56.6
1998	2.5	28.8	5.2	3.1	0.0	8.3	0.0	11.5	0.0	0.0	0.0	51.1
1999	2.2	30.5	5.3	3.6	0.0	8.9	0.0	8.5	0.0	0.0	0.0	50.1

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> Prior to 1980, based on oil used in steam plants. Since 1980, heavy oil includes fuel oil nos. 4, 5, and 6 and residual fuel oils.

<sup>d</sup> Prior to 1980, based on oil used in internal combustion and gas turbine engine plants. Since 1980, light oil includes fuel oil nos. 1 and 2, kerosene, and jet fuel.

<sup>e</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>f</sup> "Other" is electricity generated for distribution from wind, photovoltaic, and solar thermal energy.

<sup>g</sup> If applicable, from 1989, includes net imports of electricity generated from nonrenewable energy sources not shown in other columns. See data in appendix Table A8.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 29. Energy Consumption Estimates by Source, Selected Years 1960-1999, Arizona**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum											Nuclear Electric Power	Hydro-electric Power <sup>d</sup>	Wood and Waste	Other <sup>a,e</sup>	Net Inter-state Flow of Electricity/Losses <sup>f</sup>	Total <sup>g</sup>
			Asphalt & Road Oil <sup>a</sup>	Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	Kero-sene <sup>a</sup>	LPG <sup>a</sup>	Lubri-cants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Other <sup>a,c</sup>	Total						
			Thousand Barrels															Million kWh	
1960	10	136	863	699	2,787	4,721	64	724	275	12,363	125	0	22,622	0	2,975	—	—	-4,266	—
1965	337	154	1,110	478	3,528	5,545	31	1,056	299	14,997	82	0	27,125	0	4,410	—	—	1,933	—
1970	406	193	3,679	427	4,899	6,644	165	1,304	344	21,542	105	0	39,108	0	6,103	—	—	7,594	—
1975	4,392	156	2,331	358	10,143	7,075	213	1,119	472	27,704	5,942	39	55,395	0	7,240	—	—	4,887	—
1980	11,559	166	2,061	281	10,769	7,967	73	1,589	611	30,589	1,339	71	55,350	0	9,795	—	—	-24,227	—
1985	16,364	131	2,563	184	10,179	7,154	16	1,722	556	36,148	176	0	58,699	1,130	13,987	—	—	-38,272	—
1990	16,419	127	2,367	194	12,048	8,501	20	1,508	626	39,326	28	129	64,746	20,598	R <sup>h</sup> 7,667	—	—	R <sup>h</sup> -60,191	—
1991	16,805	125	2,181	188	10,370	9,642	36	1,700	560	40,593	201	216	65,687	25,096	R <sup>h</sup> 7,098	—	—	R <sup>h</sup> -73,316	—
1992	17,915	130	2,984	158	11,301	8,310	3	2,095	571	41,556	106	259	67,342	25,609	R <sup>h</sup> 6,911	—	—	R <sup>h</sup> -78,275	—
1993	18,991	115	2,328	128	13,549	7,892	3	1,843	581	43,026	192	131	69,673	22,049	R <sup>h</sup> 7,023	—	—	R <sup>h</sup> -68,667	—
1994	19,580	133	2,574	142	13,135	7,401	3	1,867	608	45,193	201	114	71,238	23,171	R <sup>h</sup> 7,670	—	—	R <sup>h</sup> -70,853	—
1995	16,682	120	3,138	139	14,607	7,588	4	1,938	597	47,159	82	107	75,359	26,985	R <sup>h</sup> 8,478	—	—	R <sup>h</sup> -63,369	—
1996	16,793	120	2,460	155	16,292	7,922	7	R <sup>h</sup> 1,625	580	49,417	109	R <sup>h</sup> 1,659	R <sup>h</sup> 80,223	28,840	R <sup>h</sup> 9,480	—	—	R <sup>h</sup> -60,493	—
1997	18,206	131	2,704	151	17,306	7,974	8	R <sup>h</sup> 1,204	612	48,884	15	R <sup>h</sup> 1,798	R <sup>h</sup> 80,656	29,314	R <sup>h</sup> 12,504	—	—	R <sup>h</sup> -72,899	—
1998	19,013	155	3,972	191	18,930	8,669	11	1,345	641	52,661	21	1,806	88,246	30,301	11,242	—	—	-78,273	—
1999	19,711	161	3,814	157	18,883	9,627	9	1,809	648	54,854	45	1,808	91,654	30,416	10,083	—	—	-84,239	—

  

Trillion Btu																			
1960	0.2	140.3	5.7	3.5	16.2	25.3	0.4	2.9	1.7	64.9	0.8	0.0	121.5	0.0	32.0	4.0	0.0	-14.6	283.4
1965	7.0	166.1	7.4	2.4	20.6	30.1	0.2	4.2	1.8	78.8	0.5	0.0	145.9	0.0	46.1	3.7	0.0	6.6	375.4
1970	8.6	204.4	24.4	2.2	28.5	36.4	0.9	4.9	2.1	113.2	0.7	0.0	213.3	0.0	64.0	4.3	0.0	25.9	520.6
1975	92.4	164.3	15.5	1.8	59.1	39.0	1.2	4.2	2.9	145.5	37.4	0.2	306.7	0.0	75.3	5.4	0.0	16.7	661.0
1980	245.0	174.0	13.7	1.4	62.7	43.9	0.4	5.8	3.7	160.7	8.4	0.4	301.2	0.0	101.8	R <sup>h</sup> 17.8	0.0	-82.7	R <sup>h</sup> 757.2
1985	342.0	137.3	17.0	0.9	59.3	39.4	0.1	6.2	3.4	189.9	1.1	0.0	317.3	12.2	146.1	R <sup>h</sup> 24.0	0.0	-130.6	R <sup>h</sup> 848.4
1990	343.6	130.8	15.7	1.0	70.2	47.3	0.1	5.5	3.8	206.6	0.2	0.8	351.1	220.0	<sup>h</sup> 79.8	R <sup>h</sup> 14.7	R <sup>h</sup> 3.9	-205.4	R <sup>h</sup> 938.4
1991	347.5	128.2	14.5	1.0	60.4	53.7	0.2	6.1	3.4	213.2	1.3	1.2	355.0	269.5	74.1	R <sup>h</sup> 15.1	R <sup>h</sup> 4.0	R <sup>h</sup> -250.2	R <sup>h</sup> 944.4
1992	369.0	133.7	19.8	0.8	65.8	46.4	(s)	7.6	3.5	218.3	0.7	1.5	364.4	273.4	71.5	R <sup>h</sup> 15.6	R <sup>h</sup> 4.1	R <sup>h</sup> -267.1	R <sup>h</sup> 964.5
1993	389.8	118.0	15.4	0.6	78.9	44.2	(s)	6.6	3.5	226.0	1.2	0.7	377.4	235.5	72.4	R <sup>h</sup> 13.9	R <sup>h</sup> 4.1	R <sup>h</sup> -234.3	R <sup>h</sup> 976.8
1994	402.3	137.1	17.1	0.7	76.5	41.9	(s)	6.8	3.7	R <sup>h</sup> 236.4	1.3	0.6	R <sup>h</sup> 385.0	247.4	79.1	R <sup>h</sup> 14.0	R <sup>h</sup> 4.2	-241.8	R <sup>h</sup> 1,027.3
1995	342.4	124.3	20.8	0.7	85.1	43.0	(s)	7.0	3.6	R <sup>h</sup> 245.9	0.5	0.6	R <sup>h</sup> 407.3	287.6	87.4	R <sup>h</sup> 16.3	R <sup>h</sup> 4.2	R <sup>h</sup> -216.2	R <sup>h</sup> 1,056.8
1996	343.2	121.7	16.3	0.8	94.9	44.9	(s)	R <sup>h</sup> 5.9	3.5	R <sup>h</sup> 257.8	0.7	R <sup>h</sup> 8.9	R <sup>h</sup> 433.7	306.4	98.0	R <sup>h</sup> 13.6	R <sup>h</sup> 4.2	R <sup>h</sup> -206.4	R <sup>h</sup> 1,114.3
1997	369.4	134.0	17.9	0.8	100.8	45.2	(s)	R <sup>h</sup> 4.4	3.7	R <sup>h</sup> 254.8	0.1	R <sup>h</sup> 9.7	R <sup>h</sup> 437.5	311.4	R <sup>h</sup> 129.5	R <sup>h</sup> 14.4	R <sup>h</sup> 4.2	R <sup>h</sup> -248.7	R <sup>h</sup> 1,151.7
1998	386.6	157.0	26.4	1.0	110.3	49.2	0.1	4.9	3.9	274.5	0.1	9.8	479.9	321.9	116.3	9.8	4.1	-267.1	1,208.5
1999	403.5	163.2	25.3	0.8	110.0	54.6	(s)	6.5	3.9	285.8	0.3	9.7	497.0	323.1	104.3	12.0	4.1	-287.4	1,219.8

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.  
<sup>b</sup> Includes supplemental gaseous fuels.  
<sup>c</sup> "Other" is the subtotal of 16 petroleum products consumed in the industrial sector. See a full description in Appendix A, Section 4, "Other Petroleum Products."  
<sup>d</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.  
<sup>e</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.  
<sup>f</sup> Net interstate flow of electricity is the difference between the amount of energy in the electricity sold within a State (including associated losses) and the energy input at the electric utilities within the State. A positive number

indicates that more electricity (including associated losses) came into the State than went out of the State during the year; conversely, a negative number indicates that more electricity (including associated losses) went out of the State than came into the State.  
<sup>g</sup> From 1989, "Total" does not equal the sum of the columns. Net imports of electricity generated from nonrenewable energy sources (shown in appendix Table A8) is included in the total but not in any other columns.  
<sup>h</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.  
kWh=kilowatthours. R=Revised data. — =Not applicable.  
(s)=Btu value less than 0.05 and physical unit value less than 0.5.  
Note: Totals may not equal sum of components due to independent rounding.  
Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.



**Table 30. Residential Energy Consumption Estimates, Selected Years 1960-1999, Arizona**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum				Wood Thousand Cords	Geothermal	Solar <sup>c</sup>	Electricity <sup>a</sup> Million Kilowatthours	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Total						Million Kilowatthours	
			Thousand Barrels									Thousand Barrels	
1960	0	27	47	0	397	445	138	—	—	1,355	—	3,369	—
1965	0	25	59	9	727	794	129	—	—	2,230	—	5,326	—
1970	0	30	98	68	840	1,006	151	—	—	4,327	—	10,486	—
1975	0	38	216	77	542	836	170	—	—	7,138	—	17,217	—
1980	0	30	2	0	657	659	R 439	—	—	9,637	—	23,434	—
1985	(s)	29	12	3	956	971	662	—	—	12,249	—	28,778	—
1990	(s)	30	11	(s)	772	783	411	—	—	15,378	—	R 33,640	—
1991	(s)	31	5	1	872	878	433	—	—	15,641	—	R 34,004	—
1992	1	28	5	2	938	946	456	—	—	16,230	—	R 34,615	—
1993	(s)	28	5	1	827	833	433	—	—	16,705	—	R 35,284	—
1994	(s)	30	4	2	844	849	424	—	—	18,212	—	R 38,008	—
1995	2	27	4	2	971	977	471	—	—	18,036	—	R 37,603	—
1996	(s)	28	7	3	784	794	470	—	—	19,746	—	R 41,152	—
1997	(s)	31	6	2	R 720	R 728	R 485	—	—	20,683	—	R 43,022	—
1998	(s)	36	4	3	1,028	1,035	427	—	—	21,611	—	44,644	—
1999	0	33	2	2	1,423	1,427	458	—	—	22,517	—	44,119	—

**Trillion Btu**

1960	0.0	28.4	0.3	0.0	1.6	1.9	2.8	0.0	0.0	4.6	37.6	11.5	49.1
1965	0.0	27.1	0.3	(s)	2.9	3.3	2.6	0.0	0.0	7.6	40.6	18.2	58.8
1970	0.0	31.4	0.6	0.4	3.2	4.1	3.0	0.0	0.0	14.8	53.3	35.8	89.1
1975	0.0	39.8	1.3	0.4	2.0	3.7	3.4	0.0	0.0	24.4	71.3	58.7	130.0
1980	0.0	30.9	(s)	0.0	2.4	2.4	8.8	0.0	0.0	32.9	74.9	80.0	154.9
1985	(s)	29.9	0.1	(s)	3.4	3.5	13.2	0.0	0.0	41.8	88.5	98.2	186.7
1990	(s)	31.3	0.1	(s)	2.8	2.9	8.2	e (s)	R e 3.7	52.5	R e 98.5	114.8	R e 213.3
1991	(s)	32.1	(s)	(s)	3.2	3.2	8.7	(s)	R 3.8	53.4	R 101.1	R 116.0	R 217.1
1992	(s)	29.3	(s)	(s)	3.4	3.4	9.1	(s)	R 3.8	55.4	R 101.1	R 118.1	R 219.2
1993	(s)	29.0	(s)	(s)	3.0	3.0	8.7	(s)	R 3.9	57.0	R 101.5	120.4	R 221.9
1994	(s)	30.5	(s)	(s)	3.1	3.1	8.5	(s)	R 4.0	62.1	R 108.2	129.7	R 237.9
1995	(s)	27.9	(s)	(s)	3.5	3.6	9.4	(s)	R 4.0	61.5	R 106.4	R 128.3	R 234.7
1996	(s)	28.0	(s)	(s)	2.8	2.9	9.4	(s)	R 4.0	67.4	R 111.7	R 140.4	R 252.1
1997	(s)	31.8	(s)	(s)	R 2.6	R 2.6	R 9.7	(s)	R 4.0	70.6	R 118.6	R 146.8	R 265.4
1998	(s)	36.7	(s)	(s)	3.7	3.8	8.5	(s)	3.9	73.7	126.7	152.3	279.0
1999	0.0	33.5	(s)	(s)	5.1	5.2	9.2	(s)	3.8	76.8	128.4	150.5	279.0

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Includes small amounts of solar thermal and photovoltaic energy consumed by the commercial sector that cannot be separately identified. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 31. Commercial Energy Consumption Estimates, Selected Years 1960-1999, Arizona**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum						Wood	Geothermal	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>c</sup>	Total <sup>d</sup>
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels						Thousand Cords	Million Kilowatthours	Million Kilowatthours			
1960	0	25	106	0	70	89	39	305	3	—	3,302	—	8,214	—
1965	0	19	131	2	128	137	17	416	2	—	3,044	—	7,268	—
1970	0	23	220	12	148	146	31	557	3	—	4,690	—	11,366	—
1975	0	33	485	14	96	177	83	855	3	—	7,162	—	17,277	—
1980	0	27	280	0	116	179	0	576	11	—	9,122	—	22,182	—
1985	1	25	476	2	169	140	(s)	787	R 18	—	12,295	—	28,885	—
1990	(s)	28	511	2	136	257	0	907	R 26	—	16,058	—	R 35,129	—
1991	(s)	28	303	2	154	372	11	842	R 28	—	15,802	—	R 34,352	—
1992	2	27	226	1	166	308	0	700	R 30	—	16,366	—	R 34,904	—
1993	1	28	167	1	146	191	0	506	35	—	16,714	—	R 35,302	—
1994	(s)	29	253	1	149	34	0	437	36	—	17,766	—	R 37,077	—
1995	3	28	261	1	171	35	0	469	36	—	18,562	—	R 38,700	—
1996	(s)	29	403	2	138	35	5	584	39	—	19,555	—	R 40,753	—
1997	(s)	30	515	4	R 127	35	0	R 681	R 53	—	20,520	—	R 42,684	—
1998	(s)	32	1,034	1	181	36	0	1,253	53	—	21,683	—	44,794	—
1999	0	31	559	5	251	36	0	851	64	—	22,688	—	44,453	—

  

Trillion Btu														
1960	0.0	26.2	0.6	0.0	0.3	0.5	0.2	1.6	0.1	0.0	11.3	39.1	28.0	67.1
1965	0.0	20.7	0.8	(s)	0.5	0.7	0.1	2.1	(s)	0.0	10.4	33.2	24.8	58.0
1970	0.0	24.0	1.3	0.1	0.6	0.8	0.2	2.9	0.1	0.0	16.0	43.0	38.8	81.8
1975	0.0	34.3	2.8	0.1	0.4	0.9	0.5	4.7	0.1	0.0	24.4	63.5	58.9	122.4
1980	0.0	28.7	1.6	0.0	0.4	0.9	0.0	3.0	0.2	0.0	31.1	63.1	75.7	138.8
1985	(s)	26.5	2.8	(s)	0.6	0.7	(s)	4.1	R 0.4	0.0	41.9	R 73.0	98.6	R 171.5
1990	(s)	29.3	3.0	(s)	0.5	1.3	0.0	4.8	R 0.5	e (s)	54.8	R e 89.4	R 119.9	R e 209.3
1991	(s)	28.3	1.8	(s)	0.6	2.0	0.1	4.4	R 0.6	(s)	53.9	R 87.1	R 117.2	R 204.3
1992	0.1	27.9	1.3	(s)	0.6	1.6	0.0	3.5	R 0.6	(s)	55.8	R 87.9	R 119.1	R 207.0
1993	(s)	28.3	1.0	(s)	0.5	1.0	0.0	2.5	0.7	(s)	57.0	88.6	R 120.4	R 209.0
1994	(s)	30.0	1.5	(s)	0.5	0.2	0.0	2.2	0.7	(s)	60.6	93.5	126.5	220.0
1995	0.1	29.3	1.5	(s)	0.6	0.2	0.0	2.3	0.7	(s)	63.3	95.7	R 132.0	R 227.8
1996	(s)	29.3	2.3	(s)	0.5	0.2	(s)	3.1	0.8	(s)	66.7	99.9	R 139.0	R 238.9
1997	(s)	30.8	3.0	(s)	0.5	0.2	0.0	3.7	R 1.1	(s)	70.0	R 105.6	R 145.6	R 251.2
1998	(s)	32.3	6.0	(s)	0.7	0.2	0.0	6.9	1.1	(s)	74.0	114.2	152.8	267.1
1999	0.0	31.9	3.3	(s)	0.9	0.2	0.0	4.4	1.3	(s)	77.4	115.0	151.7	266.7

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>d</sup> Small amounts of solar thermal and photovoltaic energy consumed in the commercial sector cannot be separately identified and are included in residential consumption.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

—=Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 32. Industrial Energy Consumption Estimates, Selected Years 1960-1999, Arizona**

Year	Coal Thousand Short Tons	Natural Gas <sup>a</sup> Billion Cubic Feet	Petroleum									Hydro-electric Power <sup>b</sup> Million kWh	Wood and Waste	Other <sup>b,d</sup>	Electricity <sup>b</sup>		Electrical System Energy Losses <sup>e</sup> Million kWh	Total
			Asphalt and Road Oil <sup>b</sup>	Distillate Fuel <sup>b</sup>	Kero-sene <sup>b</sup>	LPG <sup>b</sup>	Lubri-cants <sup>b</sup>	Motor Gasoline	Residual Fuel <sup>b</sup>	Other <sup>b,c</sup>	Total				Million kWh	Net Energy		
			Thousand Barrels															
1960	10	14	863	1,227	64	222	81	515	27	0	3,000	0	—	—	1,481	—	3,683	—
1965	4	55	1,110	1,545	21	161	93	437	20	0	3,387	0	—	—	3,331	—	7,952	—
1970	5	58	3,679	1,387	85	253	115	456	55	0	6,031	13	—	—	4,751	—	11,514	—
1975	133	51	2,331	3,113	122	430	205	440	102	39	6,781	14	—	—	6,868	—	16,566	—
1980	643	38	2,061	3,570	73	739	264	309	154	71	7,241	15	—	—	8,003	—	19,461	—
1985	1,915	17	2,563	1,850	11	505	241	404	31	0	5,605	15	—	—	8,457	—	19,869	—
1990	660	18	2,367	3,103	17	545	271	503	18	129	6,952	f 0	—	—	10,034	—	R 21,950	—
1991	689	19	2,181	2,617	34	617	242	368	176	216	6,452	0	—	—	10,405	—	R 22,620	—
1992	632	20	2,984	2,401	1	934	247	346	94	259	7,265	0	—	—	11,055	—	R 23,578	—
1993	674	21	2,328	1,707	1	812	251	338	176	131	5,745	0	—	—	10,989	—	R 23,211	—
1994	727	26	2,574	1,784	(s)	789	263	366	45	114	5,937	0	—	—	11,303	—	R 23,589	—
1995	657	28	3,138	2,649	1	745	258	410	70	107	7,377	0	—	—	11,992	—	R 25,002	—
1996	675	27	2,460	2,768	2	R 667	251	437	81	R 1,659	R 8,324	0	—	—	12,783	—	R 26,640	—
1997	702	28	2,704	3,324	2	R 331	265	457	14	R 1,798	R 8,896	0	—	—	13,253	—	R 27,568	—
1998	698	28	3,972	3,338	7	128	277	473	21	1,806	10,022	0	—	—	12,549	—	25,924	—
1999	685	27	3,814	2,460	2	116	280	334	33	1,808	8,848	0	—	—	12,456	—	24,406	—

**Trillion Btu**

1960	0.2	14.2	5.7	7.1	0.4	0.9	0.5	2.7	0.2	0.0	17.5	0.0	1.0	0.0	5.1	37.9	12.6	50.5
1965	0.1	59.4	7.4	9.0	0.1	0.6	0.6	2.3	0.1	0.0	20.1	0.0	1.1	0.0	11.4	92.0	27.1	119.1
1970	0.1	61.2	24.4	8.1	0.5	1.0	0.7	2.4	0.3	0.0	37.4	0.1	1.3	0.0	16.2	116.3	39.3	155.6
1975	2.6	53.4	15.5	18.1	0.7	1.6	1.2	2.3	0.6	0.2	40.3	0.1	1.9	0.0	23.4	121.9	56.5	178.4
1980	13.1	39.5	13.7	20.8	0.4	2.7	1.6	1.6	1.0	0.4	42.2	0.2	R 8.9	0.0	27.3	R 131.2	66.4	R 197.6
1985	38.8	17.3	17.0	10.8	0.1	1.8	1.5	2.1	0.2	0.0	33.4	0.2	R 10.4	0.0	28.9	R 128.9	67.8	R 196.7
1990	13.3	19.0	15.7	18.1	0.1	2.0	1.6	2.6	0.1	0.8	41.0	f 0.0	f 0.2	f 0.2	34.2	R f 113.7	74.9	R f 188.6
1991	13.7	19.7	14.5	15.2	0.2	2.2	1.5	1.9	1.1	1.2	37.9	0.0	R 5.9	0.2	35.5	R 113.0	R 77.2	R 190.1
1992	12.8	20.4	19.8	14.0	(s)	3.4	1.5	1.8	0.6	1.5	42.6	0.0	R 5.9	0.2	37.7	R 119.6	R 80.4	R 200.1
1993	13.5	21.8	15.4	9.9	(s)	2.9	1.5	1.8	1.1	0.7	33.4	0.0	R 4.6	0.2	37.5	R 111.0	79.2	R 190.2
1994	14.7	26.7	17.1	10.4	(s)	2.9	1.6	1.9	0.3	0.6	34.8	0.0	R 4.8	0.2	38.6	R 119.7	80.5	R 200.2
1995	13.1	28.8	20.8	15.4	(s)	2.7	1.6	R 2.1	0.4	0.6	43.7	0.0	R 6.1	0.2	40.9	R 132.8	R 85.3	R 218.1
1996	13.4	27.3	16.3	16.1	(s)	R 2.4	1.5	2.3	0.5	R 8.9	R 48.1	0.0	R 3.4	0.2	43.6	R 136.0	R 90.9	R 226.9
1997	13.7	28.5	17.9	19.4	(s)	R 1.2	1.6	2.4	0.1	R 9.7	R 52.3	0.0	R 3.6	0.2	45.2	R 143.6	R 94.1	R 237.7
1998	13.4	28.7	26.4	19.4	(s)	0.5	1.7	2.5	0.1	9.8	60.3	0.0	0.2	0.2	42.8	145.7	88.5	234.2
1999	13.2	27.5	25.3	14.3	(s)	0.4	1.7	1.7	0.2	9.7	53.4	0.0	1.5	0.2	42.5	138.4	83.3	221.6

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>e</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>f</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

R=Revised data.

kWh=kilowatthours. — =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 33. Transportation Energy Consumption Estimates, Selected Years 1960-1999, Arizona**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum								Ethanol <sup>c</sup>	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total <sup>c</sup>
			Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	LPG <sup>a</sup>	Lubricants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total					
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels								Thousand Barrels	Million Kilowatthours		Million Kilowatthours	
1960	(s)	16	699	1,404	4,721	34	193	11,759	17	18,829	0	0	—	0	—
1965	(s)	18	478	1,790	5,545	40	206	14,423	0	22,482	0	0	—	0	—
1970	(s)	24	427	3,192	6,644	63	229	20,940	0	31,494	0	0	—	0	—
1975	(s)	17	358	4,756	6,995	51	267	27,087	0	39,514	0	0	—	0	—
1980	0	21	281	6,480	7,967	78	347	30,100	0	45,253	0	0	—	0	—
1985	0	19	184	7,630	7,154	92	316	35,604	0	50,979	<sup>e</sup> 0	0	—	0	—
1990	0	25	194	8,223	8,501	55	355	38,566	0	55,895	<sup>R</sup> 0	0	—	0	—
1991	0	24	188	7,300	9,642	57	318	39,853	0	57,357	<sup>R</sup> 0	0	—	0	—
1992	0	23	158	8,546	8,310	57	324	40,902	0	58,297	<sup>R</sup> 0	0	—	0	—
1993	0	17	128	11,575	7,892	58	330	42,497	0	62,479	<sup>R</sup> 80	0	—	0	—
1994	0	25	142	11,026	7,401	84	345	44,793	0	63,791	<sup>R</sup> 208	0	—	0	—
1995	0	18	139	11,586	7,588	51	339	46,714	0	66,417	<sup>R</sup> 655	0	—	0	—
1996	0	17	155	13,013	7,922	<sup>R</sup> 35	329	48,944	0	<sup>R</sup> 70,398	<sup>R</sup> 553	0	—	0	—
1997	0	19	151	13,351	7,974	<sup>R</sup> 26	347	48,391	0	<sup>R</sup> 70,241	<sup>R</sup> 549	0	—	0	—
1998	0	20	191	14,436	8,669	7	364	52,152	0	75,819	423	0	—	0	—
1999	0	19	157	15,786	9,627	18	368	54,484	0	80,441	366	0	—	0	—
<b>Trillion Btu</b>															
1960	(s)	16.5	3.5	8.2	25.3	0.1	1.2	61.8	0.1	100.2	0.0	0.0	116.7	0.0	116.7
1965	(s)	19.4	2.4	10.4	30.1	0.2	1.2	75.8	0.0	120.1	0.0	0.0	139.4	0.0	139.4
1970	(s)	25.4	2.2	18.6	36.4	0.2	1.4	110.0	0.0	168.8	0.0	0.0	194.1	0.0	194.1
1975	(s)	17.9	1.8	27.7	38.6	0.2	1.6	142.3	0.0	212.2	0.0	0.0	230.1	0.0	230.1
1980	0.0	22.3	1.4	37.7	43.9	0.3	2.1	158.1	0.0	243.6	0.0	0.0	265.9	0.0	265.9
1985	0.0	19.4	0.9	44.4	39.4	0.3	1.9	187.0	0.0	274.1	<sup>e</sup> 0.0	0.0	<sup>e</sup> 293.5	0.0	<sup>e</sup> 293.5
1990	0.0	26.1	1.0	47.9	47.3	0.2	2.2	202.6	0.0	301.1	<sup>R</sup> 0.0	0.0	327.2	0.0	327.2
1991	0.0	24.1	1.0	42.5	53.7	0.2	1.9	209.3	0.0	308.7	<sup>R</sup> 0.0	0.0	332.8	0.0	332.8
1992	0.0	24.1	0.8	49.8	46.4	0.2	2.0	214.9	0.0	314.0	<sup>R</sup> 0.0	0.0	338.2	0.0	338.2
1993	0.0	17.9	0.6	67.4	44.2	0.2	2.0	223.2	0.0	337.7	0.3	0.0	355.6	0.0	355.6
1994	0.0	25.7	0.7	64.2	41.9	0.3	2.1	<sup>R</sup> 234.3	0.0	<sup>R</sup> 343.5	0.7	0.0	<sup>R</sup> 369.2	0.0	<sup>R</sup> 369.2
1995	0.0	19.1	0.7	67.5	43.0	0.2	2.1	<sup>R</sup> 243.6	0.0	<sup>R</sup> 357.1	<sup>R</sup> 2.3	0.0	<sup>R</sup> 376.2	0.0	<sup>R</sup> 376.2
1996	0.0	17.5	0.8	75.8	44.9	0.1	2.0	<sup>R</sup> 255.3	0.0	<sup>R</sup> 378.9	<sup>R</sup> 2.0	0.0	<sup>R</sup> 396.5	0.0	<sup>R</sup> 396.5
1997	0.0	19.2	0.8	77.8	45.2	0.1	2.1	<sup>R</sup> 252.3	0.0	<sup>R</sup> 378.2	<sup>R</sup> 1.9	0.0	<sup>R</sup> 397.4	0.0	<sup>R</sup> 397.4
1998	0.0	20.1	1.0	84.1	49.2	(s)	2.2	271.8	0.0	408.3	1.5	0.0	428.3	0.0	428.3
1999	0.0	19.0	0.8	92.0	54.6	0.1	2.2	283.9	0.0	433.5	1.3	0.0	452.5	0.0	452.5

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels. Transportation use of natural gas is gas consumed in the operation of pipelines, primarily in compressors, and, since 1990, is also gas consumed as vehicle fuel.

<sup>c</sup> Ethanol blended into motor gasoline, which is accounted for under motor gasoline, is shown separately here to display the use of renewable energy by the transportation sector and is included only once in the total.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1980 and 1981 due to the expanded coverage of renewable energy sources beginning in 1981.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 34. Estimates of Energy Input at Electric Utilities, Selected Years, 1960-1999, Arizona**

Year	Coal	Natural Gas <sup>a</sup>	Petroleum				Nuclear Electric Power	Hydroelectric Power <sup>e</sup>	Wood and Waste	Geothermal Energy	Other <sup>b,f</sup>	Total <sup>g</sup>
			Heavy Oil <sup>b,c</sup>	Light Oil <sup>b,d</sup>	Petroleum Coke <sup>b</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels				Million Kilowatthours					
1960	0	53	41	3	0	44	0	2,975	18	0	0	—
1965	333	37	44	3	0	47	0	4,410	0	0	0	—
1970	401	59	19	1	0	20	0	6,089	0	0	0	—
1975	4,259	18	5,756	1,653	0	7,410	0	7,226	0	0	0	—
1980	10,916	50	1,185	436	0	1,622	0	9,780	0	0	0	—
1985	14,448	42	145	211	0	357	1,130	13,972	0	0	0	—
1990	15,758	24	10	200	0	210	20,598	7,667	0	0	0	—
1991	16,116	23	14	145	0	159	25,096	7,098	0	0	0	—
1992	17,280	31	11	123	0	135	25,609	6,911	0	0	0	—
1993	18,316	20	16	95	0	110	22,049	7,023	0	0	0	—
1994	18,853	24	155	68	0	224	23,171	7,670	0	0	0	—
1995	16,021	19	12	107	0	119	26,985	8,478	0	0	0	—
1996	16,118	19	23	101	0	124	28,840	9,480	0	0	0	—
1997	17,504	23	(s)	110	0	110	29,314	<sup>R</sup> 12,504	0	0	0	—
1998	18,316	39	0	117	0	117	30,301	11,242	0	0	0	—
1999	19,025	51	12	75	0	88	30,416	10,083	0	0	0	—

  

Trillion Btu												
1960	0.0	55.1	0.3	(s)	0.0	0.3	0.0	32.0	0.2	0.0	0.0	87.6
1965	6.9	39.5	0.3	(s)	0.0	0.3	0.0	46.1	0.0	0.0	0.0	92.9
1970	8.5	62.4	0.1	(s)	0.0	0.1	0.0	63.9	0.0	0.0	0.0	134.9
1975	89.8	18.9	36.2	9.6	0.0	45.8	0.0	75.2	0.0	0.0	0.0	229.8
1980	231.9	52.5	7.5	2.5	0.0	10.0	0.0	101.6	0.0	0.0	0.0	396.0
1985	303.2	44.2	0.9	1.2	0.0	2.1	12.2	146.0	0.0	0.0	0.0	507.7
1990	330.3	25.1	0.1	1.2	0.0	1.2	220.0	79.8	0.0	0.0	0.0	656.4
1991	333.8	23.9	0.1	0.8	0.0	0.9	269.5	74.1	0.0	0.0	0.0	703.3
1992	356.1	31.9	0.1	0.7	0.0	0.8	273.4	71.5	0.0	0.0	0.0	733.7
1993	376.3	21.0	0.1	0.6	0.0	0.7	235.5	72.4	0.0	0.0	0.0	705.8
1994	387.6	24.3	1.0	0.4	0.0	1.4	247.4	79.1	0.0	0.0	0.0	739.8
1995	329.2	19.3	0.1	0.6	0.0	0.7	287.6	87.4	0.0	0.0	0.0	727.7
1996	329.8	19.5	0.1	0.6	0.0	0.7	306.4	98.0	0.0	0.0	0.0	<sup>R</sup> 754.5
1997	355.6	23.7	(s)	0.6	0.0	0.6	311.4	<sup>R</sup> 129.5	0.0	0.0	0.0	<sup>R</sup> 821.0
1998	373.1	39.2	0.0	0.7	0.0	0.7	321.9	116.3	0.0	0.0	0.0	851.2
1999	390.3	51.4	0.1	0.4	0.0	0.5	323.1	104.3	0.0	0.0	0.0	869.6

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> Prior to 1980, based on oil used in steam plants. Since 1980, heavy oil includes fuel oil nos. 4, 5, and 6 and residual fuel oils.

<sup>d</sup> Prior to 1980, based on oil used in internal combustion and gas turbine engine plants. Since 1980, light oil includes fuel oil nos. 1 and 2, kerosene, and jet fuel.

<sup>e</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>f</sup> "Other" is electricity generated for distribution from wind, photovoltaic, and solar thermal energy.

<sup>g</sup> If applicable, from 1989, includes net imports of electricity generated from nonrenewable energy sources not shown in other columns. See data in appendix Table A8.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 35. Energy Consumption Estimates by Source, Selected Years 1960-1999, Arkansas**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum											Nuclear Electric Power	Hydro-electric Power <sup>d</sup>	Wood and Waste	Other <sup>a,e</sup>	Net Inter-state Flow of Electricity/Losses <sup>f</sup>	Total <sup>g</sup>
			Asphalt & Road Oil <sup>a</sup>	Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	Kero-sene <sup>a</sup>	LPG <sup>a</sup>	Lubri-cants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Other <sup>a,c</sup>	Total						
			Thousand Barrels															Million kWh	
1960	14	215	1,003	177	2,021	2,237	565	4,823	543	14,675	539	R 1,892	R 28,475	0	992	—	—	2,208	—
1965	6	277	1,295	482	2,828	2,094	386	5,599	468	17,922	453	R 2,807	R 34,332	0	1,080	—	—	7,475	—
1970	0	382	2,104	293	5,462	2,204	821	10,198	531	22,457	935	R 2,830	R 47,835	0	2,160	—	—	6,464	—
1975	40	258	2,276	254	9,566	1,995	688	9,467	616	27,611	9,086	R 3,017	R 64,577	4,874	3,433	—	—	18,078	—
1980	2,076	274	2,770	275	10,686	2,035	571	4,847	700	26,490	4,981	R 3,975	R 57,331	7,833	1,695	—	—	28,164	—
1985	12,682	196	1,263	86	14,911	2,030	156	3,673	637	26,607	735	R 2,433	R 52,531	9,889	4,434	—	—	-30,696	—
1990	12,092	232	495	125	14,258	1,693	38	3,463	717	28,997	231	R 1,843	R 51,860	11,282	R <sup>h</sup> 3,698	—	—	R -29,834	—
1991	12,261	209	533	144	13,478	1,792	36	3,309	641	28,995	146	R 1,608	R 50,684	12,662	R 3,561	—	—	R -30,365	—
1992	12,538	225	1,174	152	15,340	1,134	22	3,012	654	29,401	31	R 1,849	R 52,768	11,326	R 3,382	—	—	R -27,435	—
1993	11,447	231	1,453	134	15,659	1,031	28	3,478	666	30,472	224	R 1,799	R 54,945	13,522	R 4,511	—	—	R -20,483	—
1994	12,596	244	1,066	157	17,162	1,634	28	3,378	696	30,874	323	R 1,882	R 57,198	13,924	R 3,465	—	—	R -23,664	—
1995	13,540	257	1,246	143	16,551	1,179	39	3,229	684	32,121	223	R 1,798	R 57,213	11,658	R 3,218	—	—	R -16,483	—
1996	14,816	271	975	121	16,587	1,534	26	R 3,116	664	32,081	199	R 7,182	R 62,485	13,357	R 2,800	—	—	R -22,935	—
1997	14,069	263	1,012	135	16,785	1,539	34	R 3,068	701	33,184	48	R 7,679	R 64,186	14,208	R 3,513	—	—	R -19,359	—
1998	14,563	273	859	122	17,491	1,527	39	2,322	734	33,261	103	7,540	63,999	13,097	3,117	—	—	-14,900	—
1999	15,293	261	1,023	118	18,366	4,575	53	5,973	742	33,698	112	7,530	72,190	12,920	2,694	—	—	-19,038	—

  

Trillion Btu																			
1960	0.4	222.2	6.7	0.9	11.8	12.0	3.2	19.3	3.3	77.1	3.4	R 11.3	R 148.9	0.0	10.7	37.4	0.0	7.5	R 427.1
1965	0.2	277.7	8.6	2.4	16.5	11.2	2.2	22.5	2.8	94.1	2.8	R 16.8	R 180.0	0.0	11.3	35.1	0.0	25.5	R 529.8
1970	0.0	383.5	14.0	1.5	31.8	11.9	4.7	38.5	3.2	118.0	5.9	R 16.9	R 246.3	0.0	22.7	34.3	0.0	22.1	708.8
1975	0.9	257.4	15.1	1.3	55.7	10.8	3.9	35.2	3.7	145.0	57.1	R 17.5	R 345.4	53.7	35.7	35.9	0.0	61.7	R 790.7
1980	36.6	274.0	18.4	1.4	62.2	11.0	3.2	17.8	4.2	139.1	31.3	R 22.5	R 311.3	85.4	17.6	R 56.8	0.0	96.1	R 877.9
1985	219.8	199.3	8.4	0.4	86.9	11.0	0.9	13.2	3.9	139.8	4.6	R 13.7	R 282.8	106.9	46.3	R 62.5	0.0	-104.7	R 813.0
1990	212.7	234.5	3.3	0.6	83.1	9.2	0.2	12.6	4.3	152.3	1.5	R 10.5	R 277.6	120.5	<sup>h</sup> 38.5	R 81.7	R <sup>h</sup> 1.4	-101.8	R <sup>h</sup> 865.2
1991	216.1	212.7	3.5	0.7	78.5	9.7	0.2	12.0	3.9	152.3	0.9	R 9.3	R 271.1	136.0	37.2	R 79.4	R 1.4	R -103.6	R 850.3
1992	220.7	226.6	7.8	0.8	89.4	6.2	0.1	10.9	4.0	154.4	0.2	R 10.6	R 284.4	120.9	35.0	R 84.0	R 1.4	R -93.6	R 879.5
1993	200.4	234.4	9.6	0.7	91.2	5.7	0.2	12.5	4.0	160.1	1.4	10.4	295.8	144.4	46.5	R 91.2	R 1.4	R -69.9	R 944.3
1994	221.9	249.8	7.1	0.8	100.0	9.1	0.2	12.3	4.2	R 161.5	2.0	10.9	R 307.9	148.6	35.7	R 82.9	R 1.4	R -80.7	R 967.6
1995	237.4	276.6	8.3	0.7	96.4	6.7	0.2	11.7	4.1	R 167.5	1.4	R 10.4	R 307.4	124.2	33.2	R 86.7	R 1.4	R -56.2	R 1,010.8
1996	260.2	277.7	6.5	0.6	96.6	8.7	0.1	R 11.3	4.0	R 167.3	1.3	R 39.3	R 335.7	141.9	R 29.0	R 76.2	R 1.4	R -78.3	R 1,043.7
1997	246.8	267.0	6.7	0.7	97.8	8.7	0.2	R 11.1	4.3	R 173.0	0.3	R 42.2	R 344.9	150.9	R 36.4	R 74.1	1.3	R -66.1	R 1,055.4
1998	254.6	279.3	5.7	0.6	101.9	8.7	0.2	8.4	4.5	173.4	0.6	41.4	345.3	139.1	32.2	58.3	1.2	-50.8	1,059.2
1999	266.9	265.5	6.8	0.6	107.0	25.9	0.3	21.6	4.5	175.6	0.7	41.1	384.1	137.2	27.9	185.8	1.2	-65.0	1,203.7

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.  
<sup>b</sup> Includes supplemental gaseous fuels.  
<sup>c</sup> "Other" is the subtotal of 16 petroleum products consumed in the industrial sector. See a full description in Appendix A, Section 4, "Other Petroleum Products."  
<sup>d</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.  
<sup>e</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.  
<sup>f</sup> Net interstate flow of electricity is the difference between the amount of energy in the electricity sold within a State (including associated losses) and the energy input at the electric utilities within the State. A positive number

indicates that more electricity (including associated losses) came into the State than went out of the State during the year; conversely, a negative number indicates that more electricity (including associated losses) went out of the State than came into the State.  
<sup>g</sup> From 1989, "Total" does not equal the sum of the columns. Net imports of electricity generated from nonrenewable energy sources (shown in appendix Table A8) is included in the total but not in any other columns.  
<sup>h</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.  
kWh=kilowatthours. R=Revised data. — =Not applicable.  
Note: Totals may not equal sum of components due to independent rounding.  
Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 36. Residential Energy Consumption Estimates, Selected Years 1960-1999, Arkansas**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum				Wood Thousand Cords	Geothermal	Solar <sup>c</sup>	Electricity <sup>a</sup> Million Kilowatthours	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Total						Million Kilowatthours	
												Thousand Barrels	
1960	0	33	24	62	2,831	2,918	969	—	—	1,339	—	3,331	—
1965	0	37	43	63	3,420	3,527	667	—	—	2,333	—	5,571	—
1970	0	60	70	147	6,552	6,769	417	—	—	4,321	—	10,472	—
1975	0	49	161	128	5,162	5,451	430	—	—	7,751	—	18,697	—
1980	2	47	152	0	2,142	2,294	318	—	—	10,227	—	24,869	—
1985	(s)	40	1	31	2,083	2,114	173	—	—	8,936	—	20,994	—
1990	(s)	39	(s)	20	1,851	1,871	246	—	—	10,558	—	R 23,096	—
1991	(s)	41	1	14	1,674	1,688	259	—	—	11,001	—	R 23,915	—
1992	1	39	13	7	1,498	1,518	272	—	—	10,440	—	R 22,266	—
1993	(s)	46	1	10	1,708	1,718	242	—	—	11,762	—	R 24,843	—
1994	(s)	42	1	6	1,669	1,676	237	—	—	11,642	—	R 24,296	—
1995	0	41	2	14	1,497	1,513	263	—	—	12,417	—	R 25,889	—
1996	0	46	1	12	1,490	1,503	R 262	—	—	12,934	—	R 26,955	—
1997	(s)	42	1	19	R 1,577	R 1,596	R 117	—	—	12,990	—	R 27,020	—
1998	(s)	38	(s)	15	1,169	1,184	104	—	—	14,339	—	29,622	—
1999	0	36	1	36	3,027	3,064	111	—	—	14,045	—	27,519	—
<b>Trillion Btu</b>													
1960	0.0	34.4	0.1	0.4	11.4	11.9	19.4	0.0	0.0	4.6	70.2	11.4	81.6
1965	0.0	36.5	0.3	0.4	13.7	14.3	13.3	0.0	0.0	8.0	72.2	19.0	91.2
1970	0.0	60.0	0.4	0.8	24.8	26.0	8.3	0.0	0.0	14.7	109.1	35.7	144.8
1975	0.0	48.3	0.9	0.7	19.2	20.8	8.6	0.0	0.0	26.4	104.2	63.8	168.0
1980	0.1	46.6	0.9	0.0	7.9	8.8	6.4	0.0	0.0	34.9	96.6	84.9	181.5
1985	(s)	40.9	(s)	0.2	7.5	7.7	3.5	0.0	0.0	30.5	82.5	71.6	154.1
1990	(s)	39.5	(s)	0.1	6.7	6.8	4.9	e 0.1	R e 1.3	36.0	R e 88.7	78.8	R e 167.5
1991	(s)	41.3	(s)	0.1	6.0	6.1	5.2	0.1	R 1.3	37.5	R 91.6	R 81.6	R 173.2
1992	(s)	39.7	0.1	(s)	5.4	5.5	5.4	0.1	R 1.3	35.6	R 87.8	R 76.0	R 163.8
1993	(s)	46.1	(s)	0.1	6.2	6.2	4.8	0.1	R 1.3	40.1	R 98.7	84.8	R 183.5
1994	(s)	42.4	(s)	(s)	6.1	6.1	4.7	0.1	R 1.3	39.7	R 94.4	82.9	R 177.3
1995	0.0	44.5	(s)	0.1	5.4	5.5	5.3	0.1	R 1.3	42.4	R 99.1	88.3	R 187.4
1996	0.0	47.5	(s)	0.1	5.4	5.5	R 5.2	0.1	R 1.2	44.1	R 103.7	R 92.0	R 195.7
1997	(s)	43.0	(s)	0.1	R 5.7	R 5.8	R 2.3	0.1	R 1.2	44.3	R 96.8	R 92.2	R 189.0
1998	(s)	39.1	(s)	0.1	4.2	4.3	2.1	0.1	1.1	48.9	95.7	101.1	196.7
1999	0.0	36.9	(s)	0.2	10.9	11.2	2.2	0.2	1.0	47.9	99.4	93.9	193.3

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Includes small amounts of solar thermal and photovoltaic energy consumed by the commercial sector that cannot be separately identified. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 37. Commercial Energy Consumption Estimates, Selected Years 1960-1999, Arkansas**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum						Wood	Geothermal	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>c</sup>	Total <sup>d</sup>
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels						Thousand Cords	Million Kilowatthours	Million Kilowatthours			
1960	0	17	14	38	500	151	103	806	18	—	1,161	—	2,888	—
1965	0	28	24	39	604	127	88	883	13	—	1,834	—	4,379	—
1970	0	39	40	90	1,156	181	41	1,508	8	—	2,789	—	6,760	—
1975	0	33	92	79	911	143	1,077	2,302	8	—	4,382	—	10,570	—
1980	4	31	112	132	378	162	437	1,221	8	—	5,326	—	12,951	—
1985	1	27	1,172	84	368	119	0	1,743	R 5	—	5,848	—	13,739	—
1990	(s)	25	439	1	327	142	0	909	R 16	—	6,681	—	R 14,616	—
1991	(s)	26	342	2	295	81	0	720	R 16	—	6,922	—	R 15,048	—
1992	1	25	378	5	264	71	4	722	R 18	—	6,760	—	R 14,417	—
1993	(s)	29	426	5	301	28	1	762	19	—	7,292	—	R 15,402	—
1994	(s)	27	435	4	294	29	0	763	20	—	7,451	—	R 15,550	—
1995	0	27	249	5	264	29	0	547	20	—	7,771	—	R 16,203	—
1996	0	31	255	5	263	29	(s)	552	22	—	8,063	—	R 16,804	—
1997	(s)	29	193	5	R 278	28	0	R 505	R 13	—	8,236	—	R 17,131	—
1998	(s)	28	246	7	206	29	0	488	13	—	8,910	—	18,406	—
1999	0	28	254	4	534	28	0	821	16	—	9,064	—	17,758	—

**Trillion Btu**

1960	0.0	17.8	0.1	0.2	2.0	0.8	0.6	3.7	0.4	0.0	4.0	25.8	9.9	35.7
1965	0.0	28.0	0.1	0.2	2.4	0.7	0.6	4.0	0.3	0.0	6.3	38.5	14.9	53.4
1970	0.0	39.3	0.2	0.5	4.4	0.9	0.3	6.3	0.2	0.0	9.5	55.3	23.1	78.4
1975	0.0	33.1	0.5	0.4	3.4	0.8	6.8	11.9	0.2	0.0	15.0	60.1	36.1	96.2
1980	0.1	30.5	0.6	0.7	1.4	0.9	2.7	6.4	0.2	0.0	18.2	55.3	44.2	99.5
1985	(s)	27.2	6.8	0.5	1.3	0.6	0.0	9.3	R 0.1	0.0	20.0	R 56.5	46.9	R 103.4
1990	(s)	25.3	2.6	(s)	1.2	0.7	0.0	4.5	R 0.3	e (s)	22.8	R e 52.9	49.9	R e 102.8
1991	(s)	26.4	2.0	(s)	1.1	0.4	0.0	3.5	R 0.3	(s)	23.6	R 53.9	R 51.3	R 105.2
1992	(s)	25.5	2.2	(s)	1.0	0.4	(s)	3.6	R 0.4	(s)	23.1	R 52.5	R 49.2	R 101.7
1993	(s)	29.4	2.5	(s)	1.1	0.1	(s)	3.8	0.4	(s)	24.9	58.4	52.6	R 110.9
1994	(s)	28.0	2.5	(s)	1.1	0.1	0.0	3.8	0.4	(s)	25.4	57.6	53.1	110.7
1995	0.0	29.7	1.4	(s)	1.0	0.2	0.0	2.6	0.4	(s)	26.5	59.2	R 55.3	R 114.5
1996	0.0	31.8	1.5	(s)	1.0	0.2	(s)	2.6	0.4	(s)	27.5	62.4	57.3	R 119.7
1997	(s)	29.8	1.1	(s)	1.0	0.1	0.0	2.3	R 0.3	(s)	28.1	R 60.5	R 58.5	R 119.0
1998	(s)	28.7	1.4	(s)	0.7	0.1	0.0	2.4	0.3	(s)	30.4	61.8	62.8	124.6
1999	0.0	28.4	1.5	(s)	1.9	0.1	0.0	3.6	0.3	0.0	30.9	63.2	60.6	123.8

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>d</sup> Small amounts of solar thermal and photovoltaic energy consumed in the commercial sector cannot be separately identified and are included in residential consumption.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.



**Table 38. Industrial Energy Consumption Estimates, Selected Years 1960-1999, Arkansas**

Year	Coal	Natural Gas <sup>a</sup>	Petroleum									Hydro-electric Power <sup>b</sup>	Wood and Waste	Other <sup>b,d</sup>	Electricity <sup>b</sup>	Net Energy	Electrical System Energy Losses <sup>e</sup>	Total
			Asphalt and Road Oil <sup>b</sup>	Distillate Fuel <sup>b</sup>	Kero-sene <sup>b</sup>	LPG <sup>b</sup>	Lubri-cants <sup>b</sup>	Motor Gasoline	Residual Fuel <sup>b</sup>	Other <sup>b,c</sup>	Total							
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels									Million kWh	Million kWh	Million kWh				
1960	14	108	1,003	1,055	465	1,183	269	431	315	R 1,892	R 6,614	0	—	—	3,161	—	7,864	—
1965	6	134	1,295	1,057	283	1,141	163	485	291	R 2,807	R 7,522	0	—	—	4,883	—	11,660	—
1970	0	162	2,104	1,962	584	1,798	231	291	191	R 2,830	R 9,992	0	—	—	6,333	—	15,346	—
1975	40	132	2,276	2,841	480	2,715	308	169	3,634	R 3,017	R 15,440	0	—	—	5,994	—	14,459	—
1980	296	126	2,770	3,544	439	2,122	268	51	1,438	R 3,975	R 14,608	0	—	—	10,946	—	26,617	—
1985	379	109	1,263	6,041	41	1,076	244	630	726	R 2,433	R 12,455	0	—	—	9,049	—	21,260	—
1990	256	127	495	3,567	17	1,202	274	416	217	R 1,843	R 8,033	f 0	—	—	10,126	—	R 22,152	—
1991	283	106	533	2,675	20	1,262	246	453	145	R 1,608	R 6,943	0	—	—	10,518	—	R 22,864	—
1992	295	125	1,174	4,390	9	1,188	250	439	27	R 1,849	R 9,326	R 2	—	—	11,251	—	R 23,997	—
1993	330	126	1,453	3,800	13	1,400	255	393	219	R 1,799	R 9,332	R 3	—	—	12,609	—	R 26,632	—
1994	346	139	1,066	3,596	17	1,290	266	425	269	R 1,882	R 8,811	R 3	—	—	13,526	—	R 28,227	—
1995	325	144	1,246	3,341	20	1,416	262	449	207	R 1,798	R 8,740	0	—	—	14,483	—	R 30,196	—
1996	348	147	975	2,979	9	R 1,317	254	454	118	R 7,182	R 13,287	R 3	—	—	15,139	—	R 31,551	—
1997	297	155	1,012	2,852	10	R 1,171	268	472	21	R 7,679	R 13,485	R 2	—	—	15,632	—	R 32,517	—
1998	287	156	859	2,621	17	915	281	648	4	7,540	12,884	3	—	—	16,066	—	33,189	—
1999	319	147	1,023	3,445	13	1,955	284	549	20	7,530	14,820	1	—	—	16,680	—	32,681	—

  

Trillion Btu																		
1960	0.4	112.1	6.7	6.1	2.6	4.7	1.6	2.3	2.0	R 41.3	R 37.4	0.0	17.7	0.0	10.8	R 178.3	26.8	R 205.2
1965	0.2	134.2	8.6	6.2	1.6	4.6	1.0	2.5	1.8	R 16.8	R 43.1	0.0	21.6	0.0	16.7	R 215.7	39.8	R 255.5
1970	0.0	162.8	14.0	11.4	3.3	6.8	1.4	1.5	1.2	R 16.9	56.6	0.0	25.8	0.0	21.6	266.7	52.4	319.1
1975	0.9	131.7	15.1	16.5	2.7	10.1	1.9	0.9	22.8	R 17.5	R 87.6	0.0	27.1	0.0	20.5	R 267.7	49.3	R 317.1
1980	6.3	125.1	18.4	20.6	2.5	7.8	1.6	0.3	9.0	R 22.5	R 82.8	0.0	R 50.3	0.0	37.3	R 301.9	90.8	R 392.7
1985	8.1	110.9	8.4	35.2	0.2	3.9	1.5	3.3	4.6	R 13.7	R 70.8	0.0	R 58.9	0.0	30.9	R 279.6	72.5	R 352.1
1990	5.8	128.3	3.3	20.8	0.1	4.4	1.7	2.2	1.4	R 10.5	R 44.3	f 0.0	R 76.5	f 0.0	34.6	R 289.5	75.6	R 365.0
1991	6.8	108.0	3.5	15.6	0.1	4.6	1.5	2.4	0.9	R 9.3	R 37.9	0.0	R 73.9	0.0	35.9	R 262.5	R 78.0	R 340.6
1992	7.1	125.5	7.8	25.6	0.1	4.3	1.5	2.3	0.2	R 10.6	R 52.4	(s)	R 78.2	0.0	38.4	R 301.6	R 81.9	R 383.5
1993	7.7	127.4	9.6	22.1	0.1	5.0	1.5	2.1	1.4	10.4	52.3	(s)	R 86.0	0.0	43.0	R 316.4	90.9	R 407.3
1994	8.6	141.7	7.1	20.9	0.1	4.7	1.6	2.2	1.7	10.9	R 49.2	(s)	R 77.8	0.0	46.2	R 323.5	96.3	R 419.8
1995	7.8	156.4	8.3	19.5	0.1	5.1	1.6	R 2.3	1.3	R 10.4	R 48.6	0.0	R 81.1	0.0	49.4	R 343.3	R 103.0	R 446.4
1996	8.4	150.7	6.5	17.3	0.1	R 4.8	1.5	2.4	0.7	R 39.3	R 72.5	(s)	R 70.5	0.0	51.7	R 353.8	R 107.7	R 461.5
1997	7.0	156.9	6.7	16.6	0.1	R 4.2	1.6	2.5	0.1	R 42.2	R 74.0	(s)	R 71.5	0.0	53.3	R 362.8	R 110.9	R 473.7
1998	7.0	159.5	5.7	15.3	0.1	3.3	1.7	3.4	(s)	41.4	70.8	(s)	55.9	0.0	54.8	348.1	113.2	461.3
1999	7.8	150.1	6.8	20.1	0.1	7.1	1.7	2.9	0.1	41.1	79.8	(s)	183.3	(s)	56.9	477.9	111.5	589.4

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>e</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>f</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

R=Revised data.

kWh=kilowatthours. — =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 39. Transportation Energy Consumption Estimates, Selected Years 1960-1999, Arkansas**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum								Ethanol <sup>c</sup>	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total <sup>c</sup>
			Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	LPG <sup>a</sup>	Lubricants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total				Million Kilowatthours	
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels								Thousand Barrels	Million Kilowatthours	Million Kilowatthours	Total <sup>c</sup>	
1960	(s)	9	177	926	2,237	309	274	14,093	3	18,019	0	0	—	0	—
1965	(s)	11	482	1,703	2,094	434	305	17,310	36	22,364	0	0	—	0	—
1970	0	13	293	3,383	2,204	692	300	21,985	5	28,862	0	0	—	0	—
1975	(s)	12	254	6,410	1,995	679	308	27,299	11	36,957	0	0	—	0	—
1980	0	11	275	6,699	2,035	205	432	26,276	0	35,922	0	0	—	0	—
1985	0	8	86	7,685	2,030	147	393	25,857	0	36,199	R e 19	0	—	0	—
1990	0	9	125	10,111	1,693	83	442	28,438	0	40,892	R 146	0	—	0	—
1991	0	8	144	10,333	1,792	78	396	28,461	0	41,204	R 92	0	—	0	—
1992	0	8	152	10,464	1,134	62	404	28,891	0	41,106	R 65	0	—	0	—
1993	0	10	134	11,307	1,031	68	411	30,051	0	43,003	R 45	0	—	0	—
1994	0	12	157	13,007	1,634	125	429	30,421	0	45,772	R 8	0	—	0	—
1995	0	11	143	12,865	1,179	51	422	31,644	0	46,304	R 9	0	—	0	—
1996	0	13	121	13,255	1,534	R 45	410	31,599	0	R 46,963	R 1	0	—	0	—
1997	0	12	135	13,639	1,539	R 42	433	32,684	0	R 48,472	0	0	—	0	—
1998	0	10	122	14,445	1,527	33	453	32,585	0	49,164	0	0	—	0	—
1999	0	9	118	14,498	4,575	457	458	33,120	0	53,226	0	0	—	0	—
<b>Trillion Btu</b>															
1960	(s)	9.5	0.9	5.4	12.0	1.2	1.7	74.0	(s)	95.2	0.0	0.0	104.7	0.0	104.7
1965	(s)	11.4	2.4	9.9	11.2	1.7	1.8	90.9	0.2	118.3	0.0	0.0	129.7	0.0	129.7
1970	0.0	13.5	1.5	19.7	11.9	2.6	1.8	115.5	(s)	153.0	0.0	0.0	166.5	0.0	166.5
1975	(s)	12.2	1.3	37.3	10.8	2.5	1.9	143.4	0.1	197.3	0.0	0.0	209.4	0.0	209.4
1980	0.0	11.4	1.4	39.0	11.0	0.8	2.6	138.0	0.0	192.9	0.0	0.0	204.2	0.0	204.2
1985	0.0	8.3	0.4	44.8	11.0	0.5	2.4	135.8	0.0	195.0	R e 0.1	0.0	e 203.3	0.0	e 203.3
1990	0.0	8.7	0.6	58.9	9.2	0.3	2.7	149.4	0.0	221.1	R 0.5	0.0	229.9	0.0	229.9
1991	0.0	8.5	0.7	60.2	9.7	0.3	2.4	149.5	0.0	222.8	R 0.3	0.0	231.3	0.0	231.3
1992	0.0	8.1	0.8	61.0	6.2	0.2	2.4	151.8	0.0	222.4	R 0.2	0.0	230.5	0.0	230.5
1993	0.0	9.8	0.7	65.9	5.7	0.2	2.5	157.9	0.0	232.8	R 0.2	0.0	242.6	0.0	242.6
1994	0.0	12.1	0.8	75.8	9.1	0.5	2.6	R 159.1	0.0	R 247.8	(s)	0.0	R 259.9	0.0	R 259.9
1995	0.0	12.4	0.7	74.9	6.7	0.2	2.6	R 165.0	0.0	R 250.1	(s)	0.0	R 262.5	0.0	R 262.5
1996	0.0	12.8	0.6	77.2	8.7	0.2	2.5	R 164.8	0.0	R 254.0	(s)	0.0	R 266.8	0.0	R 266.8
1997	0.0	11.7	0.7	79.4	8.7	0.2	2.6	R 170.4	0.0	R 262.0	0.0	0.0	R 273.8	0.0	R 273.8
1998	0.0	10.4	0.6	84.1	8.7	0.1	2.7	169.8	0.0	266.1	0.0	0.0	276.6	0.0	276.6
1999	0.0	9.1	0.6	84.5	25.9	1.7	2.8	172.6	0.0	288.0	0.0	0.0	297.2	0.0	297.2

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels. Transportation use of natural gas is gas consumed in the operation of pipelines, primarily in compressors, and, since 1990, is also gas consumed as vehicle fuel.

<sup>c</sup> Ethanol blended into motor gasoline, which is accounted for under motor gasoline, is shown separately here to display the use of renewable energy by the transportation sector and is included only once in the total.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1980 and 1981 due to the expanded coverage of renewable energy sources beginning in 1981.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 40. Estimates of Energy Input at Electric Utilities, Selected Years, 1960-1999, Arkansas**

Year	Coal	Natural Gas <sup>a</sup>	Petroleum				Nuclear Electric Power	Hydroelectric Power <sup>e</sup>	Wood and Waste	Geothermal Energy	Other <sup>b,f</sup>	Total <sup>g</sup>
			Heavy Oil <sup>b,c</sup>	Light Oil <sup>b,d</sup>	Petroleum Coke <sup>b</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels				Million Kilowatthours					
1960	0	47	118	1	0	119	0	992	0	0	0	—
1965	0	68	38	(s)	0	38	0	1,080	0	0	0	—
1970	0	107	698	8	0	705	0	2,160	0	0	0	—
1975	0	32	4,365	62	0	4,427	4,874	3,433	0	0	0	—
1980	1,774	59	3,106	180	0	3,285	7,833	1,695	0	0	0	—
1985	12,302	11	8	12	0	21	9,889	4,434	0	0	0	—
1990	11,836	32	15	140	0	155	11,282	3,698	0	0	0	—
1991	11,978	28	1	127	0	129	12,662	3,561	0	0	0	—
1992	12,241	27	(s)	95	0	95	11,326	3,380	0	0	0	—
1993	11,116	21	5	126	0	131	13,522	4,508	0	0	0	—
1994	12,250	25	54	122	0	176	13,924	3,462	0	0	0	—
1995	13,216	33	15	94	0	109	11,658	3,218	0	0	0	—
1996	14,467	34	81	97	0	179	13,357	2,797	0	0	0	—
1997	13,772	25	27	100	0	127	14,208	3,511	0	0	0	—
1998	14,276	41	100	179	0	279	13,097	3,114	0	0	0	—
1999	14,974	40	92	167	0	260	12,920	2,693	0	0	0	—
<b>Trillion Btu</b>												
1960	0.0	48.4	0.7	(s)	0.0	0.7	0.0	10.7	0.0	0.0	0.0	59.8
1965	0.0	67.6	0.2	(s)	0.0	0.2	0.0	11.3	0.0	0.0	0.0	79.1
1970	0.0	107.9	4.4	(s)	0.0	4.4	0.0	22.7	0.0	0.0	0.0	135.0
1975	0.0	32.2	27.4	0.4	0.0	27.8	53.7	35.7	0.0	0.0	0.0	149.4
1980	30.2	60.4	19.5	1.0	0.0	20.6	85.4	17.6	0.0	0.0	0.0	214.2
1985	211.7	12.0	0.1	0.1	0.0	0.1	106.9	46.3	0.0	0.0	0.0	377.1
1990	206.9	32.7	0.1	0.8	0.0	0.9	120.5	38.5	0.0	0.0	0.0	399.4
1991	209.2	28.5	(s)	0.7	0.0	0.7	136.0	37.2	0.0	0.0	0.0	411.6
1992	213.6	27.7	(s)	0.6	0.0	0.6	120.9	35.0	0.0	0.0	0.0	397.7
1993	192.6	21.8	(s)	0.7	0.0	0.8	144.4	46.5	0.0	0.0	0.0	406.1
1994	213.3	25.6	0.3	0.7	0.0	1.0	148.6	35.7	0.0	0.0	0.0	424.3
1995	229.6	33.5	0.1	0.5	0.0	0.6	124.2	33.2	0.0	0.0	0.0	421.2
1996	251.8	34.8	0.5	0.6	0.0	1.1	141.9	28.9	0.0	0.0	0.0	458.5
1997	239.8	25.5	0.2	0.6	0.0	0.8	150.9	<sup>R</sup> 36.4	0.0	0.0	0.0	<sup>R</sup> 453.4
1998	247.6	41.5	0.6	1.0	0.0	1.7	139.1	32.2	0.0	0.0	0.0	462.1
1999	259.1	41.0	0.6	1.0	0.0	1.6	137.2	27.9	0.0	0.0	0.0	466.7

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> Prior to 1980, based on oil used in steam plants. Since 1980, heavy oil includes fuel oil nos. 4, 5, and 6 and residual fuel oils.

<sup>d</sup> Prior to 1980, based on oil used in internal combustion and gas turbine engine plants. Since 1980, light oil includes fuel oil nos. 1 and 2, kerosene, and jet fuel.

<sup>e</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>f</sup> "Other" is electricity generated for distribution from wind, photovoltaic, and solar thermal energy.

<sup>g</sup> If applicable, from 1989, includes net imports of electricity generated from nonrenewable energy sources not shown in other columns. See data in appendix Table A8.

<sup>R</sup> Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 41. Energy Consumption Estimates by Source, Selected Years 1960-1999, California**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum											Nuclear Electric Power	Hydro-electric Power <sup>d</sup>	Wood and Waste	Other <sup>a,e</sup>	Net Inter-state Flow of Electricity/Losses <sup>f</sup>	Total <sup>g</sup>
			Asphalt & Road Oil <sup>a</sup>	Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	Kero-sene <sup>a</sup>	LPG <sup>a</sup>	Lubri-cants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Other <sup>a,c</sup>	Total						
			Thousand Short Tons	Billion Cubic Feet	Thousand Barrels													Million kWh	
1960	1,343	1,258	10,665	5,383	26,683	25,818	1,017	8,888	3,781	137,025	80,575	R 25,691	R 325,526	(s)	17,045	—	—	3,463	—
1965	2,380	1,690	11,892	3,342	35,105	40,150	817	11,029	4,482	169,900	69,745	R 28,664	R 375,126	270	30,520	—	—	-1,406	—
1970	2,327	2,126	12,084	2,184	39,221	59,614	1,004	15,532	3,967	214,064	70,324	R 35,824	R 453,818	3,132	38,071	—	—	39,011	—
1975	2,151	1,833	13,146	1,640	42,335	62,607	2,027	19,264	3,632	241,508	111,086	R 39,478	R 536,724	6,071	40,103	—	—	113,596	—
1980	2,669	1,808	18,431	285	62,277	63,201	2,117	19,197	4,907	253,593	148,701	R 49,455	R 622,165	4,920	40,868	—	—	122,895	—
1985	1,942	1,846	13,848	1,354	72,431	67,028	916	20,497	4,465	267,368	66,724	R 55,165	R 569,796	19,729	35,772	—	—	173,717	—
1990	2,899	1,864	14,862	1,106	82,559	94,907	145	19,992	5,024	305,983	64,890	R 54,940	R 644,408	32,693	R <sup>h</sup> 26,620	—	—	R 278,397	—
1991	2,816	1,971	14,251	1,091	75,409	90,064	139	18,596	4,495	298,698	45,571	R 45,165	R 593,479	31,542	R 23,111	—	—	R 301,541	—
1992	2,821	2,031	13,558	1,059	67,259	86,688	75	21,088	4,583	315,643	34,696	R 48,344	R 592,992	35,244	R 20,735	—	—	R 270,592	—
1993	2,453	1,976	12,433	819	59,089	89,244	131	16,655	4,666	308,726	37,615	R 43,672	R 573,050	31,581	R 40,791	—	—	R 239,611	—
1994	2,498	2,123	12,237	793	64,921	98,793	120	18,099	4,877	307,653	42,525	R 45,397	R 595,417	33,752	R 24,047	—	—	R 246,926	—
1995	2,618	1,925	12,212	807	68,710	95,305	164	14,798	4,793	313,464	46,957	R 42,389	R 599,599	30,246	R 50,516	—	—	R 261,421	—
1996	2,317	1,807	12,399	769	67,412	103,773	294	R 10,914	4,652	318,257	40,949	R 46,392	R 605,810	34,097	R 47,154	—	—	R 298,389	—
1997	2,134	1,947	11,512	R 836	75,787	103,144	358	R 8,854	4,914	322,871	21,864	R 44,442	R 594,582	30,512	R 42,060	—	—	R 335,645	—
1998	2,803	2,015	15,572	574	79,028	105,385	474	10,936	5,145	329,943	18,281	38,703	604,043	34,594	51,641	—	—	321,909	—
1999	2,783	2,146	20,366	825	74,662	98,673	288	12,171	5,198	337,791	28,565	39,220	617,760	33,372	41,075	—	—	416,346	—

**Trillion Btu**

1960	35.9	1,301.8	70.8	27.2	155.4	140.7	5.8	35.7	22.9	719.8	506.6	R 153.9	R 1,838.7	(s)	183.4	82.1	0.8	11.8	R 3,454.5
1965	63.7	1,813.2	78.9	16.9	204.5	222.2	4.6	44.2	27.2	892.5	438.5	R 168.7	R 2,098.2	3.2	319.0	97.5	4.2	-4.8	R 4,394.2
1970	61.8	2,241.3	80.2	11.0	228.5	332.9	5.7	58.7	24.1	1,124.5	442.1	R 210.6	R 2,518.2	34.4	399.5	116.8	11.3	133.1	R 5,516.5
1975	56.4	1,937.3	87.2	8.3	246.6	350.7	11.5	71.6	22.0	1,268.6	698.4	R 232.3	R 2,997.3	66.9	417.3	127.5	70.2	387.6	R 6,060.4
1980	66.2	1,890.9	122.3	1.4	362.8	354.2	12.0	70.5	29.8	1,332.1	934.9	R 289.5	R 3,509.6	53.7	424.5	R 134.0	109.8	419.3	R 6,607.9
1985	45.3	1,925.5	91.9	6.8	421.9	375.8	5.2	73.8	27.1	1,404.5	419.5	R 327.2	R 3,153.7	213.3	373.7	R 155.5	195.7	592.7	R 6,655.4
1990	65.3	1,923.7	98.6	5.6	480.9	534.7	0.8	72.5	30.5	1,607.3	408.0	R 323.2	R 3,562.0	349.2	R <sup>h</sup> 276.9	R 196.1	R <sup>h</sup> 380.6	R 949.9	R <sup>h</sup> 7,727.1
1991	64.0	2,023.9	94.6	5.5	439.3	508.1	0.8	67.2	27.3	1,569.1	286.5	R 267.9	R 3,266.2	338.8	R 241.2	R 185.9	R 385.9	R 1,028.9	R 7,550.2
1992	64.8	2,089.5	90.0	5.3	391.8	489.5	0.4	76.4	27.8	1,658.1	218.1	R 284.6	R 3,242.1	376.3	R 214.4	R 197.8	R 391.8	R 923.3	R 7,511.7
1993	56.9	2,047.5	82.5	4.1	344.2	504.7	0.7	60.1	28.3	1,621.7	236.5	R 258.3	R 3,141.2	337.3	R 420.5	R 180.9	R 397.6	R 817.6	R 7,410.6
1994	58.0	2,172.1	81.2	4.0	378.2	560.1	0.7	65.8	29.6	R 1,609.0	267.4	R 268.4	R 3,264.3	360.3	R 248.1	R 186.1	R 399.2	R 842.5	R 7,538.7
1995	61.0	1,955.9	81.0	4.1	400.2	540.4	0.9	53.6	29.1	R 1,634.7	295.2	R 250.9	R 3,290.1	322.4	R 520.9	R 176.2	R 341.5	R 892.0	R 7,568.4
1996	53.9	1,865.1	82.3	3.9	392.7	588.4	1.7	R 39.4	28.2	R 1,660.0	257.4	R 275.4	R 3,329.4	362.2	487.6	R 175.1	R 352.5	R 1,018.1	R 7,648.2
1997	49.2	1,982.0	76.4	4.2	441.5	584.8	2.0	R 32.0	29.8	R 1,683.1	137.5	R 263.9	R 3,255.3	324.1	R 435.6	R 152.8	R 327.5	R 1,145.2	R 7,674.3
1998	64.5	2,109.5	103.3	2.9	460.3	597.5	2.7	39.5	31.2	1,719.7	114.9	230.1	3,302.2	367.5	534.3	132.4	329.4	1,098.4	7,942.4
1999	64.0	2,182.4	135.1	4.2	434.9	559.5	1.6	44.0	31.5	1,760.2	179.6	232.5	3,383.2	354.5	425.0	162.3	377.6	1,420.6	8,375.4

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.  
<sup>b</sup> Includes supplemental gaseous fuels.  
<sup>c</sup> "Other" is the subtotal of 16 petroleum products consumed in the industrial sector. See a full description in Appendix A, Section 4, "Other Petroleum Products."  
<sup>d</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.  
<sup>e</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. From 1989, includes net imports of electricity generated from geothermal energy. See Appendix A, Section 5, for explanation of estimation methodology.  
<sup>f</sup> Net interstate flow of electricity is the difference between the amount of energy in the electricity sold within a State (including associated losses) and the energy input at the electric utilities within the State. A positive number

indicates that more electricity (including associated losses) came into the State than went out of the State during the year; conversely, a negative number indicates that more electricity (including associated losses) went out of the State than came into the State.  
<sup>g</sup> From 1989, "Total" does not equal the sum of the columns. Net imports of electricity generated from nonrenewable energy sources (shown in appendix Table A8) is included in the total but not in any other columns.  
<sup>h</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.  
kWh=kilowatthours. R=Revised data. — =Not applicable.  
(s)=Btu value less than 0.05 and physical unit value less than 0.5.  
Note: Totals may not equal sum of components due to independent rounding.  
Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

Table 42. Residential Energy Consumption Estimates, Selected Years 1960-1999, California

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum				Wood Thousand Cords	Geothermal	Solar <sup>c</sup>	Electricity <sup>a</sup> Million Kilowatthours	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Total						Million Kilowatthours	
												Thousand Barrels	
1960	2	365	485	15	3,778	4,277	1,263	—	—	14,975	—	37,248	—
1965	4	489	427	31	5,095	5,553	1,083	—	—	23,800	—	56,824	—
1970	38	553	500	166	5,167	5,833	1,209	—	—	35,777	—	86,700	—
1975	0	631	493	211	2,708	3,412	1,374	—	—	44,257	—	106,754	—
1980	1	529	94	18	4,919	5,032	R 3,550	—	—	52,011	—	126,473	—
1985	19	527	148	73	5,350	5,571	4,083	—	—	57,501	—	135,093	—
1990	9	515	226	88	5,750	6,064	3,174	—	—	66,575	—	R 145,639	—
1991	16	509	199	80	6,952	7,231	3,344	—	—	66,017	—	R 143,516	—
1992	(s)	480	201	33	4,802	5,036	3,519	—	—	68,121	—	R 145,287	—
1993	50	501	155	67	5,035	5,257	2,983	—	—	67,359	—	R 142,272	—
1994	58	521	148	67	4,953	5,168	2,924	—	—	68,866	—	R 143,719	—
1995	46	477	129	81	4,884	5,094	3,246	—	—	68,783	—	R 143,408	—
1996	62	473	101	103	4,079	4,283	3,240	—	—	71,396	—	R 148,790	—
1997	38	479	125	135	R 3,686	R 3,945	R 1,883	—	—	73,086	—	R 152,027	—
1998	40	550	156	237	6,092	6,485	1,660	—	—	74,792	—	154,505	—
1999	10	568	101	187	5,711	6,000	1,779	—	—	75,303	—	147,542	—

  

Trillion Btu													
1960	0.1	377.6	2.8	0.1	15.2	18.1	25.3	0.0	0.0	51.1	472.0	127.1	599.1
1965	0.1	524.9	2.5	0.2	20.4	23.1	21.7	0.0	0.0	81.2	650.9	193.9	844.8
1970	0.8	582.4	2.9	0.9	19.5	23.4	24.2	0.0	0.0	122.1	752.9	295.8	1,048.7
1975	0.0	666.7	2.9	1.2	10.1	14.1	27.5	0.0	0.0	151.0	859.3	364.2	1,223.6
1980	(s)	552.4	0.6	0.1	18.1	18.7	R 71.0	0.0	0.0	177.5	R 819.6	431.5	R 1,251.2
1985	0.4	547.8	0.9	0.4	19.3	20.6	81.7	0.0	0.0	196.2	846.6	460.9	1,307.6
1990	0.2	530.8	1.3	0.5	20.8	22.7	63.5	e 0.2	R e 18.4	227.2	R e 862.9	R 496.9	R e 1,359.8
1991	0.4	522.3	1.2	0.5	25.1	26.7	66.9	0.2	R 19.1	225.2	R 860.8	R 489.7	R 1,350.4
1992	(s)	492.7	1.2	0.2	17.4	18.8	70.4	0.2	R 19.6	232.4	R 834.1	R 495.7	R 1,329.8
1993	1.2	519.9	0.9	0.4	18.2	19.4	59.7	0.2	R 20.1	229.8	R 850.3	R 485.4	R 1,335.7
1994	1.4	531.7	0.9	0.4	18.0	19.2	58.5	0.2	R 20.4	235.0	R 866.3	R 490.4	R 1,356.7
1995	1.1	483.8	0.8	0.5	17.7	18.9	64.9	0.2	R 20.5	234.7	R 824.0	R 489.3	R 1,313.4
1996	1.4	489.1	0.6	0.6	14.7	15.9	64.8	0.2	R 20.5	243.6	R 835.5	R 507.7	R 1,343.2
1997	0.9	487.4	0.7	0.8	R 13.3	R 14.8	R 37.7	0.2	R 20.1	249.4	R 810.4	R 518.7	R 1,329.2
1998	0.9	578.3	0.9	1.3	22.0	24.3	33.2	0.2	19.7	255.2	911.8	527.2	1,439.0
1999	0.2	578.6	0.6	1.1	20.7	22.3	35.6	0.1	19.0	256.9	912.8	503.4	1,416.2

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Includes small amounts of solar thermal and photovoltaic energy consumed by the commercial sector that cannot be separately identified. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 43. Commercial Energy Consumption Estimates, Selected Years 1960-1999, California**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum						Wood	Geothermal	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>c</sup>	Total <sup>d</sup>
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels						Thousand Cords	Million Kilowatthours	Million Kilowatthours			
1960	4	109	637	46	667	1,406	7,284	10,040	24	—	22,039	—	54,819	—
1965	7	164	560	95	899	1,309	6,200	9,064	20	—	29,917	—	71,430	—
1970	71	210	657	510	912	1,482	8,631	12,192	23	—	40,634	—	98,471	—
1975	0	240	647	650	478	1,622	4,377	7,774	26	—	57,846	—	139,532	—
1980	3	258	3,225	222	868	1,795	6,811	12,921	85	—	63,465	—	154,326	—
1985	34	205	3,513	353	944	1,759	35	6,604	R 109	—	73,592	—	172,897	—
1990	16	285	4,588	19	1,015	1,928	895	8,444	R 202	—	88,311	—	R 193,190	—
1991	29	288	4,449	23	1,227	1,647	764	8,110	R 213	—	86,098	—	R 187,170	—
1992	(s)	285	1,994	20	847	1,485	43	4,390	R 229	—	87,849	—	R 187,363	—
1993	92	250	1,591	19	889	262	18	2,779	240	—	86,544	—	R 182,795	—
1994	108	262	1,505	12	874	226	8	2,625	245	—	84,529	—	R 176,405	—
1995	86	279	2,334	27	862	236	4	3,463	245	—	86,032	—	R 179,371	—
1996	115	235	1,743	69	720	231	12	2,775	R 266	—	88,605	—	R 184,653	—
1997	71	254	1,955	41	R 650	233	2	R 2,881	R 207	—	92,295	—	R 191,984	—
1998	75	282	2,451	63	1,075	250	63	3,901	207	—	92,228	—	190,524	—
1999	18	245	1,624	29	1,008	236	0	2,897	249	—	95,771	—	187,645	—

  

Trillion Btu														
1960	0.1	112.7	3.7	0.3	2.7	7.4	45.8	59.8	0.5	0.0	75.2	248.3	187.0	435.3
1965	0.2	175.5	3.3	0.5	3.6	6.9	39.0	53.3	0.4	0.0	102.1	331.4	243.7	575.1
1970	1.6	221.3	3.8	2.9	3.4	7.8	54.3	72.2	0.5	0.0	138.6	434.2	336.0	770.1
1975	0.0	253.7	3.8	3.7	1.8	8.5	27.5	45.3	0.5	0.0	197.4	496.8	476.1	972.9
1980	0.1	269.4	18.8	1.3	3.2	9.4	42.8	75.5	1.7	0.0	216.5	563.2	526.6	1,089.8
1985	0.8	212.9	20.5	2.0	3.4	9.2	0.2	35.3	R 2.2	0.0	251.1	R 502.3	589.9	R 1,092.3
1990	0.4	294.1	26.7	0.1	3.7	10.1	5.6	46.3	R 4.0	e 0.3	301.3	R e 646.4	R 659.2	R e 1,305.6
1991	0.7	295.3	25.9	0.1	4.4	8.7	4.8	43.9	R 4.3	0.3	293.8	R 638.2	R 638.6	R 1,276.9
1992	(s)	292.8	11.6	0.1	3.1	7.8	0.3	22.9	R 4.6	0.3	299.7	R 620.4	R 639.3	R 1,259.7
1993	2.1	259.8	9.3	0.1	3.2	1.4	0.1	14.1	4.8	0.3	295.3	576.4	R 623.7	R 1,200.1
1994	2.5	267.4	8.8	0.1	3.2	1.2	(s)	13.2	4.9	0.3	288.4	576.8	R 601.9	1,178.7
1995	2.0	282.4	13.6	0.2	3.1	1.2	(s)	18.1	4.9	0.4	293.5	601.4	R 612.0	R 1,213.4
1996	2.7	242.9	10.2	0.4	2.6	1.2	0.1	14.4	5.3	0.5	302.3	568.1	R 630.0	R 1,198.1
1997	1.6	258.4	11.4	0.2	R 2.4	1.2	(s)	R 15.2	R 4.1	0.5	314.9	R 594.8	R 655.0	R 1,249.9
1998	1.7	296.7	14.3	0.4	3.9	1.3	0.4	20.2	4.1	0.7	314.7	638.1	650.1	1,288.2
1999	0.4	249.1	9.5	0.2	3.6	1.2	0.0	14.5	5.0	0.5	326.8	596.3	640.2	1,236.5

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>d</sup> Small amounts of solar thermal and photovoltaic energy consumed in the commercial sector cannot be separately identified and are included in residential consumption.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

Table 44. Industrial Energy Consumption Estimates, Selected Years 1960-1999, California

Year	Coal Thousand Short Tons	Natural Gas <sup>a</sup> Billion Cubic Feet	Petroleum									Hydro-electric Power <sup>b</sup> Million kWh	Wood and Waste	Other <sup>b,d</sup>	Electricity <sup>b</sup>		Electrical System Energy Losses <sup>e</sup> Million kWh	Total
			Asphalt and Road Oil <sup>b</sup>	Distillate Fuel <sup>b</sup>	Kero-sene <sup>b</sup>	LPG <sup>b</sup>	Lubri-cants <sup>b</sup>	Motor Gasoline	Residual Fuel <sup>b</sup>	Other <sup>b,c</sup>	Total				Million kWh	Net Energy		
			Thousand Barrels															
1960	1,313	451	10,665	10,127	956	4,231	1,454	2,851	10,750	R 25,691	R 66,725	(s)	—	—	20,190	—	50,221	—
1965	2,361	529	11,892	13,002	692	4,826	1,709	2,245	11,846	R 28,664	R 74,876	(s)	—	—	28,904	—	69,012	—
1970	2,215	711	12,084	8,510	328	9,147	1,510	1,942	12,121	R 35,824	R 81,466	(s)	—	—	42,169	—	102,190	—
1975	2,151	666	13,146	10,519	1,166	15,688	1,246	1,338	8,308	R 39,478	R 90,890	0	—	—	46,053	—	111,086	—
1980	2,665	486	18,431	15,576	1,877	12,887	2,103	1,698	12,554	R 49,455	R 114,581	0	—	—	51,888	—	126,174	—
1985	1,889	433	13,848	18,285	491	12,977	1,914	3,065	18,732	R 55,165	R 124,477	0	—	—	52,972	—	124,454	—
1990	2,874	588	14,862	19,138	38	12,304	2,153	3,163	1,864	R 54,940	R 108,462	R f 990	—	—	55,892	—	R 122,268	—
1991	2,771	707	14,251	14,329	36	9,658	1,926	3,271	1,762	R 45,165	R 90,398	R 1,368	—	—	56,191	—	R 122,155	—
1992	2,821	687	13,558	11,101	23	14,788	1,964	3,297	1,889	R 48,344	R 94,964	R 1,476	—	—	57,090	—	R 121,759	—
1993	2,311	747	12,433	8,779	44	10,073	2,000	2,664	1,539	R 43,672	R 81,205	R 2,511	—	—	56,189	—	R 118,680	—
1994	2,332	726	12,237	9,028	40	11,266	2,090	2,758	1,353	R 45,397	R 84,169	R 1,091	—	—	59,864	—	R 124,931	—
1995	2,485	754	12,212	8,607	56	8,489	2,054	2,849	1,489	R 42,389	R 78,145	R 3,049	—	—	57,367	—	R 119,607	—
1996	2,140	761	12,399	8,078	122	R 5,634	1,994	2,741	309	R 46,392	R 77,670	R 2,919	—	—	57,683	—	R 120,211	—
1997	2,026	812	11,512	11,031	182	R 4,169	2,106	2,910	104	R 44,442	R 76,456	R 1,220	—	—	62,017	—	R 129,001	—
1998	2,688	900	15,572	11,849	174	3,100	2,205	3,263	33	38,703	74,899	2,073	—	—	58,856	—	121,584	—
1999	2,755	1,175	20,366	8,737	73	5,068	2,228	1,922	684	39,220	78,298	1,508	—	—	63,217	—	123,861	—
Trillion Btu																		
1960	35.2	466.3	70.8	59.0	5.4	17.0	8.8	15.0	67.6	R 153.9	R 397.5	(s)	56.3	0.0	68.9	R 1,024.2	171.4	R 1,195.5
1965	63.2	567.4	78.9	75.7	3.9	19.4	10.4	11.8	74.5	R 168.7	R 443.3	(s)	74.8	0.0	98.6	R 1,247.3	235.5	R 1,482.8
1970	59.3	749.1	80.2	49.6	1.9	34.6	9.2	10.2	76.2	R 210.6	R 472.3	(s)	91.7	0.0	143.9	R 1,516.4	348.7	R 1,865.0
1975	56.4	703.6	87.2	61.3	6.6	58.3	7.6	7.0	52.2	R 232.3	R 512.5	0.0	99.3	0.0	157.1	R 1,529.0	379.0	R 1,908.0
1980	66.1	507.4	122.3	90.7	10.6	47.3	12.8	8.9	78.9	R 289.5	R 661.2	0.0	R 61.1	0.0	177.0	R 1,472.7	430.5	R 1,903.3
1985	44.0	449.5	91.9	106.5	2.8	46.8	11.6	16.1	117.8	R 327.2	R 720.6	0.0	R 71.6	0.0	180.7	R 1,466.5	424.6	R 1,891.1
1990	64.7	606.5	98.6	111.5	0.2	44.6	13.1	16.6	11.7	R 323.2	R 619.5	R f 10.3	R 128.6	R f 172.5	190.7	R f 1,792.9	R 417.2	R f 2,210.1
1991	63.0	725.7	94.6	83.5	0.2	34.9	11.7	17.2	11.1	R 267.9	R 521.0	R 14.3	R 114.6	R 185.0	191.7	R 1,815.3	R 416.8	R 2,232.1
1992	64.8	705.7	90.0	64.7	0.1	53.6	11.9	17.3	11.9	R 284.6	R 534.1	R 15.3	R 122.8	R 187.4	194.8	R 1,824.7	R 415.4	R 2,240.2
1993	53.6	775.3	82.5	51.1	0.3	36.3	12.1	14.0	9.7	R 258.3	R 464.3	R 25.9	R 116.4	R 203.3	191.7	R 1,830.6	R 404.9	R 2,235.5
1994	54.2	741.4	81.2	52.6	0.2	41.0	12.7	R 14.4	8.5	R 268.4	R 478.9	R 11.3	R 122.7	R 212.7	204.3	R 1,825.3	R 426.3	2,251.6
1995	57.9	764.3	81.0	50.1	0.3	30.8	12.5	R 14.9	9.4	R 250.9	R 449.8	R 31.4	R 106.4	R 205.4	195.7	R 1,811.0	R 408.1	R 2,219.1
1996	49.8	786.7	82.3	47.1	0.7	R 20.4	12.1	R 14.3	1.9	R 275.4	R 454.1	R 30.2	R 104.5	R 211.9	196.8	R 1,834.0	R 410.2	R 2,244.1
1997	46.7	825.9	76.4	64.3	1.0	R 15.1	12.8	R 15.2	0.7	R 263.9	R 449.3	R 12.6	R 109.7	R 195.1	211.6	R 1,851.0	R 440.2	R 2,291.1
1998	61.8	946.7	103.3	69.0	1.0	11.2	13.4	17.0	0.2	230.1	445.2	21.4	93.8	202.3	200.8	1,972.1	414.8	2,387.0
1999	63.4	1,196.3	135.1	50.9	0.4	18.3	13.5	10.0	4.3	232.5	465.1	15.6	120.3	324.8	215.7	2,401.1	422.6	2,823.7

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>e</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>f</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

R=Revised data.

kWh=kilowatthours. — =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 45. Transportation Energy Consumption Estimates, Selected Years 1960-1999, California**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum								Ethanol <sup>c</sup>	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total <sup>c</sup>
			Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	LPG <sup>a</sup>	Lubricants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total					
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels								Thousand Barrels	Million Kilowatthours	Million Kilowatthours	Million Kilowatthours	
1960	23	11	5,383	15,313	25,818	214	2,327	132,768	38,610	220,432	0	66	—	164	—
1965	8	16	3,342	21,032	40,150	208	2,772	166,346	35,109	268,960	0	66	—	158	—
1970	4	17	2,184	29,448	59,614	305	2,457	210,641	27,982	332,632	0	65	—	158	—
1975	(s)	20	1,640	30,528	62,509	390	2,386	238,548	20,056	356,057	0	265	—	639	—
1980	0	15	285	41,801	62,224	522	2,804	250,100	66,673	424,409	0	203	—	493	—
1985	0	14	1,354	50,177	67,028	1,225	2,552	262,544	43,340	428,219	R <sup>e</sup> 429	266	—	625	—
1990	0	20	1,106	58,418	94,907	923	2,871	300,893	54,963	514,080	R 1,133	315	—	690	—
1991	0	19	1,091	56,328	90,064	760	2,568	293,780	42,113	486,703	R 1,424	345	—	R 750	—
1992	0	15	1,059	53,839	86,688	650	2,619	310,861	32,282	487,997	R 158	387	—	R 826	—
1993	0	12	819	48,455	89,244	658	2,666	305,800	32,831	480,474	R 575	408	—	861	—
1994	0	13	793	54,137	98,793	1,006	2,787	304,669	38,310	500,495	R 810	425	—	887	—
1995	0	20	807	57,540	95,305	564	2,739	310,379	44,729	512,062	R 2,523	423	—	882	—
1996	0	20	769	57,352	103,773	R 481	2,658	315,285	39,644	R 519,961	R 2,128	429	—	R 894	—
1997	0	25	R 836	62,403	103,144	R 349	2,808	319,727	21,714	R 510,982	R 2,134	478	—	R 994	—
1998	0	11	574	64,305	105,385	670	2,940	326,430	18,176	518,480	1,610	521	—	1,076	—
1999	0	13	825	64,078	98,673	384	2,971	335,633	27,881	530,446	1,395	540	—	1,058	—

  

Trillion Btu															
1960	0.6	11.0	27.2	89.2	140.7	0.9	14.1	697.4	242.7	1,212.2	0.0	0.2	1,223.9	0.6	1,224.5
1965	0.2	16.8	16.9	122.5	222.2	0.8	16.8	873.8	220.7	1,473.8	0.0	0.2	1,491.0	0.5	1,491.5
1970	0.1	17.9	11.0	171.5	332.9	1.2	14.9	1,106.5	175.9	1,814.0	0.0	0.2	1,832.2	0.5	1,832.7
1975	(s)	21.4	8.3	177.8	350.2	1.5	14.5	1,253.1	126.1	1,931.4	0.0	0.9	1,953.7	2.2	1,955.9
1980	0.0	15.9	1.4	243.5	348.7	1.9	17.0	1,313.8	419.2	2,345.5	0.0	0.7	2,362.1	1.7	2,363.8
1985	0.0	15.0	6.8	292.3	375.8	4.4	15.5	1,379.1	272.5	2,346.5	R <sup>e</sup> 1.5	0.9	<sup>e</sup> 2,362.3	2.1	<sup>e</sup> 2,364.5
1990	0.0	20.8	5.6	340.3	534.7	3.3	17.4	1,580.6	345.6	2,827.4	R 4.0	1.1	2,849.3	2.4	2,851.6
1991	0.0	19.0	5.5	328.1	508.1	2.7	15.6	1,543.2	264.8	2,668.0	R 5.0	1.2	2,688.2	2.6	2,690.8
1992	0.0	15.2	5.3	313.6	489.5	2.4	15.9	1,633.0	203.0	2,662.7	R 0.6	1.3	2,679.2	2.8	2,682.0
1993	0.0	12.5	4.1	282.3	504.7	2.4	16.2	1,606.4	206.4	2,622.4	R 2.0	1.4	2,636.3	2.9	2,639.3
1994	0.0	12.9	4.0	315.3	560.1	3.7	16.9	R 1,593.4	240.9	R 2,734.3	R 2.9	1.5	R 2,748.7	3.0	R 2,751.7
1995	0.0	20.0	4.1	335.2	540.4	2.0	16.6	R 1,618.6	281.2	R 2,798.1	R 8.9	1.4	R 2,819.6	3.0	R 2,822.6
1996	0.0	20.2	3.9	334.1	588.4	R 1.7	16.1	R 1,644.5	249.2	R 2,838.0	R 7.5	1.5	R 2,859.6	3.0	R 2,862.7
1997	0.0	25.1	4.2	363.5	584.8	R 1.3	17.0	R 1,666.7	136.5	R 2,774.1	R 7.6	1.6	R 2,800.8	3.4	R 2,804.2
1998	0.0	11.9	2.9	374.6	597.5	2.4	17.8	1,701.4	114.3	2,810.9	5.7	1.8	2,824.6	3.7	2,828.2
1999	0.0	12.9	4.2	373.3	559.5	1.4	18.0	1,749.0	175.3	2,880.6	4.9	1.8	2,895.3	3.6	2,898.9

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels. Transportation use of natural gas is gas consumed in the operation of pipelines, primarily in compressors, and, since 1990, is also gas consumed as vehicle fuel.

<sup>c</sup> Ethanol blended into motor gasoline, which is accounted for under motor gasoline, is shown separately here to display the use of renewable energy by the transportation sector and is included only once in the total.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1980 and 1981 due to the expanded coverage of renewable energy sources beginning in 1981.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.



Table 46. Estimates of Energy Input at Electric Utilities, Selected Years, 1960-1999, California

Year	Coal	Natural Gas <sup>a</sup>	Petroleum				Nuclear Electric Power	Hydroelectric Power <sup>e</sup>	Wood and Waste	Geothermal Energy <sup>f</sup>	Other <sup>b,g</sup>	Total <sup>h</sup>
			Heavy Oil <sup>b,c</sup>	Light Oil <sup>b,d</sup>	Petroleum Coke <sup>b</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels				Million Kilowatthours					
1960	0	323	23,931	120	0	24,051	(s)	17,045	(s)	33	0	—
1965	0	493	16,590	83	0	16,673	270	30,520	64	189	0	—
1970	0	636	21,589	107	0	21,696	3,132	38,071	48	525	0	—
1975	0	275	78,345	247	0	78,592	6,071	40,103	20	3,246	0	—
1980	0	519	62,663	2,559	0	65,222	4,920	40,868	20	5,073	0	—
1985	0	666	4,617	308	0	4,925	19,729	35,772	4	9,197	13	—
1990	0	456	7,169	189	0	7,358	32,693	R 25,630	2	8,968	2	—
1991	0	449	933	104	0	1,037	31,542	R 21,743	8	8,638	3	—
1992	0	564	482	124	0	605	35,244	R 19,260	5	8,807	3	—
1993	0	466	3,227	109	0	3,336	31,581	R 38,280	4	8,300	3	—
1994	0	601	2,854	104	0	2,959	33,752	R 22,956	3	7,918	3	—
1995	0	395	734	101	0	835	30,246	R 47,468	2	5,490	15	—
1996	0	318	983	138	0	1,122	34,097	R 44,235	55	5,692	13	—
1997	0	378	44	273	0	317	30,512	R 40,840	122	5,317	9	—
1998	0	271	10	268	0	278	34,594	49,568	120	5,061	5	—
1999	0	145	0	120	0	120	33,372	39,567	141	1,573	7	—

  

Trillion Btu												
1960	0.0	334.3	150.5	0.7	0.0	151.2	(s)	183.4	(s)	0.8	0.0	669.6
1965	0.0	528.7	104.3	0.5	0.0	104.8	3.2	319.0	0.7	4.2	0.0	960.5
1970	0.0	670.6	135.7	0.6	0.0	136.4	34.4	399.5	0.5	11.3	0.0	1,252.7
1975	0.0	291.9	492.6	1.4	0.0	494.0	66.9	417.3	0.2	70.2	0.0	1,340.4
1980	0.0	545.8	394.0	14.8	0.0	408.7	53.7	424.5	0.2	109.8	0.0	1,542.7
1985	0.0	700.3	29.0	1.8	0.0	30.8	213.3	373.7	(s)	195.6	0.1	1,513.8
1990	0.0	471.5	45.1	1.1	0.0	46.2	349.2	R 266.6	(s)	189.2	(s)	R 1,346.0
1991	0.0	461.6	5.9	0.6	0.0	6.5	338.8	R 226.9	0.1	181.4	(s)	R 1,230.7
1992	0.0	583.1	3.0	0.7	0.0	3.7	376.3	R 199.2	0.1	184.2	(s)	R 1,358.3
1993	0.0	480.0	20.3	0.6	0.0	20.9	337.3	R 394.6	(s)	173.6	(s)	R 1,417.7
1994	0.0	618.7	17.9	0.6	0.0	18.6	360.3	R 236.8	(s)	165.6	(s)	R 1,408.1
1995	0.0	405.4	4.6	0.6	0.0	5.2	322.4	R 489.5	(s)	114.8	0.2	R 1,345.9
1996	0.0	326.3	6.2	0.8	0.0	7.0	362.2	R 457.4	0.6	119.3	0.1	R 1,277.0
1997	0.0	385.1	0.3	1.6	0.0	1.9	324.1	R 423.0	1.3	111.4	0.1	R 1,249.6
1998	0.0	276.0	0.1	1.6	0.0	1.6	367.5	512.8	1.2	106.4	0.1	1,269.9
1999	0.0	145.5	0.0	0.7	0.0	0.7	354.5	409.4	1.5	33.1	0.1	950.6

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> Prior to 1980, based on oil used in steam plants. Since 1980, heavy oil includes fuel oil nos. 4, 5, and 6 and residual fuel oils.

<sup>d</sup> Prior to 1980, based on oil used in internal combustion and gas turbine engine plants. Since 1980, light oil includes fuel oil nos. 1 and 2, kerosene, and jet fuel.

<sup>e</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>f</sup> Includes net imports of electricity generated from geothermal energy.

<sup>g</sup> "Other" is electricity generated for distribution from wind, photovoltaic, and solar thermal energy.

<sup>h</sup> From 1989, includes net imports of electricity generated from nonrenewable energy sources not shown in other columns. See data in appendix Table A8.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 47. Energy Consumption Estimates by Source, Selected Years 1960-1999, Colorado**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum											Nuclear Electric Power	Hydro-electric Power <sup>d</sup>	Wood and Waste	Other <sup>a,e</sup>	Net Inter-state Flow of Electricity/Losses <sup>f</sup>	Total <sup>g</sup>
			Asphalt & Road Oil <sup>a</sup>	Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	Kero-sene <sup>a</sup>	LPG <sup>a</sup>	Lubri-cants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Other <sup>a,c</sup>	Total						
			Thousand Barrels															Million kWh	
1960	2,941	188	1,617	1,125	4,194	480	277	3,153	378	16,461	1,883	R 675	R 30,242	0	970	—	—	-4,980	—
1965	4,204	224	1,423	1,111	3,925	3,426	1,108	3,339	416	19,321	2,056	R 937	R 37,061	0	938	—	—	-2,572	—
1970	5,101	282	3,220	337	5,212	7,476	822	4,710	423	26,103	1,507	R 1,182	R 50,991	0	1,236	—	—	-2,230	—
1975	7,603	308	2,231	267	8,846	7,151	278	5,053	458	31,916	3,388	R 1,121	R 60,709	0	1,507	—	—	-1,877	—
1980	11,981	256	2,284	265	11,228	4,725	413	3,870	641	34,282	1,814	R 1,826	R 61,348	667	1,717	—	—	-5,019	—
1985	15,241	219	3,103	142	9,552	7,861	92	2,324	583	35,742	194	R 1,214	R 60,807	-32	2,357	—	—	-1,099	—
1990	16,710	239	3,257	167	10,373	6,109	50	3,045	656	35,562	13	R 1,351	R 60,583	0	R <sup>h</sup> 1,371	—	—	R 1,052	—
1991	16,218	261	3,107	155	11,805	6,503	51	3,520	587	35,676	80	R 1,232	R 62,717	0	R 1,787	—	—	R 3,597	—
1992	16,696	253	3,190	136	12,425	7,363	51	3,184	599	35,790	41	R 1,559	R 64,339	0	R 1,587	—	—	R 1,046	—
1993	17,070	284	3,413	124	12,922	8,959	53	3,448	610	37,913	11	R 1,441	R 68,895	0	R 1,968	—	—	R 1,272	—
1994	17,475	276	4,188	128	13,261	7,930	48	3,390	637	39,385	3	R 1,558	R 70,528	0	R 1,658	—	—	R 3,562	—
1995	16,971	284	3,720	124	13,426	7,428	29	3,936	626	41,357	8	R 1,482	R 72,136	0	R 2,212	—	—	R 7,334	—
1996	17,222	307	3,904	124	14,839	7,765	33	R 3,897	608	43,028	20	R 1,958	R 76,174	0	R 1,704	—	—	R 10,518	—
1997	17,961	306	2,574	143	13,796	7,174	29	R 1,954	642	43,744	3	R 1,955	R 72,013	0	R 2,031	—	—	R 10,532	—
1998	18,033	312	4,749	144	15,719	6,792	44	1,413	672	44,841	3	1,799	76,177	0	1,508	—	—	12,055	—
1999	18,171	316	2,137	195	16,275	7,800	32	2,973	679	47,069	4	1,865	79,029	0	1,600	—	—	8,485	—

  

Trillion Btu																			
1960	68.2	195.0	10.7	5.7	24.4	2.6	1.6	12.6	2.3	86.5	11.8	R 4.0	R 162.3	0.0	10.4	6.5	0.0	-17.0	R 425.4
1965	98.1	204.5	9.4	5.6	22.9	19.3	6.3	13.4	2.5	101.5	12.9	R 5.5	R 199.3	0.0	9.8	6.6	0.0	-8.8	R 509.5
1970	115.7	275.0	21.4	1.7	30.4	42.3	4.7	17.8	2.6	137.1	9.5	R 6.9	R 274.2	0.0	13.0	8.4	0.0	-7.6	R 678.6
1975	159.3	281.0	14.8	1.3	51.5	40.4	1.6	18.8	2.8	167.7	21.3	R 6.6	R 326.8	0.0	15.7	9.0	0.0	-6.4	R 785.4
1980	247.6	254.6	15.2	1.3	65.4	26.7	2.3	14.2	3.9	180.1	11.4	R 10.5	R 331.0	7.3	17.8	R 10.8	0.0	-17.1	R 852.0
1985	299.1	218.7	20.6	0.7	55.6	44.5	0.5	8.4	3.5	187.8	1.2	R 7.2	R 330.0	-0.3	24.6	R 15.3	0.0	-3.7	883.7
1990	329.0	240.3	21.6	0.8	60.4	34.6	0.3	11.0	4.0	186.8	0.1	R 8.1	R 327.7	0.0	R <sup>h</sup> 14.3	R 8.8	R <sup>h</sup> 0.6	3.6	R <sup>h</sup> 924.2
1991	321.8	268.1	20.6	0.8	68.8	36.8	0.3	12.7	3.6	187.4	0.5	R 7.4	R 338.9	0.0	R 18.6	R 9.3	0.6	R 12.3	R 969.6
1992	331.5	258.9	21.2	0.7	72.4	41.6	0.3	11.5	3.6	188.0	0.3	R 9.3	R 348.9	0.0	R 16.4	R 9.7	0.6	R 3.6	R 969.6
1993	338.5	287.3	22.6	0.6	75.3	50.7	0.3	12.4	3.7	199.2	0.1	R 8.6	R 373.5	0.0	R 20.3	R 9.3	0.6	R 4.3	R 1,033.9
1994	349.1	277.1	27.8	0.6	77.2	44.9	0.3	12.3	3.9	R 206.0	(s)	R 9.3	R 382.3	0.0	17.1	R 9.4	0.6	R 12.2	R 1,047.8
1995	337.3	288.7	24.7	0.6	78.2	42.0	0.2	14.3	3.8	R 215.7	0.1	R 8.9	R 388.4	0.0	R 22.8	R 10.5	0.6	R 25.0	R 1,073.3
1996	340.3	314.7	25.9	0.6	86.4	44.0	0.2	R 14.1	3.7	R 224.4	0.1	R 11.5	R 411.0	0.0	17.6	R 10.3	0.6	R 35.9	R 1,130.4
1997	356.0	309.6	17.1	0.7	80.4	40.7	0.2	R 7.1	3.9	R 228.0	(s)	R 11.5	R 389.5	0.0	R 21.0	R 10.6	0.6	R 35.9	R 1,123.5
1998	355.3	315.9	31.5	0.7	91.6	38.5	0.2	5.1	4.1	233.7	(s)	10.6	416.1	0.0	15.6	8.8	0.7	41.1	1,153.5
1999	355.2	318.2	14.2	1.0	94.8	44.2	0.2	10.8	4.1	245.3	(s)	10.9	425.5	0.0	16.6	10.3	0.8	29.0	1,155.5

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.  
<sup>b</sup> Includes supplemental gaseous fuels.  
<sup>c</sup> "Other" is the subtotal of 16 petroleum products consumed in the industrial sector. See a full description in Appendix A, Section 4, "Other Petroleum Products."  
<sup>d</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.  
<sup>e</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.  
<sup>f</sup> Net interstate flow of electricity is the difference between the amount of energy in the electricity sold within a State (including associated losses) and the energy input at the electric utilities within the State. A positive number

indicates that more electricity (including associated losses) came into the State than went out of the State during the year; conversely, a negative number indicates that more electricity (including associated losses) went out of the State than came into the State.  
<sup>g</sup> From 1989, "Total" does not equal the sum of the columns. Net imports of electricity generated from nonrenewable energy sources (shown in appendix Table A8) is included in the total but not in any other columns.  
<sup>h</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.  
kWh=kilowatthours. R=Revised data. — =Not applicable.  
(s)=Btu value less than 0.05 and physical unit value less than 0.5.  
Note: Totals may not equal sum of components due to independent rounding.  
Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 48. Residential Energy Consumption Estimates, Selected Years 1960-1999, Colorado**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum				Wood Thousand Cords	Geothermal	Solar <sup>c</sup>	Electricity <sup>a</sup> Million Kilowatthours	Net Energy	Electrical System Energy Losses <sup>d</sup> Million Kilowatthours	Total
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Total							
			Thousand Barrels										
1960	90	52	148	50	2,097	2,294	212	—	—	1,776	—	4,418	—
1965	112	65	90	285	2,224	2,599	179	—	—	2,521	—	6,018	—
1970	80	83	168	112	3,080	3,361	195	—	—	3,859	—	9,351	—
1975	7	100	283	36	2,862	3,181	233	—	—	5,142	—	12,403	—
1980	35	90	78	23	1,670	1,772	463	—	—	6,693	—	16,275	—
1985	55	90	106	49	1,390	1,545	673	—	—	8,861	—	20,819	—
1990	20	92	27	22	1,697	1,746	366	—	—	9,787	—	R 21,411	—
1991	23	97	27	24	1,899	1,950	385	—	—	10,099	—	R 21,955	—
1992	21	95	22	37	1,692	1,751	406	—	—	10,216	—	R 21,788	—
1993	13	106	33	35	1,768	1,836	379	—	—	10,656	—	R 22,507	—
1994	8	100	26	40	1,757	1,822	R 371	—	—	10,939	—	R 22,828	—
1995	7	104	40	20	2,188	2,248	R 412	—	—	11,307	—	R 23,574	—
1996	5	111	60	21	2,100	2,180	R 411	—	—	11,871	—	R 24,738	—
1997	23	116	69	19	R 330	R 417	R 418	—	—	12,261	—	R 25,504	—
1998	6	111	21	24	171	216	369	—	—	12,652	—	26,136	—
1999	36	112	11	16	2,011	2,039	395	—	—	13,131	—	25,727	—

  

Trillion Btu													
1960	2.1	54.1	0.9	0.3	8.4	9.6	4.2	0.0	0.0	6.1	76.0	15.1	91.1
1965	2.6	59.6	0.5	1.6	8.9	11.1	3.6	0.0	0.0	8.6	85.4	20.5	105.9
1970	1.8	80.4	1.0	0.6	11.6	13.3	3.9	0.0	0.0	13.2	112.5	31.9	144.5
1975	0.2	89.5	1.6	0.2	10.6	12.5	4.7	0.0	0.0	17.5	124.4	42.3	166.7
1980	0.8	89.2	0.5	0.1	6.1	6.7	9.3	0.0	0.0	22.8	128.8	55.5	184.3
1985	1.2	90.1	0.6	0.3	5.0	5.9	13.5	0.0	0.0	30.2	140.8	71.0	211.9
1990	0.4	92.4	0.2	0.1	6.2	6.4	7.3	e 0.1	R e 0.2	33.4	e 140.2	R 73.1	R e 213.3
1991	0.5	100.3	0.2	0.1	6.9	7.2	7.7	0.1	R 0.2	34.5	150.4	R 74.9	R 225.3
1992	0.4	96.8	0.1	0.2	6.1	6.5	8.1	0.1	0.2	34.9	R 147.0	R 74.3	R 221.3
1993	0.3	107.4	0.2	0.2	6.4	6.8	7.6	0.1	0.2	36.4	158.6	76.8	235.4
1994	0.2	99.9	0.1	0.2	6.4	6.8	7.4	0.1	0.2	37.3	151.9	77.9	229.8
1995	0.2	106.2	0.2	0.1	7.9	8.3	R 8.2	0.1	0.2	38.6	161.7	80.4	R 242.2
1996	0.1	113.6	0.4	0.1	7.6	8.1	8.2	0.1	0.2	40.5	170.8	R 84.4	R 255.2
1997	0.4	117.0	0.4	0.1	R 1.2	R 1.7	R 8.4	0.1	0.2	41.8	R 169.6	R 87.0	R 256.7
1998	0.1	112.2	0.1	0.1	0.6	0.9	7.4	0.1	0.2	43.2	164.1	89.2	253.3
1999	0.8	112.4	0.1	0.1	7.3	7.4	7.9	0.1	0.2	44.8	173.6	87.8	261.4

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Includes small amounts of solar thermal and photovoltaic energy consumed by the commercial sector that cannot be separately identified. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

R=Revised data.

—=Not applicable.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 49. Commercial Energy Consumption Estimates, Selected Years 1960-1999, Colorado**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum						Wood	Geothermal	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>c</sup>	Total <sup>d</sup>
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels						Thousand Cords	Million Kilowatthours	Million Kilowatthours			
1960	167	28	123	66	370	135	56	750	4	—	1,772	—	4,408	—
1965	207	39	75	376	393	186	49	1,078	3	—	2,842	—	6,785	—
1970	149	59	140	148	544	124	38	993	4	—	4,594	—	11,134	—
1975	14	76	235	48	505	109	75	972	4	—	6,276	—	15,139	—
1980	65	67	339	6	295	312	3	955	11	—	7,277	—	17,695	—
1985	101	69	681	15	245	176	1	1,118	R 18	—	12,344	—	29,001	—
1990	38	66	437	10	299	265	0	1,011	R 23	—	14,420	—	R 31,546	—
1991	42	69	591	11	335	336	0	1,272	R 25	—	14,609	—	R 31,759	—
1992	38	66	834	7	299	161	(s)	1,301	R 26	—	14,757	—	R 31,474	—
1993	24	72	759	7	312	35	(s)	1,113	30	—	15,278	—	R 32,270	—
1994	15	66	1,219	5	310	51	0	1,585	31	—	13,943	—	R 29,097	—
1995	13	67	814	5	386	58	0	1,263	31	—	14,300	—	R 29,814	—
1996	9	69	987	6	371	265	0	1,628	34	—	15,251	—	R 31,784	—
1997	42	69	1,186	5	R 58	37	0	R 1,286	R 46	—	15,506	—	R 32,254	—
1998	11	63	989	9	30	38	3	1,070	46	—	16,920	—	34,953	—
1999	66	64	923	9	355	166	1	1,455	55	—	17,915	—	35,100	—

  

Trillion Btu														
1960	3.8	29.5	0.7	0.4	1.5	0.7	0.4	3.6	0.1	0.0	6.0	43.1	15.0	58.1
1965	4.7	35.8	0.4	2.1	1.6	1.0	0.3	5.4	0.1	0.0	9.7	55.7	23.1	78.9
1970	3.3	57.5	0.8	0.8	2.1	0.7	0.2	4.6	0.1	0.0	15.7	81.2	38.0	119.2
1975	0.3	68.3	1.4	0.3	1.9	0.6	0.5	4.6	0.1	0.0	21.4	94.7	51.7	146.3
1980	1.4	66.6	2.0	(s)	1.1	1.6	(s)	4.7	0.2	0.0	24.8	97.8	60.4	158.2
1985	2.2	68.9	4.0	0.1	0.9	0.9	(s)	5.9	R 0.4	0.0	42.1	R 119.4	98.9	R 218.4
1990	0.8	66.6	2.5	0.1	1.1	1.4	0.0	5.1	R 0.5	e 0.2	49.2	R e 122.4	107.6	R e 230.0
1991	0.9	71.0	3.4	0.1	1.2	1.8	0.0	6.5	R 0.5	0.2	49.8	R 128.9	R 108.4	R 237.2
1992	0.8	68.0	4.9	(s)	1.1	0.8	(s)	6.8	R 0.5	0.2	50.4	R 126.7	R 107.4	R 234.0
1993	0.5	72.4	4.4	(s)	1.1	0.2	(s)	5.8	0.6	0.2	52.1	131.7	110.1	241.8
1994	0.3	66.2	7.1	(s)	1.1	0.3	0.0	8.5	0.6	0.2	47.6	123.4	99.3	222.7
1995	0.3	67.8	4.7	(s)	1.4	0.3	0.0	6.5	0.6	0.2	48.8	124.2	R 101.7	R 225.9
1996	0.2	70.6	5.7	(s)	1.3	1.4	0.0	8.5	0.7	0.2	52.0	132.2	R 108.4	R 240.6
1997	0.8	69.9	6.9	(s)	R 0.2	0.2	0.0	R 7.3	R 0.9	0.2	52.9	R 132.0	R 110.1	R 242.1
1998	0.3	63.9	5.8	(s)	0.1	0.2	(s)	6.1	0.9	0.2	57.7	129.2	119.3	248.4
1999	1.5	63.9	5.4	0.1	1.3	0.9	(s)	7.6	1.1	0.2	61.1	135.4	119.8	255.1

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>d</sup> Small amounts of solar thermal and photovoltaic energy consumed in the commercial sector cannot be separately identified and are included in residential consumption.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 50. Industrial Energy Consumption Estimates, Selected Years 1960-1999, Colorado**

Year	Coal Thousand Short Tons	Natural Gas <sup>a</sup> Billion Cubic Feet	Petroleum									Hydro-electric Power <sup>b</sup> Million kWh	Wood and Waste	Other <sup>b,d</sup>	Electricity <sup>b</sup>		Electrical System Energy Losses <sup>e</sup> Million kWh	Total
			Asphalt and Road Oil <sup>b</sup>	Distillate Fuel <sup>b</sup>	Kero-sene <sup>b</sup>	LPG <sup>b</sup>	Lubri-cants <sup>b</sup>	Motor Gasoline	Residual Fuel <sup>b</sup>	Other <sup>b,c</sup>	Total				Net Energy	Million kWh		
1960	1,438	69	1,617	1,768	161	593	98	1,303	1,583	R 675	R 7,798	1	—	—	1,289	—	3,206	—
1965	1,698	82	1,423	1,994	447	641	130	1,039	1,254	R 937	R 7,865	1	—	—	1,576	—	3,763	—
1970	1,657	88	3,220	2,228	561	953	137	1,036	1,128	R 1,182	R 10,444	1	—	—	2,334	—	5,656	—
1975	1,871	73	2,231	3,419	193	1,498	156	860	2,327	R 1,121	R 11,805	1	—	—	4,407	—	10,630	—
1980	1,757	60	2,284	3,983	384	1,860	238	695	1,640	R 1,826	R 12,910	1	—	—	6,900	—	16,778	—
1985	791	48	3,103	2,293	28	621	217	580	40	R 1,214	R 8,096	1	—	—	5,468	—	12,848	—
1990	729	66	3,257	2,683	18	975	244	408	13	R 1,351	R 8,949	R f 95	—	—	6,587	—	R 14,409	—
1991	738	80	3,107	3,531	17	1,203	218	503	34	R 1,232	R 9,844	R 124	—	—	6,748	—	R 14,670	—
1992	735	79	3,190	4,350	7	1,125	223	494	4	R 1,559	R 10,952	R 82	—	—	6,849	—	R 14,607	—
1993	780	94	3,413	3,626	12	1,284	227	504	11	R 1,441	R 10,518	R 110	—	—	7,024	—	R 14,836	—
1994	857	95	4,188	3,126	4	1,184	237	583	1	R 1,558	R 10,882	R 117	—	—	9,620	—	R 20,076	—
1995	729	98	3,720	3,184	5	1,294	233	541	(s)	R 1,482	R 10,458	R 111	—	—	9,706	—	R 20,237	—
1996	367	111	3,904	4,119	6	R 1,357	226	631	4	R 1,958	R 12,206	R 119	—	—	9,947	—	R 20,730	—
1997	780	103	2,574	4,066	5	R 1,536	239	681	3	R 1,955	R 11,059	R 68	—	—	10,297	—	R 21,420	—
1998	353	118	4,749	3,839	11	1,186	250	625	(s)	1,799	12,460	116	—	—	9,998	—	20,655	—
1999	365	113	2,137	3,622	6	538	253	564	1	1,865	8,985	119	—	—	9,521	—	18,654	—
Trillion Btu																		
1960	36.6	71.8	10.7	10.3	0.9	2.4	0.6	6.8	10.0	R 4.0	R 45.8	(s)	2.2	0.0	4.4	R 160.7	10.9	R 171.7
1965	44.2	74.9	9.4	11.6	2.5	2.6	0.8	5.5	7.9	R 5.5	45.8	(s)	2.9	0.0	5.4	R 173.2	12.8	186.1
1970	41.4	85.3	21.4	13.0	3.2	3.6	0.8	5.4	7.1	R 6.9	R 61.4	(s)	4.4	0.0	8.0	R 200.5	19.3	R 219.8
1975	45.8	65.6	14.8	19.9	1.1	5.6	0.9	4.5	14.6	R 6.6	R 68.1	(s)	4.3	0.0	15.0	R 198.8	36.3	R 235.1
1980	43.1	59.9	15.2	23.2	2.2	6.8	1.4	3.6	10.3	R 10.5	R 73.3	(s)	R 1.3	0.0	23.5	R 201.1	57.2	R 258.3
1985	17.1	47.7	20.6	13.4	0.2	2.2	1.3	3.0	0.2	R 7.2	R 48.2	(s)	R 1.5	0.0	18.7	R 133.1	43.8	R 177.0
1990	15.4	66.7	21.6	15.6	0.1	3.5	1.5	2.1	0.1	R 8.1	R 52.7	R f 1.0	R 1.0	f 0.2	22.5	R f 159.4	49.2	R f 208.5
1991	15.6	82.4	20.6	20.6	0.1	4.3	1.3	2.6	0.2	R 7.4	R 57.2	R 1.3	R 1.1	0.2	23.0	R 180.8	50.1	R 230.9
1992	14.8	80.6	21.2	25.3	(s)	4.1	1.4	2.6	(s)	R 9.3	R 63.9	R 0.9	R 1.1	0.2	23.4	R 184.7	R 49.8	R 234.6
1993	16.3	94.9	22.6	21.1	0.1	4.6	1.4	2.6	0.1	R 8.6	R 61.2	R 1.1	R 1.1	0.2	24.0	R 198.8	50.6	R 249.4
1994	18.5	95.9	27.8	18.2	(s)	4.3	1.4	R 3.0	(s)	R 9.3	R 64.2	1.2	R 1.3	0.2	32.8	R 214.0	68.5	R 282.5
1995	15.8	99.3	24.7	18.5	(s)	4.7	1.4	2.8	(s)	R 8.9	R 61.1	R 1.1	R 1.7	0.2	33.1	R 212.3	69.0	R 281.3
1996	7.9	113.9	25.9	24.0	(s)	R 4.9	1.4	3.3	(s)	R 11.5	R 71.1	1.2	R 1.4	0.2	33.9	R 229.5	R 70.7	R 300.3
1997	16.8	104.6	17.1	23.7	(s)	R 5.6	1.4	R 3.5	(s)	R 11.5	R 62.9	R 0.7	R 1.3	0.2	35.1	R 221.7	R 73.1	R 294.8
1998	7.5	119.8	31.5	22.4	0.1	4.3	1.5	3.3	(s)	10.6	73.6	1.2	0.5	0.2	34.1	236.9	70.5	307.4
1999	7.8	113.7	14.2	21.1	(s)	1.9	1.5	2.9	(s)	10.9	52.7	1.2	1.3	0.2	32.5	209.5	63.6	273.1

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>e</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>f</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

R=Revised data.

kWh=kilowatthours. — =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 51. Transportation Energy Consumption Estimates, Selected Years 1960-1999, Colorado**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum								Ethanol <sup>c</sup>	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total <sup>c</sup>
			Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	LPG <sup>a</sup>	Lubricants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total				Million Kilowatthours	
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels								Thousand Barrels	Million Kilowatthours	Net Energy	Million Kilowatthours	Total <sup>c</sup>
1960	25	1	1,125	2,146	480	93	280	15,023	137	19,284	0	0	—	0	—
1965	6	2	1,111	1,763	3,426	81	286	18,097	713	25,476	0	0	—	0	—
1970	3	2	337	2,655	7,476	133	286	24,943	99	35,929	0	0	—	0	—
1975	(s)	5	267	4,290	7,151	188	302	30,948	104	43,250	0	0	—	0	—
1980	0	8	265	6,554	4,725	45	402	33,275	0	45,267	0	0	—	0	—
1985	0	7	142	6,358	7,861	68	366	34,986	146	49,927	R <sup>e</sup> 446	0	—	0	—
1990	0	9	167	7,175	6,109	75	412	34,889	0	48,826	R 230	0	—	0	—
1991	0	8	155	7,622	6,503	83	369	34,837	0	49,568	R 241	0	—	0	—
1992	0	8	136	7,173	7,363	68	376	35,135	0	50,251	R 377	0	—	0	—
1993	0	8	124	8,476	8,959	84	383	37,374	0	55,400	R 613	0	—	0	—
1994	0	10	128	8,864	7,930	138	400	38,751	1	56,212	R 589	1	—	2	—
1995	0	11	124	9,366	7,428	69	393	40,757	0	58,136	R 897	4	—	8	—
1996	0	11	124	9,638	7,765	R 70	382	42,132	(s)	R 60,109	R 1,547	4	—	9	—
1997	0	12	143	8,437	7,174	R 31	403	43,026	0	R 59,214	R 1,521	5	—	10	—
1998	0	9	144	10,787	6,792	25	422	44,178	0	62,348	1,504	5	—	10	—
1999	0	8	195	11,648	7,800	70	426	46,339	0	66,478	1,276	5	—	9	—
<b>Trillion Btu</b>															
1960	0.6	1.3	5.7	12.5	2.6	0.4	1.7	78.9	0.9	102.6	0.0	0.0	104.5	0.0	104.5
1965	0.1	1.7	5.6	10.3	19.3	0.3	1.7	95.1	4.5	136.8	0.0	0.0	138.6	0.0	138.6
1970	0.1	1.8	1.7	15.5	42.3	0.5	1.7	131.0	0.6	193.3	0.0	0.0	195.2	0.0	195.2
1975	(s)	4.8	1.3	25.0	40.4	0.7	1.8	162.6	0.7	232.5	0.0	0.0	237.3	0.0	237.3
1980	0.0	7.5	1.3	38.2	26.7	0.2	2.4	174.8	0.0	243.6	0.0	0.0	251.1	0.0	251.1
1985	0.0	7.1	0.7	37.0	44.5	0.2	2.2	183.8	0.9	269.4	R <sup>e</sup> 1.6	0.0	<sup>e</sup> 276.5	0.0	<sup>e</sup> 276.5
1990	0.0	9.2	0.8	41.8	34.6	0.3	2.5	183.3	0.0	263.2	R 0.8	0.0	272.4	0.0	272.4
1991	0.0	8.6	0.8	44.4	36.8	0.3	2.2	183.0	0.0	267.5	R 0.9	0.0	276.2	0.0	276.2
1992	0.0	8.5	0.7	41.8	41.6	0.2	2.3	184.6	0.0	271.2	R 1.3	0.0	279.7	0.0	279.7
1993	0.0	7.7	0.6	49.4	50.7	0.3	2.3	196.3	0.0	299.6	R 2.2	0.0	307.4	0.0	307.4
1994	0.0	10.1	0.6	51.6	44.9	0.5	2.4	R 202.7	(s)	R 302.8	R 2.1	(s)	R 312.9	(s)	R 312.9
1995	0.0	11.5	0.6	54.6	42.0	0.2	2.4	R 212.6	0.0	R 312.4	R 3.2	(s)	R 323.9	(s)	R 323.9
1996	0.0	11.2	0.6	56.1	44.0	0.3	2.3	R 219.8	(s)	R 323.1	R 5.5	(s)	R 334.3	(s)	R 334.3
1997	0.0	12.5	0.7	49.1	40.7	R 0.1	2.4	R 224.3	0.0	R 317.4	R 5.4	(s)	R 329.9	(s)	R 330.0
1998	0.0	9.4	0.7	62.8	38.5	0.1	2.6	230.3	0.0	335.0	5.3	(s)	344.4	(s)	344.4
1999	0.0	8.4	1.0	67.8	44.2	0.3	2.6	241.5	0.0	357.4	4.5	(s)	365.8	(s)	365.9

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels. Transportation use of natural gas is gas consumed in the operation of pipelines, primarily in compressors, and, since 1990, is also gas consumed as vehicle fuel.

<sup>c</sup> Ethanol blended into motor gasoline, which is accounted for under motor gasoline, is shown separately here to display the use of renewable energy by the transportation sector and is included only once in the total.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1980 and 1981 due to the expanded coverage of renewable energy sources beginning in 1981.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 52. Estimates of Energy Input at Electric Utilities, Selected Years, 1960-1999, Colorado**

Year	Coal	Natural Gas <sup>a</sup>	Petroleum				Nuclear Electric Power	Hydroelectric Power <sup>e</sup>	Wood and Waste	Geothermal Energy	Other <sup>b,f</sup>	Total <sup>g</sup>
			Heavy Oil <sup>b,c</sup>	Light Oil <sup>b,d</sup>	Petroleum Coke <sup>b</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels				Million Kilowatthours					
1960	1,221	37	106	10	0	116	0	969	0	0	0	—
1965	2,181	36	40	4	0	43	0	937	0	0	0	—
1970	3,212	51	242	22	0	264	0	1,234	0	0	0	—
1975	5,710	53	882	619	0	1,501	0	1,506	0	0	0	—
1980	10,124	32	171	273	0	444	667	1,716	0	0	0	—
1985	14,295	5	8	113	0	121	-32	2,357	3	0	0	—
1990	15,924	5	(s)	50	0	50	0	1,276	(s)	0	0	—
1991	15,416	6	46	35	0	82	0	1,663	(s)	0	0	—
1992	15,902	5	37	47	0	84	0	1,505	0	0	0	—
1993	16,252	5	0	28	0	28	0	1,858	0	0	0	—
1994	16,596	5	(s)	26	0	26	0	1,540	0	0	0	—
1995	16,222	4	8	22	0	30	0	2,101	0	0	0	—
1996	16,841	5	16	35	0	51	0	1,585	0	0	0	—
1997	17,116	6	(s)	38	0	38	0	<sup>R</sup> 1,962	0	0	0	—
1998	17,663	11	(s)	83	0	83	0	1,392	0	0	0	—
1999	17,704	19	1	71	0	72	0	1,481	0	0	0	—

  

Trillion Btu												
1960	25.1	38.3	0.7	0.1	0.0	0.7	0.0	10.4	0.0	0.0	0.0	74.6
1965	46.5	32.4	0.3	(s)	0.0	0.3	0.0	9.8	0.0	0.0	0.0	89.0
1970	69.1	49.9	1.5	0.1	0.0	1.6	0.0	13.0	0.0	0.0	0.0	133.6
1975	113.1	52.7	5.5	3.6	0.0	9.2	0.0	15.7	0.0	0.0	0.0	190.6
1980	202.4	31.3	1.1	1.6	0.0	2.7	7.3	17.8	0.0	0.0	0.0	261.5
1985	278.7	4.9	(s)	0.7	0.0	0.7	-0.3	24.6	(s)	0.0	0.0	308.6
1990	312.4	5.4	(s)	0.3	0.0	0.3	0.0	13.3	(s)	0.0	0.0	331.3
1991	304.8	5.7	0.3	0.2	0.0	0.5	0.0	17.4	(s)	0.0	0.0	328.4
1992	315.5	5.0	0.2	0.3	0.0	0.5	0.0	15.6	0.0	0.0	0.0	336.6
1993	321.4	4.9	0.0	0.2	0.0	0.2	0.0	19.2	0.0	0.0	0.0	345.6
1994	330.1	5.1	(s)	0.1	0.0	0.2	0.0	15.9	0.0	0.0	0.0	351.2
1995	321.0	3.8	(s)	0.1	0.0	0.2	0.0	21.7	0.0	0.0	0.0	346.7
1996	332.1	5.5	0.1	0.2	0.0	0.3	0.0	16.4	0.0	0.0	0.0	354.2
1997	337.9	5.5	(s)	0.2	0.0	0.2	0.0	<sup>R</sup> 20.3	0.0	0.0	0.0	364.1
1998	347.4	10.6	(s)	0.5	0.0	0.5	0.0	14.4	0.0	0.0	0.0	372.8
1999	345.2	19.8	(s)	0.4	0.0	0.4	0.0	15.3	0.0	0.0	0.0	380.7

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> Prior to 1980, based on oil used in steam plants. Since 1980, heavy oil includes fuel oil nos. 4, 5, and 6 and residual fuel oils.

<sup>d</sup> Prior to 1980, based on oil used in internal combustion and gas turbine engine plants. Since 1980, light oil includes fuel oil nos. 1 and 2, kerosene, and jet fuel.

<sup>e</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>f</sup> "Other" is electricity generated for distribution from wind, photovoltaic, and solar thermal energy.

<sup>g</sup> If applicable, from 1989, includes net imports of electricity generated from nonrenewable energy sources not shown in other columns. See data in appendix Table A8.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 53. Energy Consumption Estimates by Source, Selected Years 1960-1999, Connecticut**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum											Nuclear Electric Power	Hydro-electric Power <sup>d</sup>	Wood and Waste	Other <sup>a,e</sup>	Net Inter-state Flow of Electricity/Losses <sup>f</sup>	Total <sup>g</sup>
			Asphalt & Road Oil <sup>a</sup>	Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	Kero-sene <sup>a</sup>	LPG <sup>a</sup>	Lubri-cants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Other <sup>a,c</sup>	Total						
			Thousand Barrels															Million kWh	
1960	3,851	28	1,088	104	23,369	1,129	1,914	1,092	350	19,349	14,622	222	63,238	0	424	—	—	-708	—
1965	4,957	41	1,326	172	21,186	1,411	1,308	1,383	563	22,933	17,159	660	68,100	0	187	—	—	-946	—
1970	2,060	61	1,019	124	24,117	2,897	778	1,854	569	28,638	35,595	6,190	101,782	3,604	329	—	—	-9,907	—
1975	55	64	1,262	90	21,613	2,124	588	2,209	396	31,822	32,512	617	93,233	8,135	493	—	—	-5,957	—
1980	16	73	630	89	22,304	1,973	491	1,501	455	30,205	29,334	2,012	88,994	11,835	256	—	—	-5,609	—
1985	815	78	2,095	71	18,909	1,085	712	1,283	414	30,999	21,040	1,857	78,464	12,721	307	—	—	-501	—
1990	971	98	1,585	94	20,398	2,344	315	1,592	466	31,140	16,590	1,305	75,829	19,776	R <sup>h</sup> 576	—	—	R <sup>h</sup> -13,016	—
1991	856	102	1,976	28	19,837	2,246	379	1,485	417	31,870	14,536	1,515	74,289	12,243	R <sup>h</sup> 820	—	—	R <sup>h</sup> 11,581	—
1992	849	111	1,678	28	22,236	2,293	249	1,885	425	32,596	10,889	1,583	73,862	16,771	R <sup>h</sup> 1,071	—	—	R <sup>h</sup> 4,411	—
1993	788	112	1,577	30	22,099	2,312	279	1,684	433	33,103	8,845	1,595	71,957	21,802	R <sup>h</sup> 1,258	—	—	R <sup>h</sup> -7,859	—
1994	862	120	1,676	28	20,347	2,452	260	1,487	453	32,668	7,597	1,624	68,592	20,160	R <sup>h</sup> 1,326	—	—	R <sup>h</sup> -1,866	—
1995	906	132	1,911	41	20,982	2,489	244	1,410	445	30,591	6,822	1,553	66,486	18,749	R <sup>h</sup> 1,240	—	—	R <sup>h</sup> -1,292	—
1996	931	128	1,572	37	22,545	2,718	221	R <sup>h</sup> 1,517	432	32,663	10,432	R <sup>h</sup> 4,064	R <sup>h</sup> 76,201	6,225	R <sup>h</sup> 1,556	—	—	R <sup>h</sup> 34,457	—
1997	1,065	137	1,217	23	22,877	2,371	286	R <sup>h</sup> 1,732	456	32,934	14,688	R <sup>h</sup> 4,411	R <sup>h</sup> 80,996	-125	R <sup>h</sup> 1,503	—	—	R <sup>h</sup> 41,312	—
1998	596	122	552	52	20,401	2,212	355	2,243	477	33,589	15,012	4,434	79,328	3,243	1,371	—	—	37,294	—
1999	5	132	666	32	22,457	2,456	355	1,673	482	36,283	10,628	4,444	79,478	12,675	1,381	—	—	19,243	—

  

Trillion Btu																			
1960	101.7	29.4	7.2	0.5	136.1	6.4	10.9	4.4	2.1	101.6	91.9	1.3	362.4	0.0	4.6	12.8	0.0	-2.4	508.6
1965	128.6	41.7	8.8	0.9	123.4	8.0	7.4	5.5	3.4	120.5	107.9	3.7	389.4	0.0	2.0	13.5	0.0	-3.2	572.0
1970	48.6	61.5	6.8	0.6	140.5	16.4	4.4	7.0	3.5	150.4	223.8	34.0	587.4	39.6	3.5	15.8	0.0	-33.8	722.6
1975	1.3	64.3	8.4	0.5	125.9	12.0	3.3	8.2	2.4	167.2	204.4	3.4	535.7	89.6	5.1	17.1	0.0	-20.3	692.8
1980	0.4	74.2	4.2	0.4	129.9	11.2	2.8	5.5	2.8	158.7	184.4	11.0	510.9	129.1	2.7	R <sup>h</sup> 35.3	0.0	-19.1	R <sup>h</sup> 733.3
1985	21.3	80.6	13.9	0.4	110.1	6.1	4.0	4.6	2.5	162.8	132.3	10.0	446.9	137.6	3.2	R <sup>h</sup> 36.0	0.0	-1.7	R <sup>h</sup> 723.7
1990	25.7	100.9	10.5	0.5	118.8	13.3	1.8	5.8	2.8	163.6	104.3	7.1	428.4	211.2	R <sup>h</sup> 6.0	R <sup>h</sup> 29.7	h <sup>0</sup> 1	R <sup>h</sup> -44.4	R <sup>h</sup> 757.7
1991	22.6	105.1	13.1	0.1	115.5	12.7	2.1	5.4	2.5	167.4	91.4	8.2	418.6	131.5	R <sup>h</sup> 8.6	R <sup>h</sup> 30.8	0.1	R <sup>h</sup> 39.5	R <sup>h</sup> 758.6
1992	22.3	114.4	11.1	0.1	129.5	13.0	1.4	6.8	2.6	171.2	68.5	8.5	412.8	179.1	R <sup>h</sup> 11.1	R <sup>h</sup> 35.2	0.1	R <sup>h</sup> 15.1	R <sup>h</sup> 792.7
1993	20.6	114.5	10.5	0.2	128.7	13.1	1.6	6.1	2.6	173.9	55.6	8.6	400.8	232.9	R <sup>h</sup> 13.0	R <sup>h</sup> 35.3	0.1	-26.8	R <sup>h</sup> 792.7
1994	22.5	123.6	11.1	0.1	118.5	13.9	1.5	5.4	2.7	R <sup>h</sup> 170.9	47.8	8.8	R <sup>h</sup> 380.7	215.2	R <sup>h</sup> 13.7	R <sup>h</sup> 36.1	0.1	R <sup>h</sup> -6.4	R <sup>h</sup> 789.1
1995	23.7	136.0	12.7	0.2	122.2	14.1	1.4	5.1	2.7	R <sup>h</sup> 159.5	42.9	8.4	R <sup>h</sup> 369.2	199.8	R <sup>h</sup> 12.8	R <sup>h</sup> 44.7	R <sup>h</sup> 0.2	R <sup>h</sup> -4.4	R <sup>h</sup> 785.9
1996	24.4	131.5	10.4	0.2	131.3	15.4	1.3	R <sup>h</sup> 5.5	2.6	R <sup>h</sup> 170.4	65.6	R <sup>h</sup> 21.8	R <sup>h</sup> 424.4	66.1	R <sup>h</sup> 16.1	R <sup>h</sup> 50.0	0.2	R <sup>h</sup> 117.6	R <sup>h</sup> 834.4
1997	28.0	140.7	8.1	0.1	133.3	13.4	1.6	R <sup>h</sup> 6.3	2.8	R <sup>h</sup> 171.7	92.3	R <sup>h</sup> 23.8	R <sup>h</sup> 453.4	-1.3	R <sup>h</sup> 15.6	R <sup>h</sup> 45.0	0.2	R <sup>h</sup> 141.0	R <sup>h</sup> 829.0
1998	15.7	125.0	3.7	0.3	118.8	12.5	2.0	8.1	2.9	175.1	94.4	23.9	441.7	34.5	14.2	40.2	0.2	127.2	803.6
1999	0.1	135.0	4.4	0.2	130.8	13.9	2.0	6.1	2.9	189.1	66.8	23.9	440.1	134.6	14.3	43.5	0.3	65.7	839.3

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products consumed in the industrial sector. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>e</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>f</sup> Net interstate flow of electricity is the difference between the amount of energy in the electricity sold within a State (including associated losses) and the energy input at the electric utilities within the State. A positive number

indicates that more electricity (including associated losses) came into the State than went out of the State during the year; conversely, a negative number indicates that more electricity (including associated losses) went out of the State than came into the State.

<sup>g</sup> From 1989, "Total" does not equal the sum of the columns. Net imports of electricity generated from nonrenewable energy sources (shown in appendix Table A8) is included in the total but not in any other columns.

<sup>h</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

kWh=kilowatthours. R=Revised data. — =Not applicable.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.



**Table 54. Residential Energy Consumption Estimates, Selected Years 1960-1999, Connecticut**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum				Wood Thousand Cords	Geothermal	Solar <sup>c</sup>	Electricity <sup>a</sup> Million Kilowatthours	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Total						Million Kilowatthours	
			Thousand Barrels										
1960	95	16	15,480	1,507	624	17,611	255	—	—	2,724	—	6,776	—
1965	46	22	13,649	1,101	692	15,442	239	—	—	3,812	—	9,101	—
1970	25	31	14,239	526	802	15,568	308	—	—	6,396	—	15,501	—
1975	13	32	12,950	291	768	14,009	332	—	—	7,449	—	17,969	—
1980	10	32	13,468	233	595	14,296	R 821	—	—	8,218	—	19,983	—
1985	22	33	9,758	605	639	11,001	698	—	—	8,638	—	20,295	—
1990	7	37	11,426	196	857	12,479	483	—	—	10,376	—	R 22,698	—
1991	8	37	11,236	175	950	12,360	509	—	—	10,441	—	R 22,697	—
1992	10	42	13,434	196	1,220	14,850	535	—	—	10,496	—	R 22,386	—
1993	8	42	13,812	211	1,051	15,073	R 551	—	—	10,597	—	R 22,382	—
1994	7	42	12,564	162	941	13,667	R 540	—	—	10,898	—	R 22,744	—
1995	11	41	12,129	122	875	13,126	R 599	—	—	10,760	—	R 22,434	—
1996	3	44	13,392	124	R 1,061	R 14,577	R 598	—	—	10,943	—	R 22,805	—
1997	4	41	13,362	143	R 1,208	R 14,713	R 390	—	—	10,859	—	R 22,588	—
1998	4	35	11,276	126	1,530	12,933	344	—	—	10,935	—	22,589	—
1999	3	38	12,976	177	1,182	14,335	368	—	—	11,619	—	22,765	—

  

Trillion Btu													
1960	2.4	16.6	90.2	8.5	2.5	101.2	5.1	0.0	0.0	9.3	134.5	23.1	157.7
1965	1.1	22.7	79.5	6.2	2.8	88.5	4.8	0.0	0.0	13.0	130.1	31.1	161.2
1970	0.6	31.7	82.9	3.0	3.0	89.0	6.2	0.0	0.0	21.8	149.2	52.9	202.1
1975	0.3	32.3	75.4	1.7	2.9	79.9	6.6	0.0	0.0	25.4	144.6	61.3	205.9
1980	0.2	32.7	78.5	1.3	2.2	82.0	16.4	0.0	0.0	28.0	159.4	68.2	R 227.6
1985	0.5	33.8	56.8	3.4	2.3	62.6	14.0	0.0	0.0	29.5	140.3	69.2	209.5
1990	0.2	38.7	66.6	1.1	3.1	70.8	9.7	e 0.0	e 0.1	35.4	e 154.8	77.4	e 232.2
1991	0.2	38.3	65.4	1.0	3.4	69.9	10.2	0.0	0.1	35.6	154.3	R 77.4	R 231.7
1992	0.2	43.6	78.3	1.1	4.4	83.8	10.7	0.0	0.1	35.8	174.2	R 76.4	R 250.6
1993	0.2	43.4	80.5	1.2	3.8	85.4	11.0	0.0	0.1	36.2	176.2	76.4	252.6
1994	0.2	42.9	73.2	0.9	3.4	77.5	10.8	0.0	0.1	37.2	168.7	77.6	246.3
1995	0.3	42.0	70.7	0.7	3.2	74.5	12.0	0.0	R 0.2	36.7	R 165.7	76.5	R 242.2
1996	0.1	45.0	78.0	0.7	R 3.8	R 82.5	R 12.0	0.0	0.2	37.3	R 177.2	R 77.8	R 255.0
1997	0.1	41.7	77.8	0.8	R 4.4	R 83.0	R 7.8	0.0	0.2	37.1	R 169.9	R 77.1	R 246.9
1998	0.1	36.2	65.7	0.7	5.5	71.9	6.9	0.0	0.2	37.3	152.7	77.1	229.8
1999	0.1	39.3	75.6	1.0	4.3	80.9	7.4	(s)	0.3	39.6	167.5	77.7	245.2

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Includes small amounts of solar thermal and photovoltaic energy consumed by the commercial sector that cannot be separately identified. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 55. Commercial Energy Consumption Estimates, Selected Years 1960-1999, Connecticut**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum						Wood	Geothermal	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>c</sup>	Total <sup>d</sup>
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels						Thousand Cords	Million Kilowatthours	Million Kilowatthours			
1960	98	3	5,029	52	110	63	871	6,125	5	—	1,825	—	4,539	—
1965	35	6	4,434	38	122	76	958	5,629	5	—	2,873	—	6,861	—
1970	17	15	4,626	18	142	97	995	5,877	6	—	4,649	—	11,265	—
1975	9	16	4,207	10	136	239	656	5,248	6	—	6,000	—	14,472	—
1980	6	20	2,905	7	105	275	1,171	4,463	20	—	7,039	—	17,116	—
1985	15	25	3,547	64	113	142	1,679	5,546	R 19	—	8,731	—	20,514	—
1990	5	29	2,929	51	151	204	1,049	4,385	R 31	—	10,711	—	R 23,432	—
1991	5	27	2,984	167	168	656	529	4,504	R 32	—	10,908	—	R 23,714	—
1992	10	30	2,944	45	215	1,576	893	5,673	R 35	—	10,851	—	R 23,144	—
1993	5	31	2,564	44	185	1,588	413	4,795	44	—	11,044	—	R 23,328	—
1994	5	39	2,469	51	166	1,041	656	4,382	45	—	11,210	—	R 23,395	—
1995	14	38	2,921	27	154	250	454	3,807	45	—	11,297	—	R 23,553	—
1996	2	40	3,001	72	R 187	823	462	R 4,545	49	—	11,546	—	R 24,062	—
1997	3	43	3,029	104	R 213	983	328	R 4,656	R 43	—	11,654	—	R 24,242	—
1998	3	42	2,682	176	270	725	170	4,023	43	—	12,184	—	25,169	—
1999	2	48	2,664	82	209	778	252	3,984	52	—	12,349	—	24,195	—

  

Trillion Btu														
1960	2.4	3.3	29.3	0.3	0.4	0.3	5.5	35.8	0.1	0.0	6.2	47.9	15.5	63.4
1965	0.9	5.9	25.8	0.2	0.5	0.4	6.0	33.0	0.1	0.0	9.8	49.6	23.4	73.0
1970	0.4	14.7	26.9	0.1	0.5	0.5	6.3	34.3	0.1	0.0	15.9	65.5	38.4	103.9
1975	0.2	16.0	24.5	0.1	0.5	1.3	4.1	30.4	0.1	0.0	20.5	67.3	49.4	116.6
1980	0.1	20.6	16.9	(s)	0.4	1.4	7.4	26.2	0.4	0.0	24.0	71.3	58.4	129.7
1985	0.3	25.3	20.7	0.4	0.4	0.7	10.6	32.7	R 0.4	0.0	29.8	R 88.6	70.0	R 158.6
1990	0.1	30.4	17.1	0.3	0.5	1.1	6.6	25.6	R 0.6	e 0.0	36.5	R e 93.2	R 80.0	R e 173.2
1991	0.1	27.7	17.4	0.9	0.6	3.4	3.3	25.7	R 0.6	0.0	37.2	R 91.4	R 80.9	R 172.3
1992	0.3	30.7	17.1	0.3	0.8	8.3	5.6	32.1	R 0.7	0.0	37.0	R 100.7	R 79.0	R 179.7
1993	0.1	32.3	14.9	0.3	0.7	8.3	2.6	26.8	0.9	0.0	37.7	97.8	79.6	177.4
1994	0.1	40.3	14.4	0.3	0.6	R 5.4	4.1	R 24.8	0.9	0.0	38.2	104.4	79.8	R 184.2
1995	0.3	39.0	17.0	0.2	0.6	1.3	2.9	21.9	0.9	0.0	38.5	100.7	R 80.4	181.0
1996	0.1	40.9	17.5	0.4	R 0.7	4.3	2.9	25.8	1.0	0.0	39.4	107.1	R 82.1	R 189.2
1997	0.1	43.8	17.6	0.6	R 0.8	R 5.1	2.1	R 26.2	R 0.9	0.0	39.8	R 110.7	R 82.7	R 193.4
1998	0.1	43.4	15.6	1.0	1.0	3.8	1.1	22.4	0.9	0.0	41.6	108.3	85.9	194.2
1999	(s)	48.7	15.5	0.5	0.8	4.1	1.6	22.4	1.0	0.0	42.1	114.3	82.6	196.8

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>d</sup> Small amounts of solar thermal and photovoltaic energy consumed in the commercial sector cannot be separately identified and are included in residential consumption.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 56. Industrial Energy Consumption Estimates, Selected Years 1960-1999, Connecticut**

Year	Coal	Natural Gas <sup>a</sup>	Petroleum									Hydro-electric Power <sup>b</sup>	Wood and Waste	Other <sup>b,d</sup>	Electricity <sup>b</sup>		Electrical System Energy Losses <sup>e</sup>	Total
			Asphalt and Road Oil <sup>b</sup>	Distillate Fuel <sup>b</sup>	Kero-sene <sup>b</sup>	LPG <sup>b</sup>	Lubri-cants <sup>b</sup>	Motor Gasoline	Residual Fuel <sup>b</sup>	Other <sup>b,c</sup>	Total				Million kWh	Net Energy		
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels									Million kWh		Million kWh	Million kWh			
1960	866	7	1,088	1,665	354	355	93	243	11,950	222	15,968	26	—	—	2,837	—	7,056	—
1965	776	12	1,326	1,561	169	564	308	248	13,180	660	18,016	9	—	—	3,862	—	9,220	—
1970	142	15	1,019	1,968	234	890	331	269	13,710	6,190	24,611	3	—	—	5,094	—	12,344	—
1975	29	16	1,262	1,944	287	1,280	200	36	9,124	617	14,750	7	—	—	5,050	—	12,181	—
1980	0	20	630	3,235	251	785	208	66	6,683	2,012	13,870	6	—	—	5,944	—	14,454	—
1985	4	19	2,095	1,072	44	499	189	225	2,202	1,857	8,183	6	—	—	6,113	—	14,362	—
1990	1	25	1,585	1,018	68	548	213	263	1,434	1,305	6,434	R <sup>f</sup> 52	—	—	6,100	—	R <sup>f</sup> 13,344	—
1991	3	33	1,976	1,080	37	327	191	239	996	1,515	6,360	R <sup>f</sup> 68	—	—	5,822	—	R <sup>f</sup> 12,658	—
1992	12	36	1,678	932	8	417	194	240	1,229	1,583	6,282	R <sup>f</sup> 67	—	—	5,780	—	R <sup>f</sup> 12,326	—
1993	30	37	1,577	822	24	415	198	196	1,442	1,595	6,269	R <sup>f</sup> 65	—	—	5,597	—	R <sup>f</sup> 11,822	—
1994	29	31	1,676	761	46	330	207	195	1,313	1,624	6,153	R <sup>f</sup> 72	—	—	5,917	—	R <sup>f</sup> 12,348	—
1995	0	33	1,911	825	95	355	203	195	767	1,553	5,903	R <sup>f</sup> 58	—	—	5,913	—	R <sup>f</sup> 12,329	—
1996	0	32	1,572	822	25	R <sup>f</sup> 247	197	223	980	R <sup>f</sup> 4,064	R <sup>f</sup> 8,130	R <sup>f</sup> 96	—	—	5,928	—	R <sup>f</sup> 12,355	—
1997	0	35	1,217	874	39	R <sup>f</sup> 295	208	232	395	R <sup>f</sup> 4,411	R <sup>f</sup> 7,671	R <sup>f</sup> 66	—	—	5,919	—	R <sup>f</sup> 12,312	—
1998	0	32	552	795	53	391	218	138	327	4,434	6,908	64	—	—	5,838	—	12,059	—
1999	0	32	666	787	97	249	220	210	486	4,444	7,160	57	—	—	5,836	—	11,434	—
<b>Trillion Btu</b>																		
1960	22.8	7.5	7.2	9.7	2.0	1.4	0.6	1.3	75.1	1.3	98.6	0.3	7.6	0.0	9.7	146.5	24.1	170.6
1965	20.4	12.7	8.8	9.1	1.0	2.3	1.9	1.3	82.9	3.7	110.8	0.1	8.7	0.0	13.2	165.9	31.5	197.3
1970	3.4	14.9	6.8	11.5	1.3	3.4	2.0	1.4	86.2	34.0	146.6	(s)	9.6	0.0	17.4	191.9	42.1	234.0
1975	0.7	15.6	8.4	11.3	1.6	4.8	1.2	0.2	57.4	3.4	88.3	0.1	10.3	0.0	17.2	132.2	41.6	173.8
1980	0.0	20.8	4.2	18.8	1.4	2.9	1.3	0.3	42.0	11.0	82.0	0.1	R <sup>f</sup> 18.5	0.0	20.3	R <sup>f</sup> 141.5	49.3	R <sup>f</sup> 190.8
1985	0.1	19.5	13.9	6.2	0.2	1.8	1.1	1.2	13.8	10.0	48.4	0.1	R <sup>f</sup> 21.6	0.0	20.9	R <sup>f</sup> 110.6	49.0	R <sup>f</sup> 159.6
1990	(s)	26.3	10.5	5.9	0.4	2.0	1.3	1.4	9.0	7.1	37.6	R <sup>f</sup> 0.5	R <sup>f</sup> 15.1	f <sup>f</sup> 0.0	20.8	R <sup>f</sup> 100.3	45.5	f <sup>f</sup> 145.8
1991	0.1	33.7	13.1	6.3	0.2	1.2	1.2	1.3	6.3	8.2	37.7	R <sup>f</sup> 0.7	R <sup>f</sup> 15.4	0.0	19.9	R <sup>f</sup> 107.4	43.2	R <sup>f</sup> 150.6
1992	0.3	37.4	11.1	5.4	(s)	1.5	1.2	1.3	7.7	8.5	36.8	0.7	R <sup>f</sup> 19.9	0.0	19.7	R <sup>f</sup> 114.9	42.1	R <sup>f</sup> 156.9
1993	0.7	37.8	10.5	4.8	0.1	1.5	1.2	1.0	9.1	8.6	36.8	0.7	R <sup>f</sup> 19.2	0.0	19.1	R <sup>f</sup> 114.3	R <sup>f</sup> 40.3	R <sup>f</sup> 154.6
1994	0.7	31.6	11.1	4.4	0.3	1.2	1.3	1.0	8.3	8.8	36.3	0.7	R <sup>f</sup> 19.8	0.0	20.2	R <sup>f</sup> 109.4	42.1	R <sup>f</sup> 151.6
1995	0.0	34.1	12.7	4.8	0.5	1.3	1.2	1.0	4.8	8.4	34.8	0.6	R <sup>f</sup> 27.6	0.0	20.2	R <sup>f</sup> 117.3	R <sup>f</sup> 42.1	R <sup>f</sup> 159.3
1996	0.0	33.4	10.4	4.8	0.1	R <sup>f</sup> 0.9	1.2	1.2	6.2	R <sup>f</sup> 21.8	R <sup>f</sup> 46.5	1.0	R <sup>f</sup> 32.6	0.0	20.2	R <sup>f</sup> 133.7	R <sup>f</sup> 42.2	R <sup>f</sup> 175.9
1997	0.0	35.5	8.1	5.1	0.2	R <sup>f</sup> 1.1	1.3	1.2	2.5	R <sup>f</sup> 23.8	R <sup>f</sup> 43.2	0.7	R <sup>f</sup> 31.7	0.0	20.2	R <sup>f</sup> 131.3	R <sup>f</sup> 42.0	R <sup>f</sup> 173.3
1998	0.0	33.3	3.7	4.6	0.3	1.4	1.3	0.7	2.1	23.9	38.1	0.7	28.0	0.0	19.9	120.0	41.1	161.1
1999	0.0	32.8	4.4	4.6	0.6	0.9	1.3	1.1	3.1	23.9	39.8	0.6	30.3	0.0	19.9	123.4	39.0	162.4

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>e</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>f</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

R=Revised data.

kWh=kilowatthours. — =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 57. Transportation Energy Consumption Estimates, Selected Years 1960-1999, Connecticut**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum								Ethanol <sup>c</sup>	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total <sup>c</sup>
			Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	LPG <sup>a</sup>	Lubricants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total					
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels								Thousand Barrels	Million Kilowatthours	Million Kilowatthours	Total <sup>c</sup>	
1960	15	(s)	104	1,117	1,129	2	258	19,044	204	21,857	0	0	—	0	—
1965	3	(s)	172	1,415	1,411	5	255	22,609	471	26,338	0	0	—	0	—
1970	(s)	(s)	124	2,266	2,897	21	238	28,273	359	34,177	0	0	—	0	—
1975	(s)	(s)	90	2,391	2,013	26	196	31,547	581	36,844	0	0	—	0	—
1980	0	(s)	89	2,580	1,921	15	247	29,864	53	34,768	0	0	—	0	—
1985	0	(s)	71	4,448	1,085	32	225	30,631	152	36,645	R e 31	0	—	0	—
1990	0	(s)	94	4,955	2,344	36	253	30,673	86	38,441	R 0	0	—	0	—
1991	0	1	28	4,428	2,246	40	227	30,976	92	38,036	R 32	0	—	0	—
1992	0	1	28	4,861	2,293	32	231	30,780	44	38,269	R 134	0	—	0	—
1993	0	(s)	30	4,828	2,312	33	235	31,319	31	38,788	R 163	0	—	0	—
1994	0	1	28	4,470	2,452	50	246	31,433	23	38,701	R 110	0	—	0	—
1995	0	1	41	4,976	2,489	26	242	30,146	12	37,930	R 24	0	—	0	—
1996	0	1	37	5,255	2,718	R 21	235	31,617	36	39,920	R 80	0	—	0	—
1997	0	3	23	5,510	2,371	R 16	248	31,719	25	R 39,912	R 85	0	—	0	—
1998	0	1	52	5,542	2,212	52	259	32,726	15	40,859	82	0	—	0	—
1999	0	1	32	5,898	2,456	34	262	35,294	15	43,991	87	0	—	0	—

  

Trillion Btu															
1960	0.4	0.2	0.5	6.5	6.4	(s)	1.6	100.0	1.3	116.3	0.0	0.0	116.9	0.0	116.9
1965	0.1	0.1	0.9	8.2	8.0	(s)	1.5	118.8	3.0	140.4	0.0	0.0	140.5	0.0	140.5
1970	(s)	0.1	0.6	13.2	16.4	0.1	1.4	148.5	2.3	182.5	0.0	0.0	182.6	0.0	182.6
1975	(s)	(s)	0.5	13.9	11.4	0.1	1.2	165.7	3.7	196.4	0.0	0.0	196.5	0.0	196.5
1980	0.0	0.1	0.4	15.0	10.9	0.1	1.5	156.9	0.3	185.1	0.0	0.0	185.2	0.0	185.2
1985	0.0	0.4	0.4	25.9	6.1	0.1	1.4	160.9	1.0	195.7	R e 0.1	0.0	e 196.1	0.0	e 196.1
1990	0.0	0.5	0.5	28.9	13.3	0.1	1.5	161.1	0.5	205.9	R 0.0	0.0	206.4	0.0	206.4
1991	0.0	0.5	0.1	25.8	12.7	0.1	1.4	162.7	0.6	203.4	R 0.1	0.0	204.0	0.0	204.0
1992	0.0	0.6	0.1	28.3	13.0	0.1	1.4	161.7	0.3	204.9	0.5	0.0	205.5	0.0	205.5
1993	0.0	0.5	0.2	28.1	13.1	0.1	1.4	164.5	0.2	207.6	R 0.6	0.0	208.1	0.0	208.1
1994	0.0	0.7	0.1	26.0	13.9	0.2	1.5	R 164.4	0.1	R 206.3	0.4	0.0	R 207.0	0.0	R 207.0
1995	0.0	1.2	0.2	29.0	14.1	0.1	1.5	R 157.2	0.1	R 202.1	0.1	0.0	R 203.3	0.0	R 203.3
1996	0.0	1.5	0.2	30.6	15.4	0.1	1.4	R 164.9	0.2	R 212.9	0.3	0.0	R 214.3	0.0	R 214.3
1997	0.0	2.6	0.1	32.1	13.4	0.1	1.5	R 165.4	0.2	R 212.7	0.3	0.0	R 215.3	0.0	R 215.3
1998	0.0	0.9	0.3	32.3	12.5	0.2	1.6	170.6	0.1	217.5	0.3	0.0	218.4	0.0	218.4
1999	0.0	0.8	0.2	34.4	13.9	0.1	1.6	183.9	0.1	234.2	0.3	0.0	234.9	0.0	234.9

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels. Transportation use of natural gas is gas consumed in the operation of pipelines, primarily in compressors, and, since 1990, is also gas consumed as vehicle fuel.

<sup>c</sup> Ethanol blended into motor gasoline, which is accounted for under motor gasoline, is shown separately here to display the use of renewable energy by the transportation sector and is included only once in the total.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1980 and 1981 due to the expanded coverage of renewable energy sources beginning in 1981.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 58. Estimates of Energy Input at Electric Utilities, Selected Years, 1960-1999, Connecticut**

Year	Coal	Natural Gas <sup>a</sup>	Petroleum				Nuclear Electric Power	Hydroelectric Power <sup>e</sup>	Wood and Waste	Geothermal Energy	Other <sup>b,f</sup>	Total <sup>g</sup>
			Heavy Oil <sup>b,c</sup>	Light Oil <sup>b,d</sup>	Petroleum Coke <sup>b</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels				Million Kilowatthours					
1960	2,776	2	1,597	79	0	1,676	0	398	0	0	0	—
1965	4,097	(s)	2,550	126	0	2,676	0	179	0	0	0	—
1970	1,875	(s)	20,531	1,018	0	21,550	3,604	327	0	0	0	—
1975	4	(s)	22,150	232	0	22,382	8,135	487	0	0	0	—
1980	0	0	21,428	168	0	21,596	11,835	250	0	0	0	—
1985	774	2	17,006	83	0	17,089	12,721	300	0	0	0	—
1990	958	5	14,021	69	0	14,090	19,776	R 523	422	0	0	—
1991	840	5	12,919	109	0	13,029	12,243	R 752	439	0	0	—
1992	817	2	8,723	65	0	8,788	16,771	R 1,004	374	0	0	—
1993	745	1	6,958	73	0	7,032	21,802	R 1,193	406	0	0	—
1994	821	8	5,605	83	0	5,689	20,160	R 1,254	439	0	0	—
1995	881	19	5,589	131	0	5,720	18,749	R 1,181	404	0	0	—
1996	925	10	8,953	75	0	9,028	6,225	R 1,460	437	0	0	—
1997	1,058	17	13,941	102	0	14,043	-125	R 1,437	451	0	0	—
1998	590	11	14,500	105	0	14,605	3,243	1,307	427	0	0	—
1999	0	13	9,876	132	0	10,008	12,675	1,325	467	0	0	—

**Trillion Btu**

1960	73.7	1.8	10.0	0.5	0.0	10.5	0.0	4.3	0.0	0.0	0.0	90.3
1965	106.2	0.3	16.0	0.7	0.0	16.8	0.0	1.9	0.0	0.0	0.0	125.1
1970	44.2	0.1	129.1	5.9	0.0	135.0	39.6	3.4	0.0	0.0	0.0	222.3
1975	0.1	0.3	139.3	1.3	0.0	140.6	89.6	5.1	0.0	0.0	0.0	235.7
1980	0.0	0.0	134.7	1.0	0.0	135.7	129.1	2.6	0.0	0.0	0.0	267.4
1985	20.4	1.6	106.9	0.5	0.0	107.4	137.6	3.1	0.0	0.0	0.0	270.1
1990	25.3	5.0	88.1	0.4	0.0	88.6	211.2	R 5.4	4.4	0.0	0.0	R 340.1
1991	22.2	4.9	81.2	0.6	0.0	81.9	131.5	R 7.8	4.6	0.0	0.0	R 254.7
1992	21.5	2.2	54.8	0.4	0.0	55.2	179.1	R 10.4	3.9	0.0	0.0	R 274.9
1993	19.6	0.6	43.7	0.4	0.0	44.2	232.9	R 12.3	4.2	0.0	0.0	316.1
1994	21.5	8.1	35.2	0.5	0.0	35.7	215.2	R 12.9	4.5	0.0	0.0	R 301.6
1995	23.1	19.6	35.1	0.8	0.0	35.9	199.8	R 12.2	4.2	0.0	0.0	R 298.8
1996	24.2	10.7	56.3	0.4	0.0	56.7	66.1	R 15.1	4.5	0.0	0.0	R 181.5
1997	27.8	17.1	87.6	0.6	0.0	88.2	-1.3	R 14.9	R 4.7	0.0	0.0	R 157.8
1998	15.5	11.0	91.2	0.6	0.0	91.8	34.5	13.5	4.4	0.0	0.0	175.6
1999	0.0	13.4	62.1	0.8	0.0	62.9	134.6	13.7	4.8	0.0	0.0	235.3

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> Prior to 1980, based on oil used in steam plants. Since 1980, heavy oil includes fuel oil nos. 4, 5, and 6 and residual fuel oils.

<sup>d</sup> Prior to 1980, based on oil used in internal combustion and gas turbine engine plants. Since 1980, light oil includes fuel oil nos. 1 and 2, kerosene, and jet fuel.

<sup>e</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>f</sup> "Other" is electricity generated for distribution from wind, photovoltaic, and solar thermal energy.

<sup>g</sup> If applicable, from 1989, includes net imports of electricity generated from nonrenewable energy sources not shown in other columns. See data in appendix Table A8.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 59. Energy Consumption Estimates by Source, Selected Years 1960-1999, Delaware**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum											Nuclear Electric Power	Hydro-electric Power <sup>d</sup>	Wood and Waste	Other <sup>a,e</sup>	Net Inter-state Flow of Electricity/Losses <sup>f</sup>	Total <sup>g</sup>
			Asphalt & Road Oil <sup>a</sup>	Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	Kero-sene <sup>a</sup>	LPG <sup>a</sup>	Lubri-cants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Other <sup>a,c</sup>	Total						
			Thousand Barrels															Million kWh	
1960	791	9	239	19	2,712	2,144	966	1,007	111	4,314	6,246	R 3,841	R 21,599	0	0	—	—	-668	—
1965	1,103	18	571	150	3,275	2,086	825	1,507	112	5,076	5,538	R 4,382	R 23,522	0	0	—	—	-817	—
1970	1,541	26	518	20	4,308	2,062	437	2,255	108	6,247	6,588	R 4,748	R 27,293	0	0	—	—	-1,583	—
1975	937	19	653	15	4,309	1,654	277	2,654	82	7,069	10,218	R 4,087	R 31,018	0	0	—	—	-1,500	—
1980	1,130	30	350	10	3,716	1,573	301	3,199	139	6,614	12,717	R 5,453	R 34,072	0	0	—	—	-941	—
1985	2,766	38	827	16	3,425	1,569	705	994	126	7,556	3,602	R 3,440	R 22,260	0	0	—	—	-6,056	—
1990	2,293	39	537	78	3,220	1,306	159	1,043	142	8,012	3,830	R 5,270	R 23,595	0	h 0	—	—	R 1,021	—
1991	2,186	42	142	17	3,427	2,397	187	1,098	127	7,797	5,005	R 5,346	R 25,543	0	0	—	—	R 204	—
1992	1,770	40	78	18	3,242	1,451	148	925	130	8,153	4,947	R 6,389	R 25,481	0	0	—	—	R 3,758	—
1993	2,446	42	112	51	3,562	1,440	143	1,015	132	8,312	6,414	R 4,427	R 25,608	0	0	—	—	R 2,545	—
1994	2,226	49	163	57	3,566	566	253	1,264	138	8,304	5,720	R 4,572	R 24,603	0	0	—	—	R 3,191	—
1995	2,011	61	176	53	3,401	73	127	1,361	136	8,471	4,109	R 4,515	R 22,420	0	0	—	—	R 4,719	—
1996	1,956	54	298	52	3,833	62	235	R 1,707	132	8,453	5,487	R 5,192	R 25,451	0	0	—	—	R 5,412	—
1997	1,865	46	143	64	3,448	70	143	R 1,217	139	8,587	4,453	R 5,401	R 23,666	0	0	—	—	R 10,764	—
1998	1,773	41	168	55	3,262	70	178	1,427	146	9,079	4,621	5,166	24,171	0	0	—	—	12,738	—
1999	1,393	56	179	15	3,404	105	179	1,118	147	9,259	5,462	5,290	25,160	0	0	—	—	12,302	—

  

Trillion Btu																			
1960	20.5	9.4	1.6	0.1	15.8	11.5	5.5	4.0	0.7	22.7	39.3	R 23.1	R 124.2	0.0	0.0	5.0	0.0	-2.3	R 156.7
1965	29.0	18.7	3.8	0.8	19.1	11.2	4.7	6.0	0.7	26.7	34.8	R 26.3	R 134.0	0.0	0.0	5.6	0.0	-2.8	R 184.6
1970	37.2	26.9	3.4	0.1	25.1	11.1	2.5	8.5	0.7	32.8	41.4	R 28.6	R 154.2	0.0	0.0	7.0	0.0	-5.4	R 220.0
1975	22.9	19.0	4.3	0.1	25.1	8.9	1.6	9.9	0.5	37.1	64.2	R 24.4	R 176.1	0.0	0.0	7.9	0.0	-5.1	R 220.8
1980	28.1	30.8	2.3	0.1	21.6	8.4	1.7	11.8	0.8	34.7	80.0	R 31.7	R 193.2	0.0	0.0	1.7	0.0	-3.2	R 250.6
1985	71.4	39.5	5.5	0.1	19.9	8.4	4.0	3.6	0.8	39.7	22.6	R 20.6	R 125.2	0.0	0.0	R 2.7	0.0	-20.7	R 218.1
1990	59.5	40.1	3.6	0.4	18.8	7.0	0.9	3.8	0.9	42.1	24.1	R 31.2	R 132.7	0.0	h 0.0	R 2.1	h 0.1	3.5	R 238.0
1991	56.8	43.4	0.9	0.1	20.0	12.9	1.1	4.0	0.8	41.0	31.5	R 31.5	R 143.6	0.0	0.0	R 2.2	0.1	R 0.7	R 246.8
1992	46.1	41.0	0.5	0.1	18.9	7.8	0.8	3.4	0.8	42.8	31.1	R 37.5	R 143.7	0.0	0.0	R 2.2	0.1	R 12.8	R 246.0
1993	63.5	43.1	0.7	0.3	20.7	7.7	0.8	3.7	0.8	43.7	40.3	R 25.8	R 144.6	0.0	0.0	R 2.4	0.1	8.7	R 262.3
1994	57.5	50.4	1.1	0.3	20.8	3.0	1.4	4.6	0.8	R 43.4	36.0	R 26.6	R 138.1	0.0	0.0	R 2.4	0.1	10.9	R 259.3
1995	52.4	62.7	1.2	0.3	19.8	0.4	0.7	4.9	0.8	R 44.2	25.8	R 26.3	R 124.5	0.0	0.0	R 2.7	0.1	R 16.1	R 258.6
1996	50.8	55.9	2.0	0.3	22.3	0.4	1.3	R 6.2	0.8	R 44.1	34.5	R 30.1	R 141.9	0.0	0.0	R 2.8	0.1	R 18.5	R 269.9
1997	48.6	48.1	0.9	0.3	20.1	0.4	0.8	R 4.4	0.8	R 44.8	28.0	R 31.3	R 131.9	0.0	0.0	R 2.2	0.1	R 36.7	R 267.5
1998	45.8	42.3	1.1	0.3	19.0	0.4	1.0	5.2	0.9	47.3	29.1	29.9	134.1	0.0	0.0	1.5	0.1	43.5	267.3
1999	35.9	58.1	1.2	0.1	19.8	0.6	1.0	4.0	0.9	48.3	34.3	30.5	140.8	0.0	0.0	2.0	0.1	42.0	278.8

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.  
<sup>b</sup> Includes supplemental gaseous fuels.  
<sup>c</sup> "Other" is the subtotal of 16 petroleum products consumed in the industrial sector. See a full description in Appendix A, Section 4, "Other Petroleum Products."  
<sup>d</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.  
<sup>e</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.  
<sup>f</sup> Net interstate flow of electricity is the difference between the amount of energy in the electricity sold within a State (including associated losses) and the energy input at the electric utilities within the State. A positive number

indicates that more electricity (including associated losses) came into the State than went out of the State during the year; conversely, a negative number indicates that more electricity (including associated losses) went out of the State than came into the State.  
<sup>g</sup> From 1989, "Total" does not equal the sum of the columns. Net imports of electricity generated from nonrenewable energy sources (shown in appendix Table A8) is included in the total but not in any other columns.  
<sup>h</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.  
 kWh=kilowatthours. R=Revised data. — =Not applicable.  
 Note: Totals may not equal sum of components due to independent rounding.  
 Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 60. Residential Energy Consumption Estimates, Selected Years 1960-1999, Delaware**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum				Wood Thousand Cords	Geothermal	Solar <sup>c</sup>	Electricity <sup>a</sup> Million Kilowatthours	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Total						Million Kilowatthours	
			Thousand Barrels									Thousand Barrels	
1960	12	4	1,485	807	176	2,468	76	—	—	496	—	1,234	—
1965	8	6	1,651	604	288	2,543	58	—	—	729	—	1,741	—
1970	5	8	2,037	365	416	2,818	54	—	—	1,169	—	2,832	—
1975	3	7	1,866	215	394	2,474	63	—	—	1,640	—	3,956	—
1980	2	7	1,316	275	375	1,966	85	—	—	1,866	—	4,537	—
1985	3	6	1,331	649	593	2,572	131	—	—	1,924	—	4,521	—
1990	8	7	967	144	573	1,684	79	—	—	2,651	—	R 5,800	—
1991	7	7	1,017	165	631	1,813	84	—	—	2,824	—	R 6,140	—
1992	(s)	8	1,041	144	618	1,803	88	—	—	2,786	—	R 5,942	—
1993	17	8	1,135	106	672	1,913	95	—	—	3,044	—	R 6,429	—
1994	11	9	1,180	96	700	1,976	93	—	—	3,107	—	6,484	—
1995	1	9	1,078	120	859	2,056	104	—	—	3,168	—	R 6,606	—
1996	2	10	1,107	180	R 913	R 2,200	R 104	—	—	3,271	—	R 6,817	—
1997	2	9	934	121	R 982	R 2,037	R 71	—	—	3,257	—	R 6,775	—
1998	2	8	820	164	1,041	2,025	63	—	—	3,339	—	6,898	—
1999	1	9	917	125	931	1,973	67	—	—	3,532	—	6,920	—
<b>Trillion Btu</b>													
1960	0.3	3.9	8.6	4.6	0.7	13.9	1.5	0.0	0.0	1.7	21.4	4.2	25.6
1965	0.2	5.9	9.6	3.4	1.2	14.2	1.2	0.0	0.0	2.5	24.0	5.9	29.9
1970	0.1	8.0	11.9	2.1	1.6	15.5	1.1	0.0	0.0	4.0	28.7	9.7	38.4
1975	0.1	7.1	10.9	1.2	1.5	13.5	1.3	0.0	0.0	5.6	27.5	13.5	41.0
1980	(s)	7.1	7.7	1.6	1.4	10.6	1.7	0.0	0.0	6.4	R 25.9	15.5	41.3
1985	0.1	6.3	7.8	3.7	2.1	13.6	2.6	0.0	0.0	6.6	29.2	15.4	44.6
1990	0.2	7.4	5.6	0.8	2.1	8.5	1.6	e 0.1	e (s)	9.0	e 26.8	19.8	e 46.6
1991	0.2	7.4	5.9	0.9	2.3	9.1	1.7	0.1	(s)	9.6	28.1	R 20.9	R 49.0
1992	(s)	8.5	6.1	0.8	2.2	9.1	1.8	0.1	(s)	9.5	29.0	20.3	R 49.2
1993	0.4	8.6	6.6	0.6	2.4	9.6	1.9	0.1	(s)	10.4	31.0	21.9	53.0
1994	0.3	8.9	6.9	0.5	2.5	10.0	1.9	0.1	(s)	10.6	31.6	22.1	53.8
1995	(s)	8.8	6.3	0.7	3.1	10.1	2.1	0.1	(s)	10.8	31.9	22.5	54.4
1996	0.1	10.1	6.4	1.0	R 3.3	R 10.8	2.1	0.1	(s)	11.2	R 34.3	R 23.3	R 57.6
1997	0.1	9.3	5.4	0.7	R 3.6	R 9.7	R 1.4	0.1	(s)	11.1	R 31.7	23.1	R 54.8
1998	0.1	8.2	4.8	0.9	3.8	9.5	1.3	0.1	(s)	11.4	30.5	23.5	54.1
1999	(s)	9.5	5.3	0.7	3.4	9.4	1.3	0.1	(s)	12.1	32.4	23.6	56.0

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Includes small amounts of solar thermal and photovoltaic energy consumed by the commercial sector that cannot be separately identified. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 61. Commercial Energy Consumption Estimates, Selected Years 1960-1999, Delaware**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum						Wood	Geothermal	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>c</sup>	Total <sup>d</sup>
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels						Thousand Cords	Million Kilowatthours	Million Kilowatthours			
1960	8	1	572	114	31	13	1,812	2,542	1	—	361	—	897	—
1965	5	1	636	85	51	11	2,081	2,864	1	—	536	—	1,279	—
1970	3	3	785	51	73	24	1,736	2,670	1	—	889	—	2,154	—
1975	2	3	719	30	70	32	1,204	2,054	1	—	1,333	—	3,214	—
1980	2	3	634	9	66	45	4,265	5,020	2	—	1,514	—	3,682	—
1985	3	3	334	51	105	38	70	599	R 3	—	1,698	—	3,988	—
1990	14	4	338	10	101	35	180	664	R 5	—	2,361	—	R 5,165	—
1991	13	4	440	13	111	34	51	649	R 5	—	2,471	—	R 5,371	—
1992	(s)	5	349	1	109	35	89	584	R 6	—	2,498	—	R 5,328	—
1993	32	5	332	7	119	9	220	688	8	—	2,660	—	R 5,619	—
1994	19	5	259	8	124	8	161	559	8	—	2,745	—	R 5,729	—
1995	(s)	6	273	2	152	8	133	568	8	—	2,900	—	R 6,047	—
1996	3	7	388	6	R 161	8	225	R 789	R 8	—	2,970	—	R 6,190	—
1997	4	7	349	16	R 173	8	198	R 744	R 8	—	3,124	—	R 6,498	—
1998	5	6	295	12	184	11	132	634	8	—	3,280	—	6,775	—
1999	(s)	6	325	52	164	20	119	681	9	—	3,407	—	6,675	—

  

Trillion Btu														
1960	0.2	0.6	3.3	0.6	0.1	0.1	11.4	15.6	(s)	0.0	1.2	17.6	3.1	20.7
1965	0.1	1.4	3.7	0.5	0.2	0.1	13.1	17.5	(s)	0.0	1.8	20.9	4.4	25.2
1970	0.1	2.9	4.6	0.3	0.3	0.1	10.9	16.2	(s)	0.0	3.0	22.2	7.3	29.5
1975	(s)	3.0	4.2	0.2	0.3	0.2	7.6	12.4	(s)	0.0	4.5	20.0	11.0	30.9
1980	(s)	3.4	3.7	0.1	0.2	0.2	26.8	31.0	(s)	0.0	5.2	39.6	12.6	52.2
1985	0.1	3.5	1.9	0.3	0.4	0.2	0.4	3.3	R 0.1	0.0	5.8	R 12.7	13.6	R 26.3
1990	0.4	4.1	2.0	0.1	0.4	0.2	1.1	3.7	R 0.1	e 0.0	8.1	R e 16.3	17.6	R e 33.9
1991	0.3	4.4	2.6	0.1	0.4	0.2	0.3	3.5	R 0.1	0.0	8.4	R 16.8	R 18.3	R 35.1
1992	(s)	5.1	2.0	(s)	0.4	0.2	0.6	3.2	R 0.1	0.0	8.5	R 17.0	18.2	R 35.1
1993	0.8	5.4	1.9	(s)	0.4	(s)	1.4	3.8	0.2	0.0	9.1	19.2	19.2	38.4
1994	0.5	5.7	1.5	(s)	0.4	(s)	1.0	3.1	0.2	0.0	9.4	18.7	19.5	38.2
1995	(s)	5.9	1.6	(s)	0.5	(s)	0.8	3.0	0.2	0.0	9.9	19.0	20.6	39.7
1996	0.1	6.9	2.3	(s)	0.6	(s)	1.4	4.3	0.2	0.0	10.1	21.6	21.1	R 42.8
1997	0.1	6.8	2.0	0.1	0.6	(s)	1.2	4.0	R 0.2	0.0	10.7	R 21.8	R 22.2	R 44.0
1998	0.1	5.9	1.7	0.1	0.7	0.1	0.8	3.3	0.2	0.0	11.2	20.7	23.1	43.9
1999	(s)	6.5	1.9	0.3	0.6	0.1	0.8	3.6	0.2	0.0	11.6	22.0	22.8	44.8

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>d</sup> Small amounts of solar thermal and photovoltaic energy consumed in the commercial sector cannot be separately identified and are included in residential consumption.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

R=Revised data.

—=Not applicable.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.



**Table 62. Industrial Energy Consumption Estimates, Selected Years 1960-1999, Delaware**

Year	Coal Thousand Short Tons	Natural Gas <sup>a</sup> Billion Cubic Feet	Petroleum									Hydro-electric Power <sup>b</sup> Million kWh	Wood and Waste	Other <sup>b,d</sup>	Electricity <sup>b</sup>		Electrical System Energy Losses <sup>e</sup> Million kWh	Total
			Asphalt and Road Oil <sup>b</sup>	Distillate Fuel <sup>b</sup>	Kero-sene <sup>b</sup>	LPG <sup>b</sup>	Lubri-cants <sup>b</sup>	Motor Gasoline	Residual Fuel <sup>b</sup>	Other <sup>b,c</sup>	Total				Net Energy	Million kWh		
1960	32	1	239	482	45	798	37	205	2,931	R 3,841	R 8,577	0	—	—	863	—	2,146	—
1965	35	6	571	715	136	1,165	40	144	2,785	R 4,382	R 9,939	0	—	—	1,373	—	3,277	—
1970	35	12	518	794	20	1,753	41	92	2,643	R 3,508	R 9,370	0	—	—	2,527	—	6,124	—
1975	27	7	653	1,079	32	2,154	31	63	1,878	R 3,851	R 9,741	0	—	—	2,176	—	5,249	—
1980	184	13	350	616	17	2,744	75	35	1,808	R 4,982	R 10,628	0	—	—	2,439	—	5,931	—
1985	217	22	827	423	4	293	69	54	649	R 3,089	R 5,408	0	—	—	2,693	—	6,327	—
1990	215	17	537	434	4	363	77	48	746	R 3,860	R 6,070	f 0	—	—	3,272	—	R 7,157	—
1991	208	16	142	445	8	350	69	51	950	R 4,032	R 6,046	0	—	—	3,241	—	R 7,046	—
1992	142	18	78	345	3	192	70	51	1,238	R 4,698	R 6,676	0	—	—	3,248	—	R 6,928	—
1993	174	19	112	365	30	219	72	64	1,756	R 4,427	R 7,043	0	—	—	3,417	—	R 7,217	—
1994	189	17	163	341	149	434	75	64	1,813	R 4,572	R 7,611	0	—	—	3,447	—	7,193	—
1995	194	19	176	328	5	346	74	64	1,594	R 4,515	R 7,102	0	—	—	3,511	—	R 7,320	—
1996	164	14	298	511	49	R 628	71	70	1,485	R 5,192	R 8,304	0	—	—	3,399	—	R 7,084	—
1997	174	15	143	466	6	R 55	75	70	1,241	R 5,401	R 7,458	0	—	—	3,741	—	R 7,782	—
1998	174	16	168	439	2	199	79	86	1,039	5,166	7,178	0	—	—	3,779	—	7,807	—
1999	148	21	179	478	3	20	80	77	1,404	5,290	7,531	0	—	—	3,613	—	7,080	—
Trillion Btu																		
1960	0.8	1.5	1.6	2.8	0.3	3.2	0.2	1.1	18.4	R 23.1	R 50.7	0.0	3.4	0.0	2.9	R 59.4	7.3	R 66.7
1965	0.9	6.6	3.8	4.2	0.8	4.7	0.2	0.8	17.5	R 26.3	R 58.2	0.0	4.4	0.0	4.7	R 74.8	11.2	R 86.0
1970	0.8	12.3	3.4	4.6	0.1	6.6	0.3	0.5	16.6	R 21.1	R 53.2	0.0	5.9	0.0	8.6	R 80.9	20.9	R 101.8
1975	0.6	7.1	4.3	6.3	0.2	8.0	0.2	0.3	11.8	R 22.9	R 54.1	0.0	6.6	0.0	7.4	R 75.8	17.9	R 93.7
1980	4.5	13.1	2.3	3.6	0.1	10.1	0.5	0.2	11.4	R 28.9	R 67.0	0.0	0.0	0.0	8.3	R 82.9	20.2	R 103.1
1985	5.4	22.1	5.5	2.5	(s)	1.1	0.4	0.3	4.1	R 18.4	R 32.3	0.0	0.0	0.0	9.2	R 68.9	21.6	R 90.5
1990	5.3	17.3	3.6	2.5	(s)	1.3	0.5	0.3	4.7	R 22.7	R 35.6	f 0.0	R 0.4	f 0.0	11.2	f 69.8	24.4	f 94.2
1991	5.2	16.5	0.9	2.6	(s)	1.3	0.4	0.3	6.0	R 23.6	R 35.1	0.0	R 0.4	0.0	11.1	68.3	R 24.0	R 92.3
1992	3.6	18.7	0.5	2.0	(s)	0.7	0.4	0.3	7.8	R 27.4	R 39.1	0.0	R 0.3	0.0	11.1	R 72.8	R 23.6	R 96.4
1993	4.4	20.1	0.7	2.1	0.2	0.8	0.4	0.3	11.0	R 25.8	R 41.5	0.0	R 0.4	0.0	11.7	R 78.0	24.6	R 102.6
1994	4.8	17.8	1.1	2.0	0.8	1.6	0.5	0.3	11.4	R 26.6	R 44.3	0.0	R 0.4	0.0	11.8	79.1	24.5	103.6
1995	4.9	20.1	1.2	1.9	(s)	1.3	0.4	0.3	10.0	R 26.3	R 41.5	0.0	R 0.5	0.0	12.0	R 79.0	25.0	R 103.9
1996	4.1	14.7	2.0	3.0	0.3	R 2.3	0.4	0.4	9.3	R 30.1	R 47.7	0.0	R 0.6	0.0	11.6	R 78.6	R 24.2	R 102.8
1997	4.4	15.3	0.9	2.7	(s)	R 0.2	0.5	0.4	7.8	R 31.3	R 43.8	0.0	R 0.6	0.0	12.8	R 76.9	R 26.6	R 103.4
1998	4.4	17.3	1.1	2.6	(s)	0.7	0.5	0.4	6.5	29.9	41.8	0.0	0.1	0.0	12.9	76.5	26.6	103.1
1999	3.7	22.5	1.2	2.8	(s)	0.1	0.5	0.4	8.8	30.5	44.3	0.0	0.4	0.0	12.3	83.3	24.2	107.4

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>e</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>f</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

R=Revised data.

kWh=kilowatthours. — =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 63. Transportation Energy Consumption Estimates, Selected Years 1960-1999, Delaware**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum								Ethanol <sup>c</sup>	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total <sup>c</sup>
			Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	LPG <sup>a</sup>	Lubricants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total					
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels								Thousand Barrels	Million Kilowatthours	Million Kilowatthours	Total <sup>c</sup>	
1960	1	0	19	166	2,144	2	74	4,096	1,464	7,965	0	0	—	0	—
1965	(s)	0	150	256	2,086	3	71	4,921	589	8,076	0	0	—	0	—
1970	(s)	0	20	385	2,062	13	67	6,131	671	9,350	0	0	—	0	—
1975	(s)	0	15	510	1,654	36	52	6,973	961	10,201	0	0	—	0	—
1980	0	0	10	963	1,573	14	64	6,533	812	9,970	0	0	—	0	—
1985	0	(s)	16	1,236	1,569	5	58	7,464	232	10,580	<sup>e</sup> 0	0	—	0	—
1990	0	(s)	78	1,371	1,306	6	65	7,929	912	11,667	0	0	—	0	—
1991	0	(s)	17	1,406	2,397	6	58	7,712	1,316	12,913	0	0	—	0	—
1992	0	(s)	18	1,381	1,451	6	59	8,067	1,037	12,020	0	0	—	0	—
1993	0	(s)	51	1,627	1,440	5	61	8,238	1,144	12,566	0	0	—	0	—
1994	0	(s)	57	1,539	566	7	63	8,232	1,267	11,731	0	0	—	0	—
1995	0	(s)	53	1,562	73	5	62	8,398	1,046	11,200	0	0	—	0	—
1996	0	(s)	52	1,604	62	4	60	8,375	2,031	12,189	0	0	—	0	—
1997	0	(s)	64	1,577	70	<sup>R</sup> 7	64	8,510	1,701	<sup>R</sup> 11,992	0	0	—	0	—
1998	0	(s)	55	1,587	70	3	67	8,982	1,459	12,222	0	0	—	0	—
1999	0	(s)	15	1,471	105	2	67	9,163	2,093	12,916	0	0	—	0	—

  

Trillion Btu															
1960	(s)	0.0	0.1	1.0	11.5	(s)	0.5	21.5	9.2	43.7	0.0	0.0	43.7	0.0	43.7
1965	(s)	0.0	0.8	1.5	11.2	(s)	0.4	25.8	3.7	43.4	0.0	0.0	43.4	0.0	43.4
1970	(s)	0.0	0.1	2.2	11.1	0.1	0.4	32.2	4.2	50.3	0.0	0.0	50.3	0.0	50.3
1975	(s)	0.0	0.1	3.0	8.9	0.1	0.3	36.6	6.0	55.0	0.0	0.0	55.0	0.0	55.0
1980	0.0	0.0	0.1	5.6	8.4	0.1	0.4	34.3	5.1	54.0	0.0	0.0	54.0	0.0	54.0
1985	0.0	(s)	0.1	7.2	8.4	(s)	0.4	39.2	1.5	56.8	<sup>e</sup> 0.0	0.0	<sup>e</sup> 56.8	0.0	<sup>e</sup> 56.8
1990	0.0	(s)	0.4	8.0	7.0	(s)	0.4	41.6	5.7	63.2	0.0	0.0	63.2	0.0	63.2
1991	0.0	(s)	0.1	8.2	12.9	(s)	0.4	40.5	8.3	70.3	0.0	0.0	70.3	0.0	70.3
1992	0.0	(s)	0.1	8.0	7.8	(s)	0.4	42.4	6.5	65.2	0.0	0.0	65.2	0.0	65.2
1993	0.0	(s)	0.3	9.5	7.7	(s)	0.4	43.3	7.2	68.3	0.0	0.0	68.3	0.0	68.3
1994	0.0	(s)	0.3	9.0	3.0	(s)	0.4	<sup>R</sup> 43.1	8.0	<sup>R</sup> 63.7	0.0	0.0	<sup>R</sup> 63.7	0.0	<sup>R</sup> 63.7
1995	0.0	(s)	0.3	9.1	0.4	(s)	0.4	<sup>R</sup> 43.8	6.6	<sup>R</sup> 60.6	0.0	0.0	<sup>R</sup> 60.6	0.0	<sup>R</sup> 60.6
1996	0.0	(s)	0.3	9.3	0.4	(s)	0.4	<sup>R</sup> 43.7	12.8	<sup>R</sup> 66.8	0.0	0.0	<sup>R</sup> 66.8	0.0	<sup>R</sup> 66.8
1997	0.0	(s)	0.3	9.2	0.4	(s)	0.4	<sup>R</sup> 44.4	10.7	<sup>R</sup> 65.4	0.0	0.0	<sup>R</sup> 65.4	0.0	<sup>R</sup> 65.4
1998	0.0	(s)	0.3	9.2	0.4	(s)	0.4	46.8	9.2	66.3	0.0	0.0	66.3	0.0	66.3
1999	0.0	0.1	0.1	8.6	0.6	(s)	0.4	47.7	13.2	70.6	0.0	0.0	70.6	0.0	70.6

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels. Transportation use of natural gas is gas consumed in the operation of pipelines, primarily in compressors, and, since 1990, is also gas consumed as vehicle fuel.

<sup>c</sup> Ethanol blended into motor gasoline, which is accounted for under motor gasoline, is shown separately here to display the use of renewable energy by the transportation sector and is included only once in the total.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1980 and 1981 due to the expanded coverage of renewable energy sources beginning in 1981.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 64. Estimates of Energy Input at Electric Utilities, Selected Years, 1960-1999, Delaware**

Year	Coal	Natural Gas <sup>a</sup>	Petroleum				Nuclear Electric Power	Hydroelectric Power <sup>e</sup>	Wood and Waste	Geothermal Energy	Other <sup>b,f</sup>	Total <sup>g</sup>
			Heavy Oil <sup>b,c</sup>	Light Oil <sup>b,d</sup>	Petroleum Coke <sup>b</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels				Million Kilowatthours					
1960	737	3	40	8	0	48	0	0	0	0	0	—
1965	1,055	5	84	17	0	100	0	0	0	0	0	—
1970	1,497	4	1,537	307	1,240	3,084	0	0	0	0	0	—
1975	905	2	6,176	135	237	6,547	0	0	0	0	0	—
1980	942	7	5,831	187	470	6,488	0	0	0	0	0	—
1985	2,543	7	2,650	101	351	3,102	0	0	0	0	0	—
1990	2,056	11	1,991	110	1,410	3,510	0	0	0	0	0	—
1991	1,958	14	2,689	119	1,314	4,122	0	0	0	0	0	—
1992	1,628	8	2,582	126	1,691	4,399	0	0	0	0	0	—
1993	2,223	9	3,294	103	0	3,397	0	0	0	0	0	—
1994	2,007	17	2,479	247	0	2,727	0	0	0	0	0	—
1995	1,816	27	1,335	160	0	1,495	0	0	0	0	0	—
1996	1,787	23	1,747	222	0	1,969	0	0	0	0	0	—
1997	1,685	16	1,313	122	0	1,435	0	0	0	0	0	—
1998	1,592	11	1,991	120	0	2,111	0	0	0	0	0	—
1999	1,244	20	1,846	213	0	2,059	0	0	0	0	0	—

**Trillion Btu**

1960	19.1	3.3	0.2	(s)	0.0	0.3	0.0	0.0	0.0	0.0	0.0	22.7
1965	27.8	4.8	0.5	0.1	0.0	0.6	0.0	0.0	0.0	0.0	0.0	33.3
1970	36.2	3.8	9.7	1.8	7.5	18.9	0.0	0.0	0.0	0.0	0.0	59.0
1975	22.2	1.8	38.8	0.8	1.4	41.0	0.0	0.0	0.0	0.0	0.0	65.1
1980	23.5	7.3	36.7	1.1	2.8	40.6	0.0	0.0	0.0	0.0	0.0	71.3
1985	65.9	7.5	16.7	0.6	2.1	19.4	0.0	0.0	0.0	0.0	0.0	92.8
1990	53.6	11.4	12.5	0.6	8.5	21.6	0.0	0.0	0.0	0.0	0.0	86.6
1991	51.1	15.1	16.9	0.7	7.9	25.5	0.0	0.0	0.0	0.0	0.0	91.7
1992	42.5	8.7	16.2	0.7	10.2	27.2	0.0	0.0	0.0	0.0	0.0	78.4
1993	57.9	9.0	20.7	0.6	0.0	21.3	0.0	0.0	0.0	0.0	0.0	88.2
1994	52.0	18.0	15.6	1.4	0.0	17.0	0.0	0.0	0.0	0.0	0.0	87.1
1995	47.5	27.9	8.4	0.9	0.0	9.3	0.0	0.0	0.0	0.0	0.0	84.7
1996	46.5	24.2	11.0	1.3	0.0	12.3	0.0	0.0	0.0	0.0	0.0	83.0
1997	44.0	16.7	8.3	0.7	0.0	9.0	0.0	0.0	0.0	0.0	0.0	69.7
1998	41.3	10.8	12.5	0.7	0.0	13.2	0.0	0.0	0.0	0.0	0.0	65.3
1999	32.2	19.5	11.6	1.2	0.0	12.8	0.0	0.0	0.0	0.0	0.0	64.6

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> Prior to 1980, based on oil used in steam plants. Since 1980, heavy oil includes fuel oil nos. 4, 5, and 6 and residual fuel oils.

<sup>d</sup> Prior to 1980, based on oil used in internal combustion and gas turbine engine plants. Since 1980, light oil includes fuel oil nos. 1 and 2, kerosene, and jet fuel.

<sup>e</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>f</sup> "Other" is electricity generated for distribution from wind, photovoltaic, and solar thermal energy.

<sup>g</sup> If applicable, from 1989, includes net imports of electricity generated from nonrenewable energy sources not shown in other columns. See data in appendix Table A8.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 65. Energy Consumption Estimates by Source, Selected Years 1960-1999, District of Columbia**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum											Nuclear Electric Power	Hydro-electric Power <sup>d</sup>	Wood and Waste	Other <sup>a,e</sup>	Net Inter-state Flow of Electricity/Losses <sup>f</sup>	Total <sup>g</sup>
			Asphalt & Road Oil <sup>a</sup>	Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	Kero-sene <sup>a</sup>	LPG <sup>a</sup>	Lubri-cants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Other <sup>a,c</sup>	Total						
			Thousand Barrels															Million kWh	
1960	1,051	13	11	0	2,894	0	161	2	120	4,957	2,428	0	10,573	0	3	—	—	5,633	—
1965	526	17	20	0	3,435	(s)	104	2	71	5,469	6,749	0	15,850	0	3	—	—	10,436	—
1970	1,128	26	17	0	4,934	(s)	46	4	56	5,688	11,144	0	21,889	0	1	—	—	6,335	—
1975	418	26	20	0	3,157	0	110	4	60	5,748	4,174	0	13,273	0	1	—	—	14,942	—
1980	134	28	16	0	2,284	329	268	4	61	3,881	1,612	0	8,455	0	0	—	—	21,154	—
1985	140	29	27	0	2,229	7	68	4	55	3,802	740	0	6,932	0	0	—	—	26,938	—
1990	69	29	30	0	1,537	5	11	4	62	4,043	1,024	0	6,717	0	<sup>h</sup> 0	—	—	<sup>R</sup> 29,798	—
1991	66	31	22	0	1,548	0	8	4	56	4,023	666	0	6,328	0	0	—	—	<sup>R</sup> 31,451	—
1992	50	33	21	0	1,553	0	8	7	57	4,024	472	0	6,142	0	0	—	—	<sup>R</sup> 31,009	—
1993	51	33	28	2	1,631	101	9	6	58	4,185	650	0	6,671	0	0	—	—	<sup>R</sup> 31,413	—
1994	47	31	26	2	1,863	0	10	6	61	4,099	737	0	6,804	0	0	—	—	<sup>R</sup> 30,568	—
1995	6	33	26	4	1,822	2	135	5	60	4,142	534	0	6,730	0	0	—	—	<sup>R</sup> 30,955	—
1996	23	34	22	(s)	2,041	0	107	6	58	3,862	339	0	6,435	0	0	—	—	<sup>R</sup> 30,733	—
1997	40	34	34	3	1,521	252	209	<sup>R</sup> 7	61	4,066	161	0	<sup>R</sup> 6,314	0	0	—	—	<sup>R</sup> 30,777	—
1998	6	30	28	3	1,320	559	299	3	64	4,031	454	0	6,761	0	0	—	—	30,493	—
1999	6	32	26	3	1,412	0	232	3	65	3,979	442	0	6,162	0	0	—	—	29,835	—

  

Trillion Btu																			
1960	27.8	13.0	0.1	0.0	16.9	0.0	0.9	(s)	0.7	26.0	15.3	0.0	59.9	0.0	(s)	0.1	0.0	19.2	120.0
1965	13.8	17.3	0.1	0.0	20.0	(s)	0.6	(s)	0.4	28.7	42.4	0.0	92.3	0.0	(s)	0.1	0.0	35.6	159.2
1970	28.4	26.4	0.1	0.0	28.7	(s)	0.3	(s)	0.3	29.9	70.1	0.0	129.4	0.0	(s)	0.1	0.0	21.6	206.0
1975	10.1	26.2	0.1	0.0	18.4	0.0	0.6	(s)	0.4	30.2	26.2	0.0	76.0	0.0	(s)	0.1	0.0	51.0	163.4
1980	3.3	28.0	0.1	0.0	13.3	1.9	1.5	(s)	0.4	20.4	10.1	0.0	47.7	0.0	0.0	2.0	0.0	72.2	153.1
1985	3.5	29.3	0.2	0.0	13.0	(s)	0.4	(s)	0.3	20.0	4.7	0.0	38.6	0.0	0.0	<sup>R</sup> 3.0	0.0	91.9	<sup>R</sup> 166.3
1990	1.7	29.1	0.2	0.0	9.0	(s)	0.1	(s)	0.4	21.2	6.4	0.0	37.3	0.0	<sup>h</sup> 0.0	<sup>R</sup> 1.6	<sup>h</sup> 0.0	101.7	<sup>R</sup> 171.4
1991	1.7	31.3	0.1	0.0	9.0	0.0	(s)	(s)	0.3	21.1	4.2	0.0	34.9	0.0	0.0	<sup>R</sup> 1.7	(s)	<sup>R</sup> 107.3	176.8
1992	1.3	33.2	0.1	0.0	9.0	0.0	(s)	(s)	0.3	21.1	3.0	0.0	33.7	0.0	0.0	<sup>R</sup> 1.8	(s)	<sup>R</sup> 105.8	175.8
1993	1.3	33.3	0.2	(s)	9.5	0.6	0.1	(s)	0.4	22.0	4.1	0.0	36.8	0.0	0.0	1.9	(s)	107.2	180.4
1994	1.2	31.2	0.2	(s)	10.9	0.0	0.1	(s)	0.4	<sup>R</sup> 21.4	4.6	0.0	<sup>R</sup> 37.6	0.0	0.0	1.8	(s)	104.3	<sup>R</sup> 176.0
1995	0.1	33.2	0.2	(s)	10.6	(s)	0.8	(s)	0.4	<sup>R</sup> 21.6	3.4	0.0	<sup>R</sup> 36.9	0.0	0.0	2.0	(s)	105.6	<sup>R</sup> 177.9
1996	0.6	34.2	0.1	(s)	11.9	0.0	0.6	(s)	0.4	<sup>R</sup> 20.1	2.1	0.0	<sup>R</sup> 35.3	0.0	0.0	2.0	(s)	<sup>R</sup> 104.9	<sup>R</sup> 176.9
1997	1.0	34.8	0.2	(s)	8.9	1.4	1.2	(s)	0.4	<sup>R</sup> 21.2	1.0	0.0	<sup>R</sup> 34.3	0.0	0.0	<sup>R</sup> 1.3	(s)	<sup>R</sup> 105.0	<sup>R</sup> 176.4
1998	0.1	31.2	0.2	(s)	7.7	3.2	1.7	(s)	0.4	21.0	2.9	0.0	37.0	0.0	0.0	1.2	(s)	104.0	173.6
1999	0.1	32.9	0.2	(s)	8.2	0.0	1.3	(s)	0.4	20.7	2.8	0.0	33.6	0.0	0.0	1.3	(s)	101.8	169.8

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products consumed in the industrial sector. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>e</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>f</sup> Net interstate flow of electricity is the difference between the amount of energy in the electricity sold within a State (including associated losses) and the energy input at the electric utilities within the State. A positive number

indicates that more electricity (including associated losses) came into the State than went out of the State during the year; conversely, a negative number indicates that more electricity (including associated losses) went out of the State than came into the State.

<sup>g</sup> From 1989, "Total" does not equal the sum of the columns. Net imports of electricity generated from nonrenewable energy sources (shown in appendix Table A8) is included in the total but not in any other columns.

<sup>h</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

kWh=kilowatthours. R=Revised data. — =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 66. Residential Energy Consumption Estimates, Selected Years 1960-1999, District of Columbia**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum				Wood Thousand Cords	Geothermal	Solar <sup>c</sup>	Electricity <sup>a</sup> Million Kilowatthours	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Total						Million Kilowatthours	
			Thousand Barrels										
1960	47	9	1,314	67	1	1,382	6	—	—	429	—	1,068	—
1965	36	11	1,241	43	1	1,285	4	—	—	578	—	1,381	—
1970	14	14	1,622	21	1	1,644	5	—	—	830	—	2,012	—
1975	5	13	1,161	7	1	1,169	6	—	—	909	—	2,193	—
1980	38	14	749	5	1	755	98	—	—	1,085	—	2,638	—
1985	49	17	495	10	1	507	144	—	—	1,233	—	2,897	—
1990	24	15	149	3	1	154	76	—	—	1,480	—	3,238	—
1991	23	15	165	4	1	170	80	—	—	1,580	—	R 3,435	—
1992	18	17	170	4	1	175	85	—	—	1,488	—	R 3,174	—
1993	18	17	164	5	1	171	86	—	—	1,635	—	R 3,453	—
1994	16	16	133	4	1	139	84	—	—	1,572	—	R 3,280	—
1995	2	16	275	6	2	283	93	—	—	1,608	—	R 3,354	—
1996	8	17	307	6	2	R 315	93	—	—	1,614	—	R 3,364	—
1997	14	16	266	6	2	274	R 59	—	—	1,554	—	R 3,232	—
1998	2	13	240	6	2	247	52	—	—	1,596	—	3,296	—
1999	2	14	210	5	2	217	56	—	—	1,643	—	3,219	—
<b>Trillion Btu</b>													
1960	1.2	9.0	7.7	0.4	(s)	8.0	0.1	0.0	0.0	1.5	19.8	3.6	23.5
1965	0.9	11.1	7.2	0.2	(s)	7.5	0.1	0.0	0.0	2.0	21.5	4.7	26.2
1970	0.3	14.1	9.4	0.1	(s)	9.6	0.1	0.0	0.0	2.8	27.0	6.9	33.8
1975	0.1	13.3	6.8	(s)	(s)	6.8	0.1	0.0	0.0	3.1	23.5	7.5	31.0
1980	0.9	13.8	4.4	(s)	(s)	4.4	2.0	0.0	0.0	3.7	24.8	9.0	33.8
1985	1.2	16.9	2.9	0.1	(s)	2.9	2.9	0.0	0.0	4.2	28.1	9.9	38.0
1990	0.6	15.3	0.9	(s)	(s)	0.9	1.5	e 0.0	e (s)	5.1	e 23.3	11.0	e 34.4
1991	0.6	15.4	1.0	(s)	(s)	1.0	1.6	0.0	(s)	5.4	23.9	11.7	35.7
1992	0.4	16.7	1.0	(s)	(s)	1.0	1.7	0.0	(s)	5.1	24.9	10.8	35.8
1993	0.4	16.7	1.0	(s)	(s)	1.0	1.7	0.0	(s)	5.6	25.4	11.8	37.2
1994	0.4	16.0	0.8	(s)	(s)	0.8	1.7	0.0	(s)	5.4	24.3	11.2	35.5
1995	0.1	15.8	1.6	(s)	(s)	1.6	1.9	0.0	(s)	5.5	24.8	11.4	36.3
1996	0.2	17.4	1.8	(s)	(s)	1.8	1.9	0.0	(s)	5.5	26.8	11.5	38.3
1997	0.3	16.1	1.6	(s)	(s)	1.6	R 1.2	0.0	(s)	5.3	R 24.6	11.0	R 35.6
1998	0.1	13.6	1.4	(s)	(s)	1.4	1.0	0.0	(s)	5.4	21.6	11.2	32.8
1999	0.1	14.4	1.2	(s)	(s)	1.3	1.1	0.0	(s)	5.6	22.5	11.0	33.5

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Includes small amounts of solar thermal and photovoltaic energy consumed by the commercial sector that cannot be separately identified. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 67. Commercial Energy Consumption Estimates, Selected Years 1960-1999, District of Columbia**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum						Wood	Geothermal	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>c</sup>	Total <sup>d</sup>
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels						Thousand Cords	Million Kilowatthours	Million Kilowatthours			
1960	87	4	1,060	34	(s)	85	1,443	2,621	(s)	—	955	—	2,375	—
1965	67	6	1,001	22	(s)	78	4,044	5,144	(s)	—	1,359	—	3,245	—
1970	26	12	1,308	10	(s)	65	5,081	6,464	(s)	—	1,935	—	4,689	—
1975	10	12	936	4	(s)	78	1,051	2,068	(s)	—	2,355	—	5,680	—
1980	71	14	647	1	(s)	40	37	725	2	—	2,457	—	5,974	—
1985	91	12	749	55	(s)	27	286	1,117	R 4	—	4,317	—	10,142	—
1990	45	13	501	8	(s)	71	221	802	R 5	—	5,250	—	R 11,485	—
1991	43	16	587	4	(s)	35	222	848	R 5	—	5,418	—	R 11,778	—
1992	33	16	551	4	(s)	29	269	854	R 6	—	5,416	—	R 11,550	—
1993	33	16	800	4	(s)	32	208	1,045	7	—	5,605	—	R 11,838	—
1994	30	15	908	6	(s)	66	170	1,150	7	—	8,291	—	R 17,302	—
1995	4	17	803	129	(s)	101	132	1,166	7	—	8,275	—	R 17,252	—
1996	15	16	975	101	(s)	20	97	1,194	8	—	8,108	—	R 16,897	—
1997	26	18	522	202	(s)	49	35	809	R 6	—	8,132	—	R 16,916	—
1998	4	17	324	293	(s)	170	4	793	6	—	8,261	—	17,066	—
1999	4	18	337	227	(s)	22	2	589	8	—	8,354	—	16,367	—

  

Trillion Btu														
1960	2.2	3.7	6.2	0.2	(s)	0.4	9.1	15.9	(s)	0.0	3.3	25.1	8.1	33.2
1965	1.7	6.0	5.8	0.1	(s)	0.4	25.4	31.8	(s)	0.0	4.6	44.1	11.1	55.2
1970	0.6	11.8	7.6	0.1	(s)	0.3	31.9	40.0	(s)	0.0	6.6	59.0	16.0	75.0
1975	0.2	12.4	5.5	(s)	(s)	0.4	6.6	12.5	(s)	0.0	8.0	33.2	19.4	52.5
1980	1.7	13.8	3.8	(s)	(s)	0.2	0.2	4.2	(s)	0.0	8.4	28.2	20.4	48.6
1985	2.3	12.1	4.4	0.3	(s)	0.1	1.8	6.6	R 0.1	0.0	14.7	R 35.8	34.6	R 70.4
1990	1.1	13.6	2.9	(s)	(s)	0.4	1.4	4.7	R 0.1	e 0.0	17.9	e 37.4	39.2	R e 76.6
1991	1.1	15.6	3.4	(s)	(s)	0.2	1.4	5.0	R 0.1	0.0	18.5	R 40.3	40.2	80.5
1992	0.8	16.2	3.2	(s)	(s)	0.2	1.7	5.1	R 0.1	0.0	18.5	R 40.7	R 39.4	80.1
1993	0.8	16.3	4.7	(s)	(s)	0.2	1.3	6.2	0.1	0.0	19.1	42.6	40.4	83.0
1994	0.8	14.9	5.3	(s)	(s)	0.3	1.1	6.7	0.1	0.0	28.3	50.8	59.0	109.9
1995	0.1	17.1	4.7	0.7	(s)	0.5	0.8	6.8	0.1	0.0	28.2	52.4	R 58.9	111.2
1996	0.4	16.5	5.7	0.6	(s)	0.1	0.6	7.0	0.2	0.0	27.7	51.7	R 57.7	R 109.3
1997	0.6	18.4	3.0	1.1	(s)	0.3	0.2	4.7	0.1	0.0	27.7	51.6	R 57.7	R 109.3
1998	0.1	17.3	1.9	1.7	(s)	0.9	(s)	4.5	0.1	0.0	28.2	50.2	58.2	108.4
1999	0.1	18.2	2.0	1.3	(s)	0.1	(s)	3.4	0.2	0.0	28.5	50.3	55.8	106.2

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>d</sup> Small amounts of solar thermal and photovoltaic energy consumed in the commercial sector cannot be separately identified and are included in residential consumption.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 68. Industrial Energy Consumption Estimates, Selected Years 1960-1999, District of Columbia**

Year	Coal	Natural Gas <sup>a</sup>	Petroleum									Hydro-electric Power <sup>b</sup>	Wood and Waste	Other <sup>b,d</sup>	Electricity <sup>b</sup>	Net Energy	Electrical System Energy Losses <sup>e</sup>	Total
			Asphalt and Road Oil <sup>b</sup>	Distillate Fuel <sup>b</sup>	Kero-sene <sup>b</sup>	LPG <sup>b</sup>	Lubri-cants <sup>b</sup>	Motor Gasoline	Residual Fuel <sup>b</sup>	Other <sup>b,c</sup>	Total							
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels									Million kWh	Million kWh	Million kWh				
1960	463	(s)	11	211	61	1	8	0	949	0	1,241	0	—	—	1,237	—	3,076	—
1965	129	(s)	20	316	39	1	11	0	2,689	0	3,076	0	—	—	1,836	—	4,383	—
1970	414	(s)	17	377	15	2	3	0	3,296	0	3,710	0	—	—	2,627	—	6,367	—
1975	292	(s)	20	150	99	2	14	0	686	0	970	0	—	—	2,532	—	6,108	—
1980	25	(s)	16	192	262	3	7	0	54	0	534	0	—	—	3,356	—	8,161	—
1985	0	0	27	36	3	2	7	59	1	0	135	0	—	—	2,534	—	5,954	—
1990	0	0	30	2	0	2	7	90	1	0	133	f 0	—	—	2,976	—	R 6,511	—
1991	0	0	22	2	(s)	2	7	58	1	0	93	0	—	—	3,053	—	R 6,637	—
1992	0	0	21	13	0	5	7	59	2	0	106	0	—	—	2,987	—	R 6,371	—
1993	0	0	28	15	0	3	7	36	0	0	90	0	—	—	2,976	—	R 6,287	—
1994	0	0	26	13	0	3	7	69	1	0	119	0	—	—	267	—	558	—
1995	0	0	26	15	0	3	7	44	(s)	0	95	0	—	—	262	—	R 547	—
1996	0	0	22	18	(s)	3	7	39	(s)	0	89	0	—	—	252	—	524	—
1997	0	0	34	21	(s)	R 4	7	56	0	0	R 122	0	—	—	262	—	R 546	—
1998	0	0	28	18	0	1	8	27	0	0	81	0	—	—	262	—	541	—
1999	0	0	26	141	(s)	1	8	18	0	0	194	0	—	—	249	—	488	—
<b>Trillion Btu</b>																		
1960	12.0	0.2	0.1	1.2	0.3	(s)	(s)	0.0	6.0	0.0	7.7	0.0	0.0	0.0	4.2	24.0	10.5	34.5
1965	3.3	0.3	0.1	1.8	0.2	(s)	0.1	0.0	16.9	0.0	19.2	0.0	0.0	0.0	6.3	29.0	15.0	44.0
1970	10.0	0.4	0.1	2.2	0.1	(s)	(s)	0.0	20.7	0.0	23.1	0.0	0.0	0.0	9.0	42.6	21.7	64.3
1975	7.0	0.4	0.1	0.9	0.6	(s)	0.1	0.0	4.3	0.0	6.0	0.0	0.0	0.0	8.6	22.0	20.8	42.8
1980	0.6	0.4	0.1	1.1	1.5	(s)	(s)	0.0	0.3	0.0	3.1	0.0	0.0	0.0	11.5	15.5	27.8	43.4
1985	0.0	0.0	0.2	0.2	(s)	(s)	(s)	0.3	(s)	0.0	0.8	0.0	0.0	0.0	8.6	9.4	20.3	29.7
1990	0.0	0.0	0.2	(s)	0.0	(s)	(s)	0.5	(s)	0.0	0.7	f 0.0	0.0	f 0.0	10.2	f 10.9	22.2	f 33.1
1991	0.0	0.0	0.1	(s)	(s)	(s)	(s)	0.3	(s)	0.0	0.5	0.0	0.0	0.0	10.4	10.9	R 22.6	33.6
1992	0.0	0.0	0.1	0.1	0.0	(s)	(s)	0.3	(s)	0.0	0.6	0.0	0.0	0.0	10.2	10.8	R 21.7	R 32.5
1993	0.0	0.0	0.2	0.1	0.0	(s)	(s)	0.2	0.0	0.0	0.5	0.0	0.0	0.0	10.2	10.7	R 21.4	32.1
1994	0.0	0.0	0.2	0.1	0.0	(s)	(s)	0.4	(s)	0.0	0.7	0.0	0.0	0.0	0.9	1.6	1.9	3.5
1995	0.0	0.0	0.2	0.1	0.0	(s)	(s)	0.2	(s)	0.0	0.5	0.0	0.0	0.0	0.9	1.4	1.9	3.3
1996	0.0	0.0	0.1	0.1	(s)	(s)	(s)	0.2	(s)	0.0	0.5	0.0	0.0	0.0	0.9	1.4	1.8	3.2
1997	0.0	0.0	0.2	0.1	(s)	(s)	(s)	0.3	0.0	0.0	0.7	0.0	0.0	0.0	0.9	1.6	1.9	3.5
1998	0.0	0.0	0.2	0.1	0.0	(s)	(s)	0.1	0.0	0.0	0.5	0.0	0.0	0.0	0.9	1.4	1.8	3.2
1999	0.0	0.0	0.2	0.8	(s)	(s)	(s)	0.1	0.0	0.0	1.1	0.0	0.0	0.0	0.9	2.0	1.7	3.7

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>e</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>f</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

R=Revised data.

kWh=kilowatthours. — =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 69. Transportation Energy Consumption Estimates, Selected Years 1960-1999, District of Columbia**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum								Ethanol <sup>c</sup>	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total <sup>c</sup>
			Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	LPG <sup>a</sup>	Lubricants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total				Million Kilowatthours	
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels								Thousand Barrels	Million Kilowatthours	Million Kilowatthours	Total <sup>c</sup>	
1960	8	(s)	0	305	0	(s)	112	4,872	28	5,317	0	32	—	80	—
1965	(s)	0	0	874	(s)	(s)	59	5,391	6	6,331	0	0	—	0	—
1970	1	(s)	0	492	(s)	(s)	53	5,623	13	6,182	0	0	—	0	—
1975	(s)	(s)	0	820	0	1	46	5,670	350	6,887	0	0	—	0	—
1980	0	0	0	587	329	(s)	54	3,841	59	4,870	0	106	—	258	—
1985	0	(s)	0	882	7	1	49	3,716	202	4,857	R e (s)	130	—	305	—
1990	0	(s)	0	812	5	1	55	3,882	3	4,759	0	142	—	310	—
1991	0	(s)	0	740	0	(s)	49	3,930	0	4,720	R 1	144	—	R 313	—
1992	0	(s)	0	763	0	1	50	3,936	7	4,758	0	152	—	325	—
1993	0	(s)	2	617	101	1	51	4,117	0	4,889	0	159	—	336	—
1994	0	(s)	2	712	0	1	53	3,963	0	4,731	0	165	—	345	—
1995	0	(s)	4	654	2	1	53	3,997	0	4,709	0	170	—	355	—
1996	0	(s)	(s)	693	0	1	51	3,803	0	4,548	0	163	—	339	—
1997	0	(s)	3	641	252	R 1	54	3,962	0	R 4,913	0	158	—	R 330	—
1998	0	(s)	3	622	559	(s)	56	3,833	0	5,074	0	162	—	335	—
1999	0	(s)	3	617	0	(s)	57	3,938	0	4,615	0	172	—	338	—
<b>Trillion Btu</b>															
1960	0.2	(s)	0.0	1.8	0.0	(s)	0.7	25.6	0.2	28.2	0.0	0.1	28.6	0.3	28.8
1965	(s)	0.0	0.0	5.1	(s)	(s)	0.4	28.3	(s)	33.8	0.0	0.0	33.8	0.0	33.8
1970	(s)	(s)	0.0	2.9	(s)	(s)	0.3	29.5	0.1	32.8	0.0	0.0	32.8	0.0	32.8
1975	(s)	(s)	0.0	4.8	0.0	(s)	0.3	29.8	2.2	37.0	0.0	0.0	37.1	0.0	37.1
1980	0.0	0.0	0.0	3.4	1.9	(s)	0.3	20.2	0.4	26.2	0.0	0.4	26.5	0.9	27.4
1985	0.0	0.4	0.0	5.1	(s)	(s)	0.3	19.5	1.3	26.3	R e (s)	0.4	e 27.1	1.0	e 28.1
1990	0.0	0.3	0.0	4.7	(s)	(s)	0.3	20.4	(s)	25.5	0.0	0.5	26.2	1.1	27.3
1991	0.0	0.3	0.0	4.3	0.0	(s)	0.3	20.6	0.0	25.3	R (s)	0.5	26.0	1.1	27.1
1992	0.0	0.3	0.0	4.4	0.0	(s)	0.3	20.7	(s)	25.5	0.0	0.5	26.3	1.1	27.4
1993	0.0	0.3	(s)	3.6	0.6	(s)	0.3	21.6	0.0	26.1	0.0	0.5	26.9	1.1	28.1
1994	0.0	0.2	(s)	4.1	0.0	(s)	0.3	R 20.7	0.0	R 25.2	0.0	0.6	R 26.0	1.2	R 27.2
1995	0.0	0.3	(s)	3.8	(s)	(s)	0.3	R 20.8	0.0	R 25.0	0.0	0.6	R 25.8	1.2	R 27.1
1996	0.0	0.2	(s)	4.0	0.0	(s)	0.3	R 19.8	0.0	R 24.2	0.0	0.6	R 25.0	1.2	R 26.1
1997	0.0	0.3	(s)	3.7	1.4	(s)	0.3	R 20.7	0.0	R 26.2	0.0	0.5	R 27.0	1.1	R 28.1
1998	0.0	0.3	(s)	3.6	3.2	(s)	0.3	20.0	0.0	27.1	0.0	0.6	27.9	1.1	29.1
1999	0.0	0.3	(s)	3.6	0.0	(s)	0.3	20.5	0.0	24.5	0.0	0.6	25.3	1.2	26.5

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels. Transportation use of natural gas is gas consumed in the operation of pipelines, primarily in compressors, and, since 1990, is also gas consumed as vehicle fuel.

<sup>c</sup> Ethanol blended into motor gasoline, which is accounted for under motor gasoline, is shown separately here to display the use of renewable energy by the transportation sector and is included only once in the total.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1980 and 1981 due to the expanded coverage of renewable energy sources beginning in 1981.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.



**Table 70. Estimates of Energy Input at Electric Utilities, Selected Years, 1960-1999, District of Columbia**

Year	Coal	Natural Gas <sup>a</sup>	Petroleum				Nuclear Electric Power	Hydroelectric Power <sup>e</sup>	Wood and Waste	Geothermal Energy	Other <sup>b,f</sup>	Total <sup>g</sup>
			Heavy Oil <sup>b,c</sup>	Light Oil <sup>b,d</sup>	Petroleum Coke <sup>b</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels				Million Kilowatthours					
1960	446	0	9	4	0	12	0	3	0	0	0	—
1965	293	0	10	4	0	14	0	3	0	0	0	—
1970	673	0	2,755	1,135	0	3,889	0	1	0	0	0	—
1975	111	0	2,088	90	0	2,178	0	1	0	0	0	—
1980	0	0	1,462	109	0	1,572	0	0	0	0	0	—
1985	0	0	250	66	0	316	0	0	0	0	0	—
1990	0	0	798	72	0	871	0	0	0	0	0	—
1991	0	0	442	54	0	497	0	0	0	0	0	—
1992	0	0	194	56	0	250	0	0	0	0	0	—
1993	0	0	442	35	0	477	0	0	0	0	0	—
1994	0	0	566	98	0	664	0	0	0	0	0	—
1995	0	0	402	75	0	477	0	0	0	0	0	—
1996	0	0	241	49	0	290	0	0	0	0	0	—
1997	0	0	126	71	0	197	0	0	0	0	0	—
1998	0	0	450	116	0	566	0	0	0	0	0	—
1999	0	0	440	107	0	547	0	0	0	0	0	—
<b>Trillion Btu</b>												
1960	12.2	0.0	0.1	(s)	0.0	0.1	0.0	(s)	0.0	0.0	0.0	12.4
1965	7.9	0.0	0.1	(s)	0.0	0.1	0.0	(s)	0.0	0.0	0.0	8.0
1970	17.4	0.0	17.3	6.6	0.0	23.9	0.0	(s)	0.0	0.0	0.0	41.4
1975	2.8	0.0	13.1	0.5	0.0	13.6	0.0	(s)	0.0	0.0	0.0	16.5
1980	0.0	0.0	9.2	0.6	0.0	9.8	0.0	0.0	0.0	0.0	0.0	9.8
1985	0.0	0.0	1.6	0.4	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0
1990	0.0	0.0	5.0	0.4	0.0	5.4	0.0	0.0	0.0	0.0	0.0	5.4
1991	0.0	0.0	2.8	0.3	0.0	3.1	0.0	0.0	0.0	0.0	0.0	3.1
1992	0.0	0.0	1.2	0.3	0.0	1.5	0.0	0.0	0.0	0.0	0.0	1.5
1993	0.0	0.0	2.8	0.2	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0
1994	0.0	0.0	3.6	0.6	0.0	4.1	0.0	0.0	0.0	0.0	0.0	4.1
1995	0.0	0.0	2.5	0.4	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0
1996	0.0	0.0	1.5	0.3	0.0	1.8	0.0	0.0	0.0	0.0	0.0	1.8
1997	0.0	0.0	0.8	0.4	0.0	1.2	0.0	0.0	0.0	0.0	0.0	1.2
1998	0.0	0.0	2.8	0.7	0.0	3.5	0.0	0.0	0.0	0.0	0.0	3.5
1999	0.0	0.0	2.8	0.6	0.0	3.4	0.0	0.0	0.0	0.0	0.0	3.4

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> Prior to 1980, based on oil used in steam plants. Since 1980, heavy oil includes fuel oil nos. 4, 5, and 6 and residual fuel oils.

<sup>d</sup> Prior to 1980, based on oil used in internal combustion and gas turbine engine plants. Since 1980, light oil includes fuel oil nos. 1 and 2, kerosene, and jet fuel.

<sup>e</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>f</sup> "Other" is electricity generated for distribution from wind, photovoltaic, and solar thermal energy.

<sup>g</sup> If applicable, from 1989, includes net imports of electricity generated from nonrenewable energy sources not shown in other columns. See data in appendix Table A8.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 71. Energy Consumption Estimates by Source, Selected Years 1960-1999, Florida**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum											Nuclear Electric Power	Hydro-electric Power <sup>d</sup>	Wood and Waste	Other <sup>a,e</sup>	Net Inter-state Flow of Electricity/Losses <sup>f</sup>	Total <sup>g</sup>
			Asphalt & Road Oil <sup>a</sup>	Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	Kero-sene <sup>a</sup>	LPG <sup>a</sup>	Lubri-cants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Other <sup>a,c</sup>	Total						
			Thousand Barrels															Million kWh	
1960	1,104	138	3,304	4,517	8,621	9,482	3,962	4,936	911	43,148	30,199	356	109,435	0	278	—	—	-2,134	—
1965	2,323	185	3,506	4,273	12,279	17,525	4,449	5,663	1,014	53,136	43,344	1,349	146,537	0	298	—	—	606	—
1970	5,131	337	4,076	3,138	15,639	23,840	3,657	7,828	1,089	76,254	53,642	1,380	190,543	0	292	—	—	-1,715	—
1975	5,779	280	3,659	1,921	23,387	24,224	879	7,478	1,189	100,592	79,315	1,651	244,296	8,370	234	—	—	-850	—
1980	9,543	317	4,487	1,339	29,431	35,911	952	10,718	1,409	109,279	96,756	3,036	293,318	16,737	215	—	—	12,500	—
1985	19,305	290	6,666	841	30,444	23,101	2,530	9,932	1,282	125,346	37,777	3,100	241,020	23,461	244	—	—	73,679	—
1990	25,233	328	6,804	808	34,388	31,958	329	7,744	1,443	142,351	54,500	3,677	284,002	21,780	R <sup>h</sup> 175	—	—	R 84,085	—
1991	26,004	344	7,310	712	31,382	25,048	237	7,959	1,291	141,440	59,727	3,068	278,174	20,508	R 263	—	—	R 70,233	—
1992	26,368	353	6,933	593	34,689	24,436	313	7,992	1,316	143,176	59,829	3,230	282,506	25,116	R 236	—	—	R 57,205	—
1993	26,430	336	8,342	527	23,595	26,644	284	8,070	1,340	150,283	70,106	3,254	292,446	25,887	R 211	—	—	R 60,680	—
1994	26,082	368	7,304	526	33,724	28,640	209	7,430	1,401	152,338	67,062	3,265	301,899	26,682	R 274	—	—	R 78,138	—
1995	26,526	516	6,630	599	39,920	28,045	313	7,796	1,377	157,657	47,456	3,110	292,904	28,741	R 231	—	—	R 85,769	—
1996	28,443	486	5,920	519	39,187	29,345	402	R 8,081	1,336	159,028	47,619	R 10,308	R 301,746	25,470	R 216	—	—	R 103,733	—
1997	28,719	486	3,517	567	42,889	30,507	308	R 5,839	1,411	161,878	49,948	R 14,200	R 311,064	22,968	R 241	—	—	R 103,736	—
1998	28,827	466	3,826	431	44,938	28,482	396	6,269	1,477	169,201	71,338	15,575	341,932	31,115	199	—	—	71,982	—
1999	27,286	519	3,672	591	47,566	28,977	332	7,170	1,493	173,543	66,022	15,647	345,014	31,526	140	—	—	58,452	—

  

Trillion Btu																			
1960	27.2	142.9	21.9	22.8	50.2	51.5	22.5	19.8	5.5	226.7	189.9	2.1	612.8	0.0	3.0	32.7	0.0	-7.3	811.3
1965	55.2	191.7	23.3	21.6	71.5	97.2	25.2	22.7	6.2	279.1	272.5	7.4	826.6	0.0	3.1	36.8	0.0	2.1	1,115.5
1970	116.7	350.6	27.0	15.8	91.1	133.2	20.7	29.6	6.6	400.6	337.2	7.5	1,069.4	0.0	3.1	48.0	0.0	-5.9	1,581.9
1975	133.5	292.1	24.3	9.7	136.2	135.7	5.0	27.8	7.2	528.4	498.7	9.1	1,382.0	92.2	2.4	47.6	0.0	-2.9	1,946.9
1980	225.5	329.6	29.8	6.8	171.4	201.6	5.4	39.4	8.5	574.0	608.3	16.7	1,661.9	182.6	2.2	R 73.8	0.0	42.6	R 2,518.2
1985	472.4	305.1	44.2	4.2	177.3	129.2	14.3	35.8	7.8	658.4	237.5	16.8	1,325.6	253.7	2.5	R 101.5	0.0	251.4	R 2,712.1
1990	624.3	342.0	45.1	4.1	200.3	179.6	1.9	28.1	8.8	747.8	342.6	19.9	1,578.1	232.6	h 1.8	R 139.5	R <sup>h</sup> 27.5	R 286.9	R <sup>h</sup> 3,232.7
1991	642.8	361.0	48.5	3.6	182.8	140.8	1.3	28.8	7.8	743.0	375.5	16.6	1,548.8	220.3	2.7	R 147.5	R 28.4	R 239.6	R 3,191.2
1992	652.7	370.3	46.0	3.0	202.1	137.5	1.8	29.0	8.0	752.1	376.1	17.4	1,573.0	268.2	2.4	R 150.7	R 29.8	R 195.2	R 3,242.2
1993	652.2	353.4	55.4	2.7	137.4	150.3	1.6	29.1	8.1	789.4	440.8	17.5	1,632.4	276.5	2.2	R 159.8	R 31.0	R 207.0	R 3,314.3
1994	641.7	392.5	48.5	2.7	196.4	162.1	1.2	27.0	8.5	R 796.7	421.6	17.6	R 1,682.4	284.9	2.8	R 162.8	R 31.8	R 266.6	R 3,465.5
1995	653.0	532.6	44.0	3.0	232.5	159.0	1.8	28.2	8.3	R 822.2	298.4	16.8	R 1,614.2	306.3	2.4	R 176.7	R 32.6	R 292.6	R 3,610.6
1996	694.5	510.7	39.3	2.6	228.3	166.4	2.3	R 29.2	8.1	R 829.5	299.4	R 55.4	R 1,660.4	270.6	2.2	R 190.7	R 33.3	R 353.9	R 3,716.3
1997	697.3	509.0	23.3	2.9	249.8	173.0	1.7	R 21.1	8.6	R 843.9	314.0	R 78.7	R 1,717.0	244.0	R 2.5	R 154.4	R 33.3	R 353.9	R 3,711.5
1998	701.0	490.0	25.4	2.2	261.8	161.5	2.2	22.7	9.0	881.9	448.5	87.0	1,902.0	330.5	2.1	133.1	33.3	245.6	3,837.8
1999	671.6	541.7	24.4	3.0	277.1	164.3	1.9	25.9	9.1	904.3	415.1	87.0	1,912.0	334.9	1.5	159.0	32.7	199.4	3,852.9

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products consumed in the industrial sector. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>e</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>f</sup> Net interstate flow of electricity is the difference between the amount of energy in the electricity sold within a State (including associated losses) and the energy input at the electric utilities within the State. A positive number

indicates that more electricity (including associated losses) came into the State than went out of the State during the year; conversely, a negative number indicates that more electricity (including associated losses) went out of the State than came into the State.

<sup>g</sup> From 1989, "Total" does not equal the sum of the columns. Net imports of electricity generated from nonrenewable energy sources (shown in appendix Table A8) is included in the total but not in any other columns.

<sup>h</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

kWh=kilowatthours. R=Revised data. — =Not applicable.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 72. Residential Energy Consumption Estimates, Selected Years 1960-1999, Florida**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum				Wood Thousand Cords	Geothermal	Solar <sup>c</sup>	Electricity <sup>a</sup> Million Kilowatthours	Net Energy	Electrical System Energy Losses <sup>d</sup> Million Kilowatthours	Total
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Total							
			Thousand Barrels										
1960	0	6	541	3,150	3,458	7,149	436	—	—	7,258	—	18,052	—
1965	0	8	976	3,001	4,095	8,073	292	—	—	12,283	—	29,327	—
1970	0	15	1,010	2,414	5,698	9,121	373	—	—	24,610	—	59,638	—
1975	0	15	1,097	724	5,157	6,977	481	—	—	34,756	—	83,836	—
1980	4	15	1,215	774	4,434	6,422	R 1,609	—	—	44,746	—	108,807	—
1985	38	14	568	864	5,994	7,426	2,610	—	—	54,118	—	127,146	—
1990	2	13	234	154	4,989	5,377	428	—	—	71,115	—	R 155,570	—
1991	(s)	13	237	195	5,162	5,594	451	—	—	72,814	—	R 158,293	—
1992	6	14	309	274	5,189	5,772	474	—	—	73,189	—	R 156,095	—
1993	6	14	319	218	5,053	5,591	513	—	—	76,827	—	R 162,271	—
1994	7	14	249	125	4,635	5,008	503	—	—	80,595	—	R 168,196	—
1995	(s)	15	221	211	3,944	4,375	558	—	—	85,770	—	R 178,825	—
1996	(s)	16	216	264	R 4,030	R 4,510	557	—	—	88,315	—	R 184,049	—
1997	0	13	150	202	R 3,992	R 4,344	R 319	—	—	87,845	—	R 182,727	—
1998	2	14	111	167	4,455	4,733	281	—	—	95,768	—	197,838	—
1999	2	14	101	161	4,433	4,696	301	—	—	93,846	—	183,874	—
<b>Trillion Btu</b>													
1960	0.0	6.6	3.2	17.9	13.9	34.9	8.7	0.0	0.0	24.8	75.0	61.6	136.6
1965	0.0	8.4	5.7	17.0	16.4	39.1	5.8	0.0	0.0	41.9	95.3	100.1	195.4
1970	0.0	15.3	5.9	13.7	21.5	41.1	7.5	0.0	0.0	84.0	147.8	203.5	351.3
1975	0.0	16.4	6.4	4.1	19.2	29.6	9.6	0.0	0.0	118.6	174.2	286.0	460.3
1980	0.1	16.2	7.1	4.4	16.3	27.8	R 32.2	0.0	0.0	152.7	R 228.9	371.2	600.1
1985	1.0	15.0	3.3	4.9	21.6	29.8	52.2	0.0	0.0	184.7	282.6	433.8	716.4
1990	(s)	14.1	1.4	0.9	18.1	20.3	8.6	e 1.1	R e 26.2	242.6	R e 313.0	R 530.8	R e 843.8
1991	(s)	14.2	1.4	1.1	18.7	21.1	9.0	1.2	R 27.0	248.4	R 321.1	R 540.1	R 861.1
1992	0.1	15.8	1.8	1.6	18.8	22.2	9.5	1.3	R 28.3	249.7	R 326.9	R 532.6	R 859.5
1993	0.1	15.3	1.9	1.2	18.2	21.3	10.3	1.4	R 29.4	262.1	R 339.9	R 553.7	R 893.6
1994	0.2	15.6	1.5	0.7	16.8	19.0	10.1	1.3	R 30.3	275.0	R 351.4	R 573.9	R 925.3
1995	(s)	15.6	1.3	1.2	14.3	16.8	11.2	1.4	R 31.0	292.6	R 368.5	R 610.2	R 978.7
1996	(s)	18.1	1.3	1.5	R 14.6	R 17.3	11.1	1.5	R 31.5	301.3	R 380.8	R 628.0	R 1,008.8
1997	0.0	13.8	0.9	1.1	R 14.4	R 16.5	R 6.4	1.6	R 31.4	299.7	R 369.3	R 623.5	R 992.8
1998	(s)	14.8	0.6	0.9	16.1	17.7	5.6	1.6	31.2	326.8	397.7	675.0	1,072.7
1999	0.1	14.4	0.6	0.9	16.0	17.5	6.0	1.6	30.6	320.2	390.4	627.4	1,017.8

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Includes small amounts of solar thermal and photovoltaic energy consumed by the commercial sector that cannot be separately identified. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 73. Commercial Energy Consumption Estimates, Selected Years 1960-1999, Florida**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum						Wood	Geothermal	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>c</sup>	Total <sup>d</sup>
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels						Thousand Cords	Million Kilowatthours	Million Kilowatthours			
1960	0	7	1,097	175	610	685	2,126	4,693	8	—	5,586	—	13,894	—
1965	0	13	1,981	166	723	712	1,608	5,190	6	—	9,369	—	22,369	—
1970	0	27	2,049	134	1,005	1,382	1,467	6,038	7	—	16,244	—	39,364	—
1975	0	32	2,226	40	910	1,038	1,555	5,769	9	—	22,904	—	55,248	—
1980	7	30	1,926	28	782	1,340	1,476	5,552	39	—	57,278	—	66,681	—
1985	71	31	3,657	1,047	1,058	1,368	2,170	9,300	R 70	—	41,290	—	97,008	—
1990	3	36	3,243	125	880	1,412	2,398	8,059	R 27	—	55,769	—	R 122,001	—
1991	(s)	39	3,000	29	911	927	2,146	7,014	R 29	—	56,993	—	R 123,898	—
1992	10	42	3,002	30	916	818	1,804	6,569	R 31	—	57,278	—	R 122,161	—
1993	10	41	3,077	54	892	96	143	4,262	41	—	59,576	—	R 125,834	—
1994	13	40	2,190	76	818	97	136	3,318	42	—	62,388	—	R 130,198	—
1995	1	40	2,850	95	696	100	140	3,881	42	—	65,201	—	R 135,940	—
1996	1	42	2,151	106	R 711	100	100	R 3,168	46	—	66,255	—	R 138,076	—
1997	0	37	1,842	54	R 705	241	127	R 2,969	R 35	—	68,879	—	R 143,276	—
1998	4	38	1,420	65	786	247	11	2,529	35	—	73,087	—	150,984	—
1999	4	36	1,810	61	782	251	16	2,921	42	—	74,790	—	146,537	—

  

Trillion Btu														
1960	0.0	7.2	6.4	1.0	2.4	3.6	13.4	26.8	0.2	0.0	19.1	53.2	47.4	100.6
1965	0.0	13.2	11.5	0.9	2.9	3.7	10.1	29.2	0.1	0.0	32.0	74.5	76.3	150.8
1970	0.0	28.0	11.9	0.8	3.8	7.3	9.2	33.0	0.1	0.0	55.4	116.6	134.3	250.9
1975	0.0	34.2	13.0	0.2	3.4	5.5	9.8	31.8	0.2	0.0	78.1	144.3	188.5	332.8
1980	0.2	32.3	11.2	0.2	2.9	7.0	9.3	30.6	0.8	0.0	93.6	R 157.4	227.5	384.9
1985	1.8	34.0	21.3	5.9	3.8	7.2	13.6	51.9	R 1.4	0.0	140.9	R 230.0	331.0	R 560.9
1990	0.1	39.5	18.9	0.7	3.2	7.4	15.1	45.3	R 0.5	e 0.2	190.3	R e 275.8	R 416.3	R e 692.1
1991	(s)	43.1	17.5	0.2	3.3	4.9	13.5	39.3	R 0.6	0.2	194.5	R 277.6	R 422.7	700.4
1992	0.2	45.9	17.5	0.2	3.3	4.3	11.3	36.6	R 0.6	0.2	195.4	R 279.0	R 416.8	695.8
1993	0.3	45.2	17.9	0.3	3.2	0.5	0.9	22.8	0.8	0.2	203.3	272.6	R 429.3	R 702.0
1994	0.3	44.9	12.8	0.4	3.0	0.5	0.9	17.5	0.8	0.2	212.9	276.7	444.2	720.9
1995	(s)	43.2	16.6	0.5	2.5	0.5	0.9	21.1	0.8	0.3	222.5	287.9	R 463.8	R 751.7
1996	(s)	46.4	12.5	0.6	R 2.6	0.5	0.6	R 16.9	0.9	0.3	226.1	R 290.5	R 471.1	R 761.7
1997	0.0	38.7	10.7	0.3	2.5	1.3	0.8	15.6	R 0.7	0.4	235.0	290.4	R 488.9	R 779.3
1998	0.1	39.5	8.3	0.4	2.8	1.3	0.1	12.8	0.7	0.5	249.4	303.0	515.2	818.1
1999	0.1	37.8	10.5	0.3	2.8	1.3	0.1	15.1	0.8	0.5	255.2	309.5	500.0	809.5

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>d</sup> Small amounts of solar thermal and photovoltaic energy consumed in the commercial sector cannot be separately identified and are included in residential consumption.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 74. Industrial Energy Consumption Estimates, Selected Years 1960-1999, Florida**

Year	Coal Thousand Short Tons	Natural Gas <sup>a</sup> Billion Cubic Feet	Petroleum									Hydro-electric Power <sup>b</sup> Million kWh	Wood and Waste	Other <sup>b,d</sup>	Electricity <sup>b</sup>		Electrical System Energy Losses <sup>e</sup> Million kWh	Total
			Asphalt and Road Oil <sup>b</sup>	Distillate Fuel <sup>b</sup>	Kero-sene <sup>b</sup>	LPG <sup>b</sup>	Lubri-cants <sup>b</sup>	Motor Gasoline	Residual Fuel <sup>b</sup>	Other <sup>b,c</sup>	Total				Million kWh	Net Energy		
			Thousand Barrels														Million kWh	
1960	0	35	3,304	2,934	638	785	237	182	10,883	356	19,320	0	—	—	3,963	—	9,858	—
1965	0	74	3,506	4,451	1,281	711	291	180	9,636	1,349	21,404	0	—	—	6,449	—	15,397	—
1970	0	92	4,076	4,494	1,109	928	420	202	8,148	1,380	20,757	0	—	—	9,365	—	22,695	—
1975	21	90	3,659	4,724	115	1,242	567	92	7,369	1,651	19,421	0	—	—	13,294	—	32,067	—
1980	748	102	4,487	7,077	150	5,341	604	86	13,673	3,036	34,453	0	—	—	18,598	—	45,224	—
1985	911	76	6,666	4,639	620	2,489	550	1,022	6,283	3,100	25,369	0	—	—	15,742	—	36,983	—
1990	1,207	87	6,804	3,491	50	1,662	619	1,069	3,265	3,677	20,636	f	—	—	16,605	—	R 36,324	—
1991	1,133	87	7,310	3,083	13	1,707	553	965	2,613	3,068	19,313	0	—	—	16,482	—	R 35,831	—
1992	1,335	90	6,933	3,619	9	1,721	564	979	4,127	3,230	21,181	0	—	—	16,497	—	R 35,184	—
1993	1,307	102	8,342	4,162	13	1,961	575	969	5,257	3,254	24,533	0	—	—	16,298	—	R 34,423	—
1994	1,303	128	7,304	3,776	8	1,698	601	1,031	4,647	3,265	22,328	0	—	—	16,513	—	R 34,461	—
1995	1,325	134	6,630	5,608	7	3,008	590	1,148	5,058	3,110	25,158	0	—	—	16,473	—	R 34,345	—
1996	1,270	139	5,920	5,730	33	R 3,221	573	1,139	3,969	R 9,994	R 30,579	0	—	—	17,212	—	R 35,870	—
1997	1,347	133	3,517	5,923	52	R 1,039	605	1,144	3,511	R 10,864	R 26,656	0	—	—	18,266	—	R 37,995	—
1998	1,279	129	3,826	5,623	163	936	633	1,900	4,398	10,953	28,433	0	—	—	18,448	—	38,110	—
1999	1,190	143	3,672	6,396	109	1,822	640	1,069	3,811	11,024	28,543	0	—	—	18,579	—	36,402	—
<b>Trillion Btu</b>																		
1960	0.0	36.4	21.9	17.1	3.6	3.2	1.4	1.0	68.4	2.1	118.7	0.0	23.8	0.0	13.5	192.4	33.6	226.0
1965	0.0	77.2	23.3	25.9	7.3	2.9	1.8	0.9	60.6	7.4	130.0	0.0	30.8	0.0	22.0	260.0	52.5	312.5
1970	0.0	96.3	27.0	26.2	6.3	3.5	2.5	1.1	51.2	7.5	125.4	0.0	40.4	0.0	32.0	294.0	77.4	371.4
1975	0.5	96.6	24.3	27.5	0.7	4.6	3.4	0.5	46.3	9.1	116.4	0.0	37.8	0.0	45.4	296.7	109.4	406.1
1980	17.1	108.6	29.8	41.2	0.9	19.6	3.7	0.5	86.0	16.7	198.2	0.0	R 40.9	0.0	63.5	R 428.3	154.3	R 582.6
1985	22.6	84.2	44.2	27.0	3.5	9.0	3.3	5.4	39.5	16.8	148.7	0.0	R 47.9	0.0	53.7	R 357.2	126.2	R 483.3
1990	30.2	94.2	45.1	20.3	0.3	6.0	3.8	5.6	20.5	19.9	121.6	f	R 130.4	f	56.7	R f 433.0	123.9	R f 556.9
1991	28.5	95.7	48.5	18.0	0.1	6.2	3.4	5.1	16.4	16.6	114.2	0.0	R 137.9	0.0	56.2	R 432.6	R 122.3	R 554.8
1992	33.4	99.0	46.0	21.1	0.1	6.2	3.4	5.1	25.9	17.4	125.3	0.0	R 140.6	0.0	56.3	R 454.5	R 120.0	R 574.6
1993	32.5	112.1	55.4	24.2	0.1	7.1	3.5	5.1	33.1	17.5	145.9	0.0	R 148.7	0.0	55.6	R 494.8	117.5	R 612.3
1994	32.5	143.5	48.5	22.0	(s)	6.2	3.6	5.4	29.2	17.6	R 132.5	0.0	R 151.9	0.0	56.3	R 516.8	117.6	R 634.3
1995	33.3	143.7	44.0	32.7	(s)	10.9	3.6	6.0	31.8	16.8	R 145.7	0.0	R 164.7	0.0	56.2	R 543.6	R 117.2	R 660.8
1996	31.9	154.0	39.3	33.4	0.2	R 11.6	3.5	R 5.9	25.0	R 53.5	R 172.4	0.0	R 178.6	0.0	58.7	R 595.6	R 122.4	R 718.0
1997	33.7	140.5	23.3	34.5	0.3	R 3.8	3.7	6.0	22.1	R 58.6	R 152.2	R 0.0	R 147.3	0.0	62.3	R 536.1	R 129.6	R 665.7
1998	32.0	135.4	25.4	32.8	0.9	3.4	3.8	9.9	27.7	59.1	163.0	0.0	126.8	0.0	62.9	520.1	130.0	650.2
1999	29.8	149.1	24.4	37.3	0.6	6.6	3.9	5.6	24.0	59.2	161.4	0.0	152.0	0.0	63.4	555.6	124.2	679.8

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>e</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>f</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

R=Revised data.

kWh=kilowatthours. — =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 75. Transportation Energy Consumption Estimates, Selected Years 1960-1999, Florida**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum								Ethanol <sup>c</sup>	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total <sup>c</sup>
			Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	LPG <sup>a</sup>	Lubricants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total					
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels								Thousand Barrels	Million Kilowatthours	Million Kilowatthours	Total <sup>c</sup>	
1960	0	1	4,517	3,858	9,482	82	674	42,281	3,770	64,663	0	0	—	0	—
1965	0	3	4,273	4,482	17,525	134	723	52,244	4,751	84,132	0	0	—	0	—
1970	0	4	3,138	7,493	23,840	197	669	74,670	2,244	112,252	0	0	—	0	—
1975	(s)	2	1,921	10,160	24,199	169	622	99,462	2,211	138,744	0	0	—	0	—
1980	0	4	1,339	16,014	35,911	161	805	107,853	11,613	173,695	0	0	—	0	—
1985	0	4	841	20,335	23,101	390	733	122,956	6,892	175,247	R <sup>e</sup> 1,093	18	—	43	—
1990	0	3	808	25,551	31,958	213	824	139,870	10,085	209,311	R 183	46	—	101	—
1991	0	3	712	23,253	25,048	179	737	139,547	8,347	197,823	R 228	47	—	103	—
1992	0	4	593	26,334	24,436	167	752	141,380	10,382	204,043	R 229	46	—	98	—
1993	0	4	527	14,616	26,644	164	766	149,218	11,774	203,709	R 131	46	—	98	—
1994	0	5	526	26,196	28,640	279	800	151,211	10,224	217,876	R 106	49	—	102	—
1995	0	8	599	29,863	28,045	148	786	156,410	8,567	224,418	R 57	49	—	102	—
1996	0	6	519	29,504	29,345	R 120	763	157,789	8,264	R 226,304	R 20	51	—	105	—
1997	0	6	567	33,466	30,507	R 103	806	160,492	8,661	R 234,603	R 34	51	—	105	—
1998	0	4	431	34,515	28,482	92	844	167,054	8,149	239,567	35	51	—	106	—
1999	0	7	591	36,095	28,977	132	853	172,223	9,135	248,006	24	55	—	107	—
<b>Trillion Btu</b>															
1960	0.0	1.0	22.8	22.5	51.5	0.3	4.1	222.1	23.7	347.0	0.0	0.0	348.0	0.0	348.0
1965	0.0	2.6	21.6	26.1	97.2	0.5	4.4	274.4	29.9	454.1	0.0	0.0	456.7	0.0	456.7
1970	0.0	4.5	15.8	43.6	133.2	0.7	4.1	392.2	14.1	603.8	0.0	0.0	608.3	0.0	608.3
1975	(s)	2.5	9.7	59.2	135.5	0.6	3.8	522.5	13.9	745.2	0.0	0.0	747.7	0.0	747.7
1980	0.0	3.9	6.8	93.3	201.6	0.6	4.9	566.6	73.0	946.6	0.0	0.0	950.6	0.0	950.6
1985	0.0	4.3	4.2	118.4	129.2	1.4	4.4	645.9	43.3	946.9	R <sup>e</sup> 3.9	0.1	<sup>e</sup> 951.3	0.1	<sup>e</sup> 951.4
1990	0.0	3.0	4.1	148.8	179.6	0.8	5.0	734.7	63.4	1,136.4	R 0.6	0.2	1,139.6	0.3	1,139.9
1991	0.0	3.8	3.6	135.4	140.8	0.6	4.5	733.0	52.5	1,070.5	R 0.8	0.2	1,074.4	0.4	1,074.8
1992	0.0	4.8	3.0	153.4	137.5	0.6	4.6	742.7	65.3	1,107.0	R 0.8	0.2	1,111.9	0.3	1,112.3
1993	0.0	4.8	2.7	85.1	150.3	0.6	4.6	783.8	74.0	1,101.2	R 0.5	0.2	1,106.2	0.3	1,106.5
1994	0.0	6.0	2.7	152.6	162.1	1.0	4.9	R 790.8	64.3	R 1,178.4	R 0.4	0.2	R 1,184.6	0.3	R 1,184.9
1995	0.0	8.1	3.0	174.0	159.0	0.5	4.8	R 815.7	53.9	R 1,210.8	0.2	0.2	R 1,219.1	0.3	R 1,219.4
1996	0.0	6.4	2.6	171.9	166.4	0.4	4.6	R 823.0	52.0	R 1,220.9	0.1	0.2	R 1,227.5	0.4	R 1,227.9
1997	0.0	6.0	2.9	194.9	173.0	0.4	4.9	R 836.6	54.5	R 1,267.1	0.1	0.2	R 1,273.3	0.4	R 1,273.7
1998	0.0	4.1	2.2	201.1	161.5	0.3	5.1	870.7	51.2	1,292.1	0.1	0.2	1,296.4	0.4	1,296.7
1999	0.0	7.2	3.0	210.3	164.3	0.5	5.2	897.5	57.4	1,338.1	0.1	0.2	1,345.4	0.4	1,345.8

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels. Transportation use of natural gas is gas consumed in the operation of pipelines, primarily in compressors, and, since 1990, is also gas consumed as vehicle fuel.

<sup>c</sup> Ethanol blended into motor gasoline, which is accounted for under motor gasoline, is shown separately here to display the use of renewable energy by the transportation sector and is included only once in the total.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1980 and 1981 due to the expanded coverage of renewable energy sources beginning in 1981.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 76. Estimates of Energy Input at Electric Utilities, Selected Years, 1960-1999, Florida**

Year	Coal	Natural Gas <sup>a</sup>	Petroleum				Nuclear Electric Power	Hydroelectric Power <sup>e</sup>	Wood and Waste	Geothermal Energy	Other <sup>b,f</sup>	Total <sup>g</sup>
			Heavy Oil <sup>b,c</sup>	Light Oil <sup>b,d</sup>	Petroleum Coke <sup>b</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels				Million Kilowatthours					
1960	1,104	89	13,419	191	0	13,610	0	278	0	0	0	—
1965	2,323	87	27,349	388	0	27,737	0	298	0	0	0	—
1970	5,131	198	41,783	593	0	42,376	0	292	0	0	0	—
1975	5,758	141	68,180	5,205	0	73,385	8,370	234	0	0	0	—
1980	8,785	166	69,994	3,200	0	73,194	16,737	215	0	0	0	—
1985	18,283	166	22,432	1,246	0	23,678	23,461	244	0	0	0	—
1990	24,022	189	38,752	1,869	0	40,620	21,780	175	0	0	0	—
1991	24,870	201	46,621	1,809	0	48,430	20,508	263	0	0	0	—
1992	25,016	203	43,516	1,424	0	44,940	25,116	236	0	0	0	—
1993	25,108	174	52,931	1,420	0	54,351	25,887	211	0	0	0	—
1994	24,758	181	52,055	1,313	0	53,369	26,682	274	0	0	0	—
1995	25,200	319	33,692	1,379	0	35,071	28,741	231	0	0	0	—
1996	27,172	284	35,286	1,586	313	37,185	25,470	216	0	0	0	—
1997	27,372	297	37,648	1,508	3,336	42,493	22,968	241	0	0	0	—
1998	27,542	281	58,780	3,268	4,622	66,670	31,115	199	0	0	0	—
1999	26,090	319	53,061	3,164	4,624	60,848	31,526	140	16	0	0	—

  

Trillion Btu												
1960	27.2	91.6	84.4	1.1	0.0	85.5	0.0	3.0	0.0	0.0	0.0	207.3
1965	55.2	90.2	171.9	2.3	0.0	174.2	0.0	3.1	0.0	0.0	0.0	322.7
1970	116.7	206.5	262.7	3.5	0.0	266.1	0.0	3.1	0.0	0.0	0.0	592.4
1975	133.0	142.4	428.6	30.3	0.0	459.0	92.2	2.4	0.0	0.0	0.0	829.0
1980	208.1	168.5	440.1	18.6	0.0	458.7	182.6	2.2	0.0	0.0	0.0	1,020.1
1985	447.0	167.5	141.0	7.3	0.0	148.3	253.7	2.5	0.0	0.0	0.0	1,019.1
1990	594.0	191.2	243.6	10.9	0.0	254.5	232.6	1.8	0.0	0.0	0.0	1,274.2
1991	614.3	204.1	293.1	10.5	0.0	303.6	220.3	2.7	0.0	0.0	0.0	1,345.1
1992	618.9	204.8	273.6	8.3	0.0	281.9	268.2	2.4	0.0	0.0	0.0	1,376.2
1993	619.3	175.9	332.8	8.3	0.0	341.1	276.5	2.2	0.0	0.0	0.0	1,414.9
1994	608.7	182.5	327.3	7.7	0.0	334.9	284.9	2.8	0.0	0.0	0.0	1,413.8
1995	619.8	322.0	211.8	8.0	0.0	219.9	306.3	2.4	0.0	0.0	0.0	1,470.3
1996	662.6	285.8	221.8	9.2	1.9	233.0	270.6	2.2	0.0	0.0	0.0	1,454.2
1997	663.6	310.0	236.7	8.8	20.1	265.6	244.0	2.5	0.0	0.0	0.0	1,485.6
1998	668.9	296.3	369.5	19.0	27.8	416.4	330.5	2.1	0.0	0.0	0.0	1,714.2
1999	641.7	333.3	333.6	18.4	27.9	379.9	334.9	1.5	0.2	0.0	0.0	1,691.5

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> Prior to 1980, based on oil used in steam plants. Since 1980, heavy oil includes fuel oil nos. 4, 5, and 6 and residual fuel oils.

<sup>d</sup> Prior to 1980, based on oil used in internal combustion and gas turbine engine plants. Since 1980, light oil includes fuel oil nos. 1 and 2, kerosene, and jet fuel.

<sup>e</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of

imports of electricity that is derived from hydroelectric power.

<sup>f</sup> "Other" is electricity generated from distribution from wind, photovoltaic, and solar thermal energy.

<sup>g</sup> If applicable, from 1989, includes net imports of electricity generated from nonrenewable energy sources not shown in other columns. See data in appendix Table A8.

— =Not applicable.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 77. Energy Consumption Estimates by Source, Selected Years 1960-1999, Georgia**

Year	Natural Gas <sup>b</sup>		Petroleum											Nuclear Electric Power	Hydro-electric Power <sup>d</sup>	Wood and Waste	Other <sup>a,e</sup>	Net Inter-state Flow of Electricity/Losses <sup>f</sup>	
	Coal <sup>a</sup>		Asphalt & Road Oil <sup>a</sup>	Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	Kero-sene <sup>a</sup>	LPG <sup>a</sup>	Lubri-cants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Other <sup>a,c</sup>	Total					Million kWh	Million kWh
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels											Million kWh					
1960	3,548	182	2,482	262	5,140	2,306	1,554	4,253	819	32,079	6,551	273	55,720	0	2,306	—	—	7,839	—
1965	6,116	211	4,007	928	8,531	2,158	1,297	5,424	967	39,136	8,413	1,005	71,867	0	3,234	—	—	13,600	—
1970	8,131	333	3,916	600	12,781	10,506	457	7,430	1,023	54,081	10,279	1,031	102,104	0	2,519	—	—	27,394	—
1975	13,141	327	4,198	399	16,115	12,887	246	8,168	1,126	65,541	10,809	2,038	121,527	3,093	4,334	—	—	9,175	—
1980	21,892	315	4,795	386	19,437	16,421	552	7,444	1,250	65,506	9,036	5,272	130,097	8,436	4,423	—	—	-15,441	—
1985	29,898	282	4,580	212	23,818	16,236	367	6,825	1,137	72,993	11,931	4,372	142,471	10,130	2,826	—	—	-28,970	—
1990	30,067	311	6,398	196	28,537	18,439	198	6,021	1,279	83,148	3,539	4,880	152,635	24,797	R <sup>h</sup> 4,916	—	—	R <sup>h</sup> -31,157	—
1991	26,957	323	5,192	182	26,960	14,441	194	6,747	1,145	83,715	2,954	7,626	149,155	26,016	R <sup>h</sup> 4,663	—	—	R <sup>h</sup> -11,752	—
1992	25,481	343	4,897	166	27,207	12,422	155	7,185	1,167	83,906	6,875	8,003	151,983	27,996	R <sup>h</sup> 5,367	—	—	R <sup>h</sup> -10,314	—
1993	27,081	351	5,324	167	31,273	15,204	223	7,614	1,188	93,036	5,548	8,043	167,620	27,233	R <sup>h</sup> 4,801	—	—	R <sup>h</sup> -4,270	—
1994	29,254	341	5,251	160	31,485	16,936	243	7,548	1,242	93,493	4,798	8,151	169,308	28,927	R <sup>h</sup> 4,911	—	—	R <sup>h</sup> -16,940	—
1995	31,288	370	5,526	156	35,275	18,451	195	7,288	1,221	97,672	4,165	7,774	177,723	30,661	R <sup>h</sup> 4,734	—	—	R <sup>h</sup> -15,070	—
1996	31,158	383	5,428	168	41,616	17,293	212	R <sup>h</sup> 7,490	1,185	101,063	4,857	R <sup>h</sup> 5,971	R <sup>h</sup> 185,282	29,925	R <sup>h</sup> 4,989	—	—	R <sup>h</sup> 3,763	—
1997	32,693	362	4,890	157	37,344	15,233	187	R <sup>h</sup> 7,800	1,251	101,576	4,338	R <sup>h</sup> 6,390	R <sup>h</sup> 179,166	30,414	R <sup>h</sup> 4,453	—	—	R <sup>h</sup> -7,215	—
1998	32,701	357	5,497	138	38,916	15,134	245	6,188	1,310	106,860	2,501	6,578	183,366	31,380	5,061	—	—	5,354	—
1999	33,494	332	7,428	149	42,325	15,316	314	6,899	1,324	109,920	2,562	6,932	193,170	31,478	2,703	—	—	1,783	—

  

Trillion Btu																			
1960	89.0	188.5	16.5	1.3	29.9	12.4	8.8	17.1	5.0	168.5	41.2	1.6	302.2	0.0	24.8	71.2	0.0	26.7	702.4
1965	152.6	219.8	26.6	4.7	49.7	11.6	7.4	21.8	5.9	205.6	52.9	5.4	391.4	0.0	33.8	74.2	0.0	46.4	918.2
1970	193.2	342.8	26.0	3.0	74.5	59.0	2.6	28.1	6.2	284.1	64.6	5.6	553.6	0.0	26.4	71.8	0.0	93.5	1,281.3
1975	312.0	335.4	27.9	2.0	93.9	72.6	1.4	30.3	6.8	344.3	68.0	11.2	658.3	34.1	45.1	78.3	0.0	31.3	1,494.4
1980	521.5	325.3	31.8	1.9	113.2	92.6	3.1	27.3	7.6	344.1	56.8	28.8	707.3	92.0	45.9	R <sup>h</sup> 91.8	0.0	-52.7	R <sup>h</sup> 1,731.2
1985	725.7	289.7	30.4	1.1	138.7	91.5	2.1	24.6	6.9	383.4	75.0	23.8	777.5	109.5	29.5	R <sup>h</sup> 113.8	0.0	-98.8	R <sup>h</sup> 1,946.9
1990	718.2	319.4	42.5	1.0	166.2	104.2	1.1	21.8	7.8	436.8	22.2	26.5	830.1	264.8	h <sup>h</sup> 51.1	R <sup>h</sup> 175.9	h <sup>h</sup> 0.1	R <sup>h</sup> -106.3	R <sup>h</sup> 2,253.5
1991	646.2	331.8	34.5	0.9	157.0	81.5	1.1	24.4	6.9	439.8	18.6	41.5	806.1	279.4	48.7	R <sup>h</sup> 195.2	R <sup>h</sup> 0.2	R <sup>h</sup> -40.1	R <sup>h</sup> 2,267.4
1992	615.5	351.5	32.5	0.8	158.5	70.0	0.9	26.0	7.1	440.8	43.2	43.2	823.0	298.9	R <sup>h</sup> 55.5	R <sup>h</sup> 194.2	0.2	R <sup>h</sup> -35.2	R <sup>h</sup> 2,303.6
1993	659.4	360.1	35.3	0.8	182.2	85.8	1.3	27.5	7.2	488.7	34.9	43.4	907.1	290.9	49.5	R <sup>h</sup> 199.1	0.2	R <sup>h</sup> -14.6	R <sup>h</sup> 2,451.7
1994	691.9	351.6	34.8	0.8	183.4	95.9	1.4	27.4	7.5	R <sup>h</sup> 489.0	30.2	44.0	R <sup>h</sup> 914.4	308.8	50.7	R <sup>h</sup> 195.8	0.2	R <sup>h</sup> -57.8	R <sup>h</sup> 2,455.6
1995	728.5	380.0	36.7	0.8	205.5	104.6	1.1	26.4	7.4	R <sup>h</sup> 509.4	26.2	41.9	R <sup>h</sup> 959.9	326.8	48.8	R <sup>h</sup> 207.4	0.2	R <sup>h</sup> -51.4	R <sup>h</sup> 2,600.2
1996	725.6	392.2	36.0	0.8	242.4	98.0	1.2	R <sup>h</sup> 27.1	7.2	R <sup>h</sup> 527.1	30.5	R <sup>h</sup> 32.0	R <sup>h</sup> 1,002.5	317.9	51.6	R <sup>h</sup> 209.9	0.2	R <sup>h</sup> 12.8	R <sup>h</sup> 2,712.7
1997	771.9	371.4	32.4	0.8	217.5	86.4	1.1	R <sup>h</sup> 28.2	7.6	R <sup>h</sup> 529.5	27.3	R <sup>h</sup> 34.5	R <sup>h</sup> 965.3	323.1	R <sup>h</sup> 46.1	R <sup>h</sup> 232.5	0.2	R <sup>h</sup> -24.6	R <sup>h</sup> 2,686.0
1998	771.6	367.0	36.5	0.7	226.7	85.8	1.4	22.4	7.9	557.0	15.7	35.5	989.6	333.4	52.4	180.8	0.3	18.3	2,713.2
1999	789.6	340.6	49.3	0.8	246.5	86.8	1.8	24.9	8.0	572.8	16.1	37.3	1,044.4	334.4	28.0	254.8	0.3	6.1	2,798.1

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products consumed in the industrial sector. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>e</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>f</sup> Net interstate flow of electricity is the difference between the amount of energy in the electricity sold within a State (including associated losses) and the energy input at the electric utilities within the State. A positive number

indicates that more electricity (including associated losses) came into the State than went out of the State during the year; conversely, a negative number indicates that more electricity (including associated losses) went out of the State than came into the State.

<sup>g</sup> From 1989, "Total" does not equal the sum of the columns. Net imports of electricity generated from nonrenewable energy sources (shown in appendix Table A8) is included in the total but not in any other columns.

<sup>h</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

kWh=kilowatthours. R=Revised data. — =Not applicable.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.



**Table 78. Residential Energy Consumption Estimates, Selected Years 1960-1999, Georgia**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum				Wood Thousand Cords	Geothermal	Solar <sup>c</sup>	Electricity <sup>a</sup> Million Kilowatthours	Net Energy	Electrical System Energy Losses <sup>d</sup> Million Kilowatthours	Total
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Total							
			Thousand Barrels										
1960	134	56	131	633	2,279	3,042	1,719	—	—	4,469	—	11,116	—
1965	68	67	211	460	3,092	3,764	1,173	—	—	6,936	—	16,560	—
1970	44	87	250	121	4,164	4,536	729	—	—	12,474	—	30,229	—
1975	18	87	298	34	3,896	4,229	758	—	—	16,457	—	39,696	—
1980	8	90	578	91	3,553	4,222	R 726	—	—	20,033	—	48,713	—
1985	14	84	353	257	3,952	4,562	1,150	—	—	23,505	—	55,222	—
1990	8	90	250	111	3,400	3,761	723	—	—	29,933	—	R 65,481	—
1991	3	97	178	113	3,651	3,943	761	—	—	30,187	—	R 65,624	—
1992	13	108	178	109	4,020	4,306	801	—	—	30,528	—	R 65,108	—
1993	8	116	236	136	4,196	4,568	R 874	—	—	33,867	—	R 71,532	—
1994	10	105	113	80	4,216	4,408	R 856	—	—	32,735	—	R 68,314	—
1995	21	115	159	126	4,001	4,285	R 950	—	—	35,812	—	R 74,667	—
1996	1	127	153	144	R 4,072	R 4,369	R 949	—	—	37,763	—	R 78,698	—
1997	6	114	82	135	R 4,387	R 4,604	R 686	—	—	36,831	—	R 76,612	—
1998	4	107	95	171	3,770	4,037	605	—	—	41,519	—	85,770	—
1999	6	99	55	241	4,106	4,401	648	—	—	41,767	—	81,834	—
<b>Trillion Btu</b>													
1960	3.3	57.8	0.8	3.6	9.1	13.5	34.4	0.0	0.0	15.2	124.2	37.9	162.2
1965	1.7	69.9	1.2	2.6	12.4	16.2	23.5	0.0	0.0	23.7	134.9	56.5	191.4
1970	1.1	90.1	1.5	0.7	15.7	17.9	14.6	0.0	0.0	42.6	166.1	103.1	269.3
1975	0.4	89.5	1.7	0.2	14.5	16.4	15.2	0.0	0.0	56.2	177.6	135.4	313.1
1980	0.2	93.1	3.4	0.5	13.1	16.9	14.5	0.0	0.0	68.4	193.1	166.2	359.3
1985	0.3	86.4	2.1	1.5	14.2	17.8	23.0	0.0	0.0	80.2	207.7	188.4	396.1
1990	0.2	92.7	1.5	0.6	12.3	14.4	14.5	e (s)	e 0.1	102.1	e 224.0	223.4	R e 447.5
1991	0.1	99.3	1.0	0.6	13.2	14.9	15.2	(s)	0.1	103.0	232.6	R 223.9	R 456.5
1992	0.3	110.9	1.0	0.6	14.6	16.2	16.0	(s)	0.1	104.2	247.8	R 222.1	R 470.0
1993	0.2	118.8	1.4	0.8	15.1	17.3	17.5	(s)	0.1	115.6	269.5	244.1	R 513.5
1994	0.3	108.6	0.7	0.5	15.3	16.4	R 17.1	(s)	0.1	111.7	254.3	233.1	487.4
1995	0.5	117.7	0.9	0.7	14.5	16.1	19.0	(s)	R 0.2	122.2	275.7	R 254.8	R 530.5
1996	(s)	130.0	0.9	0.8	R 14.7	R 16.4	19.0	(s)	0.2	128.8	R 294.5	R 268.5	R 563.0
1997	0.1	117.5	0.5	0.8	R 15.9	R 17.1	R 13.7	0.1	0.2	125.7	R 274.4	R 261.4	R 535.8
1998	0.1	110.3	0.6	1.0	13.6	15.2	12.1	0.1	0.2	141.7	279.6	292.6	572.2
1999	0.2	101.4	0.3	1.4	14.8	16.5	13.0	0.1	0.2	142.5	273.9	279.2	553.1

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Includes small amounts of solar thermal and photovoltaic energy consumed by the commercial sector that cannot be separately identified. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 79. Commercial Energy Consumption Estimates, Selected Years 1960-1999, Georgia**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum					Total	Wood	Geothermal	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>c</sup>	Total <sup>d</sup>
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>							
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels					Thousand Cords	Million Kilowatthours	Million Kilowatthours				
1960	249	21	373	206	402	269	59	1,308	33	—	2,765	—	6,878	—
1965	125	26	603	149	546	306	83	1,687	22	—	4,560	—	10,887	—
1970	82	39	713	39	735	349	108	1,945	14	—	8,174	—	19,807	—
1975	33	49	851	11	688	372	80	2,002	14	—	11,226	—	27,079	—
1980	14	59	315	12	627	363	10	1,327	17	—	11,965	—	29,094	—
1985	25	52	1,546	46	697	310	468	3,066	R 31	—	17,009	—	39,962	—
1990	14	49	1,271	64	600	519	69	2,523	R 46	—	23,715	—	R 51,878	—
1991	5	51	862	53	644	330	22	1,912	R 48	—	24,086	—	R 52,360	—
1992	25	54	1,038	37	709	415	6	2,205	R 52	—	24,594	—	R 52,454	—
1993	14	58	1,134	65	740	64	6	2,010	70	—	26,166	—	R 55,267	—
1994	18	54	1,035	149	744	171	7	2,106	72	—	27,149	—	R 56,659	—
1995	39	57	1,407	35	706	62	12	2,221	72	—	28,793	—	R 60,031	—
1996	2	61	1,172	31	R 719	62	11	R 1,995	78	—	30,273	—	R 63,089	—
1997	11	57	896	28	R 774	632	6	R 2,337	R 75	—	31,352	—	R 65,216	—
1998	7	55	730	27	665	155	1	1,579	75	—	34,026	—	70,292	—
1999	11	44	1,218	37	725	142	(s)	2,122	91	—	35,536	—	69,627	—

  

Trillion Btu														
1960	6.2	22.1	2.2	1.2	1.6	1.4	0.4	6.7	0.7	0.0	9.4	45.1	23.5	68.6
1965	3.1	27.1	3.5	0.8	2.2	1.6	0.5	8.7	0.4	0.0	15.6	54.9	37.1	92.0
1970	2.0	39.9	4.2	0.2	2.8	1.8	0.7	9.7	0.3	0.0	27.9	79.7	67.6	147.3
1975	0.8	50.8	5.0	0.1	2.6	2.0	0.5	10.0	0.3	0.0	38.3	100.2	92.4	192.6
1980	0.3	60.6	1.8	0.1	2.3	1.9	0.1	6.2	0.3	0.0	40.8	108.3	99.3	207.6
1985	0.6	53.0	9.0	0.3	2.5	1.6	2.9	16.3	R 0.6	0.0	58.0	R 128.6	136.3	R 264.9
1990	0.4	50.8	7.4	0.4	2.2	2.7	0.4	13.1	R 0.9	e (s)	80.9	R e 146.1	177.0	R e 323.1
1991	0.1	52.4	5.0	0.3	2.3	1.7	0.1	9.5	R 1.0	(s)	82.2	R 145.2	R 178.7	R 323.9
1992	0.6	55.2	6.0	0.2	2.6	2.2	(s)	11.0	R 1.0	(s)	83.9	R 151.8	R 179.0	R 330.8
1993	0.4	59.1	6.6	0.4	2.7	0.3	(s)	10.0	1.4	(s)	89.3	160.1	188.6	R 348.7
1994	0.5	55.7	6.0	0.8	2.7	0.9	(s)	10.5	1.4	(s)	92.6	160.7	193.3	354.0
1995	1.0	58.0	8.2	0.2	2.6	0.3	0.1	11.3	1.4	(s)	98.2	R 170.0	R 204.8	R 374.8
1996	(s)	62.8	6.8	0.2	R 2.6	0.3	0.1	R 10.0	1.6	(s)	103.3	R 177.7	R 215.3	R 392.9
1997	0.3	58.8	5.2	0.2	R 2.8	3.3	(s)	R 11.5	R 1.5	(s)	107.0	R 179.0	R 222.5	R 401.6
1998	0.2	56.9	4.3	0.2	2.4	0.8	(s)	7.6	1.5	(s)	116.1	182.3	239.8	422.2
1999	0.3	44.7	7.1	0.2	2.6	0.7	(s)	10.7	1.8	(s)	121.3	178.8	237.6	416.3

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>d</sup> Small amounts of solar thermal and photovoltaic energy consumed in the commercial sector cannot be separately identified and are included in residential consumption.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 80. Industrial Energy Consumption Estimates, Selected Years 1960-1999, Georgia**

Year	Coal Thousand Short Tons	Natural Gas <sup>a</sup> Billion Cubic Feet	Petroleum									Hydro-electric Power <sup>b</sup> Million kWh	Wood and Waste	Other <sup>b,d</sup>	Electricity <sup>b</sup>		Electrical System Energy Losses <sup>e</sup> Million kWh	Total
			Asphalt and Road Oil <sup>b</sup>	Distillate Fuel <sup>b</sup>	Kero-sene <sup>b</sup>	LPG <sup>b</sup>	Lubri-cants <sup>b</sup>	Motor Gasoline	Residual Fuel <sup>b</sup>	Other <sup>b,c</sup>	Total				Million kWh	Net Energy		
			Thousand Barrels														Million kWh	
1960	548	76	2,482	2,043	715	1,507	289	936	4,909	273	13,153	63	—	—	4,713	—	11,723	—
1965	630	113	4,007	3,538	687	1,716	384	616	7,117	1,005	19,070	64	—	—	6,903	—	16,481	—
1970	506	141	3,916	4,014	296	2,430	474	124	8,457	1,031	20,741	58	—	—	10,853	—	26,300	—
1975	434	145	4,198	3,557	200	3,478	610	60	6,243	2,038	20,384	56	—	—	13,866	—	33,446	—
1980	679	155	4,795	3,993	449	3,188	632	26	5,361	5,272	23,717	54	—	—	19,195	—	46,676	—
1985	1,575	140	4,580	3,653	65	1,964	575	1,251	10,397	4,372	26,855	54	—	—	23,122	—	54,324	—
1990	2,232	162	6,398	4,068	23	1,916	647	1,288	2,030	4,880	21,250	R <sup>f</sup> 29	—	—	26,717	—	R <sup>f</sup> 58,447	—
1991	2,101	167	5,192	3,433	28	2,340	579	1,173	1,747	7,626	22,118	R <sup>f</sup> 23	—	—	27,193	—	R <sup>f</sup> 59,116	—
1992	1,787	172	4,897	2,797	10	2,346	590	1,223	3,425	8,003	23,290	R <sup>f</sup> 25	—	—	28,197	—	R <sup>f</sup> 60,138	—
1993	1,720	167	5,324	3,838	22	2,560	601	712	2,804	8,043	23,904	R <sup>f</sup> 48	—	—	29,084	—	R <sup>f</sup> 61,430	—
1994	1,933	174	5,251	3,472	14	2,339	628	777	2,857	8,151	23,490	R <sup>f</sup> 54	—	—	29,942	—	R <sup>f</sup> 62,487	—
1995	1,949	184	5,526	4,831	35	2,441	617	829	2,639	7,774	24,692	R <sup>f</sup> 51	—	—	31,493	—	R <sup>f</sup> 65,662	—
1996	1,985	182	5,428	5,562	37	R <sup>f</sup> 2,579	599	907	3,503	R <sup>f</sup> 5,971	R <sup>f</sup> 24,586	R <sup>f</sup> 53	—	—	33,175	—	R <sup>f</sup> 69,138	—
1997	2,046	175	4,890	5,028	24	R <sup>f</sup> 2,503	633	890	3,122	R <sup>f</sup> 6,390	R <sup>f</sup> 23,479	R <sup>f</sup> 35	—	—	33,957	—	R <sup>f</sup> 70,635	—
1998	1,959	165	5,497	5,349	46	1,711	663	954	1,286	6,578	22,082	35	—	—	35,077	—	72,461	—
1999	1,971	160	7,428	6,258	37	1,949	670	982	1,264	6,932	25,520	29	—	—	35,255	—	69,076	—
<b>Trillion Btu</b>																		
1960	13.9	78.6	16.5	11.9	4.1	6.0	1.8	4.9	30.9	1.6	77.6	0.7	36.2	0.0	16.1	223.0	40.0	263.0
1965	15.9	117.0	26.6	20.6	3.9	6.9	2.3	3.2	44.7	5.4	113.7	0.7	50.3	0.0	23.6	321.1	56.2	377.4
1970	12.0	145.3	26.0	23.4	1.7	9.2	2.9	0.7	53.2	5.6	122.5	0.6	56.9	0.0	37.0	374.3	89.7	464.1
1975	10.2	149.4	27.9	20.7	1.1	12.9	3.7	0.3	39.2	11.2	117.1	0.6	62.9	0.0	47.3	387.4	114.1	501.5
1980	16.5	160.1	31.8	23.3	2.5	11.7	3.8	0.1	33.7	28.8	135.8	0.6	R <sup>f</sup> 76.9	0.0	65.5	R <sup>f</sup> 455.4	159.3	R <sup>f</sup> 614.7
1985	39.1	143.9	30.4	21.3	0.4	7.1	3.5	6.6	65.4	23.8	158.3	0.6	R <sup>f</sup> 90.1	0.0	78.9	R <sup>f</sup> 510.9	185.4	R <sup>f</sup> 696.3
1990	56.1	166.4	42.5	23.7	0.1	6.9	3.9	6.8	12.8	26.5	123.2	f <sup>f</sup> 0.3	R <sup>f</sup> 160.5	f <sup>f</sup> 0.0	91.2	R <sup>f</sup> 597.7	199.4	R <sup>f</sup> 797.1
1991	52.8	171.6	34.5	20.0	0.2	8.5	3.5	6.2	11.0	41.5	125.2	R <sup>f</sup> 0.2	R <sup>f</sup> 179.0	0.0	92.8	R <sup>f</sup> 621.6	R <sup>f</sup> 201.7	R <sup>f</sup> 823.3
1992	44.9	176.5	32.5	16.3	0.1	8.5	3.6	6.4	21.5	43.2	132.1	R <sup>f</sup> 0.3	R <sup>f</sup> 177.1	0.0	96.2	R <sup>f</sup> 627.1	R <sup>f</sup> 205.2	R <sup>f</sup> 832.3
1993	43.2	171.9	35.3	22.4	0.1	9.2	3.6	3.7	17.6	43.4	135.5	0.5	R <sup>f</sup> 180.2	0.0	99.2	R <sup>f</sup> 630.5	R <sup>f</sup> 209.6	R <sup>f</sup> 840.1
1994	48.5	179.1	34.8	20.2	0.1	8.5	3.8	4.1	18.0	44.0	133.5	0.6	R <sup>f</sup> 177.2	0.0	102.2	R <sup>f</sup> 641.0	213.2	R <sup>f</sup> 854.2
1995	49.1	188.5	36.7	28.1	0.2	8.8	3.7	R <sup>f</sup> 4.3	16.6	41.9	R <sup>f</sup> 140.4	0.5	R <sup>f</sup> 187.0	0.0	107.5	R <sup>f</sup> 673.0	R <sup>f</sup> 224.0	R <sup>f</sup> 897.0
1996	49.9	185.9	36.0	32.4	0.2	R <sup>f</sup> 9.3	3.6	R <sup>f</sup> 4.7	22.0	R <sup>f</sup> 32.0	R <sup>f</sup> 140.4	R <sup>f</sup> 0.5	R <sup>f</sup> 189.3	0.0	113.2	R <sup>f</sup> 679.3	R <sup>f</sup> 235.9	R <sup>f</sup> 915.2
1997	51.3	179.5	32.4	29.3	0.1	R <sup>f</sup> 9.0	3.8	R <sup>f</sup> 4.6	19.6	R <sup>f</sup> 34.5	R <sup>f</sup> 133.5	0.4	R <sup>f</sup> 217.3	0.0	115.9	R <sup>f</sup> 697.9	R <sup>f</sup> 241.0	R <sup>f</sup> 938.9
1998	49.1	168.9	36.5	31.2	0.3	6.2	4.0	5.0	8.1	35.5	126.7	0.4	167.2	0.0	119.7	632.0	247.2	879.2
1999	49.4	164.1	49.3	36.5	0.2	7.0	4.1	5.1	7.9	37.3	147.4	0.3	240.1	(s)	120.3	721.6	235.7	957.3

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>e</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>f</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

R=Revised data.

kWh=kilowatthours. — =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 81. Transportation Energy Consumption Estimates, Selected Years 1960-1999, Georgia**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum								Ethanol <sup>c</sup> Thousand Barrels	Electricity <sup>a</sup> Million Kilowatthours	Net Energy	Electrical System Energy Losses <sup>d</sup> Million Kilowatthours	Total <sup>c</sup>
			Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	LPG <sup>a</sup>	Lubricants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total					
			Thousand Barrels												
1960	10	4	262	2,592	2,306	66	530	30,875	1,544	38,175	0	43	—	107	—
1965	2	5	928	4,177	2,158	69	583	38,215	1,162	47,292	0	0	—	0	—
1970	1	7	600	7,747	10,506	100	549	53,608	172	73,283	0	0	—	0	—
1975	(s)	4	399	10,331	12,887	106	516	65,110	427	89,776	0	0	—	0	—
1980	0	7	386	14,135	16,421	76	618	65,116	2,995	99,747	0	16	—	40	—
1985	0	5	212	18,031	16,236	212	562	71,432	1,009	107,695	<sup>e</sup> 0	61	—	142	—
1990	0	7	196	22,731	18,439	105	632	81,341	1,325	124,769	<sup>R</sup> 209	75	—	165	—
1991	0	7	182	22,292	14,441	112	566	82,211	1,165	120,969	<sup>R</sup> 227	74	—	161	—
1992	0	8	166	22,995	12,422	110	577	82,268	3,376	121,914	<sup>R</sup> 61	73	—	155	—
1993	0	7	167	25,729	15,204	118	587	92,260	2,568	136,633	<sup>R</sup> 113	73	—	155	—
1994	0	7	160	26,568	16,936	249	614	92,545	1,873	138,945	<sup>R</sup> 32	87	—	181	—
1995	0	8	156	28,494	18,451	140	603	96,781	1,405	146,030	<sup>R</sup> 3	94	—	<sup>R</sup> 196	—
1996	0	8	168	34,173	17,293	<sup>R</sup> 120	586	100,094	1,258	<sup>R</sup> 153,691	0	96	—	200	—
1997	0	8	157	30,967	15,233	<sup>R</sup> 136	619	100,054	1,129	<sup>R</sup> 148,295	0	109	—	<sup>R</sup> 228	—
1998	0	8	138	31,396	15,134	41	648	105,751	970	154,077	0	98	—	203	—
1999	0	9	149	33,769	15,316	120	654	108,795	907	159,711	0	98	—	191	—

  

Trillion Btu															
1960	0.2	3.7	1.3	15.1	12.4	0.3	3.2	162.2	9.7	204.2	0.0	0.1	208.3	0.4	208.6
1965	0.1	5.0	4.7	24.3	11.6	0.3	3.5	200.7	7.3	252.5	0.0	0.0	257.5	0.0	257.5
1970	(s)	7.1	3.0	45.1	59.0	0.4	3.3	281.6	1.1	393.5	0.0	0.0	400.6	0.0	400.6
1975	(s)	4.3	2.0	60.2	72.6	0.4	3.1	342.0	2.7	483.0	0.0	0.0	487.3	0.0	487.3
1980	0.0	7.6	1.9	82.3	92.6	0.3	3.7	342.1	18.8	541.8	0.0	0.1	549.4	0.1	549.6
1985	0.0	5.5	1.1	105.0	91.5	0.8	3.4	375.2	6.3	583.4	<sup>e</sup> 0.0	0.2	<sup>e</sup> 589.1	0.5	<sup>e</sup> 589.6
1990	0.0	7.5	1.0	132.4	104.2	0.4	3.8	427.3	8.3	677.4	<sup>R</sup> 0.7	0.3	685.2	0.6	685.8
1991	0.0	7.6	0.9	129.9	81.5	0.4	3.4	431.9	7.3	655.3	<sup>R</sup> 0.8	0.3	663.2	0.5	663.7
1992	0.0	7.7	0.8	133.9	70.0	0.4	3.5	432.2	21.2	662.0	<sup>R</sup> 0.2	0.2	670.0	0.5	670.5
1993	0.0	7.2	0.8	149.9	85.8	0.4	3.6	484.6	16.1	741.3	0.4	0.3	748.8	0.5	749.3
1994	0.0	7.2	0.8	154.8	95.9	0.9	3.7	<sup>R</sup> 484.0	11.8	<sup>R</sup> 751.9	0.1	0.3	<sup>R</sup> 759.4	0.6	<sup>R</sup> 760.0
1995	0.0	7.9	0.8	166.0	104.6	0.5	3.7	<sup>R</sup> 504.7	8.8	<sup>R</sup> 789.1	(s)	0.3	<sup>R</sup> 797.3	0.7	<sup>R</sup> 797.9
1996	0.0	8.7	0.8	199.1	98.0	0.4	3.6	<sup>R</sup> 522.1	7.9	<sup>R</sup> 831.9	0.0	0.3	<sup>R</sup> 840.9	0.7	<sup>R</sup> 841.6
1997	0.0	8.2	0.8	180.4	86.4	<sup>R</sup> 0.5	3.8	<sup>R</sup> 521.6	7.1	<sup>R</sup> 800.5	0.0	0.4	<sup>R</sup> 809.0	0.8	<sup>R</sup> 809.8
1998	0.0	7.8	0.7	182.9	85.8	0.1	3.9	551.2	6.1	830.7	0.0	0.3	838.9	0.7	839.6
1999	0.0	9.1	0.8	196.7	86.8	0.4	4.0	566.9	5.7	861.3	0.0	0.3	870.8	0.7	871.4

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels. Transportation use of natural gas is gas consumed in the operation of pipelines, primarily in compressors, and, since 1990, is also gas consumed as vehicle fuel.

<sup>c</sup> Ethanol blended into motor gasoline, which is accounted for under motor gasoline, is shown separately here to display the use of renewable energy by the transportation sector and is included only once in the total.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1980 and 1981 due to the expanded coverage of renewable energy sources beginning in 1981.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 82. Estimates of Energy Input at Electric Utilities, Selected Years, 1960-1999, Georgia**

Year	Coal	Natural Gas <sup>a</sup>	Petroleum				Nuclear Electric Power	Hydroelectric Power <sup>e</sup>	Wood and Waste	Geothermal Energy	Other <sup>b,f</sup>	Total <sup>g</sup>
			Heavy Oil <sup>b,c</sup>	Light Oil <sup>b,d</sup>	Petroleum Coke <sup>b</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels				Million Kilowatthours					
1960	2,608	25	39	1	0	40	0	2,243	0	0	0	—
1965	5,291	1	52	2	0	54	0	3,170	0	0	0	—
1970	7,498	59	1,542	58	0	1,600	0	2,461	0	0	0	—
1975	12,656	40	4,059	1,077	0	5,136	3,093	4,278	0	0	0	—
1980	21,191	4	670	415	0	1,085	8,436	4,369	0	0	0	—
1985	28,285	1	57	235	0	292	10,130	2,772	0	0	0	—
1990	27,812	2	115	218	0	333	24,797	4,887	0	0	0	—
1991	24,848	1	20	194	0	213	26,016	4,639	0	0	0	—
1992	23,656	1	69	199	0	268	27,996	5,342	0	0	0	—
1993	25,339	3	170	336	0	506	27,233	4,753	0	0	0	—
1994	27,293	1	61	297	0	358	28,927	4,857	0	0	0	—
1995	29,280	8	109	385	0	494	30,661	4,684	0	0	0	—
1996	29,170	5	84	555	0	640	29,925	4,936	0	0	0	—
1997	30,631	7	81	370	0	451	30,414	4,418	0	0	0	—
1998	30,731	22	245	1,346	0	1,591	31,380	5,026	0	0	0	—
1999	31,506	21	391	1,025	0	1,416	31,478	2,674	0	0	0	—

  

Trillion Btu												
1960	65.3	26.2	0.2	(s)	0.0	0.3	0.0	24.1	0.0	0.0	0.0	115.9
1965	131.9	0.9	0.3	(s)	0.0	0.3	0.0	33.1	0.0	0.0	0.0	166.3
1970	178.1	60.5	9.7	0.3	0.0	10.0	0.0	25.8	0.0	0.0	0.0	274.5
1975	300.6	41.5	25.5	6.3	0.0	31.8	34.1	44.5	0.0	0.0	0.0	452.4
1980	504.5	3.8	4.2	2.4	0.0	6.6	92.0	45.4	0.0	0.0	0.0	652.3
1985	685.7	0.9	0.4	1.4	0.0	1.7	109.5	29.0	0.0	0.0	0.0	826.8
1990	661.5	2.0	0.7	1.3	0.0	2.0	264.8	50.8	0.0	0.0	0.0	981.2
1991	593.2	0.9	0.1	1.1	0.0	1.3	279.4	48.4	0.0	0.0	0.0	923.1
1992	569.6	1.2	0.4	1.2	0.0	1.6	298.9	55.2	0.0	0.0	0.0	926.6
1993	615.6	3.1	1.1	2.0	0.0	3.0	290.9	49.0	0.0	0.0	0.0	961.7
1994	642.7	1.1	0.4	1.7	0.0	2.1	308.8	50.1	0.0	0.0	0.0	1,004.8
1995	677.9	8.0	0.7	2.2	0.0	2.9	326.8	48.3	0.0	0.0	0.0	1,063.9
1996	675.6	4.8	0.5	3.2	0.0	3.8	317.9	51.0	0.0	0.0	0.0	1,053.2
1997	720.2	7.5	0.5	2.2	0.0	2.7	323.1	<sup>R</sup> 45.8	0.0	0.0	0.0	<sup>R</sup> 1,099.2
1998	722.2	23.0	1.5	7.8	0.0	9.4	333.4	52.0	0.0	0.0	0.0	1,139.9
1999	739.7	21.2	2.5	6.0	0.0	8.4	334.4	27.7	0.0	0.0	0.0	1,131.4

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> Prior to 1980, based on oil used in steam plants. Since 1980, heavy oil includes fuel oil nos. 4, 5, and 6 and residual fuel oils.

<sup>d</sup> Prior to 1980, based on oil used in internal combustion and gas turbine engine plants. Since 1980, light oil includes fuel oil nos. 1 and 2, kerosene, and jet fuel.

<sup>e</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>f</sup> "Other" is electricity generated for distribution from wind, photovoltaic, and solar thermal energy.

<sup>g</sup> If applicable, from 1989, includes net imports of electricity generated from nonrenewable energy sources not shown in other columns. See data in appendix Table A8.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 83. Energy Consumption Estimates by Source, Selected Years 1960-1999, Hawaii**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum											Nuclear Electric Power	Hydro-electric Power <sup>d</sup>	Wood and Waste	Other <sup>a,e</sup>	Net Inter-state Flow of Electricity/Losses <sup>f</sup>	Total <sup>g</sup>
			Asphalt & Road Oil <sup>a</sup>	Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	Kero-sene <sup>a</sup>	LPG <sup>a</sup>	Lubri-cants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Other <sup>a,c</sup>	Total						
			Thousand Barrels															Million kWh	
1960	0	0	29	2,640	886	4,321	91	112	38	3,429	4,766	R 533	R 16,844	0	27	—	—	0	—
1965	0	0	306	613	1,612	7,618	49	219	94	4,082	7,230	R 655	R 22,478	0	105	—	—	0	—
1970	0	0	377	133	1,695	14,273	153	938	71	5,691	10,154	R 619	R 34,105	0	108	—	—	0	—
1975	0	0	379	116	1,948	14,849	76	872	104	6,766	11,255	R 734	R 37,097	0	89	—	—	0	—
1980	0	3	285	199	5,987	14,116	9	1,573	94	7,231	13,196	R 872	R 43,562	0	86	—	—	0	—
1985	46	2	308	155	4,611	13,260	2	133	86	7,594	13,185	R 757	R 40,091	0	86	—	—	0	—
1990	28	3	381	272	6,822	12,646	(s)	178	96	8,670	17,433	R 2,215	R 48,714	0	R h 79	—	—	0	—
1991	37	3	383	261	7,239	11,123	(s)	214	86	8,970	15,418	R 1,910	R 45,606	0	R 71	—	—	0	—
1992	47	3	431	243	5,588	9,993	(s)	651	88	8,870	16,271	R 2,304	R 44,439	0	R 61	—	—	0	—
1993	73	3	444	198	4,837	8,891	1	884	90	9,060	12,361	R 2,050	R 38,814	0	R 56	—	—	0	—
1994	86	3	407	210	5,063	9,472	1	1,619	94	9,343	12,931	R 2,256	R 41,396	0	R 141	—	—	0	—
1995	192	3	438	218	5,017	9,940	1	R 1,316	92	9,416	12,348	R 2,161	R 40,947	0	R 98	—	—	0	—
1996	169	3	401	165	4,418	10,087	1	R 1,319	89	9,374	10,379	R 2,577	R 38,811	0	R 105	—	—	0	—
1997	145	3	396	121	4,287	10,217	1	R 241	94	9,358	9,879	R 2,540	R 37,134	0	R 115	—	—	0	—
1998	167	3	322	107	4,343	9,990	(s)	844	99	9,342	11,026	2,085	38,159	0	121	—	—	0	—
1999	133	3	353	58	4,507	9,474	(s)	376	100	8,953	11,120	2,091	37,031	0	118	—	—	0	—

  

Trillion Btu																			
1960	0.0	0.0	0.2	13.3	5.2	23.5	0.5	0.4	0.2	18.0	30.0	R 3.2	R 94.6	0.0	0.3	0.0	0.0	0.0	R 94.9
1965	0.0	0.0	2.0	3.1	9.4	42.3	0.3	0.9	0.6	21.4	45.5	R 3.9	R 129.3	0.0	1.1	0.2	0.0	0.0	R 130.6
1970	0.0	0.0	2.5	0.7	9.9	80.1	0.9	3.5	0.4	29.9	63.8	R 3.7	R 195.4	0.0	1.1	0.4	0.0	0.0	R 197.0
1975	0.0	0.0	2.5	0.6	11.3	83.5	0.4	3.2	0.6	35.5	70.8	R 4.4	R 212.9	0.0	0.9	0.6	0.0	0.0	R 214.4
1980	0.0	3.0	1.9	1.0	34.9	79.2	0.1	5.8	0.6	38.0	83.0	R 5.2	R 249.6	0.0	0.9	11.9	0.0	0.0	R 265.4
1985	1.1	2.7	2.0	0.8	26.9	74.4	(s)	0.5	0.5	39.9	82.9	R 4.7	R 232.6	0.0	0.9	14.2	0.4	0.0	R 251.9
1990	0.7	3.0	2.5	1.4	39.7	71.1	(s)	0.6	0.6	45.5	109.6	R 13.3	R 284.4	0.0	R h 0.8	R 6.6	R h 1.3	0.0	R h 296.8
1991	0.9	2.9	2.5	1.3	42.2	62.6	(s)	0.8	0.5	47.1	96.9	R 11.6	R 265.6	0.0	R 0.7	R 6.7	R 1.4	0.0	R 278.3
1992	1.2	2.9	2.9	1.2	32.6	56.5	(s)	2.4	0.5	46.6	102.3	R 13.8	R 258.8	0.0	0.6	R 7.0	R 1.3	0.0	R 271.7
1993	1.8	2.8	2.9	1.0	28.2	50.4	(s)	3.2	0.5	47.6	77.7	R 12.4	R 224.0	0.0	0.6	R 6.8	R 4.4	0.0	R 240.4
1994	1.8	2.9	2.7	1.1	29.5	53.7	(s)	5.9	0.6	R 48.9	81.3	R 13.6	R 237.2	0.0	1.5	R 6.9	R 5.4	0.0	R 255.7
1995	4.1	2.9	2.9	1.1	29.2	56.4	(s)	4.8	0.6	R 49.1	77.6	R 13.1	R 234.7	0.0	1.0	R 8.0	6.3	0.0	R 257.0
1996	3.6	2.8	2.7	0.8	25.7	57.2	(s)	R 4.8	0.5	R 48.9	65.3	R 15.5	221.4	0.0	1.1	R 16.0	R 6.5	0.0	R 251.4
1997	3.3	2.7	2.6	0.6	25.0	57.9	(s)	R 0.9	0.6	R 48.8	62.1	R 15.3	R 213.7	0.0	1.2	R 14.8	R 6.2	0.0	R 241.8
1998	3.8	2.8	2.1	0.5	25.3	56.6	(s)	3.1	0.6	48.7	69.3	12.6	218.9	0.0	1.3	13.3	6.5	0.0	246.6
1999	3.1	2.9	2.3	0.3	26.3	53.7	(s)	1.4	0.6	46.7	69.9	12.6	213.7	0.0	1.2	14.6	6.0	0.0	241.4

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products consumed in the industrial sector. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>e</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>f</sup> Net interstate flow of electricity is the difference between the amount of energy in the electricity sold within a State (including associated losses) and the energy input at the electric utilities within the State. A positive number

indicates that more electricity (including associated losses) came into the State than went out of the State during the year; conversely, a negative number indicates that more electricity (including associated losses) went out of the State than came into the State.

<sup>g</sup> From 1989, "Total" does not equal the sum of the columns. Net imports of electricity generated from nonrenewable energy sources (shown in appendix Table A8) is included in the total but not in any other columns.

<sup>h</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

kWh=kilowatthours. R=Revised data. — =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 84. Residential Energy Consumption Estimates, Selected Years 1960-1999, Hawaii**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum				Wood Thousand Cords	Geothermal	Solar <sup>c</sup>	Electricity <sup>a</sup> Million Kilowatthours	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Total						Million Kilowatthours	
			Thousand Barrels									Million Kilowatthours	
1960	0	0	(s)	0	57	58	0	—	—	514	—	1,550	—
1965	0	0	1	0	113	114	0	—	—	861	—	1,976	—
1970	0	0	1	0	447	449	0	—	—	1,285	—	3,021	—
1975	0	0	1	0	320	321	0	—	—	1,663	—	3,732	—
1980	0	1	1	0	430	431	0	—	—	1,841	—	4,103	—
1985	0	1	(s)	0	101	101	0	—	—	1,879	—	3,928	—
1990	0	1	(s)	0	127	128	0	—	—	2,324	—	4,734	—
1991	0	1	(s)	(s)	131	131	0	—	—	2,396	—	4,132	—
1992	0	1	(s)	(s)	413	413	0	—	—	2,438	—	3,711	—
1993	0	1	1	(s)	88	89	0	—	—	2,469	—	3,061	—
1994	0	1	1	(s)	90	91	0	—	—	2,557	—	2,859	—
1995	0	1	1	(s)	86	88	0	—	—	2,606	—	2,923	—
1996	0	1	(s)	(s)	107	107	0	—	—	2,676	—	3,023	—
1997	0	1	(s)	(s)	R 198	R 198	0	—	—	2,668	—	2,927	—
1998	0	1	(s)	(s)	563	563	0	—	—	2,641	—	2,988	—
1999	0	1	(s)	(s)	319	319	0	—	—	2,689	—	3,145	—
<b>Trillion Btu</b>													
1960	0.0	0.0	(s)	0.0	0.2	0.2	0.0	0.0	0.0	1.8	2.0	5.3	7.3
1965	0.0	0.0	(s)	0.0	0.5	0.5	0.0	0.0	0.0	2.9	3.4	6.7	10.1
1970	0.0	0.0	(s)	0.0	1.7	1.7	0.0	0.0	0.0	4.4	6.1	10.3	16.4
1975	0.0	0.0	(s)	0.0	1.2	1.2	0.0	0.0	0.0	5.7	6.9	12.7	19.6
1980	0.0	1.4	(s)	0.0	1.6	1.6	0.0	0.0	0.0	6.3	9.2	14.0	23.2
1985	0.0	0.7	(s)	0.0	0.4	0.4	0.0	0.0	0.0	6.4	7.5	13.4	20.9
1990	0.0	0.6	(s)	0.0	0.5	0.5	0.0	e 0.0	Re 0.9	7.9	Re 9.9	16.2	Re 26.1
1991	0.0	0.6	(s)	(s)	0.5	0.5	0.0	0.0	R 1.0	8.2	R 10.2	14.1	R 24.3
1992	0.0	0.6	(s)	(s)	1.5	1.5	0.0	0.0	R 1.0	8.3	R 11.4	12.7	R 24.1
1993	0.0	0.6	(s)	(s)	0.3	0.3	0.0	0.0	R 1.1	8.4	R 10.4	10.4	R 20.9
1994	0.0	0.6	(s)	(s)	0.3	0.3	0.0	0.0	R 1.2	8.7	R 10.8	9.8	R 20.6
1995	0.0	0.6	(s)	(s)	0.3	0.3	0.0	0.0	R 1.2	8.9	R 11.0	10.0	R 21.0
1996	0.0	0.6	(s)	(s)	0.4	0.4	0.0	0.0	R 1.3	9.1	R 11.3	10.3	R 21.7
1997	0.0	0.5	(s)	(s)	R 0.7	R 0.7	0.0	0.0	R 1.3	9.1	R 11.6	10.0	R 21.6
1998	0.0	0.6	(s)	(s)	2.0	2.0	0.0	0.0	1.3	9.0	12.9	10.2	23.1
1999	0.0	0.6	(s)	(s)	1.2	1.2	0.0	0.0	1.3	9.2	12.2	10.7	23.0

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Includes small amounts of solar thermal and photovoltaic energy consumed by the commercial sector that cannot be separately identified. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 85. Commercial Energy Consumption Estimates, Selected Years 1960-1999, Hawaii**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum						Wood	Geothermal	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>c</sup>	Total <sup>d</sup>
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels						Thousand Cords	Million Kilowatthours	Million Kilowatthours			
1960	0	0	48	23	10	55	41	177	0	—	306	—	921	—
1965	0	0	71	39	20	59	31	220	0	—	495	—	1,136	—
1970	0	0	174	87	79	133	38	511	0	—	771	—	1,813	—
1975	0	0	84	45	57	98	15	299	0	—	1,109	—	2,489	—
1980	0	2	398	0	76	54	25	552	0	—	1,462	—	3,259	—
1985	0	2	136	1	18	47	21	223	0	—	1,612	—	3,371	—
1990	0	2	507	(s)	22	59	837	1,426	0	—	2,253	—	4,589	—
1991	0	2	613	(s)	23	49	19	703	0	—	2,355	—	4,062	—
1992	0	2	437	(s)	73	45	1,063	1,618	0	—	2,417	—	3,678	—
1993	0	2	279	1	15	11	35	341	0	—	2,419	—	3,000	—
1994	0	2	252	(s)	16	11	439	718	0	—	2,601	—	2,908	—
1995	0	2	253	(s)	15	11	63	343	0	—	2,779	—	3,116	—
1996	0	2	152	(s)	19	11	13	195	0	—	2,819	—	3,185	—
1997	0	2	308	(s)	R 35	11	11	R 366	0	—	2,839	—	3,114	—
1998	0	2	194	(s)	99	11	1,812	2,116	0	—	2,833	—	3,205	—
1999	0	2	154	(s)	56	11	7	228	0	—	2,944	—	3,444	—
<b>Trillion Btu</b>														
1960	0.0	0.0	0.3	0.1	(s)	0.3	0.3	1.0	0.0	0.0	1.0	2.0	3.1	5.2
1965	0.0	0.0	0.4	0.2	0.1	0.3	0.2	1.2	0.0	0.0	1.7	2.9	3.9	6.8
1970	0.0	0.0	1.0	0.5	0.3	0.7	0.2	2.7	0.0	0.0	2.6	5.4	6.2	11.6
1975	0.0	0.0	0.5	0.3	0.2	0.5	0.1	1.6	0.0	0.0	3.8	5.4	8.5	13.8
1980	0.0	1.7	2.3	0.0	0.3	0.3	0.2	3.0	0.0	0.0	5.0	9.7	11.1	20.8
1985	0.0	2.0	0.8	(s)	0.1	0.2	0.1	1.2	0.0	0.0	5.5	8.8	11.5	20.3
1990	0.0	2.4	3.0	(s)	0.1	0.3	5.3	8.6	0.0	e 0.0	7.7	e 18.7	15.7	e 34.3
1991	0.0	2.3	3.6	(s)	0.1	0.3	0.1	4.0	0.0	0.0	8.0	14.4	13.9	28.2
1992	0.0	2.3	2.5	(s)	0.3	0.2	6.7	9.7	0.0	0.0	8.2	20.3	12.6	32.8
1993	0.0	2.3	1.6	(s)	0.1	0.1	0.2	2.0	0.0	0.0	8.3	12.5	10.2	22.7
1994	0.0	2.3	1.5	(s)	0.1	0.1	2.8	4.3	0.0	0.0	8.9	15.5	9.9	25.4
1995	0.0	2.3	1.5	(s)	0.1	0.1	0.4	2.0	0.0	0.0	9.5	13.8	10.6	24.4
1996	0.0	2.3	0.9	(s)	0.1	0.1	0.1	1.1	0.0	0.0	9.6	13.0	10.9	23.8
1997	0.0	1.8	1.8	(s)	0.1	0.1	0.1	R 2.1	0.0	0.0	9.7	13.5	10.6	R 24.2
1998	0.0	1.8	1.1	(s)	0.4	0.1	11.4	12.9	0.0	0.0	9.7	24.4	10.9	35.4
1999	0.0	1.8	0.9	(s)	0.2	0.1	(s)	1.2	0.0	(s)	10.0	13.1	11.8	24.8

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>d</sup> Small amounts of solar thermal and photovoltaic energy consumed in the commercial sector cannot be separately identified and are included in residential consumption.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

—=Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.



Table 86. Industrial Energy Consumption Estimates, Selected Years 1960-1999, Hawaii

Year	Coal	Natural Gas <sup>a</sup>	Petroleum									Hydro-electric Power <sup>b</sup>	Wood and Waste	Other <sup>b,d</sup>	Electricity <sup>b</sup>	Net Energy	Electrical System Energy Losses <sup>e</sup>	Total
			Asphalt and Road Oil <sup>b</sup>	Distillate Fuel <sup>b</sup>	Kero-sene <sup>b</sup>	LPG <sup>b</sup>	Lubri-cants <sup>b</sup>	Motor Gasoline	Residual Fuel <sup>b</sup>	Other <sup>b,c</sup>	Total							
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels									Million kWh	Million kWh	Million kWh				
1960	0	0	29	554	68	43	18	83	1,038	R 533	R 2,367	0	—	—	465	—	1,403	—
1965	0	0	306	635	10	82	21	76	1,712	R 655	R 3,497	83	—	—	1,096	—	2,516	—
1970	0	0	377	701	66	386	4	49	1,671	R 619	R 3,874	86	—	—	1,720	—	4,044	—
1975	0	0	379	603	31	472	30	53	1,346	R 734	R 3,648	71	—	—	2,538	—	5,696	—
1980	0	0	285	1,369	9	1,041	20	49	1,491	R 872	R 5,135	67	—	—	3,028	—	6,749	—
1985	46	0	308	471	(s)	9	18	104	1,344	R 757	R 3,010	67	—	—	3,143	—	6,571	—
1990	28	0	381	812	(s)	15	20	133	1,765	R 2,215	R 5,342	R 57	—	—	3,734	—	7,605	—
1991	37	0	383	692	(s)	46	18	150	1,804	R 1,910	R 5,003	R 51	—	—	3,773	—	6,507	—
1992	47	0	431	602	(s)	130	18	152	1,372	R 2,304	R 5,009	R 51	—	—	3,811	—	5,800	—
1993	73	0	444	451	(s)	772	19	241	1,070	R 2,050	R 5,046	R 42	—	—	3,770	—	4,675	—
1994	86	0	407	349	(s)	1,499	20	245	1,202	R 2,256	R 5,978	R 122	—	—	3,791	—	4,238	—
1995	192	0	438	405	(s)	1,207	19	245	1,040	R 2,161	R 5,515	R 82	—	—	3,803	—	4,265	—
1996	169	0	401	324	(s)	R 1,191	19	259	973	R 2,577	R 5,745	R 87	—	—	3,884	—	4,388	—
1997	145	(s)	396	489	(s)	R 6	20	242	862	R 2,540	R 4,556	R 97	—	—	3,856	—	4,231	—
1998	167	(s)	322	539	(s)	181	21	266	324	2,085	3,738	108	—	—	3,787	—	4,285	—
1999	133	(s)	353	253	(s)	(s)	21	155	399	2,091	3,272	99	—	—	3,748	—	4,384	—

  

Trillion Btu																		
1960	0.0	0.0	0.2	3.2	0.4	0.2	0.1	0.4	6.5	R 3.2	R 14.3	0.0	0.0	0.0	1.6	R 15.8	4.8	R 20.6
1965	0.0	0.0	2.0	3.7	0.1	0.3	0.1	0.4	10.8	R 3.9	R 21.3	0.9	0.2	0.0	3.7	R 26.1	8.6	R 34.7
1970	0.0	0.0	2.5	4.1	0.4	1.5	(s)	0.3	10.5	R 3.7	R 22.9	0.9	0.2	0.0	5.9	R 29.9	13.8	R 43.7
1975	0.0	0.0	2.5	3.5	0.2	1.8	0.2	0.3	8.5	R 4.4	R 21.3	0.7	0.3	0.0	8.7	R 31.0	19.4	R 50.4
1980	0.0	0.0	1.9	8.0	0.1	3.8	0.1	0.3	9.4	R 5.2	R 28.7	0.7	11.9	0.0	10.3	R 51.7	23.0	R 74.7
1985	1.1	0.0	2.0	2.7	(s)	(s)	0.1	0.5	8.4	R 4.7	R 18.6	0.7	R 14.0	0.0	10.7	R 45.1	22.4	R 67.5
1990	0.7	0.0	2.5	4.7	(s)	0.1	0.1	0.7	11.1	R 13.3	R 32.6	R 0.6	R 6.5	R 0.4	12.7	R 53.5	25.9	R 79.4
1991	0.9	0.0	2.5	4.0	(s)	0.2	0.1	0.8	11.3	R 11.6	R 30.6	R 0.5	R 6.7	R 0.4	12.9	R 52.1	22.2	R 74.3
1992	1.2	0.0	2.9	3.5	(s)	0.5	0.1	0.8	8.6	R 13.8	R 30.2	0.5	R 7.0	0.3	13.0	R 52.2	19.8	R 71.9
1993	1.8	0.0	2.9	2.6	(s)	2.8	0.1	1.3	6.7	R 12.4	R 28.9	0.4	R 6.8	R 3.3	12.9	R 54.1	16.0	R 70.0
1994	1.8	0.0	2.7	2.0	(s)	5.5	0.1	1.3	7.6	R 13.6	R 32.8	1.3	R 6.9	4.2	12.9	R 59.9	14.5	R 74.3
1995	4.1	0.0	2.9	2.4	(s)	4.4	0.1	1.3	6.5	R 13.1	R 30.6	R 0.8	R 8.0	R 5.1	13.0	R 61.7	14.6	R 76.2
1996	3.6	0.0	2.7	1.9	(s)	R 4.3	0.1	R 1.3	6.1	R 15.5	R 31.9	0.9	R 16.0	R 5.2	13.3	R 71.0	15.0	R 85.9
1997	3.3	0.4	2.6	2.9	(s)	(s)	0.1	1.3	5.4	R 15.3	R 27.6	1.0	R 14.8	R 4.9	13.2	R 65.0	14.4	R 79.4
1998	3.8	0.4	2.1	3.1	(s)	0.7	0.1	1.4	2.0	12.6	22.1	1.1	13.3	5.2	12.9	58.8	14.6	73.5
1999	3.1	0.5	2.3	1.5	(s)	(s)	0.1	0.8	2.5	12.6	19.9	1.0	14.6	4.6	12.8	56.4	15.0	71.3

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>e</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>f</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

R=Revised data.

kWh=kilowatthours. — =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 87. Transportation Energy Consumption Estimates, Selected Years 1960-1999, Hawaii**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum								Ethanol <sup>c</sup>	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total <sup>c</sup>
			Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	LPG <sup>a</sup>	Lubricants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total				Million Kilowatthours	
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels								Thousand Barrels	Million Kilowatthours	Million Kilowatthours	Total <sup>c</sup>	
1960	0	0	2,640	247	4,321	2	19	3,290	968	11,487	0	0	—	0	—
1965	0	0	613	844	7,618	4	73	3,947	1,195	14,294	0	0	—	0	—
1970	0	0	133	722	14,273	26	68	5,508	1,744	22,473	0	0	—	0	—
1975	0	0	116	831	14,849	22	74	6,615	1,013	23,520	0	0	—	0	—
1980	0	0	199	3,331	14,116	26	74	7,129	1,441	26,317	0	0	—	0	—
1985	0	0	155	3,253	13,260	6	68	7,443	1,526	25,710	<sup>e</sup> 0	0	—	0	—
1990	0	0	272	3,870	12,646	13	76	8,477	2,694	28,049	0	0	—	0	—
1991	0	0	261	4,224	11,123	14	68	8,771	2,609	27,072	0	0	—	0	—
1992	0	0	243	2,597	9,993	35	69	8,674	3,799	25,410	0	0	—	0	—
1993	0	0	198	2,017	8,891	9	71	8,808	2,689	22,682	0	0	—	0	—
1994	0	0	210	2,362	9,472	14	74	9,088	2,980	24,201	0	0	—	0	—
1995	0	0	218	2,171	9,940	8	73	9,160	2,719	24,289	0	0	—	0	—
1996	0	0	165	1,641	10,087	2	71	9,104	714	21,784	0	0	—	0	—
1997	0	0	121	1,203	10,217	2	75	9,104	500	21,221	0	0	—	0	—
1998	0	0	107	1,228	9,990	1	78	9,065	408	20,876	0	0	—	0	—
1999	0	0	58	1,568	9,474	0	79	8,786	2,051	22,016	0	0	—	0	—

  

Trillion Btu															
1960	0.0	0.0	13.3	1.4	23.5	(s)	0.1	17.3	6.1	61.8	0.0	0.0	61.8	0.0	61.8
1965	0.0	0.0	3.1	4.9	42.3	(s)	0.4	20.7	7.5	79.0	0.0	0.0	79.0	0.0	79.0
1970	0.0	0.0	0.7	4.2	80.1	0.1	0.4	28.9	11.0	125.3	0.0	0.0	125.3	0.0	125.3
1975	0.0	0.0	0.6	4.8	83.5	0.1	0.5	34.7	6.4	130.5	0.0	0.0	130.5	0.0	130.5
1980	0.0	0.0	1.0	19.4	79.2	0.1	0.5	37.4	9.1	146.7	0.0	0.0	146.7	0.0	146.7
1985	0.0	0.0	0.8	18.9	74.4	(s)	0.4	39.1	9.6	143.3	<sup>e</sup> 0.0	0.0	<sup>e</sup> 143.3	0.0	<sup>e</sup> 143.3
1990	0.0	0.0	1.4	22.5	71.1	(s)	0.5	44.5	16.9	156.9	0.0	0.0	156.9	0.0	156.9
1991	0.0	0.0	1.3	24.6	62.6	(s)	0.4	46.1	16.4	151.4	0.0	0.0	151.4	0.0	151.4
1992	0.0	0.0	1.2	15.1	56.5	0.1	0.4	45.6	23.9	142.9	0.0	0.0	142.9	0.0	142.9
1993	0.0	0.0	1.0	11.7	50.4	(s)	0.4	46.3	16.9	126.8	0.0	0.0	126.8	0.0	126.8
1994	0.0	0.0	1.1	13.8	53.7	0.1	0.4	<sup>R</sup> 47.5	18.7	<sup>R</sup> 135.3	0.0	0.0	<sup>R</sup> 135.3	0.0	<sup>R</sup> 135.3
1995	0.0	0.0	1.1	12.6	56.4	(s)	0.4	<sup>R</sup> 47.8	17.1	<sup>R</sup> 135.4	0.0	0.0	<sup>R</sup> 135.4	0.0	<sup>R</sup> 135.4
1996	0.0	0.0	0.8	9.6	57.2	(s)	0.4	<sup>R</sup> 47.5	4.5	<sup>R</sup> 120.0	0.0	0.0	<sup>R</sup> 120.0	0.0	<sup>R</sup> 120.0
1997	0.0	0.0	0.6	7.0	57.9	(s)	0.5	<sup>R</sup> 47.5	3.1	<sup>R</sup> 116.6	0.0	0.0	<sup>R</sup> 116.6	0.0	<sup>R</sup> 116.6
1998	0.0	0.0	0.5	7.2	56.6	(s)	0.5	47.2	2.6	114.6	0.0	0.0	114.6	0.0	114.6
1999	0.0	0.0	0.3	9.1	53.7	0.0	0.5	45.8	12.9	122.3	0.0	0.0	122.3	0.0	122.3

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels. Transportation use of natural gas is gas consumed in the operation of pipelines, primarily in compressors, and, since 1990, is also gas consumed as vehicle fuel.

<sup>c</sup> Ethanol blended into motor gasoline, which is accounted for under motor gasoline, is shown separately here to display the use of renewable energy by the transportation sector and is included only once in the total.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1980 and 1981 due to the expanded coverage of renewable energy sources beginning in 1981.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 88. Estimates of Energy Input at Electric Utilities, Selected Years, 1960-1999, Hawaii**

Year	Coal	Natural Gas <sup>a</sup>	Petroleum				Nuclear Electric Power	Hydroelectric Power <sup>e</sup>	Wood and Waste	Geothermal Energy	Other <sup>b,f</sup>	Total <sup>g</sup>
			Heavy Oil <sup>b,c</sup>	Light Oil <sup>b,d</sup>	Petroleum Coke <sup>b</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels				Million Kilowatthours					
1960	0	0	2,719	37	0	2,756	0	27	0	0	0	—
1965	0	0	4,292	61	0	4,353	0	22	0	0	0	—
1970	0	0	6,702	96	0	6,798	0	22	24	0	0	—
1975	0	0	8,880	429	0	9,309	0	18	25	0	0	—
1980	0	0	10,239	888	0	11,127	0	20	0	0	0	—
1985	0	0	10,295	752	0	11,047	0	19	25	19	0	—
1990	0	0	12,138	1,632	0	13,769	0	23	6	0	0	—
1991	0	0	10,986	1,710	0	12,696	0	20	0	0	0	—
1992	0	0	10,037	1,952	0	11,989	0	10	0	0	0	—
1993	0	0	8,568	2,088	0	10,656	0	14	0	0	0	—
1994	0	0	8,310	2,100	0	10,409	0	19	0	0	0	—
1995	0	0	8,525	2,187	0	10,713	0	16	0	0	0	—
1996	0	0	8,679	2,301	0	10,980	0	18	0	0	0	—
1997	0	0	8,507	2,286	0	10,793	0	19	0	0	0	—
1998	0	0	8,482	2,382	0	10,864	0	14	0	0	(s)	—
1999	0	0	8,663	2,532	0	11,195	0	19	0	0	4	—

  

Trillion Btu												
1960	0.0	0.0	17.1	0.2	0.0	17.3	0.0	0.3	0.0	0.0	0.0	17.6
1965	0.0	0.0	27.0	0.4	0.0	27.3	0.0	0.2	0.0	0.0	0.0	27.6
1970	0.0	0.0	42.1	0.6	0.0	42.7	0.0	0.2	0.3	0.0	0.0	43.2
1975	0.0	0.0	55.8	2.5	0.0	58.3	0.0	0.2	0.3	0.0	0.0	58.8
1980	0.0	0.0	64.4	5.2	0.0	69.5	0.0	0.2	0.0	0.0	0.0	69.7
1985	0.0	0.0	64.7	4.4	0.0	69.1	0.0	0.2	0.3	0.4	0.0	70.0
1990	0.0	0.0	76.3	9.5	0.0	85.8	0.0	0.2	0.1	0.0	0.0	86.1
1991	0.0	0.0	69.1	10.0	0.0	79.0	0.0	0.2	0.0	0.0	0.0	79.2
1992	0.0	0.0	63.1	11.4	0.0	74.5	0.0	0.1	0.0	0.0	0.0	74.6
1993	0.0	0.0	53.9	12.2	0.0	66.0	0.0	0.1	0.0	0.0	0.0	66.2
1994	0.0	0.0	52.2	12.2	0.0	64.5	0.0	0.2	0.0	0.0	0.0	64.7
1995	0.0	0.0	53.6	12.7	0.0	66.3	0.0	0.2	0.0	0.0	0.0	66.5
1996	0.0	0.0	54.6	13.4	0.0	68.0	0.0	0.2	0.0	0.0	0.0	68.2
1997	0.0	0.0	53.5	13.3	0.0	66.8	0.0	0.2	0.0	0.0	0.0	67.0
1998	0.0	0.0	53.3	13.9	0.0	67.2	0.0	0.1	0.0	0.0	(s)	67.3
1999	0.0	0.0	54.5	14.8	0.0	69.2	0.0	0.2	0.0	0.0	(s)	69.4

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> Prior to 1980, based on oil used in steam plants. Since 1980, heavy oil includes fuel oil nos. 4, 5, and 6 and residual fuel oils.

<sup>d</sup> Prior to 1980, based on oil used in internal combustion and gas turbine engine plants. Since 1980, light oil includes fuel oil nos. 1 and 2, kerosene, and jet fuel.

<sup>e</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>f</sup> "Other" is electricity generated for distribution from wind, photovoltaic, and solar thermal energy.

<sup>g</sup> If applicable, from 1989, includes net imports of electricity generated from nonrenewable energy sources not shown in other columns. See data in appendix Table A8.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 89. Energy Consumption Estimates by Source, Selected Years 1960-1999, Idaho**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum											Nuclear Electric Power	Hydro-electric Power <sup>d</sup>	Wood and Waste	Other <sup>a,e</sup>	Net Inter-state Flow of Electricity/Losses <sup>f</sup>	Total <sup>g</sup>
			Asphalt & Road Oil <sup>a</sup>	Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	Kero-sene <sup>a</sup>	LPG <sup>a</sup>	Lubri-cants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Other <sup>a,c</sup>	Total						
			Thousand Barrels															Million kWh	
1960	699	22	491	133	4,072	899	107	455	147	6,965	205	9	13,484	0	6,165	—	—	-5	—
1965	673	34	710	177	4,803	870	521	560	160	7,654	356	8	15,819	0	6,640	—	—	4,753	—
1970	353	47	1,147	154	5,600	960	230	1,057	151	9,684	277	17	19,278	0	7,075	—	—	14,161	—
1975	647	60	880	120	7,560	950	145	1,184	163	11,288	684	0	22,973	0	10,274	—	—	11,347	—
1980	514	49	797	162	5,662	1,243	0	993	182	11,078	613	0	20,731	0	9,507	—	—	18,078	—
1985	486	39	632	80	5,584	1,122	7	778	166	10,672	86	0	19,126	0	10,919	—	—	21,495	—
1990	549	46	1,281	39	7,173	1,143	9	610	186	11,453	47	0	21,942	113	<sup>R</sup> 9,182	—	—	<sup>R</sup> 30,789	—
1991	673	51	988	39	8,508	957	4	814	167	11,610	44	18	23,149	77	<sup>R</sup> 8,912	—	—	<sup>R</sup> 31,504	—
1992	535	49	1,465	1	7,187	973	2	669	170	11,947	22	19	22,456	65	<sup>R</sup> 6,842	—	—	<sup>R</sup> 39,776	—
1993	528	56	1,533	63	7,749	1,076	2	682	173	12,770	38	21	24,108	76	<sup>R</sup> 9,715	—	—	<sup>R</sup> 30,998	—
1994	534	57	1,798	54	8,086	1,201	6	645	181	12,927	21	21	24,940	52	<sup>R</sup> 7,967	—	—	<sup>R</sup> 39,079	—
1995	465	64	2,014	48	8,355	1,568	20	758	178	13,521	7	21	26,490	0	<sup>R</sup> 10,927	—	—	<sup>R</sup> 30,105	—
1996	397	67	2,034	55	9,457	874	17	<sup>R</sup> 2,656	173	14,174	7	<sup>R</sup> 26	<sup>R</sup> 29,473	0	<sup>R</sup> 13,275	—	—	<sup>R</sup> 27,550	—
1997	361	67	2,080	72	9,904	760	18	<sup>R</sup> 550	182	14,462	2	<sup>R</sup> 24	<sup>R</sup> 28,053	0	<sup>R</sup> 14,150	—	—	<sup>R</sup> 23,877	—
1998	479	68	3,049	61	8,514	718	21	419	191	15,284	5	23	28,286	0	12,977	—	—	28,459	—
1999	419	69	3,052	67	9,756	856	13	954	193	15,886	7	20	30,804	0	13,497	—	—	29,280	—

  

Trillion Btu																			
1960	16.8	22.8	3.3	0.7	23.7	4.8	0.6	1.8	0.9	36.6	1.3	0.1	73.7	0.0	66.3	11.4	0.0	(s)	191.0
1965	15.9	36.1	4.7	0.9	28.0	4.7	3.0	2.2	1.0	40.2	2.2	(s)	86.9	0.0	69.4	10.4	0.0	16.2	234.9
1970	7.9	49.4	7.6	0.8	32.6	5.2	1.3	4.0	0.9	50.9	1.7	0.1	105.1	0.0	74.2	11.5	0.0	48.3	296.5
1975	13.4	63.8	5.8	0.6	44.0	5.2	0.8	4.4	1.0	59.3	4.3	0.0	125.5	0.0	106.9	11.1	0.0	38.7	359.4
1980	9.6	51.6	5.3	0.8	33.0	6.8	0.0	3.7	1.1	58.2	3.9	0.0	112.7	0.0	98.8	<sup>R</sup> 14.6	0.0	61.7	<sup>R</sup> 349.1
1985	8.9	41.1	4.2	0.4	32.5	6.1	(s)	2.8	1.0	56.1	0.5	0.0	103.7	0.0	114.1	<sup>R</sup> 17.8	0.0	73.3	<sup>R</sup> 358.9
1990	10.1	46.8	8.5	0.2	41.8	6.3	0.1	2.2	1.1	60.2	0.3	0.0	120.6	1.2	<sup>R</sup> 95.5	<sup>R</sup> 26.2	<sup>h</sup> 0.5	<sup>R</sup> 105.1	<sup>R</sup> 406.5
1991	12.3	52.7	6.6	0.2	49.6	5.3	(s)	2.9	1.0	61.0	0.3	0.1	126.9	0.8	<sup>R</sup> 93.0	<sup>R</sup> 25.1	0.5	<sup>R</sup> 107.5	<sup>R</sup> 419.4
1992	9.6	50.4	9.7	(s)	41.9	5.3	(s)	2.4	1.0	62.8	0.1	0.1	123.4	0.7	<sup>R</sup> 70.8	<sup>R</sup> 26.7	0.5	<sup>R</sup> 135.7	<sup>R</sup> 418.6
1993	9.8	58.3	10.2	0.3	45.1	5.9	(s)	2.5	1.0	67.1	0.2	0.1	132.5	0.8	<sup>R</sup> 100.2	<sup>R</sup> 26.4	0.5	<sup>R</sup> 105.8	<sup>R</sup> 434.3
1994	9.7	59.1	11.9	0.3	47.1	6.6	(s)	2.3	1.1	<sup>R</sup> 67.6	0.1	0.1	<sup>R</sup> 137.3	0.6	<sup>R</sup> 82.2	<sup>R</sup> 24.9	0.5	<sup>R</sup> 133.3	<sup>R</sup> 447.7
1995	8.9	65.7	13.4	0.2	48.7	8.6	0.1	2.7	1.1	<sup>R</sup> 70.5	(s)	0.1	<sup>R</sup> 145.5	0.0	<sup>R</sup> 112.7	<sup>R</sup> 27.6	0.5	<sup>R</sup> 102.7	<sup>R</sup> 463.6
1996	7.3	69.0	13.5	0.3	55.1	4.9	0.1	<sup>R</sup> 9.6	1.0	<sup>R</sup> 73.9	(s)	0.1	<sup>R</sup> 158.6	0.0	<sup>R</sup> 137.3	<sup>R</sup> 27.3	0.5	<sup>R</sup> 94.0	494.6
1997	6.4	69.0	13.8	0.4	57.7	4.3	0.1	<sup>R</sup> 2.0	1.1	<sup>R</sup> 75.4	(s)	0.1	<sup>R</sup> 154.9	0.0	<sup>R</sup> 146.5	<sup>R</sup> 29.8	0.5	<sup>R</sup> 81.5	<sup>R</sup> 489.3
1998	9.0	70.1	20.2	0.3	49.6	4.1	0.1	1.5	1.2	79.7	(s)	0.1	156.8	0.0	134.3	23.7	0.6	97.1	492.0
1999	7.9	71.5	20.3	0.3	56.8	4.9	0.1	3.5	1.2	82.8	(s)	0.1	169.9	0.0	139.6	28.1	1.3	99.9	518.3

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products consumed in the industrial sector. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>e</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>f</sup> Net interstate flow of electricity is the difference between the amount of energy in the electricity sold within a State (including associated losses) and the energy input at the electric utilities within the State. A positive number

indicates that more electricity (including associated losses) came into the State than went out of the State during the year; conversely, a negative number indicates that more electricity (including associated losses) went out of the State than came into the State.

<sup>g</sup> From 1989, "Total" does not equal the sum of the columns. Net imports of electricity generated from nonrenewable energy sources (shown in appendix Table A8) is included in the total but not in any other columns.

<sup>h</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

kWh=kilowatt-hours. R=Revised data. — =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 90. Residential Energy Consumption Estimates, Selected Years 1960-1999, Idaho**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum				Wood Thousand Cords	Geothermal	Solar <sup>c</sup>	Electricity <sup>a</sup> Million Kilowatthours	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Total						Million Kilowatthours	
			Thousand Barrels										
1960	166	2	663	0	314	977	278	—	—	1,463	—	3,639	—
1965	123	5	708	0	348	1,056	200	—	—	1,779	—	4,247	—
1970	63	8	837	0	711	1,548	146	—	—	2,354	—	5,706	—
1975	66	14	972	0	712	1,684	160	—	—	3,870	—	9,336	—
1980	40	7	485	0	316	801	144	—	—	4,936	—	12,003	—
1985	16	8	635	2	328	964	199	—	—	5,780	—	13,580	—
1990	21	9	530	5	318	853	102	—	—	5,626	—	R 12,308	—
1991	24	10	704	2	373	1,078	108	—	—	5,971	—	R 12,981	—
1992	18	10	570	2	297	869	113	—	—	5,739	—	R 12,239	—
1993	15	13	619	2	328	948	109	—	—	6,245	—	R 13,191	—
1994	14	12	524	2	307	833	107	—	—	6,222	—	R 12,985	—
1995	14	13	510	15	374	899	119	—	—	6,193	—	R 12,912	—
1996	10	15	526	13	449	988	R 118	—	—	6,508	—	R 13,563	—
1997	11	15	578	4	R 432	R 1,014	R 123	—	—	6,628	—	R 13,787	—
1998	20	16	425	14	177	616	108	—	—	6,610	—	13,655	—
1999	19	18	541	6	733	1,280	116	—	—	6,806	—	13,336	—
<b>Trillion Btu</b>													
1960	4.1	2.3	3.9	0.0	1.3	5.1	5.6	0.0	0.0	5.0	22.0	12.4	34.5
1965	3.0	5.2	4.1	0.0	1.4	5.5	4.0	0.0	0.0	6.1	23.8	14.5	38.3
1970	1.5	8.2	4.9	0.0	2.7	7.6	2.9	0.0	0.0	8.0	28.2	19.5	47.7
1975	1.5	14.9	5.7	0.0	2.6	8.3	3.2	0.0	0.0	13.2	41.1	31.9	72.9
1980	0.9	7.8	2.8	0.0	1.2	4.0	2.9	0.0	0.0	16.8	32.4	41.0	73.3
1985	0.4	8.1	3.7	(s)	1.2	4.9	4.0	0.0	0.0	19.7	37.1	46.3	83.4
1990	0.5	8.8	3.1	(s)	1.2	4.3	2.0	e 0.1	e (s)	19.2	e 34.9	42.0	e 76.9
1991	0.5	10.6	4.1	(s)	1.3	5.5	2.2	0.1	(s)	20.4	39.2	44.3	83.5
1992	0.4	9.9	3.3	(s)	1.1	4.4	2.3	0.1	(s)	19.6	36.7	41.8	78.5
1993	0.3	13.0	3.6	(s)	1.2	4.8	2.2	0.1	(s)	21.3	41.8	45.0	86.8
1994	0.3	12.8	3.1	(s)	1.1	4.2	2.1	0.1	(s)	21.2	40.7	44.3	85.0
1995	0.3	13.4	3.0	0.1	1.4	4.4	2.4	0.1	(s)	21.1	41.7	R 44.1	R 85.8
1996	0.2	15.4	3.1	0.1	1.6	4.8	2.4	0.1	(s)	22.2	45.0	R 46.3	91.3
1997	0.2	15.7	3.4	(s)	1.6	R 4.9	R 2.5	0.1	(s)	22.6	R 46.1	47.0	R 93.1
1998	0.5	16.6	2.5	0.1	0.6	3.2	2.2	0.1	(s)	22.6	45.1	46.6	91.7
1999	0.4	18.6	3.1	(s)	2.7	5.8	2.3	(s)	(s)	23.2	50.4	45.5	95.9

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Includes small amounts of solar thermal and photovoltaic energy consumed by the commercial sector that cannot be separately identified. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 91. Commercial Energy Consumption Estimates, Selected Years 1960-1999, Idaho**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum						Wood	Geothermal	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>c</sup>	Total <sup>d</sup>
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels						Thousand Cords	Million Kilowatthours	Million Kilowatthours			
1960	307	3	232	102	55	45	0	435	5	—	1,261	—	3,136	—
1965	228	5	248	500	61	52	0	862	4	—	1,290	—	3,079	—
1970	118	6	294	116	125	65	0	600	3	—	2,088	—	5,059	—
1975	123	12	341	81	126	90	0	637	3	—	3,530	—	8,515	—
1980	73	6	218	0	56	100	487	860	3	—	3,973	—	9,661	—
1985	30	9	366	3	58	134	25	586	R 5	—	4,592	—	10,789	—
1990	39	9	340	1	56	148	19	565	R 7	—	5,212	—	R 11,401	—
1991	44	10	434	(s)	66	345	1	846	R 7	—	5,166	—	R 11,230	—
1992	33	9	414	(s)	52	312	14	793	R 7	—	5,718	—	R 12,196	—
1993	28	11	339	(s)	58	38	30	464	9	—	5,253	—	R 11,094	—
1994	26	10	441	2	54	38	7	542	9	—	6,010	—	R 12,543	—
1995	25	10	454	3	66	38	4	566	9	—	5,584	—	R 11,641	—
1996	18	12	612	4	79	167	4	867	10	—	6,231	—	R 12,986	—
1997	20	11	467	1	R 76	39	1	R 584	R 13	—	6,285	—	R 13,073	—
1998	37	12	470	3	31	33	4	541	13	—	6,273	—	12,960	—
1999	36	13	585	1	129	40	0	756	16	—	6,745	—	13,216	—
<b>Trillion Btu</b>														
1960	7.6	2.9	1.4	0.6	0.2	0.2	0.0	2.4	0.1	0.0	4.3	17.3	10.7	28.0
1965	5.6	5.4	1.4	2.8	0.2	0.3	0.0	4.8	0.1	0.0	4.4	20.3	10.5	30.8
1970	2.8	6.2	1.7	0.7	0.5	0.3	0.0	3.2	0.1	0.0	7.1	19.4	17.3	36.6
1975	2.8	12.8	2.0	0.5	0.5	0.5	0.0	3.4	0.1	0.0	12.0	31.1	29.1	60.2
1980	1.6	6.1	1.3	0.0	0.2	0.5	3.1	5.1	0.1	0.0	13.6	26.4	33.0	59.3
1985	0.7	9.4	2.1	(s)	0.2	0.7	0.2	3.2	R 0.1	0.0	15.7	R 29.1	36.8	R 65.9
1990	0.9	8.8	2.0	(s)	0.2	0.8	0.1	3.1	R 0.1	e 0.2	17.8	R e 30.8	38.9	R e 69.7
1991	1.0	9.9	2.5	(s)	0.2	1.8	(s)	4.6	R 0.1	0.2	17.6	R 33.4	R 38.3	71.7
1992	0.7	9.2	2.4	(s)	0.2	1.6	0.1	4.3	R 0.1	0.2	19.5	R 34.1	R 41.6	R 75.7
1993	0.6	11.1	2.0	(s)	0.2	0.2	0.2	2.6	0.2	0.2	17.9	32.5	37.9	70.4
1994	0.6	10.5	2.6	(s)	0.2	0.2	(s)	3.0	0.2	0.2	20.5	34.9	42.8	77.7
1995	0.5	10.7	2.6	(s)	0.2	0.2	(s)	3.1	0.2	0.2	19.1	33.7	39.7	R 73.5
1996	0.4	11.9	3.6	(s)	0.3	0.9	(s)	4.8	0.2	0.2	21.3	38.6	R 44.3	82.9
1997	0.4	11.8	2.7	(s)	0.3	0.2	(s)	3.2	R 0.3	0.2	21.4	R 37.3	R 44.6	R 81.9
1998	0.9	12.1	2.7	(s)	0.1	0.2	(s)	3.1	0.3	0.2	21.4	37.9	44.2	82.1
1999	0.8	13.1	3.4	(s)	0.5	0.2	0.0	4.1	0.3	0.4	23.0	41.8	45.1	86.9

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>d</sup> Small amounts of solar thermal and photovoltaic energy consumed in the commercial sector cannot be separately identified and are included in residential consumption.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 92. Industrial Energy Consumption Estimates, Selected Years 1960-1999, Idaho**

Year	Coal Thousand Short Tons	Natural Gas <sup>a</sup> Billion Cubic Feet	Petroleum									Hydro-electric Power <sup>b</sup> Million kWh	Wood and Waste	Other <sup>b,d</sup>	Electricity <sup>b</sup> Million kWh	Net Energy	Electrical System Energy Losses <sup>e</sup> Million kWh	Total
			Asphalt and Road Oil <sup>b</sup>	Distillate Fuel <sup>b</sup>	Kero-sene <sup>b</sup>	LPG <sup>b</sup>	Lubri-cants <sup>b</sup>	Motor Gasoline	Residual Fuel <sup>b</sup>	Other <sup>b,c</sup>	Total							
			Thousand Barrels															
1960	222	17	491	2,529	5	79	19	930	153	9	4,217	(s)	—	—	2,849	—	7,087	—
1965	321	23	710	2,768	21	146	32	859	301	8	4,846	(s)	—	—	4,340	—	10,361	—
1970	171	29	1,147	3,206	114	212	32	626	275	17	5,630	0	—	—	6,052	—	14,665	—
1975	459	30	880	3,935	64	325	44	801	684	0	6,734	0	—	—	5,112	—	12,331	—
1980	401	32	797	2,209	0	598	44	639	126	0	4,413	0	—	—	4,798	—	11,667	—
1985	439	19	632	1,751	2	333	40	511	61	0	3,330	0	—	—	6,029	—	14,165	—
1990	489	23	1,281	2,726	3	187	45	352	28	0	4,623	R f 504	—	—	7,165	R 15,675	—	—
1991	604	27	988	3,744	2	336	40	439	43	18	5,611	R 534	—	—	6,909	R 15,019	—	—
1992	484	27	1,465	2,458	1	284	41	388	8	19	4,664	R 394	—	—	7,551	R 16,105	—	—
1993	486	29	1,533	2,289	1	262	42	339	8	21	4,494	R 693	—	—	7,222	R 15,254	—	—
1994	494	30	1,798	2,522	1	234	44	378	14	21	5,012	R 616	—	—	7,647	R 15,958	—	—
1995	426	34	2,014	2,623	2	291	43	400	3	21	5,396	R 863	—	—	7,843	R 16,352	—	—
1996	369	35	2,034	2,922	1	R 2,106	42	412	2	R 26	R 7,546	R 925	—	—	8,380	R 17,464	—	—
1997	331	35	2,080	3,126	13	R 31	44	425	1	R 24	R 5,744	R 531	—	—	8,322	R 17,311	—	—
1998	421	34	3,049	2,325	4	209	46	425	1	23	6,082	902	—	—	8,393	—	17,338	—
1999	364	34	3,052	2,786	6	82	47	335	7	20	6,334	987	—	—	9,171	—	17,968	—
<b>Trillion Btu</b>																		
1960	5.0	17.1	3.3	14.7	(s)	0.3	0.1	4.9	1.0	0.1	24.4	(s)	5.7	0.0	9.7	61.9	24.2	86.1
1965	7.2	24.4	4.7	16.1	0.1	0.6	0.2	4.5	1.9	(s)	28.2	(s)	6.3	0.0	14.8	80.8	35.4	116.2
1970	3.6	30.6	7.6	18.7	0.6	0.8	0.2	3.3	1.7	0.1	33.0	0.0	8.5	0.0	20.6	96.4	50.0	146.4
1975	9.1	31.6	5.8	22.9	0.4	1.2	0.3	4.2	4.3	0.0	39.1	0.0	7.8	0.0	17.4	105.1	42.1	147.2
1980	7.1	33.3	5.3	12.9	0.0	2.2	0.3	3.4	0.8	0.0	24.8	0.0	R 11.7	0.0	16.4	R 93.3	39.8	R 133.1
1985	7.8	20.4	4.2	10.2	(s)	1.2	0.2	2.7	0.4	0.0	18.9	0.0	R 13.7	0.0	20.6	R 81.4	48.3	R 129.8
1990	8.7	24.0	8.5	15.9	(s)	0.7	0.3	1.9	0.2	0.0	27.4	R f 5.2	R 24.1	R f 1.5	24.4	R f 115.3	53.5	R f 168.8
1991	10.7	27.5	6.6	21.8	(s)	1.2	0.2	2.3	0.3	0.1	32.5	R 5.6	R 22.8	R 1.1	23.6	R 123.8	R 51.2	R 175.1
1992	8.5	27.9	9.7	14.3	(s)	1.0	0.2	2.0	(s)	0.1	27.5	4.1	R 24.3	R 1.0	25.8	R 119.0	R 54.9	R 173.9
1993	8.8	30.3	10.2	13.3	(s)	0.9	0.3	1.8	0.1	0.1	26.7	R 7.1	R 24.0	R 1.1	24.6	R 122.6	R 52.0	R 174.7
1994	8.8	30.9	11.9	14.7	(s)	0.9	0.3	2.0	0.1	0.1	29.9	6.4	R 22.6	R 0.8	26.1	R 125.4	54.4	R 179.9
1995	8.1	35.0	13.4	15.3	(s)	1.1	0.3	2.1	(s)	0.1	32.2	R 8.9	R 25.0	0.3	26.8	R 136.3	55.8	R 192.1
1996	6.7	35.6	13.5	17.0	(s)	R 7.6	0.3	R 2.1	(s)	0.1	R 40.7	R 9.6	R 24.7	0.3	28.6	R 146.1	R 59.6	R 205.7
1997	5.7	36.1	13.8	18.2	0.1	R 0.1	0.3	2.2	(s)	0.1	R 34.8	R 5.5	R 27.1	0.3	28.4	R 137.9	R 59.1	R 196.9
1998	7.6	35.6	20.2	13.5	(s)	0.8	0.3	2.2	(s)	0.1	37.2	9.3	21.3	0.3	28.6	139.9	59.2	199.1
1999	6.6	35.1	20.3	16.2	(s)	0.3	0.3	1.7	(s)	0.1	39.0	10.2	25.4	0.8	31.3	148.5	61.3	209.8

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>e</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>f</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

R=Revised data.

kWh=kilowatthours. — =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 93. Transportation Energy Consumption Estimates, Selected Years 1960-1999, Idaho**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum								Ethanol <sup>c</sup>	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total <sup>c</sup>
			Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	LPG <sup>a</sup>	Lubricants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total					
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels								Thousand Barrels	Million Kilowatthours	Million Kilowatthours	Total <sup>c</sup>	
1960	4	(s)	133	648	899	7	127	5,990	52	7,856	0	0	—	0	—
1965	1	1	177	1,079	870	4	128	6,743	55	9,055	0	0	—	0	—
1970	(s)	4	154	1,263	960	9	119	8,993	2	11,500	0	0	—	0	—
1975	(s)	4	120	2,306	950	21	119	10,396	0	13,912	0	0	—	0	—
1980	0	4	162	2,750	1,243	23	138	10,339	0	14,655	0	0	—	0	—
1985	0	3	80	2,830	1,122	59	126	10,026	0	14,244	R e 40	0	—	0	—
1990	0	5	39	3,575	1,143	48	141	10,952	0	15,899	R 166	0	—	0	—
1991	0	5	39	3,626	957	40	126	10,826	0	15,614	R 187	0	—	0	—
1992	0	3	1	3,743	973	36	129	11,246	0	16,128	R 117	0	—	0	—
1993	0	4	63	4,503	1,076	34	131	12,394	0	18,201	R 18	0	—	0	—
1994	0	5	54	4,598	1,201	50	137	12,511	0	18,552	R 16	0	—	0	—
1995	0	6	48	4,768	1,568	27	135	13,083	0	19,629	R 11	0	—	0	—
1996	0	6	55	5,395	874	R 21	131	13,595	0	R 20,071	0	0	—	0	—
1997	0	5	72	5,733	760	R 10	138	13,998	0	R 20,710	0	0	—	0	—
1998	0	6	61	5,294	718	2	145	14,827	0	21,046	0	0	—	0	—
1999	0	5	67	5,844	856	10	146	15,511	0	22,435	0	0	—	0	—

  

Trillion Btu															
1960	0.1	0.5	0.7	3.8	4.8	(s)	0.8	31.5	0.3	41.9	0.0	0.0	42.5	0.0	42.5
1965	(s)	1.1	0.9	6.3	4.7	(s)	0.8	35.4	0.3	48.4	0.0	0.0	49.6	0.0	49.6
1970	(s)	4.5	0.8	7.4	5.2	(s)	0.7	47.2	(s)	61.3	0.0	0.0	65.8	0.0	65.8
1975	(s)	4.5	0.6	13.4	5.2	0.1	0.7	54.6	0.0	74.6	0.0	0.0	79.1	0.0	79.1
1980	0.0	4.4	0.8	16.0	6.8	0.1	0.8	54.3	0.0	78.9	0.0	0.0	83.3	0.0	83.3
1985	0.0	3.1	0.4	16.5	6.1	0.2	0.8	52.7	0.0	76.6	R e 0.1	0.0	e 79.7	0.0	e 79.7
1990	0.0	5.2	0.2	20.8	6.3	0.2	0.9	57.5	0.0	85.9	R 0.6	0.0	91.1	0.0	91.1
1991	0.0	4.7	0.2	21.1	5.3	0.1	0.8	56.9	0.0	84.4	R 0.7	0.0	89.1	0.0	89.1
1992	0.0	3.4	(s)	21.8	5.3	0.1	0.8	59.1	0.0	87.1	R 0.4	0.0	90.5	0.0	90.5
1993	0.0	3.9	0.3	26.2	5.9	0.1	0.8	65.1	0.0	98.5	0.1	0.0	102.4	0.0	102.4
1994	0.0	4.9	0.3	26.8	6.6	0.2	0.8	R 65.4	0.0	R 100.1	0.1	0.0	R 105.1	0.0	R 105.1
1995	0.0	6.6	0.2	27.8	8.6	0.1	0.8	R 68.2	0.0	R 105.8	(s)	0.0	R 112.3	0.0	R 112.3
1996	0.0	6.2	0.3	31.4	4.9	0.1	0.8	R 70.9	0.0	R 108.4	0.0	0.0	R 114.6	0.0	R 114.6
1997	0.0	5.4	0.4	33.4	4.3	R (s)	0.8	R 73.0	0.0	R 111.9	0.0	0.0	R 117.3	0.0	R 117.3
1998	0.0	5.7	0.3	30.8	4.1	(s)	0.9	77.3	0.0	113.4	0.0	0.0	119.1	0.0	119.1
1999	0.0	4.7	0.3	34.0	4.9	(s)	0.9	80.8	0.0	121.0	0.0	0.0	125.7	0.0	125.7

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels. Transportation use of natural gas is gas consumed in the operation of pipelines, primarily in compressors, and, since 1990, is also gas consumed as vehicle fuel.

<sup>c</sup> Ethanol blended into motor gasoline, which is accounted for under motor gasoline, is shown separately here to display the use of renewable energy by the transportation sector and is included only once in the total.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1980 and 1981 due to the expanded coverage of renewable energy sources beginning in 1981.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.



**Table 94. Estimates of Energy Input at Electric Utilities, Selected Years, 1960-1999, Idaho**

Year	Coal	Natural Gas <sup>a</sup>	Petroleum				Nuclear Electric Power	Hydroelectric Power <sup>e</sup>	Wood and Waste	Geothermal Energy	Other <sup>b,f</sup>	Total <sup>g</sup>
			Heavy Oil <sup>b,c</sup>	Light Oil <sup>b,d</sup>	Petroleum Coke <sup>b</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels				Million Kilowatthours					
1960	0	0	0	(s)	0	(s)	0	6,165	0	0	0	—
1965	0	0	0	(s)	0	(s)	0	6,640	0	0	0	—
1970	0	0	0	1	0	1	0	7,075	0	0	0	—
1975	0	(s)	0	5	0	5	0	10,274	0	0	0	—
1980	0	(s)	0	(s)	0	(s)	0	9,507	0	0	0	—
1985	0	(s)	0	1	0	1	0	10,919	0	0	0	—
1990	0	0	0	2	0	2	0	R 8,679	0	0	0	—
1991	0	0	0	1	0	1	0	R 8,378	0	0	0	—
1992	0	0	0	1	0	1	0	R 6,447	0	0	0	—
1993	0	0	0	(s)	0	(s)	0	R 9,023	0	0	0	—
1994	0	0	0	(s)	0	(s)	0	R 7,351	0	0	0	—
1995	0	0	0	1	0	1	0	R 10,064	0	0	0	—
1996	0	0	0	(s)	0	(s)	0	R 12,350	0	0	0	—
1997	0	0	0	(s)	0	(s)	0	R 13,619	0	0	0	—
1998	0	0	0	1	0	1	0	12,076	0	0	0	—
1999	0	0	0	(s)	0	(s)	0	12,510	0	0	0	—
<b>Trillion Btu</b>												
1960	0.0	0.0	0.0	(s)	0.0	(s)	0.0	66.3	0.0	0.0	0.0	66.3
1965	0.0	0.0	0.0	(s)	0.0	(s)	0.0	69.4	0.0	0.0	0.0	69.4
1970	0.0	0.0	0.0	(s)	0.0	(s)	0.0	74.2	0.0	0.0	0.0	74.3
1975	0.0	(s)	0.0	(s)	0.0	(s)	0.0	106.9	0.0	0.0	0.0	107.0
1980	0.0	(s)	0.0	(s)	0.0	(s)	0.0	98.8	0.0	0.0	0.0	98.8
1985	0.0	(s)	0.0	(s)	0.0	(s)	0.0	114.1	0.0	0.0	0.0	114.1
1990	0.0	0.0	0.0	(s)	0.0	(s)	0.0	R 90.3	0.0	0.0	0.0	R 90.8
1991	0.0	0.0	0.0	(s)	0.0	(s)	0.0	R 87.4	0.0	0.0	0.0	R 87.9
1992	0.0	0.0	0.0	(s)	0.0	(s)	0.0	R 66.7	0.0	0.0	0.0	R 67.5
1993	0.0	0.0	0.0	(s)	0.0	(s)	0.0	R 93.0	0.0	0.0	0.0	R 93.0
1994	0.0	0.0	0.0	(s)	0.0	(s)	0.0	R 75.8	0.0	0.0	0.0	R 76.0
1995	0.0	0.0	0.0	(s)	0.0	(s)	0.0	R 103.8	0.0	0.0	0.0	R 103.8
1996	0.0	0.0	0.0	(s)	0.0	(s)	0.0	R 127.7	0.0	0.0	0.0	R 128.2
1997	0.0	0.0	0.0	(s)	0.0	(s)	0.0	R 141.0	0.0	0.0	0.0	R 141.7
1998	0.0	0.0	0.0	(s)	0.0	(s)	0.0	124.9	0.0	0.0	0.0	125.5
1999	0.0	0.0	0.0	(s)	0.0	(s)	0.0	129.4	0.0	0.0	0.0	129.5

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> Prior to 1980, based on oil used in steam plants. Since 1980, heavy oil includes fuel oil nos. 4, 5, and 6 and residual fuel oils.

<sup>d</sup> Prior to 1980, based on oil used in internal combustion and gas turbine engine plants. Since 1980, light oil includes fuel oil nos. 1 and 2, kerosene, and jet fuel.

<sup>e</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>f</sup> "Other" is electricity generated for distribution from wind, photovoltaic, and solar thermal energy.

<sup>g</sup> If applicable, from 1989, includes net imports of electricity generated from nonrenewable energy sources not shown in other columns. See data in appendix Table A8.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 95. Energy Consumption Estimates by Source, Selected Years 1960-1999, Illinois**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum											Nuclear Electric Power	Hydro-electric Power <sup>d</sup>	Wood and Waste	Other <sup>a,e</sup>	Net Inter-state Flow of Electricity/Losses <sup>f</sup>		
			Asphalt & Road Oil <sup>a</sup>	Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	Kero-sene <sup>a</sup>	LPG <sup>a</sup>	Lubri-cants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Other <sup>a,c</sup>	Total					Million kWh	Million kWh	Total <sup>g</sup>
1960	39,674	518	7,244	3,733	42,592	4,356	5,369	14,958	2,672	78,026	26,533	R 13,726	R 199,209	254	185	—	—	-18,487	—	
1965	44,715	757	9,751	383	41,011	12,176	5,337	18,763	2,616	88,769	23,091	R 20,417	R 222,314	965	175	—	—	-8,786	—	
1970	42,136	1,174	12,651	264	44,495	22,644	3,583	28,481	3,255	107,084	27,949	R 24,151	R 274,558	2,514	166	—	—	5,391	—	
1975	40,374	1,095	10,213	82	51,249	24,769	2,622	35,135	3,120	118,637	28,142	R 28,264	R 302,231	22,315	122	—	—	-4,391	—	
1980	40,147	1,090	8,094	132	36,704	19,664	606	38,811	3,473	109,062	28,271	R 31,213	R 276,030	27,742	138	—	—	4,045	—	
1985	37,706	962	7,502	212	32,189	2,748	755	27,168	3,160	111,114	6,508	R 19,530	R 210,886	39,106	136	—	—	6,167	—	
1990	33,904	939	8,339	164	42,529	3,952	174	12,471	3,556	105,948	3,622	R 30,737	R 211,490	71,887	R <sup>h</sup> 134	—	—	R -49,340	—	
1991	34,677	988	7,917	176	36,149	6,437	203	14,539	3,181	104,380	3,454	R 32,027	R 208,464	71,866	R 112	—	—	R -39,238	—	
1992	31,599	993	9,293	176	36,377	7,399	142	12,482	3,243	106,297	2,354	R 36,023	R 213,786	73,742	R 115	—	—	R -43,323	—	
1993	38,135	1,031	6,310	231	38,385	9,170	176	21,649	3,302	109,587	2,282	R 34,717	R 225,810	78,373	R 125	—	—	R -80,335	—	
1994	39,077	1,025	7,798	204	33,949	9,619	201	24,708	3,452	111,255	2,712	R 36,392	R 230,288	72,654	R 121	—	—	R -62,038	—	
1995	39,623	1,079	7,457	215	37,535	10,360	293	25,822	3,392	111,207	1,463	R 34,524	R 232,270	78,481	R 124	—	—	R -66,777	—	
1996	44,431	1,119	9,127	202	37,926	12,076	398	R 25,109	3,292	111,554	2,010	R 30,175	R 231,870	69,774	R 107	—	—	R -62,165	—	
1997	47,621	1,077	8,350	197	39,186	12,497	367	R 24,777	3,478	113,343	1,448	R 30,879	R 234,519	51,069	R 69	—	—	R -20,141	—	
1998	44,629	958	9,859	168	41,426	13,152	349	15,783	3,641	113,707	1,065	29,660	228,809	55,596	140	—	—	-8,303	—	
1999	42,061	1,035	11,282	172	43,761	18,245	661	22,588	3,679	118,810	588	30,583	250,369	81,737	142	—	—	-76,358	—	

  

Trillion Btu																			
1960	914.7	536.1	48.1	18.8	248.1	24.4	30.4	60.0	16.2	409.9	166.8	R 82.2	R 1,105.0	3.0	2.0	31.0	0.0	-63.1	R 2,528.7
1965	1,014.5	778.7	64.7	1.9	238.9	68.8	30.3	75.3	15.9	466.3	145.2	R 118.8	R 1,226.0	11.4	1.8	33.2	0.0	-30.0	R 3,035.6
1970	920.3	1,203.2	84.0	1.3	259.2	128.2	20.3	107.6	19.7	562.5	175.7	R 140.4	R 1,498.9	27.6	1.7	39.3	0.0	18.4	R 3,709.5
1975	845.6	1,123.6	67.8	0.4	298.5	140.2	14.9	130.5	18.9	623.2	176.9	R 165.6	R 1,637.0	245.8	1.3	41.6	0.0	-15.0	R 3,879.8
1980	844.5	1,113.7	53.7	0.7	213.8	111.3	3.4	142.6	21.1	572.9	177.7	R 180.9	R 1,478.1	302.6	1.4	R 87.4	0.0	13.8	R 3,841.5
1985	811.1	1,000.5	49.8	1.1	187.5	15.4	4.3	97.9	19.2	583.7	40.9	R 113.8	R 1,113.5	422.9	1.4	R 93.5	0.0	21.0	R 3,463.9
1990	747.9	960.1	55.3	0.8	247.7	22.3	1.0	45.2	21.6	556.5	22.8	R 176.9	R 1,150.1	767.8	R <sup>h</sup> 1.4	R 44.9	R <sup>h</sup> 0.3	R -168.3	R <sup>h</sup> 3,504.1
1991	757.7	1,006.4	52.5	0.9	210.6	36.3	1.2	52.5	19.3	548.3	21.7	R 183.5	R 1,126.9	771.8	R 1.2	R 45.8	R 1.3	R -133.9	R 3,577.1
1992	692.5	1,011.3	61.7	0.9	211.9	41.8	0.8	45.2	19.7	558.4	14.8	R 205.2	R 1,160.4	787.4	R 1.2	R 48.5	0.4	R -147.8	R 3,553.9
1993	812.4	1,052.9	41.9	1.2	223.6	51.9	1.0	78.1	20.0	575.7	14.3	R 198.2	R 1,205.8	837.2	R 1.3	R 31.0	0.4	R -274.1	R 3,666.8
1994	818.9	1,046.4	51.7	1.0	197.8	54.4	1.1	89.8	20.9	R 581.9	17.1	R 207.9	R 1,223.6	775.7	R 1.2	R 34.0	0.4	R -211.7	R 3,688.6
1995	816.9	1,100.1	49.5	1.1	218.6	58.7	1.7	93.6	20.6	R 579.9	9.2	R 197.2	R 1,230.0	836.4	1.3	R 39.7	0.4	R -227.8	R 3,797.1
1996	906.9	1,140.6	60.6	1.0	220.9	68.5	2.3	R 90.7	20.0	R 581.9	12.6	R 174.1	R 1,232.5	741.2	1.1	R 37.1	0.5	R -212.1	R 3,847.8
1997	964.2	1,099.7	55.4	1.0	228.3	70.9	2.1	R 89.6	21.1	R 590.9	9.1	R 178.2	R 1,246.5	542.5	R 0.7	R 30.6	0.5	R -68.7	R 3,816.0
1998	897.8	978.7	65.4	0.8	241.3	74.6	2.0	57.0	22.1	592.6	6.7	170.9	1,233.5	590.6	1.5	23.9	0.6	-28.3	3,698.2
1999	836.9	1,057.5	74.9	0.9	254.9	103.4	3.7	81.7	22.3	619.1	3.7	175.5	1,340.2	868.3	1.5	38.1	0.7	-260.5	3,882.6

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products consumed in the industrial sector. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>e</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>f</sup> Net interstate flow of electricity is the difference between the amount of energy in the electricity sold within a State (including associated losses) and the energy input at the electric utilities within the State. A positive number

indicates that more electricity (including associated losses) came into the State than went out of the State during the year; conversely, a negative number indicates that more electricity (including associated losses) went out of the State than came into the State.

<sup>g</sup> From 1989, "Total" does not equal the sum of the columns. Net imports of electricity generated from nonrenewable energy sources (shown in appendix Table A8) is included in the total but not in any other columns.

<sup>h</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

kWh=kilowatt-hours. R=Revised data. — =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 96. Residential Energy Consumption Estimates, Selected Years 1960-1999, Illinois**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum				Wood Thousand Cords	Geothermal	Solar <sup>c</sup>	Electricity <sup>a</sup> Million Kilowatthours	Net Energy	Electrical System Energy Losses <sup>d</sup> Million Kilowatthours	Total
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Total							
			Thousand Barrels										
1960	2,233	232	15,330	2,052	5,192	22,574	739	—	—	9,969	—	24,797	—
1965	1,383	342	13,154	2,518	5,989	21,661	550	—	—	14,173	—	33,839	—
1970	770	439	11,980	1,336	8,616	21,932	634	—	—	22,533	—	54,604	—
1975	268	479	12,384	1,225	9,145	22,754	681	—	—	26,366	—	63,599	—
1980	65	478	3,512	161	4,051	7,724	R 2,363	—	—	29,930	—	72,780	—
1985	94	447	2,258	568	3,518	6,343	2,327	—	—	29,976	—	70,425	—
1990	93	442	1,200	101	3,209	4,510	1,608	—	—	32,871	—	R 71,910	—
1991	91	467	1,228	117	3,797	5,141	1,694	—	—	35,964	—	R 78,183	—
1992	99	475	999	61	3,661	4,720	1,783	—	—	32,367	—	R 69,031	—
1993	91	495	741	81	3,883	4,705	R 907	—	—	35,226	—	R 74,402	—
1994	90	474	807	72	3,771	4,650	R 889	—	—	35,706	—	R 74,515	—
1995	78	501	822	84	3,871	4,777	R 987	—	—	38,386	—	R 80,033	—
1996	66	539	756	96	R 5,216	R 6,068	R 985	—	—	37,535	—	R 78,223	—
1997	103	497	750	109	R 5,295	R 6,154	R 579	—	—	37,246	—	R 77,475	—
1998	83	410	411	120	4,498	5,030	510	—	—	39,685	—	81,981	—
1999	63	445	462	520	6,514	7,497	547	—	—	39,631	—	77,649	—

**Trillion Btu**

1960	53.7	240.2	89.3	11.6	20.8	121.8	14.8	0.0	0.0	34.0	464.5	84.6	549.1
1965	33.1	351.9	76.6	14.3	24.0	114.9	11.0	0.0	0.0	48.4	559.3	115.5	674.7
1970	17.8	450.1	69.8	7.6	32.6	109.9	12.7	0.0	0.0	76.9	667.4	186.3	853.7
1975	6.0	491.0	72.1	6.9	34.0	113.1	13.6	0.0	0.0	90.0	713.7	217.0	930.7
1980	1.4	489.0	20.5	0.9	14.9	36.3	R 47.3	0.0	0.0	102.1	R 676.1	248.3	R 924.4
1985	2.1	464.5	13.2	3.2	12.7	29.0	46.5	0.0	0.0	102.3	644.4	240.3	884.7
1990	2.1	451.9	7.0	0.6	11.6	19.2	32.2	e 0.3	R e 0.1	112.2	e 617.8	R 245.4	R e 863.2
1991	2.1	475.8	7.2	0.7	13.7	21.5	33.9	0.3	R 0.1	122.7	656.4	R 266.8	R 923.1
1992	2.3	483.9	5.8	0.3	13.3	19.4	35.7	0.3	0.1	110.4	652.1	R 235.5	R 887.6
1993	2.1	505.8	4.3	0.5	14.0	18.8	R 18.1	0.3	0.1	120.2	665.3	253.9	R 919.2
1994	2.0	483.7	4.7	0.4	13.7	18.8	17.8	0.3	0.1	121.8	644.6	254.2	898.8
1995	1.8	510.9	4.8	0.5	14.0	19.3	R 19.7	0.3	0.1	131.0	683.1	R 273.1	R 956.2
1996	1.5	549.0	4.4	0.5	R 18.8	R 23.8	19.7	0.4	0.1	128.1	R 722.5	R 266.9	R 989.4
1997	2.4	507.8	4.4	0.6	R 19.1	R 24.1	R 11.6	0.4	0.1	127.1	R 673.4	R 264.3	R 937.8
1998	1.9	418.9	2.4	0.7	16.3	19.3	10.2	0.4	0.2	135.4	586.3	279.7	866.0
1999	1.5	455.0	2.7	2.9	23.6	29.2	10.9	0.4	0.2	135.2	632.5	264.9	897.4

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Includes small amounts of solar thermal and photovoltaic energy consumed by the commercial sector that cannot be separately identified. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

R=Revised data.

—=Not applicable.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 97. Commercial Energy Consumption Estimates, Selected Years 1960-1999, Illinois**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum						Wood Thousand Cords	Geothermal	Electricity <sup>a</sup> Million Kilowatthours	Net Energy	Electrical System Energy Losses <sup>c</sup> Million Kilowatthours	Total <sup>d</sup>
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total						
			Thousand Barrels											
1960	4,142	47	4,834	78	916	358	8,336	14,523	14	—	10,002	—	24,878	—
1965	2,565	129	4,148	96	1,057	469	7,453	13,223	10	—	15,059	—	35,956	—
1970	1,428	193	3,778	51	1,520	533	7,627	13,509	12	—	22,406	—	54,296	—
1975	498	216	3,905	47	1,614	678	4,960	11,203	13	—	28,097	—	67,774	—
1980	121	228	2,100	16	715	1,008	2,633	6,471	57	—	31,579	—	76,791	—
1985	175	214	3,975	96	621	549	343	5,583	R 62	—	32,578	—	76,539	—
1990	172	200	1,548	26	566	560	207	2,908	R 102	—	38,999	—	R 85,314	—
1991	166	194	1,689	40	670	399	39	2,838	R 108	—	40,771	—	R 88,633	—
1992	184	197	1,801	34	646	374	43	2,900	R 116	—	38,844	—	R 82,845	—
1993	170	203	1,994	32	685	132	56	2,898	73	—	41,901	—	R 88,502	—
1994	167	198	2,214	50	665	161	67	3,158	R 74	—	43,615	—	R 91,021	—
1995	145	204	2,021	80	683	138	46	2,968	R 74	—	45,201	—	R 94,242	—
1996	121	218	1,843	67	R 921	184	193	R 3,208	81	—	45,577	—	R 94,984	—
1997	192	203	2,336	108	R 934	224	132	R 3,734	R 64	—	46,402	—	R 99,520	—
1998	154	175	1,834	39	794	228	123	3,017	64	—	48,079	—	99,322	—
1999	118	189	1,335	84	1,150	152	94	2,814	77	—	50,642	—	99,224	—

**Trillion Btu**

1960	99.6	48.9	28.2	0.4	3.7	1.9	52.4	86.6	0.3	0.0	34.1	269.5	84.9	354.3
1965	61.3	132.7	24.2	0.5	4.2	2.5	46.9	78.3	0.2	0.0	51.4	323.9	122.7	446.6
1970	33.0	198.3	22.0	0.3	5.7	2.8	47.9	78.8	0.2	0.0	76.4	386.7	185.3	572.0
1975	11.2	221.3	22.7	0.3	6.0	3.6	31.2	63.8	0.3	0.0	95.9	392.4	231.2	623.6
1980	2.7	233.2	12.2	0.1	2.6	5.3	16.6	36.8	1.1	0.0	107.7	381.5	262.0	643.5
1985	3.9	222.1	23.2	0.5	2.2	2.9	2.2	31.0	R 1.2	0.0	111.2	R 369.3	261.2	R 630.5
1990	3.9	204.7	9.0	0.1	2.1	2.9	1.3	15.5	R 2.0	e 0.0	133.1	R e 359.1	R 291.1	R e 650.2
1991	3.8	197.5	9.8	0.2	2.4	2.1	0.2	14.8	R 2.2	0.0	139.1	R 357.4	R 302.4	R 659.8
1992	4.2	200.5	10.5	0.2	2.3	2.0	0.3	15.3	R 2.3	0.0	132.5	R 354.8	R 282.7	R 637.5
1993	3.8	207.4	11.6	0.2	2.5	0.7	0.4	15.3	1.5	0.0	143.0	371.0	R 302.0	R 673.0
1994	3.7	201.7	12.9	0.3	2.4	0.8	0.4	16.9	1.5	0.0	148.8	372.6	R 310.6	R 683.2
1995	3.3	207.9	11.8	0.5	2.5	0.7	0.3	15.7	1.5	0.0	154.2	382.6	R 321.6	R 704.1
1996	2.7	222.2	10.7	0.4	R 3.3	1.0	1.2	R 16.6	1.6	0.0	155.5	R 398.7	R 324.1	R 722.8
1997	4.4	207.2	13.6	0.6	R 3.4	1.2	0.8	R 19.6	R 1.3	0.0	158.3	R 390.7	R 329.3	R 720.0
1998	3.5	178.6	10.7	0.2	2.9	1.2	0.8	15.7	1.3	0.0	164.0	363.1	338.9	702.0
1999	2.7	192.7	7.8	0.5	4.2	0.8	0.6	13.8	1.5	0.0	172.8	383.5	338.6	722.0

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>d</sup> Small amounts of solar thermal and photovoltaic energy consumed in the commercial sector cannot be separately identified and are included in residential consumption.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

R=Revised data.

—=Not applicable.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 98. Industrial Energy Consumption Estimates, Selected Years 1960-1999, Illinois**

Year	Coal	Natural Gas <sup>a</sup>	Petroleum									Hydro-electric Power <sup>b</sup>	Wood and Waste	Other <sup>b,d</sup>	Electricity <sup>b</sup>		Electrical System Energy Losses <sup>e</sup>	Total
			Asphalt and Road Oil <sup>b</sup>	Distillate Fuel <sup>b</sup>	Kerosene <sup>b</sup>	LPG <sup>b</sup>	Lubricants <sup>b</sup>	Motor Gasoline	Residual Fuel <sup>b</sup>	Other <sup>b,c</sup>	Total				Million kWh	Net Energy		
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels									Million kWh	Million kWh	Net Energy	Million kWh	Total		
1960	13,842	186	7,244	13,545	3,239	8,534	1,340	6,476	16,835	R 13,726	R 70,939	19	—	—	13,722	—	34,131	—
1965	15,669	238	9,751	12,074	2,723	11,399	1,321	6,512	15,064	R 20,417	R 79,260	17	—	—	18,708	—	44,668	—
1970	10,928	381	12,651	10,836	2,196	17,818	2,015	6,017	16,694	R 24,151	R 92,380	20	—	—	25,647	—	62,151	—
1975	7,257	352	10,213	11,138	1,351	23,889	1,668	4,290	15,728	R 28,264	R 96,540	19	—	—	30,330	—	73,160	—
1980	5,350	349	8,094	7,842	429	33,867	1,959	3,505	12,598	R 31,213	R 99,506	17	—	—	35,158	—	85,492	—
1985	5,829	285	7,502	6,373	91	22,607	1,782	1,738	3,410	R 19,530	R 63,033	17	—	—	36,178	—	84,997	—
1990	6,243	276	8,339	7,616	47	8,368	2,006	1,264	1,741	R 30,737	R 60,117	R <sup>f</sup> 73	—	—	39,299	—	R 85,969	—
1991	6,666	303	7,917	7,678	47	9,761	1,794	1,342	851	R 32,027	R 61,418	R 59	—	—	39,712	—	R 86,331	—
1992	6,052	300	9,293	8,493	47	7,857	1,829	1,212	373	R 36,023	R 65,127	R 64	—	—	40,898	—	R 87,227	—
1993	6,130	305	6,310	7,089	64	16,800	1,863	1,590	536	R 34,717	R 68,969	R 85	—	—	40,249	—	R 85,013	—
1994	6,222	305	7,798	7,663	78	19,741	1,947	1,515	608	R 36,392	R 75,741	R 76	—	—	41,765	—	R 87,161	—
1995	5,937	322	7,457	8,479	129	20,981	1,913	1,500	369	R 34,139	R 74,967	R 77	—	—	42,251	—	R 88,090	—
1996	6,154	322	9,127	7,797	235	R 18725	1,857	1,464	602	R 29,934	R 69,741	R 85	—	—	42,050	—	R 87,633	—
1997	6,309	318	8,350	8,593	150	R 18373	1,962	1,489	691	R 30,859	R 70,466	R 53	—	—	42,375	—	R 88,145	—
1998	6,137	304	9,859	9,391	190	10,222	2,054	1,347	159	29,314	62,535	90	—	—	43,031	—	88,894	—
1999	5,885	306	11,282	6,725	57	14,587	2,075	1,087	189	30,489	66,491	90	—	—	41,972	—	82,236	—

**Trillion Btu**

1960	338.8	192.7	48.1	78.9	18.4	34.2	8.1	34.0	105.8	R 82.2	R 409.8	0.2	16.0	0.0	46.8	R 1,004.3	116.5	R 1,120.8
1965	381.7	244.6	64.7	70.3	15.4	45.7	8.0	34.2	94.7	R 118.8	R 451.9	0.2	22.0	0.0	63.8	R 1,164.2	152.4	R 1,316.6
1970	260.2	390.5	84.0	63.1	12.5	67.3	12.2	31.6	105.0	R 140.4	R 516.0	0.2	26.4	0.0	87.5	R 1,280.8	212.1	R 1,492.9
1975	172.9	361.4	67.8	64.9	7.7	88.7	10.1	22.5	98.9	R 165.6	R 526.2	0.2	27.7	0.0	103.5	R 1,192.0	249.6	R 1,441.6
1980	127.7	357.0	53.7	45.7	2.4	124.4	11.9	18.4	79.2	R 180.9	R 516.6	0.2	R 39.0	0.0	120.0	R 1,160.4	291.7	R 1,452.1
1985	142.3	296.3	49.8	37.1	0.5	81.5	10.8	9.1	21.4	R 113.8	R 324.1	0.2	R 45.7	0.0	123.4	R 932.0	290.0	R 1,222.0
1990	150.8	281.8	55.3	44.4	0.3	30.3	12.2	6.6	10.9	R 176.9	R 337.0	R <sup>f</sup> 0.8	R 10.7	R <sup>f</sup> 0.0	134.1	R <sup>f</sup> 915.2	293.3	R <sup>f</sup> 1,208.5
1991	156.8	308.6	52.5	44.7	0.3	35.3	10.9	7.1	5.4	R 183.5	R 339.6	R 0.6	R 9.7	R 0.9	135.5	R 951.8	R 294.6	R 1,246.4
1992	147.1	305.9	61.7	49.5	0.3	28.5	11.1	6.4	2.3	R 205.2	R 364.9	R 0.7	R 10.4	0.0	139.5	R 968.5	R 297.6	R 1,266.1
1993	148.6	311.6	41.9	41.3	0.4	60.6	11.3	8.4	3.4	R 198.2	R 365.3	0.9	R 11.4	0.0	137.3	R 975.1	R 290.1	R 1,265.2
1994	149.4	311.6	51.7	44.6	0.4	71.8	11.8	R 7.9	3.8	R 207.9	R 400.0	0.8	R 14.7	0.0	142.5	R 1,019.0	297.4	R 1,316.4
1995	144.6	328.0	49.5	49.4	0.7	76.0	11.6	R 7.8	2.3	R 194.8	R 392.2	0.8	R 17.8	0.0	144.2	R 1,027.6	R 300.6	R 1,328.2
1996	150.1	328.5	60.6	45.4	1.3	R 67.7	11.3	R 7.6	3.8	R 172.7	R 370.3	0.9	R 14.4	0.0	143.5	R 1,007.7	R 299.0	R 1,306.7
1997	155.1	324.6	55.4	50.1	0.8	R 66.4	11.9	7.8	4.3	R 178.1	R 374.9	R 0.5	R 17.5	0.0	144.6	R 1,017.1	R 300.7	R 1,317.9
1998	150.2	310.5	65.4	54.7	1.1	36.9	12.5	7.0	1.0	168.8	347.5	0.9	12.4	0.0	146.8	968.3	303.3	1,271.6
1999	144.5	312.9	74.9	39.2	0.3	52.7	12.6	5.7	1.2	175.0	361.5	0.9	24.9	4.0	143.2	992.1	280.6	1,272.6

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>e</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for

electrical system energy losses.

<sup>f</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

R=Revised data.

kWh=kilowatt-hours. — =Not applicable.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 99. Transportation Energy Consumption Estimates, Selected Years 1960-1999, Illinois**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum								Ethanol <sup>c</sup>	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total <sup>c</sup>
			Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	LPG <sup>a</sup>	Lubricants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total					
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels								Thousand Barrels	Million Kilowatthours		Million Kilowatthours	
1960	239	10	3,733	8,721	4,356	316	1,333	71,193	1,168	90,819	0	308	—	767	—
1965	51	13	383	11,509	12,176	318	1,295	81,788	423	107,891	0	302	—	722	—
1970	17	28	264	15,234	22,644	526	1,239	100,534	408	140,850	0	296	—	717	—
1975	1	14	82	20,488	24,271	486	1,452	113,669	215	160,662	0	262	—	632	—
1980	0	15	132	22,560	19,508	178	1,514	104,550	279	148,721	0	282	—	685	—
1985	0	11	212	19,147	2,748	423	1,378	108,826	187	132,921	R <sup>e</sup> 2,040	379	—	891	—
1990	0	12	164	31,675	3,952	328	1,550	104,123	52	141,843	R <sup>e</sup> 3,278	408	—	892	—
1991	0	11	176	25,059	6,437	312	1,387	102,638	13	136,023	R <sup>e</sup> 3,620	422	—	R <sup>e</sup> 917	—
1992	0	11	176	24,718	7,399	319	1,414	104,710	32	138,768	R <sup>e</sup> 4,162	411	—	R <sup>e</sup> 877	—
1993	0	12	231	28,093	9,170	281	1,440	107,865	37	147,117	R <sup>e</sup> 4,123	410	—	866	—
1994	0	14	204	22,640	9,619	531	1,505	109,579	51	144,128	R <sup>e</sup> 5,147	404	—	843	—
1995	0	13	215	25,674	10,360	287	1,479	109,570	36	147,621	R <sup>e</sup> 4,321	393	—	R <sup>e</sup> 819	—
1996	0	14	202	26,982	12,076	R <sup>e</sup> 247	1,435	109,906	31	R <sup>e</sup> 150,879	R <sup>e</sup> 3,136	427	—	R <sup>e</sup> 889	—
1997	0	15	197	26,955	12,497	R <sup>e</sup> 175	1,516	111,630	48	R <sup>e</sup> 153,018	R <sup>e</sup> 4,562	426	—	R <sup>e</sup> 886	—
1998	0	13	168	29,195	13,152	269	1,587	112,132	39	156,543	5,405	422	—	872	—
1999	0	54	172	34,786	18,245	337	1,604	117,570	36	172,751	5,740	437	—	856	—

  

Trillion Btu															
1960	5.7	10.4	18.8	50.8	24.4	1.3	8.1	374.0	7.3	484.7	0.0	1.1	501.9	2.6	504.5
1965	1.2	13.8	1.9	67.0	68.8	1.3	7.9	429.6	2.7	579.2	0.0	1.0	595.2	2.5	597.6
1970	0.4	28.7	1.3	88.7	128.2	2.0	7.5	528.1	2.6	758.4	0.0	1.0	788.5	2.4	790.9
1975	(s)	14.6	0.4	119.3	137.4	1.8	8.8	597.1	1.4	866.2	0.0	0.9	881.8	2.2	883.9
1980	0.0	14.9	0.7	131.4	110.4	0.7	9.2	549.2	1.8	803.3	0.0	1.0	819.1	2.3	821.5
1985	0.0	11.6	1.1	111.5	15.4	1.5	8.4	571.7	1.2	710.7	R <sup>e</sup> 7.2	1.3	<sup>e</sup> 723.6	3.0	<sup>e</sup> 726.7
1990	0.0	12.4	0.8	184.5	22.3	1.2	9.4	547.0	0.3	765.5	R <sup>e</sup> 11.6	1.4	779.2	3.0	782.3
1991	0.0	11.3	0.9	146.0	36.3	1.1	8.4	539.2	0.1	732.0	R <sup>e</sup> 12.8	1.4	744.7	3.1	747.8
1992	0.0	11.5	0.9	144.0	41.8	1.2	8.6	550.0	0.2	746.7	R <sup>e</sup> 14.7	1.4	759.6	3.0	762.6
1993	0.0	11.9	1.2	163.6	51.9	1.0	8.7	566.6	0.2	793.3	R <sup>e</sup> 14.6	1.4	806.5	3.0	809.5
1994	0.0	14.1	1.0	131.9	54.4	1.9	9.1	R <sup>e</sup> 573.1	0.3	R <sup>e</sup> 771.8	R <sup>e</sup> 18.2	1.4	R <sup>e</sup> 787.3	2.9	R <sup>e</sup> 790.2
1995	0.0	13.5	1.1	149.5	58.7	1.0	9.0	R <sup>e</sup> 571.4	0.2	R <sup>e</sup> 791.0	R <sup>e</sup> 15.3	1.3	R <sup>e</sup> 805.9	2.8	R <sup>e</sup> 808.7
1996	0.0	14.7	1.0	157.2	68.5	R <sup>e</sup> 0.9	8.7	R <sup>e</sup> 573.3	0.2	R <sup>e</sup> 809.7	R <sup>e</sup> 11.1	1.5	R <sup>e</sup> 825.9	3.0	R <sup>e</sup> 828.9
1997	0.0	14.8	1.0	157.0	70.9	R <sup>e</sup> 0.6	9.2	R <sup>e</sup> 581.9	0.3	R <sup>e</sup> 820.9	R <sup>e</sup> 16.1	1.5	R <sup>e</sup> 837.2	3.0	R <sup>e</sup> 840.2
1998	0.0	13.3	0.8	170.1	74.6	1.0	9.6	584.4	0.2	840.8	19.1	1.4	855.5	3.0	858.5
1999	0.0	55.3	0.9	202.6	103.4	1.2	9.7	612.7	0.2	930.8	20.3	1.5	987.5	2.9	990.5

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels. Transportation use of natural gas is gas consumed in the operation of pipelines, primarily in compressors, and, since 1990, is also gas consumed as vehicle fuel.

<sup>c</sup> Ethanol blended into motor gasoline, which is accounted for under motor gasoline, is shown separately here to display the use of renewable energy by the transportation sector and is included only once in the total.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1980 and 1981 due to the expanded coverage of renewable energy sources beginning in 1981.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 100. Estimates of Energy Input at Electric Utilities, Selected Years, 1960-1999, Illinois**

Year	Coal	Natural Gas <sup>a</sup>	Petroleum				Nuclear Electric Power	Hydroelectric Power <sup>e</sup>	Wood and Waste	Geothermal Energy	Other <sup>b,f</sup>	Total <sup>g</sup>
			Heavy Oil <sup>b,c</sup>	Light Oil <sup>b,d</sup>	Petroleum Coke <sup>b</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels				Million Kilowatthours					
1960	19,218	42	194	161	0	355	254	166	0	0	0	—
1965	25,047	35	152	126	0	278	965	158	3	0	0	—
1970	28,993	132	3,221	2,667	0	5,888	2,514	146	(s)	0	0	—
1975	32,350	34	7,239	3,833	0	11,072	22,315	104	0	0	0	—
1980	34,611	19	12,762	847	0	13,608	27,742	121	0	0	0	—
1985	31,608	6	2,569	436	0	3,005	39,106	119	0	0	0	—
1990	27,396	9	1,622	491	0	2,113	71,887	61	0	0	0	—
1991	27,754	13	2,550	495	0	3,044	71,866	53	0	0	0	—
1992	25,264	9	1,906	365	0	2,271	73,742	52	8	0	0	—
1993	31,744	16	1,653	469	0	2,122	78,373	40	0	0	0	—
1994	32,599	35	1,986	624	0	2,611	72,654	45	0	0	0	—
1995	33,463	39	1,013	539	385	1,938	78,481	48	68	0	0	—
1996	38,091	26	1,184	548	241	1,973	69,774	22	134	0	0	—
1997	41,017	45	577	551	19	1,147	51,069	17	24	0	0	—
1998	38,255	56	744	595	346	1,684	55,596	51	0	0	0	—
1999	35,995	41	269	453	93	815	81,356	52	67	0	0	—
<b>Trillion Btu</b>												
1960	416.9	43.8	1.2	0.9	0.0	2.2	3.0	1.8	0.0	0.0	0.0	467.6
1965	537.2	35.6	1.0	0.7	0.0	1.7	11.4	1.7	(s)	0.0	0.0	587.6
1970	608.9	135.7	20.3	15.5	0.0	35.8	27.6	1.5	(s)	0.0	0.0	809.5
1975	655.4	35.2	45.5	22.2	0.0	67.8	245.8	1.1	0.0	0.0	0.0	1,005.2
1980	712.7	19.6	80.2	4.9	0.0	85.1	302.6	1.3	0.0	0.0	0.0	1,121.4
1985	662.8	6.0	16.2	2.5	0.0	18.7	422.9	1.2	0.0	0.0	0.0	1,111.6
1990	591.1	9.3	10.2	2.9	0.0	13.1	767.8	0.6	0.0	0.0	0.0	1,381.9
1991	595.1	13.1	16.0	2.9	0.0	18.9	771.8	0.6	0.0	0.0	0.0	1,399.5
1992	539.0	9.4	12.0	2.1	0.0	14.1	787.4	0.5	0.1	0.0	0.0	1,350.6
1993	657.8	16.3	10.4	2.7	0.0	13.1	837.2	0.4	0.0	0.0	0.0	1,524.8
1994	663.8	35.3	12.5	3.6	0.0	16.1	775.7	0.5	0.0	0.0	0.0	1,491.3
1995	667.3	39.8	6.4	3.1	2.3	11.8	836.4	0.5	0.7	0.0	0.0	1,556.5
1996	752.5	26.2	7.4	3.2	1.5	12.1	741.2	0.2	1.4	0.0	0.0	1,533.6
1997	802.4	45.3	3.6	3.2	0.1	7.0	542.5	0.2	0.2	0.0	0.0	1,397.6
1998	742.2	57.4	4.7	3.5	2.1	10.2	590.6	0.5	0.0	0.0	0.0	1,400.9
1999	688.3	41.6	1.7	2.6	0.6	4.9	864.2	0.5	0.7	0.0	0.0	1,600.2

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> Prior to 1980, based on oil used in steam plants. Since 1980, heavy oil includes fuel oil nos. 4, 5, and 6 and residual fuel oils.

<sup>d</sup> Prior to 1980, based on oil used in internal combustion and gas turbine engine plants. Since 1980, light oil includes fuel oil nos. 1 and 2, kerosene, and jet fuel.

<sup>e</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>f</sup> "Other" is electricity generated for distribution from wind, photovoltaic, and solar thermal energy.

<sup>g</sup> If applicable, from 1989, includes net imports of electricity generated from nonrenewable energy sources not shown in other columns. See data in appendix Table A8.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 101. Energy Consumption Estimates by Source, Selected Years 1960-1999, Indiana**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum											Nuclear Electric Power	Hydro-electric Power <sup>d</sup>	Wood and Waste	Other <sup>a,e</sup>	Net Inter-state Flow of Electricity/Losses <sup>f</sup>	Total <sup>g</sup>
			Asphalt & Road Oil <sup>a</sup>	Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	Kero-sene <sup>a</sup>	LPG <sup>a</sup>	Lubri-cants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Other <sup>a,c</sup>	Total						
			Thousand Barrels															Million kWh	
1960	32,599	212	3,277	453	25,707	1,316	3,899	5,751	1,181	43,595	13,076	R 9,555	R 107,809	0	100	—	—	-31,833	—
1965	37,350	358	4,283	1,110	25,948	1,848	3,444	6,654	1,458	48,051	13,033	R 11,559	R 117,388	0	94	—	—	-38,137	—
1970	42,776	545	6,101	367	29,379	2,558	2,130	8,978	1,583	58,905	9,769	R 14,130	R 133,900	0	495	—	—	-27,768	—
1975	46,210	477	6,067	217	32,655	2,619	841	12,335	1,604	64,639	15,007	R 13,954	R 149,938	0	444	—	—	114	—
1980	50,485	489	5,165	260	30,795	2,151	659	7,961	1,788	60,192	14,615	R 12,296	R 135,881	0	474	—	—	-9,357	—
1985	53,291	433	5,336	393	30,776	15,445	731	4,947	1,627	57,936	3,768	R 10,792	R 131,752	0	426	—	—	-27,809	—
1990	61,701	451	8,552	302	32,718	17,889	368	9,563	1,831	61,930	3,881	R 14,706	R 151,739	0	R <sup>h</sup> 441	—	—	R -64,905	—
1991	60,790	457	7,058	302	32,418	17,228	406	9,508	1,638	61,302	3,239	R 15,432	R 148,531	0	R 399	—	—	R -56,528	—
1992	58,765	483	6,210	252	31,959	16,001	298	7,045	1,670	61,975	4,112	R 18,388	R 147,909	0	R 562	—	—	R -56,235	—
1993	60,353	518	9,501	201	33,109	16,366	347	7,778	1,701	65,531	2,925	R 15,974	R 153,432	0	R 448	—	—	R -50,420	—
1994	59,996	519	10,219	149	35,828	17,299	429	7,134	1,778	66,838	3,045	R 16,910	R 159,628	0	R 407	—	—	R -58,098	—
1995	62,631	535	7,085	144	35,339	17,344	330	6,788	1,747	70,100	1,862	R 16,263	R 157,002	0	R 467	—	—	R -51,881	—
1996	64,021	574	8,528	171	35,679	12,576	441	R 8,555	1,695	69,578	1,350	R 19,774	R 158,348	0	R 448	—	—	R -50,494	—
1997	66,042	557	9,233	136	38,407	10,991	459	R 7,379	1,791	69,828	1,509	R 20,638	R 160,372	0	R 562	—	—	R -66,980	—
1998	66,296	521	7,187	113	37,761	9,647	433	5,346	1,875	74,133	1,235	21,215	158,945	0	479	—	—	-64,478	—
1999	66,167	567	7,460	119	39,845	11,198	1,450	6,730	1,895	72,552	674	22,028	163,950	0	407	—	—	-63,143	—

  

Trillion Btu																			
1960	795.1	219.8	21.7	2.3	149.7	7.1	22.1	23.1	7.2	229.0	82.2	R 57.3	R 601.7	0.0	1.1	23.5	0.0	-108.6	R 1,532.5
1965	900.6	357.5	28.4	5.6	151.1	10.2	19.5	26.7	8.8	252.4	81.9	R 68.5	R 653.3	0.0	1.0	22.1	0.0	-130.1	R 1,804.3
1970	1,006.8	548.6	40.5	1.9	171.1	14.2	12.1	33.9	9.6	309.4	61.4	R 83.6	R 737.7	0.0	5.2	23.3	0.0	-94.7	R 2,227.0
1975	1,061.2	472.6	40.3	1.1	190.2	14.6	4.8	45.8	9.7	339.6	94.3	R 82.6	R 823.0	0.0	4.6	26.7	0.0	0.4	R 2,388.5
1980	1,157.0	483.9	34.3	1.3	179.4	12.0	3.7	29.2	10.8	316.2	91.9	R 72.4	R 751.3	0.0	4.9	R 49.5	0.0	-31.9	R 2,414.6
1985	1,193.3	436.4	35.4	2.0	179.3	87.4	4.1	17.8	9.9	304.3	23.7	R 63.5	R 727.4	0.0	4.5	R 53.8	0.0	-94.9	R 2,320.5
1990	1,361.8	459.1	56.7	1.5	190.6	101.3	2.1	34.7	11.1	325.3	24.4	R 86.5	R 834.1	0.0	h 4.6	R 34.0	h 0.5	R -221.5	R <sup>h</sup> 2,472.6
1991	1,340.1	463.7	46.8	1.5	188.8	97.5	2.3	34.4	9.9	322.0	20.4	R 89.9	R 813.6	0.0	4.2	R 33.0	0.6	R -192.9	R 2,462.2
1992	1,296.5	488.8	41.2	1.3	186.2	90.5	1.7	25.5	10.1	325.6	25.9	R 106.8	R 814.7	0.0	5.8	R 33.8	0.6	R -191.9	R 2,448.3
1993	1,318.5	524.5	63.1	1.0	192.9	92.7	2.0	28.0	10.3	344.2	18.4	R 92.6	R 845.1	0.0	4.6	R 25.5	0.6	R -172.0	R 2,546.9
1994	1,299.0	526.1	67.8	0.8	208.7	98.0	2.4	25.9	10.8	R 349.6	19.1	R 98.0	R 881.1	0.0	4.2	R 26.8	0.7	R -198.2	R 2,539.7
1995	1,341.9	541.7	47.0	0.7	205.8	98.3	1.9	24.6	10.6	R 365.6	11.7	R 94.3	R 860.6	0.0	4.8	R 30.8	R 0.8	R -177.0	R 2,603.5
1996	1,372.1	579.8	56.6	0.9	207.8	71.3	2.5	R 30.9	10.3	R 362.9	8.5	R 113.9	R 865.6	0.0	4.6	R 32.7	0.8	R -172.3	R 2,683.4
1997	1,427.3	563.3	61.3	0.7	223.7	62.3	2.6	R 26.7	10.9	R 364.0	9.5	R 119.0	R 880.7	0.0	5.8	R 29.7	0.9	R -228.5	R 2,679.1
1998	1,441.9	529.6	47.7	0.6	220.0	54.7	2.5	19.3	11.4	386.4	7.8	122.7	872.9	0.0	5.0	17.0	1.0	-220.0	2,647.4
1999	1,450.6	577.3	49.5	0.6	232.1	63.5	8.2	24.3	11.5	378.1	4.2	127.3	899.3	0.0	4.2	18.7	1.1	-215.4	2,735.8

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.  
<sup>b</sup> Includes supplemental gaseous fuels.  
<sup>c</sup> "Other" is the subtotal of 16 petroleum products consumed in the industrial sector. See a full description in Appendix A, Section 4, "Other Petroleum Products."  
<sup>d</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.  
<sup>e</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.  
<sup>f</sup> Net interstate flow of electricity is the difference between the amount of energy in the electricity sold within a State (including associated losses) and the energy input at the electric utilities within the State. A positive number

indicates that more electricity (including associated losses) came into the State than went out of the State during the year; conversely, a negative number indicates that more electricity (including associated losses) went out of the State than came into the State.  
<sup>g</sup> From 1989, "Total" does not equal the sum of the columns. Net imports of electricity generated from nonrenewable energy sources (shown in appendix Table A8) is included in the total but not in any other columns.  
<sup>h</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.  
 kWh=kilowatthours. R=Revised data. — =Not applicable.  
 Note: Totals may not equal sum of components due to independent rounding.  
 Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.



**Table 102. Residential Energy Consumption Estimates, Selected Years 1960-1999, Indiana**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum				Wood Thousand Cords	Geothermal	Solar <sup>c</sup>	Electricity <sup>a</sup> Million Kilowatthours	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Total						Million Kilowatthours	
			Thousand Barrels									Thousand Barrels	
1960	744	76	8,536	3,370	3,389	15,296	770	—	—	6,371	—	15,847	—
1965	380	114	8,146	2,498	3,993	14,637	580	—	—	8,651	—	20,656	—
1970	247	159	8,027	1,837	6,312	16,175	567	—	—	13,488	—	32,686	—
1975	315	163	8,647	717	6,665	16,029	562	—	—	16,375	—	39,499	—
1980	78	164	5,398	492	3,351	9,241	R 1,150	—	—	19,262	—	46,839	—
1985	184	146	2,558	466	2,340	5,364	1,142	—	—	19,803	—	46,526	—
1990	193	140	1,719	278	3,494	5,492	802	—	—	22,111	—	R 48,370	—
1991	152	146	1,937	316	3,490	5,743	844	—	—	24,220	—	R 52,653	—
1992	145	153	1,897	186	3,422	5,505	888	—	—	22,837	—	R 48,706	—
1993	120	164	2,110	253	3,769	6,132	R 459	—	—	24,978	—	R 52,758	—
1994	125	157	1,827	275	3,698	5,801	R 450	—	—	25,048	—	R 52,273	—
1995	102	161	1,595	215	3,768	5,578	R 499	—	—	26,560	—	R 55,376	—
1996	127	180	1,467	288	R 5,058	R 6,813	R 498	—	—	26,860	—	R 55,978	—
1997	140	169	1,339	303	R 5,003	R 6,644	R 301	—	—	26,550	—	R 55,228	—
1998	132	140	1,038	300	3,684	5,023	266	—	—	27,334	—	56,467	—
1999	121	152	954	1,328	4,466	6,747	285	—	—	28,806	—	56,439	—

  

Trillion Btu													
1960	17.9	78.7	49.7	19.1	13.6	82.4	15.4	0.0	0.0	21.7	216.1	54.1	270.2
1965	9.1	114.2	47.5	14.2	16.0	77.6	11.6	0.0	0.0	29.5	242.1	70.5	312.6
1970	5.7	159.7	46.8	10.4	23.9	81.0	11.3	0.0	0.0	46.0	303.7	111.5	415.3
1975	7.0	161.2	50.4	4.1	24.8	79.2	11.2	0.0	0.0	55.9	314.5	134.8	449.3
1980	1.7	161.9	31.4	2.8	12.3	46.5	23.0	0.0	0.0	65.7	298.8	159.8	458.6
1985	4.1	147.4	14.9	2.6	8.4	26.0	22.8	0.0	0.0	67.6	267.9	158.7	426.6
1990	4.3	143.1	10.0	1.6	12.7	24.3	16.0	e 0.5	e (s)	75.4	e 263.6	165.0	e 428.7
1991	3.4	148.5	11.3	1.8	12.6	25.7	16.9	0.5	(s)	82.6	277.7	R 179.7	R 457.4
1992	3.3	154.4	11.1	1.1	12.4	24.5	17.8	0.6	(s)	77.9	278.4	R 166.2	R 444.6
1993	2.7	166.1	12.3	1.4	13.6	27.3	9.2	0.6	(s)	85.2	R 291.1	R 180.0	471.2
1994	2.8	159.5	10.6	1.6	13.4	25.6	9.0	0.6	(s)	85.5	R 283.0	R 178.4	461.4
1995	2.3	163.0	9.3	1.2	13.7	24.2	10.0	0.6	(s)	90.6	R 290.6	R 188.9	R 479.6
1996	2.8	181.9	8.5	1.6	R 18.3	R 28.5	10.0	0.7	(s)	91.6	R 315.5	R 191.0	R 506.5
1997	3.1	171.0	7.8	1.7	R 18.1	R 27.6	R 6.0	0.7	(s)	90.6	R 299.1	R 188.4	R 487.5
1998	3.0	142.5	6.0	1.7	13.3	21.1	5.3	0.7	(s)	93.3	265.8	192.7	458.5
1999	2.7	154.2	5.6	7.5	16.1	29.2	5.7	0.8	(s)	98.3	291.0	192.6	483.6

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Includes small amounts of solar thermal and photovoltaic energy consumed by the commercial sector that cannot be separately identified. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 103. Commercial Energy Consumption Estimates, Selected Years 1960-1999, Indiana**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum						Wood	Geothermal	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>c</sup>	Total <sup>d</sup>
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels						Thousand Cords	Million Kilowatthours	Million Kilowatthours			
1960	1,376	20	2,968	328	598	168	1,394	5,456	15	—	2,900	—	7,213	—
1965	703	42	2,832	243	705	171	1,520	5,472	11	—	4,243	—	10,132	—
1970	456	78	2,791	179	1,114	251	844	5,178	11	—	6,520	—	15,800	—
1975	585	71	3,007	70	1,176	120	1,645	6,017	11	—	9,071	—	21,881	—
1980	144	70	1,985	31	591	223	2,431	5,262	28	—	10,423	—	25,345	—
1985	340	70	2,637	133	413	352	388	3,923	R 30	—	12,257	—	28,797	—
1990	357	67	1,071	35	617	561	63	2,346	R 51	—	16,116	—	R 35,255	—
1991	280	68	1,176	43	616	353	205	2,393	R 54	—	17,014	—	R 36,988	—
1992	266	73	1,415	59	604	333	18	2,429	R 58	—	16,688	—	R 35,593	—
1993	219	78	1,619	48	665	289	38	2,660	37	—	17,524	—	R 37,012	—
1994	231	76	1,536	67	653	260	41	2,556	38	—	17,982	—	R 37,528	—
1995	185	83	1,193	70	665	175	32	2,135	38	—	18,654	—	R 38,893	—
1996	230	87	978	69	R 893	159	14	R 2,112	41	—	18,822	—	R 39,226	—
1997	255	82	1,159	87	R 883	171	9	R 2,309	R 33	—	19,030	—	R 39,585	—
1998	239	73	1,401	51	650	167	128	2,398	33	—	19,861	—	41,029	—
1999	222	74	1,174	41	788	183	3	2,188	40	—	20,685	—	40,527	—

  

Trillion Btu														
1960	33.1	20.7	17.3	1.9	2.4	0.9	8.8	31.2	0.3	0.0	9.9	95.2	24.6	119.8
1965	16.8	42.2	16.5	1.4	2.8	0.9	9.6	31.2	0.2	0.0	14.5	104.9	34.6	139.5
1970	10.5	78.0	16.3	1.0	4.2	1.3	5.3	28.1	0.2	0.0	22.2	139.1	53.9	193.0
1975	12.9	69.8	17.5	0.4	4.4	0.6	10.3	33.3	0.2	0.0	31.0	147.1	74.7	221.8
1980	3.2	69.3	11.6	0.2	2.2	1.2	15.3	30.4	0.6	0.0	35.6	138.9	86.5	225.4
1985	7.6	70.2	15.4	0.8	1.5	1.8	2.4	21.9	R 0.6	0.0	41.8	R 142.1	98.3	R 240.3
1990	8.0	68.4	6.2	0.2	2.2	2.9	0.4	12.0	R 1.0	e 0.0	55.0	R e 144.5	120.3	R e 264.8
1991	6.3	69.4	6.9	0.2	2.2	1.9	1.3	12.5	R 1.1	0.0	58.1	R 147.2	R 126.2	R 273.4
1992	6.0	73.5	8.2	0.3	2.2	1.8	0.1	12.6	R 1.2	0.0	56.9	R 150.2	R 121.4	R 271.7
1993	5.0	79.1	9.4	0.3	2.4	1.5	0.2	13.9	0.7	0.0	59.8	158.4	126.3	284.7
1994	5.2	76.8	8.9	0.4	2.4	1.4	0.3	13.3	0.8	0.1	61.4	157.5	128.0	285.6
1995	4.1	83.7	6.9	0.4	2.4	0.9	0.2	10.9	0.8	0.1	63.6	163.2	R 132.7	R 295.9
1996	5.1	88.4	5.7	0.4	R 3.2	0.8	0.1	R 10.2	0.8	0.1	64.2	R 168.9	R 133.8	R 302.8
1997	5.7	82.6	6.8	0.5	R 3.2	0.9	0.1	R 11.4	0.7	0.2	64.9	R 165.4	R 135.1	R 300.5
1998	5.3	74.3	8.2	0.3	2.3	0.9	0.8	12.5	0.7	0.2	67.8	160.8	140.0	300.8
1999	4.9	75.0	6.8	0.2	2.8	1.0	(s)	10.9	0.8	0.2	70.6	162.4	138.3	300.7

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>d</sup> Small amounts of solar thermal and photovoltaic energy consumed in the commercial sector cannot be separately identified and are included in residential consumption.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 104. Industrial Energy Consumption Estimates, Selected Years 1960-1999, Indiana**

Year	Coal Thousand Short Tons	Natural Gas <sup>a</sup> Billion Cubic Feet	Petroleum									Hydro-electric Power <sup>b</sup> Million kWh	Wood and Waste	Other <sup>b,d</sup>	Electricity <sup>b</sup>		Electrical System Energy Losses <sup>e</sup> Million kWh	Total
			Asphalt and Road Oil <sup>b</sup>	Distillate Fuel <sup>b</sup>	Kero-sene <sup>b</sup>	LPG <sup>b</sup>	Lubri-cants <sup>b</sup>	Motor Gasoline	Residual Fuel <sup>b</sup>	Other <sup>b,c</sup>	Total				Million kWh	Net Energy		
			Thousand Barrels															
1960	16,702	102	3,277	9,976	202	1,716	489	2,813	11,229	R 9,555	R 39,256	(s)	—	—	8,226	—	20,461	—
1965	18,093	180	4,283	9,766	703	1,904	843	2,686	10,866	R 11,559	R 42,611	0	—	—	12,360	—	29,510	—
1970	19,394	268	6,101	10,180	115	1,455	974	2,238	8,391	R 13,876	R 43,329	0	—	—	17,952	—	43,504	—
1975	18,006	223	6,067	9,324	55	4,369	842	1,263	11,688	R 13,954	R 47,560	0	—	—	26,675	—	64,343	—
1980	16,599	245	5,165	5,053	136	3,930	1,096	752	11,984	R 12,296	R 40,412	0	—	—	30,730	—	74,725	—
1985	14,457	211	5,336	4,502	131	2,046	998	901	3,348	R 10,792	R 28,055	0	—	—	31,784	—	74,674	—
1990	13,496	228	8,552	4,555	54	5,300	1,123	625	3,620	R 13,749	R 37,579	f 0	—	—	35,743	—	R 78,192	—
1991	12,638	228	7,058	5,332	47	5,243	1,004	709	2,944	R 15,085	R 37,422	0	—	—	35,787	—	R 77,798	—
1992	11,416	246	6,210	5,489	54	2,857	1,024	639	3,886	R 18,087	R 38,245	0	—	—	37,439	—	R 79,848	—
1993	11,178	263	9,501	4,758	45	3,216	1,043	739	2,547	R 15,974	R 37,823	0	—	—	39,415	—	R 83,251	—
1994	9,085	270	10,219	5,158	87	2,549	1,090	836	2,778	R 16,910	R 39,626	0	—	—	40,763	—	R 85,069	—
1995	10,255	275	7,085	5,150	45	2,250	1,071	849	1,591	R 16,180	R 34,223	0	—	—	41,777	—	R 87,102	—
1996	10,810	289	8,528	4,736	84	R 2,485	1,039	808	1,039	R 19,475	R 38,194	0	—	—	43,203	—	R 90,036	—
1997	10,801	291	9,233	5,326	70	R 1,427	1,098	847	1,097	R 19,730	R 38,829	0	—	—	43,550	—	R 90,588	—
1998	10,839	291	7,187	5,791	81	962	1,149	650	785	19,988	36,595	0	—	—	44,848	—	92,648	—
1999	10,718	320	7,460	5,162	81	1,442	1,161	655	377	20,953	37,290	0	—	—	47,230	—	92,539	—
<b>Trillion Btu</b>																		
1960	431.8	106.1	21.7	58.1	1.1	6.9	3.0	14.8	70.6	R 57.3	R 233.5	(s)	7.8	0.0	28.1	R 807.2	69.8	R 877.0
1965	466.3	179.8	28.4	56.9	4.0	7.6	5.1	14.1	68.3	R 68.5	R 253.0	0.0	10.3	0.0	42.2	R 951.5	100.7	R 1,052.2
1970	490.9	270.1	40.5	59.3	0.6	5.5	5.9	11.8	52.8	R 82.1	R 258.4	0.0	11.7	0.0	61.3	R 1,092.4	148.4	R 1,240.9
1975	461.6	221.1	40.3	54.3	0.3	16.2	5.1	6.6	73.5	R 82.6	R 278.9	0.0	15.3	0.0	91.0	R 1,067.9	219.5	R 1,287.4
1980	423.9	242.0	34.3	29.4	0.8	14.4	6.6	3.9	75.3	R 72.4	R 237.3	0.0	R 25.9	0.0	104.9	R 1,034.0	255.0	R 1,288.9
1985	365.1	212.8	35.4	26.2	0.7	7.4	6.1	4.7	21.1	R 63.5	R 165.1	0.0	R 30.4	0.0	108.4	R 881.8	254.8	R 1,136.6
1990	342.8	232.3	56.7	26.5	0.3	19.2	6.8	3.3	22.8	R 80.7	R 216.3	f 0.0	R 17.0	f 0.0	122.0	R 930.3	R 266.8	R 1,197.1
1991	321.6	231.0	46.8	31.1	0.3	18.9	6.1	3.7	18.5	R 87.8	R 213.2	0.0	R 15.0	0.0	122.1	R 903.0	R 265.4	R 1,168.5
1992	289.5	248.3	41.2	32.0	0.3	10.4	6.2	3.4	24.4	R 104.9	R 222.8	0.0	R 14.9	0.0	127.7	R 903.2	R 272.4	R 1,175.6
1993	281.5	266.7	63.1	27.7	0.3	11.6	6.3	3.9	16.0	R 92.6	R 221.4	0.0	R 15.6	0.0	134.5	R 919.7	284.1	R 1,203.8
1994	225.8	273.6	67.8	30.0	0.5	9.3	6.6	4.4	17.5	R 98.0	R 234.1	0.0	R 17.1	0.0	139.1	R 889.7	R 290.3	R 1,179.9
1995	258.5	278.8	47.0	30.0	0.3	8.2	6.5	R 4.4	10.0	R 93.8	R 200.2	0.0	R 20.1	0.0	142.5	R 900.0	R 297.2	R 1,197.2
1996	269.3	292.4	56.6	27.6	0.5	R 9.0	6.3	4.2	6.5	R 112.1	R 222.8	0.0	R 21.9	0.0	147.4	R 953.9	R 307.2	R 1,261.1
1997	271.1	293.9	61.3	31.0	0.4	R 5.2	6.7	R 4.4	6.9	R 113.5	R 229.4	0.0	R 23.0	0.0	148.6	R 965.9	R 309.1	R 1,275.0
1998	274.9	295.9	47.7	33.7	0.5	3.5	7.0	3.4	4.9	115.3	216.0	0.0	11.1	0.0	153.0	950.9	316.1	1,267.0
1999	272.6	325.6	49.5	30.1	0.5	5.2	7.0	3.4	2.4	120.8	218.9	0.0	12.2	0.0	161.1	990.4	315.7	1,306.2

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>e</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>f</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

R=Revised data.

kWh=kilowatthours. — =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 105. Transportation Energy Consumption Estimates, Selected Years 1960-1999, Indiana**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum								Ethanol <sup>c</sup>	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total <sup>c</sup>
			Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	LPG <sup>a</sup>	Lubricants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total					
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels								Thousand Barrels	Million Kilowatthours	Million Kilowatthours	Total <sup>c</sup>	
1960	294	5	453	4,097	1,316	47	692	40,615	350	47,570	0	1	—	2	—
1965	60	8	1,110	5,124	1,848	52	615	45,194	583	54,526	0	0	—	0	—
1970	31	11	367	8,123	2,558	97	610	56,417	330	68,501	0	0	—	0	—
1975	3	10	217	11,200	2,619	125	763	63,256	331	78,510	0	0	—	0	—
1980	0	9	260	17,629	2,151	88	692	59,217	200	80,236	0	0	—	0	—
1985	0	5	393	20,665	15,445	148	630	56,684	31	93,996	R e 1,308	0	—	0	—
1990	0	8	302	24,950	17,889	153	709	60,744	197	104,944	R 1,507	12	—	27	—
1991	0	5	302	23,622	17,228	159	634	60,240	90	102,275	R 1,790	12	—	27	—
1992	0	5	252	22,893	16,001	162	646	61,003	208	101,165	R 1,706	13	—	27	—
1993	0	7	201	24,229	16,366	128	658	64,502	340	106,423	R 1,788	14	—	30	—
1994	0	7	149	26,895	17,299	234	688	65,742	226	111,233	R 1,760	14	—	30	—
1995	0	8	144	27,059	17,344	104	676	69,076	238	114,642	R 2,222	15	—	31	—
1996	0	13	171	28,145	12,576	R 120	656	68,611	298	R 110,576	R 1,132	15	—	32	—
1997	0	11	136	30,260	10,991	R 66	693	68,809	403	R 111,358	R 1,519	16	—	33	—
1998	0	7	113	29,084	9,647	50	726	73,315	322	113,256	1,447	15	—	31	—
1999	0	14	119	32,002	11,198	35	733	71,714	295	116,095	2,537	15	—	30	—
<b>Trillion Btu</b>															
1960	7.1	5.2	2.3	23.9	7.1	0.2	4.2	213.3	2.2	253.2	0.0	(s)	265.5	(s)	265.5
1965	1.4	8.0	5.6	29.8	10.2	0.2	3.7	237.4	3.7	290.6	0.0	0.0	300.1	0.0	300.1
1970	0.7	11.2	1.9	47.3	14.2	0.4	3.7	296.4	2.1	365.9	0.0	0.0	377.8	0.0	377.8
1975	0.1	9.5	1.1	65.2	14.6	0.5	4.6	332.3	2.1	420.4	0.0	0.0	430.0	0.0	430.0
1980	0.0	8.8	1.3	102.7	12.0	0.3	4.2	311.1	1.3	432.8	0.0	0.0	441.6	0.0	441.6
1985	0.0	4.9	2.0	120.4	87.4	0.5	3.8	297.8	0.2	512.0	R e 4.6	0.0	e 516.9	0.0	e 516.9
1990	0.0	8.6	1.5	145.3	101.3	0.6	4.3	319.1	1.2	573.3	R 5.3	(s)	582.0	0.1	582.1
1991	0.0	4.7	1.5	137.6	97.5	0.6	3.8	316.4	0.6	558.0	R 6.3	(s)	562.8	0.1	562.9
1992	0.0	4.8	1.3	133.4	90.5	0.6	3.9	320.4	1.3	551.4	R 6.0	(s)	556.3	0.1	556.4
1993	0.0	6.9	1.0	141.1	92.7	0.5	4.0	338.8	2.1	580.2	R 6.3	(s)	587.2	0.1	587.3
1994	0.0	7.0	0.8	156.7	98.0	0.9	4.2	R 343.8	1.4	R 605.7	R 6.2	(s)	R 612.7	0.1	R 612.9
1995	0.0	7.8	0.7	157.6	98.3	0.4	4.1	R 360.2	1.5	R 622.9	R 7.9	0.1	R 630.7	0.1	R 630.8
1996	0.0	12.7	0.9	163.9	71.3	0.4	4.0	R 357.9	1.9	R 600.3	R 4.0	0.1	R 613.0	0.1	R 613.1
1997	0.0	11.0	0.7	176.3	62.3	R 0.2	4.2	R 358.7	2.5	R 604.9	R 5.4	0.1	R 616.0	0.1	R 616.1
1998	0.0	7.5	0.6	169.4	54.7	0.2	4.4	382.1	2.0	613.4	5.1	0.1	621.0	0.1	621.1
1999	0.0	14.6	0.6	186.4	63.5	0.1	4.4	373.7	1.9	630.6	9.0	0.1	645.3	0.1	645.4

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels. Transportation use of natural gas is gas consumed in the operation of pipelines, primarily in compressors, and, since 1990, is also gas consumed as vehicle fuel.

<sup>c</sup> Ethanol blended into motor gasoline, which is accounted for under motor gasoline, is shown separately here to display the use of renewable energy by the transportation sector and is included only once in the total.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1980 and 1981 due to the expanded coverage of renewable energy sources beginning in 1981.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 106. Estimates of Energy Input at Electric Utilities, Selected Years, 1960-1999, Indiana**

Year	Coal	Natural Gas <sup>a</sup>	Petroleum				Nuclear Electric Power	Hydroelectric Power <sup>e</sup>	Wood and Waste	Geothermal Energy	Other <sup>b,f</sup>	Total <sup>g</sup>
			Heavy Oil <sup>b,c</sup>	Light Oil <sup>b,d</sup>	Petroleum Coke <sup>b</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels				Million Kilowatthours					
1960	13,483	9	103	130	0	232	0	100	0	0	0	—
1965	18,113	13	63	80	0	142	0	94	0	0	0	—
1970	22,648	30	204	257	255	716	0	495	0	0	0	—
1975	27,301	11	1,344	477	0	1,821	0	444	0	0	0	—
1980	33,664	2	0	730	0	730	0	474	0	0	0	—
1985	38,310	1	0	414	0	414	0	426	0	0	0	—
1990	47,654	7	0	423	956	1,379	0	441	0	0	0	—
1991	47,720	10	0	351	346	698	0	399	0	0	0	—
1992	46,937	8	0	264	301	565	0	562	0	0	0	—
1993	48,836	6	0	393	0	393	0	448	0	0	0	—
1994	50,554	9	0	412	0	412	0	407	0	0	0	—
1995	52,089	8	0	342	82	424	0	467	0	0	0	—
1996	52,855	4	0	353	298	652	0	448	0	0	0	—
1997	54,845	5	0	322	908	1,230	0	562	0	0	0	—
1998	55,086	9	0	447	1,227	1,674	0	479	0	0	0	—
1999	55,105	8	0	554	1,075	1,630	0	407	0	0	0	—
<b>Trillion Btu</b>												
1960	305.2	9.1	0.6	0.8	0.0	1.4	0.0	1.1	0.0	0.0	0.0	316.8
1965	406.9	13.3	0.4	0.5	0.0	0.9	0.0	1.0	0.0	0.0	0.0	422.0
1970	498.9	29.7	1.3	1.5	1.5	4.3	0.0	5.2	0.0	0.0	0.0	538.1
1975	579.6	11.0	8.5	2.8	0.0	11.2	0.0	4.6	0.0	0.0	0.0	606.4
1980	728.2	1.9	0.0	4.3	0.0	4.3	0.0	4.9	0.0	0.0	0.0	739.3
1985	816.5	1.1	0.0	2.4	0.0	2.4	0.0	4.5	0.0	0.0	0.0	824.5
1990	1,006.6	6.6	0.0	2.5	5.8	8.2	0.0	4.6	0.0	0.0	0.0	1,026.1
1991	1,008.8	10.1	0.0	2.0	2.1	4.1	0.0	4.2	0.0	0.0	0.0	1,027.1
1992	997.7	7.8	0.0	1.5	1.8	3.4	0.0	5.8	0.0	0.0	0.0	1,014.7
1993	1,029.4	5.7	0.0	2.3	0.0	2.3	0.0	4.6	0.0	0.0	0.0	1,042.0
1994	1,065.1	9.2	0.0	2.4	0.0	2.4	0.0	4.2	0.0	0.0	0.0	1,080.9
1995	1,077.0	8.5	0.0	2.0	0.5	2.5	0.0	4.8	0.0	0.0	0.0	1,092.8
1996	1,094.8	4.4	0.0	2.1	1.8	3.9	0.0	4.6	0.0	0.0	0.0	1,107.8
1997	1,147.5	4.8	0.0	1.9	5.5	7.3	0.0	5.8	0.0	0.0	0.0	1,165.4
1998	1,158.7	9.3	0.0	2.6	7.4	10.0	0.0	5.0	0.0	0.0	0.0	1,183.0
1999	1,170.4	7.9	0.0	3.2	6.5	9.7	0.0	4.2	0.0	0.0	0.0	1,192.2

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> Prior to 1980, based on oil used in steam plants. Since 1980, heavy oil includes fuel oil nos. 4, 5, and 6 and residual fuel oils.

<sup>d</sup> Prior to 1980, based on oil used in internal combustion and gas turbine engine plants. Since 1980, light oil includes fuel oil nos. 1 and 2, kerosene, and jet fuel.

<sup>e</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of

imports of electricity that is derived from hydroelectric power.

<sup>f</sup> "Other" is electricity generated for distribution from wind, photovoltaic, and solar thermal energy.

<sup>g</sup> If applicable, from 1989, includes net imports of electricity generated from nonrenewable energy sources not shown in other columns. See data in appendix Table A8.

— =Not applicable.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 107. Energy Consumption Estimates by Source, Selected Years 1960-1999, Iowa**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum											Nuclear Electric Power	Hydro-electric Power <sup>d</sup>	Wood and Waste	Other <sup>a,e</sup>	Net Inter-state Flow of Electricity/Losses <sup>f</sup>	Total <sup>g</sup>
			Asphalt & Road Oil <sup>a</sup>	Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	Kero-sene <sup>a</sup>	LPG <sup>a</sup>	Lubri-cants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Other <sup>a,c</sup>	Total						
			Thousand Barrels															Million kWh	
1960	5,257	187	2,579	366	11,163	195	2,587	5,017	713	29,463	1,071	44	53,197	0	881	—	—	-2,370	—
1965	5,722	248	2,569	358	11,068	232	1,523	7,448	698	30,792	531	542	55,760	0	928	—	—	3,241	—
1970	6,166	349	2,914	256	13,677	725	490	11,038	700	35,701	401	627	66,528	0	935	—	—	1,618	—
1975	6,407	346	2,294	191	14,553	835	214	13,645	655	39,042	608	986	73,024	2,291	879	—	—	13,729	—
1980	12,340	270	1,699	184	15,930	813	171	11,167	714	35,394	415	5,236	71,721	2,563	946	—	—	13,041	—
1985	14,342	226	2,023	83	15,490	592	155	8,507	649	31,465	182	1,778	60,925	1,927	2,048	—	—	6,022	—
1990	17,929	218	1,537	99	15,223	891	81	6,355	731	31,684	126	937	57,663	3,012	R <sup>h</sup> 873	—	—	R <sup>h</sup> 604	—
1991	18,741	233	1,563	82	14,605	892	51	7,255	654	32,471	96	676	58,346	4,147	R <sup>h</sup> 896	—	—	R <sup>h</sup> -1,958	—
1992	17,992	231	1,406	75	16,370	803	42	8,978	666	31,713	107	748	60,908	3,405	R <sup>h</sup> 995	—	—	R <sup>h</sup> 324	—
1993	19,188	248	1,354	70	16,970	720	71	15,651	679	32,703	164	756	69,139	3,235	R <sup>h</sup> 756	—	—	R <sup>h</sup> 1,638	—
1994	19,341	248	1,964	69	18,531	897	60	15,663	709	33,887	182	688	72,650	4,107	R <sup>h</sup> 1,073	—	—	R <sup>h</sup> -518	—
1995	20,636	262	1,636	72	18,879	1,046	69	16,989	697	34,418	94	640	74,540	3,730	R <sup>h</sup> 1,010	—	—	R <sup>h</sup> -681	—
1996	21,171	273	2,052	71	20,276	819	54	R <sup>h</sup> 11,344	676	35,909	96	R <sup>h</sup> 2,261	R <sup>h</sup> 73,558	3,924	R <sup>h</sup> 938	—	—	R <sup>h</sup> 995	—
1997	21,719	255	2,623	78	20,553	793	63	R <sup>h</sup> 10,296	715	35,577	73	R <sup>h</sup> 2,425	R <sup>h</sup> 73,197	4,149	R <sup>h</sup> 910	—	—	R <sup>h</sup> 1,482	—
1998	23,351	233	2,157	72	20,425	1,184	62	14,882	748	36,973	94	2,525	79,122	3,768	984	—	—	-3,896	—
1999	23,399	231	2,942	81	19,479	885	72	18,746	756	36,993	120	2,624	82,698	3,640	988	—	—	-4,767	—

**Trillion Btu**

1960	115.9	193.7	17.1	1.8	65.0	1.0	14.7	20.1	4.3	154.8	6.7	0.2	285.9	0.0	9.5	6.4	0.0	-8.1	603.3
1965	126.6	250.0	17.0	1.8	64.5	1.3	8.6	29.9	4.2	161.7	3.3	2.9	295.3	0.0	9.7	5.5	0.0	11.1	698.1
1970	130.9	351.8	19.3	1.3	79.7	4.1	2.8	41.7	4.2	187.5	2.5	3.3	346.4	0.0	9.8	6.3	0.0	5.5	850.7
1975	131.6	348.6	15.2	1.0	84.8	4.7	1.2	50.7	4.0	205.1	3.8	5.4	375.8	25.2	9.1	7.9	0.0	46.8	945.0
1980	234.4	270.4	11.3	0.9	92.8	4.6	1.0	41.0	4.3	185.9	2.6	28.7	373.1	28.0	9.8	R <sup>h</sup> 50.8	0.0	44.5	R <sup>h</sup> 1,011.0
1985	268.8	228.4	13.4	0.4	90.2	3.3	0.9	30.7	3.9	165.3	1.1	9.6	318.9	20.8	21.4	R <sup>h</sup> 56.8	0.0	20.5	R <sup>h</sup> 935.6
1990	331.7	219.7	10.2	0.5	88.7	5.0	0.5	23.0	4.4	166.4	0.8	5.1	304.6	32.2	h <sup>h</sup> 9.1	R <sup>h</sup> 15.7	h <sup>h</sup> 0.1	R <sup>h</sup> 2.1	R <sup>h</sup> 915.1
1991	346.4	235.0	10.4	0.4	85.1	5.0	0.3	26.2	4.0	170.6	0.6	3.6	306.2	44.5	R <sup>h</sup> 9.3	R <sup>h</sup> 15.1	0.1	R <sup>h</sup> -6.7	R <sup>h</sup> 950.0
1992	326.7	231.9	9.3	0.4	95.4	4.5	0.2	32.5	4.0	166.6	0.7	4.0	317.7	36.4	10.3	R <sup>h</sup> 14.9	0.1	R <sup>h</sup> 1.1	R <sup>h</sup> 939.0
1993	339.9	248.8	9.0	0.4	98.9	4.1	0.4	56.4	4.1	171.8	1.0	4.0	350.1	34.6	R <sup>h</sup> 7.8	R <sup>h</sup> 13.8	0.1	R <sup>h</sup> 5.6	R <sup>h</sup> 1,000.5
1994	346.9	250.3	13.0	0.3	107.9	5.1	0.3	56.9	4.3	R <sup>h</sup> 177.2	1.1	3.7	R <sup>h</sup> 370.0	43.9	11.1	R <sup>h</sup> 32.7	0.2	-1.8	R <sup>h</sup> 1,053.3
1995	368.8	263.6	10.9	0.4	110.0	5.9	0.4	61.5	4.2	R <sup>h</sup> 179.5	0.6	3.4	R <sup>h</sup> 376.8	39.8	R <sup>h</sup> 10.4	R <sup>h</sup> 21.3	0.2	R <sup>h</sup> -2.3	R <sup>h</sup> 1,078.6
1996	380.5	274.3	13.6	0.4	118.1	4.6	0.3	R <sup>h</sup> 41.0	4.1	R <sup>h</sup> 187.3	0.6	R <sup>h</sup> 12.1	R <sup>h</sup> 382.1	41.7	9.7	R <sup>h</sup> 19.7	0.2	R <sup>h</sup> 3.4	R <sup>h</sup> 1,111.7
1997	390.0	257.1	17.4	0.4	119.7	4.5	0.4	R <sup>h</sup> 37.2	4.3	R <sup>h</sup> 185.5	0.5	R <sup>h</sup> 13.1	R <sup>h</sup> 382.9	44.1	R <sup>h</sup> 9.4	R <sup>h</sup> 20.5	0.3	R <sup>h</sup> 5.1	R <sup>h</sup> 1,109.9
1998	417.0	235.2	14.3	0.4	119.0	6.7	0.4	53.8	4.5	192.7	0.6	13.6	405.9	40.0	10.2	8.7	0.3	-13.3	1,103.9
1999	416.0	235.7	19.5	0.4	113.5	5.0	0.4	67.8	4.6	192.8	0.8	14.1	418.8	38.7	10.2	15.2	3.7	-16.3	1,121.7

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products consumed in the industrial sector. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>e</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>f</sup> Net interstate flow of electricity is the difference between the amount of energy in the electricity sold within a State (including associated losses) and the energy input at the electric utilities within the State. A positive number

indicates that more electricity (including associated losses) came into the State than went out of the State during the year; conversely, a negative number indicates that more electricity (including associated losses) went out of the State than came into the State.

<sup>g</sup> From 1989, "Total" does not equal the sum of the columns. Net imports of electricity generated from nonrenewable energy sources (shown in appendix Table A8) is included in the total but not in any other columns.

<sup>h</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

kWh=kilowatthours. R=Revised data. — =Not applicable.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

Table 108. Residential Energy Consumption Estimates, Selected Years 1960-1999, Iowa

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum				Wood Thousand Cords	Geothermal	Solar <sup>c</sup>	Electricity <sup>a</sup> Million Kilowatthours	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Total						Million Kilowatthours	
			Thousand Barrels									Million Kilowatthours	
1960	319	58	2,610	2,301	3,312	8,223	163	—	—	3,720	—	9,253	—
1965	171	77	2,347	1,327	4,741	8,416	108	—	—	5,044	—	12,042	—
1970	62	96	2,232	325	6,826	9,383	99	—	—	6,480	—	15,703	—
1975	49	94	1,802	138	6,799	8,740	115	—	—	8,338	—	20,112	—
1980	32	85	2,388	47	3,890	6,325	R 620	—	—	10,038	—	24,409	—
1985	98	79	1,435	115	2,996	4,546	575	—	—	9,851	—	23,144	—
1990	86	71	797	24	2,742	3,563	348	—	—	10,513	—	R 22,998	—
1991	78	79	887	34	3,359	4,279	366	—	—	11,159	—	R 24,259	—
1992	23	75	779	20	3,401	4,199	385	—	—	10,290	—	R 21,947	—
1993	26	83	821	33	3,955	4,809	R 319	—	—	11,103	—	R 23,451	—
1994	15	78	973	19	3,925	4,917	R 313	—	—	11,062	—	R 23,085	—
1995	31	82	844	25	3,964	4,832	R 347	—	—	11,640	—	R 24,268	—
1996	78	88	785	30	R 5,321	R 6,135	R 347	—	—	11,537	—	R 24,044	—
1997	131	82	768	28	R 4,935	R 5,730	R 242	—	—	11,673	—	R 24,282	—
1998	98	69	542	25	4,178	4,745	214	—	—	11,855	—	24,491	—
1999	136	71	489	24	5,230	5,743	229	—	—	11,867	—	23,251	—
Trillion Btu													
1960	6.8	60.5	15.2	13.0	13.3	41.5	3.3	0.0	0.0	12.7	124.7	31.6	156.3
1965	3.6	78.0	13.7	7.5	19.0	40.2	2.2	0.0	0.0	17.2	141.3	41.1	182.3
1970	1.3	97.1	13.0	1.8	25.8	40.6	2.0	0.0	0.0	22.1	163.1	53.6	216.7
1975	0.9	95.1	10.5	0.8	25.3	36.5	2.3	0.0	0.0	28.4	163.3	68.6	231.9
1980	0.6	85.2	13.9	0.3	14.3	28.5	12.4	0.0	0.0	34.2	160.9	83.3	244.2
1985	2.1	79.6	8.4	0.7	10.8	19.8	11.5	0.0	0.0	33.6	146.6	79.0	225.6
1990	2.1	71.9	4.6	0.1	9.9	14.7	7.0	e 0.1	e (s)	35.9	e 131.6	78.5	e 210.0
1991	1.9	79.4	5.2	0.2	12.1	17.5	7.3	0.1	(s)	38.1	144.3	R 82.8	R 227.1
1992	0.5	75.2	4.5	0.1	12.3	17.0	7.7	0.1	(s)	35.1	135.6	R 74.9	R 210.5
1993	0.6	83.7	4.8	0.2	14.3	19.2	6.4	0.1	(s)	37.9	R 147.9	80.0	227.9
1994	0.4	78.9	5.7	0.1	14.3	20.0	R 6.3	0.1	(s)	37.7	143.4	78.8	222.1
1995	0.8	82.6	4.9	0.1	14.4	19.4	6.9	0.1	(s)	39.7	149.6	R 82.8	R 232.4
1996	1.9	88.6	4.6	0.2	R 19.2	R 24.0	6.9	0.1	(s)	39.4	R 160.9	R 82.0	R 242.9
1997	3.1	82.4	4.5	0.2	R 17.8	R 22.5	R 4.8	0.1	(s)	39.8	R 152.8	R 82.9	R 235.6
1998	2.3	69.7	3.2	0.1	15.1	18.4	4.3	0.1	(s)	40.5	135.2	83.6	218.8
1999	3.2	72.8	2.8	0.1	18.9	21.9	4.6	0.1	(s)	40.5	143.1	79.3	222.5

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Includes small amounts of solar thermal and photovoltaic energy consumed by the commercial sector that cannot be separately identified. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 109. Commercial Energy Consumption Estimates, Selected Years 1960-1999, Iowa**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum						Wood	Geothermal	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>c</sup>	Total <sup>d</sup>
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels						Thousand Cords	Million Kilowatthours	Million Kilowatthours			
1960	592	28	1,046	94	584	178	232	2,135	3	—	1,812	—	4,506	—
1965	318	39	941	54	837	194	135	2,161	2	—	2,797	—	6,679	—
1970	116	57	895	13	1,205	271	65	2,449	2	—	3,655	—	8,857	—
1975	90	67	722	6	1,200	323	115	2,366	2	—	5,121	—	12,353	—
1980	59	51	751	5	686	350	79	1,871	15	—	5,502	—	13,379	—
1985	180	48	1,124	7	529	237	1	1,898	R 15	—	6,306	—	14,816	—
1990	159	44	495	38	484	142	31	1,190	R 22	—	7,532	—	R 16,477	—
1991	145	47	563	3	593	727	9	1,895	R 23	—	7,938	—	R 17,257	—
1992	41	46	488	4	600	645	37	1,775	R 25	—	7,783	—	R 16,600	—
1993	44	50	356	7	698	637	5	1,703	26	—	8,536	—	R 18,029	—
1994	25	48	391	13	693	35	1	1,132	26	—	8,753	—	R 18,268	—
1995	58	50	449	3	700	35	0	1,186	26	—	8,890	—	R 18,536	—
1996	144	55	361	4	R 939	244	1	R 1,549	28	—	8,673	—	R 18,075	—
1997	243	50	339	8	R 871	445	0	R 1,663	R 27	—	8,944	—	R 18,604	—
1998	181	43	456	3	737	470	1	1,667	27	—	9,384	—	19,386	—
1999	253	45	443	4	923	433	0	1,803	32	—	9,668	—	18,942	—

  

Trillion Btu														
1960	12.6	28.8	6.1	0.5	2.3	0.9	1.5	11.4	0.1	0.0	6.2	59.1	15.4	74.4
1965	6.7	39.1	5.5	0.3	3.4	1.0	0.9	11.0	(s)	0.0	9.5	66.4	22.8	89.2
1970	2.4	57.8	5.2	0.1	4.6	1.4	0.4	11.7	(s)	0.0	12.5	84.3	30.2	114.5
1975	1.6	67.5	4.2	(s)	4.5	1.7	0.7	11.1	(s)	0.0	17.5	97.7	42.1	139.9
1980	1.2	50.7	4.4	(s)	2.5	1.8	0.5	9.3	0.3	0.0	18.8	80.2	45.6	125.9
1985	3.9	48.2	6.5	(s)	1.9	1.2	(s)	9.7	R 0.3	0.0	21.5	R 83.6	50.6	R 134.1
1990	3.8	44.3	2.9	0.2	1.8	0.7	0.2	5.8	R 0.4	e 0.0	25.7	R e 80.0	56.2	R e 136.2
1991	3.5	47.0	3.3	(s)	2.1	3.8	0.1	9.3	R 0.5	0.0	27.1	R 87.3	R 58.9	R 146.2
1992	1.0	46.3	2.8	(s)	2.2	3.4	0.2	8.7	R 0.5	0.0	26.6	R 83.0	R 56.6	R 139.6
1993	1.0	50.5	2.1	(s)	2.5	3.3	(s)	8.0	0.5	0.0	29.1	89.2	61.5	150.7
1994	0.6	48.3	2.3	0.1	2.5	0.2	(s)	5.1	0.5	0.1	29.9	84.4	62.3	146.8
1995	1.4	50.6	2.6	(s)	2.5	0.2	0.0	5.3	0.5	0.1	30.3	88.3	63.2	R 151.6
1996	3.5	54.9	2.1	(s)	R 3.4	1.3	(s)	R 6.8	0.6	0.1	29.6	R 95.5	R 61.7	R 157.2
1997	5.7	50.6	2.0	(s)	R 3.1	2.3	0.0	R 7.5	0.5	0.2	30.5	R 95.1	R 63.5	R 158.5
1998	4.3	43.5	2.7	(s)	2.7	2.4	(s)	7.8	0.5	0.2	32.0	88.4	66.1	154.5
1999	6.0	45.8	2.6	(s)	3.3	2.3	0.0	8.2	0.6	0.2	33.0	93.8	64.6	158.5

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>d</sup> Small amounts of solar thermal and photovoltaic energy consumed in the commercial sector cannot be separately identified and are included in residential consumption.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.



Table 110. Industrial Energy Consumption Estimates, Selected Years 1960-1999, Iowa

Year	Coal Thousand Short Tons	Natural Gas <sup>a</sup> Billion Cubic Feet	Petroleum									Hydro- electric Power <sup>b</sup> Million kWh	Wood and Waste	Other <sup>b,d</sup>	Electricity <sup>b</sup> Million kWh	Net Energy	Electrical System Energy Losses <sup>e</sup> Million kWh	Total
			Asphalt and Road Oil <sup>b</sup>	Distillate Fuel <sup>b</sup>	Kero- sene <sup>b</sup>	LPG <sup>b</sup>	Lubri- cants <sup>b</sup>	Motor Gasoline	Residual Fuel <sup>b</sup>	Other <sup>b,c</sup>	Total							
			Thousand Barrels															
1960	2,193	43	2,579	5,536	192	1,098	196	5,797	573	44	16,016	2	—	—	2,676	—	6,657	—
1965	2,464	68	2,569	5,607	142	1,815	218	5,373	354	542	16,620	2	—	—	3,719	—	8,879	—
1970	1,955	99	2,914	5,884	152	2,949	220	5,391	261	627	18,398	1	—	—	5,338	—	12,936	—
1975	1,333	121	2,294	4,670	70	5,593	155	3,791	279	986	17,838	1	—	—	6,626	—	15,984	—
1980	1,505	115	1,699	4,698	119	6,557	192	2,612	273	5,236	21,385	1	—	—	9,318	—	22,658	—
1985	1,572	87	2,023	4,788	33	4,893	175	1,703	179	1,778	15,571	1	—	—	9,520	—	22,367	—
1990	2,353	90	1,537	4,137	19	3,087	196	1,072	95	937	11,080	R <sup>f</sup> 16	—	—	11,392	—	R <sup>f</sup> 24,922	—
1991	2,672	97	1,563	4,604	15	3,255	176	1,160	87	676	11,536	R <sup>f</sup> 13	—	—	11,684	—	R <sup>f</sup> 25,401	—
1992	2,571	101	1,406	6,221	18	4,932	179	1,052	70	748	14,625	R <sup>f</sup> 14	—	—	12,134	—	R <sup>f</sup> 25,880	—
1993	2,494	103	1,354	6,150	31	10,944	182	799	160	756	20,378	R <sup>f</sup> 19	—	—	12,465	—	R <sup>f</sup> 26,328	—
1994	2,735	109	1,964	6,680	28	10,894	191	1,108	181	688	21,734	R <sup>f</sup> 20	—	—	13,224	—	R <sup>f</sup> 27,598	—
1995	2,761	115	1,636	6,091	41	12,267	187	1,038	94	640	21,994	R <sup>f</sup> 19	—	—	13,771	—	R <sup>f</sup> 28,712	—
1996	3,085	114	2,052	6,334	20	R <sup>f</sup> 4,986	182	1,105	95	R <sup>f</sup> 2,261	R <sup>f</sup> 17,035	R <sup>f</sup> 20	—	—	14,789	—	R <sup>f</sup> 30,820	—
1997	3,151	107	2,623	6,859	27	R <sup>f</sup> 4,399	192	1,092	73	R <sup>f</sup> 2,425	R <sup>f</sup> 17,690	R <sup>f</sup> 12	—	—	15,531	—	R <sup>f</sup> 32,306	—
1998	3,040	106	2,157	6,472	34	9,946	201	900	93	2,525	22,329	20	—	—	16,079	—	33,215	—
1999	2,939	102	2,942	5,386	44	12,589	203	879	120	2,624	24,788	15	—	—	16,499	—	32,327	—
Trillion Btu																		
1960	51.7	44.9	17.1	32.2	1.1	4.4	1.2	30.5	3.6	0.2	90.3	(s)	2.8	0.0	9.1	198.8	22.7	221.6
1965	57.5	68.9	17.0	32.7	0.8	7.3	1.3	28.2	2.2	2.9	92.4	(s)	2.9	0.0	12.7	234.5	30.3	264.8
1970	43.0	99.9	19.3	34.3	0.9	11.1	1.3	28.3	1.6	3.3	100.2	(s)	3.9	0.0	18.2	265.1	44.1	309.3
1975	28.4	122.5	15.2	27.2	0.4	20.8	0.9	19.9	1.8	5.4	91.6	(s)	5.1	0.0	22.6	270.2	54.5	324.7
1980	32.4	114.9	11.3	27.4	0.7	24.1	1.2	13.7	1.7	28.7	108.7	(s)	R <sup>f</sup> 37.8	0.0	31.8	R <sup>f</sup> 325.6	77.3	R <sup>f</sup> 402.9
1985	35.6	88.0	13.4	27.9	0.2	17.6	1.1	8.9	1.1	9.6	79.9	(s)	R <sup>f</sup> 44.3	0.0	32.5	R <sup>f</sup> 280.2	76.3	R <sup>f</sup> 356.6
1990	53.1	90.9	10.2	24.1	0.1	11.2	1.2	5.6	0.6	5.1	58.1	f <sup>f</sup> 0.2	R <sup>f</sup> 8.1	f <sup>f</sup> 0.0	38.9	R <sup>f</sup> 249.3	85.0	R <sup>f</sup> 334.3
1991	59.3	98.2	10.4	26.8	0.1	11.8	1.1	6.1	0.5	3.6	60.4	R <sup>f</sup> 0.1	R <sup>f</sup> 7.1	0.0	39.9	R <sup>f</sup> 265.0	R <sup>f</sup> 86.7	R <sup>f</sup> 351.6
1992	52.9	101.2	9.3	36.2	0.1	17.9	1.1	5.5	0.4	4.0	74.6	R <sup>f</sup> 0.1	R <sup>f</sup> 6.5	0.0	41.4	R <sup>f</sup> 276.7	R <sup>f</sup> 88.3	R <sup>f</sup> 365.0
1993	50.3	102.9	9.0	35.8	0.2	39.5	1.1	4.2	1.0	4.0	94.8	R <sup>f</sup> 0.2	R <sup>f</sup> 6.7	0.0	42.5	R <sup>f</sup> 297.5	R <sup>f</sup> 89.8	R <sup>f</sup> 387.3
1994	55.0	109.6	13.0	38.9	0.2	39.6	1.2	5.8	1.1	3.7	103.5	0.2	R <sup>f</sup> 25.6	0.0	45.1	R <sup>f</sup> 339.0	94.2	R <sup>f</sup> 433.2
1995	57.9	115.7	10.9	35.5	0.2	44.4	1.1	R <sup>f</sup> 5.4	0.6	3.4	101.6	R <sup>f</sup> 0.2	R <sup>f</sup> 13.6	0.0	47.0	R <sup>f</sup> 336.0	R <sup>f</sup> 98.0	R <sup>f</sup> 434.0
1996	65.7	114.7	13.6	36.9	0.1	R <sup>f</sup> 18.0	1.1	5.8	0.6	R <sup>f</sup> 12.1	R <sup>f</sup> 88.2	0.2	R <sup>f</sup> 12.0	0.0	50.5	R <sup>f</sup> 331.3	R <sup>f</sup> 105.2	R <sup>f</sup> 436.4
1997	66.0	108.4	17.4	40.0	0.2	R <sup>f</sup> 15.9	1.2	5.7	0.5	R <sup>f</sup> 13.1	R <sup>f</sup> 93.8	0.1	R <sup>f</sup> 14.9	0.0	53.0	R <sup>f</sup> 336.2	R <sup>f</sup> 110.2	R <sup>f</sup> 446.4
1998	64.4	107.1	14.3	37.7	0.2	35.9	1.2	4.7	0.6	13.6	108.3	0.2	3.7	0.0	54.9	R <sup>f</sup> 338.5	113.3	451.8
1999	62.2	103.9	19.5	31.4	0.2	45.5	1.2	4.6	0.8	14.1	117.3	0.2	9.7	3.4	56.3	353.0	110.3	463.3

<sup>a</sup> Includes supplemental gaseous fuels.<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.<sup>c</sup> "Other" is the subtotal of 16 petroleum products. See a full description in Appendix A, Section 4, "Other Petroleum Products."<sup>d</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.<sup>e</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.<sup>f</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

R=Revised data.

kWh=kilowatthours. — =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 111. Transportation Energy Consumption Estimates, Selected Years 1960-1999, Iowa**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum								Ethanol <sup>c</sup>	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total <sup>c</sup>
			Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	LPG <sup>a</sup>	Lubricants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total				Million Kilowatthours	
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels								Thousand Barrels	Million Kilowatthours	Million Kilowatthours	Total <sup>c</sup>	
1960	36	9	366	1,711	195	23	516	23,488	227	26,526	0	0	—	0	—
1965	8	11	358	1,991	232	55	480	25,224	15	28,354	0	0	—	0	—
1970	3	18	256	4,339	725	58	480	30,039	26	35,923	0	0	—	0	—
1975	(s)	16	191	6,851	835	53	501	34,929	0	43,359	0	0	—	0	—
1980	0	13	184	7,924	813	34	522	32,432	0	41,909	0	0	—	0	—
1985	0	10	83	8,042	592	90	475	29,525	0	38,807	R <sup>e</sup> 820	0	—	0	—
1990	0	9	99	9,671	891	42	534	30,470	(s)	41,708	R 885	0	—	0	—
1991	0	7	82	8,442	892	49	478	30,584	0	40,528	R 1,102	0	—	0	—
1992	0	7	75	8,792	803	46	487	30,016	0	40,219	R 1,366	0	—	0	—
1993	0	7	70	9,521	720	54	496	31,266	0	42,128	R 1,611	0	—	0	—
1994	0	11	69	10,305	897	151	519	32,744	0	44,684	R 1,849	0	—	0	—
1995	0	11	72	11,349	1,046	58	510	33,345	0	46,380	R 1,811	0	—	0	—
1996	0	13	71	12,662	819	R <sup>98</sup>	495	34,561	0	R 48,705	R 1,158	0	—	0	—
1997	0	11	78	12,377	793	R <sup>91</sup>	522	34,040	0	R 47,901	R 1,410	0	—	0	—
1998	0	9	72	12,686	1,184	21	547	35,603	0	50,113	1,744	(s)	—	(s)	—
1999	0	8	81	12,862	885	4	553	35,681	0	50,065	1,888	(s)	—	(s)	—

  

Trillion Btu															
1960	0.9	9.2	1.8	10.0	1.0	0.1	3.1	123.4	1.4	140.9	0.0	0.0	151.0	0.0	151.0
1965	0.2	11.2	1.8	11.6	1.3	0.2	2.9	132.5	0.1	150.4	0.0	0.0	161.7	0.0	161.7
1970	0.1	18.5	1.3	25.3	4.1	0.2	2.9	157.8	0.2	191.7	0.0	0.0	210.2	0.0	210.2
1975	(s)	16.2	1.0	39.9	4.7	0.2	3.0	183.5	0.0	232.3	0.0	0.0	248.5	0.0	248.5
1980	0.0	12.7	0.9	46.2	4.6	0.1	3.2	170.4	0.0	225.3	0.0	0.0	238.0	0.0	238.0
1985	0.0	10.5	0.4	46.8	3.3	0.3	2.9	155.1	0.0	208.9	R <sup>e</sup> 2.9	0.0	<sup>e</sup> 219.3	0.0	<sup>e</sup> 219.3
1990	0.0	9.2	0.5	56.3	5.0	0.2	3.2	160.1	(s)	225.3	R 3.1	0.0	234.5	0.0	234.5
1991	0.0	6.7	0.4	49.2	5.0	0.2	2.9	160.7	0.0	218.3	R 3.9	0.0	225.0	0.0	225.0
1992	0.0	7.0	0.4	51.2	4.5	0.2	3.0	157.7	0.0	216.9	R 4.8	0.0	223.9	0.0	223.9
1993	0.0	7.4	0.4	55.5	4.1	0.2	3.0	164.2	0.0	227.3	R 5.7	0.0	234.7	0.0	234.7
1994	0.0	10.8	0.3	60.0	5.1	0.5	3.1	R 171.2	0.0	R 240.4	R 6.5	0.0	R 251.2	0.0	R 251.2
1995	0.0	11.1	0.4	66.1	5.9	0.2	3.1	R 173.9	0.0	R 249.6	R 6.4	0.0	R 260.7	0.0	R 260.7
1996	0.0	12.7	0.4	73.8	4.6	R 0.4	3.0	R 180.3	0.0	R 262.4	R 4.1	0.0	R 275.1	0.0	R 275.1
1997	0.0	11.4	0.4	72.1	4.5	0.3	3.2	R 177.4	0.0	R 257.9	R 5.0	0.0	R 269.3	0.0	R 269.3
1998	0.0	8.9	0.4	73.9	6.7	0.1	3.3	185.6	0.0	269.9	6.2	(s)	278.8	(s)	278.8
1999	0.0	7.9	0.4	74.9	5.0	(s)	3.4	185.9	0.0	269.6	6.7	(s)	277.5	(s)	277.5

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels. Transportation use of natural gas is gas consumed in the operation of pipelines, primarily in compressors, and, since 1990, is also gas consumed as vehicle fuel.

<sup>c</sup> Ethanol blended into motor gasoline, which is accounted for under motor gasoline, is shown separately here to display the use of renewable energy by the transportation sector and is included only once in the total.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1980 and 1981 due to the expanded coverage of renewable energy sources beginning in 1981.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

Table 112. Estimates of Energy Input at Electric Utilities, Selected Years, 1960-1999, Iowa

Year	Coal	Natural Gas <sup>a</sup>	Petroleum				Nuclear Electric Power	Hydroelectric Power <sup>e</sup>	Wood and Waste	Geothermal Energy	Other <sup>b,f</sup>	Total <sup>g</sup>
			Heavy Oil <sup>b,c</sup>	Light Oil <sup>b,d</sup>	Petroleum Coke <sup>b</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels				Million Kilowatthours					
1960	2,118	49	39	259	0	298	0	879	25	0	0	—
1965	2,760	52	27	183	0	210	0	926	30	0	0	—
1970	4,030	78	49	327	0	375	0	934	38	0	0	—
1975	4,936	47	214	507	0	722	2,291	877	40	0	0	—
1980	10,745	7	63	168	0	231	2,563	945	29	0	0	—
1985	12,491	2	2	101	0	103	1,927	2,047	60	0	0	—
1990	15,331	3	0	123	0	123	3,012	857	17	0	0	—
1991	15,846	4	0	109	0	109	4,147	883	20	0	0	—
1992	15,357	2	0	90	0	90	3,405	981	14	0	0	—
1993	16,623	4	0	122	0	122	3,235	737	20	0	0	—
1994	16,565	3	0	183	0	183	4,107	1,053	28	0	(s)	—
1995	17,785	4	0	148	0	148	3,730	991	20	0	(s)	—
1996	17,864	3	0	134	0	134	3,924	918	23	0	(s)	—
1997	18,194	4	0	211	0	211	4,149	<sup>R</sup> 899	22	0	(s)	—
1998	20,031	6	0	269	0	269	3,768	964	19	0	(s)	—
1999	20,071	5	0	299	0	299	3,640	974	20	0	2	—
<b>Trillion Btu</b>												
1960	44.0	50.3	0.2	1.5	0.0	1.8	0.0	9.5	0.3	0.0	0.0	105.8
1965	58.6	52.8	0.2	1.1	0.0	1.2	0.0	9.7	0.3	0.0	0.0	122.6
1970	84.2	78.6	0.3	1.9	0.0	2.2	0.0	9.8	0.4	0.0	0.0	175.2
1975	100.6	47.3	1.3	3.0	0.0	4.3	25.2	9.1	0.4	0.0	0.0	187.0
1980	200.2	6.9	0.4	1.0	0.0	1.4	28.0	9.8	0.3	0.0	0.0	246.6
1985	227.3	2.1	(s)	0.6	0.0	0.6	20.8	21.4	0.6	0.0	0.0	272.9
1990	272.6	3.5	0.0	0.7	0.0	0.7	32.2	8.9	0.2	0.0	0.0	318.1
1991	281.8	3.7	0.0	0.6	0.0	0.6	44.5	9.2	0.2	0.0	0.0	340.0
1992	272.3	2.3	0.0	0.5	0.0	0.5	36.4	10.1	0.1	0.0	0.0	321.8
1993	287.9	4.3	0.0	0.7	0.0	0.7	34.6	7.6	0.2	0.0	0.0	335.3
1994	291.0	2.7	0.0	1.1	0.0	1.1	43.9	10.9	0.3	0.0	(s)	349.8
1995	308.7	3.6	0.0	0.9	0.0	0.9	39.8	10.2	0.2	0.0	(s)	363.4
1996	309.3	3.4	0.0	0.8	0.0	0.8	41.7	9.5	0.2	0.0	(s)	364.9
1997	315.2	4.1	0.0	1.2	0.0	1.2	44.1	<sup>R</sup> 9.3	0.2	0.0	(s)	<sup>R</sup> 374.8
1998	346.0	6.0	0.0	1.6	0.0	1.6	40.0	10.0	0.2	0.0	(s)	403.7
1999	344.5	5.3	0.0	1.7	0.0	1.7	38.7	10.1	0.2	0.0	(s)	400.3

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> Prior to 1980, based on oil used in steam plants. Since 1980, heavy oil includes fuel oil nos. 4, 5, and 6 and residual fuel oils.

<sup>d</sup> Prior to 1980, based on oil used in internal combustion and gas turbine engine plants. Since 1980, light oil includes fuel oil nos. 1 and 2, kerosene, and jet fuel.

<sup>e</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>f</sup> "Other" is electricity generated for distribution from wind, photovoltaic, and solar thermal energy.

<sup>g</sup> If applicable, from 1989, includes net imports of electricity generated from nonrenewable energy sources not shown in other columns. See data in appendix Table A8.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

Table 113. Energy Consumption Estimates by Source, Selected Years 1960-1999, Kansas

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum											Nuclear Electric Power	Hydro-electric Power <sup>d</sup>	Wood and Waste	Other <sup>a,e</sup>	Net Interstate Flow of Electricity/Losses <sup>f</sup>	Total <sup>g</sup>
			Asphalt & Road Oil <sup>a</sup>	Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	Kero-sene <sup>a</sup>	LPG <sup>a</sup>	Lubri-cants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Other <sup>a,c</sup>	Total						
			Thousand Barrels															Million kWh	
1960	675	361	2,198	170	4,739	952	696	5,590	737	23,712	2,403	R 5,801	R 46,998	0	20	—	—	-4,181	—
1965	644	443	3,061	493	5,257	1,053	1,813	6,521	770	25,525	1,066	R 6,186	R 51,744	0	13	—	—	-3,746	—
1970	458	576	2,188	326	7,550	1,561	306	8,009	655	28,849	1,127	R 6,618	R 57,189	0	7	—	—	-5,106	—
1975	3,117	499	2,162	177	11,273	1,310	100	8,857	773	32,004	6,365	R 8,568	R 71,589	0	5	—	—	-5,045	—
1980	10,370	488	3,019	221	14,764	2,466	492	8,404	1,011	29,584	1,498	R 8,430	R 69,890	0	8	—	—	-9,085	—
1985	14,715	355	1,700	137	15,040	4,424	57	24,510	920	28,209	86	R 5,705	R 80,789	3,856	9	—	—	-13,553	—
1990	15,175	353	3,875	136	16,561	3,701	27	15,565	1,035	28,626	232	R 7,809	R 77,569	7,874	R h 24	—	—	R -25,070	—
1991	14,881	371	3,721	124	15,714	3,296	24	13,293	926	28,041	128	R 5,973	R 71,240	5,859	R 21	—	—	R -17,331	—
1992	14,227	343	3,715	142	15,154	4,164	33	16,816	944	27,821	180	R 6,595	R 75,565	8,491	R 13	—	—	R -19,314	—
1993	17,386	392	3,635	151	16,268	3,617	36	8,269	962	28,480	373	R 5,563	R 67,354	7,900	R 12	—	—	R -28,923	—
1994	17,158	418	4,741	142	15,770	1,981	17	7,754	1,005	29,073	190	R 6,137	R 66,810	8,529	R 12	—	—	R -30,096	—
1995	16,521	368	3,911	146	19,446	2,414	28	4,924	988	29,402	31	R 5,872	R 67,162	10,062	R 14	—	—	R -29,710	—
1996	19,084	363	3,581	177	16,964	2,009	37	R 10,442	959	30,927	292	R 7,941	R 73,329	8,205	R 14	—	—	R -33,767	—
1997	17,673	R 339	2,115	247	17,142	2,130	58	R 14,557	1,013	30,695	260	R 8,119	R 76,336	8,430	R 15	—	—	R -24,792	—
1998	17,736	327	2,699	199	16,215	2,157	50	14,121	1,060	32,001	286	7,344	76,133	10,411	14	—	—	-28,940	—
1999	19,004	303	2,358	240	15,514	3,476	360	21,741	1,071	33,550	616	7,585	86,511	9,157	13	—	—	-35,681	—

  

Trillion Btu																			
1960	15.7	373.7	14.6	0.9	27.6	5.1	3.9	22.4	4.5	124.6	15.1	R 34.8	R 253.4	0.0	0.2	3.9	0.0	-14.3	R 632.7
1965	15.3	440.8	20.3	2.5	30.6	5.7	10.3	26.2	4.7	134.1	6.7	R 37.0	R 278.0	0.0	0.1	3.4	0.0	-12.8	R 724.8
1970	10.7	574.5	14.5	1.6	44.0	8.6	1.7	30.3	4.0	151.5	7.1	R 39.5	R 302.8	0.0	0.1	3.7	0.0	-17.4	R 874.4
1975	62.3	490.7	14.3	0.9	65.7	7.2	0.6	32.9	4.7	168.1	40.0	R 51.2	R 385.6	0.0	(s)	5.8	0.0	-17.2	R 927.2
1980	191.6	482.0	20.0	1.1	86.0	13.8	2.8	30.9	6.1	155.4	9.4	R 50.1	R 375.7	0.0	0.1	R 10.8	0.0	-31.0	R 1,029.1
1985	259.5	354.8	11.3	0.7	87.6	24.8	0.3	88.3	5.6	148.2	0.5	R 34.1	R 401.5	41.7	0.1	R 10.3	(s)	-46.2	R 1,021.6
1990	272.6	352.6	25.7	0.7	96.5	20.7	0.2	56.4	6.3	150.4	1.5	R 46.1	R 404.3	84.1	R h 0.3	R 8.1	h 0.1	R -85.5	R h 1,036.6
1991	268.7	373.2	24.7	0.6	91.5	18.3	0.1	48.0	5.6	147.3	0.8	R 35.8	R 372.8	62.9	0.2	R 8.3	0.1	R -59.1	R 1,027.1
1992	254.3	338.8	24.7	0.7	88.3	23.2	0.2	60.9	5.7	146.1	1.1	R 39.1	R 390.0	90.7	0.1	R 8.6	0.1	R -65.9	R 1,016.7
1993	301.9	386.5	24.1	0.8	94.8	20.2	0.2	29.8	5.8	149.6	2.3	R 33.1	R 360.8	84.4	0.1	R 7.5	0.1	R -98.7	R 1,042.6
1994	300.0	417.2	31.5	0.7	91.9	11.0	0.1	28.2	6.1	R 152.1	1.2	R 36.4	R 359.1	91.1	0.1	R 7.7	0.2	-102.7	R 1,072.7
1995	289.6	369.1	26.0	0.7	113.3	13.7	0.2	17.8	6.0	R 153.3	0.2	R 34.9	R 366.0	107.2	0.1	R 8.8	0.2	R -101.4	R 1,039.8
1996	338.6	362.0	23.8	0.9	98.8	11.4	0.2	R 37.7	5.8	R 161.3	1.8	R 46.0	R 387.8	87.2	0.1	R 8.9	0.2	R -115.2	R 1,069.7
1997	310.8	R 339.5	14.0	1.2	99.9	12.1	0.3	R 52.6	6.1	R 160.0	1.6	R 47.1	R 395.0	89.6	R 0.2	R 7.1	0.2	R -84.6	R 1,057.9
1998	309.3	325.3	17.9	1.0	94.5	12.2	0.3	51.0	6.4	166.8	1.8	42.6	394.5	110.6	0.1	4.9	0.3	-98.7	1,046.2
1999	328.8	302.2	15.6	1.2	90.4	19.7	2.0	78.6	6.5	174.8	3.9	43.9	436.7	97.3	0.1	6.4	0.3	-121.7	1,050.0

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products consumed in the industrial sector. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>e</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>f</sup> Net interstate flow of electricity is the difference between the amount of energy in the electricity sold within a State (including associated losses) and the energy input at the electric utilities within the State. A positive number

indicates that more electricity (including associated losses) came into the State than went out of the State during the year; conversely, a negative number indicates that more electricity (including associated losses) went out of the State than came into the State.

<sup>g</sup> From 1989, "Total" does not equal the sum of the columns. Net imports of electricity generated from nonrenewable energy sources (shown in appendix Table A8) is included in the total but not in any other columns.

<sup>h</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

kWh=kilowatthours. R=Revised data. — =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

Table 114. Residential Energy Consumption Estimates, Selected Years 1960-1999, Kansas

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum				Wood Thousand Cords	Geothermal	Solar <sup>c</sup>	Electricity <sup>a</sup> Million Kilowatthours	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Total						Million Kilowatthours	
			Thousand Barrels									Thousand Barrels	
1960	22	73	53	303	3,447	3,804	157	—	—	2,360	—	5,869	—
1965	6	87	50	1,285	3,991	5,327	102	—	—	3,251	—	7,762	—
1970	4	97	53	116	4,825	4,994	80	—	—	5,348	—	12,960	—
1975	0	98	96	60	4,563	4,719	93	—	—	5,695	—	13,736	—
1980	2	85	150	5	2,083	2,237	R 527	—	—	7,189	—	17,481	—
1985	(s)	78	65	27	1,469	1,561	501	—	—	8,195	—	19,252	—
1990	(s)	71	24	11	1,182	1,218	317	—	—	9,515	—	R 20,814	—
1991	(s)	75	23	10	1,305	1,338	334	—	—	9,933	—	R 21,594	—
1992	(s)	72	29	13	1,079	1,121	352	—	—	8,873	—	R 18,924	—
1993	8	85	27	20	1,092	1,139	293	—	—	9,986	—	R 21,093	—
1994	11	74	27	8	1,054	1,089	287	—	—	10,131	—	R 21,142	—
1995	13	76	15	13	1,469	1,497	R 319	—	—	10,356	—	R 21,591	—
1996	27	85	18	19	R 1,971	R 2,008	318	—	—	10,672	—	R 22,241	—
1997	1	69	37	12	R 2,382	R 2,431	R 225	—	—	10,862	—	R 22,594	—
1998	(s)	70	11	18	2,538	2,567	199	—	—	11,832	—	24,442	—
1999	2	68	13	346	3,342	3,700	213	—	—	11,347	—	22,233	—
Trillion Btu													
1960	0.5	76.1	0.3	1.7	13.8	15.9	3.1	0.0	0.0	8.1	103.6	20.0	123.6
1965	0.1	86.4	0.3	7.3	16.0	23.6	2.0	0.0	0.0	11.1	123.2	26.5	149.7
1970	0.1	97.1	0.3	0.7	18.2	19.2	1.6	0.0	0.0	18.2	136.2	44.2	180.5
1975	0.0	96.6	0.6	0.3	17.0	17.9	1.9	0.0	0.0	19.4	135.7	46.9	182.6
1980	(s)	84.8	0.9	(s)	7.7	8.6	10.5	0.0	0.0	24.5	128.4	59.6	188.1
1985	(s)	78.3	0.4	0.2	5.3	5.8	10.0	0.0	0.0	28.0	122.2	65.7	187.8
1990	(s)	71.3	0.1	0.1	4.3	4.5	6.3	e (s)	e (s)	32.5	e 114.7	71.0	e 185.7
1991	(s)	75.7	0.1	0.1	4.7	4.9	6.7	(s)	(s)	33.9	121.2	R 73.7	R 194.9
1992	(s)	70.6	0.2	0.1	3.9	4.2	7.0	(s)	(s)	30.3	112.2	R 64.6	R 176.7
1993	0.2	83.9	0.2	0.1	3.9	4.2	5.9	(s)	(s)	34.1	128.2	72.0	200.2
1994	0.3	74.1	0.2	(s)	3.8	4.0	5.7	(s)	(s)	34.6	118.8	72.1	190.9
1995	0.3	76.1	0.1	0.1	5.3	5.5	6.4	(s)	(s)	35.3	123.7	R 73.7	R 197.4
1996	0.7	85.2	0.1	0.1	R 7.1	R 7.3	6.4	(s)	(s)	36.4	R 136.0	R 75.9	R 211.9
1997	(s)	R 69.6	0.2	0.1	R 8.6	R 8.9	R 4.5	(s)	(s)	37.1	R 120.2	R 77.1	R 197.3
1998	(s)	69.8	0.1	0.1	9.2	9.3	4.0	(s)	(s)	40.4	123.6	83.4	207.0
1999	0.1	67.8	0.1	2.0	12.1	14.1	4.3	(s)	(s)	38.7	125.0	75.9	200.9

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Includes small amounts of solar thermal and photovoltaic energy consumed by the commercial sector that cannot be separately identified. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

Table 115. Commercial Energy Consumption Estimates, Selected Years 1960-1999, Kansas

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum						Wood	Geothermal	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>c</sup>	Total <sup>d</sup>
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels						Thousand Cords	Million Kilowatthours	Million Kilowatthours			
1960	40	41	115	87	608	179	47	1,036	3	—	1,727	—	4,296	—
1965	11	38	109	367	704	204	19	1,403	2	—	2,597	—	6,200	—
1970	7	53	115	33	851	215	34	1,249	2	—	3,967	—	9,614	—
1975	0	52	209	17	805	268	36	1,335	2	—	5,614	—	13,542	—
1980	3	59	360	10	368	279	0	1,016	13	—	6,806	—	16,550	—
1985	1	57	698	10	259	177	0	1,145	R 13	—	8,174	—	19,205	—
1990	(s)	56	283	6	209	162	27	687	R 20	—	9,547	—	R 20,885	—
1991	(s)	59	363	4	230	124	7	728	R 21	—	9,935	—	R 21,598	—
1992	(s)	54	502	4	190	109	22	827	R 23	—	9,746	—	R 20,785	—
1993	15	56	645	7	193	55	30	929	24	—	10,120	—	R 21,374	—
1994	21	52	499	4	186	76	2	766	24	—	10,482	—	R 21,875	—
1995	25	53	608	6	259	74	12	959	24	—	10,645	—	R 22,194	—
1996	51	57	562	5	R 348	99	2	R 1,015	26	—	11,388	—	R 23,732	—
1997	2	41	501	28	R 420	90	0	R 1,039	R 25	—	12,043	—	R 25,051	—
1998	(s)	42	434	9	448	94	84	1,069	25	—	12,546	—	25,918	—
1999	5	40	432	4	590	61	0	1,086	30	—	12,258	—	24,018	—

  

Trillion Btu														
1960	0.9	42.6	0.7	0.5	2.4	0.9	0.3	4.8	0.1	0.0	5.9	54.3	14.7	68.9
1965	0.2	38.3	0.6	2.1	2.8	1.1	0.1	6.7	(s)	0.0	8.9	54.2	21.2	75.3
1970	0.1	52.5	0.7	0.2	3.2	1.1	0.2	5.4	(s)	0.0	13.5	71.7	32.8	104.5
1975	0.0	50.8	1.2	0.1	3.0	1.4	0.2	5.9	(s)	0.0	19.2	75.9	46.2	122.1
1980	0.1	58.5	2.1	0.1	1.4	1.5	0.0	5.0	0.3	0.0	23.2	87.0	56.5	143.5
1985	(s)	56.5	4.1	0.1	0.9	0.9	0.0	6.0	R 0.3	0.0	27.9	R 90.7	65.5	R 156.2
1990	(s)	56.0	1.6	(s)	0.8	0.9	0.2	3.5	R 0.4	e (s)	32.6	R e 92.5	R 71.3	R e 163.8
1991	(s)	59.2	2.1	(s)	0.8	0.7	(s)	3.7	R 0.4	(s)	33.9	R 97.3	R 73.7	R 171.0
1992	(s)	53.3	2.9	(s)	0.7	0.6	0.1	4.3	R 0.5	0.1	33.3	R 91.4	R 70.9	R 162.3
1993	0.3	55.3	3.8	(s)	0.7	0.3	0.2	5.0	0.5	0.1	34.5	95.7	R 72.9	R 168.6
1994	0.5	52.2	2.9	(s)	0.7	0.4	(s)	4.0	0.5	0.1	35.8	93.1	74.6	167.7
1995	0.6	53.3	3.5	(s)	0.9	0.4	0.1	5.0	0.5	0.1	36.3	95.8	75.7	171.5
1996	1.2	57.1	3.3	(s)	R 1.3	0.5	(s)	R 5.1	0.5	0.1	38.9	R 102.9	R 81.0	R 183.9
1997	(s)	R 41.6	2.9	0.2	R 1.5	0.5	0.0	R 5.1	R 0.5	0.2	41.1	R 88.5	R 85.5	R 173.9
1998	(s)	41.5	2.5	(s)	1.6	0.5	0.5	5.2	0.5	0.2	42.8	90.3	88.4	178.7
1999	0.1	39.5	2.5	(s)	2.1	0.3	0.0	5.0	0.6	0.2	41.8	87.2	81.9	169.2

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>d</sup> Small amounts of solar thermal and photovoltaic energy consumed in the commercial sector cannot be separately identified and are included in residential consumption.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

Table 116. Industrial Energy Consumption Estimates, Selected Years 1960-1999, Kansas

Year	Coal Thousand Short Tons	Natural Gas <sup>a</sup> Billion Cubic Feet	Petroleum									Hydro-electric Power <sup>b</sup> Million kWh	Wood and Waste	Other <sup>b,d</sup>	Electricity <sup>b</sup> Million kWh	Net Energy	Electrical System Energy Losses <sup>e</sup> Million kWh	Total
			Asphalt and Road Oil <sup>b</sup>	Distillate Fuel <sup>b</sup>	Kero-sene <sup>b</sup>	LPG <sup>b</sup>	Lubri-cants <sup>b</sup>	Motor Gasoline	Residual Fuel <sup>b</sup>	Other <sup>b,c</sup>	Total							
			Thousand Barrels															
1960	175	121	2,198	1,405	306	1,321	230	4,557	1,924	R 5,801	R 17,742	0	—	—	2,932	—	7,293	—
1965	148	155	3,061	1,553	160	1,530	303	3,535	755	R 6,186	R 17,084	0	—	—	3,902	—	9,318	—
1970	103	184	2,188	2,515	157	1,985	207	2,777	701	R 6,618	R 17,149	0	—	—	4,548	—	11,022	—
1975	134	152	2,162	3,532	23	3,125	253	2,406	2,178	R 8,564	R 22,244	0	—	—	6,214	—	14,990	—
1980	331	191	3,019	3,476	477	5,844	408	1,198	1,004	R 8,430	R 23,856	0	—	—	7,845	—	19,076	—
1985	363	161	1,700	3,908	20	22,687	371	1,064	66	R 5,705	R 35,521	0	—	—	7,167	—	16,839	—
1990	157	158	3,875	3,912	10	14,032	418	765	184	R 7,809	R 31,003	R f 12	—	—	8,087	—	R 17,691	—
1991	148	168	3,721	4,580	11	11,649	374	755	118	R 5,973	R 27,180	R 11	—	—	8,284	—	R 18,008	—
1992	158	175	3,715	4,546	15	15,448	381	675	157	R 6,595	R 31,532	R 13	—	—	8,451	—	R 18,023	—
1993	137	196	3,635	5,103	10	6,885	388	892	303	R 5,563	R 22,779	R 12	—	—	8,702	—	R 18,381	—
1994	137	233	4,741	5,387	6	6,364	405	943	175	R 6,137	R 24,159	R 12	—	—	9,001	—	R 18,785	—
1995	138	177	3,911	5,207	10	3,140	398	995	19	R 5,872	R 19,551	R 14	—	—	9,356	—	R 19,507	—
1996	154	159	3,581	4,892	13	R 8,100	387	1,021	135	R 7,941	R 26,069	R 14	—	—	9,231	—	R 19,237	—
1997	137	R 163	2,115	5,580	19	R 11,657	408	1,055	171	R 8,119	R 29,123	R 15	—	—	9,365	—	R 19,480	—
1998	109	145	2,699	4,776	23	11,109	428	1,156	195	7,344	27,731	11	—	—	9,762	—	20,166	—
1999	108	128	2,358	4,393	10	17,786	432	725	268	7,585	33,558	12	—	—	10,215	—	20,013	—
Trillion Btu																		
1960	4.0	125.7	14.6	8.2	1.7	5.3	1.4	23.9	12.1	R 34.8	R 102.0	0.0	0.7	0.0	10.0	R 242.3	24.9	R 267.2
1965	3.3	154.3	20.3	9.0	0.9	6.1	1.8	18.6	4.7	R 37.0	R 98.6	0.0	1.3	0.0	13.3	R 270.8	31.8	R 302.6
1970	2.2	184.1	14.5	14.7	0.9	7.5	1.3	14.6	4.4	R 39.5	R 97.3	0.0	2.0	0.0	15.5	R 301.1	37.6	R 338.7
1975	2.7	148.8	14.3	20.6	0.1	11.6	1.5	12.6	13.7	R 51.2	R 125.7	0.0	3.9	0.0	21.2	R 302.3	51.1	R 353.5
1980	7.1	189.7	20.0	20.2	2.7	21.5	2.5	6.3	6.3	R 50.1	R 129.7	0.0	R 0.0	0.0	26.8	R 353.3	65.1	R 418.3
1985	7.8	161.3	11.3	22.8	0.1	81.7	2.3	5.6	0.4	R 34.1	R 158.3	0.0	R 0.0	0.0	24.5	R 351.8	57.5	R 409.3
1990	3.8	157.8	25.7	22.8	0.1	50.9	2.5	4.0	1.2	R 46.1	R 153.2	f 0.1	R 1.4	f 0.0	27.6	R f 343.9	60.4	R f 404.2
1991	3.6	170.0	24.7	26.7	0.1	42.1	2.3	4.0	0.7	R 35.8	R 136.3	0.1	R 1.2	0.0	28.3	R 339.5	R 61.4	R 400.9
1992	3.9	172.4	24.7	26.5	0.1	56.0	2.3	3.5	1.0	R 39.1	R 153.1	0.1	R 1.1	0.0	28.8	R 359.4	R 61.5	R 420.9
1993	3.2	193.3	24.1	29.7	0.1	24.8	2.4	4.7	1.9	R 33.1	R 120.8	0.1	R 1.1	0.0	29.7	R 348.2	62.7	R 410.9
1994	3.3	232.4	31.5	31.4	(s)	23.1	2.5	R 4.9	1.1	R 36.4	R 130.9	0.1	R 1.5	0.0	30.7	R 398.9	64.1	R 463.0
1995	3.3	177.5	26.0	30.3	0.1	11.4	2.4	5.2	0.1	R 34.9	R 110.3	0.1	R 2.0	0.0	31.9	R 325.1	R 66.6	R 391.7
1996	3.9	159.1	23.8	28.5	0.1	R 29.3	2.3	R 5.3	0.8	R 46.0	R 136.1	0.1	R 2.0	0.0	31.5	R 332.8	R 65.6	R 398.5
1997	3.4	R 163.8	14.0	32.5	0.1	R 42.2	2.5	5.5	1.1	R 47.1	R 144.9	R 0.2	R 2.1	0.0	32.0	R 346.4	R 66.5	R 412.8
1998	2.7	144.3	17.9	27.8	0.1	40.1	2.6	6.0	1.2	42.6	138.4	0.1	0.4	0.0	33.3	319.3	68.8	388.1
1999	2.7	127.1	15.6	25.6	0.1	64.3	2.6	3.8	1.7	43.9	157.6	0.1	1.6	0.0	34.9	323.9	68.3	392.2

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>e</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>f</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

R=Revised data.

kWh=kilowatthours. — =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

Table 117. Transportation Energy Consumption Estimates, Selected Years 1960-1999, Kansas

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum								Ethanol <sup>c</sup>	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total <sup>c</sup>
			Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	LPG <sup>a</sup>	Lubricants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total				Million Kilowatthours	
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels								Thousand Barrels	Million Kilowatthours	Million Kilowatthours	Total <sup>c</sup>	
1960	3	43	170	3,056	952	215	507	18,976	190	24,065	0	0	—	0	—
1965	(s)	50	493	3,473	1,053	295	467	21,786	137	27,704	0	0	—	0	—
1970	(s)	73	326	4,691	1,561	348	448	25,857	8	33,238	0	0	—	0	—
1975	(s)	69	177	5,898	1,310	364	520	29,331	17	37,615	0	0	—	0	—
1980	0	52	221	10,397	2,466	110	603	28,107	2	41,906	0	0	—	0	—
1985	0	38	137	10,173	4,424	95	549	26,968	0	42,347	R <sup>e</sup> 529	0	—	0	—
1990	0	41	136	12,213	3,701	142	618	27,700	0	44,509	R 175	0	—	0	—
1991	0	33	124	10,595	3,296	108	553	27,162	0	41,838	R 170	0	—	0	—
1992	0	29	142	9,975	4,164	99	563	27,037	0	41,981	R 167	0	—	0	—
1993	0	33	151	10,367	3,617	100	574	27,533	0	42,341	R 145	0	—	0	—
1994	0	32	142	9,727	1,981	151	600	28,054	0	40,655	R 137	0	—	0	—
1995	0	35	146	13,466	2,414	56	589	28,333	0	45,004	R 110	0	—	0	—
1996	0	38	177	11,317	2,009	R 23	572	29,807	0	R 43,906	R 68	0	—	0	—
1997	0	39	247	10,860	2,130	R 97	604	29,551	0	R 43,490	R 68	0	—	0	—
1998	0	33	199	10,699	2,157	26	633	30,751	3	44,468	84	0	—	0	—
1999	0	32	240	10,384	3,476	23	639	32,764	9	47,534	140	0	—	0	—

  

Trillion Btu															
1960	0.1	44.3	0.9	17.8	5.1	0.9	3.1	99.7	1.2	128.6	0.0	0.0	172.9	0.0	172.9
1965	(s)	49.5	2.5	20.2	5.7	1.2	2.8	114.4	0.9	147.7	0.0	0.0	197.2	0.0	197.2
1970	(s)	73.2	1.6	27.3	8.6	1.3	2.7	135.8	0.1	177.5	0.0	0.0	250.7	0.0	250.7
1975	(s)	68.0	0.9	34.4	7.2	1.4	3.2	154.1	0.1	201.1	0.0	0.0	269.1	0.0	269.1
1980	0.0	52.0	1.1	60.6	13.8	0.4	3.7	147.6	(s)	227.2	0.0	0.0	279.2	0.0	279.2
1985	0.0	38.1	0.7	59.3	24.8	0.3	3.3	141.7	0.0	230.1	R <sup>e</sup> 1.9	0.0	<sup>e</sup> 268.2	0.0	<sup>e</sup> 268.2
1990	0.0	40.6	0.7	71.1	20.7	0.5	3.7	145.5	0.0	242.3	R 0.6	0.0	282.9	0.0	282.9
1991	0.0	33.3	0.6	61.7	18.3	0.4	3.4	142.7	0.0	227.1	R 0.6	0.0	260.4	0.0	260.4
1992	0.0	28.8	0.7	58.1	23.2	0.4	3.4	142.0	0.0	227.8	R 0.6	0.0	256.7	0.0	256.7
1993	0.0	33.0	0.8	60.4	20.2	0.4	3.5	144.6	0.0	229.8	0.5	0.0	262.8	0.0	262.8
1994	0.0	31.7	0.7	56.7	11.0	0.5	3.6	R 146.7	0.0	R 219.3	R 0.5	0.0	R 251.0	0.0	R 251.0
1995	0.0	34.8	0.7	78.4	13.7	0.2	3.6	R 147.8	0.0	R 244.4	R 0.4	0.0	R 279.2	0.0	R 279.2
1996	0.0	38.2	0.9	65.9	11.4	0.1	3.5	R 155.5	0.0	R 237.2	0.2	0.0	R 275.4	0.0	R 275.4
1997	0.0	39.2	1.2	63.3	12.1	R 0.4	3.7	R 154.0	0.0	R 234.6	0.2	0.0	R 273.9	0.0	R 273.9
1998	0.0	32.7	1.0	62.3	12.2	0.1	3.8	160.3	(s)	239.8	0.3	0.0	272.5	0.0	272.5
1999	0.0	31.6	1.2	60.5	19.7	0.1	3.9	170.7	0.1	256.2	0.5	0.0	287.8	0.0	287.8

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels. Transportation use of natural gas is gas consumed in the operation of pipelines, primarily in compressors, and, since 1990, is also gas consumed as vehicle fuel.

<sup>c</sup> Ethanol blended into motor gasoline, which is accounted for under motor gasoline, is shown separately here to display the use of renewable energy by the transportation sector and is included only once in the total.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1980 and 1981 due to the expanded coverage of renewable energy sources beginning in 1981.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.



**Table 118. Estimates of Energy Input at Electric Utilities, Selected Years, 1960-1999, Kansas**

Year	Coal	Natural Gas <sup>a</sup>	Petroleum				Nuclear Electric Power	Hydroelectric Power <sup>e</sup>	Wood and Waste	Geothermal Energy	Other <sup>b,f</sup>	Total <sup>g</sup>
			Heavy Oil <sup>b,c</sup>	Light Oil <sup>b,d</sup>	Petroleum Coke <sup>b</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels				Million Kilowatthours					
1960	435	82	241	110	0	351	0	20	0	0	0	—
1965	478	113	156	71	0	226	0	13	0	0	0	—
1970	344	168	385	175	0	560	0	7	0	0	0	—
1975	2,983	128	4,134	1,539	4	5,676	0	5	0	0	0	—
1980	10,034	101	492	382	0	875	0	8	0	0	0	—
1985	14,351	21	20	195	0	215	3,856	9	0	0	(s)	—
1990	15,018	27	22	130	0	152	7,874	12	0	0	(s)	—
1991	14,732	36	4	153	0	156	5,859	9	0	0	(s)	—
1992	14,068	14	2	103	0	104	8,491	0	0	0	(s)	—
1993	17,226	22	40	126	0	166	7,900	0	0	0	(s)	—
1994	16,989	27	12	129	0	142	8,529	0	0	0	(s)	—
1995	16,345	28	1	150	0	151	10,062	0	0	0	(s)	—
1996	18,852	23	155	176	0	331	8,205	0	0	0	0	—
1997	17,534	26	89	163	0	252	8,430	R (s)	0	0	0	—
1998	17,627	37	4	294	0	298	10,411	2	0	0	0	—
1999	18,888	36	339	293	0	632	9,157	1	0	0	0	—

  

Trillion Btu												
1960	10.3	85.1	1.5	0.6	0.0	2.2	0.0	0.2	0.0	0.0	0.0	97.8
1965	11.6	112.4	1.0	0.4	0.0	1.4	0.0	0.1	0.0	0.0	0.0	125.5
1970	8.3	167.5	2.4	1.0	0.0	3.4	0.0	0.1	0.0	0.0	0.0	179.4
1975	59.5	126.7	26.0	9.0	(s)	35.0	0.0	(s)	0.0	0.0	0.0	221.2
1980	184.3	97.0	3.1	2.2	0.0	5.3	0.0	0.1	0.0	0.0	0.0	286.7
1985	251.7	20.5	0.1	1.1	0.0	1.3	41.7	0.1	0.0	0.0	(s)	315.2
1990	268.8	26.9	0.1	0.8	0.0	0.9	84.1	0.1	0.0	0.0	(s)	380.8
1991	265.1	35.0	(s)	0.9	0.0	0.9	62.9	0.1	0.0	0.0	(s)	364.0
1992	250.4	13.6	(s)	0.6	0.0	0.6	90.7	0.0	0.0	0.0	(s)	355.2
1993	298.1	21.1	0.3	0.7	0.0	1.0	84.4	0.0	0.0	0.0	(s)	404.6
1994	295.9	26.8	0.1	0.8	0.0	0.8	91.1	0.0	0.0	0.0	(s)	414.6
1995	285.4	27.4	(s)	0.9	0.0	0.9	107.2	0.0	0.0	0.0	(s)	420.9
1996	332.8	22.5	1.0	1.0	0.0	2.0	87.2	0.0	0.0	0.0	0.0	444.5
1997	307.4	25.3	0.6	1.0	0.0	1.5	89.6	R (s)	0.0	0.0	0.0	423.7
1998	306.6	36.9	(s)	1.7	0.0	1.7	110.6	(s)	0.0	0.0	0.0	455.9
1999	325.9	36.2	2.1	1.7	0.0	3.8	97.3	(s)	0.0	0.0	0.0	463.2

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> Prior to 1980, based on oil used in steam plants. Since 1980, heavy oil includes fuel oil nos. 4, 5, and 6 and residual fuel oils.

<sup>d</sup> Prior to 1980, based on oil used in internal combustion and gas turbine engine plants. Since 1980, light oil includes fuel oil nos. 1 and 2, kerosene, and jet fuel.

<sup>e</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>f</sup> "Other" is electricity generated for distribution from wind, photovoltaic, and solar thermal energy.

<sup>g</sup> If applicable, from 1989, includes net imports of electricity generated from nonrenewable energy sources not shown in other columns. See data in appendix Table A8.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 119. Energy Consumption Estimates by Source, Selected Years 1960-1999, Kentucky**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum											Nuclear Electric Power	Hydro-electric Power <sup>d</sup>	Wood and Waste	Other <sup>a,e</sup>	Net Inter-state Flow of Electricity/Losses <sup>f</sup>	Total <sup>g</sup>
			Asphalt & Road Oil <sup>a</sup>	Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	Kero-sene <sup>a</sup>	LPG <sup>a</sup>	Lubri-cants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Other <sup>a,c</sup>	Total						
			Thousand Barrels															Million kWh	
1960	12,006	149	1,482	652	4,850	497	1,585	4,152	544	21,535	337	R 2,195	R 37,827	0	2,633	—	—	38,952	—
1965	17,584	172	2,112	1,052	5,567	1,284	2,375	5,869	755	25,780	600	R 3,933	R 49,327	0	2,464	—	—	1,224	—
1970	23,558	248	3,090	330	8,211	3,089	3,094	9,564	842	33,581	1,063	R 7,036	R 69,900	0	3,174	—	—	-26,029	—
1975	25,556	208	2,622	129	10,924	2,150	1,577	10,977	1,048	40,816	2,169	R 9,060	R 81,471	0	3,463	—	—	8,996	—
1980	27,728	202	2,021	112	22,906	2,897	2,912	10,223	1,057	39,829	1,012	R 13,564	R 96,533	0	2,940	—	—	-2,827	—
1985	31,066	173	1,872	66	21,768	3,434	1,507	5,539	962	39,924	622	R 7,360	R 83,053	0	2,941	—	—	-21,176	—
1990	34,449	184	3,032	51	23,408	5,713	567	6,154	1,082	43,040	545	R 9,703	R 93,295	0	R <sup>h</sup> 3,160	—	—	R -24,456	—
1991	34,517	187	2,801	51	22,666	6,368	551	6,709	968	43,766	458	R 18,160	R 102,499	0	R 3,658	—	—	R -20,727	—
1992	34,704	190	2,537	55	25,603	6,882	505	6,427	987	44,786	422	R 20,831	R 109,035	0	R 3,767	—	—	R -17,743	—
1993	39,095	203	2,550	40	27,952	5,705	612	5,815	1,005	45,756	336	R 19,609	R 109,381	0	R 3,155	—	—	R -39,668	—
1994	38,090	208	2,843	46	28,041	6,343	562	5,673	1,050	46,180	329	R 20,378	R 111,446	0	R 4,014	—	—	R -25,719	—
1995	39,516	224	2,778	44	29,108	6,305	647	5,607	1,032	48,104	204	R 19,770	R 113,600	0	R 3,423	—	—	R -24,423	—
1996	40,862	236	2,714	47	28,350	5,590	670	R 7,207	1,002	43,543	247	R 29,447	R 118,817	0	R 3,497	—	—	R -24,822	—
1997	42,228	228	3,417	28	29,335	4,556	735	R 8,757	1,058	50,174	169	R 30,846	R 129,077	0	R 3,380	—	—	R -34,343	—
1998	39,235	205	3,199	62	28,623	5,347	851	7,517	1,108	50,222	59	32,321	129,309	0	3,116	—	—	-22,347	—
1999	37,890	213	4,191	33	27,299	6,962	1,062	9,278	1,120	50,950	93	33,527	134,515	0	2,557	—	—	-11,389	—

  

Trillion Btu																			
1960	286.6	153.8	9.8	3.3	28.2	2.7	9.0	16.7	3.3	113.1	2.1	R 13.0	R 201.3	0.0	28.3	22.4	0.0	132.9	R 825.4
1965	415.5	176.7	14.0	5.3	32.4	7.2	13.5	23.5	4.6	135.4	3.8	R 22.4	R 262.1	0.0	25.8	21.7	0.0	4.2	R 905.9
1970	527.0	252.3	20.5	1.7	47.8	17.4	17.5	36.1	5.1	176.4	6.7	R 40.0	R 369.3	0.0	33.3	23.7	0.0	-88.8	R 1,116.8
1975	558.3	209.2	17.4	0.6	63.6	12.1	8.9	40.8	6.4	214.4	13.6	R 52.0	R 429.9	0.0	36.0	30.8	0.0	30.7	R 1,295.0
1980	641.7	204.1	13.4	0.6	133.4	16.3	16.5	37.6	6.4	209.2	6.4	R 76.5	R 516.3	0.0	30.5	R 19.6	0.0	-9.6	R 1,402.6
1985	716.9	177.7	12.4	0.3	126.8	19.3	8.5	20.0	5.8	209.7	3.9	R 42.9	R 449.8	0.0	30.7	R 36.0	0.0	-72.3	R 1,338.9
1990	804.3	191.7	20.1	0.3	136.4	32.3	3.2	22.3	6.6	226.1	3.4	R 57.0	R 507.7	0.0	<sup>h</sup> 32.9	R 18.6	<sup>h</sup> 0.2	R -83.4	R <sup>h</sup> 1,471.9
1991	804.6	196.3	18.6	0.3	132.0	36.0	3.1	24.2	5.9	229.9	2.9	R 102.7	R 555.7	0.0	38.2	R 18.8	0.3	R -70.7	R 1,543.0
1992	813.6	200.9	16.8	0.3	149.1	38.9	2.9	23.3	6.0	235.3	2.7	R 117.8	R 593.0	0.0	39.0	R 19.3	0.3	R -60.5	R 1,605.5
1993	922.4	213.1	16.9	0.2	162.8	32.3	3.5	21.0	6.1	240.4	2.1	R 110.6	R 595.8	0.0	32.5	R 15.6	0.3	R -135.3	R 1,644.4
1994	897.5	221.3	18.9	0.2	163.3	35.9	3.2	20.6	6.4	R 241.5	2.1	R 115.0	R 607.1	0.0	41.4	R 15.5	0.4	-87.8	R 1,695.4
1995	927.6	245.6	18.4	0.2	169.6	35.7	3.7	20.3	6.3	R 250.9	1.3	R 111.6	R 618.0	0.0	35.3	R 18.0	0.4	R -83.3	R 1,761.5
1996	951.8	248.0	18.0	0.2	165.1	31.7	3.8	R 26.0	6.1	R 227.1	1.6	R 163.5	R 643.2	0.0	R 36.2	R 19.1	0.5	R -84.7	R 1,814.1
1997	985.2	239.3	22.7	0.1	170.9	25.8	4.2	R 31.7	6.4	R 261.6	1.1	R 171.6	R 696.0	0.0	R 35.0	R 12.4	0.5	R -117.2	R 1,851.2
1998	916.5	212.0	21.2	0.3	166.7	30.3	4.8	27.2	6.7	261.8	0.4	180.7	700.1	0.0	32.2	7.2	0.6	-76.2	1,792.5
1999	885.1	220.1	27.8	0.2	159.0	39.5	6.0	33.5	6.8	265.5	0.6	187.1	726.1	0.0	26.5	10.7	0.6	-38.9	1,830.2

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.  
<sup>b</sup> Includes supplemental gaseous fuels.  
<sup>c</sup> "Other" is the subtotal of 16 petroleum products consumed in the industrial sector. See a full description in Appendix A, Section 4, "Other Petroleum Products."  
<sup>d</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.  
<sup>e</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.  
<sup>f</sup> Net interstate flow of electricity is the difference between the amount of energy in the electricity sold within a State (including associated losses) and the energy input at the electric utilities within the State. A positive number

indicates that more electricity (including associated losses) came into the State than went out of the State during the year; conversely, a negative number indicates that more electricity (including associated losses) went out of the State than came into the State.  
<sup>g</sup> From 1989, "Total" does not equal the sum of the columns. Net imports of electricity generated from nonrenewable energy sources (shown in appendix Table A8) is included in the total but not in any other columns.  
<sup>h</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.  
kWh=kilowatthours. R=Revised data. — =Not applicable.  
Note: Totals may not equal sum of components due to independent rounding.  
Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 120. Residential Energy Consumption Estimates, Selected Years 1960-1999, Kentucky**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum				Wood Thousand Cords	Geothermal	Solar <sup>c</sup>	Electricity <sup>a</sup> Million Kilowatthours	Net Energy	Electrical System Energy Losses <sup>d</sup> Million Kilowatthours	Total
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Total							
			Thousand Barrels										
1960	266	63	242	897	1,396	2,534	744	—	—	2,760	—	6,866	—
1965	176	64	278	1,653	1,594	3,526	562	—	—	3,763	—	8,984	—
1970	190	86	403	2,077	3,356	5,836	505	—	—	6,987	—	16,932	—
1975	105	79	442	1,073	3,740	5,255	542	—	—	9,586	—	23,122	—
1980	102	74	820	1,751	2,063	4,633	R 484	—	—	13,075	—	31,794	—
1985	87	60	824	833	1,586	3,244	1,197	—	—	14,539	—	34,159	—
1990	53	56	644	321	1,825	2,791	683	—	—	16,814	—	R 36,781	—
1991	65	59	703	378	2,152	3,233	719	—	—	18,644	—	R 40,532	—
1992	74	62	769	365	2,027	3,160	757	—	—	17,787	—	R 37,935	—
1993	94	67	779	396	2,347	3,522	R 571	—	—	19,223	—	R 40,602	—
1994	100	63	816	390	2,270	3,477	R 560	—	—	19,481	—	R 40,655	—
1995	46	66	781	415	2,260	3,455	R 622	—	—	20,537	—	R 42,819	—
1996	41	70	672	438	R 3,033	R 4,143	R 621	—	—	21,353	—	R 44,500	—
1997	124	66	697	486	R 3,018	R 4,201	R 294	—	—	20,998	—	R 43,678	—
1998	81	56	576	611	2,289	3,476	259	—	—	21,669	—	44,765	—
1999	140	59	476	864	2,797	4,137	278	—	—	22,548	—	44,178	—

  

Trillion Btu													
1960	6.5	65.2	1.4	5.1	5.6	12.1	14.9	0.0	0.0	9.4	108.1	23.4	131.5
1965	4.3	65.9	1.6	9.4	6.4	17.4	11.2	0.0	0.0	12.8	111.6	30.7	142.3
1970	4.4	87.9	2.3	11.8	12.7	26.8	10.1	0.0	0.0	23.8	153.1	57.8	210.9
1975	2.4	79.8	2.6	6.1	13.9	22.6	10.8	0.0	0.0	32.7	148.3	78.9	227.2
1980	2.4	74.9	4.8	9.9	7.6	22.3	9.7	0.0	0.0	44.6	153.9	108.5	262.4
1985	2.1	61.9	4.8	4.7	5.7	15.2	23.9	0.0	0.0	49.6	152.8	116.6	269.4
1990	1.3	58.3	3.8	1.8	6.6	12.2	13.7	e 0.2	e (s)	57.4	e 143.1	125.5	e 268.5
1991	1.6	62.3	4.1	2.1	7.8	14.0	14.4	0.3	(s)	63.6	R 156.2	R 138.3	R 294.4
1992	1.8	65.5	4.5	2.1	7.3	13.9	15.1	0.3	(s)	60.7	157.3	R 129.4	R 286.8
1993	2.3	70.1	4.5	2.2	8.5	15.2	R 11.4	0.3	(s)	65.6	R 165.0	R 138.5	303.6
1994	2.5	66.4	4.8	2.2	8.3	15.2	11.2	0.3	(s)	66.5	162.1	138.7	300.8
1995	1.1	72.5	4.5	2.4	8.2	15.1	R 12.4	0.3	(s)	70.1	R 171.5	R 146.1	317.6
1996	1.0	73.7	3.9	2.5	R 11.0	R 17.4	12.4	0.3	(s)	72.9	R 177.6	R 151.8	R 329.5
1997	2.9	69.4	4.1	2.8	R 10.9	R 17.7	R 5.9	0.3	(s)	71.6	R 167.8	R 149.0	R 316.8
1998	2.0	57.4	3.4	3.5	8.3	15.1	5.2	0.3	(s)	73.9	154.0	152.7	306.7
1999	3.4	61.1	2.8	4.9	10.1	17.8	5.6	0.4	(s)	76.9	165.2	150.7	315.9

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Includes small amounts of solar thermal and photovoltaic energy consumed by the commercial sector that cannot be separately identified. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 121. Commercial Energy Consumption Estimates, Selected Years 1960-1999, Kentucky**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum						Wood	Geothermal	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>c</sup>	Total <sup>d</sup>
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels						Thousand Cords	Million Kilowatthours	Million Kilowatthours			
1960	460	18	501	176	246	336	4	1,263	14	—	1,590	—	3,955	—
1965	305	21	576	325	281	268	8	1,459	11	—	2,166	—	5,171	—
1970	339	42	835	408	592	263	11	2,110	9	—	3,465	—	8,396	—
1975	187	38	915	211	660	275	7	2,069	10	—	6,489	—	15,652	—
1980	185	39	2,632	622	364	250	19	3,887	12	—	8,432	—	20,504	—
1985	162	34	1,521	92	280	377	1	2,271	R 32	—	9,465	—	22,237	—
1990	98	32	656	94	322	445	(s)	1,517	R 43	—	11,740	—	R 25,683	—
1991	122	34	716	102	380	319	0	1,516	R 46	—	12,610	—	R 27,414	—
1992	138	35	878	58	358	277	0	1,570	R 49	—	12,198	—	R 26,015	—
1993	172	38	662	78	414	40	2	1,197	46	—	12,606	—	R 26,626	—
1994	185	37	988	73	401	40	2	1,503	47	—	12,956	—	R 27,037	—
1995	85	39	1,203	117	399	42	0	1,762	47	—	13,521	—	R 28,190	—
1996	76	41	1,209	111	R 535	40	(s)	R 1,896	51	—	13,736	—	R 28,626	—
1997	230	39	989	113	R 533	40	0	R 1,675	R 32	—	15,238	—	R 31,696	—
1998	151	32	1,043	130	404	80	0	1,657	32	—	15,921	—	32,890	—
1999	261	36	999	67	494	39	1	1,599	39	—	16,496	—	32,321	—

  

Trillion Btu														
1960	11.2	18.9	2.9	1.0	1.0	1.8	(s)	6.7	0.3	0.0	5.4	42.5	13.5	56.0
1965	7.4	21.9	3.4	1.8	1.1	1.4	(s)	7.8	0.2	0.0	7.4	44.7	17.6	62.4
1970	8.0	43.2	4.9	2.3	2.2	1.4	0.1	10.9	0.2	0.0	11.8	74.0	28.6	102.7
1975	4.3	38.8	5.3	1.2	2.5	1.4	(s)	10.5	0.2	0.0	22.1	76.0	53.4	129.4
1980	4.4	39.7	15.3	3.5	1.3	1.3	0.1	21.6	0.2	0.0	28.8	94.7	70.0	164.7
1985	3.9	34.8	8.9	0.5	1.0	2.0	(s)	12.4	R 0.6	0.0	32.3	R 84.0	75.9	R 159.9
1990	2.4	33.1	3.8	0.5	1.2	2.3	(s)	7.9	R 0.9	e 0.0	40.1	R e 84.3	87.6	R e 171.9
1991	3.0	35.3	4.2	0.6	1.4	1.7	0.0	7.8	R 0.9	0.0	43.0	R 90.0	R 93.5	R 183.6
1992	3.4	37.5	5.1	0.3	1.3	1.5	0.0	8.2	R 1.0	0.0	41.6	R 91.7	R 88.8	R 180.4
1993	4.3	39.6	3.9	0.4	1.5	0.2	(s)	6.0	0.9	0.0	43.0	93.9	R 90.8	184.7
1994	4.6	39.0	5.8	0.4	1.5	0.2	(s)	7.8	0.9	0.1	44.2	96.7	R 92.3	189.0
1995	2.1	42.3	7.0	0.7	1.4	0.2	0.0	9.3	0.9	0.1	46.1	101.0	R 96.2	197.1
1996	1.9	43.0	7.0	0.6	R 1.9	0.2	(s)	R 9.8	1.0	0.1	46.9	R 102.7	R 97.7	R 200.4
1997	5.4	40.6	5.8	0.6	R 1.9	0.2	0.0	R 8.5	R 0.6	0.2	52.0	107.3	R 108.1	R 215.4
1998	3.7	33.6	6.1	0.7	1.5	0.4	0.0	8.7	0.6	0.2	54.3	101.1	112.2	213.3
1999	6.3	37.0	5.8	0.4	1.8	0.2	(s)	8.2	0.8	0.2	56.3	108.7	110.3	219.0

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>d</sup> Small amounts of solar thermal and photovoltaic energy consumed in the commercial sector cannot be separately identified and are included in residential consumption.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 122. Industrial Energy Consumption Estimates, Selected Years 1960-1999, Kentucky**

Year	Coal Thousand Short Tons	Natural Gas <sup>a</sup> Billion Cubic Feet	Petroleum									Hydro-electric Power <sup>b</sup> Million kWh	Wood and Waste	Other <sup>b,d</sup>	Electricity <sup>b</sup>		Electrical System Energy Losses <sup>e</sup> Million kWh	Total
			Asphalt and Road Oil <sup>b</sup>	Distillate Fuel <sup>b</sup>	Kerosene <sup>b</sup>	LPG <sup>b</sup>	Lubricants <sup>b</sup>	Motor Gasoline	Residual Fuel <sup>b</sup>	Other <sup>b,c</sup>	Total				Million kWh	Net Energy		
			Thousand Barrels															
1960	3,754	46	1,482	1,558	512	2,476	138	485	289	R 2,195	R 9,134	0	—	—	23,818	—	59,243	—
1965	4,879	58	2,112	1,987	397	3,957	346	430	536	R 3,933	R 13,698	0	—	—	20,893	—	49,884	—
1970	4,325	75	3,090	2,078	608	5,562	474	209	786	R 7,036	R 19,843	0	—	—	20,586	—	49,887	—
1975	2,898	66	2,622	3,346	293	6,511	518	195	2,059	R 9,060	R 24,603	0	—	—	31,006	—	74,790	—
1980	3,058	66	2,021	6,433	539	7,784	539	89	857	R 13,564	R 31,825	0	—	—	28,280	—	68,767	—
1985	3,732	63	1,872	5,622	582	3,574	490	843	621	R 7,360	R 20,964	0	—	—	26,564	—	62,409	—
1990	3,431	72	3,032	5,211	152	3,941	552	848	544	R 9,703	R 23,983	f 0	—	—	32,543	—	R 71,192	—
1991	2,898	74	2,801	5,226	72	4,125	493	865	458	R 18,160	R 32,200	0	—	—	32,939	—	R 71,607	—
1992	2,777	76	2,537	5,792	82	3,986	503	861	422	R 20,831	R 35,014	0	—	—	37,084	—	R 79,091	—
1993	3,565	79	2,550	5,257	138	2,997	512	1,043	334	R 19,609	R 32,440	0	—	—	36,320	—	R 76,713	—
1994	3,241	86	2,843	6,400	99	2,909	535	1,114	328	R 20,378	R 34,606	0	—	—	40,049	—	R 83,579	—
1995	3,679	93	2,778	6,614	115	2,902	526	1,168	204	R 19,770	R 34,077	0	—	—	40,490	—	R 84,420	—
1996	3,674	97	2,714	6,181	121	R 3,589	511	1,199	247	R 29,447	R 44,010	0	—	—	41,930	—	R 87,382	—
1997	3,593	98	3,417	6,019	136	R 5,148	540	1,230	169	R 30,846	R 47,506	0	—	—	40,600	—	R 84,451	—
1998	3,161	96	3,199	5,800	110	4,805	565	821	59	32,321	47,679	0	—	—	38,260	—	79,037	—
1999	2,778	96	4,191	4,504	131	5,962	571	820	92	33,527	49,798	0	—	—	40,054	—	78,479	—

  

Trillion Btu																		
1960	95.9	47.7	9.8	9.1	2.9	9.9	0.8	2.5	1.8	R 13.0	R 50.0	0.0	7.3	0.0	81.3	R 282.1	202.1	R 484.3
1965	123.9	60.0	14.0	11.6	2.3	15.9	2.1	2.3	3.4	R 22.4	R 73.8	0.0	10.2	0.0	71.3	R 339.3	170.2	R 509.5
1970	105.9	76.1	20.5	12.1	3.4	21.0	2.9	1.1	4.9	R 40.0	R 106.0	0.0	13.4	0.0	70.2	R 371.7	170.2	R 541.9
1975	71.1	66.6	17.4	19.5	1.7	24.2	3.1	1.0	12.9	R 52.0	R 131.9	0.0	19.8	0.0	105.8	R 395.2	255.2	R 650.4
1980	76.1	66.4	13.4	37.5	3.1	28.6	3.3	0.5	5.4	R 76.5	R 168.2	0.0	R 9.7	0.0	96.5	R 416.9	234.6	R 651.5
1985	94.2	65.1	12.4	32.8	3.3	12.9	3.0	4.4	3.9	R 42.9	R 115.6	0.0	R 11.4	0.0	90.6	R 376.9	212.9	R 589.9
1990	87.1	74.4	20.1	30.4	0.9	14.3	3.3	4.5	3.4	R 57.0	R 133.8	f 0.0	R 4.0	f 0.0	111.0	R 410.4	242.9	R 653.3
1991	73.8	77.6	18.6	30.4	0.4	14.9	3.0	4.5	2.9	R 102.7	R 177.5	0.0	R 3.5	0.0	112.4	R 444.7	R 244.3	R 689.0
1992	71.3	80.9	16.8	33.7	0.5	14.4	3.1	4.5	2.7	R 117.8	R 193.5	0.0	R 3.2	0.0	126.5	R 475.4	R 269.9	R 745.2
1993	90.9	83.1	16.9	30.6	0.8	10.8	3.1	5.5	2.1	R 110.6	R 180.4	0.0	R 3.3	0.0	123.9	R 481.5	R 261.7	R 743.3
1994	82.8	91.2	18.9	37.3	0.6	10.6	3.2	5.8	2.1	R 115.0	R 193.4	0.0	R 3.4	0.0	136.6	R 507.4	R 285.2	R 792.6
1995	94.2	102.4	18.4	38.5	0.7	10.5	3.2	6.1	1.3	R 111.6	R 190.3	0.0	R 4.6	0.0	138.2	R 529.7	R 288.0	R 817.7
1996	93.7	101.7	18.0	36.0	0.7	R 13.0	3.1	6.3	1.6	R 163.5	R 242.1	0.0	R 5.7	0.0	143.1	R 586.2	R 298.1	R 884.4
1997	91.1	103.1	22.7	35.1	0.8	R 18.6	3.3	R 6.4	1.1	R 171.6	R 259.5	0.0	R 5.9	0.0	138.5	R 598.1	R 288.1	R 886.3
1998	80.9	98.8	21.2	33.8	0.6	17.4	3.4	4.3	0.4	180.7	261.8	0.0	1.4	0.0	130.5	573.4	269.7	843.1
1999	71.3	99.2	27.8	26.2	0.7	21.6	3.5	4.3	0.6	187.1	271.8	0.0	4.4	0.0	136.7	583.3	267.8	851.1

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>e</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for

electrical system energy losses.

<sup>f</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

R=Revised data.

kWh=kilowatt-hours. — =Not applicable.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 123. Transportation Energy Consumption Estimates, Selected Years 1960-1999, Kentucky**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum								Ethanol <sup>c</sup>	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total <sup>c</sup>
			Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	LPG <sup>a</sup>	Lubricants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total					
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels								Thousand Barrels	Million Kilowatthours	Million Kilowatthours	Total <sup>c</sup>	
1960	60	19	652	2,549	497	34	405	20,715	35	24,886	0	0	—	0	—
1965	15	28	1,052	2,725	1,284	36	409	25,082	42	30,630	0	0	—	0	—
1970	7	36	330	4,891	3,089	54	368	33,109	145	41,986	0	0	—	0	—
1975	(s)	24	129	6,215	2,150	66	530	40,346	2	49,437	0	0	—	0	—
1980	0	21	112	12,795	2,897	13	518	39,490	136	55,961	0	0	—	0	—
1985	0	14	66	13,530	3,434	98	471	38,704	0	56,304	R e 1,046	0	—	0	—
1990	0	25	51	16,685	5,713	65	531	41,748	0	64,792	R 841	0	—	0	—
1991	0	20	51	15,793	6,368	52	475	42,583	0	65,322	R 826	0	—	0	—
1992	0	16	55	17,969	6,882	57	484	43,648	0	69,095	R 969	0	—	0	—
1993	0	19	40	21,040	5,705	56	493	44,674	0	72,008	R 611	0	—	0	—
1994	0	23	46	19,519	6,343	93	515	45,027	0	71,542	R 258	0	—	0	—
1995	0	25	44	20,228	6,305	47	506	46,894	0	74,024	R 130	0	—	0	—
1996	0	26	47	19,980	5,590	R 50	491	42,303	0	R 68,461	R 134	0	—	0	—
1997	0	23	28	21,364	4,556	R 58	519	48,904	0	R 75,430	R 159	0	—	0	—
1998	0	16	62	20,939	5,347	19	543	49,322	0	76,232	94	0	—	0	—
1999	0	17	33	21,100	6,962	26	549	50,091	0	78,761	88	0	—	0	—

  

Trillion Btu															
1960	1.5	19.6	3.3	14.8	2.7	0.1	2.5	108.8	0.2	132.5	0.0	0.0	153.5	0.0	153.5
1965	0.4	28.4	5.3	15.9	7.2	0.1	2.5	131.8	0.3	163.0	0.0	0.0	191.8	0.0	191.8
1970	0.2	36.3	1.7	28.5	17.4	0.2	2.2	173.9	0.9	224.8	0.0	0.0	261.3	0.0	261.3
1975	(s)	23.7	0.6	36.2	12.1	0.2	3.2	211.9	(s)	264.4	0.0	0.0	288.1	0.0	288.1
1980	0.0	21.1	0.6	74.5	16.3	(s)	3.1	207.4	0.9	302.9	0.0	0.0	324.0	0.0	324.0
1985	0.0	14.7	0.3	78.8	19.3	0.4	2.9	203.3	0.0	305.0	R e 3.7	0.0	e 319.8	0.0	e 319.8
1990	0.0	25.6	0.3	97.2	32.3	0.2	3.2	219.3	0.0	352.5	R 3.0	0.0	378.1	0.0	378.1
1991	0.0	20.9	0.3	92.0	36.0	0.2	2.9	223.7	0.0	355.1	R 2.9	0.0	376.0	0.0	376.0
1992	0.0	16.8	0.3	104.7	38.9	0.2	2.9	229.3	0.0	376.3	R 3.4	0.0	393.1	0.0	393.1
1993	0.0	19.9	0.2	122.6	32.3	0.2	3.0	234.7	0.0	392.9	R 2.2	0.0	412.8	0.0	412.8
1994	0.0	24.3	0.2	113.7	35.9	0.3	3.1	R 235.5	0.0	R 388.8	R 0.9	0.0	R 413.1	0.0	R 413.1
1995	0.0	27.4	0.2	117.8	35.7	0.2	3.1	R 244.6	0.0	R 401.6	R 0.5	0.0	R 429.0	0.0	R 429.0
1996	0.0	27.8	0.2	116.4	31.7	0.2	3.0	R 220.7	0.0	R 372.1	R 0.5	0.0	R 399.9	0.0	R 399.9
1997	0.0	24.0	0.1	124.4	25.8	0.2	3.1	R 254.9	0.0	R 408.7	R 0.6	0.0	R 432.7	0.0	R 432.7
1998	0.0	16.3	0.3	122.0	30.3	0.1	3.3	257.1	0.0	413.0	0.3	0.0	429.3	0.0	429.3
1999	0.0	17.2	0.2	122.9	39.5	0.1	3.3	261.0	0.0	427.0	0.3	0.0	444.2	0.0	444.2

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels. Transportation use of natural gas is gas consumed in the operation of pipelines, primarily in compressors, and, since 1990, is also gas consumed as vehicle fuel.

<sup>c</sup> Ethanol blended into motor gasoline, which is accounted for under motor gasoline, is shown separately here to display the use of renewable energy by the transportation sector and is included only once in the total.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1980 and 1981 due to the expanded coverage of renewable energy sources beginning in 1981.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 124. Estimates of Energy Input at Electric Utilities, Selected Years, 1960-1999, Kentucky**

Year	Coal	Natural Gas <sup>a</sup>	Petroleum				Nuclear Electric Power	Hydroelectric Power <sup>e</sup>	Wood and Waste	Geothermal Energy	Other <sup>b,f</sup>	Total <sup>g</sup>
			Heavy Oil <sup>b,c</sup>	Light Oil <sup>b,d</sup>	Petroleum Coke <sup>b</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels				Million Kilowatthours					
1960	7,466	2	9	(s)	0	10	0	2,633	0	0	0	—
1965	12,210	(s)	14	(s)	0	14	0	2,464	0	0	0	—
1970	18,698	9	121	4	0	124	0	3,174	0	0	0	—
1975	22,366	(s)	100	7	0	108	0	3,463	0	0	0	—
1980	24,383	2	0	227	0	227	0	2,940	0	0	0	—
1985	27,085	1	0	270	0	270	0	2,941	0	0	0	—
1990	30,867	(s)	0	212	0	212	0	3,160	0	0	0	—
1991	31,432	(s)	0	228	0	228	0	3,658	0	0	0	—
1992	31,715	(s)	0	195	0	195	0	3,767	0	0	0	—
1993	35,264	(s)	0	214	0	214	0	3,155	0	0	0	—
1994	34,564	(s)	0	317	0	317	0	4,014	0	0	0	—
1995	35,707	1	0	282	0	282	0	3,423	0	0	0	—
1996	37,071	2	0	308	0	308	0	3,497	0	0	0	—
1997	38,281	2	0	266	0	266	0	3,380	0	0	0	—
1998	35,842	6	0	265	0	265	0	3,116	0	0	0	—
1999	34,710	6	0	220	0	220	0	2,557	0	0	0	—

  

Trillion Btu												
1960	171.5	2.4	0.1	(s)	0.0	0.1	0.0	28.3	0.0	0.0	0.0	202.3
1965	279.5	0.5	0.1	(s)	0.0	0.1	0.0	25.8	0.0	0.0	0.0	305.8
1970	408.6	8.7	0.8	(s)	0.0	0.8	0.0	33.3	0.0	0.0	0.0	451.3
1975	480.4	0.3	0.6	(s)	0.0	0.7	0.0	36.0	0.0	0.0	0.0	517.4
1980	558.8	1.9	0.0	1.3	0.0	1.3	0.0	30.5	0.0	0.0	0.0	592.6
1985	616.7	1.1	0.0	1.6	0.0	1.6	0.0	30.7	0.0	0.0	0.0	650.2
1990	713.5	0.3	0.0	1.2	0.0	1.2	0.0	32.9	0.0	0.0	0.0	747.9
1991	726.2	0.2	0.0	1.3	0.0	1.3	0.0	38.2	0.0	0.0	0.0	765.9
1992	737.1	0.3	0.0	1.1	0.0	1.1	0.0	39.0	0.0	0.0	0.0	777.4
1993	825.0	0.3	0.0	1.2	0.0	1.2	0.0	32.5	0.0	0.0	0.0	859.0
1994	807.6	0.4	0.0	1.8	0.0	1.8	0.0	41.4	0.0	0.0	0.0	851.2
1995	830.2	0.9	0.0	1.6	0.0	1.6	0.0	35.3	0.0	0.0	0.0	868.0
1996	855.3	1.9	0.0	1.8	0.0	1.8	0.0	<sup>R</sup> 36.2	0.0	0.0	0.0	895.1
1997	885.9	2.2	0.0	1.5	0.0	1.5	0.0	<sup>R</sup> 35.0	0.0	0.0	0.0	<sup>R</sup> 924.7
1998	830.0	5.9	0.0	1.5	0.0	1.5	0.0	32.2	0.0	0.0	0.0	869.7
1999	804.1	5.7	0.0	1.3	0.0	1.3	0.0	26.5	0.0	0.0	0.0	837.5

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> Prior to 1980, based on oil used in steam plants. Since 1980, heavy oil includes fuel oil nos. 4, 5, and 6 and residual fuel oils.

<sup>d</sup> Prior to 1980, based on oil used in internal combustion and gas turbine engine plants. Since 1980, light oil includes fuel oil nos. 1 and 2, kerosene, and jet fuel.

<sup>e</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>f</sup> "Other" is electricity generated for distribution from wind, photovoltaic, and solar thermal energy.

<sup>g</sup> If applicable, from 1989, includes net imports of electricity generated from nonrenewable energy sources not shown in other columns. See data in appendix Table A8.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 125. Energy Consumption Estimates by Source, Selected Years 1960-1999, Louisiana**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum											Nuclear Electric Power	Hydro-electric Power <sup>d</sup>	Wood and Waste	Other <sup>a,e</sup>	Net Inter-state Flow of Electricity/Losses <sup>f</sup>	Total <sup>g</sup>
			Asphalt & Road Oil <sup>a</sup>	Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	Kero-sene <sup>a</sup>	LPG <sup>a</sup>	Lubri-cants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Other <sup>a,c</sup>	Total						
			Thousand Barrels															Million kWh	
1960	0	970	2,201	847	10,710	3,207	927	21,646	1,259	22,550	8,769	R 16,663	R 88,779	0	0	—	—	-2,067	—
1965	(s)	1,110	2,539	1,055	8,357	6,097	803	31,150	1,483	27,404	7,889	R 22,380	R 109,158	0	0	—	—	362	—
1970	0	1,841	2,210	447	11,799	5,879	2,509	47,555	1,590	34,850	11,118	R 32,499	R 150,456	0	0	—	—	321	—
1975	0	1,789	2,812	295	21,502	6,082	2,418	52,953	1,826	43,192	28,410	R 50,685	R 210,174	0	0	—	—	2,064	—
1980	111	1,794	1,946	255	22,579	8,644	5,711	52,872	1,999	47,157	64,084	R 88,497	R 293,743	0	0	—	—	36,712	—
1985	9,217	1,386	1,835	171	33,602	12,803	187	70,430	1,819	49,302	24,717	R 52,809	R 247,676	2,457	0	—	—	64,216	—
1990	12,547	1,571	1,672	108	39,230	25,879	81	47,504	2,047	43,967	23,302	R 85,104	R 268,893	14,197	R <sup>h</sup> 747	—	—	R 19,869	—
1991	12,965	1,508	1,498	93	34,796	32,179	87	51,957	1,831	43,005	26,096	R 71,894	R 263,436	13,956	R 701	—	—	R 23,841	—
1992	13,674	1,546	1,689	87	31,546	26,950	46	54,256	1,867	45,117	30,253	R 82,039	R 273,850	10,356	R 736	—	—	R 29,644	—
1993	13,676	1,578	1,860	219	35,151	25,124	62	55,642	1,901	46,073	27,878	R 81,658	R 275,569	14,398	R 1,010	—	—	R 22,979	—
1994	14,100	1,624	1,682	132	38,762	32,225	49	67,586	1,987	45,627	24,555	R 83,498	R 296,101	12,779	R 1,064	—	—	R 24,874	—
1995	13,357	1,718	1,652	87	32,699	28,853	37	66,974	1,953	47,247	23,418	R 79,504	R 282,424	15,686	R 1,017	—	—	R 15,333	—
1996	12,534	1,664	1,720	81	39,288	29,030	54	R 66,649	1,895	50,871	26,988	R 56,834	R 273,409	15,765	R 1,090	—	—	R 45,436	—
1997	13,874	1,659	5,289	98	35,276	30,459	122	R 47,298	2,002	46,918	21,961	R 57,368	R 246,790	13,511	R 626	—	—	R 39,826	—
1998	13,891	1,569	1,697	78	32,495	28,643	130	46,693	2,096	50,105	23,284	52,618	237,839	16,428	1,063	—	—	22,129	—
1999	13,954	1,495	1,520	87	36,368	34,016	87	75,103	2,118	49,717	26,442	55,049	280,507	13,112	802	—	—	25,594	—

  

Trillion Btu																			
1960	0.0	1,003.8	14.6	4.3	62.4	17.4	5.3	86.8	7.6	118.5	55.1	R 99.8	R 471.8	0.0	0.0	39.0	0.0	-7.1	R 1,507.5
1965	(s)	1,156.4	16.8	5.3	48.7	33.8	4.6	124.9	9.0	144.0	49.6	R 133.1	R 569.8	0.0	0.0	38.3	0.0	1.2	R 1,765.8
1970	0.0	1,894.2	14.7	2.3	68.7	32.6	14.2	179.7	9.6	183.1	69.9	R 191.7	R 766.5	0.0	0.0	41.6	0.0	1.1	R 2,703.4
1975	0.0	1,854.8	18.7	1.5	125.2	33.9	13.7	196.7	11.1	226.9	178.6	R 294.9	R 1,101.1	0.0	0.0	42.4	0.0	7.0	R 3,005.3
1980	2.5	1,862.2	12.9	1.3	131.5	48.4	32.4	194.3	12.1	247.7	402.9	R 505.5	R 1,589.0	0.0	0.0	R 72.4	0.0	125.3	R 3,651.3
1985	159.1	1,441.8	12.2	0.9	195.7	72.0	1.1	253.8	11.0	259.0	155.4	R 309.0	R 1,270.0	26.6	0.0	R 77.9	0.0	219.1	R 3,194.4
1990	208.5	1,636.9	11.1	0.5	228.5	146.1	0.5	172.2	12.4	231.0	146.5	R 486.9	R 1,435.6	151.6	R <sup>h</sup> 7.8	R 125.1	h <sup>0</sup> 2	R 67.8	R <sup>h</sup> 3,633.5
1991	214.3	1,579.0	9.9	0.5	202.7	181.9	0.5	187.8	11.1	225.9	164.1	R 413.8	R 1,398.1	149.9	R 7.3	R 135.3	0.2	R 81.3	R 3,565.4
1992	223.5	1,613.8	11.2	0.4	183.8	152.3	0.3	196.6	11.3	237.0	190.2	R 469.8	R 1,452.8	110.6	R 7.6	R 132.1	0.2	R 101.1	R 3,641.9
1993	222.7	1,636.8	12.3	1.1	204.8	142.0	0.4	200.6	11.5	242.0	175.3	R 469.5	R 1,459.5	153.8	R 10.4	R 128.7	0.2	R 78.4	R 3,690.6
1994	230.8	1,688.7	11.2	0.7	225.8	182.6	0.3	245.7	12.1	R 238.6	154.4	R 478.6	R 1,549.8	136.4	R 11.0	R 141.1	0.3	R 84.9	R 3,843.0
1995	217.5	1,778.0	11.0	0.4	190.5	163.6	0.2	242.6	11.8	R 246.4	147.2	R 455.5	R 1,469.3	167.2	R 10.5	R 124.9	0.3	R 52.3	R 3,820.0
1996	205.6	1,737.7	11.4	0.4	228.9	164.6	0.3	R 240.8	11.5	R 265.3	169.7	R 336.6	R 1,429.5	167.5	R 11.3	R 148.3	0.4	R 155.0	R 3,855.2
1997	225.4	1,855.0	35.1	0.5	205.5	172.7	0.7	R 171.0	12.1	R 244.6	138.1	R 339.6	R 1,319.9	143.5	R 6.5	R 136.4	0.4	R 135.9	R 3,823.0
1998	225.3	1,679.1	11.3	0.4	189.3	162.4	0.7	168.7	12.7	261.1	146.4	312.4	1,265.5	174.5	11.0	108.8	0.5	75.5	3,540.1
1999	227.8	1,558.0	10.1	0.4	211.8	192.9	0.5	271.6	12.8	259.1	166.2	326.6	1,452.0	139.3	8.3	142.1	0.5	87.3	3,615.4

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.  
<sup>b</sup> Includes supplemental gaseous fuels.  
<sup>c</sup> "Other" is the subtotal of 16 petroleum products consumed in the industrial sector. See a full description in Appendix A, Section 4, "Other Petroleum Products."  
<sup>d</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.  
<sup>e</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.  
<sup>f</sup> Net interstate flow of electricity is the difference between the amount of energy in the electricity sold within a State (including associated losses) and the energy input at the electric utilities within the State. A positive number

indicates that more electricity (including associated losses) came into the State than went out of the State during the year; conversely, a negative number indicates that more electricity (including associated losses) went out of the State than came into the State.  
<sup>g</sup> From 1989, "Total" does not equal the sum of the columns. Net imports of electricity generated from nonrenewable energy sources (shown in appendix Table A8) is included in the total but not in any other columns.  
<sup>h</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.  
 kWh=kilowatthours. R=Revised data. — =Not applicable.  
 (s)=Btu value less than 0.05 and physical unit value less than 0.5.  
 Note: Totals may not equal sum of components due to independent rounding.  
 Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.



**Table 126. Residential Energy Consumption Estimates, Selected Years 1960-1999, Louisiana**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum				Wood Thousand Cords	Geothermal	Solar <sup>c</sup>	Electricity <sup>a</sup> Million Kilowatthours	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Total						Million Kilowatthours	
			Thousand Barrels									Million Kilowatthours	
1960	0	56	11	7	1,567	1,585	453	—	—	3,014	—	7,498	—
1965	0	61	6	14	2,159	2,178	304	—	—	5,161	—	12,323	—
1970	0	86	6	20	2,709	2,735	219	—	—	9,334	—	22,620	—
1975	0	96	10	21	2,086	2,117	257	—	—	11,923	—	28,761	—
1980	1	73	5	0	1,147	1,152	R 553	—	—	16,832	—	40,930	—
1985	0	61	8	18	989	1,014	308	—	—	20,168	—	47,383	—
1990	0	53	9	13	774	797	421	—	—	21,434	—	R 46,888	—
1991	(s)	55	2	14	825	840	444	—	—	21,577	—	R 46,906	—
1992	0	55	(s)	9	1,058	1,067	467	—	—	21,188	—	R 45,188	—
1993	1	57	(s)	7	712	719	R 409	—	—	22,430	—	R 47,376	—
1994	0	53	13	5	683	701	R 401	—	—	22,629	—	R 47,224	—
1995	2	53	1	9	626	636	R 445	—	—	24,116	—	R 50,281	—
1996	0	57	1	17	791	809	R 444	—	—	24,311	—	R 50,664	—
1997	(s)	53	(s)	92	R 871	R 963	R 195	—	—	24,502	—	R 50,966	—
1998	0	48	1	69	1,270	1,340	172	—	—	26,709	—	55,175	—
1999	0	45	3	62	1,889	1,955	184	—	—	26,426	—	51,776	—
<b>Trillion Btu</b>													
1960	0.0	57.8	0.1	(s)	6.3	6.4	9.1	0.0	0.0	10.3	83.5	25.6	109.1
1965	0.0	63.6	(s)	0.1	8.7	8.8	6.1	0.0	0.0	17.6	96.1	42.0	138.1
1970	0.0	88.6	(s)	0.1	10.2	10.4	4.4	0.0	0.0	31.8	135.3	77.2	212.4
1975	0.0	99.3	0.1	0.1	7.7	7.9	5.1	0.0	0.0	40.7	153.0	98.1	251.1
1980	(s)	75.8	(s)	0.0	4.2	4.2	R 11.1	0.0	0.0	57.4	148.6	139.7	288.2
1985	0.0	63.0	(s)	0.1	3.6	3.7	6.2	0.0	0.0	68.8	141.7	161.7	303.3
1990	0.0	55.6	0.1	0.1	2.8	2.9	8.4	e 0.1	e 0.1	73.1	e 140.3	160.0	R e 300.3
1991	(s)	57.2	(s)	0.1	3.0	3.1	8.9	0.1	0.1	73.6	143.0	R 160.0	R 303.0
1992	0.0	57.7	(s)	0.1	3.8	3.9	9.3	0.1	0.1	72.3	143.4	R 154.2	R 297.6
1993	(s)	58.6	(s)	(s)	2.6	2.6	8.2	0.2	0.1	76.5	146.2	R 161.6	R 307.8
1994	0.0	55.0	0.1	(s)	2.5	2.6	8.0	0.1	0.1	77.2	R 143.1	161.1	R 304.2
1995	(s)	54.3	(s)	0.1	2.3	2.3	8.9	0.1	0.1	82.3	148.1	R 171.6	R 319.7
1996	0.0	59.1	(s)	0.1	2.9	3.0	8.9	0.2	0.1	82.9	154.1	R 172.9	R 327.0
1997	(s)	59.8	(s)	0.5	R 3.1	R 3.7	R 3.9	0.2	0.1	83.6	R 151.2	R 173.9	R 325.1
1998	0.0	51.2	(s)	0.4	4.6	5.0	3.4	0.2	0.1	91.1	151.0	188.3	339.3
1999	0.0	47.0	(s)	0.4	6.8	7.2	3.7	0.2	0.1	90.2	148.4	176.7	325.0

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Includes small amounts of solar thermal and photovoltaic energy consumed by the commercial sector that cannot be separately identified. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 127. Commercial Energy Consumption Estimates, Selected Years 1960-1999, Louisiana**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum						Wood	Geothermal	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>c</sup>	Total <sup>d</sup>
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels						Thousand Cords	Million Kilowatthours	Million Kilowatthours			
1960	0	23	1,604	156	276	259	304	2,599	9	—	2,493	—	6,202	—
1965	0	23	815	305	381	299	206	2,006	6	—	4,890	—	11,675	—
1970	0	70	838	445	478	381	502	2,645	4	—	8,427	—	20,421	—
1975	0	51	1,458	467	368	465	1,830	4,588	5	—	9,225	—	22,253	—
1980	3	40	399	549	202	168	13,466	14,784	13	—	12,809	—	31,147	—
1985	0	30	3,743	65	174	235	575	4,793	R 8	—	16,548	—	38,877	—
1990	0	25	1,091	21	137	318	40	1,606	R 27	—	16,528	—	R 36,156	—
1991	(s)	25	899	22	146	258	121	1,445	R 28	—	16,541	—	R 35,958	—
1992	0	28	606	10	187	245	6	1,054	R 30	—	16,441	—	R 35,065	—
1993	(s)	25	865	26	126	41	(s)	1,057	33	—	16,884	—	R 35,661	—
1994	0	24	865	13	121	41	0	1,039	R 34	—	17,630	—	R 36,793	—
1995	3	24	213	6	110	41	0	370	R 34	—	18,016	—	R 37,562	—
1996	0	26	118	7	140	41	1	307	36	—	18,411	—	R 38,368	—
1997	(s)	26	222	3	R 154	41	0	R 419	R 21	—	18,888	—	R 39,290	—
1998	0	24	208	5	224	41	0	478	21	—	20,005	—	41,327	—
1999	0	25	537	9	333	41	0	920	26	—	20,354	—	39,880	—

  

Trillion Btu														
1960	0.0	24.3	9.3	0.9	1.1	1.4	1.9	14.6	0.2	0.0	8.5	47.6	21.2	68.8
1965	0.0	23.5	4.7	1.7	1.5	1.6	1.3	10.9	0.1	0.0	16.7	51.2	39.8	91.0
1970	0.0	72.4	4.9	2.5	1.8	2.0	3.2	14.4	0.1	0.0	28.8	115.6	69.7	185.2
1975	0.0	52.3	8.5	2.6	1.4	2.4	11.5	26.5	0.1	0.0	31.5	110.3	75.9	186.2
1980	0.1	41.5	2.3	3.1	0.7	0.9	84.7	91.7	0.3	0.0	43.7	177.2	106.3	283.5
1985	0.0	31.4	21.8	0.4	0.6	1.2	3.6	27.7	R 0.2	0.0	56.5	R 115.7	132.6	R 248.3
1990	0.0	26.0	6.4	0.1	0.5	1.7	0.3	8.9	R 0.5	e 0.0	56.4	R e 91.8	R 123.4	R e 215.1
1991	(s)	26.7	5.2	0.1	0.5	1.4	0.8	8.0	R 0.6	0.0	56.4	R 91.7	R 122.7	R 214.4
1992	0.0	29.7	3.5	0.1	0.7	1.3	(s)	5.6	R 0.6	0.0	56.1	R 92.0	R 119.6	R 211.6
1993	(s)	26.1	5.0	0.1	0.5	0.2	(s)	5.9	0.7	0.0	57.6	90.2	121.7	211.9
1994	0.0	25.1	5.0	0.1	0.4	0.2	0.0	5.8	0.7	0.1	60.2	91.8	125.5	217.3
1995	0.1	24.6	1.2	(s)	0.4	0.2	0.0	1.9	0.7	0.1	61.5	88.8	R 128.2	R 217.0
1996	0.0	26.9	0.7	(s)	0.5	0.2	(s)	1.5	0.7	0.1	62.8	92.0	R 130.9	R 222.9
1997	(s)	29.1	1.3	(s)	R 0.6	0.2	0.0	R 2.1	R 0.4	0.2	64.4	R 96.2	R 134.1	230.2
1998	0.0	25.9	1.2	(s)	0.8	0.2	0.0	2.3	0.4	0.2	68.3	97.1	141.0	238.1
1999	0.0	25.6	3.1	0.1	1.2	0.2	0.0	4.6	0.5	0.2	69.4	100.4	136.1	236.5

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>d</sup> Small amounts of solar thermal and photovoltaic energy consumed in the commercial sector cannot be separately identified and are included in residential consumption.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 128. Industrial Energy Consumption Estimates, Selected Years 1960-1999, Louisiana**

Year	Coal Thousand Short Tons	Natural Gas <sup>a</sup> Billion Cubic Feet	Petroleum									Hydro-electric Power <sup>b</sup> Million kWh	Wood and Waste	Other <sup>b,d</sup>	Electricity <sup>b</sup>		Electrical System Energy Losses <sup>e</sup> Million kWh	Total
			Asphalt and Road Oil <sup>b</sup>	Distillate Fuel <sup>b</sup>	Kerosene <sup>b</sup>	LPG <sup>b</sup>	Lubricants <sup>b</sup>	Motor Gasoline	Residual Fuel <sup>b</sup>	Other <sup>b,c</sup>	Total				Million kWh	Net Energy		
			Thousand Barrels															
1960	0	739	2,201	3,383	764	19,606	559	562	485	R 16,663	R 44,222	0	—	—	4,326	—	10,761	—
1965	0	797	2,539	3,129	484	28,451	821	548	353	R 22,380	R 58,706	0	—	—	5,905	—	14,100	—
1970	0	1,281	2,210	4,241	2,044	44,017	1,052	302	819	R 32,499	R 87,183	0	—	—	11,637	—	28,201	—
1975	0	1,224	2,812	6,391	1,931	50,191	1,299	173	4,046	R 50,685	R 117,528	0	—	—	14,969	—	36,108	—
1980	107	1,182	1,946	8,543	5,162	51,364	1,278	62	12,363	R 88,497	R 169,215	0	—	—	23,233	—	56,495	—
1985	457	968	1,835	9,540	104	69,158	1,163	486	6,806	R 52,809	R 141,901	0	—	—	23,952	—	56,274	—
1990	799	1,168	1,672	13,455	47	46,519	1,309	337	1,146	R 85,104	R 149,589	R <sup>f</sup> 747	—	—	25,862	—	R 56,576	—
1991	559	1,120	1,498	12,826	52	50,912	1,171	356	1,125	R 71,894	R 139,834	R 701	—	—	26,584	—	R 57,792	—
1992	597	1,153	1,689	11,390	27	52,948	1,194	345	1,003	R 81,166	R 149,761	R 736	—	—	27,466	—	R 58,580	—
1993	586	1,196	1,860	12,251	29	54,735	1,216	656	311	R 78,909	R 149,967	R 1,010	—	—	28,439	—	R 60,068	—
1994	621	1,206	1,682	13,525	31	66,667	1,271	796	232	R 82,587	R 166,790	R 1,064	—	—	29,870	—	R 62,336	—
1995	422	1,254	1,652	9,383	22	66,176	1,249	771	388	R 79,504	R 159,145	R 1,017	—	—	30,692	—	R 63,991	—
1996	84	1,262	1,720	10,995	30	R 65,673	1,212	773	757	R 56,834	R 137,993	R 1,090	—	—	32,544	—	R 67,823	—
1997	67	1,232	5,289	8,965	27	R 46,228	1,280	825	1,034	R 57,368	R 121,016	R 626	—	—	32,493	—	R 67,588	—
1998	41	1,119	1,697	8,420	56	45,178	1,340	655	779	52,618	110,743	1,063	—	—	30,999	—	64,038	—
1999	37	1,057	1,520	10,468	15	72,855	1,354	570	1,434	55,049	143,265	802	—	—	31,484	—	61,687	—

  

Trillion Btu																		
1960	0.0	764.9	14.6	19.7	4.3	78.6	3.4	3.0	3.0	R 99.8	R 226.5	0.0	29.8	0.0	14.8	R 1,035.9	36.7	R 1,072.7
1965	0.0	830.0	16.8	18.2	2.7	114.1	5.0	2.9	2.2	R 133.1	R 295.1	0.0	32.1	0.0	20.1	R 1,177.4	48.1	R 1,225.5
1970	0.0	1,318.4	14.7	24.7	11.6	166.3	6.4	1.6	5.1	R 191.7	R 422.1	0.0	37.2	0.0	39.7	R 1,817.4	96.2	R 1,913.6
1975	0.0	1,263.1	18.7	37.2	10.9	186.5	7.9	0.9	25.4	R 294.9	R 582.4	0.0	37.1	0.0	51.1	R 1,933.7	123.2	R 2,056.9
1980	2.4	1,225.4	12.9	49.8	29.3	188.7	7.8	0.3	77.7	R 505.5	R 872.0	0.0	R 61.1	0.0	79.3	R 2,240.1	192.8	R 2,432.9
1985	11.0	1,005.1	12.2	55.6	0.6	249.2	7.1	2.6	42.8	R 309.0	R 678.9	0.0	R 71.5	0.0	81.7	R 1,848.2	192.0	R 2,040.2
1990	16.0	1,216.4	11.1	78.4	0.3	168.6	7.9	1.8	7.2	R 486.9	R 762.1	R <sup>f</sup> 7.8	R 116.1	R <sup>f</sup> 0.0	88.2	R <sup>f</sup> 2,206.7	193.0	R <sup>f</sup> 2,399.7
1991	10.3	1,174.0	9.9	74.7	0.3	184.0	7.1	1.9	7.1	R 413.8	R 698.8	R 7.3	R 125.9	0.0	90.7	R 2,106.9	R 197.2	R 2,304.0
1992	11.1	1,204.1	11.2	66.3	0.2	191.9	7.2	1.8	6.3	R 464.5	R 749.5	R 7.6	R 122.2	0.0	93.7	R 2,188.2	R 199.9	R 2,388.1
1993	10.8	1,239.4	12.3	71.4	0.2	197.4	7.4	3.4	2.0	R 452.9	R 747.0	R 10.4	R 119.9	0.0	97.0	R 2,224.5	205.0	R 2,429.5
1994	11.4	1,253.0	11.2	78.8	0.2	242.3	7.7	4.2	1.5	R 473.1	R 818.9	R 11.0	R 132.5	0.0	101.9	R 2,328.6	212.7	R 2,541.3
1995	7.7	1,295.4	11.0	54.7	0.1	239.8	7.6	R 4.0	2.4	R 455.5	R 775.0	R 10.5	R 115.3	0.0	104.7	R 2,308.6	R 218.3	R 2,527.0
1996	2.1	1,317.9	11.4	64.0	0.2	R 237.3	7.4	R 4.0	4.8	R 336.6	R 665.7	R 11.3	R 138.7	0.0	111.0	R 2,246.7	R 231.4	R 2,478.2
1997	1.7	1,397.6	35.1	52.2	0.2	R 167.2	7.8	4.3	6.5	R 339.6	R 612.8	R 6.5	R 132.0	0.0	110.9	R 2,261.4	R 230.6	R 2,492.1
1998	1.0	1,204.8	11.3	49.0	0.3	163.3	8.1	3.4	4.9	312.4	552.7	11.0	104.9	0.0	105.8	1,980.2	218.5	2,198.7
1999	0.9	1,102.5	10.1	61.0	0.1	263.4	8.2	3.0	9.0	326.6	681.4	8.3	137.9	(s)	107.4	2,038.5	210.5	2,249.0

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>e</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for

electrical system energy losses.

<sup>f</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

R=Revised data.

kWh=kilowatt-hours. —=Not applicable.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 129. Transportation Energy Consumption Estimates, Selected Years 1960-1999, Louisiana**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum								Ethanol <sup>c</sup>	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total <sup>c</sup>
			Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	LPG <sup>a</sup>	Lubricants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total					
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels								Thousand Barrels	Million Kilowatthours		Million Kilowatthours	
1960	0	32	847	5,690	3,207	197	700	21,729	7,944	40,314	0	25	—	63	—
1965	0	54	1,055	4,387	6,097	159	661	26,557	7,297	46,213	0	7	—	17	—
1970	0	71	447	6,655	5,879	350	539	34,167	9,699	57,736	0	4	—	8	—
1975	0	61	295	13,554	6,082	307	527	42,554	16,835	80,154	0	3	—	6	—
1980	0	74	255	12,457	8,644	159	721	46,927	31,159	100,321	0	3	—	8	—
1985	0	42	171	20,179	12,803	109	656	48,581	17,277	99,777	R <sup>e</sup> 232	3	—	7	—
1990	0	56	108	24,516	25,879	73	738	43,312	22,041	116,667	R 92	3	—	6	—
1991	0	54	93	20,997	32,179	74	660	42,391	24,835	121,229	R 171	3	—	6	—
1992	0	54	87	19,475	26,950	64	673	44,527	29,226	121,001	R 222	3	—	6	—
1993	0	56	219	21,966	25,124	69	685	45,377	26,933	120,373	R 220	3	—	6	—
1994	0	63	132	24,261	32,225	115	716	44,791	23,987	126,226	R 311	3	—	7	—
1995	0	65	87	23,024	28,853	61	704	46,434	23,016	122,181	R 186	3	—	7	—
1996	0	68	81	27,976	29,030	R 45	683	50,057	25,922	R 133,794	R 45	3	—	7	—
1997	0	72	98	26,003	30,459	R 45	722	46,053	19,902	R 123,282	R 19	3	—	6	—
1998	0	60	78	23,785	28,643	21	756	49,410	21,537	124,229	16	3	—	6	—
1999	0	48	87	25,309	34,016	26	764	49,106	24,416	133,724	39	3	—	6	—

  

Trillion Btu															
1960	0.0	32.8	4.3	33.1	17.4	0.8	4.2	114.1	49.9	223.9	0.0	0.1	256.8	0.2	257.0
1965	0.0	56.4	5.3	25.6	33.8	0.6	4.0	139.5	45.9	254.7	0.0	(s)	311.1	0.1	311.1
1970	0.0	73.4	2.3	38.8	32.6	1.3	3.3	179.5	61.0	318.7	0.0	(s)	392.1	(s)	392.1
1975	0.0	63.0	1.5	79.0	33.9	1.1	3.2	223.5	105.8	448.0	0.0	(s)	511.0	(s)	511.1
1980	0.0	77.0	1.3	72.6	48.4	0.6	4.4	246.5	195.9	569.6	0.0	(s)	646.6	(s)	646.7
1985	0.0	43.9	0.9	117.5	72.0	0.4	4.0	255.2	108.6	558.6	R <sup>e</sup> 0.8	(s)	<sup>e</sup> 602.5	(s)	<sup>e</sup> 602.5
1990	0.0	58.1	0.5	142.8	146.1	0.3	4.5	227.5	138.6	660.3	R 0.3	(s)	718.4	(s)	718.4
1991	0.0	56.2	0.5	122.3	181.9	0.3	4.0	222.7	156.1	687.7	R 0.6	(s)	743.9	(s)	744.0
1992	0.0	56.4	0.4	113.4	152.3	0.2	4.1	233.9	183.7	688.1	R 0.8	(s)	744.5	(s)	744.6
1993	0.0	58.2	1.1	128.0	142.0	0.2	4.2	238.4	169.3	683.2	R 0.8	(s)	741.4	(s)	741.4
1994	0.0	65.7	0.7	141.3	182.6	0.4	4.3	R 234.3	150.8	R 714.4	R 1.1	(s)	R 780.1	(s)	R 780.1
1995	0.0	66.9	0.4	134.1	163.6	0.2	4.3	R 242.2	144.7	R 689.5	R 0.7	(s)	R 756.4	(s)	R 756.4
1996	0.0	70.8	0.4	163.0	164.6	0.2	4.1	R 261.1	163.0	R 756.3	R 0.2	(s)	R 827.1	(s)	R 827.1
1997	0.0	81.2	0.5	151.5	172.7	0.2	4.4	R 240.1	125.1	R 694.4	0.1	(s)	R 775.6	(s)	R 775.6
1998	0.0	65.1	0.4	138.5	162.4	0.1	4.6	257.5	135.4	698.9	0.1	(s)	764.0	(s)	764.0
1999	0.0	50.0	0.4	147.4	192.9	0.1	4.6	255.9	153.5	754.9	0.1	(s)	804.9	(s)	804.9

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels. Transportation use of natural gas is gas consumed in the operation of pipelines, primarily in compressors, and, since 1990, is also gas consumed as vehicle fuel.

<sup>c</sup> Ethanol blended into motor gasoline, which is accounted for under motor gasoline, is shown separately here to display the use of renewable energy by the transportation sector and is included only once in the total.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1980 and 1981 due to the expanded coverage of renewable energy sources beginning in 1981.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

Table 130. Estimates of Energy Input at Electric Utilities, Selected Years, 1960-1999, Louisiana

Year	Coal	Natural Gas <sup>a</sup>	Petroleum				Nuclear Electric Power	Hydroelectric Power <sup>e</sup>	Wood and Waste	Geothermal Energy	Other <sup>b,f</sup>	Total <sup>g</sup>
			Heavy Oil <sup>b,c</sup>	Light Oil <sup>b,d</sup>	Petroleum Coke <sup>b</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels				Million Kilowatthours					
1960	0	120	36	22	0	58	0	0	0	0	0	—
1965	(s)	176	34	20	0	54	0	0	0	0	0	—
1970	0	332	98	58	0	156	0	0	0	0	0	—
1975	0	356	5,699	88	0	5,787	0	0	0	0	0	—
1980	0	425	7,096	1,174	0	8,270	0	0	0	0	0	—
1985	8,760	285	59	132	0	191	2,457	0	0	0	0	—
1990	11,748	269	75	159	0	234	14,197	0	0	0	0	—
1991	12,406	254	16	73	0	89	13,956	0	0	0	0	—
1992	13,077	255	18	75	873	966	10,356	0	0	0	0	—
1993	13,089	244	634	69	2,749	3,452	14,398	0	0	0	0	—
1994	13,479	277	336	98	911	1,345	12,779	0	0	0	0	—
1995	12,930	323	13	78	0	91	15,686	0	0	0	0	—
1996	12,450	252	308	198	0	507	15,765	0	0	0	0	—
1997	13,807	277	1,024	86	0	1,111	13,511	0	0	0	0	—
1998	13,850	318	968	82	0	1,050	16,428	0	0	0	0	—
1999	13,916	320	592	51	0	644	13,112	0	0	0	0	—
<b>Trillion Btu</b>												
1960	0.0	124.0	0.2	0.1	0.0	0.4	0.0	0.0	0.0	0.0	0.0	124.4
1965	(s)	182.9	0.2	0.1	0.0	0.3	0.0	0.0	0.0	0.0	0.0	183.3
1970	0.0	341.4	0.6	0.3	0.0	1.0	0.0	0.0	0.0	0.0	0.0	342.3
1975	0.0	377.1	35.8	0.5	0.0	36.3	0.0	0.0	0.0	0.0	0.0	413.5
1980	0.0	442.4	44.6	6.8	0.0	51.5	0.0	0.0	0.0	0.0	0.0	493.9
1985	148.1	298.4	0.4	0.8	0.0	1.1	26.6	0.0	0.0	0.0	0.0	474.3
1990	192.5	280.8	0.5	0.9	0.0	1.4	151.6	0.0	0.0	0.0	0.0	626.4
1991	204.0	264.9	0.1	0.4	0.0	0.5	149.9	0.0	0.0	0.0	0.0	619.4
1992	212.4	265.9	0.1	0.4	5.3	5.8	110.6	0.0	0.0	0.0	0.0	594.7
1993	211.8	254.5	4.0	0.4	16.6	20.9	153.8	0.0	0.0	0.0	0.0	641.1
1994	219.3	289.9	2.1	0.6	5.5	8.2	136.4	0.0	0.0	0.0	0.0	653.8
1995	209.7	336.8	0.1	0.5	0.0	0.5	167.2	0.0	0.0	0.0	0.0	714.2
1996	203.5	263.0	1.9	1.2	0.0	3.1	167.5	0.0	0.0	0.0	0.0	637.0
1997	223.7	287.4	6.4	0.5	0.0	6.9	143.5	0.0	0.0	0.0	0.0	661.6
1998	224.3	332.1	6.1	0.5	0.0	6.6	174.5	0.0	0.0	0.0	0.0	737.4
1999	226.8	332.8	3.7	0.3	0.0	4.0	139.3	0.0	0.0	0.0	0.0	702.9

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> Prior to 1980, based on oil used in steam plants. Since 1980, heavy oil includes fuel oil nos. 4, 5, and 6 and residual fuel oils.

<sup>d</sup> Prior to 1980, based on oil used in internal combustion and gas turbine engine plants. Since 1980, light oil includes fuel oil nos. 1 and 2, kerosene, and jet fuel.

<sup>e</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>f</sup> "Other" is electricity generated for distribution from wind, photovoltaic, and solar thermal energy.

<sup>g</sup> If applicable, from 1989, includes net imports of electricity generated from nonrenewable energy sources not shown in other columns. See data in appendix Table A8.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 131. Energy Consumption Estimates by Source, Selected Years 1960-1999, Maine**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum											Nuclear Electric Power	Hydro-electric Power <sup>d</sup>	Wood and Waste	Other <sup>a,e</sup>	Net Inter-state Flow of Electricity/Losses <sup>f</sup>	Total <sup>g</sup>
			Asphalt & Road Oil <sup>a</sup>	Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	Kero-sene <sup>a</sup>	LPG <sup>a</sup>	Lubri-cants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Other <sup>a,c</sup>	Total						
			Thousand Barrels															Million kWh	
1960	794	0	729	57	7,415	1,904	2,294	442	175	8,378	5,408	10	26,811	0	2,993	—	—	-489	—
1965	316	0	745	89	9,220	1,812	2,052	550	169	9,131	6,340	25	30,132	0	2,290	—	—	-360	—
1970	91	1	701	93	11,822	2,300	1,783	635	169	11,025	11,605	72	40,206	0	3,369	—	—	928	—
1975	56	2	696	71	11,505	1,988	1,036	963	167	12,645	9,929	0	39,001	4,502	4,100	—	—	-7,464	—
1980	124	2	435	82	10,628	1,875	504	874	196	11,768	8,557	0	34,919	4,404	6,176	—	—	-8,605	—
1985	206	3	2,185	41	9,581	1,639	1,042	674	179	12,548	7,900	0	35,789	5,354	3,379	—	—	2,200	—
1990	265	4	645	62	11,993	2,528	657	1,391	201	14,126	10,709	0	42,312	4,861	R <sup>h</sup> 5,490	—	—	R <sup>h</sup> 1,773	—
1991	374	5	988	42	10,366	2,374	743	1,475	180	14,125	10,196	145	40,634	6,264	R <sup>h</sup> 5,163	—	—	R <sup>h</sup> 1,078	—
1992	856	5	1,064	41	10,899	1,904	553	1,234	183	14,123	9,647	151	39,800	5,358	R <sup>h</sup> 4,852	—	—	R <sup>h</sup> 5,167	—
1993	449	5	1,083	37	12,767	1,488	967	1,368	187	14,391	9,353	153	41,794	5,740	R <sup>h</sup> 4,893	—	—	R <sup>h</sup> 6,023	—
1994	464	5	480	35	13,581	992	982	1,383	195	14,512	11,486	158	43,805	6,632	R <sup>h</sup> 5,789	—	—	R <sup>h</sup> -1,869	—
1995	282	5	482	35	14,513	841	1,281	1,545	192	14,368	9,537	153	42,946	198	R <sup>h</sup> 6,585	—	—	R <sup>h</sup> 13,404	—
1996	234	6	379	28	15,221	891	1,536	R <sup>h</sup> 1,832	186	14,959	9,717	R <sup>h</sup> 1,144	R <sup>h</sup> 45,894	5,062	R <sup>h</sup> 7,304	—	—	R <sup>h</sup> -1,154	—
1997	194	6	557	36	15,139	954	1,506	R <sup>h</sup> 1,242	197	15,987	10,033	R <sup>h</sup> 1,248	R <sup>h</sup> 46,897	0	R <sup>h</sup> 5,835	—	—	R <sup>h</sup> 16,375	—
1998	141	6	297	25	15,621	929	2,183	1,403	206	15,319	9,322	1,239	46,544	0	7,526	—	—	7,113	—
1999	120	6	324	34	15,146	864	1,698	1,131	208	16,158	7,819	1,226	44,610	0	7,868	—	—	13,687	—

  

Trillion Btu																			
1960	20.4	0.0	4.8	0.3	43.2	10.2	13.0	1.8	1.1	44.0	34.0	0.1	152.4	0.0	32.2	29.2	0.0	-1.7	232.5
1965	8.0	0.0	4.9	0.4	53.7	9.7	11.6	2.2	1.0	48.0	39.9	0.1	171.6	0.0	23.9	30.0	0.0	-1.2	232.4
1970	2.2	1.3	4.7	0.5	68.9	12.5	10.1	2.4	1.0	57.9	73.0	0.4	231.3	0.0	35.4	29.5	0.0	3.2	302.8
1975	1.3	2.0	4.6	0.4	67.0	10.8	5.9	3.6	1.0	66.4	62.4	0.0	222.1	49.6	42.7	32.7	0.0	-25.5	324.9
1980	3.0	2.3	2.9	0.4	61.9	10.2	2.9	3.2	1.2	61.8	53.8	0.0	198.3	48.0	64.2	R <sup>h</sup> 93.5	0.0	-29.4	R <sup>h</sup> 380.0
1985	5.1	2.6	14.5	0.2	55.8	8.9	5.9	2.4	1.1	65.9	49.7	0.0	204.5	57.9	35.3	R <sup>h</sup> 107.2	0.0	7.5	R <sup>h</sup> 420.1
1990	6.6	4.4	4.3	0.3	69.9	14.0	3.7	5.0	1.2	74.2	67.3	0.0	240.0	51.9	R <sup>h</sup> 57.1	R <sup>h</sup> 112.3	h <sup>0</sup> 1.1	R <sup>h</sup> 6.0	R <sup>h</sup> 487.6
1991	9.4	4.8	6.6	0.2	60.4	13.2	4.2	5.3	1.1	74.2	64.1	0.8	230.0	67.3	R <sup>h</sup> 53.9	R <sup>h</sup> 122.3	0.1	R <sup>h</sup> 3.7	R <sup>h</sup> 495.5
1992	21.5	5.2	7.1	0.2	63.5	10.5	3.1	4.5	1.1	74.2	60.7	0.8	225.7	57.2	R <sup>h</sup> 50.2	R <sup>h</sup> 128.3	0.1	R <sup>h</sup> 17.6	R <sup>h</sup> 508.0
1993	11.2	5.0	7.2	0.2	74.4	8.3	5.5	4.9	1.1	75.6	58.8	0.8	236.8	61.3	R <sup>h</sup> 50.4	R <sup>h</sup> 130.0	0.1	R <sup>h</sup> 20.6	R <sup>h</sup> 518.5
1994	11.6	5.1	3.2	0.2	79.1	5.6	5.6	5.0	1.2	R <sup>h</sup> 75.9	72.2	0.9	R <sup>h</sup> 248.8	70.8	R <sup>h</sup> 59.7	R <sup>h</sup> 125.9	0.1	R <sup>h</sup> -6.4	R <sup>h</sup> 524.6
1995	7.1	5.5	3.2	0.2	84.5	4.8	7.3	5.6	1.2	R <sup>h</sup> 74.9	60.0	0.8	R <sup>h</sup> 242.4	2.1	R <sup>h</sup> 67.9	R <sup>h</sup> 127.4	0.1	R <sup>h</sup> 45.7	R <sup>h</sup> 512.5
1996	5.9	5.8	2.5	0.1	88.7	5.1	8.7	R <sup>h</sup> 6.6	1.1	R <sup>h</sup> 78.0	61.1	R <sup>h</sup> 6.1	R <sup>h</sup> 258.1	53.8	R <sup>h</sup> 75.5	R <sup>h</sup> 146.0	0.1	R <sup>h</sup> -3.9	R <sup>h</sup> 554.3
1997	4.8	6.3	3.7	0.2	88.2	5.4	8.5	R <sup>h</sup> 4.5	1.2	R <sup>h</sup> 83.3	63.1	R <sup>h</sup> 6.7	R <sup>h</sup> 264.8	0.0	R <sup>h</sup> 60.4	R <sup>h</sup> 131.2	0.1	R <sup>h</sup> 55.9	R <sup>h</sup> 536.7
1998	3.5	5.8	2.0	0.1	91.0	5.3	12.4	5.1	1.2	79.8	58.6	6.7	262.2	0.0	77.9	96.2	0.1	24.3	490.0
1999	2.9	6.2	2.1	0.2	88.2	4.9	9.6	4.1	1.3	84.2	49.2	6.6	250.4	0.0	81.4	122.0	0.1	46.7	528.6

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products consumed in the industrial sector. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>e</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>f</sup> Net interstate flow of electricity is the difference between the amount of energy in the electricity sold within a State (including associated losses) and the energy input at the electric utilities within the State. A positive number

indicates that more electricity (including associated losses) came into the State than went out of the State during the year; conversely, a negative number indicates that more electricity (including associated losses) went out of the State than came into the State.

<sup>g</sup> From 1989, "Total" does not equal the sum of the columns. Net imports of electricity generated from nonrenewable energy sources (shown in appendix Table A8) is included in the total but not in any other columns.

<sup>h</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

kWh=kilowatthours. R=Revised data. — =Not applicable.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 132. Residential Energy Consumption Estimates, Selected Years 1960-1999, Maine**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum				Wood Thousand Cords	Geothermal	Solar <sup>c</sup>	Electricity <sup>a</sup> Million Kilowatthours	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Total						Million Kilowatthours	
	Thousand Barrels												
1960	95	0	4,727	2,091	342	7,160	426	—	—	993	—	2,471	—
1965	58	0	6,139	1,691	381	8,210	322	—	—	1,224	—	2,922	—
1970	24	1	7,877	1,649	383	9,909	222	—	—	1,723	—	4,175	—
1975	13	1	7,646	932	604	9,182	292	—	—	2,487	—	5,999	—
1980	12	1	6,372	405	395	7,173	R 356	—	—	2,998	—	7,290	—
1985	21	1	4,881	910	348	6,139	304	—	—	3,419	—	8,033	—
1990	18	1	5,039	563	863	6,464	215	—	—	3,932	—	R 8,602	—
1991	7	1	5,157	593	939	6,689	226	—	—	3,817	—	R 8,298	—
1992	15	1	5,282	473	767	6,522	238	—	—	3,830	—	R 8,168	—
1993	11	1	5,722	741	952	7,414	R 247	—	—	3,872	—	R 8,179	—
1994	4	1	5,642	758	985	7,385	R 242	—	—	3,692	—	R 7,705	—
1995	2	1	7,384	1,089	1,120	9,593	R 269	—	—	3,629	—	R 7,566	—
1996	2	1	7,657	1,370	R 1,315	R 10,342	R 269	—	—	3,679	—	R 7,667	—
1997	2	1	7,644	1,310	R 971	R 9,924	R 177	—	—	3,659	—	R 7,611	—
1998	2	1	7,701	1,880	1,074	10,655	156	—	—	3,589	—	7,414	—
1999	2	1	7,484	1,539	948	9,971	167	—	—	3,704	—	7,258	—
<b>Trillion Btu</b>													
1960	2.4	0.0	27.5	11.9	1.4	40.8	8.5	0.0	0.0	3.4	55.0	8.4	63.5
1965	1.4	0.0	35.8	9.6	1.5	46.9	6.4	0.0	0.0	4.2	58.9	10.0	68.9
1970	0.6	0.5	45.9	9.4	1.4	56.7	4.4	0.0	0.0	5.9	68.1	14.2	82.3
1975	0.3	0.7	44.5	5.3	2.2	52.1	5.8	0.0	0.0	8.5	67.4	20.5	87.9
1980	0.3	0.6	37.1	2.3	1.5	40.9	7.1	0.0	0.0	10.2	R 59.1	24.9	83.9
1985	0.5	0.5	28.4	5.2	1.3	34.8	6.1	0.0	0.0	11.7	53.6	27.4	81.0
1990	0.5	0.7	29.3	3.2	3.1	35.7	4.3	e 0.0	e 0.1	13.4	e 54.6	R 29.4	e 83.9
1991	0.2	0.7	30.0	3.4	3.4	36.8	4.5	0.0	0.1	13.0	55.3	R 28.3	83.7
1992	0.4	0.9	30.8	2.7	2.8	36.2	4.8	0.0	0.1	13.1	55.4	27.9	83.3
1993	0.3	0.9	33.3	4.2	3.4	41.0	R 4.9	0.0	0.1	13.2	60.4	27.9	R 88.3
1994	0.1	0.9	32.9	4.3	3.6	40.7	R 4.8	0.0	0.1	12.6	59.3	26.3	85.6
1995	(s)	0.9	43.0	6.2	4.1	53.2	5.4	0.0	0.1	12.4	72.1	25.8	97.9
1996	0.1	1.0	44.6	7.8	R 4.8	R 57.1	5.4	0.0	0.1	12.6	R 76.2	R 26.2	R 102.4
1997	0.1	1.0	44.5	7.4	R 3.5	R 55.5	R 3.5	0.0	0.1	12.5	R 72.7	R 26.0	R 98.7
1998	(s)	0.9	44.9	10.7	3.9	59.4	3.1	0.0	0.1	12.2	75.9	25.3	101.2
1999	(s)	1.0	43.6	8.7	3.4	55.7	3.3	(s)	0.1	12.6	72.9	24.8	97.6

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Includes small amounts of solar thermal and photovoltaic energy consumed by the commercial sector that cannot be separately identified. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 133. Commercial Energy Consumption Estimates, Selected Years 1960-1999, Maine**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum						Wood	Geothermal	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>c</sup>	Total <sup>d</sup>
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels						Thousand Cords	Million Kilowatthours	Million Kilowatthours			
1960	111	0	996	100	60	29	145	1,331	8	—	542	—	1,349	—
1965	67	0	1,294	81	67	34	72	1,549	6	—	819	—	1,956	—
1970	19	(s)	1,660	79	68	40	292	2,139	4	—	975	—	2,364	—
1975	11	1	1,611	45	107	40	334	2,136	6	—	1,568	—	3,781	—
1980	13	1	1,840	70	70	48	682	2,710	9	—	1,717	—	4,175	—
1985	28	1	969	99	61	104	1,040	2,273	R 8	—	2,338	—	5,493	—
1990	25	2	1,688	68	152	101	2,166	4,176	R 14	—	2,847	—	R 6,227	—
1991	6	2	1,444	125	166	54	2,464	4,252	R 14	—	2,857	—	R 6,210	—
1992	21	2	1,715	66	135	50	1,257	3,223	R 15	—	2,900	—	R 6,186	—
1993	15	2	2,262	174	168	12	740	3,355	20	—	3,040	—	R 6,422	—
1994	2	2	2,292	152	174	12	772	3,401	R 20	—	2,962	—	R 6,182	—
1995	1	2	2,212	161	198	12	375	2,958	R 20	—	2,973	—	R 6,199	—
1996	2	3	2,458	148	R 232	12	516	R 3,367	22	—	3,276	—	R 6,826	—
1997	2	3	2,426	157	R 171	12	599	R 3,365	19	—	3,343	—	R 6,954	—
1998	1	2	2,802	242	190	12	299	3,544	19	—	3,388	—	6,998	—
1999	1	3	2,807	135	167	12	130	3,251	23	—	3,553	—	6,961	—
<b>Trillion Btu</b>														
1960	2.8	0.0	5.8	0.6	0.2	0.2	0.9	7.7	0.2	0.0	1.9	12.5	4.6	17.1
1965	1.7	0.0	7.5	0.5	0.3	0.2	0.5	8.9	0.1	0.0	2.8	13.5	6.7	20.2
1970	0.5	0.4	9.7	0.4	0.3	0.2	1.8	12.4	0.1	0.0	3.3	16.7	8.1	24.8
1975	0.3	0.5	9.4	0.3	0.4	0.2	2.1	12.3	0.1	0.0	5.3	18.6	12.9	31.5
1980	0.3	0.9	10.7	0.4	0.3	0.3	4.3	15.9	0.2	0.0	5.9	23.1	14.2	37.4
1985	0.7	1.2	5.6	0.6	0.2	0.5	6.5	13.5	R 0.2	0.0	8.0	R 23.5	18.7	R 42.2
1990	0.6	1.7	9.8	0.4	0.6	0.5	13.6	24.9	R 0.3	e 0.0	9.7	R e 37.2	21.2	R e 58.5
1991	0.1	1.9	8.4	0.7	0.6	0.3	15.5	25.5	R 0.3	0.0	9.7	R 37.5	21.2	R 58.7
1992	0.5	2.2	10.0	0.4	0.5	0.3	7.9	19.0	R 0.3	0.0	9.9	R 32.0	21.1	R 53.1
1993	0.4	2.3	13.2	1.0	0.6	0.1	4.6	19.5	0.4	0.0	10.4	33.0	21.9	54.9
1994	0.1	2.4	13.4	0.9	0.6	0.1	4.9	19.8	0.4	0.0	10.1	R 32.7	21.1	53.8
1995	(s)	2.5	12.9	0.9	0.7	0.1	2.4	16.9	0.4	0.0	10.1	30.0	21.1	51.1
1996	(s)	2.6	14.3	0.8	0.8	0.1	3.2	19.3	0.4	0.0	11.2	R 33.6	23.3	R 56.9
1997	(s)	2.8	14.1	0.9	R 0.6	0.1	3.8	R 19.5	0.4	0.0	11.4	R 34.1	23.7	R 57.8
1998	(s)	2.5	16.3	1.4	0.7	0.1	1.9	20.3	0.4	0.0	11.6	34.8	23.9	58.7
1999	(s)	2.6	16.4	0.8	0.6	0.1	0.8	18.6	0.5	0.0	12.1	33.8	23.7	57.6

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>d</sup> Small amounts of solar thermal and photovoltaic energy consumed in the commercial sector cannot be separately identified and are included in residential consumption.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.



**Table 134. Industrial Energy Consumption Estimates, Selected Years 1960-1999, Maine**

Year	Coal Thousand Short Tons	Natural Gas <sup>a</sup> Billion Cubic Feet	Petroleum									Hydro-electric Power <sup>b</sup> Million kWh	Wood and Waste	Other <sup>b,d</sup>	Electricity <sup>b</sup> Million kWh	Net Energy	Electrical System Energy Losses <sup>e</sup> Million kWh	Total
			Asphalt and Road Oil <sup>b</sup>	Distillate Fuel <sup>b</sup>	Kero-sene <sup>b</sup>	LPG <sup>b</sup>	Lubri-cants <sup>b</sup>	Motor Gasoline	Residual Fuel <sup>b</sup>	Other <sup>b,c</sup>	Total							
			Thousand Barrels															
1960	562	0	729	402	103	38	42	166	2,639	10	4,130	906	—	—	1,246	—	3,100	—
1965	191	0	745	500	280	100	54	145	1,270	25	3,117	697	—	—	1,715	—	4,094	—
1970	48	(s)	701	805	54	182	55	137	5,128	72	7,134	940	—	—	2,370	—	5,743	—
1975	32	1	696	682	59	250	59	79	5,848	0	7,674	832	—	—	2,477	—	5,976	—
1980	99	1	435	762	29	400	65	76	4,047	0	5,812	974	—	—	3,470	—	8,438	—
1985	157	1	2,185	456	34	249	59	124	3,407	0	6,514	974	—	—	4,067	—	9,555	—
1990	222	2	645	708	27	358	66	94	4,856	0	6,754	R <sup>f</sup> 2,036	—	—	4,750	—	R <sup>f</sup> 10,391	—
1991	361	2	988	778	26	353	59	100	5,330	145	7,780	R <sup>f</sup> 1,923	—	—	4,709	—	R <sup>f</sup> 10,237	—
1992	820	2	1,064	752	14	316	60	102	6,021	151	8,480	R <sup>f</sup> 1,798	—	—	4,753	—	R <sup>f</sup> 10,137	—
1993	423	2	1,083	1,258	52	235	61	146	6,952	153	9,942	R <sup>f</sup> 1,670	—	—	5,040	—	R <sup>f</sup> 10,644	—
1994	458	2	480	1,415	72	202	64	163	9,202	158	11,758	R <sup>f</sup> 1,837	—	—	4,952	—	R <sup>f</sup> 10,334	—
1995	279	2	482	1,163	31	216	63	169	7,493	153	9,770	R <sup>f</sup> 1,709	—	—	4,959	—	R <sup>f</sup> 10,340	—
1996	230	2	379	1,355	17	R <sup>f</sup> 278	61	176	7,853	R <sup>f</sup> 1,144	R <sup>f</sup> 11,265	R <sup>f</sup> 2,151	—	—	4,772	—	R <sup>f</sup> 9,944	—
1997	190	3	557	1,293	39	R <sup>f</sup> 87	65	179	6,821	R <sup>f</sup> 1,248	R <sup>f</sup> 10,288	R <sup>f</sup> 1,887	—	—	4,957	—	R <sup>f</sup> 10,311	—
1998	138	2	297	1,379	61	133	68	117	5,766	1,239	9,060	1,896	—	—	4,622	—	9,548	—
1999	117	3	324	1,039	25	11	68	86	6,341	1,226	9,119	3,242	—	—	4,687	—	9,182	—
<b>Trillion Btu</b>																		
1960	14.5	0.0	4.8	2.3	0.6	0.2	0.3	0.9	16.6	0.1	25.7	9.7	20.5	0.0	4.3	74.7	10.6	85.3
1965	4.9	0.0	4.9	2.9	1.6	0.4	0.3	0.8	8.0	0.1	19.0	7.3	23.5	0.0	5.9	60.6	14.0	74.5
1970	1.2	0.4	4.7	4.7	0.3	0.7	0.3	0.7	32.2	0.4	44.0	9.9	25.0	0.0	8.1	88.4	19.6	108.0
1975	0.8	0.7	4.6	4.0	0.3	0.9	0.4	0.4	36.8	0.0	47.4	8.7	26.8	0.0	8.5	92.7	20.4	113.1
1980	2.4	0.8	2.9	4.4	0.2	1.5	0.4	0.4	25.4	0.0	35.2	10.1	R <sup>f</sup> 86.2	0.0	11.8	R <sup>f</sup> 146.5	28.8	R <sup>f</sup> 175.3
1985	3.9	0.9	14.5	2.7	0.2	0.9	0.4	0.7	21.4	0.0	40.7	10.2	R <sup>f</sup> 101.0	0.0	13.9	R <sup>f</sup> 170.5	32.6	R <sup>f</sup> 203.1
1990	5.5	2.0	4.3	4.1	0.2	1.3	0.4	0.5	30.5	0.0	41.3	R <sup>f</sup> 21.2	R <sup>f</sup> 107.8	f <sup>f</sup> 0.0	16.2	R <sup>f</sup> 194.0	R <sup>f</sup> 35.5	R <sup>f</sup> 229.4
1991	9.0	2.2	6.6	4.5	0.1	1.3	0.4	0.5	33.5	0.8	47.7	R <sup>f</sup> 20.1	R <sup>f</sup> 117.5	0.0	16.1	R <sup>f</sup> 212.6	R <sup>f</sup> 34.9	R <sup>f</sup> 247.5
1992	20.6	2.1	7.1	4.4	0.1	1.1	0.4	0.5	37.9	0.8	52.2	R <sup>f</sup> 18.6	R <sup>f</sup> 123.2	0.0	16.2	R <sup>f</sup> 232.9	34.6	R <sup>f</sup> 267.5
1993	10.6	1.8	7.2	7.3	0.3	0.8	0.4	0.8	43.7	0.8	61.3	R <sup>f</sup> 17.2	R <sup>f</sup> 124.7	0.0	17.2	R <sup>f</sup> 232.8	36.3	R <sup>f</sup> 269.1
1994	11.4	1.8	3.2	8.2	0.4	0.7	0.4	0.9	57.9	0.9	72.5	R <sup>f</sup> 18.9	R <sup>f</sup> 120.6	0.0	16.9	R <sup>f</sup> 242.2	35.3	R <sup>f</sup> 277.5
1995	7.0	2.0	3.2	6.8	0.2	0.8	0.4	0.9	47.1	0.8	60.1	R <sup>f</sup> 17.6	R <sup>f</sup> 121.6	0.0	16.9	R <sup>f</sup> 225.3	35.3	R <sup>f</sup> 260.6
1996	5.8	2.2	2.5	7.9	0.1	R <sup>f</sup> 1.0	0.4	0.9	49.4	R <sup>f</sup> 6.1	R <sup>f</sup> 68.3	R <sup>f</sup> 22.2	R <sup>f</sup> 140.2	0.0	16.3	R <sup>f</sup> 255.0	33.9	R <sup>f</sup> 288.9
1997	4.7	2.6	3.7	7.5	0.2	R <sup>f</sup> 0.3	0.4	0.9	42.9	R <sup>f</sup> 6.7	R <sup>f</sup> 62.7	R <sup>f</sup> 19.5	R <sup>f</sup> 127.3	0.0	16.9	R <sup>f</sup> 233.7	R <sup>f</sup> 35.2	R <sup>f</sup> 268.9
1998	3.4	2.3	2.0	8.0	0.3	0.5	0.4	0.6	36.2	6.7	54.8	19.6	92.7	0.0	15.8	188.6	32.6	221.1
1999	2.9	2.6	2.1	6.1	0.1	(s)	0.4	0.4	39.9	6.6	55.7	33.5	118.2	0.0	16.0	228.9	31.3	260.2

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>e</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>f</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

R=Revised data.

kWh=kilowatthours. — =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 135. Transportation Energy Consumption Estimates, Selected Years 1960-1999, Maine**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum								Ethanol <sup>c</sup>	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total <sup>c</sup>
			Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	LPG <sup>a</sup>	Lubricants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total				Million Kilowatthours	
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels								Thousand Barrels	Million Kilowatthours	Million Kilowatthours	Total <sup>c</sup>	
1960	10	0	57	1,251	1,904	1	133	8,183	776	12,305	0	0	—	0	—
1965	1	0	89	1,199	1,812	2	116	8,952	625	12,794	0	0	—	0	—
1970	(s)	0	93	1,385	2,300	3	114	10,848	1,415	16,158	0	0	—	0	—
1975	(s)	0	71	1,524	1,988	3	108	12,526	934	17,155	0	0	—	0	—
1980	0	(s)	82	1,593	1,875	9	132	11,644	209	15,544	0	0	—	0	—
1985	0	(s)	41	3,247	1,639	15	120	12,320	21	17,403	<sup>e</sup> 0	0	—	0	—
1990	0	(s)	62	4,539	2,528	17	135	13,931	149	21,362	0	0	—	0	—
1991	0	(s)	42	2,965	2,374	17	121	13,971	116	19,606	0	0	—	0	—
1992	0	(s)	41	3,126	1,904	15	123	13,971	156	19,337	0	0	—	0	—
1993	0	(s)	37	3,510	1,488	13	125	14,233	285	19,691	0	0	—	0	—
1994	0	(s)	35	4,213	992	22	131	14,337	236	19,967	0	0	—	0	—
1995	0	(s)	35	3,725	841	11	129	14,187	207	19,135	0	0	—	0	—
1996	0	0	28	3,738	891	7	125	14,771	205	19,766	0	(s)	—	(s)	—
1997	0	0	36	3,763	954	<sup>R</sup> 13	132	15,796	110	<sup>R</sup> 20,804	0	(s)	—	(s)	—
1998	0	0	25	3,724	929	6	138	15,190	299	20,311	0	(s)	—	(s)	—
1999	0	0	34	3,807	864	5	140	16,061	224	21,135	0	(s)	—	(s)	—
<b>Trillion Btu</b>															
1960	0.3	0.0	0.3	7.3	10.2	(s)	0.8	43.0	4.9	66.4	0.0	0.0	66.7	0.0	66.7
1965	(s)	0.0	0.4	7.0	9.7	(s)	0.7	47.0	3.9	68.8	0.0	0.0	68.8	0.0	68.8
1970	(s)	0.0	0.5	8.1	12.5	(s)	0.7	57.0	8.9	87.6	0.0	0.0	87.6	0.0	87.6
1975	(s)	0.0	0.4	8.9	10.8	(s)	0.7	65.8	5.9	92.4	0.0	0.0	92.4	0.0	92.4
1980	0.0	0.1	0.4	9.3	10.2	(s)	0.8	61.2	1.3	83.2	0.0	0.0	83.3	0.0	83.3
1985	0.0	(s)	0.2	18.9	8.9	0.1	0.7	64.7	0.1	93.7	<sup>e</sup> 0.0	0.0	<sup>e</sup> 93.7	0.0	<sup>e</sup> 93.7
1990	0.0	(s)	0.3	26.4	14.0	0.1	0.8	73.2	0.9	115.8	0.0	0.0	115.8	0.0	115.8
1991	0.0	(s)	0.2	17.3	13.2	0.1	0.7	73.4	0.7	105.6	0.0	0.0	105.6	0.0	105.6
1992	0.0	(s)	0.2	18.2	10.5	0.1	0.7	73.4	1.0	104.1	0.0	0.0	104.1	0.0	104.1
1993	0.0	(s)	0.2	20.4	8.3	(s)	0.8	74.8	1.8	106.3	0.0	0.0	106.3	0.0	106.3
1994	0.0	(s)	0.2	24.5	5.6	0.1	0.8	<sup>R</sup> 75.0	1.5	<sup>R</sup> 107.7	0.0	0.0	<sup>R</sup> 107.7	0.0	<sup>R</sup> 107.7
1995	0.0	0.1	0.2	21.7	4.8	(s)	0.8	<sup>R</sup> 74.0	1.3	<sup>R</sup> 102.7	0.0	0.0	<sup>R</sup> 102.8	0.0	<sup>R</sup> 102.8
1996	0.0	0.0	0.1	21.8	5.1	(s)	0.8	<sup>R</sup> 77.0	1.3	<sup>R</sup> 106.1	0.0	(s)	<sup>R</sup> 106.1	(s)	<sup>R</sup> 106.1
1997	0.0	0.0	0.2	21.9	5.4	(s)	0.8	<sup>R</sup> 82.3	0.7	<sup>R</sup> 111.4	0.0	(s)	<sup>R</sup> 111.4	(s)	<sup>R</sup> 111.4
1998	0.0	0.0	0.1	21.7	5.3	(s)	0.8	79.2	1.9	109.0	0.0	(s)	109.0	(s)	109.0
1999	0.0	0.0	0.2	22.2	4.9	(s)	0.8	83.7	1.4	113.2	0.0	(s)	113.2	(s)	113.2

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels. Transportation use of natural gas is gas consumed in the operation of pipelines, primarily in compressors, and, since 1990, is also gas consumed as vehicle fuel.

<sup>c</sup> Ethanol blended into motor gasoline, which is accounted for under motor gasoline, is shown separately here to display the use of renewable energy by the transportation sector and is included only once in the total.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1980 and 1981 due to the expanded coverage of renewable energy sources beginning in 1981.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 136. Estimates of Energy Input at Electric Utilities, Selected Years, 1960-1999, Maine**

Year	Coal	Natural Gas <sup>a</sup>	Petroleum				Nuclear Electric Power	Hydroelectric Power <sup>e</sup>	Wood and Waste	Geothermal Energy	Other <sup>b,f</sup>	Total <sup>g</sup>
			Heavy Oil <sup>b,c</sup>	Light Oil <sup>b,d</sup>	Petroleum Coke <sup>b</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels				Million Kilowatthours					
1960	17	0	1,847	38	0	1,885	0	2,087	0	0	0	—
1965	0	0	4,373	89	0	4,462	0	1,593	0	0	0	—
1970	0	0	4,770	95	0	4,865	0	2,429	0	0	0	—
1975	0	0	2,812	42	0	2,854	4,502	3,268	0	0	0	—
1980	0	0	3,620	61	0	3,680	4,404	5,203	0	0	0	—
1985	0	0	3,432	28	0	3,461	5,354	2,405	0	0	0	—
1990	0	0	3,537	19	0	3,557	4,861	R 3,454	0	0	0	—
1991	0	0	2,286	22	0	2,307	6,264	R 3,241	0	0	0	—
1992	0	0	2,213	24	0	2,237	5,358	R 3,055	0	0	0	—
1993	0	0	1,377	16	0	1,392	5,740	R 3,223	0	0	0	—
1994	0	0	1,275	18	0	1,294	6,632	R 3,952	0	0	0	—
1995	0	0	1,462	29	0	1,490	198	R 4,876	(s)	0	0	—
1996	0	0	1,142	12	0	1,154	5,062	R 5,152	1	0	0	—
1997	0	0	2,503	13	0	2,517	0	R 3,948	0	0	0	—
1998	0	0	2,958	15	0	2,973	0	5,631	0	0	0	—
1999	0	0	1,124	9	0	1,133	0	4,626	0	0	0	—

  

Trillion Btu												
1960	0.5	0.0	11.6	0.2	0.0	11.8	0.0	22.5	0.0	0.0	0.0	34.8
1965	0.0	0.0	27.5	0.5	0.0	28.0	0.0	16.7	0.0	0.0	0.0	44.7
1970	0.0	0.0	30.0	0.6	0.0	30.5	0.0	25.5	0.0	0.0	0.0	56.0
1975	0.0	0.0	17.7	0.2	0.0	17.9	49.6	34.0	0.0	0.0	0.0	101.5
1980	0.0	0.0	22.8	0.4	0.0	23.1	48.0	54.0	0.0	0.0	0.0	125.2
1985	0.0	0.0	21.6	0.2	0.0	21.7	57.9	25.1	0.0	0.0	0.0	104.8
1990	0.0	0.0	22.2	0.1	0.0	22.4	51.9	R 35.9	0.0	0.0	0.0	R 119.3
1991	0.0	0.0	14.4	0.1	0.0	14.5	67.3	R 33.8	0.0	0.0	0.0	R 119.6
1992	0.0	0.0	13.9	0.1	0.0	14.1	57.2	R 31.6	0.0	0.0	0.0	R 105.1
1993	0.0	0.0	8.7	0.1	0.0	8.7	61.3	R 33.2	0.0	0.0	0.0	R 106.4
1994	0.0	0.0	8.0	0.1	0.0	8.1	70.8	R 40.8	0.0	0.0	0.0	R 128.6
1995	0.0	0.0	9.2	0.2	0.0	9.4	2.1	R 50.3	(s)	0.0	0.0	R 76.0
1996	0.0	0.0	7.2	0.1	0.0	7.3	53.8	R 53.3	(s)	0.0	0.0	R 127.3
1997	0.0	0.0	15.7	0.1	0.0	15.8	0.0	R 40.9	0.0	0.0	0.0	R 69.8
1998	0.0	0.0	18.6	0.1	0.0	18.7	0.0	58.3	0.0	0.0	0.0	97.1
1999	0.0	0.0	7.1	0.1	0.0	7.1	0.0	47.9	0.0	0.0	0.0	73.9

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> Prior to 1980, based on oil used in steam plants. Since 1980, heavy oil includes fuel oil nos. 4, 5, and 6 and residual fuel oils.

<sup>d</sup> Prior to 1980, based on oil used in internal combustion and gas turbine engine plants. Since 1980, light oil includes fuel oil nos. 1 and 2, kerosene, and jet fuel.

<sup>e</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>f</sup> "Other" is electricity generated for distribution from wind, photovoltaic, and solar thermal energy.

<sup>g</sup> If applicable, from 1989, includes net imports of electricity generated from nonrenewable energy sources not shown in other columns. See data in appendix Table A8.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 137. Energy Consumption Estimates by Source, Selected Years 1960-1999, Maryland**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum											Nuclear Electric Power	Hydro-electric Power <sup>d</sup>	Wood and Waste	Other <sup>a,e</sup>	Net Inter-state Flow of Electricity/Losses <sup>f</sup>	Total <sup>g</sup>
			Asphalt & Road Oil <sup>a</sup>	Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	Kero-sene <sup>a</sup>	LPG <sup>a</sup>	Lubri-cants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Other <sup>a,c</sup>	Total						
			Thousand Barrels															Million kWh	
1960	8,530	71	1,813	279	12,870	2,457	2,445	1,051	565	22,552	16,835	978	61,844	0	1,358	—	—	1,813	—
1965	12,372	99	3,289	474	16,967	2,856	2,371	1,473	627	27,510	15,510	1,697	72,774	0	1,141	—	—	-5,190	—
1970	12,216	156	2,798	309	19,817	4,477	2,331	1,841	624	37,159	22,046	2,895	94,297	0	1,907	—	—	4,900	—
1975	7,761	140	3,246	205	21,034	3,049	1,193	2,395	763	43,688	26,941	2,166	104,680	4,386	2,311	—	—	9,915	—
1980	9,312	160	2,638	173	21,908	3,522	1,168	2,060	724	44,003	16,480	2,504	95,181	10,947	1,270	—	—	18,497	—
1985	10,012	151	4,520	76	17,717	3,901	1,247	1,805	659	45,632	7,916	2,640	86,112	9,926	1,524	—	—	31,970	—
1990	11,193	172	5,008	74	17,003	3,637	466	1,965	742	47,415	9,881	4,027	90,218	1,251	R <sup>h</sup> 2,299	—	—	R 62,337	—
1991	10,709	173	3,703	75	17,313	3,293	476	2,018	663	48,448	9,368	3,814	89,173	9,036	R 1,407	—	—	R 45,800	—
1992	9,713	181	3,509	96	18,355	3,061	378	2,635	676	49,044	7,836	4,559	90,150	10,664	R 1,825	—	—	R 40,705	—
1993	10,268	181	4,684	102	19,724	3,000	621	2,479	689	49,602	9,703	4,025	94,629	12,301	R 1,658	—	—	R 36,415	—
1994	10,491	184	4,363	71	19,463	3,229	672	2,835	720	50,699	9,039	4,133	95,222	11,235	R 2,010	—	—	R 36,951	—
1995	11,198	194	4,236	48	19,189	3,430	801	2,687	708	51,475	3,921	4,057	90,553	12,938	R 1,442	—	—	R 40,619	—
1996	11,366	193	3,610	35	22,124	3,897	802	R 2,995	687	51,800	4,383	R 4,436	R 94,769	12,093	R 2,457	—	—	R 43,294	—
1997	11,261	207	5,619	43	20,214	4,096	865	R 2,856	725	53,594	4,026	R 4,428	R 96,466	13,213	R 1,588	—	—	R 39,663	—
1998	11,789	179	4,679	56	21,299	3,920	1,146	2,410	759	54,585	7,409	5,500	101,763	13,331	1,740	—	—	32,469	—
1999	11,752	195	4,375	39	22,383	3,938	814	2,143	767	56,886	8,559	6,164	106,067	13,312	1,424	—	—	28,121	—

  

Trillion Btu																			
1960	226.6	73.3	12.0	1.4	75.0	13.5	13.9	4.2	3.4	118.5	105.8	5.7	353.4	0.0	14.6	23.8	0.0	6.2	697.9
1965	327.4	101.0	21.8	2.4	98.8	15.7	13.4	5.9	3.8	144.5	97.5	9.4	413.4	0.0	11.9	27.1	0.0	-17.7	863.1
1970	311.3	159.6	18.6	1.6	115.4	25.0	13.2	7.0	3.8	195.2	138.6	16.2	534.4	0.0	20.0	31.8	0.0	16.7	1,073.8
1975	197.2	141.9	21.5	1.0	122.5	16.9	6.8	8.9	4.6	229.5	169.4	12.4	593.6	48.3	24.0	31.8	0.0	33.8	1,070.6
1980	235.7	163.4	17.5	0.9	127.6	19.5	6.6	7.6	4.4	231.1	103.6	14.1	533.0	119.4	13.2	R 27.8	0.0	63.1	R 1,155.6
1985	256.2	156.0	30.0	0.4	103.2	21.7	7.1	6.5	4.0	239.7	49.8	14.9	477.2	107.3	15.9	R 37.0	0.0	109.1	R 1,158.7
1990	286.4	177.1	33.2	0.4	99.0	20.3	2.6	7.1	4.5	249.1	62.1	22.8	501.2	13.4	<sup>h</sup> 23.9	R 30.5	<sup>h</sup> 0.1	R 212.7	R <sup>h</sup> 1,245.3
1991	274.8	177.8	24.6	0.4	100.9	18.4	2.7	7.3	4.0	254.5	58.9	21.5	493.1	97.0	14.7	R 30.6	0.1	R 156.3	R 1,244.4
1992	247.5	186.4	23.3	0.5	106.9	17.1	2.1	9.6	4.1	257.6	49.3	25.8	496.3	113.9	18.9	R 32.0	0.1	R 138.9	R 1,233.9
1993	261.7	185.7	31.1	0.5	114.9	16.8	3.5	8.9	4.2	260.6	61.0	22.6	524.1	131.4	17.1	R 32.8	0.1	R 124.2	R 1,277.2
1994	268.9	189.4	28.9	0.4	113.4	18.2	3.8	10.3	4.4	R 265.2	56.8	23.3	R 524.7	119.9	20.7	R 33.4	0.1	R 126.1	R 1,283.3
1995	289.6	199.1	28.1	0.2	111.8	19.4	4.5	9.7	4.3	R 268.4	24.7	22.9	R 494.2	137.9	14.9	R 40.2	0.1	R 138.6	R 1,314.6
1996	292.2	198.1	24.0	0.2	128.9	22.1	4.5	R 10.8	4.2	R 270.2	27.6	R 25.0	R 517.3	128.5	25.4	R 43.3	0.1	R 147.7	R 1,352.7
1997	290.2	214.5	37.3	0.2	117.7	23.2	4.9	R 10.3	4.4	R 279.4	25.3	R 24.9	R 527.7	140.4	R 16.5	R 38.3	0.2	R 135.3	R 1,363.0
1998	303.8	185.9	31.1	0.3	124.1	22.2	6.5	8.7	4.6	284.5	46.6	31.2	559.7	141.6	18.0	31.0	0.2	110.8	1,351.0
1999	303.5	201.4	29.0	0.2	130.4	22.3	4.6	7.7	4.7	296.4	53.8	34.9	584.1	141.4	14.7	36.9	0.2	95.9	1,378.2

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products consumed in the industrial sector. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>e</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>f</sup> Net interstate flow of electricity is the difference between the amount of energy in the electricity sold within a State (including associated losses) and the energy input at the electric utilities within the State. A positive number

indicates that more electricity (including associated losses) came into the State than went out of the State during the year; conversely, a negative number indicates that more electricity (including associated losses) went out of the State than came into the State.

<sup>g</sup> From 1989, "Total" does not equal the sum of the columns. Net imports of electricity generated from nonrenewable energy sources (shown in appendix Table A8) is included in the total but not in any other columns.

<sup>h</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

kWh=kilowatthours. R=Revised data. — =Not applicable.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 138. Residential Energy Consumption Estimates, Selected Years 1960-1999, Maryland**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum				Wood Thousand Cords	Geothermal	Solar <sup>c</sup>	Electricity <sup>a</sup> Million Kilowatthours	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Total						Million Kilowatthours	
												Thousand Barrels	
1960	116	46	6,053	2,234	617	8,903	406	—	—	2,772	—	6,895	—
1965	91	57	7,191	2,177	893	10,261	328	—	—	4,384	—	10,466	—
1970	35	73	8,234	2,166	1,007	11,407	377	—	—	7,690	—	18,635	—
1975	15	69	8,453	1,014	1,242	10,708	452	—	—	9,660	—	23,300	—
1980	15	68	8,797	830	740	10,367	558	—	—	12,119	—	29,469	—
1985	44	68	5,023	1,113	987	7,123	862	—	—	14,319	—	33,642	—
1990	18	66	4,284	385	1,088	5,757	518	—	—	19,102	—	R 41,787	—
1991	16	69	4,181	396	1,215	5,792	546	—	—	20,295	—	R 44,121	—
1992	5	75	4,458	316	1,365	6,139	575	—	—	19,762	—	R 42,148	—
1993	6	77	5,230	509	1,404	7,143	619	—	—	21,546	—	R 45,509	—
1994	14	77	4,985	393	1,431	6,809	607	—	—	21,666	—	R 45,215	—
1995	107	77	4,766	535	1,647	6,948	R 674	—	—	22,234	—	R 46,356	—
1996	15	86	5,895	593	R 1,853	R 8,341	R 673	—	—	22,986	—	R 47,903	—
1997	20	78	5,176	597	R 1,989	R 7,762	R 458	—	—	21,937	—	R 45,630	—
1998	19	68	4,398	720	1,814	6,932	403	—	—	22,407	—	46,288	—
1999	17	75	4,694	523	1,661	6,878	432	—	—	23,342	—	45,735	—
<b>Trillion Btu</b>													
1960	2.9	47.5	35.3	12.7	2.5	50.4	8.1	0.0	0.0	9.5	118.4	23.5	141.9
1965	2.3	58.1	41.9	12.3	3.6	57.8	6.6	0.0	0.0	15.0	139.7	35.7	175.4
1970	0.8	74.5	48.0	12.3	3.8	64.0	7.5	0.0	0.0	26.2	173.2	63.6	236.8
1975	0.3	70.1	49.2	5.7	4.6	59.6	9.0	0.0	0.0	33.0	172.0	79.5	251.5
1980	0.4	69.4	51.2	4.7	2.7	58.7	11.2	0.0	0.0	41.4	181.0	100.5	281.5
1985	1.1	70.7	29.3	6.3	3.6	39.1	17.2	0.0	0.0	48.9	177.1	114.8	291.8
1990	0.4	68.2	25.0	2.2	3.9	31.1	10.4	e 0.1	e (s)	e 65.2	e 175.4	142.6	e 317.9
1991	0.4	71.0	24.4	2.2	4.4	31.0	10.9	0.1	(s)	69.2	182.6	R 150.5	R 333.2
1992	0.1	77.1	26.0	1.8	4.9	32.7	11.5	0.1	(s)	67.4	189.0	R 143.8	R 332.8
1993	0.2	79.0	30.5	2.9	5.1	38.4	12.4	0.1	R 0.1	73.5	203.6	155.3	358.9
1994	0.3	79.0	29.0	2.2	5.2	36.5	12.1	0.1	R 0.1	73.9	202.0	154.3	356.3
1995	2.7	78.4	27.8	3.0	6.0	36.8	13.5	0.1	R 0.1	75.9	207.3	R 158.2	R 365.5
1996	0.4	88.0	34.3	3.4	R 6.7	R 44.4	R 13.5	0.1	R 0.1	78.4	R 224.8	R 163.4	R 388.2
1997	0.5	80.1	30.1	3.4	R 7.2	R 40.7	R 9.2	0.1	R 0.1	74.8	R 205.5	R 155.7	R 361.2
1998	0.5	70.5	25.6	4.1	6.6	36.3	8.1	0.1	0.1	76.5	191.9	157.9	349.9
1999	0.4	77.4	27.3	3.0	6.0	36.3	8.6	0.1	(s)	79.6	202.5	156.0	358.6

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Includes small amounts of solar thermal and photovoltaic energy consumed by the commercial sector that cannot be separately identified. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 139. Commercial Energy Consumption Estimates, Selected Years 1960-1999, Maryland**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum						Wood Thousand Cords	Geothermal	Electricity <sup>a</sup> Million Kilowatthours	Net Energy	Electrical System Energy Losses <sup>c</sup>		Total <sup>d</sup>
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total					Million Kilowatthours	Million Kilowatthours	
	Thousand Barrels														
1960	170	8	2,357	72	109	72	2,442	5,052	8	—	2,696	—	6,706	—	
1965	142	13	2,800	70	158	90	1,920	5,039	6	—	3,937	—	9,401	—	
1970	48	26	3,206	70	178	103	1,498	5,054	7	—	6,347	—	15,380	—	
1975	19	25	3,291	33	219	120	1,169	4,833	9	—	8,573	—	20,680	—	
1980	22	29	2,865	20	131	121	1,159	4,296	13	—	9,387	—	22,827	—	
1985	77	24	1,942	89	174	170	252	2,628	R 23	—	9,621	—	22,603	—	
1990	30	24	2,095	48	192	231	556	3,122	R 33	—	11,021	—	R 24,111	—	
1991	26	38	2,297	52	214	118	133	2,816	R 35	—	11,259	—	R 24,476	—	
1992	8	42	2,575	42	241	103	478	3,439	R 37	—	11,355	—	R 24,217	—	
1993	9	44	2,689	85	248	31	193	3,246	50	—	12,006	—	R 25,357	—	
1994	22	44	3,063	213	253	31	217	3,776	51	—	13,914	—	R 29,036	—	
1995	190	47	2,999	210	291	32	121	3,652	51	—	23,730	—	R 49,476	—	
1996	27	46	3,317	151	R 327	32	109	R 3,935	55	—	23,780	—	R 49,558	—	
1997	35	50	2,560	227	R 351	31	51	R 3,220	R 50	—	24,070	—	R 50,067	—	
1998	34	57	2,605	313	320	31	45	3,315	50	—	24,950	—	51,541	—	
1999	29	58	2,224	254	293	31	63	2,866	61	—	25,662	—	50,279	—	

  

Trillion Btu														
1960	4.3	8.3	13.7	0.4	0.4	0.4	15.4	30.3	0.2	0.0	9.2	52.2	22.9	75.1
1965	3.5	13.3	16.3	0.4	0.6	0.5	12.1	29.9	0.1	0.0	13.4	60.3	32.1	92.4
1970	1.1	26.5	18.7	0.4	0.7	0.5	9.4	29.7	0.1	0.0	21.7	79.1	52.5	131.6
1975	0.4	25.5	19.2	0.2	0.8	0.6	7.4	28.2	0.2	0.0	29.3	83.5	70.6	154.1
1980	0.5	29.1	16.7	0.1	0.5	0.6	7.3	25.2	0.3	0.0	32.0	87.2	77.9	165.1
1985	1.9	25.0	11.3	0.5	0.6	0.9	1.6	14.9	R 0.5	0.0	32.8	R 75.1	77.1	R 152.2
1990	0.8	24.7	12.2	0.3	0.7	1.2	3.5	17.9	R 0.7	e 0.0	37.6	R e 81.6	82.3	R e 163.9
1991	0.7	39.1	13.4	0.3	0.8	0.6	0.8	15.9	R 0.7	0.0	38.4	R 94.8	R 83.5	R 178.3
1992	0.2	43.6	15.0	0.2	0.9	0.5	3.0	19.7	R 0.7	0.0	38.7	R 103.0	R 82.6	R 185.6
1993	0.2	44.8	15.7	0.5	0.9	0.2	1.2	18.4	1.0	0.0	41.0	105.4	86.5	R 191.9
1994	0.6	45.5	17.8	1.2	0.9	0.2	1.4	21.5	1.0	0.0	47.5	116.0	99.1	215.1
1995	4.7	48.0	17.5	1.2	1.1	0.2	0.8	20.6	1.0	0.0	81.0	155.4	R 168.8	R 324.2
1996	0.7	47.1	19.3	0.9	R 1.2	0.2	0.7	22.2	1.1	0.0	81.1	R 152.3	R 169.1	R 321.4
1997	0.9	51.5	14.9	1.3	R 1.3	0.2	0.3	R 18.0	R 1.0	0.0	82.1	R 153.4	R 170.8	R 324.3
1998	0.8	59.5	15.2	1.8	1.2	0.2	0.3	18.6	1.0	0.0	85.1	165.0	175.9	340.8
1999	0.7	60.0	13.0	1.4	1.1	0.2	0.4	16.0	1.2	0.0	87.6	165.6	171.6	337.1

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>d</sup> Small amounts of solar thermal and photovoltaic energy consumed in the commercial sector cannot be separately identified and are included in residential consumption.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

R=Revised data.

—=Not applicable.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 140. Industrial Energy Consumption Estimates, Selected Years 1960-1999, Maryland**

Year	Coal Thousand Short Tons	Natural Gas <sup>a</sup> Billion Cubic Feet	Petroleum									Hydro-electric Power <sup>b</sup> Million kWh	Wood and Waste	Other <sup>b,d</sup>	Electricity <sup>b</sup>		Electrical System Energy Losses <sup>e</sup> Million kWh	Total
			Asphalt and Road Oil <sup>b</sup>	Distillate Fuel <sup>b</sup>	Kero-sene <sup>b</sup>	LPG <sup>b</sup>	Lubri-cants <sup>b</sup>	Motor Gasoline	Residual Fuel <sup>b</sup>	Other <sup>b,c</sup>	Total				Million kWh	Net Energy		
			Thousand Barrels														Million kWh	
1960	5,067	16	1,813	2,093	138	317	247	670	10,333	978	16,589	1	—	—	3,269	—	8,131	—
1965	6,101	28	3,289	3,177	124	412	316	439	8,296	1,697	17,750	1	—	—	5,073	—	12,113	—
1970	6,174	44	2,798	3,248	95	624	325	261	6,672	2,895	16,918	(s)	—	—	8,469	—	20,524	—
1975	3,854	43	3,246	3,434	146	888	456	293	4,983	2,166	15,614	0	—	—	9,069	—	21,875	—
1980	3,367	54	2,638	3,297	318	1,163	414	145	2,669	2,504	13,148	0	—	—	13,057	—	31,750	—
1985	2,846	55	4,520	2,547	44	584	377	299	1,022	2,640	12,032	0	—	—	15,312	—	35,974	—
1990	2,200	62	5,008	1,733	33	633	424	297	1,241	4,027	13,396	f 0	—	—	19,308	—	R 42,239	—
1991	2,034	47	3,703	1,556	28	547	379	285	777	3,814	11,089	0	—	—	19,448	—	R 42,279	—
1992	706	50	3,509	1,408	19	928	387	275	1,073	4,559	12,159	0	—	—	19,768	—	R 42,161	—
1993	732	49	4,684	1,787	27	713	394	290	1,244	4,025	13,163	0	—	—	20,201	—	R 42,667	—
1994	738	48	4,363	1,697	66	1,055	412	294	1,252	4,133	13,271	0	—	—	19,037	—	R 39,730	—
1995	760	49	4,236	1,682	57	701	405	328	740	4,057	12,207	0	—	—	10,057	—	R 20,969	—
1996	785	50	3,610	2,087	58	R 767	393	343	1,384	R 4,436	R 13,077	0	—	—	10,098	—	R 21,045	—
1997	790	66	5,619	1,765	41	R 414	415	363	856	R 4,428	R 13,900	0	—	—	10,128	—	R 21,067	—
1998	768	39	4,679	2,776	113	263	434	294	676	5,500	14,736	0	—	—	10,344	—	21,368	—
1999	775	42	4,375	2,379	36	176	439	238	711	6,164	14,517	2	—	—	9,936	—	19,468	—
<b>Trillion Btu</b>																		
1960	135.0	16.6	12.0	12.2	0.8	1.3	1.5	3.5	65.0	5.7	102.0	(s)	15.6	0.0	11.2	280.2	27.7	308.0
1965	162.4	28.3	21.8	18.5	0.7	1.7	1.9	2.3	52.2	9.4	108.5	(s)	20.4	0.0	17.3	336.9	41.3	378.2
1970	162.7	44.9	18.6	18.9	0.5	2.4	2.0	1.4	41.9	16.2	101.8	(s)	24.1	0.0	28.9	362.3	70.0	432.4
1975	102.2	43.6	21.5	20.0	0.8	3.3	2.8	1.5	31.3	12.4	93.7	0.0	22.6	0.0	30.9	293.0	74.6	367.7
1980	88.6	55.5	17.5	19.2	1.8	4.3	2.5	0.8	16.8	14.1	76.9	0.0	R 16.4	0.0	44.6	R 281.9	108.3	R 390.2
1985	74.8	56.5	30.0	14.8	0.2	2.1	2.3	1.6	6.4	14.9	72.4	0.0	R 19.2	0.0	52.2	R 275.1	122.7	R 397.8
1990	57.4	63.5	33.2	10.1	0.2	2.3	2.6	1.6	7.8	22.8	80.6	f 0.0	R 19.5	f 0.0	65.9	R 286.8	144.1	R 430.9
1991	52.8	48.3	24.6	9.1	0.2	2.0	2.3	1.5	4.9	21.5	66.0	0.0	R 19.0	0.0	66.4	R 252.5	R 144.3	R 396.8
1992	17.8	51.1	23.3	8.2	0.1	3.4	2.3	1.4	6.7	25.8	71.3	0.0	R 19.7	0.0	67.4	R 227.4	R 143.9	R 371.2
1993	18.5	50.2	31.1	10.4	0.2	2.6	2.4	1.5	7.8	22.6	78.6	0.0	R 19.5	0.0	68.9	R 235.6	145.6	R 381.2
1994	18.8	49.1	28.9	9.9	0.4	3.8	2.5	1.5	7.9	23.3	78.3	0.0	R 20.2	0.0	65.0	R 231.3	R 135.6	R 366.9
1995	19.2	50.2	28.1	9.8	0.3	2.5	2.5	1.7	4.7	22.9	72.5	0.0	R 25.7	0.0	34.3	R 201.9	71.5	R 273.5
1996	19.7	51.4	24.0	12.2	0.3	R 2.8	2.4	1.8	8.7	R 25.0	R 77.0	0.0	R 28.7	0.0	34.5	R 211.4	R 71.8	R 283.2
1997	19.8	68.2	37.3	10.3	0.2	R 1.5	2.5	1.9	5.4	R 24.9	R 84.0	0.0	R 28.1	0.0	34.6	R 234.6	R 71.9	R 306.5
1998	19.2	39.9	31.1	16.2	0.6	1.0	2.6	1.5	4.3	31.2	88.4	0.0	21.9	0.0	35.3	204.8	72.9	277.7
1999	19.4	43.6	29.0	13.9	0.2	0.6	2.7	1.2	4.5	34.9	87.0	(s)	27.1	0.0	33.9	211.0	66.4	277.4

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>e</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>f</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

R=Revised data.

kWh=kilowatthours. — =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 141. Transportation Energy Consumption Estimates, Selected Years 1960-1999, Maryland**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum								Ethanol <sup>c</sup>	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total <sup>c</sup>
			Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	LPG <sup>a</sup>	Lubricants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total					
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels								Thousand Barrels	Million Kilowatthours	Million Kilowatthours	Total <sup>c</sup>	
1960	89	1	279	2,352	2,457	9	318	21,810	3,893	31,117	0	19	—	48	—
1965	20	1	474	3,774	2,856	10	310	26,981	5,024	39,429	0	0	—	0	—
1970	10	2	309	4,184	4,477	32	299	36,795	3,931	50,027	0	0	—	0	—
1975	1	2	205	5,244	2,973	46	307	43,275	2,807	54,856	0	0	—	0	—
1980	0	4	173	5,848	3,512	26	310	43,737	4,514	58,121	0	23	—	55	—
1985	0	2	76	7,375	3,901	60	282	45,163	1,511	58,368	R e 1	75	—	176	—
1990	0	2	74	8,293	3,637	52	318	46,887	1,850	61,111	0	102	—	224	—
1991	0	3	75	8,727	3,293	42	284	48,045	1,373	61,840	0	106	—	R 229	—
1992	0	2	96	9,457	3,061	101	290	48,665	1,631	63,301	0	104	—	R 221	—
1993	0	2	102	9,425	3,000	115	295	49,281	1,291	63,509	0	120	—	254	—
1994	0	3	71	8,678	3,229	97	308	50,374	988	63,745	0	135	—	281	—
1995	0	3	48	9,068	3,430	48	303	51,115	946	64,958	R 76	137	—	285	—
1996	0	3	35	10,044	3,897	49	294	51,425	768	R 66,512	R 64	133	—	277	—
1997	0	3	43	10,075	4,096	R 102	311	53,200	739	R 68,566	R 73	130	—	R 271	—
1998	0	3	56	10,835	3,920	13	325	54,260	1,213	70,622	61	134	—	276	—
1999	0	3	39	12,581	3,938	12	329	56,617	1,173	74,689	62	146	—	286	—

  

Trillion Btu															
1960	2.3	0.9	1.4	13.7	13.5	(s)	1.9	114.6	24.5	169.6	0.0	0.1	172.8	0.2	173.0
1965	0.5	1.2	2.4	22.0	15.7	(s)	1.9	141.7	31.6	215.4	0.0	0.0	217.1	0.0	217.1
1970	0.2	2.1	1.6	24.4	25.0	0.1	1.8	193.3	24.7	270.8	0.0	0.0	273.1	0.0	273.1
1975	(s)	2.2	1.0	30.5	16.5	0.2	1.9	227.3	17.6	295.1	0.0	0.0	297.3	0.0	297.3
1980	0.0	4.0	0.9	34.1	19.5	0.1	1.9	229.8	28.4	314.5	0.0	0.1	318.6	0.2	318.8
1985	0.0	2.3	0.4	43.0	21.7	0.2	1.7	237.2	9.5	313.7	R e (s)	0.3	e 316.3	0.6	e 316.9
1990	0.0	2.5	0.4	48.3	20.3	0.2	1.9	246.3	11.6	329.0	0.0	0.3	331.8	0.8	332.6
1991	0.0	2.6	0.4	50.8	18.4	0.2	1.7	252.4	8.6	332.5	0.0	0.4	335.4	0.8	336.2
1992	0.0	2.5	0.5	55.1	17.1	0.4	1.8	255.6	10.3	340.7	0.0	0.4	343.5	0.8	344.3
1993	0.0	2.5	0.5	54.9	16.8	0.4	1.8	258.9	8.1	341.4	0.0	0.4	344.3	0.9	345.2
1994	0.0	2.6	0.4	50.6	18.2	0.4	1.9	R 263.5	6.2	R 341.0	0.0	0.5	R 344.1	1.0	R 345.0
1995	0.0	2.9	0.2	52.8	19.4	0.2	1.8	R 266.6	5.9	R 347.0	R 0.3	0.5	R 350.4	1.0	R 351.4
1996	0.0	2.7	0.2	58.5	22.1	0.2	1.8	R 268.2	4.8	R 355.8	0.2	0.5	R 359.0	0.9	R 359.9
1997	0.0	3.3	0.2	58.7	23.2	R 0.4	1.9	R 277.3	4.6	R 366.4	R 0.3	0.4	R 370.1	0.9	R 371.0
1998	0.0	3.1	0.3	63.1	22.2	(s)	2.0	282.8	7.6	378.1	0.2	0.5	381.7	0.9	382.6
1999	0.0	3.4	0.2	73.3	22.3	(s)	2.0	295.0	7.4	400.3	0.2	0.5	404.1	1.0	405.1

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels. Transportation use of natural gas is gas consumed in the operation of pipelines, primarily in compressors, and, since 1990, is also gas consumed as vehicle fuel.

<sup>c</sup> Ethanol blended into motor gasoline, which is accounted for under motor gasoline, is shown separately here to display the use of renewable energy by the transportation sector and is included only once in the total.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1980 and 1981 due to the expanded coverage of renewable energy sources beginning in 1981.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.



Table 142. Estimates of Energy Input at Electric Utilities, Selected Years, 1960-1999, Maryland

Year	Coal	Natural Gas <sup>a</sup>	Petroleum				Nuclear Electric Power	Hydroelectric Power <sup>e</sup>	Wood and Waste	Geothermal Energy	Other <sup>b,f</sup>	Total <sup>g</sup>
			Heavy Oil <sup>b,c</sup>	Light Oil <sup>b,d</sup>	Petroleum Coke <sup>b</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels				Million Kilowatthours					
1960	3,088	(s)	166	16	0	182	0	1,356	0	0	0	—
1965	6,018	(s)	269	26	0	295	0	1,140	0	0	0	—
1970	5,950	11	9,946	945	0	10,891	0	1,906	0	0	0	—
1975	3,873	(s)	17,982	688	0	18,669	4,386	2,311	0	0	0	—
1980	5,908	5	8,139	1,111	0	9,250	10,947	1,270	0	0	0	—
1985	7,046	1	5,131	830	0	5,961	9,926	1,524	16	0	0	—
1990	8,945	18	6,234	598	0	6,832	1,251	2,299	0	0	0	—
1991	8,632	16	7,084	552	0	7,637	9,036	1,407	0	0	0	—
1992	8,993	12	4,654	458	0	5,111	10,664	1,825	0	0	0	—
1993	9,521	9	6,975	592	0	7,567	12,301	1,658	0	0	0	—
1994	9,717	13	6,581	1,040	0	7,621	11,235	2,010	0	0	0	—
1995	10,141	19	2,115	674	0	2,789	12,938	1,442	0	0	0	—
1996	10,540	8	2,121	782	0	2,903	12,093	2,457	0	0	0	—
1997	10,417	11	2,380	638	0	3,018	13,213	1,588	0	0	0	—
1998	10,968	12	5,475	684	0	6,159	13,331	1,740	0	0	0	—
1999	10,931	16	6,612	505	0	7,117	13,312	1,422	0	0	0	—
<b>Trillion Btu</b>												
1960	82.2	0.1	1.0	0.1	0.0	1.1	0.0	14.6	0.0	0.0	0.0	98.0
1965	158.7	0.1	1.7	0.1	0.0	1.8	0.0	11.9	0.0	0.0	0.0	172.5
1970	146.4	11.7	62.5	5.5	0.0	68.0	0.0	20.0	0.0	0.0	0.0	246.2
1975	94.2	0.4	113.0	4.0	0.0	117.0	48.3	24.0	0.0	0.0	0.0	284.0
1980	146.3	5.4	51.2	6.5	0.0	57.6	119.4	13.2	0.0	0.0	0.0	341.8
1985	178.4	1.4	32.3	4.8	0.0	37.1	107.3	15.9	0.2	0.0	0.0	340.4
1990	227.8	18.3	39.2	3.5	0.0	42.7	13.4	23.9	0.0	0.0	0.0	326.0
1991	220.9	16.8	44.5	3.2	0.0	47.8	97.0	14.7	0.0	0.0	0.0	397.2
1992	229.4	12.1	29.3	2.7	0.0	31.9	113.9	18.9	0.0	0.0	0.0	406.1
1993	242.8	9.2	43.9	3.5	0.0	47.3	131.4	17.1	0.0	0.0	0.0	447.8
1994	249.2	13.3	41.4	6.1	0.0	47.4	119.9	20.7	0.0	0.0	0.0	450.6
1995	263.0	19.6	13.3	3.9	0.0	17.2	137.9	14.9	0.0	0.0	0.0	452.5
1996	271.5	8.8	13.3	4.6	0.0	17.9	128.5	25.4	0.0	0.0	0.0	452.0
1997	269.0	11.5	15.0	3.7	0.0	18.7	140.4	<sup>R</sup> 16.5	0.0	0.0	0.0	<sup>R</sup> 456.0
1998	283.3	12.9	34.4	4.0	0.0	38.4	141.6	18.0	0.0	0.0	0.0	494.2
1999	283.0	17.1	41.6	2.9	0.0	44.5	141.4	14.7	0.0	0.0	0.0	500.7

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> Prior to 1980, based on oil used in steam plants. Since 1980, heavy oil includes fuel oil nos. 4, 5, and 6 and residual fuel oils.

<sup>d</sup> Prior to 1980, based on oil used in internal combustion and gas turbine engine plants. Since 1980, light oil includes fuel oil nos. 1 and 2, kerosene, and jet fuel.

<sup>e</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>f</sup> "Other" is electricity generated for distribution from wind, photovoltaic, and solar thermal energy.

<sup>g</sup> If applicable, from 1989, includes net imports of electricity generated from nonrenewable energy sources not shown in other columns. See data in appendix Table A8.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 143. Energy Consumption Estimates by Source, Selected Years 1960-1999, Massachusetts**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum											Nuclear Electric Power	Hydro-electric Power <sup>d</sup>	Wood and Waste	Other <sup>a,e</sup>	Net Inter-state Flow of Electricity/Losses <sup>f</sup>	Total <sup>g</sup>
			Asphalt & Road Oil <sup>a</sup>	Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	Kero-sene <sup>a</sup>	LPG <sup>a</sup>	Lubri-cants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Other <sup>a,c</sup>	Total						
			Thousand Barrels															Million kWh	
1960	4,559	78	2,270	968	51,240	1,209	5,718	1,148	799	34,993	39,108	R 1,269	R 138,722	34	982	—	—	-711	—
1965	4,932	114	2,867	1,702	55,825	3,166	3,496	1,511	915	39,752	54,207	1,120	164,561	966	664	—	—	-6,364	—
1970	910	147	2,843	276	59,239	7,864	2,103	1,820	947	49,527	86,130	1,121	211,870	1,209	753	—	—	-7,191	—
1975	1,016	154	1,832	228	58,665	8,009	867	2,315	786	54,630	65,975	1,127	194,432	3,781	417	—	—	6,757	—
1980	874	183	1,231	274	37,613	8,573	698	2,125	841	51,443	54,143	2,312	159,253	3,232	158	—	—	11,452	—
1985	4,176	219	1,051	134	33,072	6,984	737	1,719	765	54,847	36,075	2,268	137,652	6,133	4,574	—	—	5,631	—
1990	4,337	258	1,339	97	33,697	9,806	308	2,631	861	56,125	32,066	2,337	139,265	5,070	R <sup>h</sup> 1,684	—	—	R 28,874	—
1991	4,451	252	1,976	45	33,188	9,398	369	1,919	770	54,488	30,533	2,277	134,964	4,417	R 2,018	—	—	R 29,974	—
1992	4,257	295	1,567	45	35,150	7,880	424	1,869	785	55,436	27,386	2,426	132,967	4,742	R 1,543	—	—	R 38,695	—
1993	3,811	312	1,454	85	36,629	7,728	378	2,102	800	56,065	24,361	2,444	132,046	4,339	R 1,757	—	—	R 51,720	—
1994	3,932	337	886	73	35,313	7,433	336	2,056	836	56,871	21,079	2,397	127,278	3,859	R 1,504	—	—	R 56,154	—
1995	4,113	362	1,249	84	36,635	6,636	275	2,143	821	58,775	13,942	2,270	122,831	4,486	R 1,418	—	—	R 57,103	—
1996	4,477	358	1,270	90	34,929	6,873	209	R 2,563	797	59,794	15,500	R 4,911	R 126,936	5,324	R 1,731	—	—	R 59,463	—
1997	4,891	380	916	87	35,596	7,298	257	R 2,109	842	60,912	22,497	R 5,307	R 135,822	4,310	R 1,676	—	—	R 43,585	—
1998	3,189	338	838	87	33,587	7,728	290	1,969	882	62,284	18,895	5,387	131,946	5,698	1,597	—	—	68,054	—
1999	497	339	967	96	33,175	8,081	426	2,295	891	63,433	2,733	5,453	117,551	4,473	1,446	—	—	128,236	—

  

Trillion Btu																			
1960	118.8	80.6	15.1	4.9	298.5	6.7	32.4	4.6	4.8	183.8	245.9	R 7.6	R 804.3	0.4	10.6	42.8	0.0	-2.4	R 1,055.0
1965	127.9	115.7	19.0	8.6	325.2	17.8	19.8	6.1	5.6	208.8	340.8	6.0	957.7	11.4	6.9	48.7	0.0	-21.7	1,246.6
1970	21.4	149.1	18.9	1.4	345.1	44.5	11.9	6.9	5.7	260.2	541.5	6.0	1,242.0	13.3	7.9	57.1	0.0	-24.5	1,466.3
1975	24.5	154.6	12.2	1.2	341.7	45.3	4.9	8.6	4.8	287.0	414.8	6.1	1,126.5	41.6	4.3	49.0	0.0	23.1	1,423.6
1980	22.8	185.5	8.2	1.4	219.1	48.5	4.0	7.8	5.1	270.2	340.4	12.6	917.2	35.3	1.6	R 59.8	0.0	39.1	R 1,261.3
1985	110.2	224.8	7.0	0.7	192.6	39.5	4.2	6.2	4.6	288.1	226.8	12.2	781.9	66.3	47.8	R 59.8	0.0	19.2	R 1,310.0
1990	113.1	268.0	8.9	0.5	196.3	55.5	1.7	9.5	5.2	294.8	201.6	12.7	786.7	54.1	R <sup>h</sup> 17.5	R 53.7	R <sup>h</sup> 0.2	R 98.5	R <sup>h</sup> 1,400.5
1991	116.8	261.3	13.1	0.2	193.3	52.8	2.1	6.9	4.7	286.2	192.0	12.3	763.7	47.4	R 21.1	R 57.1	0.2	R 102.3	R 1,377.9
1992	111.0	305.9	10.4	0.2	204.7	44.5	2.4	6.8	4.8	291.2	172.2	13.0	750.3	50.6	R 16.0	R 61.0	R 0.3	132.0	R 1,431.9
1993	98.5	324.2	9.6	0.4	213.4	43.7	2.1	7.6	4.8	294.5	153.2	13.2	742.5	46.3	R 18.1	R 62.1	0.3	R 176.5	R 1,472.6
1994	100.7	346.1	5.9	0.4	205.7	42.1	1.9	7.5	5.1	R 297.4	132.5	12.9	R 711.4	41.2	R 15.5	R 65.4	0.3	R 191.6	R 1,476.7
1995	104.4	371.7	8.3	0.4	213.4	37.6	1.6	7.8	5.0	R 306.5	87.7	12.2	R 680.4	47.8	R 14.6	R 68.8	0.3	R 194.8	R 1,488.6
1996	113.1	367.5	8.4	0.5	203.5	39.0	1.2	R 9.3	4.8	R 311.9	97.4	R 26.3	R 702.2	56.6	R 17.9	R 69.1	R 0.4	R 202.9	R 1,534.5
1997	122.9	388.6	6.1	0.4	207.3	41.4	1.5	R 7.6	5.1	R 317.5	141.4	R 28.6	R 757.0	45.8	R 17.4	R 62.8	0.4	R 148.7	R 1,550.8
1998	80.4	345.5	5.6	0.4	195.6	43.8	1.6	7.1	5.3	324.6	118.8	29.1	732.1	60.5	16.5	50.2	0.4	232.2	1,522.9
1999	13.0	355.5	6.4	0.5	193.2	45.8	2.4	8.3	5.4	330.6	17.2	29.3	639.1	47.5	15.0	55.3	0.4	437.5	1,569.1

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.  
<sup>b</sup> Includes supplemental gaseous fuels.  
<sup>c</sup> "Other" is the subtotal of 16 petroleum products consumed in the industrial sector. See a full description in Appendix A, Section 4, "Other Petroleum Products."  
<sup>d</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.  
<sup>e</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.  
<sup>f</sup> Net interstate flow of electricity is the difference between the amount of energy in the electricity sold within a State (including associated losses) and the energy input at the electric utilities within the State. A positive number

indicates that more electricity (including associated losses) came into the State than went out of the State during the year; conversely, a negative number indicates that more electricity (including associated losses) went out of the State than came into the State.  
<sup>g</sup> From 1989, "Total" does not equal the sum of the columns. Net imports of electricity generated from nonrenewable energy sources (shown in appendix Table A8) is included in the total but not in any other columns.  
<sup>h</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.  
 kWh=kilowatthours. R=Revised data. — =Not applicable.  
 Note: Totals may not equal sum of components due to independent rounding.  
 Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 144. Residential Energy Consumption Estimates, Selected Years 1960-1999, Massachusetts**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum				Wood Thousand Cords	Geothermal	Solar <sup>c</sup>	Electricity <sup>a</sup> Million Kilowatthours	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Total						Million Kilowatthours	
			Thousand Barrels										
1960	394	45	34,305	4,858	752	39,915	427	—	—	4,190	—	10,423	—
1965	195	65	37,082	2,682	926	40,689	378	—	—	5,766	—	13,767	—
1970	105	83	38,530	1,434	933	40,897	459	—	—	9,335	—	22,621	—
1975	57	90	37,860	591	1,006	39,456	491	—	—	10,648	—	25,684	—
1980	50	94	22,712	323	675	23,710	R 1,560	—	—	11,571	—	28,137	—
1985	70	98	17,968	577	1,021	19,566	1,322	—	—	12,907	—	30,324	—
1990	29	107	17,287	163	1,358	18,808	904	—	—	15,581	—	R 34,085	—
1991	15	103	16,640	151	1,229	18,020	952	—	—	15,379	—	R 33,434	—
1992	25	120	18,812	259	1,219	20,291	1,002	—	—	15,560	—	R 33,186	—
1993	22	121	20,527	250	1,344	22,120	R 1,029	—	—	15,785	—	R 33,341	—
1994	13	120	19,764	218	1,389	21,372	R 1,008	—	—	16,049	—	R 33,493	—
1995	14	106	19,425	130	1,451	21,006	R 1,119	—	—	15,993	—	R 33,344	—
1996	16	114	18,625	148	R 1,720	R 20,493	R 1,117	—	—	16,256	—	R 33,877	—
1997	14	112	18,916	190	R 1,614	R 20,720	R 726	—	—	16,274	—	R 33,853	—
1998	12	102	17,312	197	1,478	18,987	640	—	—	16,388	—	33,854	—
1999	15	106	17,923	179	1,522	19,624	686	—	—	17,392	—	34,077	—

**Trillion Btu**

1960	9.8	46.6	199.8	27.5	3.0	230.4	8.5	0.0	0.0	14.3	309.6	35.6	345.2
1965	4.8	65.7	216.0	15.2	3.7	234.9	7.6	0.0	0.0	19.7	332.6	47.0	379.6
1970	2.5	83.6	224.4	8.1	3.5	236.1	9.2	0.0	0.0	31.8	363.2	77.2	440.4
1975	1.3	90.6	220.5	3.3	3.7	227.6	9.8	0.0	0.0	36.3	365.6	87.6	453.3
1980	1.2	96.0	132.3	1.8	2.5	136.6	31.2	0.0	0.0	39.5	304.4	96.0	400.4
1985	1.6	100.1	104.7	3.3	3.7	111.6	26.4	0.0	0.0	44.0	283.9	103.5	387.3
1990	0.7	110.5	100.7	0.9	4.9	106.5	18.1	e 0.0	e 0.2	53.2	e 289.2	116.3	R e 405.5
1991	0.4	106.9	96.9	0.9	4.4	102.2	19.0	0.0	0.2	52.5	281.2	R 114.1	R 395.3
1992	0.6	124.2	109.6	1.5	4.4	115.5	20.0	0.0	0.2	53.1	313.6	R 113.2	R 426.8
1993	0.5	125.9	119.6	1.4	4.8	125.8	R 20.6	0.0	0.2	53.9	R 326.9	113.8	440.6
1994	0.3	122.6	115.1	1.2	5.0	121.4	R 20.2	0.0	0.2	54.8	R 319.5	114.3	433.7
1995	0.3	108.5	113.2	0.7	5.3	119.1	R 22.4	0.0	0.2	54.6	R 305.2	R 113.8	R 419.0
1996	0.4	117.3	108.5	0.8	R 6.2	R 115.5	22.3	0.0	0.2	55.5	R 311.3	R 115.6	R 426.9
1997	0.3	114.6	110.2	1.1	R 5.8	R 117.1	R 14.5	0.0	0.2	55.5	R 302.3	R 115.5	R 417.8
1998	0.3	104.4	100.8	1.1	5.3	107.3	12.8	0.0	0.2	55.9	280.9	115.5	396.4
1999	0.4	110.8	104.4	1.0	5.5	110.9	13.7	(s)	0.2	59.3	295.4	116.3	411.7

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Includes small amounts of solar thermal and photovoltaic energy consumed by the commercial sector that cannot be separately identified. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 145. Commercial Energy Consumption Estimates, Selected Years 1960-1999, Massachusetts**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum						Wood	Geothermal	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>c</sup>	Total <sup>d</sup>
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels						Thousand Cords	Million Kilowatthours	Million Kilowatthours			
1960	431	10	11,965	404	133	135	10,036	22,672	8	—	3,011	—	7,488	—
1965	174	16	12,933	223	163	92	14,503	27,914	7	—	4,302	—	10,272	—
1970	81	35	13,438	119	165	102	14,872	28,696	9	—	7,782	—	18,858	—
1975	45	38	13,204	49	178	109	9,122	22,662	9	—	11,397	—	27,490	—
1980	50	53	7,510	30	119	191	4,854	12,704	37	—	13,047	—	31,726	—
1985	67	41	5,703	108	180	188	3,157	9,336	R 35	—	15,566	—	36,571	—
1990	34	51	6,236	127	240	69	4,535	11,207	R 57	—	19,520	—	R 42,702	—
1991	12	53	7,610	200	217	182	4,562	12,772	R 61	—	19,421	—	R 42,219	—
1992	33	64	6,685	73	215	164	3,711	10,847	R 65	—	19,563	—	R 41,724	—
1993	22	65	6,334	113	237	53	2,592	9,330	R 83	—	19,670	—	R 41,545	—
1994	9	85	5,548	100	245	57	2,998	8,948	84	—	20,105	—	R 41,958	—
1995	13	82	6,272	110	256	65	3,117	9,820	84	—	20,255	—	R 42,231	—
1996	17	96	5,718	47	R 303	65	2,472	R 8,605	92	—	20,711	—	R 43,163	—
1997	15	106	5,859	47	R 285	48	2,286	R 8,524	R 80	—	21,203	—	R 44,104	—
1998	14	90	5,510	70	261	66	1,506	7,413	80	—	21,773	—	44,979	—
1999	22	65	3,851	225	269	63	1,422	5,830	96	—	21,815	—	42,743	—

  

Trillion Btu														
1960	10.7	10.6	69.7	2.3	0.5	0.7	63.1	136.3	0.2	0.0	10.3	168.1	25.6	193.7
1965	4.3	16.5	75.3	1.3	0.7	0.5	91.2	168.9	0.1	0.0	14.7	204.5	35.0	239.6
1970	1.9	35.8	78.3	0.7	0.6	0.5	93.5	173.6	0.2	0.0	26.6	238.0	64.3	302.4
1975	1.0	38.0	76.9	0.3	0.7	0.6	57.4	135.8	0.2	0.0	38.9	213.8	93.8	307.6
1980	1.2	54.3	43.7	0.2	0.4	1.0	30.5	75.9	0.7	0.0	44.5	176.7	108.2	284.9
1985	1.6	42.4	33.2	0.6	0.6	1.0	19.8	55.3	R 0.7	0.0	53.1	R 153.1	124.8	R 277.9
1990	0.8	52.3	36.3	0.7	0.9	0.4	28.5	66.8	R 1.1	e (s)	66.6	R e 187.7	145.7	R e 333.5
1991	0.3	55.2	44.3	1.1	0.8	1.0	28.7	75.9	R 1.2	(s)	66.3	R 198.9	R 144.1	R 343.0
1992	0.8	66.8	38.9	0.4	0.8	0.9	23.3	64.3	R 1.3	0.1	66.8	R 200.0	R 142.4	R 342.4
1993	0.5	67.9	36.9	0.6	0.9	0.3	16.3	55.0	R 1.7	0.1	67.1	192.3	141.8	R 334.0
1994	0.2	86.6	32.3	0.6	0.9	0.3	18.9	52.9	1.7	0.1	68.6	R 210.2	R 143.2	353.3
1995	0.3	84.4	36.5	0.6	0.9	0.3	19.6	58.0	1.7	0.1	69.1	R 213.7	R 144.1	R 357.8
1996	0.4	98.6	33.3	0.3	R 1.1	0.3	15.5	50.5	1.8	0.1	70.7	R 222.3	R 147.3	R 369.5
1997	0.4	108.0	34.1	0.3	1.0	0.3	14.4	R 50.0	1.6	0.2	72.3	232.5	R 150.5	R 383.0
1998	0.3	92.1	32.1	0.4	0.9	0.3	9.5	43.3	1.6	0.2	74.3	211.8	153.5	365.3
1999	0.5	68.3	22.4	1.3	1.0	0.3	8.9	33.9	1.9	0.2	74.4	179.4	145.8	325.2

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>d</sup> Small amounts of solar thermal and photovoltaic energy consumed in the commercial sector cannot be separately identified and are included in residential consumption.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 146. Industrial Energy Consumption Estimates, Selected Years 1960-1999, Massachusetts**

Year	Coal Thousand Short Tons	Natural Gas <sup>a</sup> Billion Cubic Feet	Petroleum									Hydro-electric Power <sup>b</sup> Million kWh	Wood and Waste	Other <sup>b,d</sup>	Electricity <sup>b</sup>		Electrical System Energy Losses <sup>e</sup> Million kWh	Total
			Asphalt and Road Oil <sup>b</sup>	Distillate Fuel <sup>b</sup>	Kerosene <sup>b</sup>	LPG <sup>b</sup>	Lubricants <sup>b</sup>	Motor Gasoline	Residual Fuel <sup>b</sup>	Other <sup>b,c</sup>	Total				Million kWh	Net Energy		
			Thousand Barrels															
1960	1,266	12	2,270	2,322	456	260	356	133	17,875	R 1,269	R 24,942	117	—	—	5,075	—	12,625	—
1965	496	20	2,867	2,841	590	401	507	206	25,076	1,120	33,607	100	—	—	6,546	—	15,630	—
1970	149	23	2,843	2,897	549	693	506	111	25,742	1,121	34,463	72	—	—	7,418	—	17,975	—
1975	110	24	1,832	2,654	227	1,099	353	81	15,891	1,127	23,264	67	—	—	7,330	—	17,680	—
1980	98	29	1,231	1,886	345	1,305	377	91	2,663	2,312	10,209	63	—	—	8,486	—	20,635	—
1985	176	33	1,051	1,044	52	448	343	367	8,399	2,268	13,973	63	—	—	9,454	—	22,210	—
1990	73	44	1,339	2,176	18	973	386	414	2,640	2,337	10,284	R f 280	—	—	10,157	—	R 22,219	—
1991	85	55	1,976	1,195	18	404	346	332	1,406	2,277	7,955	R 263	—	—	9,794	—	R 21,290	—
1992	155	71	1,567	1,855	92	372	352	334	2,180	2,426	9,178	R 244	—	—	9,663	—	R 20,609	—
1993	115	95	1,454	1,402	15	460	359	175	3,537	2,444	9,846	R 309	—	—	9,605	—	R 20,286	—
1994	65	93	886	1,121	17	333	375	347	2,731	2,397	8,209	R 309	—	—	9,710	—	R 20,264	—
1995	42	108	1,249	1,237	35	387	369	373	1,481	2,270	7,400	R 328	—	—	10,026	—	R 20,904	—
1996	38	100	1,270	1,237	14	R 495	358	372	1,719	R 4,911	R 10,375	R 352	—	—	10,085	—	R 21,018	—
1997	36	108	916	1,166	21	R 163	378	392	1,759	R 5,307	R 10,101	R 202	—	—	9,930	—	R 20,654	—
1998	35	125	838	1,031	23	185	396	316	1,892	5,387	10,068	343	—	—	10,212	—	21,096	—
1999	33	158	967	1,224	22	348	400	297	1,081	5,453	9,792	300	—	—	9,966	—	19,526	—

  

Trillion Btu																		
1960	33.2	12.0	15.1	13.5	2.6	1.0	2.2	0.7	112.4	R 7.6	R 155.0	1.3	34.1	0.0	17.3	R 252.8	43.1	R 295.9
1965	12.8	20.0	19.0	16.5	3.3	1.6	3.1	1.1	157.6	6.0	208.3	1.0	41.0	0.0	22.3	305.6	53.3	358.9
1970	3.6	22.8	18.9	16.9	3.1	2.6	3.1	0.6	161.8	6.0	213.0	0.8	47.8	0.0	25.3	313.3	61.3	374.6
1975	2.6	24.1	12.2	15.5	1.3	4.1	2.1	0.4	99.9	6.1	141.6	0.7	39.0	0.0	25.0	233.0	60.3	293.3
1980	2.4	29.4	8.2	11.0	2.0	4.8	2.3	0.5	16.7	12.6	58.0	0.7	R 27.8	0.0	29.0	R 147.2	70.4	R 217.6
1985	4.4	33.9	7.0	6.1	0.3	1.6	2.1	1.9	52.8	12.2	84.0	0.7	R 32.6	0.0	32.3	R 187.8	75.8	R 263.6
1990	1.8	45.8	8.9	12.7	0.1	3.5	2.3	2.2	16.6	12.7	59.0	R f 2.9	R 34.5	f 0.0	34.7	R f 178.7	75.8	R f 254.5
1991	2.1	56.9	13.1	7.0	0.1	1.5	2.1	1.7	8.8	12.3	46.6	R 2.7	R 36.8	0.0	33.4	R 178.6	R 72.6	R 251.2
1992	3.9	73.5	10.4	10.8	0.5	1.3	2.1	1.8	13.7	13.0	53.7	R 2.5	R 39.6	0.0	33.0	R 206.2	R 70.3	R 276.5
1993	2.9	98.3	9.6	8.2	0.1	1.7	2.2	0.9	22.2	13.2	58.0	R 3.2	R 39.8	0.0	32.8	R 235.0	69.2	R 304.2
1994	1.6	95.1	5.9	6.5	0.1	1.2	2.3	1.8	17.2	12.9	47.9	R 3.2	R 43.5	0.0	33.1	R 224.4	69.1	R 293.6
1995	1.1	110.5	8.3	7.2	0.2	1.4	2.2	R 1.9	9.3	12.2	42.8	R 3.4	R 44.7	0.0	34.2	R 236.7	71.3	R 308.0
1996	0.9	102.6	8.4	7.2	0.1	R 1.8	2.2	R 1.9	10.8	R 26.3	R 58.7	R 3.6	R 44.9	0.0	34.4	R 245.2	R 71.7	R 316.9
1997	0.9	110.5	6.1	6.8	0.1	R 0.6	2.3	R 2.0	11.1	R 28.6	R 57.6	R 2.1	R 46.7	0.0	33.9	R 251.6	R 70.5	R 322.1
1998	0.9	128.1	5.6	6.0	0.1	0.7	2.4	1.6	11.9	29.1	57.4	3.5	35.8	0.0	34.8	260.5	72.0	332.5
1999	0.8	165.2	6.4	7.1	0.1	1.3	2.4	1.5	6.8	29.3	55.0	3.1	39.7	27.0	34.0	324.8	66.6	391.4

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>e</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for

electrical system energy losses.

<sup>f</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

R=Revised data.

kWh=kilowatt-hours. —=Not applicable.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 147. Transportation Energy Consumption Estimates, Selected Years 1960-1999, Massachusetts**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum								Ethanol <sup>c</sup>	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total <sup>c</sup>
			Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	LPG <sup>a</sup>	Lubricants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total					
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels								Thousand Barrels	Million Kilowatthours	Million Kilowatthours	Total <sup>c</sup>	
1960	22	(s)	968	2,371	1,209	4	443	34,725	1,207	40,927	0	105	—	261	—
1965	2	(s)	1,702	2,632	3,166	22	408	39,454	2,472	49,856	0	105	—	251	—
1970	(s)	1	276	3,198	7,864	29	441	49,314	3,215	64,336	0	105	—	254	—
1975	(s)	1	228	4,485	7,967	33	433	54,440	1,049	68,634	0	105	—	253	—
1980	0	1	274	4,900	8,563	26	463	51,161	900	66,287	0	167	—	406	—
1985	0	1	134	7,536	6,984	70	422	54,292	874	70,311	<sup>e</sup> 0	193	—	453	—
1990	0	1	97	7,510	9,806	59	475	55,642	1,385	74,973	<sup>R</sup> 0	183	—	401	—
1991	0	2	45	7,270	9,398	69	425	53,974	443	71,623	<sup>R</sup> 0	203	—	442	—
1992	0	2	45	7,404	7,880	63	433	54,938	434	71,197	<sup>R</sup> 0	212	—	452	—
1993	0	2	85	7,980	7,728	62	441	55,837	349	72,482	<sup>R</sup> (s)	221	—	468	—
1994	0	2	73	8,346	7,433	88	461	56,466	369	73,236	0	227	—	474	—
1995	0	2	84	9,088	6,636	50	453	58,337	202	74,850	0	236	—	493	—
1996	0	2	90	8,896	6,873	<sup>R</sup> 45	439	59,356	2,036	<sup>R</sup> 77,736	0	241	—	<sup>R</sup> 503	—
1997	0	2	87	9,263	7,298	<sup>R</sup> 47	464	60,472	1,409	<sup>R</sup> 79,041	0	252	—	<sup>R</sup> 525	—
1998	0	2	87	9,276	7,728	45	486	61,902	32	79,556	0	234	—	483	—
1999	0	3	96	9,782	8,081	156	491	63,073	26	81,706	0	234	—	458	—

  

Trillion Btu															
1960	0.6	0.3	4.9	13.8	6.7	(s)	2.7	182.4	7.6	218.1	0.0	0.4	219.3	0.9	220.2
1965	(s)	0.2	8.6	15.3	17.8	0.1	2.5	207.3	15.5	267.1	0.0	0.4	267.7	0.9	268.6
1970	(s)	1.1	1.4	18.6	44.5	0.1	2.7	259.0	20.2	346.5	0.0	0.4	348.0	0.9	348.9
1975	(s)	0.5	1.2	26.1	45.1	0.1	2.6	286.0	6.6	367.7	0.0	0.4	368.5	0.9	369.4
1980	0.0	0.7	1.4	28.5	48.4	0.1	2.8	268.7	5.7	355.7	0.0	0.6	356.9	1.4	358.3
1985	0.0	1.4	0.7	43.9	39.5	0.3	2.6	285.2	5.5	377.6	<sup>e</sup> 0.0	0.7	<sup>e</sup> 379.6	1.5	<sup>e</sup> 381.2
1990	0.0	1.3	0.5	43.7	55.5	0.2	2.9	292.3	8.7	403.8	<sup>R</sup> 0.0	0.6	405.7	1.4	407.1
1991	0.0	1.6	0.2	42.3	52.8	0.2	2.6	283.5	2.8	384.6	<sup>R</sup> 0.0	0.7	386.8	1.5	388.3
1992	0.0	1.8	0.2	43.1	44.5	0.2	2.6	288.6	2.7	382.1	<sup>R</sup> 0.0	0.7	384.6	1.5	386.1
1993	0.0	2.3	0.4	46.5	43.7	0.2	2.7	293.3	2.2	389.0	(s)	0.8	392.1	1.6	393.7
1994	0.0	1.9	0.4	48.6	42.1	0.3	2.8	<sup>R</sup> 295.3	2.3	<sup>R</sup> 391.8	0.0	0.8	<sup>R</sup> 394.5	1.6	<sup>R</sup> 396.1
1995	0.0	1.9	0.4	52.9	37.6	0.2	2.7	<sup>R</sup> 304.2	1.3	<sup>R</sup> 399.4	0.0	0.8	<sup>R</sup> 402.2	1.7	<sup>R</sup> 403.8
1996	0.0	2.2	0.5	51.8	39.0	0.2	2.7	<sup>R</sup> 309.6	12.8	<sup>R</sup> 416.5	0.0	0.8	<sup>R</sup> 419.5	1.7	<sup>R</sup> 421.2
1997	0.0	2.4	0.4	54.0	41.4	<sup>R</sup> 0.2	2.8	<sup>R</sup> 315.2	8.9	<sup>R</sup> 422.9	0.0	0.9	<sup>R</sup> 426.1	1.8	<sup>R</sup> 427.9
1998	0.0	2.0	0.4	54.0	43.8	0.2	2.9	322.6	0.2	424.2	0.0	0.8	427.0	1.6	428.6
1999	0.0	2.8	0.5	57.0	45.8	0.6	3.0	328.7	0.2	435.7	0.0	0.8	439.2	1.6	440.8

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels. Transportation use of natural gas is gas consumed in the operation of pipelines, primarily in compressors, and, since 1990, is also gas consumed as vehicle fuel.

<sup>c</sup> Ethanol blended into motor gasoline, which is accounted for under motor gasoline, is shown separately here to display the use of renewable energy by the transportation sector and is included only once in the total.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1980 and 1981 due to the expanded coverage of renewable energy sources beginning in 1981.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 148. Estimates of Energy Input at Electric Utilities, Selected Years, 1960-1999, Massachusetts**

Year	Coal	Natural Gas <sup>a</sup>	Petroleum				Nuclear Electric Power	Hydroelectric Power <sup>e</sup>	Wood and Waste	Geothermal Energy	Other <sup>b,f</sup>	Total <sup>g</sup>
			Heavy Oil <sup>b,c</sup>	Light Oil <sup>b,d</sup>	Petroleum Coke <sup>b</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels				Million Kilowatthours					
1960	2,446	11	9,990	277	0	10,267	34	865	0	0	0	—
1965	4,066	13	12,157	337	0	12,494	966	564	0	0	0	—
1970	575	6	42,301	1,176	0	43,477	1,209	682	0	0	0	—
1975	804	1	39,912	503	0	40,415	3,781	350	0	0	0	—
1980	676	5	45,726	616	0	46,342	3,232	96	0	0	0	—
1985	3,863	45	23,645	822	0	24,467	6,133	4,511	0	0	0	—
1990	4,201	55	23,505	488	0	23,993	5,070	R 1,404	0	0	0	—
1991	4,339	39	24,121	473	0	24,594	4,417	R 1,755	0	0	0	—
1992	4,044	38	21,061	394	0	21,455	4,742	R 1,299	0	0	0	—
1993	3,652	29	17,883	386	0	18,269	4,339	R 1,448	0	0	0	—
1994	3,845	39	14,981	533	0	15,514	3,859	R 1,195	0	0	0	—
1995	4,044	65	9,143	612	0	9,755	4,486	R 1,090	0	0	0	—
1996	4,406	45	9,273	453	0	9,727	5,324	R 1,380	0	0	0	—
1997	4,826	51	17,043	392	0	17,436	4,310	R 1,474	0	0	0	—
1998	3,129	18	15,465	458	0	15,923	5,698	1,254	0	0	0	—
1999	427	8	205	394	0	600	1,931	1,146	0	0	0	—

  

Trillion Btu												
1960	64.5	11.2	62.8	1.6	0.0	64.4	0.4	9.3	0.0	0.0	0.0	149.8
1965	106.0	13.3	76.4	2.0	0.0	78.4	11.4	5.9	0.0	0.0	0.0	215.0
1970	13.4	5.7	265.9	6.8	0.0	272.8	13.3	7.2	0.0	0.0	0.0	312.3
1975	19.6	1.4	250.9	2.9	0.0	253.8	41.6	3.6	0.0	0.0	0.0	320.1
1980	18.1	5.1	287.5	3.6	0.0	291.1	35.3	1.0	0.0	0.0	0.0	350.5
1985	102.6	46.9	148.7	4.8	0.0	153.4	66.3	47.1	0.0	0.0	0.0	416.4
1990	109.7	58.1	147.8	2.8	0.0	150.6	54.1	R 14.6	0.0	0.0	0.0	R 395.7
1991	114.0	40.7	151.7	2.8	0.0	154.4	47.4	R 18.3	0.0	0.0	0.0	R 382.9
1992	105.7	39.6	132.4	2.3	0.0	134.7	50.6	R 13.4	0.0	0.0	0.0	R 349.0
1993	94.6	29.8	112.4	2.2	0.0	114.7	46.3	R 14.9	0.0	0.0	0.0	304.4
1994	98.5	40.0	94.2	3.1	0.0	97.3	41.2	R 12.3	0.0	0.0	0.0	R 293.9
1995	102.7	66.3	57.5	3.6	0.0	61.0	47.8	R 11.2	0.0	0.0	0.0	R 294.7
1996	111.3	46.8	58.3	2.6	0.0	60.9	56.6	R 14.3	0.0	0.0	0.0	R 294.8
1997	121.3	53.2	107.2	2.3	0.0	109.4	45.8	R 15.3	0.0	0.0	0.0	R 352.2
1998	78.9	19.0	97.2	2.7	0.0	99.9	60.5	13.0	0.0	0.0	0.0	276.3
1999	11.2	8.4	1.3	2.3	0.0	3.6	20.5	11.9	0.0	0.0	0.0	61.3

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> Prior to 1980, based on oil used in steam plants. Since 1980, heavy oil includes fuel oil nos. 4, 5, and 6 and residual fuel oils.

<sup>d</sup> Prior to 1980, based on oil used in internal combustion and gas turbine engine plants. Since 1980, light oil includes fuel oil nos. 1 and 2, kerosene, and jet fuel.

<sup>e</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>f</sup> "Other" is electricity generated for distribution from wind, photovoltaic, and solar thermal energy.

<sup>g</sup> If applicable, from 1989, includes net imports of electricity generated from nonrenewable energy sources not shown in other columns. See data in appendix Table A8.

R=Revised data.

— =Not applicable.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 149. Energy Consumption Estimates by Source, Selected Years 1960-1999, Michigan**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum											Nuclear Electric Power	Hydro-electric Power <sup>d</sup>	Wood and Waste	Other <sup>a,e</sup>	Net Inter-state Flow of Electricity/Losses <sup>f</sup>	Total <sup>g</sup>
			Asphalt & Road Oil <sup>a</sup>	Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	Kero-sene <sup>a</sup>	LPG <sup>a</sup>	Lubri-cants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Other <sup>a,c</sup>	Total						
			Thousand Barrels															Million kWh	
1960	25,934	370	2,936	1,312	30,235	3,369	4,072	2,827	2,497	65,782	11,840	R 4,051	R 128,920	0	3,280	—	—	9,080	—
1965	33,132	556	2,264	2,619	30,287	4,377	5,880	3,716	3,025	78,044	8,594	R 8,077	R 146,882	181	1,400	—	—	11,513	—
1970	34,066	809	3,881	718	38,141	7,365	3,124	6,202	3,157	96,831	10,056	R 9,775	R 179,250	375	1,303	—	—	12,620	—
1975	31,198	884	3,886	347	42,170	5,776	1,349	7,475	2,751	108,255	18,291	R 10,245	R 200,545	7,176	1,430	—	—	4,840	—
1980	31,110	865	3,507	488	27,643	6,646	1,233	6,736	3,274	97,025	13,289	R 17,512	R 177,353	15,891	6,885	—	—	-13,005	—
1985	32,793	709	2,779	201	25,411	6,570	507	14,225	2,979	93,447	3,109	R 8,260	R 157,487	13,452	1,388	—	—	21,789	—
1990	34,713	817	3,950	215	23,312	10,057	270	14,901	3,352	99,913	2,750	R 10,434	R 169,153	21,611	R <sup>h</sup> 971	—	—	R 27,601	—
1991	33,879	828	3,464	206	24,978	10,234	360	16,017	2,999	101,375	1,750	R 12,699	R 174,082	27,021	R 1,078	—	—	R -16,657	—
1992	31,554	891	3,546	182	25,311	10,125	251	16,666	3,057	101,370	1,706	R 13,552	R 175,766	18,849	R 1,086	—	—	R 14,656	—
1993	32,217	913	4,453	198	28,719	10,305	452	13,077	3,113	105,003	2,094	R 13,452	R 180,867	28,525	R 2,911	—	—	R -14,058	—
1994	35,674	926	3,596	237	29,347	10,281	415	14,287	3,254	105,744	2,188	R 13,717	R 183,067	14,144	R 5,802	—	—	R 10,107	—
1995	35,802	971	4,955	231	29,118	8,818	366	14,497	3,198	110,546	1,610	R 13,153	R 186,493	24,448	R 4,921	—	—	R -5,505	—
1996	36,694	1,015	3,703	215	29,502	9,045	421	R 18,306	3,104	110,520	1,787	R 15,697	R 192,297	26,829	R 2,474	—	—	R 1,681	—
1997	35,888	980	7,777	197	30,999	9,483	354	R 14,524	3,279	112,389	1,564	R 16,752	R 197,319	21,914	R 2,930	—	—	R 22,355	—
1998	38,084	843	6,488	167	30,651	9,025	387	13,108	3,432	114,913	2,144	16,886	197,201	12,494	1,818	—	—	50,522	—
1999	38,220	914	6,669	286	31,760	9,116	694	15,339	3,468	121,027	2,565	16,290	207,214	14,591	1,086	—	—	41,014	—

  

Trillion Btu																			
1960	653.2	383.0	19.5	6.6	176.1	18.2	23.1	11.3	15.1	345.6	74.4	R 23.9	R 713.9	0.0	35.3	37.3	0.0	31.0	R 1,853.6
1965	830.2	563.6	15.0	13.2	176.4	24.0	33.3	14.9	18.3	410.0	54.0	R 45.4	R 804.7	2.1	14.6	36.9	0.0	39.3	R 2,291.4
1970	828.9	821.3	25.8	3.6	222.2	41.0	17.7	23.4	19.1	508.7	63.2	R 54.4	R 979.1	4.1	13.7	36.4	0.0	43.1	R 2,726.5
1975	751.0	894.8	25.8	1.7	245.6	32.1	7.6	27.8	16.7	568.7	115.0	R 57.8	R 1,098.9	79.0	14.9	35.9	0.0	16.5	R 2,891.0
1980	759.0	874.7	23.3	2.5	161.0	37.1	7.0	24.7	19.9	509.7	83.6	R 96.6	R 965.4	173.3	71.5	R 87.6	0.0	-44.4	R 2,887.1
1985	781.9	719.9	18.4	1.0	148.0	36.7	2.9	51.3	18.1	490.9	19.5	R 45.6	R 832.4	145.5	14.5	R 95.4	0.0	74.3	R 2,663.9
1990	786.3	835.4	26.2	1.1	135.8	56.6	1.5	54.0	20.3	524.8	17.3	R 57.8	R 895.4	230.8	R <sup>h</sup> 10.1	R 91.6	R <sup>h</sup> 0.8	R 94.2	R <sup>h</sup> 2,830.9
1991	759.8	844.2	23.0	1.0	145.5	57.5	2.0	57.9	18.2	532.5	11.0	R 70.2	R 918.8	290.2	R 11.3	R 91.6	R 0.9	R -56.8	R 2,854.6
1992	702.0	909.0	23.5	0.9	147.4	57.0	1.4	60.4	18.5	532.5	10.7	R 74.4	R 926.9	201.3	R 11.2	R 95.0	0.9	R 50.0	R 2,893.3
1993	708.1	932.2	29.6	1.0	167.3	58.1	2.6	47.2	18.9	551.6	13.2	R 73.9	R 963.2	304.7	R 30.0	R 87.3	R 1.0	R -48.0	R 2,983.5
1994	794.0	945.5	23.9	1.2	170.9	58.2	2.4	51.9	19.7	R 553.0	13.8	R 75.3	R 970.3	151.0	R 59.9	R 90.3	1.0	R 34.5	R 3,066.9
1995	780.9	987.4	32.9	1.2	169.6	50.0	2.1	52.5	19.4	R 576.5	10.1	R 72.2	R 986.5	260.6	R 50.7	R 98.9	1.1	R -18.8	R 3,165.0
1996	789.3	1,026.7	24.6	1.1	171.8	51.3	2.4	R 66.1	18.8	R 576.5	11.2	R 85.6	R 1,009.5	285.0	R 25.6	R 106.9	R 1.2	R 5.7	R 3,254.2
1997	774.6	995.4	51.6	1.0	180.6	53.8	2.0	R 52.5	19.9	R 585.9	9.8	R 91.8	R 1,048.9	232.8	R 30.3	R 93.1	1.2	R 76.3	R 3,244.7
1998	820.7	860.3	43.1	0.8	178.5	51.2	2.2	47.4	20.8	598.9	13.5	92.5	1,048.9	132.7	18.8	68.7	1.3	172.4	3,094.2
1999	822.6	930.2	44.3	1.4	185.0	51.7	3.9	55.5	21.0	630.7	16.1	88.3	1,097.9	155.0	11.2	89.4	1.4	139.9	3,239.6

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.  
<sup>b</sup> Includes supplemental gaseous fuels.  
<sup>c</sup> "Other" is the subtotal of 16 petroleum products consumed in the industrial sector. See a full description in Appendix A, Section 4, "Other Petroleum Products."  
<sup>d</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.  
<sup>e</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.  
<sup>f</sup> Net interstate flow of electricity is the difference between the amount of energy in the electricity sold within a State (including associated losses) and the energy input at the electric utilities within the State. A positive number

indicates that more electricity (including associated losses) came into the State than went out of the State during the year; conversely, a negative number indicates that more electricity (including associated losses) went out of the State than came into the State.  
<sup>g</sup> From 1989, "Total" does not equal the sum of the columns. Net imports of electricity generated from nonrenewable energy sources (shown in appendix Table A8) is included in the total but not in any other columns.  
<sup>h</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.  
 kWh=kilowatthours. R=Revised data. — =Not applicable.  
 Note: Totals may not equal sum of components due to independent rounding.  
 Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.



**Table 150. Residential Energy Consumption Estimates, Selected Years 1960-1999, Michigan**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum				Wood Thousand Cords	Geothermal	Solar <sup>c</sup>	Electricity <sup>a</sup> Million Kilowatthours	Net Energy	Electrical System Energy Losses <sup>d</sup> Million Kilowatthours	Total
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Total							
			Thousand Barrels										
1960	842	202	17,380	765	1,940	20,084	1,103	—	—	8,728	—	21,709	—
1965	620	271	16,334	1,279	2,346	19,959	890	—	—	11,309	—	27,002	—
1970	302	340	18,839	545	4,493	23,877	829	—	—	17,103	—	41,446	—
1975	140	335	19,420	302	5,219	24,942	796	—	—	20,886	—	50,380	—
1980	108	387	9,195	83	3,375	12,653	R 1,972	—	—	22,260	—	54,129	—
1985	89	341	5,964	425	4,427	10,817	1,950	—	—	22,302	—	52,396	—
1990	94	327	4,167	217	6,538	10,922	1,373	—	—	25,319	—	R 55,388	—
1991	93	337	4,558	279	7,248	12,085	1,447	—	—	26,760	—	R 58,173	—
1992	66	358	4,232	205	7,331	11,767	1,522	—	—	25,671	—	R 54,750	—
1993	83	370	4,149	355	7,976	12,480	779	—	—	26,770	—	R 56,543	—
1994	102	365	4,032	322	7,896	12,250	R 764	—	—	27,174	—	R 56,710	—
1995	89	380	4,123	233	8,015	12,370	847	—	—	28,623	—	R 59,677	—
1996	95	400	3,912	230	R 10,758	R 14,900	846	—	—	28,901	—	R 60,231	—
1997	66	380	3,879	254	R 10,166	R 14,299	R 503	—	—	28,726	—	R 59,754	—
1998	51	320	2,613	272	9,500	12,385	443	—	—	29,808	—	61,577	—
1999	7	351	2,727	606	10,763	14,096	475	—	—	30,661	—	60,075	—
<b>Trillion Btu</b>													
1960	20.8	209.0	101.2	4.3	7.8	113.4	22.1	0.0	0.0	29.8	395.1	74.1	469.2
1965	15.3	274.8	95.1	7.3	9.4	111.8	17.8	0.0	0.0	38.6	458.3	92.1	550.4
1970	7.2	345.1	109.7	3.1	17.0	129.8	16.6	0.0	0.0	58.4	557.1	141.4	698.5
1975	3.3	343.0	113.1	1.7	19.4	134.2	15.9	0.0	0.0	71.3	567.7	171.9	739.6
1980	2.6	394.9	53.6	0.5	12.4	66.4	39.4	0.0	0.0	76.0	579.3	184.7	764.0
1985	2.2	348.9	34.7	2.4	16.0	53.1	39.0	0.0	0.0	76.1	519.3	178.8	698.0
1990	2.3	342.2	24.3	1.2	23.7	49.2	27.5	e 0.6	e 0.2	86.4	R e 508.4	189.0	e 697.3
1991	2.3	350.2	26.5	1.6	26.2	54.3	28.9	0.6	0.2	91.3	R 528.0	R 198.5	R 726.4
1992	1.7	371.5	24.7	1.2	26.6	52.4	30.4	0.7	0.2	87.6	R 544.5	R 186.8	R 731.3
1993	2.1	382.6	24.2	2.0	28.8	54.9	15.6	0.7	0.2	91.3	547.4	R 192.9	740.4
1994	2.5	376.8	23.5	1.8	28.7	54.0	15.3	0.7	R 0.3	92.7	542.2	193.5	R 735.7
1995	2.2	396.0	24.0	1.3	29.0	54.4	16.9	0.7	R 0.3	97.7	568.1	R 203.6	R 771.8
1996	2.4	414.0	22.8	1.3	R 38.9	R 63.0	16.9	0.8	R 0.3	98.6	R 595.8	R 205.5	R 801.4
1997	1.6	395.3	22.6	1.4	R 36.8	R 60.8	R 10.1	0.8	0.3	98.0	566.9	R 203.9	R 770.8
1998	1.3	335.4	15.2	1.5	34.3	51.1	8.9	0.8	0.3	101.7	499.4	210.1	709.5
1999	0.2	365.6	15.9	3.4	38.9	58.2	9.5	0.9	0.3	104.6	539.3	205.0	744.3

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Includes small amounts of solar thermal and photovoltaic energy consumed by the commercial sector that cannot be separately identified. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

R=Revised data.

—=Not applicable.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 151. Commercial Energy Consumption Estimates, Selected Years 1960-1999, Michigan**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum						Wood	Geothermal	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>c</sup>	Total <sup>d</sup>
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels						Thousand Cords	Million Kilowatthours	Million Kilowatthours			
1960	1,554	43	3,212	566	342	324	1,175	5,619	21	—	6,381	—	15,872	—
1965	1,146	85	3,019	946	414	536	839	5,754	17	—	9,124	—	21,785	—
1970	557	133	3,482	403	793	804	558	6,040	16	—	13,021	—	31,553	—
1975	258	182	3,589	224	921	954	390	6,078	15	—	14,596	—	35,207	—
1980	200	190	3,123	15	596	823	225	4,781	47	—	16,765	—	40,767	—
1985	164	158	2,359	11	781	699	274	4,126	R 52	—	18,421	—	43,279	—
1990	174	159	1,730	18	1,154	770	72	3,744	R 87	—	21,986	—	R 48,097	—
1991	171	166	1,938	17	1,279	586	5	3,825	R 92	—	22,748	—	R 49,452	—
1992	123	174	1,767	5	1,294	553	12	3,631	R 99	—	22,508	—	R 48,005	—
1993	154	180	1,472	25	1,407	77	8	2,990	63	—	30,242	—	R 63,875	—
1994	188	183	1,437	33	1,393	363	3	3,229	64	—	31,264	—	R 65,246	—
1995	165	194	1,770	102	1,414	77	5	3,369	64	—	32,153	—	R 67,038	—
1996	175	201	1,790	149	R 1,899	77	5	R 3,920	R 69	—	32,896	—	R 68,555	—
1997	122	192	2,030	56	R 1,794	76	57	R 4,012	R 55	—	33,231	—	R 69,123	—
1998	94	163	1,483	66	1,676	208	2	3,435	55	—	34,710	—	71,704	—
1999	13	179	1,276	37	1,899	171	3	3,387	67	—	36,040	—	70,614	—

  

Trillion Btu														
1960	38.5	44.5	18.7	3.2	1.4	1.7	7.4	32.4	0.4	0.0	21.8	137.6	54.2	191.7
1965	28.2	86.0	17.6	5.4	1.7	2.8	5.3	32.7	0.3	0.0	31.1	178.4	74.3	252.7
1970	13.3	134.7	20.3	2.3	3.0	4.2	3.5	33.3	0.3	0.0	44.4	226.0	107.7	333.7
1975	6.1	186.4	20.9	1.3	3.4	5.0	2.4	33.1	0.3	0.0	49.8	275.6	120.1	395.7
1980	4.9	194.0	18.2	0.1	2.2	4.3	1.4	26.2	0.9	0.0	57.2	283.2	139.1	422.3
1985	4.0	161.4	13.7	0.1	2.8	3.7	1.7	22.0	R 1.0	0.0	62.9	R 251.3	147.7	R 399.0
1990	4.3	166.6	10.1	0.1	4.2	4.0	0.5	18.9	R 1.7	e 0.0	75.0	R e 266.6	164.1	R e 430.7
1991	4.3	172.0	11.3	0.1	4.6	3.1	(s)	19.1	R 1.8	0.0	77.6	R 274.8	R 168.7	R 443.5
1992	3.1	180.3	10.3	(s)	4.7	2.9	0.1	18.0	R 2.0	0.0	76.8	R 280.1	R 163.8	R 443.9
1993	3.8	186.5	8.6	0.1	5.1	0.4	0.1	14.2	1.3	0.0	103.2	308.9	R 217.9	R 526.9
1994	4.6	189.2	8.4	0.2	5.1	1.9	(s)	15.5	1.3	0.1	106.7	317.4	222.6	540.0
1995	4.1	202.2	10.3	0.6	5.1	0.4	(s)	R 16.4	1.3	0.1	109.7	R 333.8	R 228.7	R 562.6
1996	4.4	208.7	10.4	0.8	R 6.9	0.4	(s)	R 18.6	1.4	0.1	112.2	R 345.4	R 233.9	R 579.3
1997	3.0	200.1	11.8	0.3	R 6.5	0.4	0.4	R 19.4	R 1.1	0.2	113.4	R 337.1	R 235.8	R 573.0
1998	2.3	171.4	8.6	0.4	6.1	1.1	(s)	16.2	1.1	0.2	118.4	309.6	244.7	554.3
1999	0.3	186.9	7.4	0.2	6.9	0.9	(s)	15.4	1.3	0.2	123.0	327.2	240.9	568.1

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>d</sup> Small amounts of solar thermal and photovoltaic energy consumed in the commercial sector cannot be separately identified and are included in residential consumption.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 152. Industrial Energy Consumption Estimates, Selected Years 1960-1999, Michigan**

Year	Coal Thousand Short Tons	Natural Gas <sup>a</sup> Billion Cubic Feet	Petroleum									Hydro-electric Power <sup>b</sup> Million kWh	Wood and Waste	Other <sup>b,d</sup>	Electricity <sup>b</sup>		Electrical System Energy Losses <sup>e</sup> Million kWh	Total
			Asphalt and Road Oil <sup>b</sup>	Distillate Fuel <sup>b</sup>	Kerosene <sup>b</sup>	LPG <sup>b</sup>	Lubricants <sup>b</sup>	Motor Gasoline	Residual Fuel <sup>b</sup>	Other <sup>b,c</sup>	Total				Million kWh	Net Energy		
			Thousand Barrels															
1960	13,011	117	2,936	7,091	2,741	524	1,221	3,151	9,574	R 4,051	R 31,288	212	—	—	12,482	—	31,046	—
1965	15,193	192	2,264	7,518	3,655	923	1,898	2,694	6,660	R 8,077	R 33,689	146	—	—	19,350	—	46,201	—
1970	13,061	262	3,881	8,502	2,175	854	1,834	2,758	4,557	R 9,775	R 34,336	123	—	—	25,169	—	60,992	—
1975	9,885	300	3,886	8,749	823	1,239	1,430	1,889	3,343	R 10,245	R 31,603	121	—	—	28,866	—	69,627	—
1980	8,652	249	3,507	4,804	1,135	2,637	1,796	967	3,213	R 17,512	R 35,572	117	—	—	30,656	—	74,545	—
1985	6,645	190	2,779	4,246	70	8,725	1,635	1,192	2,213	R 8,260	R 29,121	117	—	—	33,704	—	79,184	—
1990	4,719	290	3,950	3,406	34	6,926	1,839	976	1,435	R 10,434	R 29,001	R f 150	—	—	35,062	—	R 76,702	—
1991	3,718	282	3,464	4,576	64	7,228	1,646	1,111	751	R 12,699	R 31,538	R 150	—	—	35,007	—	R 76,102	—
1992	3,127	313	3,546	4,628	41	7,791	1,678	950	763	R 13,552	R 32,948	R 150	—	—	35,657	—	R 76,048	—
1993	3,231	320	4,453	4,487	72	3,420	1,708	1,034	965	R 13,452	R 29,591	R 138	—	—	30,572	—	R 64,572	—
1994	4,278	338	3,596	4,729	60	4,528	1,786	1,166	972	R 13,717	R 30,554	R 142	—	—	32,717	—	R 68,277	—
1995	4,383	336	4,955	3,736	32	4,826	1,755	1,310	408	R 13,153	R 30,175	R 129	—	—	33,921	—	R 70,722	—
1996	4,248	356	3,703	3,943	42	R 5,425	1,703	1,418	422	R 15,694	R 32,349	R 143	—	—	34,499	—	R 71,897	—
1997	3,772	351	7,777	4,223	44	R 2,361	1,799	1,271	423	R 16,752	R 34,651	R 139	—	—	35,430	—	R 73,697	—
1998	3,918	291	6,488	4,060	50	1,127	1,883	1,097	425	16,783	31,913	130	—	—	35,983	—	74,335	—
1999	4,584	310	6,669	4,470	51	2,323	1,903	1,017	399	16,225	33,058	91	—	—	37,276	—	73,035	—

  

Trillion Btu																		
1960	332.0	121.3	19.5	41.3	15.5	2.1	7.4	16.5	60.2	R 23.9	R 186.5	2.3	14.8	0.0	42.6	R 699.4	105.9	R 805.3
1965	385.6	195.1	15.0	43.8	20.7	3.7	11.5	14.2	41.9	R 45.4	R 196.2	1.5	18.8	0.0	66.0	R 863.2	157.6	R 1,020.8
1970	320.9	265.7	25.8	49.5	12.3	3.2	11.1	14.5	28.7	R 54.4	R 199.5	1.3	19.5	0.0	85.9	R 892.8	208.1	R 1,100.9
1975	246.7	307.7	25.8	51.0	4.7	4.6	8.7	9.9	21.0	R 57.8	R 183.5	1.3	19.7	0.0	98.5	R 857.4	237.6	R 1,094.9
1980	219.4	253.7	23.3	28.0	6.4	9.7	10.9	5.1	20.2	R 96.6	R 200.2	1.2	R 47.2	0.0	104.6	R 826.3	254.3	R 1,080.7
1985	169.9	194.2	18.4	24.7	0.4	31.4	9.9	6.3	13.9	R 45.6	R 150.7	1.2	R 55.3	0.0	115.0	R 686.3	270.2	R 956.5
1990	117.9	302.8	26.2	19.8	0.2	25.1	11.2	5.1	9.0	R 57.8	R 154.4	R f 1.6	R 62.4	f 0.0	119.6	R f 758.7	261.7	R f 1,020.4
1991	92.5	292.5	23.0	26.7	0.4	26.1	10.0	5.8	4.7	R 70.2	R 166.8	R 1.6	R 60.9	0.0	119.4	R 733.6	R 259.7	R 993.3
1992	76.3	324.4	23.5	27.0	0.2	28.2	10.2	5.0	4.8	R 74.4	R 173.3	1.6	R 62.6	0.0	121.7	R 759.8	R 259.5	R 1,019.3
1993	78.2	331.3	29.6	26.1	0.4	12.3	10.4	5.4	6.1	R 73.9	R 164.2	1.4	R 70.5	0.0	104.3	R 749.9	R 220.3	R 970.2
1994	107.2	348.9	23.9	27.5	0.3	16.5	10.8	6.1	6.1	R 75.3	R 166.6	1.5	R 73.8	0.0	111.6	R 809.6	R 233.0	R 1,042.5
1995	109.2	350.2	32.9	21.8	0.2	17.5	10.6	R 6.8	2.6	R 72.2	R 164.6	1.3	R 80.6	0.0	115.7	R 821.6	R 241.3	R 1,062.9
1996	106.7	368.4	24.6	23.0	0.2	R 19.6	10.3	7.4	2.7	R 85.6	R 173.3	1.5	R 88.6	0.0	117.7	R 856.2	R 245.3	R 1,101.5
1997	95.2	364.8	51.6	24.6	0.3	R 8.5	10.9	R 6.6	2.7	R 91.8	R 197.0	1.4	R 81.9	0.0	120.9	R 861.2	R 251.5	R 1,112.7
1998	98.3	305.6	43.1	23.6	0.3	4.1	11.4	5.7	2.7	91.9	182.8	1.3	58.8	0.0	122.8	769.5	253.6	1,023.2
1999	117.1	323.3	44.3	26.0	0.3	8.4	11.5	5.3	2.5	87.9	186.2	0.9	78.6	0.0	127.2	833.3	249.2	1,082.5

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>e</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for

electrical system energy losses.

<sup>f</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

R=Revised data.

kWh=kilowatt-hours. —=Not applicable.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 153. Transportation Energy Consumption Estimates, Selected Years 1960-1999, Michigan**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum								Ethanol <sup>c</sup>	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total <sup>c</sup>
			Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	LPG <sup>a</sup>	Lubricants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total				Million Kilowatthours	
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels								Thousand Barrels	Million Kilowatthours	Million Kilowatthours		
1960	227	3	1,312	2,475	3,369	21	1,277	62,307	728	71,489	0	9	—	23	—
1965	50	5	2,619	3,348	4,377	34	1,126	74,814	779	87,097	0	0	—	0	—
1970	21	10	718	6,353	7,365	62	1,324	93,269	427	109,518	0	0	—	0	—
1975	2	10	347	8,949	5,700	95	1,321	105,412	423	122,248	0	0	—	0	—
1980	0	12	488	9,741	6,646	128	1,477	95,235	232	113,946	0	0	—	0	—
1985	0	11	201	12,196	6,570	291	1,344	91,556	99	112,256	R e 1,032	0	—	0	—
1990	0	18	215	13,670	10,057	283	1,513	98,167	93	123,997	R 1,205	0	—	0	—
1991	0	20	206	13,620	10,234	262	1,353	99,679	50	125,403	R 1,582	5	—	10	—
1992	0	22	182	14,391	10,125	251	1,380	99,868	98	126,294	R 1,367	4	—	9	—
1993	0	24	198	18,269	10,305	275	1,405	103,892	74	134,418	R 1,609	5	—	11	—
1994	0	23	237	18,831	10,281	470	1,468	104,215	98	135,601	R 1,859	5	—	10	—
1995	0	25	231	19,082	8,818	241	1,443	109,159	95	139,070	R 1,219	4	—	9	—
1996	0	26	215	19,567	9,045	R 224	1,401	109,025	125	R 139,600	R 514	5	—	11	—
1997	0	24	197	20,560	9,483	R 204	1,480	111,042	53	R 143,018	R 654	4	—	9	—
1998	0	21	167	22,038	9,025	804	1,549	113,608	87	147,277	845	5	—	10	—
1999	0	22	286	22,788	9,116	352	1,565	119,839	43	153,989	956	4	—	7	—

  

Trillion Btu															
1960	5.6	2.7	6.6	14.4	18.2	0.1	7.7	327.3	4.6	378.9	0.0	(s)	387.3	0.1	387.4
1965	1.2	4.6	13.2	19.5	24.0	0.1	6.8	393.0	4.9	461.5	0.0	0.0	467.4	0.0	467.4
1970	0.5	10.5	3.6	37.0	41.0	0.2	8.0	489.9	2.7	582.5	0.0	0.0	593.5	0.0	593.5
1975	(s)	10.5	1.7	52.1	31.6	0.4	8.0	553.7	2.7	650.3	0.0	0.0	660.8	0.0	660.8
1980	0.0	12.6	2.5	56.7	37.1	0.5	9.0	500.3	1.5	607.5	0.0	0.0	620.1	0.0	620.1
1985	0.0	10.8	1.0	71.0	36.7	1.0	8.2	480.9	0.6	599.5	R e 3.7	0.0	e 610.3	0.0	e 610.3
1990	0.0	18.7	1.1	79.6	56.6	1.0	9.2	515.7	0.6	663.7	R 4.3	0.0	682.5	0.0	682.5
1991	0.0	20.3	1.0	79.3	57.5	0.9	8.2	523.6	0.3	670.9	R 5.6	(s)	691.3	(s)	691.3
1992	0.0	22.5	0.9	83.8	57.0	0.9	8.4	524.6	0.6	676.2	R 4.8	(s)	698.8	(s)	698.8
1993	0.0	24.7	1.0	106.4	58.1	1.0	8.5	545.7	0.5	721.3	R 5.7	(s)	746.0	(s)	746.1
1994	0.0	23.3	1.2	109.7	58.2	1.7	8.9	R 545.0	0.6	R 725.3	R 6.6	(s)	R 748.6	(s)	R 748.7
1995	0.0	25.9	1.2	111.2	50.0	0.9	8.8	R 569.3	0.6	R 741.8	R 4.3	(s)	R 767.7	(s)	R 767.8
1996	0.0	26.9	1.1	114.0	51.3	0.8	8.5	R 568.7	0.8	R 745.1	R 1.8	(s)	R 772.0	(s)	R 772.0
1997	0.0	24.8	1.0	119.8	53.8	0.7	9.0	R 578.9	0.3	R 763.4	R 2.3	(s)	R 788.2	(s)	R 788.3
1998	0.0	21.8	0.8	128.4	51.2	2.9	9.4	592.1	0.5	785.4	3.0	(s)	807.2	(s)	807.2
1999	0.0	23.3	1.4	132.7	51.7	1.3	9.5	624.5	0.3	821.4	3.4	(s)	844.7	(s)	844.8

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels. Transportation use of natural gas is gas consumed in the operation of pipelines, primarily in compressors, and, since 1990, is also gas consumed as vehicle fuel.

<sup>c</sup> Ethanol blended into motor gasoline, which is accounted for under motor gasoline, is shown separately here to display the use of renewable energy by the transportation sector and is included only once in the total.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1980 and 1981 due to the expanded coverage of renewable energy sources beginning in 1981.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 154. Estimates of Energy Input at Electric Utilities, Selected Years, 1960-1999, Michigan**

Year	Coal	Natural Gas <sup>a</sup>	Petroleum				Nuclear Electric Power	Hydroelectric Power <sup>e</sup>	Wood and Waste	Geothermal Energy	Other <sup>b,f</sup>	Total <sup>g</sup>
			Heavy Oil <sup>b,c</sup>	Light Oil <sup>b,d</sup>	Petroleum Coke <sup>b</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels				Million Kilowatthours					
1960	10,300	5	362	77	0	440	0	3,067	0	0	0	—
1965	16,123	3	316	68	0	384	181	1,254	0	0	0	—
1970	20,124	64	4,514	965	0	5,479	375	1,181	0	0	0	—
1975	20,914	57	14,136	1,538	0	15,674	7,176	1,309	0	0	0	—
1980	22,150	26	9,621	780	0	10,400	15,891	6,768	0	0	0	—
1985	25,896	10	522	646	0	1,168	13,452	1,272	0	0	0	—
1990	29,726	23	1,149	339	0	1,488	21,611	R 821	0	0	0	—
1991	29,896	24	944	286	0	1,230	27,021	R 928	0	0	0	—
1992	28,238	25	833	292	0	1,125	18,849	R 936	0	0	0	—
1993	28,749	19	1,047	341	0	1,388	28,525	R 2,772	0	0	0	—
1994	31,106	18	1,114	319	0	1,433	14,144	R 5,660	0	0	0	—
1995	31,165	36	1,101	408	0	1,509	24,448	R 4,792	0	0	0	—
1996	32,175	32	1,235	289	3	1,527	26,829	R 2,332	0	0	0	—
1997	31,928	33	1,031	308	0	1,339	21,914	R 2,790	0	0	0	—
1998	34,021	48	1,630	457	103	2,190	12,494	1,688	0	0	0	—
1999	33,615	51	2,120	499	65	2,684	14,591	995	0	0	0	—

  

Trillion Btu												
1960	256.3	5.4	2.3	0.5	0.0	2.7	0.0	33.0	0.0	0.0	0.0	297.4
1965	399.9	3.0	2.0	0.4	0.0	2.4	2.1	13.1	0.0	0.0	0.0	420.6
1970	487.0	65.2	28.4	5.6	0.0	34.0	4.1	12.4	0.0	0.0	0.0	602.8
1975	494.9	47.3	88.9	8.9	0.0	97.8	79.0	13.6	0.0	0.0	0.0	732.6
1980	532.2	19.4	60.5	4.5	0.0	65.0	173.3	70.3	0.0	0.0	0.0	860.3
1985	605.8	4.7	3.3	3.8	0.0	7.0	145.5	13.3	0.0	0.0	0.0	776.2
1990	661.8	5.2	7.2	2.0	0.0	9.2	230.8	R 8.5	0.0	0.0	0.0	R 801.7
1991	660.8	9.2	5.9	1.7	0.0	7.6	290.2	R 9.7	0.0	0.0	0.0	R 972.1
1992	621.0	10.3	5.2	1.7	0.0	6.9	201.3	R 9.7	0.0	0.0	0.0	R 846.2
1993	624.0	7.2	6.6	2.0	0.0	8.6	304.7	R 28.6	0.0	0.0	0.0	R 978.0
1994	679.7	7.3	7.0	1.9	0.0	8.9	151.0	R 58.4	0.0	0.0	0.0	R 925.7
1995	665.5	13.1	6.9	2.4	0.0	9.3	260.6	R 49.4	0.0	0.0	0.0	1,015.6
1996	675.9	8.8	7.8	1.7	(s)	9.5	285.0	R 24.1	0.0	0.0	0.0	R 1,007.6
1997	674.7	10.3	6.5	1.8	0.0	8.3	232.8	R 28.9	0.0	0.0	0.0	947.2
1998	718.7	26.2	10.2	2.7	0.6	13.5	132.7	17.5	0.0	0.0	0.0	879.0
1999	705.0	31.1	13.3	2.9	0.4	16.6	155.0	10.3	0.0	0.0	0.0	910.0

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> Prior to 1980, based on oil used in steam plants. Since 1980, heavy oil includes fuel oil nos. 4, 5, and 6 and residual fuel oils.

<sup>d</sup> Prior to 1980, based on oil used in internal combustion and gas turbine engine plants. Since 1980, light oil includes fuel oil nos. 1 and 2, kerosene, and jet fuel.

<sup>e</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>f</sup> "Other" is electricity generated for distribution from wind, photovoltaic, and solar thermal energy.

<sup>g</sup> If applicable, from 1989, includes net imports of electricity generated from nonrenewable energy sources not shown in other columns. See data in appendix Table A8.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 155. Energy Consumption Estimates by Source, Selected Years 1960-1999, Minnesota**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum											Nuclear Electric Power	Hydroelectric Power <sup>d</sup>	Wood and Waste	Other <sup>a,e</sup>	Net Inter-state Flow of Electricity/Losses <sup>f</sup>	Total <sup>g</sup>	
			Asphalt & Road Oil <sup>a</sup>	Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	Kero-sene <sup>a</sup>	LPG <sup>a</sup>	Lubri-cants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Other <sup>a,c</sup>	Total							Million kWh
			Thousand Barrels															Million kWh		
1960	5,977	180	3,004	1,199	16,151	472	2,570	4,525	960	32,583	6,658	R 1,314	R 69,435	0	977	—	—	-3,263	—	
1965	7,260	249	3,791	803	18,960	2,624	2,313	5,781	759	35,278	4,980	R 2,219	R 77,507	143	1,204	—	—	-1,370	—	
1970	8,787	342	4,413	277	22,356	3,491	1,685	8,887	924	44,122	5,159	R 3,122	R 94,435	0	1,020	—	—	11,382	—	
1975	10,120	331	4,628	215	24,369	5,629	856	9,187	1,003	48,253	4,326	R 4,185	R 102,651	9,750	1,101	—	—	6,217	—	
1980	13,810	286	3,565	193	21,382	5,142	212	7,697	1,120	46,211	3,183	R 3,540	R 92,244	10,027	1,739	—	—	8,135	—	
1985	12,744	257	4,989	154	19,399	7,781	184	5,353	1,019	45,285	859	R 2,899	R 87,922	11,572	3,642	—	—	22,856	—	
1990	18,377	291	6,039	214	18,481	5,099	42	5,966	1,146	47,760	974	R 5,471	R 91,192	12,139	R <sup>h</sup> 1,871	—	—	R 16,796	—	
1991	16,993	314	5,040	188	21,227	4,978	54	6,595	1,026	48,578	1,053	R 5,936	R 94,674	12,059	R 3,031	—	—	R 17,718	—	
1992	16,924	309	5,343	134	21,630	6,621	53	8,008	1,046	49,693	1,189	R 6,913	R 100,630	11,166	R 4,848	—	—	R 8,114	—	
1993	18,321	328	4,793	132	21,073	9,438	60	8,926	1,065	51,348	1,251	R 6,795	R 104,881	11,986	R 6,366	—	—	R 2,502	—	
1994	18,729	324	4,745	125	23,698	9,780	134	9,445	1,113	52,540	1,102	R 7,305	R 109,988	12,224	R 6,749	—	—	R 702	—	
1995	18,947	353	6,403	129	24,574	9,969	104	9,758	1,094	54,303	657	R 6,811	R 113,802	13,243	R 7,067	—	—	R 2,336	—	
1996	19,264	368	6,674	124	24,575	10,625	123	R 12,018	1,061	54,866	796	R 7,712	R 118,574	12,095	R 7,526	—	—	R 6,306	—	
1997	19,086	354	6,671	137	24,810	10,887	102	R 10,269	1,121	55,755	710	R 7,831	R 118,293	10,819	R 7,240	—	—	R 8,864	—	
1998	19,586	325	6,884	92	24,994	10,699	130	7,410	1,174	58,106	547	6,894	116,931	11,644	6,852	—	—	12,532	—	
1999	18,827	340	7,746	141	23,768	12,591	125	8,705	1,186	59,894	663	7,256	122,077	13,316	5,654	—	—	12,719	—	

  

Trillion Btu																			
1960	131.3	186.1	19.9	6.1	94.1	2.6	14.6	18.1	5.8	171.2	41.9	R 7.9	R 382.1	0.0	10.5	25.4	0.0	-11.1	R 724.3
1965	160.0	248.2	25.2	4.1	110.4	14.8	13.1	23.2	4.6	185.3	31.3	R 13.2	R 425.1	1.7	12.6	23.4	0.0	-4.7	R 866.3
1970	179.7	343.0	29.3	1.4	130.2	19.7	9.6	33.6	5.6	231.8	32.4	R 18.6	R 512.2	0.0	10.7	23.4	0.0	38.8	R 1,107.9
1975	191.5	331.5	30.7	1.1	141.9	31.9	4.9	34.1	6.1	253.5	27.2	R 24.9	R 556.2	107.4	11.5	27.4	0.0	21.2	R 1,246.7
1980	242.4	285.0	23.7	1.0	124.5	29.1	1.2	28.3	6.8	242.7	20.0	R 21.1	R 498.4	109.4	18.1	R 49.7	0.0	27.8	R 1,230.6
1985	226.1	258.5	33.1	0.8	113.0	44.1	1.0	19.3	6.2	237.9	5.4	R 17.8	R 478.6	125.1	38.0	R 54.3	0.0	78.0	R 1,258.6
1990	324.3	291.7	40.1	1.1	107.7	28.9	0.2	21.6	7.0	250.9	6.1	R 32.8	R 496.3	129.6	R <sup>h</sup> 19.5	R 50.5	R <sup>h</sup> 0.5	R 57.3	R <sup>h</sup> 1,366.9
1991	300.6	318.3	33.4	0.9	123.6	28.2	0.3	23.8	6.2	255.2	6.6	R 35.4	R 513.8	129.5	R 31.6	R 49.6	0.5	R 60.5	R 1,412.3
1992	300.1	312.2	35.5	0.7	126.0	37.5	0.3	29.0	6.3	261.0	7.5	R 40.9	R 544.7	119.2	R 50.1	R 55.0	0.5	R 27.7	R 1,425.3
1993	324.7	331.5	31.8	0.7	122.7	53.5	0.3	32.2	6.5	269.7	7.9	R 40.4	R 565.7	128.0	R 65.6	R 54.1	0.5	R 8.5	R 1,488.6
1994	332.1	327.4	31.5	0.6	138.0	55.4	0.8	34.3	6.7	R 274.8	6.9	R 43.4	R 592.5	130.5	R 69.6	R 55.9	R 1.1	R 2.4	R 1,533.5
1995	337.2	357.7	42.5	0.7	143.1	56.5	0.6	35.4	6.6	R 283.2	4.1	R 40.4	R 613.1	141.1	R 72.9	R 75.2	R 1.3	R 8.0	R 1,631.9
1996	345.5	375.1	44.3	0.6	143.1	60.2	0.7	R 43.4	6.4	R 286.2	5.0	R 46.1	R 636.1	128.5	R 77.8	R 64.6	R 1.5	R 21.5	R 1,676.0
1997	341.2	360.5	44.3	0.7	144.5	61.7	0.6	R 37.1	6.8	R 290.6	4.5	R 46.8	R 637.6	114.9	R 75.0	R 76.6	R 2.2	R 30.2	R 1,675.3
1998	349.6	331.8	45.7	0.5	145.6	60.7	0.7	26.8	7.1	302.8	3.4	41.3	634.6	123.7	70.9	730.4	2.1	42.8	2,306.9
1999	336.0	346.3	51.4	0.7	138.4	71.4	0.7	31.5	7.2	312.1	4.2	43.4	661.0	141.5	58.5	67.3	5.6	43.4	1,675.3

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.  
<sup>b</sup> Includes supplemental gaseous fuels.  
<sup>c</sup> "Other" is the subtotal of 16 petroleum products consumed in the industrial sector. See a full description in Appendix A, Section 4, "Other Petroleum Products."  
<sup>d</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.  
<sup>e</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.  
<sup>f</sup> Net interstate flow of electricity is the difference between the amount of energy in the electricity sold within a State (including associated losses) and the energy input at the electric utilities within the State. A positive number

indicates that more electricity (including associated losses) came into the State than went out of the State during the year; conversely, a negative number indicates that more electricity (including associated losses) went out of the State than came into the State.  
<sup>g</sup> From 1989, "Total" does not equal the sum of the columns. Net imports of electricity generated from nonrenewable energy sources (shown in appendix Table A8) is included in the total but not in any other columns.  
<sup>h</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.  
kWh=kilowatthours. R=Revised data. — =Not applicable.  
Note: Totals may not equal sum of components due to independent rounding.  
Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

Table 156. Residential Energy Consumption Estimates, Selected Years 1960-1999, Minnesota

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum				Wood Thousand Cords	Geothermal	Solar <sup>c</sup>	Electricity <sup>a</sup> Million Kilowatthours	Net Energy	Electrical System Energy Losses <sup>d</sup> Million Kilowatthours	Total
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Total							
			Thousand Barrels										
1960	330	61	5,414	1,748	3,108	10,270	878	—	—	4,186	—	10,411	—
1965	216	86	6,309	1,556	4,043	11,908	682	—	—	6,063	—	14,476	—
1970	200	102	7,197	1,195	6,390	14,782	560	—	—	9,031	—	21,886	—
1975	81	114	7,242	558	6,040	13,840	563	—	—	10,189	—	24,578	—
1980	50	103	5,946	114	2,929	8,989	R 893	—	—	11,749	—	28,570	—
1985	77	107	3,826	137	2,400	6,363	855	—	—	13,261	—	31,156	—
1990	63	107	3,222	30	2,933	6,185	562	—	—	14,858	—	R 32,502	—
1991	33	117	4,098	41	3,186	7,324	592	—	—	15,655	—	R 34,033	—
1992	9	114	3,426	38	3,560	7,024	623	—	—	14,848	—	R 31,667	—
1993	38	123	3,210	36	4,379	7,624	R 525	—	—	15,597	—	R 32,943	—
1994	80	122	3,384	45	4,305	7,735	R 514	—	—	16,007	—	R 33,404	—
1995	92	129	3,334	50	4,447	7,831	R 571	—	—	16,974	—	R 35,391	—
1996	55	142	3,499	61	R 5,969	R 9,529	R 570	—	—	17,157	—	R 35,756	—
1997	37	129	3,106	52	R 5,650	R 8,808	R 404	—	—	17,073	—	R 35,515	—
1998	15	110	2,503	73	3,927	6,503	356	—	—	17,378	—	35,900	—
1999	5	119	1,914	32	4,853	6,799	381	—	—	17,998	—	35,263	—
Trillion Btu													
1960	7.3	63.6	31.5	9.9	12.5	53.9	17.6	0.0	0.0	14.3	156.6	35.5	192.1
1965	4.7	86.3	36.7	8.8	16.2	61.8	13.6	0.0	0.0	20.7	187.1	49.4	236.5
1970	4.2	102.0	41.9	6.8	24.1	72.8	11.2	0.0	0.0	30.8	221.1	74.7	295.7
1975	1.6	114.7	42.2	3.2	22.4	67.8	11.3	0.0	0.0	34.8	230.1	83.9	313.9
1980	1.0	103.1	34.6	0.6	10.8	46.0	R 17.9	0.0	0.0	40.1	208.1	97.5	305.6
1985	1.5	107.1	22.3	0.8	8.6	31.7	17.1	0.0	0.0	45.2	202.6	106.3	308.9
1990	1.1	107.4	18.8	0.2	10.6	29.6	11.2	e 0.1	e 0.3	50.7	e 200.5	110.9	R e 311.4
1991	0.6	118.6	23.9	0.2	11.5	35.6	11.8	0.2	0.3	53.4	R 220.5	R 116.1	R 336.6
1992	0.2	114.8	20.0	0.2	12.9	33.1	12.5	0.2	R 0.4	50.7	R 211.7	R 108.0	R 319.7
1993	0.7	124.8	18.7	0.2	15.8	34.7	R 10.5	0.2	R 0.4	53.2	R 224.4	112.4	R 336.8
1994	1.6	123.6	19.7	0.3	15.6	35.6	R 10.3	0.2	R 0.4	54.6	R 226.2	114.0	R 340.2
1995	1.9	130.4	19.4	0.3	16.1	35.8	11.4	0.2	R 0.4	57.9	R 238.0	R 120.8	R 358.8
1996	1.0	144.9	20.4	0.3	R 21.6	R 42.3	R 11.4	0.2	R 0.4	58.5	R 258.7	R 122.0	R 380.7
1997	0.7	131.2	18.1	0.3	R 20.4	R 38.8	R 8.1	0.2	0.4	58.3	R 237.6	R 121.2	R 358.8
1998	0.3	112.7	14.6	0.4	14.2	29.2	7.1	0.2	0.4	59.3	209.2	122.5	331.7
1999	0.1	121.2	11.1	0.2	17.5	28.9	7.6	0.2	0.3	61.4	219.8	120.3	340.2

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Includes small amounts of solar thermal and photovoltaic energy consumed by the commercial sector that cannot be separately identified. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

R=Revised data.

—=Not applicable.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 157. Commercial Energy Consumption Estimates, Selected Years 1960-1999, Minnesota**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum						Wood	Geothermal	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>c</sup>	Total <sup>d</sup>
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels						Thousand Cords	Million Kilowatthours	Million Kilowatthours			
1960	614	20	1,323	378	548	142	634	3,026	17	—	1,540	—	3,831	—
1965	401	27	1,542	337	713	158	414	3,164	13	—	2,026	—	4,838	—
1970	372	77	1,759	259	1,128	235	393	3,774	11	—	3,178	—	7,701	—
1975	151	90	1,770	121	1,066	355	223	3,536	11	—	4,845	—	11,686	—
1980	93	64	1,443	0	517	340	32	2,331	21	—	5,724	—	13,919	—
1985	143	77	2,740	24	424	335	223	3,746	R 23	—	7,469	—	17,548	—
1990	116	78	939	5	518	1,568	263	3,293	R 36	—	8,813	—	R 19,278	—
1991	61	86	910	3	562	198	295	1,969	R 38	—	9,162	—	R 19,917	—
1992	16	82	760	7	628	117	197	1,709	R 41	—	9,007	—	R 19,211	—
1993	70	87	653	9	773	49	134	1,618	42	—	9,229	—	R 19,494	—
1994	149	84	903	14	760	49	161	1,887	43	—	9,698	—	R 20,238	—
1995	171	91	931	23	785	50	113	1,903	43	—	10,407	—	R 21,699	—
1996	101	99	1,028	27	R 1,053	50	141	R 2,298	47	—	10,850	—	R 22,612	—
1997	68	92	925	26	R 997	1,010	163	R 3,121	R 44	—	10,888	—	R 22,648	—
1998	27	82	830	31	693	988	171	2,714	44	—	11,152	—	23,038	—
1999	10	88	809	20	856	50	186	1,921	53	—	11,637	—	22,801	—

  

Trillion Btu														
1960	13.5	21.0	7.7	2.1	2.2	0.7	4.0	16.8	0.3	0.0	5.3	56.9	13.1	70.0
1965	8.8	26.8	9.0	1.9	2.9	0.8	2.6	17.2	0.3	0.0	6.9	59.9	16.5	76.5
1970	7.8	76.7	10.2	1.5	4.3	1.2	2.5	19.7	0.2	0.0	10.8	115.3	26.3	141.6
1975	2.9	89.9	10.3	0.7	4.0	1.9	1.4	18.2	0.2	0.0	16.5	127.7	39.9	167.6
1980	1.9	63.6	8.4	0.0	1.9	1.8	0.2	12.3	0.4	0.0	19.5	97.8	47.5	145.3
1985	2.7	77.3	16.0	0.1	1.5	1.8	1.4	20.8	R 0.5	0.0	25.5	R 126.8	59.9	R 186.7
1990	2.1	78.3	5.5	(s)	1.9	8.2	1.7	17.3	R 0.7	e 0.0	30.1	R e 128.5	65.8	R e 194.2
1991	1.1	86.9	5.3	(s)	2.0	1.0	1.9	10.2	R 0.8	0.0	31.3	R 130.3	68.0	R 198.2
1992	0.3	83.3	4.4	(s)	2.3	0.6	1.2	8.6	R 0.8	0.0	30.7	R 123.7	R 65.5	R 189.3
1993	1.3	87.6	3.8	(s)	2.8	0.3	0.8	7.7	0.8	0.0	31.5	128.9	66.5	195.5
1994	2.9	84.9	5.3	0.1	2.8	0.3	1.0	9.4	0.9	0.0	33.1	131.1	R 69.1	R 200.2
1995	3.5	91.9	5.4	0.1	2.8	0.3	0.7	9.4	0.9	0.0	35.5	141.1	74.0	R 215.1
1996	1.8	100.3	6.0	0.2	R 3.8	0.3	0.9	R 11.1	0.9	0.0	37.0	R 151.2	R 77.2	R 228.3
1997	1.3	93.9	5.4	0.1	R 3.6	5.3	1.0	R 15.4	R 0.9	0.0	37.1	R 148.6	R 77.3	R 225.9
1998	0.6	84.0	4.8	0.2	2.5	5.2	1.1	13.7	0.9	0.0	38.1	137.3	78.6	215.9
1999	0.2	89.7	4.7	0.1	3.1	0.3	1.2	9.4	1.1	0.0	39.7	140.1	77.8	217.9

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>d</sup> Small amounts of solar thermal and photovoltaic energy consumed in the commercial sector cannot be separately identified and are included in residential consumption.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.



Table 158. Industrial Energy Consumption Estimates, Selected Years 1960-1999, Minnesota

Year	Coal Thousand Short Tons	Natural Gas <sup>a</sup> Billion Cubic Feet	Petroleum									Hydro-electric Power <sup>b</sup> Million kWh	Wood and Waste	Other <sup>b,d</sup>	Electricity <sup>b</sup> Million kWh	Net Energy	Electrical System Energy Losses <sup>e</sup> Million kWh	Total
			Asphalt and Road Oil <sup>b</sup>	Distillate Fuel <sup>b</sup>	Kero-sene <sup>b</sup>	LPG <sup>b</sup>	Lubri-cants <sup>b</sup>	Motor Gasoline	Residual Fuel <sup>b</sup>	Other <sup>b,c</sup>	Total							
			Thousand Barrels															
1960	2,555	49	3,004	6,062	444	841	263	4,266	5,690	R 1,314	R 21,884	156	—	—	3,095	—	7,699	—
1965	2,776	83	3,791	7,651	420	988	163	3,947	4,213	R 2,219	R 23,392	178	—	—	4,677	—	11,166	—
1970	2,020	98	4,413	7,784	231	1,275	296	3,608	3,894	R 2,979	R 24,480	168	—	—	8,506	—	20,613	—
1975	2,292	101	4,628	7,991	177	1,985	252	3,132	2,675	R 4,126	R 24,965	189	—	—	11,280	—	27,208	—
1980	1,057	101	3,565	5,708	98	4,183	324	1,336	1,818	R 3,540	R 20,573	145	—	—	15,525	—	37,752	—
1985	1,027	66	4,989	4,802	23	2,406	294	1,718	481	R 2,899	R 17,612	145	—	—	17,934	—	42,133	—
1990	1,283	88	6,039	4,719	7	2,459	331	1,117	710	R 4,744	R 20,126	R f 212	—	—	23,497	—	R 51,402	—
1991	785	92	5,040	5,612	10	2,795	296	1,442	753	R 4,974	R 20,923	R 170	—	—	23,938	—	R 52,039	—
1992	1,059	93	5,343	6,193	8	3,765	302	1,417	989	R 5,849	R 23,865	R 184	—	—	23,557	—	R 50,241	—
1993	1,370	98	4,793	5,765	16	3,674	308	1,222	1,115	R 5,718	R 22,611	R 245	—	—	24,384	—	R 51,503	—
1994	1,455	94	4,745	6,414	75	4,254	322	1,254	938	R 6,312	R 24,314	R 308	—	—	25,451	—	R 53,114	—
1995	1,401	106	6,403	6,518	31	4,392	316	1,192	544	R 6,041	R 25,437	R 266	—	—	26,577	—	R 55,412	—
1996	1,649	102	6,674	6,600	35	R 4,855	307	670	654	R 6,657	R 26,453	R 307	—	—	26,934	—	R 56,132	—
1997	1,490	107	6,671	6,784	25	R 3,485	324	1,846	530	R 6,590	R 26,254	R 237	—	—	27,713	—	R 57,646	—
1998	1,642	105	6,884	6,202	26	2,777	339	1,240	375	5,853	23,696	258	—	—	28,214	—	58,283	—
1999	1,698	104	7,746	4,818	74	2,989	343	1,026	473	5,995	23,464	322	—	—	27,764	—	54,399	—
Trillion Btu																		
1960	55.2	51.0	19.9	35.3	2.5	3.4	1.6	22.4	35.8	R 7.9	R 128.8	1.7	7.4	0.0	10.6	R 254.6	26.3	R 280.8
1965	60.8	82.6	25.2	44.6	2.4	4.0	1.0	20.7	26.5	R 13.2	R 137.4	1.9	9.3	0.0	16.0	R 308.0	38.1	R 346.1
1970	42.1	97.8	29.3	45.3	1.3	4.8	1.8	19.0	24.5	R 17.7	R 143.7	1.8	11.8	0.0	29.0	R 326.1	70.3	R 396.5
1975	50.8	100.8	30.7	46.5	1.0	7.4	1.5	16.5	16.8	R 24.5	R 145.0	2.0	15.9	0.0	38.5	R 352.8	92.8	R 445.7
1980	18.1	101.2	23.7	33.3	0.6	15.4	2.0	7.0	11.4	R 21.1	R 114.3	1.5	R 31.3	0.0	53.0	R 319.4	128.8	R 448.2
1985	21.3	66.6	33.1	28.0	0.1	8.7	1.8	9.0	3.0	R 17.8	R 101.5	1.5	R 36.7	0.0	61.2	R 288.8	143.8	R 432.5
1990	23.8	88.7	40.1	27.5	(s)	8.9	2.0	5.9	4.5	R 28.4	R 117.3	R f 2.2	R 34.4	f 0.0	80.2	R f 346.6	175.4	R f 522.0
1991	15.2	93.4	33.4	32.7	0.1	10.1	1.8	7.6	4.7	R 29.6	R 120.0	R 1.8	R 32.8	0.0	81.7	R 344.9	R 177.6	R 522.4
1992	19.6	94.1	35.5	36.1	(s)	13.6	1.8	7.4	6.2	R 34.5	R 135.2	R 1.9	R 37.5	0.0	80.4	R 368.7	R 171.4	R 540.1
1993	24.9	98.9	31.8	33.6	0.1	13.2	1.9	6.4	7.0	R 33.9	R 127.9	R 2.5	R 38.5	0.0	83.2	R 375.9	R 175.7	R 551.6
1994	26.9	95.5	31.5	37.4	0.4	15.5	2.0	6.6	5.9	R 37.4	R 136.5	3.2	R 40.5	R 0.5	86.8	R 390.0	181.2	R 571.3
1995	26.7	107.6	42.5	38.0	0.2	15.9	1.9	R 6.2	3.4	R 35.8	R 143.9	R 2.7	R 58.5	R 0.7	90.7	R 430.9	R 189.1	R 619.9
1996	31.6	104.3	44.3	38.4	0.2	R 17.5	1.9	3.5	4.1	R 39.7	R 149.7	R 3.2	R 47.9	R 1.0	91.9	R 429.5	R 191.5	R 621.0
1997	28.1	109.3	44.3	39.5	0.1	R 12.6	2.0	R 9.6	3.3	R 39.3	R 150.8	R 2.5	R 63.2	R 1.6	94.6	R 450.0	R 196.7	R 646.7
1998	30.6	106.7	45.7	36.1	0.1	10.0	2.1	6.5	2.4	35.0	137.9	2.7	717.7	1.5	96.3	1,093.4	198.9	1,292.2
1999	31.6	106.2	51.4	28.1	0.4	10.8	2.1	5.3	3.0	35.8	136.9	3.3	54.3	5.0	94.7	432.1	185.6	617.7

<sup>a</sup> Includes supplemental gaseous fuels.<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.<sup>c</sup> "Other" is the subtotal of 16 petroleum products. See a full description in Appendix A, Section 4, "Other Petroleum Products."<sup>d</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.<sup>e</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.<sup>f</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

R=Revised data.

kWh=kilowatthours. — =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 159. Transportation Energy Consumption Estimates, Selected Years 1960-1999, Minnesota**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum								Ethanol <sup>c</sup>	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total <sup>c</sup>
			Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	LPG <sup>a</sup>	Lubricants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total				Million Kilowatthours	
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels								Thousand Barrels	Million Kilowatthours	Million Kilowatthours	Total <sup>c</sup>	
1960	45	(s)	1,199	3,194	472	27	697	28,176	95	33,860	0	0	—	0	—
1965	9	1	803	3,276	2,624	37	596	31,173	75	38,584	0	0	—	0	—
1970	3	7	277	5,064	3,491	95	628	40,279	29	49,863	0	0	—	0	—
1975	(s)	4	215	6,691	5,629	97	752	44,766	577	58,726	0	0	—	0	—
1980	0	9	193	8,117	5,142	68	796	44,535	971	59,822	0	0	—	0	—
1985	0	6	154	7,982	7,781	123	724	43,232	155	60,152	R <sup>e</sup> 658	0	—	0	—
1990	0	12	214	9,509	5,099	57	815	45,075	0	60,768	R <sup>e</sup> 577	0	—	0	—
1991	0	13	188	10,518	4,978	52	729	46,937	3	63,404	R <sup>e</sup> 1,102	0	—	0	—
1992	0	15	134	11,190	6,621	54	743	48,159	3	66,904	R <sup>e</sup> 1,729	0	—	0	—
1993	0	16	132	11,355	9,438	100	757	50,077	(s)	71,859	R <sup>e</sup> 3,224	0	—	0	—
1994	0	17	125	12,889	9,780	126	791	51,237	2	74,951	R <sup>e</sup> 3,690	0	—	0	—
1995	0	19	129	13,657	9,969	134	778	53,061	0	77,728	R <sup>e</sup> 3,968	0	—	0	—
1996	0	20	124	13,308	10,625	R <sup>e</sup> 140	755	54,146	0	R <sup>e</sup> 79,099	R <sup>e</sup> 3,023	0	—	0	—
1997	0	20	137	13,816	10,887	R <sup>e</sup> 137	797	52,898	10	R <sup>e</sup> 78,682	R <sup>e</sup> 4,523	0	—	0	—
1998	0	20	92	15,283	10,699	13	835	55,878	0	82,800	5,063	0	—	0	—
1999	0	22	141	16,027	12,591	7	843	58,819	2	88,430	5,500	0	—	0	—

  

Trillion Btu															
1960	0.9	0.3	6.1	18.6	2.6	0.1	4.2	148.0	0.6	180.2	0.0	0.0	181.4	0.0	181.4
1965	0.2	1.2	4.1	19.1	14.8	0.1	3.6	163.8	0.5	205.9	0.0	0.0	207.3	0.0	207.3
1970	0.1	7.5	1.4	29.5	19.7	0.4	3.8	211.6	0.2	266.6	0.0	0.0	274.1	0.0	274.1
1975	(s)	3.9	1.1	39.0	31.9	0.4	4.6	235.2	3.6	315.6	0.0	0.0	319.5	0.0	319.5
1980	0.0	9.1	1.0	47.3	29.1	0.2	4.8	233.9	6.1	322.5	0.0	0.0	331.6	0.0	331.6
1985	0.0	6.3	0.8	46.5	44.1	0.4	4.4	227.1	1.0	324.2	R <sup>e</sup> 2.3	0.0	<sup>e</sup> 330.5	0.0	<sup>e</sup> 330.5
1990	0.0	12.1	1.1	55.4	28.9	0.2	4.9	236.8	0.0	327.3	R <sup>e</sup> 2.0	0.0	339.3	0.0	339.3
1991	0.0	13.5	0.9	61.3	28.2	0.2	4.4	246.6	(s)	341.6	R <sup>e</sup> 3.9	0.0	355.1	0.0	355.1
1992	0.0	15.1	0.7	65.2	37.5	0.2	4.5	253.0	(s)	361.0	R <sup>e</sup> 6.1	0.0	376.2	0.0	376.2
1993	0.0	16.4	0.7	66.1	53.5	0.4	4.6	263.1	(s)	388.3	R <sup>e</sup> 11.4	0.0	404.7	0.0	404.7
1994	0.0	17.5	0.6	75.1	55.4	0.5	4.8	R <sup>e</sup> 268.0	(s)	R <sup>e</sup> 404.4	R <sup>e</sup> 13.1	0.0	R <sup>e</sup> 421.9	0.0	R <sup>e</sup> 421.9
1995	0.0	19.5	0.7	79.6	56.5	0.5	4.7	R <sup>e</sup> 276.7	0.0	R <sup>e</sup> 418.6	R <sup>e</sup> 14.0	0.0	R <sup>e</sup> 438.1	0.0	R <sup>e</sup> 438.1
1996	0.0	20.2	0.6	77.5	60.2	0.5	4.6	R <sup>e</sup> 282.4	0.0	R <sup>e</sup> 425.9	R <sup>e</sup> 10.7	0.0	R <sup>e</sup> 446.1	0.0	R <sup>e</sup> 446.1
1997	0.0	19.9	0.7	80.5	61.7	R <sup>e</sup> 0.5	4.8	R <sup>e</sup> 275.8	0.1	R <sup>e</sup> 424.0	R <sup>e</sup> 16.0	0.0	R <sup>e</sup> 443.9	0.0	R <sup>e</sup> 443.9
1998	0.0	20.5	0.5	89.0	60.7	(s)	5.1	291.2	0.0	446.5	17.9	0.0	467.0	0.0	467.0
1999	0.0	22.5	0.7	93.4	71.4	(s)	5.1	306.5	(s)	477.1	19.5	0.0	499.6	0.0	499.6

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels. Transportation use of natural gas is gas consumed in the operation of pipelines, primarily in compressors, and, since 1990, is also gas consumed as vehicle fuel.

<sup>c</sup> Ethanol blended into motor gasoline, which is accounted for under motor gasoline, is shown separately here to display the use of renewable energy by the transportation sector and is included only once in the total.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1980 and 1981 due to the expanded coverage of renewable energy sources beginning in 1981.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

Table 160. Estimates of Energy Input at Electric Utilities, Selected Years, 1960-1999, Minnesota

Year	Coal	Natural Gas <sup>a</sup>	Petroleum				Nuclear Electric Power	Hydroelectric Power <sup>e</sup>	Wood and Waste	Geothermal Energy	Other <sup>b,f</sup>	Total <sup>g</sup>
			Heavy Oil <sup>b,c</sup>	Light Oil <sup>b,d</sup>	Petroleum Coke <sup>b</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels				Million Kilowatthours					
1960	2,433	49	239	156	0	395	0	822	15	0	0	—
1965	3,857	51	278	182	0	460	143	1,026	14	0	0	—
1970	6,192	59	842	551	143	1,537	0	853	19	0	0	—
1975	7,595	23	851	674	59	1,584	9,750	913	4	0	0	—
1980	12,610	8	361	167	0	529	10,027	1,594	2	0	0	—
1985	11,498	1	(s)	49	0	49	11,572	3,497	(s)	0	0	—
1990	16,916	5	1	91	727	820	12,139	R 1,659	398	0	(s)	—
1991	16,114	6	2	90	962	1,054	12,059	R 2,861	402	0	(s)	—
1992	15,841	5	(s)	62	1,064	1,127	11,166	R 4,665	407	0	(s)	—
1993	16,844	4	1	90	1,077	1,168	11,986	R 6,120	414	0	(s)	—
1994	17,046	6	0	108	993	1,101	12,224	R 6,441	414	0	(s)	—
1995	17,282	8	0	133	770	903	13,243	R 6,801	429	0	(s)	—
1996	17,459	5	2	140	1,055	1,196	12,095	R 7,219	422	0	(s)	—
1997	17,490	6	7	179	1,241	1,427	10,819	R 7,003	429	0	0	—
1998	17,902	8	1	177	1,041	1,218	11,644	6,594	451	0	0	—
1999	17,114	7	2	200	1,261	1,462	13,316	5,332	417	0	0	—
Trillion Btu												
1960	54.5	50.2	1.5	0.9	0.0	2.4	0.0	8.8	0.2	0.0	0.0	116.1
1965	85.5	51.3	1.7	1.1	0.0	2.8	1.7	10.7	0.1	0.0	0.0	152.2
1970	125.5	59.1	5.3	3.2	0.9	9.4	0.0	8.9	0.2	0.0	0.0	203.1
1975	136.3	22.3	5.4	3.9	0.4	9.6	107.4	9.5	(s)	0.0	0.0	285.1
1980	221.4	8.0	2.3	1.0	0.0	3.2	109.4	16.6	(s)	0.0	0.0	358.6
1985	200.6	1.3	(s)	0.3	0.0	0.3	125.1	36.5	(s)	0.0	0.0	363.9
1990	297.3	5.2	(s)	0.5	4.4	4.9	129.6	R 17.3	4.1	0.0	(s)	R 455.7
1991	283.7	5.9	(s)	0.5	5.8	6.3	129.5	R 29.9	4.2	0.0	(s)	R 467.5
1992	280.0	4.9	(s)	0.4	6.4	6.8	119.2	R 48.2	4.2	0.0	(s)	R 479.1
1993	297.9	3.9	(s)	0.5	6.5	7.0	128.0	R 63.1	4.3	0.0	(s)	R 514.0
1994	300.7	5.9	0.0	0.6	6.0	6.6	130.5	R 66.4	4.3	0.0	(s)	R 536.4
1995	305.1	8.3	0.0	0.8	4.6	5.4	141.1	R 70.1	4.4	0.0	(s)	R 560.0
1996	311.2	5.3	(s)	0.8	6.4	7.2	128.5	R 74.6	4.4	0.0	(s)	R 556.6
1997	311.1	6.1	(s)	1.0	7.5	8.6	114.9	R 72.5	4.4	0.0	0.0	R 554.9
1998	318.0	7.8	(s)	1.0	6.3	7.3	123.7	68.2	4.7	0.0	0.0	550.8
1999	304.0	6.7	(s)	1.2	7.6	8.8	141.5	55.2	4.3	0.0	0.0	536.2

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> Prior to 1980, based on oil used in steam plants. Since 1980, heavy oil includes fuel oil nos. 4, 5, and 6 and residual fuel oils.

<sup>d</sup> Prior to 1980, based on oil used in internal combustion and gas turbine engine plants. Since 1980, light oil includes fuel oil nos. 1 and 2, kerosene, and jet fuel.

<sup>e</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>f</sup> "Other" is electricity generated for distribution from wind, photovoltaic, and solar thermal energy.

<sup>g</sup> If applicable, from 1989, includes net imports of electricity generated from nonrenewable energy sources not shown in other columns. See data in appendix Table A8.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 161. Energy Consumption Estimates by Source, Selected Years 1960-1999, Mississippi**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum											Nuclear Electric Power	Hydro-electric Power <sup>d</sup>	Wood and Waste	Other <sup>a,e</sup>	Net Inter-state Flow of Electricity/Losses <sup>f</sup>	Total <sup>g</sup>	
			Asphalt & Road Oil <sup>a</sup>	Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	Kero-sene <sup>a</sup>	LPG <sup>a</sup>	Lubri-cants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Other <sup>a,c</sup>	Total							
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels											Million kWh		Million kWh	Total <sup>g</sup>			
1960	30	182	762	170	2,375	1,465	398	4,220	391	16,096	311	R 1,229	R 27,417	0	0	—	—	8,132	—	
1965	40	244	1,144	463	2,796	1,460	346	4,720	469	18,539	489	R 2,810	R 33,237	0	0	—	—	14,061	—	
1970	549	360	1,748	318	5,991	1,614	2,646	8,645	525	24,316	703	R 5,446	R 51,951	0	0	—	—	17,089	—	
1975	1,440	230	2,589	203	9,852	1,475	1,434	8,180	681	27,811	12,063	R 4,906	R 69,194	0	0	—	—	27,909	—	
1980	3,127	264	2,036	206	9,648	1,530	242	5,694	655	26,781	16,010	R 5,991	R 68,793	0	0	—	—	20,395	—	
1985	4,519	227	2,054	108	15,914	4,111	86	4,672	596	27,586	1,319	R 4,096	R 60,541	4,332	0	—	—	25,490	—	
1990	4,159	254	2,509	132	16,133	6,922	53	7,093	671	29,080	3,692	R 6,247	R 72,532	7,422	h 0	—	—	R 28,549	—	
1991	3,812	250	2,531	110	15,450	8,080	61	6,103	600	29,794	4,778	R 6,104	R 73,612	9,133	0	—	—	R 29,790	—	
1992	3,485	239	2,171	94	15,313	11,006	38	6,203	612	30,535	3,433	R 7,317	R 76,723	8,174	0	—	—	R 37,287	—	
1993	4,030	230	1,945	85	14,691	8,328	66	6,214	623	31,907	8,999	R 6,921	R 79,779	7,904	0	—	—	R 34,006	—	
1994	4,285	258	2,110	72	15,486	6,750	51	6,505	651	32,868	5,444	R 6,522	R 76,460	9,615	0	—	—	R 28,115	—	
1995	4,606	288	2,430	100	13,530	7,573	47	6,810	640	34,017	2,648	R 6,207	R 74,000	8,013	0	—	—	R 29,430	—	
1996	5,791	269	2,608	61	14,489	7,157	49	R 8,945	621	34,178	3,521	R 7,342	R 78,970	9,225	0	—	—	R 28,947	—	
1997	6,273	255	3,041	66	15,095	7,912	65	R 3,091	656	35,393	5,343	R 7,400	R 78,062	10,813	0	—	—	R 23,008	—	
1998	5,897	241	3,223	99	15,703	7,683	83	2,787	687	36,708	9,582	6,495	83,050	9,191	0	—	—	27,824	—	
1999	6,207	334	3,308	80	18,098	9,658	104	5,312	694	38,422	6,029	6,600	88,304	8,428	6	—	—	25,107	—	
<b>Trillion Btu</b>																				
1960	0.8	187.9	5.1	0.9	13.8	7.8	2.3	16.9	2.4	84.6	2.0	R 7.4	R 143.0	0.0	0.0	46.6	0.0	27.7	R 406.0	
1965	1.0	250.6	7.6	2.3	16.3	7.8	2.0	18.9	2.8	97.4	3.1	R 16.9	R 175.1	0.0	0.0	37.8	0.0	48.0	R 512.5	
1970	13.2	369.4	11.6	1.6	34.9	8.7	15.0	32.7	3.2	127.7	4.4	R 32.7	R 272.6	0.0	0.0	33.5	0.0	58.3	R 747.0	
1975	33.4	235.3	17.2	1.0	57.4	8.0	8.1	30.4	4.1	146.1	75.8	R 29.4	R 377.6	0.0	0.0	31.2	0.0	95.2	R 772.7	
1980	75.0	270.9	13.5	1.0	56.2	8.3	1.4	20.9	4.0	140.7	100.7	R 35.9	R 382.6	0.0	0.0	R 34.3	0.0	69.6	R 832.4	
1985	109.4	233.0	13.6	0.5	92.7	22.9	0.5	16.8	3.6	144.9	8.3	R 25.4	R 329.4	46.8	0.0	R 49.0	0.0	87.0	R 854.6	
1990	103.8	261.9	16.7	0.7	94.0	39.0	0.3	25.7	4.1	152.8	23.2	R 37.3	R 393.6	79.3	h 0.0	R 91.1	h 0.0	97.4	R h 1,027.2	
1991	95.3	257.0	16.8	0.6	90.0	45.5	0.3	22.1	3.6	156.5	30.0	R 36.4	R 401.8	98.1	0.0	R 93.4	(s)	R 101.6	R 1,047.3	
1992	86.8	250.7	14.4	0.5	89.2	62.2	0.2	22.5	3.7	160.4	21.6	R 43.2	R 417.9	87.3	0.0	R 94.7	(s)	R 127.2	R 1,064.5	
1993	99.3	235.2	12.9	0.4	85.6	47.0	0.4	22.4	3.8	167.6	56.6	R 41.1	R 437.8	84.4	0.0	R 96.1	0.1	R 116.0	R 1,068.9	
1994	97.3	266.1	14.0	0.4	90.2	38.2	0.3	23.6	4.0	R 171.9	34.2	R 38.6	R 415.3	102.6	0.0	R 98.0	0.1	95.9	R 1,075.5	
1995	103.8	295.6	16.1	0.5	78.8	42.9	0.3	24.7	3.9	R 177.4	16.6	R 36.7	R 397.9	85.4	0.0	R 82.9	0.1	R 100.4	R 1,066.2	
1996	128.1	277.4	17.3	0.3	84.4	40.6	0.3	R 32.3	3.8	R 178.3	22.1	R 43.2	R 422.5	98.0	0.0	R 77.5	0.2	R 98.8	R 1,102.4	
1997	132.2	264.1	20.2	0.3	87.9	44.9	0.4	R 11.2	4.0	R 184.5	33.6	R 43.5	R 430.4	114.9	0.0	R 73.4	0.2	R 78.5	R 1,093.6	
1998	125.3	252.3	21.4	0.5	91.5	43.6	0.5	10.1	4.2	191.3	60.2	38.2	461.4	97.6	0.0	59.8	0.2	94.9	1,091.6	
1999	137.7	346.2	21.9	0.4	105.4	54.8	0.6	19.2	4.2	200.2	37.9	38.7	483.3	89.5	0.1	65.7	0.3	85.7	1,208.5	

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products consumed in the industrial sector. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>e</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>f</sup> Net interstate flow of electricity is the difference between the amount of energy in the electricity sold within a State (including associated losses) and the energy input at the electric utilities within the State. A positive number

indicates that more electricity (including associated losses) came into the State than went out of the State during the year; conversely, a negative number indicates that more electricity (including associated losses) went out of the State than came into the State.

<sup>g</sup> From 1989, "Total" does not equal the sum of the columns. Net imports of electricity generated from nonrenewable energy sources (shown in appendix Table A8) is included in the total but not in any other columns.

<sup>h</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

kWh=kilowatt-hours. R=Revised data. — =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 162. Residential Energy Consumption Estimates, Selected Years 1960-1999, Mississippi**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum				Wood Thousand Cords	Geothermal	Solar <sup>c</sup>	Electricity <sup>a</sup> Million Kilowatthours	Net Energy	Electrical System Energy Losses <sup>d</sup> Million Kilowatthours	Total
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Total							
			Thousand Barrels										
1960	0	24	23	13	2,450	2,486	1,375	—	—	2,089	—	5,196	—
1965	0	24	32	27	2,865	2,923	923	—	—	3,705	—	8,847	—
1970	0	37	89	75	5,129	5,293	515	—	—	6,880	—	16,673	—
1975	0	30	196	127	4,231	4,554	507	—	—	8,091	—	19,517	—
1980	1	29	7	44	2,201	2,252	323	—	—	9,964	—	24,229	—
1985	(s)	26	2	27	1,915	1,943	805	—	—	10,447	—	24,545	—
1990	(s)	25	1	12	2,158	2,171	458	—	—	12,266	—	R 26,832	—
1991	(s)	26	2	23	1,862	1,887	482	—	—	12,518	—	R 27,212	—
1992	(s)	26	1	14	1,744	1,759	507	—	—	12,422	—	R 26,494	—
1993	(s)	28	3	25	2,200	2,227	380	—	—	13,200	—	R 27,880	—
1994	0	27	1	20	2,159	2,181	372	—	—	13,642	—	R 28,469	—
1995	0	27	(s)	20	1,946	1,966	413	—	—	14,181	—	R 29,567	—
1996	0	30	1	22	2,397	2,420	R 412	—	—	14,965	—	R 31,186	—
1997	(s)	28	(s)	21	R 2,240	R 2,261	R 195	—	—	14,817	—	R 30,822	—
1998	0	25	1	24	2,124	2,149	172	—	—	16,392	—	33,863	—
1999	0	25	2	21	2,328	2,351	185	—	—	16,321	—	31,979	—

  

Trillion Btu													
1960	0.0	24.9	0.1	0.1	9.8	10.0	27.5	0.0	0.0	7.1	69.5	17.7	87.3
1965	0.0	24.8	0.2	0.2	11.5	11.8	18.5	0.0	0.0	12.6	67.7	30.2	97.9
1970	0.0	37.6	0.5	0.4	19.4	20.3	10.3	0.0	0.0	23.5	91.7	56.9	148.6
1975	0.0	30.2	1.1	0.7	15.7	17.6	10.1	0.0	0.0	27.6	85.5	66.6	152.1
1980	(s)	30.5	(s)	0.2	8.1	8.4	6.5	0.0	0.0	34.0	79.3	82.7	162.0
1985	(s)	26.3	(s)	0.2	6.9	7.1	16.1	0.0	0.0	35.6	85.2	83.7	168.9
1990	(s)	25.8	(s)	0.1	7.8	7.9	9.2	e (s)	e (s)	41.9	e 84.8	R 91.6	e 176.3
1991	(s)	26.5	(s)	0.1	6.7	6.9	9.6	(s)	(s)	42.7	85.8	R 92.8	R 178.6
1992	(s)	27.9	(s)	0.1	6.3	6.4	10.1	(s)	(s)	42.4	86.8	R 90.4	R 177.2
1993	(s)	29.0	(s)	0.1	7.9	8.1	7.6	(s)	(s)	45.0	89.7	R 95.1	184.9
1994	0.0	27.9	(s)	0.1	7.8	8.0	7.4	(s)	(s)	46.5	89.8	97.1	187.0
1995	0.0	27.4	(s)	0.1	7.0	7.2	8.3	(s)	(s)	48.4	91.3	R 100.9	R 192.2
1996	0.0	31.0	(s)	0.1	8.7	8.8	R 8.2	(s)	(s)	51.1	99.1	R 106.4	R 205.5
1997	(s)	28.5	(s)	0.1	R 8.1	R 8.2	R 3.9	(s)	(s)	50.6	R 91.2	R 105.2	R 196.4
1998	0.0	26.1	(s)	0.1	7.7	7.8	3.4	(s)	(s)	55.9	93.3	115.5	208.8
1999	0.0	25.5	(s)	0.1	8.4	8.5	3.7	(s)	(s)	55.7	93.5	109.1	202.6

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Includes small amounts of solar thermal and photovoltaic energy consumed by the commercial sector that cannot be separately identified. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 163. Commercial Energy Consumption Estimates, Selected Years 1960-1999, Mississippi**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum						Wood	Geothermal	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>c</sup>	Total <sup>d</sup>
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels						Thousand Cords	Million Kilowatthours	Million Kilowatthours			
1960	0	15	28	0	432	79	18	557	26	—	1,278	—	3,179	—
1965	0	12	39	0	506	88	33	665	17	—	1,968	—	4,700	—
1970	0	24	108	0	905	91	45	1,149	10	—	3,019	—	7,317	—
1975	0	24	239	0	747	105	898	1,988	10	—	3,982	—	9,604	—
1980	1	21	24	0	388	122	3,405	3,940	8	—	5,110	—	12,426	—
1985	1	17	1,067	39	338	134	11	1,589	R 21	—	6,131	—	14,405	—
1990	(s)	18	589	6	381	165	0	1,141	R 29	—	7,407	—	R 16,204	—
1991	(s)	18	607	6	329	81	1	1,024	R 31	—	7,478	—	R 16,256	—
1992	(s)	18	511	9	308	172	(s)	1,000	R 33	—	7,328	—	R 15,629	—
1993	(s)	19	329	6	388	49	0	773	R 30	—	7,320	—	R 15,461	—
1994	0	19	432	3	381	149	0	965	31	—	7,729	—	R 16,130	—
1995	0	20	263	7	343	49	0	662	31	—	8,210	—	R 17,118	—
1996	0	22	349	6	423	57	0	835	34	—	8,615	—	R 17,954	—
1997	(s)	22	235	13	R 395	47	0	R 690	R 21	—	10,649	—	R 22,152	—
1998	0	21	251	7	375	49	0	681	21	—	11,519	—	23,797	—
1999	0	20	254	44	411	44	0	752	26	—	11,923	—	23,361	—

  

Trillion Btu														
1960	0.0	15.7	0.2	0.0	1.7	0.4	0.1	2.4	0.5	0.0	4.4	23.0	10.8	33.9
1965	0.0	12.8	0.2	0.0	2.0	0.5	0.2	2.9	0.3	0.0	6.7	22.8	16.0	38.8
1970	0.0	24.4	0.6	0.0	3.4	0.5	0.3	4.8	0.2	0.0	10.3	39.7	25.0	64.7
1975	0.0	24.4	1.4	0.0	2.8	0.6	5.6	10.4	0.2	0.0	13.6	48.6	32.8	81.4
1980	(s)	21.6	0.1	0.0	1.4	0.6	21.4	23.6	0.2	0.0	17.4	62.8	42.4	105.2
1985	(s)	17.0	6.2	0.2	1.2	0.7	0.1	8.4	R 0.4	0.0	20.9	R 46.8	49.1	R 95.9
1990	(s)	18.1	3.4	(s)	1.4	0.9	0.0	5.7	R 0.6	e (s)	25.3	R e 49.7	55.3	R e 105.0
1991	(s)	18.3	3.5	(s)	1.2	0.4	(s)	5.2	R 0.6	(s)	25.5	R 49.6	55.5	R 105.1
1992	(s)	18.9	3.0	(s)	1.1	0.9	(s)	5.0	R 0.7	(s)	25.0	R 49.6	R 53.3	R 103.0
1993	(s)	19.6	1.9	(s)	1.4	0.3	0.0	3.6	0.6	(s)	25.0	48.9	52.8	R 101.6
1994	0.0	19.8	2.5	(s)	1.4	0.8	0.0	4.7	0.6	0.1	26.4	51.6	55.0	106.6
1995	0.0	20.3	1.5	(s)	1.2	0.3	0.0	3.1	0.6	0.1	28.0	52.1	58.4	R 110.5
1996	0.0	22.8	2.0	(s)	1.5	0.3	0.0	3.9	0.7	0.1	29.4	56.9	R 61.3	R 118.2
1997	(s)	22.8	1.4	0.1	R 1.4	0.2	0.0	R 3.1	R 0.4	0.2	36.3	R 62.8	R 75.6	R 138.4
1998	0.0	22.4	1.5	(s)	1.4	0.3	0.0	3.1	0.4	0.2	39.3	65.5	81.2	146.7
1999	0.0	21.1	1.5	0.2	1.5	0.2	0.0	3.4	0.5	0.2	40.7	65.9	79.7	145.6

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>d</sup> Small amounts of solar thermal and photovoltaic energy consumed in the commercial sector cannot be separately identified and are included in residential consumption.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 164. Industrial Energy Consumption Estimates, Selected Years 1960-1999, Mississippi**

Year	Coal Thousand Short Tons	Natural Gas <sup>a</sup> Billion Cubic Feet	Petroleum									Hydro-electric Power <sup>b</sup> Million kWh	Wood and Waste	Other <sup>b,d</sup>	Electricity <sup>b</sup>		Electrical System Energy Losses <sup>e</sup> Million kWh	Total
			Asphalt and Road Oil <sup>b</sup>	Distillate Fuel <sup>b</sup>	Kerosene <sup>b</sup>	LPG <sup>b</sup>	Lubricants <sup>b</sup>	Motor Gasoline	Residual Fuel <sup>b</sup>	Other <sup>b,c</sup>	Total				Million kWh	Net Energy		
			Thousand Barrels															
1960	21	77	762	1,441	385	1,118	99	738	218	R 1,229	R 5,990	0	—	—	2,004	—	4,985	—
1965	31	105	1,144	1,590	319	1,117	157	610	149	R 2,810	R 7,896	0	—	—	3,517	—	8,398	—
1970	48	141	1,748	3,100	2,571	2,139	242	311	240	R 5,446	R 15,795	0	—	—	5,101	—	12,361	—
1975	24	107	2,589	4,455	1,307	2,739	374	218	778	R 4,906	R 17,366	0	—	—	6,814	—	16,437	—
1980	53	79	2,036	3,527	198	2,952	341	73	2,172	R 5,991	R 17,290	0	—	—	8,184	—	19,901	—
1985	251	105	2,054	5,392	20	2,187	310	751	89	R 4,096	R 14,899	0	—	—	9,147	—	21,490	—
1990	271	108	2,509	5,667	35	4,423	349	578	960	R 6,247	R 20,767	f 0	—	—	12,454	—	R 27,245	—
1991	242	109	2,531	4,830	33	3,803	312	669	238	R 6,104	R 18,520	0	—	—	13,024	—	R 28,314	—
1992	247	108	2,171	4,344	15	4,060	318	638	192	R 7,317	R 19,055	0	—	—	13,491	—	R 28,772	—
1993	263	105	1,945	3,756	35	3,520	324	383	258	R 6,921	R 17,143	0	—	—	14,229	—	R 30,054	—
1994	296	90	2,110	4,128	29	3,807	339	418	173	R 6,522	R 17,526	0	—	—	15,256	—	R 31,838	—
1995	287	88	2,430	3,209	19	4,448	333	427	82	R 6,207	R 17,155	0	—	—	15,477	—	R 32,269	—
1996	233	84	2,608	3,387	21	R 6,061	323	430	114	R 7,342	R 20,286	0	—	—	16,043	—	R 33,433	—
1997	238	88	3,041	3,313	31	R 397	341	488	31	R 7,400	R 15,041	0	—	—	14,622	—	R 30,415	—
1998	213	82	3,223	2,782	52	280	357	370	162	6,495	13,722	0	—	—	14,599	—	30,158	—
1999	185	124	3,308	3,834	40	2,232	361	733	14	6,600	17,121	6	—	—	15,735	—	30,830	—

  

Trillion Btu																		
1960	0.5	79.3	5.1	8.4	2.2	4.5	0.6	3.9	1.4	R 7.4	R 33.4	0.0	18.5	0.0	6.8	R 138.5	17.0	R 155.5
1965	0.8	108.5	7.6	9.3	1.8	4.5	1.0	3.2	0.9	R 16.9	R 45.1	0.0	19.0	0.0	12.0	R 185.3	28.7	R 214.0
1970	1.2	144.4	11.6	18.1	14.6	8.1	1.5	1.6	1.5	R 32.7	R 89.6	0.0	23.0	0.0	17.4	R 275.6	42.2	R 317.8
1975	0.6	109.1	17.2	26.0	7.4	10.2	2.3	1.1	4.9	R 29.4	R 98.4	0.0	20.8	0.0	23.3	R 252.1	56.1	R 308.2
1980	1.2	81.5	13.5	20.5	1.1	10.8	2.1	0.4	13.7	R 35.9	R 98.0	0.0	R 27.7	0.0	27.9	R 236.4	67.9	R 304.3
1985	5.9	108.1	13.6	31.4	0.1	7.9	1.9	3.9	0.6	R 25.4	R 84.8	0.0	R 32.5	0.0	31.2	R 262.4	73.3	R 335.8
1990	6.3	111.5	16.7	33.0	0.2	16.0	2.1	3.0	6.0	R 37.3	R 114.4	f 0.0	R 81.4	f 0.0	42.5	R 356.1	R 93.0	R 449.0
1991	5.6	112.5	16.8	28.1	0.2	13.7	1.9	3.5	1.5	R 36.4	R 102.2	0.0	R 83.2	0.0	44.4	R 347.9	R 96.6	R 444.5
1992	5.8	113.2	14.4	25.3	0.1	14.7	1.9	3.3	1.2	R 43.2	R 104.2	0.0	R 83.9	0.0	46.0	R 353.0	R 98.2	R 451.2
1993	6.3	107.4	12.9	21.9	0.2	12.7	2.0	2.0	1.6	R 41.1	R 94.4	0.0	R 87.9	0.0	48.6	R 344.6	R 102.5	R 447.2
1994	7.1	92.2	14.0	24.0	0.2	13.8	2.1	2.2	1.1	R 38.6	R 95.9	0.0	R 89.9	0.0	52.1	R 337.1	108.6	R 445.8
1995	6.9	89.6	16.1	18.7	0.1	16.1	2.0	2.2	0.5	R 36.7	R 92.5	0.0	R 74.0	0.0	52.8	R 315.8	R 110.1	R 425.9
1996	5.6	86.7	17.3	19.7	0.1	R 21.9	2.0	R 2.2	0.7	R 43.2	R 107.1	0.0	R 68.5	0.0	54.7	R 322.7	R 114.1	R 436.8
1997	5.6	90.5	20.2	19.3	0.2	R 1.4	2.1	R 2.5	0.2	R 43.5	R 89.4	0.0	R 69.0	0.0	49.9	R 304.5	R 103.8	R 408.3
1998	5.1	86.4	21.4	16.2	0.3	1.0	2.2	1.9	1.0	38.2	82.2	0.0	55.9	0.0	49.8	279.4	102.9	382.3
1999	4.5	129.1	21.9	22.3	0.2	8.1	2.2	3.8	0.1	38.7	97.3	0.1	61.5	(s)	53.7	346.2	105.2	451.4

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>e</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for

electrical system energy losses.

<sup>f</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

R=Revised data.

kWh=kilowatt-hours. — =Not applicable.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 165. Transportation Energy Consumption Estimates, Selected Years 1960-1999, Mississippi**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum								Ethanol <sup>c</sup> Thousand Barrels	Electricity <sup>a</sup> Million Kilowatthours	Net Energy	Electrical System Energy Losses <sup>d</sup> Million Kilowatthours	Total <sup>c</sup>
			Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	LPG <sup>a</sup>	Lubricants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total					
			Thousand Barrels												
1960	(s)	31	170	882	1,465	220	292	15,279	11	18,320	0	0	—	0	—
1965	(s)	45	463	1,136	1,460	233	312	17,842	301	21,747	0	0	—	0	—
1970	(s)	59	318	2,690	1,614	472	283	23,914	3	29,293	0	0	—	0	—
1975	(s)	38	203	4,696	1,475	464	307	27,489	1,184	35,817	0	0	—	0	—
1980	0	39	206	6,020	1,530	152	315	26,585	5,355	40,163	0	0	—	0	—
1985	0	25	108	9,392	4,111	232	286	26,701	1,110	41,941	<sup>e</sup> 0	0	—	0	—
1990	0	38	132	9,826	6,922	131	322	28,337	1,554	47,224	<sup>R</sup> 0	0	—	0	—
1991	0	35	110	9,932	8,080	109	288	29,043	3,938	51,500	<sup>R</sup> 0	0	—	0	—
1992	0	33	94	10,429	11,006	92	294	29,725	2,618	54,258	<sup>R</sup> 0	0	—	0	—
1993	0	38	85	10,568	8,328	106	299	31,475	3,238	54,099	<sup>R</sup> 139	0	—	0	—
1994	0	39	72	10,875	6,750	158	313	32,301	3,588	54,056	<sup>R</sup> 98	0	—	0	—
1995	0	42	100	10,018	7,573	72	307	33,540	2,558	54,169	<sup>R</sup> 55	0	—	0	—
1996	0	49	61	10,664	7,157	<sup>R</sup> 64	298	33,690	1,703	<sup>R</sup> 53,637	<sup>R</sup> 6	0	—	0	—
1997	0	45	66	11,496	7,912	<sup>R</sup> 58	315	34,858	1,277	<sup>R</sup> 55,983	0	0	—	0	—
1998	0	36	99	12,608	7,683	7	330	36,290	1,106	58,122	0	0	—	0	—
1999	0	64	80	13,946	9,658	341	333	37,644	1,099	63,102	0	0	—	0	—

  

Trillion Btu															
1960	(s)	32.5	0.9	5.1	7.8	0.9	1.8	80.3	0.1	96.8	0.0	0.0	129.3	0.0	129.3
1965	(s)	46.6	2.3	6.6	7.8	0.9	1.9	93.7	1.9	115.2	0.0	0.0	161.8	0.0	161.8
1970	(s)	60.8	1.6	15.7	8.7	1.8	1.7	125.6	(s)	155.2	0.0	0.0	216.0	0.0	216.0
1975	(s)	39.2	1.0	27.4	8.0	1.7	1.9	144.4	7.4	191.8	0.0	0.0	231.0	0.0	231.0
1980	0.0	40.6	1.0	35.1	8.3	0.6	1.9	139.7	33.7	220.2	0.0	0.0	260.8	0.0	260.8
1985	0.0	25.9	0.5	54.7	22.9	0.8	1.7	140.3	7.0	228.0	<sup>e</sup> 0.0	0.0	<sup>e</sup> 253.9	0.0	<sup>e</sup> 253.9
1990	0.0	38.9	0.7	57.2	39.0	0.5	2.0	148.9	9.8	257.9	<sup>R</sup> 0.0	0.0	296.9	0.0	296.9
1991	0.0	35.7	0.6	57.9	45.5	0.4	1.7	152.6	24.8	283.4	<sup>R</sup> 0.0	0.0	319.1	0.0	319.1
1992	0.0	35.0	0.5	60.8	62.2	0.3	1.8	156.1	16.5	298.1	<sup>R</sup> 0.0	0.0	333.1	0.0	333.1
1993	0.0	38.4	0.4	61.6	47.0	0.4	1.8	165.3	20.4	296.9	<sup>R</sup> 0.5	0.0	335.3	0.0	335.3
1994	0.0	40.3	0.4	63.3	38.2	0.6	1.9	<sup>R</sup> 168.9	22.6	<sup>R</sup> 295.9	0.3	0.0	<sup>R</sup> 336.1	0.0	<sup>R</sup> 336.1
1995	0.0	42.7	0.5	58.4	42.9	0.3	1.9	<sup>R</sup> 174.9	16.1	<sup>R</sup> 294.9	0.2	0.0	<sup>R</sup> 337.6	0.0	<sup>R</sup> 337.6
1996	0.0	50.5	0.3	62.1	40.6	0.2	1.8	<sup>R</sup> 175.7	10.7	<sup>R</sup> 291.5	(s)	0.0	<sup>R</sup> 342.0	0.0	<sup>R</sup> 342.0
1997	0.0	46.5	0.3	67.0	44.9	0.2	1.9	<sup>R</sup> 181.7	8.0	<sup>R</sup> 304.0	0.0	0.0	<sup>R</sup> 350.5	0.0	<sup>R</sup> 350.5
1998	0.0	38.1	0.5	73.4	43.6	(s)	2.0	189.1	7.0	315.6	0.0	0.0	353.7	0.0	353.7
1999	0.0	66.1	0.4	81.2	54.8	1.2	2.0	196.2	6.9	342.7	0.0	0.0	408.9	0.0	408.9

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels. Transportation use of natural gas is gas consumed in the operation of pipelines, primarily in compressors, and, since 1990, is also gas consumed as vehicle fuel.

<sup>c</sup> Ethanol blended into motor gasoline, which is accounted for under motor gasoline, is shown separately here to display the use of renewable energy by the transportation sector and is included only once in the total.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1980 and 1981 due to the expanded coverage of renewable energy sources beginning in 1981.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.



**Table 166. Estimates of Energy Input at Electric Utilities, Selected Years, 1960-1999, Mississippi**

Year	Coal	Natural Gas <sup>a</sup>	Petroleum				Nuclear Electric Power	Hydroelectric Power <sup>e</sup>	Wood and Waste	Geothermal Energy	Other <sup>b,f</sup>	Total <sup>g</sup>
			Heavy Oil <sup>b,c</sup>	Light Oil <sup>b,d</sup>	Petroleum Coke <sup>b</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels				Million Kilowatthours					
1960	8	34	64	1	0	65	0	0	0	0	0	—
1965	9	56	6	(s)	0	7	0	0	0	0	0	—
1970	500	100	415	5	0	420	0	0	0	0	0	—
1975	1,416	32	9,203	266	0	9,469	0	0	0	0	0	—
1980	3,072	95	5,078	70	0	5,149	0	0	0	0	0	—
1985	4,267	54	108	61	0	169	4,332	0	0	0	0	—
1990	3,888	65	1,179	50	0	1,228	7,422	0	0	0	0	—
1991	3,570	62	602	79	0	681	9,133	0	0	0	0	—
1992	3,237	54	623	28	0	651	8,174	0	0	0	0	—
1993	3,767	40	5,503	35	0	5,538	7,904	0	0	0	0	—
1994	3,989	83	1,683	50	0	1,733	9,615	0	0	0	0	—
1995	4,319	111	7	41	0	48	8,013	0	0	0	0	—
1996	5,558	83	1,703	89	0	1,792	9,225	0	0	0	0	—
1997	6,035	73	4,035	51	0	4,086	10,813	0	0	0	0	—
1998	5,684	76	8,314	61	0	8,376	9,191	0	0	0	0	—
1999	6,022	102	4,916	62	0	4,978	8,428	0	0	0	0	—
<b>Trillion Btu</b>												
1960	0.2	35.6	0.4	(s)	0.0	0.4	0.0	0.0	0.0	0.0	0.0	36.2
1965	0.2	58.0	(s)	(s)	0.0	(s)	0.0	0.0	0.0	0.0	0.0	58.3
1970	12.1	102.2	2.6	(s)	0.0	2.6	0.0	0.0	0.0	0.0	0.0	116.9
1975	32.8	32.5	57.9	1.5	0.0	59.4	0.0	0.0	0.0	0.0	0.0	124.7
1980	73.7	96.7	31.9	0.4	0.0	32.3	0.0	0.0	0.0	0.0	0.0	202.7
1985	103.5	55.7	0.7	0.4	0.0	1.0	46.8	0.0	0.0	0.0	0.0	207.0
1990	97.5	67.5	7.4	0.3	0.0	7.7	79.3	0.0	0.0	0.0	0.0	252.0
1991	89.6	64.0	3.8	0.5	0.0	4.2	98.1	0.0	0.0	0.0	0.0	255.9
1992	81.0	55.8	3.9	0.2	0.0	4.1	87.3	0.0	0.0	0.0	0.0	228.1
1993	93.0	40.8	34.6	0.2	0.0	34.8	84.4	0.0	0.0	0.0	0.0	253.0
1994	90.2	86.1	10.6	0.3	0.0	10.9	102.6	0.0	0.0	0.0	0.0	289.8
1995	96.9	115.6	(s)	0.2	0.0	0.3	85.4	0.0	0.0	0.0	0.0	298.2
1996	122.5	86.4	10.7	0.5	0.0	11.2	98.0	0.0	0.0	0.0	0.0	318.2
1997	126.6	75.7	25.4	0.3	0.0	25.7	114.9	0.0	0.0	0.0	0.0	342.8
1998	120.1	79.3	52.3	0.4	0.0	52.6	97.6	0.0	0.0	0.0	0.0	349.7
1999	133.2	104.4	30.9	0.4	0.0	31.3	89.5	0.0	0.0	0.0	0.0	358.4

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> Prior to 1980, based on oil used in steam plants. Since 1980, heavy oil includes fuel oil nos. 4, 5, and 6 and residual fuel oils.

<sup>d</sup> Prior to 1980, based on oil used in internal combustion and gas turbine engine plants. Since 1980, light oil includes fuel oil nos. 1 and 2, kerosene, and jet fuel.

<sup>e</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>f</sup> "Other" is electricity generated for distribution from wind, photovoltaic, and solar thermal energy.

<sup>g</sup> If applicable, from 1989, includes net imports of electricity generated from nonrenewable energy sources not shown in other columns. See data in appendix Table A8.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

Table 167. Energy Consumption Estimates by Source, Selected Years 1960-1999, Missouri

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum											Nuclear Electric Power	Hydro-electric Power <sup>d</sup>	Wood and Waste	Other <sup>a,e</sup>	Net Inter-state Flow of Electricity/Losses <sup>f</sup>	Total <sup>g</sup>	
			Asphalt & Road Oil <sup>a</sup>	Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	Kero-sene <sup>a</sup>	LPG <sup>a</sup>	Lubri-cants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Other <sup>a,c</sup>	Total							Million kWh
			Thousand Barrels															Million kWh		
1960	7,510	261	3,725	1,844	12,817	1,249	2,087	5,994	953	40,807	3,179	R 2,207	R 74,860	0	726	—	—	4,227	—	
1965	8,534	341	4,401	2,323	13,803	3,625	1,162	7,692	1,029	45,015	3,449	R 4,395	R 86,894	0	802	—	—	2,382	—	
1970	12,863	430	5,657	179	16,235	8,074	643	11,771	1,150	56,041	3,570	R 5,467	R 108,789	0	927	—	—	-2,103	—	
1975	19,955	370	5,401	184	17,819	8,311	282	12,995	1,284	62,342	2,521	R 4,801	R 115,940	0	1,280	—	—	-12,225	—	
1980	24,845	318	4,002	162	18,390	6,268	315	9,121	1,603	58,966	1,427	R 11,384	R 111,638	0	558	—	—	-5,550	—	
1985	24,733	260	4,295	135	19,593	5,889	149	5,583	1,459	60,036	732	7,660	105,531	8,030	2,993	—	—	-22,418	—	
1990	25,836	239	4,468	126	20,743	6,647	45	6,874	1,641	63,994	629	9,864	115,031	7,998	R <sup>h</sup> 2,156	—	—	-8,848	—	
1991	25,773	256	4,062	117	20,310	7,506	65	8,633	1,468	63,908	548	4,639	111,256	9,979	R 1,072	—	—	-6,189	—	
1992	25,180	241	3,832	115	22,458	7,522	43	8,470	1,497	65,260	666	5,644	115,507	8,084	R 1,450	—	—	-4,364	—	
1993	23,381	280	4,055	93	22,784	9,034	56	9,586	1,524	66,109	1,079	6,030	120,350	8,381	R 3,110	—	—	R 16,244	—	
1994	27,663	268	5,703	113	24,545	10,623	48	9,407	1,593	67,526	534	6,527	126,619	10,006	R 1,844	—	—	-6,774	—	
1995	31,753	279	5,296	109	25,540	11,425	53	11,085	1,566	68,930	359	6,369	130,732	8,242	R 1,854	—	—	-10,057	—	
1996	34,382	294	5,385	108	27,873	12,133	116	R 12,965	1,520	69,947	365	R 4,462	R 134,876	8,890	R 1,239	—	—	-9,155	—	
1997	36,665	284	4,141	160	30,015	12,320	77	R 11,200	1,605	70,581	257	R 4,320	R 134,678	8,955	R 1,479	—	—	-18,477	—	
1998	38,589	259	3,906	136	36,943	12,747	83	8,134	1,680	71,675	247	5,676	141,228	8,517	2,269	—	—	-22,830	—	
1999	37,948	266	4,977	75	35,879	12,760	84	12,671	1,698	71,189	169	6,465	145,967	8,587	1,743	—	—	-26,448	—	
Trillion Btu																				
1960	170.9	270.1	24.7	9.3	74.7	7.0	11.8	24.0	5.8	214.4	20.0	R 13.0	R 404.6	0.0	7.8	33.6	0.0	14.4	R 901.5	
1965	189.6	348.0	29.2	11.7	80.4	20.4	6.6	30.9	6.2	236.5	21.7	R 24.8	R 468.4	0.0	8.4	27.0	0.0	8.1	R 1,049.5	
1970	279.2	432.5	37.5	0.9	94.6	45.7	3.6	44.5	7.0	294.4	22.4	R 30.7	R 581.3	0.0	9.7	23.6	0.0	-7.2	R 1,319.3	
1975	430.2	371.8	35.8	0.9	103.8	47.0	1.6	48.3	7.8	327.5	15.9	R 27.4	R 616.0	0.0	13.3	27.1	0.0	-41.7	R 1,416.8	
1980	531.4	322.9	26.6	0.8	107.1	35.5	1.8	33.5	9.7	309.8	9.0	R 63.3	R 597.0	0.0	5.8	R 28.8	0.0	-18.9	R 1,467.0	
1985	529.7	264.3	28.5	0.7	114.1	33.3	0.8	20.1	8.8	315.4	4.6	41.9	568.3	86.8	31.3	R 28.7	0.0	-76.5	R 1,432.6	
1990	540.6	241.3	29.6	0.6	120.8	37.6	0.3	24.9	10.0	336.2	4.0	54.8	618.8	85.4	<sup>h</sup> 22.4	R 16.1	<sup>h</sup> 0.2	R -30.2	R <sup>h</sup> 1,494.7	
1991	534.5	258.6	27.0	0.6	118.3	42.5	0.4	31.2	8.9	335.7	3.4	26.2	594.2	107.2	11.2	R 16.6	0.2	R -21.1	R 1,501.4	
1992	523.2	241.2	25.4	0.6	130.8	42.6	0.2	30.7	9.1	342.8	4.2	32.1	618.5	86.3	15.0	R 17.3	0.2	R -14.9	R 1,486.9	
1993	466.3	280.7	26.9	0.5	132.7	51.2	0.3	34.6	9.2	347.3	6.8	34.4	643.8	89.5	32.1	R 14.9	0.2	R 55.4	R 1,583.0	
1994	542.3	269.2	37.8	0.6	143.0	60.2	0.3	34.2	9.7	R 353.2	3.4	37.4	R 679.6	106.8	19.0	R 14.7	0.2	R -23.1	R 1,608.8	
1995	591.4	281.0	35.1	0.5	148.8	64.8	0.3	40.2	9.5	R 359.5	2.3	36.5	R 697.4	87.8	19.1	R 16.7	0.2	R -34.3	R 1,659.4	
1996	629.7	297.5	35.7	0.5	162.4	68.8	0.7	R 46.8	9.2	R 364.8	2.3	R 25.6	R 716.9	94.4	12.8	R 16.4	0.2	R -31.2	R 1,736.7	
1997	666.7	286.4	27.5	0.8	174.8	69.9	0.4	R 40.5	9.7	R 367.9	1.6	R 24.7	R 717.9	95.1	R 15.3	R 13.0	0.2	R -63.0	R 1,731.6	
1998	697.0	262.0	25.9	0.7	215.2	72.3	0.5	29.4	10.2	373.6	1.6	32.7	762.0	90.5	23.5	11.0	0.2	-77.9	1,768.2	
1999	686.1	269.6	33.0	0.4	209.0	72.3	0.5	45.8	10.3	371.0	1.1	37.3	780.6	91.2	18.0	12.3	0.2	-90.2	1,768.0	

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products consumed in the industrial sector. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>e</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>f</sup> Net interstate flow of electricity is the difference between the amount of energy in the electricity sold within a State (including associated losses) and the energy input at the electric utilities within the State. A positive number

indicates that more electricity (including associated losses) came into the State than went out of the State during the year; conversely, a negative number indicates that more electricity (including associated losses) went out of the State than came into the State.

<sup>g</sup> From 1989, "Total" does not equal the sum of the columns. Net imports of electricity generated from nonrenewable energy sources (shown in appendix Table A8) is included in the total but not in any other columns.

<sup>h</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

kWh=kilowatt-hours. R=Revised data. — =Not applicable.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

Table 168. Residential Energy Consumption Estimates, Selected Years 1960-1999, Missouri

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum				Wood Thousand Cords	Geothermal	Solar <sup>c</sup>	Electricity <sup>a</sup> Million Kilowatthours	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Total						Million Kilowatthours	
			Thousand Barrels										
1960	415	111	1,330	240	4,687	6,257	1,293	—	—	4,223	—	10,505	—
1965	105	130	1,056	138	6,139	7,332	898	—	—	5,977	—	14,271	—
1970	32	157	1,312	69	8,934	10,315	674	—	—	9,672	—	23,438	—
1975	54	155	1,435	28	9,528	10,992	704	—	—	13,654	—	32,935	—
1980	29	143	1,246	57	4,991	6,294	R 1,093	—	—	18,648	—	45,346	—
1985	55	128	815	95	3,496	4,406	1,033	—	—	18,483	—	43,425	—
1990	99	116	355	29	4,193	4,577	669	—	—	21,652	—	R 47,367	—
1991	88	121	430	37	5,489	5,956	704	—	—	23,386	—	R 50,840	—
1992	79	117	358	21	5,545	5,923	741	—	—	21,294	—	R 45,414	—
1993	91	134	414	37	5,863	6,314	R 617	—	—	24,182	—	R 51,076	—
1994	77	123	353	24	5,771	6,148	R 605	—	—	24,057	—	R 50,205	—
1995	74	125	472	32	5,841	6,344	R 672	—	—	25,409	—	R 52,976	—
1996	72	137	335	56	R 7,840	R 8,231	R 671	—	—	26,448	—	R 55,117	—
1997	93	128	329	45	R 7,148	R 7,522	R 478	—	—	26,595	—	R 55,321	—
1998	58	111	289	49	5,105	5,444	421	—	—	28,265	—	58,389	—
1999	80	112	279	55	6,848	7,182	451	—	—	27,766	—	54,402	—
Trillion Btu													
1960	9.5	115.0	7.7	1.4	18.8	27.9	25.9	0.0	0.0	14.4	192.7	35.8	228.5
1965	2.4	132.1	6.1	0.8	24.6	31.6	18.0	0.0	0.0	20.4	204.4	48.7	253.1
1970	0.7	157.7	7.6	0.4	33.8	41.8	13.5	0.0	0.0	33.0	246.7	80.0	326.6
1975	1.2	156.5	8.4	0.2	35.4	43.9	14.1	0.0	0.0	46.6	262.2	112.4	374.6
1980	0.6	145.7	7.3	0.3	18.3	25.9	R 21.9	0.0	0.0	63.6	257.7	154.7	412.4
1985	1.2	130.3	4.8	0.5	12.6	17.9	20.7	0.0	0.0	63.1	233.2	148.2	381.3
1990	2.2	117.2	2.1	0.2	15.2	17.4	13.4	e (s)	R e 0.2	73.9	e 224.3	161.6	R e 385.9
1991	1.9	121.7	2.5	0.2	19.8	22.6	14.1	(s)	R 0.2	79.8	240.3	R 173.5	R 413.8
1992	1.7	116.9	2.1	0.1	20.1	22.3	14.8	0.1	R 0.2	72.7	228.6	R 155.0	R 383.6
1993	2.0	134.7	2.4	0.2	21.1	23.8	R 12.3	0.1	R 0.2	82.5	255.6	174.3	R 429.9
1994	1.8	123.3	2.1	0.1	21.0	23.2	R 12.1	0.1	R 0.2	82.1	R 242.6	171.3	R 413.9
1995	1.7	126.0	2.7	0.2	21.2	24.1	R 13.4	0.1	R 0.2	86.7	R 252.1	R 180.8	R 432.9
1996	1.6	138.7	2.0	0.3	R 28.3	R 30.6	R 13.4	0.1	R 0.2	90.2	R 274.8	R 188.1	R 462.9
1997	2.1	128.9	1.9	0.3	R 25.8	R 28.0	R 9.6	0.1	R 0.2	90.7	R 259.6	R 188.8	R 448.3
1998	1.3	112.0	1.7	0.3	18.5	20.4	8.4	0.1	0.1	96.4	238.8	199.2	438.0
1999	1.8	113.6	1.6	0.3	24.8	26.7	9.0	0.1	0.1	94.7	246.1	185.6	431.7

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Includes small amounts of solar thermal and photovoltaic energy consumed by the commercial sector that cannot be separately identified. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 169. Commercial Energy Consumption Estimates, Selected Years 1960-1999, Missouri**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum						Wood	Geothermal	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>c</sup>	Total <sup>d</sup>
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels						Thousand Cords	Million Kilowatthours	Million Kilowatthours			
1960	770	33	1,101	1,507	827	113	1,366	4,914	24	—	3,314	—	8,243	—
1965	196	41	873	865	1,083	133	1,508	4,463	17	—	4,473	—	10,681	—
1970	60	88	1,085	433	1,577	153	1,654	4,901	13	—	6,168	—	14,948	—
1975	101	91	1,187	179	1,681	159	764	3,971	13	—	7,639	—	18,425	—
1980	53	76	1,001	171	881	223	554	2,830	26	—	12,986	—	31,578	—
1985	101	60	1,465	33	617	262	121	2,498	R 28	—	15,205	—	35,724	—
1990	185	59	883	8	740	239	60	1,931	R 43	—	19,335	—	R 42,297	—
1991	164	63	1,111	4	969	128	30	2,241	R 45	—	20,014	—	R 43,509	—
1992	148	61	1,174	16	978	121	3	2,293	R 48	—	19,677	—	R 41,967	—
1993	168	70	1,148	13	1,035	112	8	2,315	50	—	20,822	—	R 43,979	—
1994	142	66	1,194	14	1,018	102	20	2,348	51	—	21,518	—	R 44,906	—
1995	137	65	1,286	10	1,031	99	1	2,427	51	—	22,514	—	R 46,940	—
1996	133	73	1,327	27	R 1,383	116	6	R 2,859	R 55	—	23,462	—	R 48,895	—
1997	173	70	1,238	21	R 1,261	145	34	R 2,699	R 52	—	23,792	—	R 49,491	—
1998	108	62	1,142	18	901	122	36	2,220	52	—	24,901	—	51,440	—
1999	146	63	931	17	1,209	305	32	2,494	63	—	25,138	—	49,253	—

  

Trillion Btu														
1960	17.7	33.8	6.4	8.5	3.3	0.6	8.6	27.5	0.5	0.0	11.3	90.8	28.1	118.9
1965	4.5	41.8	5.1	4.9	4.3	0.7	9.5	24.5	0.3	0.0	15.3	86.4	36.4	122.8
1970	1.3	88.3	6.3	2.5	6.0	0.8	10.4	25.9	0.3	0.0	21.0	136.8	51.0	187.8
1975	2.2	91.5	6.9	1.0	6.2	0.8	4.8	19.8	0.3	0.0	26.1	139.8	62.9	202.6
1980	1.2	77.3	5.8	1.0	3.2	1.2	3.5	14.7	0.5	0.0	44.3	137.9	107.7	245.7
1985	2.3	61.4	8.5	0.2	2.2	1.4	0.8	13.1	R 0.6	0.0	51.9	R 129.2	121.9	R 251.1
1990	4.0	60.0	5.1	(s)	2.7	1.3	0.4	9.5	R 0.9	e 0.0	66.0	R e 140.4	144.3	R e 284.7
1991	3.6	63.7	6.5	(s)	3.5	0.7	0.2	10.9	R 0.9	0.0	68.3	R 147.4	R 148.5	R 295.8
1992	3.2	61.1	6.8	0.1	3.5	0.6	(s)	11.1	R 1.0	0.0	67.1	R 143.6	R 143.2	R 286.8
1993	3.8	69.9	6.7	0.1	3.7	0.6	(s)	11.1	1.0	0.0	71.0	156.9	150.1	R 306.9
1994	3.2	66.6	7.0	0.1	3.7	0.5	0.1	11.4	1.0	0.0	73.4	155.7	153.2	308.9
1995	3.1	65.5	7.5	0.1	3.7	0.5	(s)	11.8	1.0	0.0	76.8	158.3	R 160.2	R 318.4
1996	3.0	73.6	7.7	0.2	R 5.0	0.6	(s)	R 13.5	1.1	0.0	80.1	R 171.3	R 166.8	R 338.1
1997	3.9	70.5	7.2	0.1	R 4.6	0.8	0.2	R 12.9	1.0	0.0	81.2	R 169.6	R 168.9	R 338.4
1998	2.5	62.7	6.7	0.1	3.3	0.6	0.2	10.9	1.0	0.0	85.0	162.0	175.5	337.5
1999	3.3	64.0	5.4	0.1	4.4	1.6	0.2	11.7	1.3	0.0	85.8	166.0	168.0	334.1

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>d</sup> Small amounts of solar thermal and photovoltaic energy consumed in the commercial sector cannot be separately identified and are included in residential consumption.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

—=Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

Table 170. Industrial Energy Consumption Estimates, Selected Years 1960-1999, Missouri

Year	Coal Thousand Short Tons	Natural Gas <sup>a</sup> Billion Cubic Feet	Petroleum									Hydro- electric Power <sup>b</sup> Million kWh	Wood and Waste	Other <sup>b,d</sup>	Electricity <sup>b</sup> Million kWh	Net Energy	Electrical System Energy Losses <sup>e</sup> Million kWh	Total
			Asphalt and Road Oil <sup>b</sup>	Distillate Fuel <sup>b</sup>	Kero- sene <sup>b</sup>	LPG <sup>b</sup>	Lubri- cants <sup>b</sup>	Motor Gasoline	Residual Fuel <sup>b</sup>	Other <sup>b,c</sup>	Total							
			Thousand Barrels															
1960	2,605	79	3,725	5,722	340	437	284	3,074	1,630	R 2,207	R 17,419	0	—	—	3,890	—	9,675	—
1965	2,534	114	4,401	5,097	160	423	328	3,224	1,710	R 4,395	R 19,739	0	—	—	5,872	—	14,020	—
1970	1,921	110	5,657	5,689	141	1,175	415	2,767	1,620	R 5,467	R 22,932	0	—	—	9,939	—	24,084	—
1975	2,065	90	5,401	5,765	75	1,712	491	2,707	1,242	R 4,786	R 22,178	0	—	—	11,782	—	28,421	—
1980	1,595	78	4,002	4,782	87	3,182	671	1,866	703	R 11,283	R 26,575	0	—	—	11,018	—	26,792	—
1985	1,798	66	4,295	3,993	22	1,333	610	1,076	557	7,660	19,546	0	—	—	12,625	—	29,661	—
1990	1,321	55	4,468	3,007	8	1,823	687	663	526	9,864	21,046	f 0	—	—	12,937	—	R 28,302	—
1991	1,235	57	4,062	2,947	23	2,046	614	758	476	4,639	15,565	0	—	—	13,114	—	R 28,509	—
1992	1,137	58	3,832	3,258	6	1,859	626	669	621	5,644	16,515	0	—	—	13,440	—	R 28,665	—
1993	1,177	61	4,055	2,803	5	2,597	638	1,469	1,015	5,115	17,696	0	—	—	13,618	—	R 28,763	—
1994	1,070	72	5,703	3,482	10	2,416	666	1,623	465	5,323	19,688	0	—	—	14,106	—	R 29,438	—
1995	1,102	69	5,296	3,261	11	4,102	655	1,676	324	5,254	20,580	0	—	—	14,321	—	R 29,858	—
1996	1,118	72	5,385	3,225	33	R 3,644	636	1,677	314	R 4,462	R 19,376	0	—	—	14,915	—	R 31,083	—
1997	1,206	71	4,141	3,761	12	R 2,733	672	1,688	183	R 4,320	R 17,510	0	—	—	15,267	—	R 31,757	—
1998	1,258	65	3,906	3,727	15	2,108	703	1,033	194	5,676	17,362	0	—	—	15,801	—	32,641	—
1999	1,175	65	4,977	4,434	12	4,555	710	915	131	6,465	22,199	0	—	—	16,122	—	31,588	—
Trillion Btu																		
1960	62.2	81.7	24.7	33.3	1.9	1.8	1.7	16.1	10.2	R 13.0	R 102.8	0.0	7.3	0.0	13.3	R 267.2	33.0	R 300.3
1965	59.9	116.4	29.2	29.7	0.9	1.7	2.0	16.9	10.8	R 24.8	R 116.0	0.0	8.7	0.0	20.0	R 321.1	47.8	R 368.9
1970	43.8	110.4	37.5	33.1	0.8	4.4	2.5	14.5	10.2	R 30.7	R 133.8	0.0	9.9	0.0	33.9	R 331.8	82.2	R 413.9
1975	45.7	90.7	35.8	33.6	0.4	6.4	3.0	14.2	7.8	R 27.3	R 128.5	0.0	12.7	0.0	40.2	R 317.9	97.0	R 414.8
1980	36.0	79.3	26.6	27.9	0.5	11.7	4.1	9.8	4.4	R 62.7	R 147.6	0.0	6.4	0.0	37.6	R 306.9	91.4	R 398.3
1985	41.2	66.8	28.5	23.3	0.1	4.8	3.7	5.7	3.5	41.9	111.4	0.0	7.5	0.0	43.1	R 270.0	101.2	R 371.2
1990	30.4	55.1	29.6	17.5	(s)	6.6	4.2	3.5	3.3	54.8	119.6	f 0.0	R 1.9	f 0.0	44.1	R 251.1	R 96.6	R 347.7
1991	28.7	57.7	27.0	17.2	0.1	7.4	3.7	4.0	3.0	26.2	88.6	0.0	R 1.7	0.0	44.7	R 221.4	R 97.3	R 318.7
1992	26.6	58.6	25.4	19.0	(s)	6.7	3.8	3.5	3.9	32.1	94.5	0.0	R 1.5	0.0	45.9	R 227.1	R 97.8	R 324.9
1993	27.8	61.2	26.9	16.3	(s)	9.4	3.9	7.7	6.4	28.9	99.5	0.0	R 1.5	0.0	46.5	R 236.4	R 98.1	R 334.6
1994	24.6	72.0	37.8	20.3	0.1	8.8	4.0	8.5	2.9	30.1	R 112.5	0.0	R 1.5	0.0	48.1	R 258.9	100.4	R 359.3
1995	25.5	69.4	35.1	19.0	0.1	14.9	4.0	R 8.7	2.0	29.8	R 113.6	0.0	R 2.0	0.0	48.9	R 259.4	R 101.9	R 361.3
1996	25.9	72.3	35.7	18.8	0.2	R 13.2	3.9	R 8.7	2.0	R 25.6	R 108.0	0.0	R 1.6	0.0	50.9	R 258.7	R 106.1	R 364.8
1997	27.5	71.9	27.5	21.9	0.1	R 9.9	4.1	R 8.8	1.2	R 24.7	R 98.1	0.0	R 1.9	0.0	52.1	R 251.5	R 108.4	R 359.9
1998	28.8	65.6	25.9	21.7	0.1	7.6	4.3	5.4	1.2	32.7	98.9	0.0	0.7	0.0	53.9	247.9	111.4	359.3
1999	26.9	65.8	33.0	25.8	0.1	16.5	4.3	4.8	0.8	37.3	122.6	0.0	1.5	0.0	55.0	271.8	107.8	379.6

<sup>a</sup> Includes supplemental gaseous fuels.<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.<sup>c</sup> "Other" is the subtotal of 16 petroleum products. See a full description in Appendix A, Section 4, "Other Petroleum Products."<sup>d</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.<sup>e</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.<sup>f</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

R=Revised data.

kWh=kilowatthours. — =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 171. Transportation Energy Consumption Estimates, Selected Years 1960-1999, Missouri**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum								Ethanol <sup>c</sup>	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total <sup>c</sup>
			Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	LPG <sup>a</sup>	Lubricants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total				Million Kilowatthours	
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels								Thousand Barrels	Million Kilowatthours	Million Kilowatthours	Total <sup>c</sup>	
1960	46	8	1,844	4,485	1,249	43	669	37,620	34	45,943	0	2	—	5	—
1965	8	9	2,323	6,685	3,625	47	701	41,658	154	55,191	0	0	—	0	—
1970	3	13	179	7,990	8,074	85	735	53,122	163	70,349	0	0	—	0	—
1975	(s)	7	184	8,721	8,311	74	793	59,476	141	77,698	0	0	—	0	—
1980	0	6	162	10,824	6,268	68	932	56,877	142	75,272	0	0	—	0	—
1985	0	4	135	13,116	5,889	138	848	58,698	38	78,863	R e 35	0	—	0	—
1990	0	5	126	16,291	6,647	117	955	63,092	34	87,263	R 631	0	—	0	—
1991	0	3	117	15,577	7,506	130	854	63,022	0	87,206	R 570	0	—	0	—
1992	0	2	115	17,483	7,522	88	871	64,471	17	90,567	R 672	0	—	0	—
1993	0	10	93	18,052	9,034	91	887	64,527	34	92,719	R 768	0	—	0	—
1994	0	3	113	19,260	10,623	202	927	65,801	22	96,949	R 861	12	—	25	—
1995	0	7	109	20,237	11,425	112	911	67,155	21	99,971	R 576	16	—	33	—
1996	0	7	108	22,759	12,133	R 98	884	68,154	18	R 104,153	R 303	19	—	39	—
1997	0	7	160	24,412	12,320	R 57	934	68,748	15	R 106,646	R 167	18	—	37	—
1998	0	6	136	31,083	12,747	20	977	70,520	4	115,487	189	19	—	40	—
1999	0	7	75	29,532	12,760	59	988	69,969	6	113,388	406	20	—	38	—
<b>Trillion Btu</b>															
1960	1.1	8.2	9.3	26.1	7.0	0.2	4.1	197.6	0.2	244.5	0.0	(s)	253.8	(s)	253.8
1965	0.2	9.1	11.7	38.9	20.4	0.2	4.3	218.8	1.0	295.3	0.0	0.0	304.6	0.0	304.6
1970	0.1	12.8	0.9	46.5	45.7	0.3	4.5	279.0	1.0	378.0	0.0	0.0	390.9	0.0	390.9
1975	(s)	7.6	0.9	50.8	47.0	0.3	4.8	312.4	0.9	417.2	0.0	0.0	424.7	0.0	424.7
1980	0.0	5.7	0.8	63.0	35.5	0.2	5.7	298.8	0.9	404.9	0.0	0.0	410.6	0.0	410.6
1985	0.0	4.3	0.7	76.4	33.3	0.5	5.1	308.3	0.2	424.6	R e 0.1	0.0	e 429.0	0.0	e 429.0
1990	0.0	5.4	0.6	94.9	37.6	0.4	5.8	331.4	0.2	471.0	R 2.2	0.0	476.4	0.0	476.4
1991	0.0	2.6	0.6	90.7	42.5	0.5	5.2	331.1	0.0	470.5	R 2.0	0.0	473.1	0.0	473.1
1992	0.0	2.3	0.6	101.8	42.6	0.3	5.3	338.7	0.1	489.4	R 2.4	0.0	491.7	0.0	491.7
1993	0.0	9.9	0.5	105.2	51.2	0.3	5.4	339.0	0.2	501.7	R 2.7	0.0	511.6	0.0	511.6
1994	0.0	2.9	0.6	112.2	60.2	0.7	5.6	R 344.1	0.1	R 523.6	R 3.0	(s)	R 526.5	0.1	R 526.6
1995	0.0	7.2	0.5	117.9	64.8	0.4	5.5	R 350.2	0.1	R 539.5	R 2.0	0.1	R 546.7	0.1	R 546.8
1996	0.0	7.6	0.5	132.6	68.8	R 0.4	5.4	R 355.5	0.1	R 563.2	R 1.1	0.1	R 570.9	0.1	R 571.0
1997	0.0	7.6	0.8	142.2	69.9	R 0.2	5.7	R 358.4	0.1	R 577.2	R 0.6	0.1	R 584.8	0.1	R 585.0
1998	0.0	5.6	0.7	181.1	72.3	0.1	5.9	367.6	(s)	627.6	0.7	0.1	633.2	0.1	633.4
1999	0.0	6.8	0.4	172.0	72.3	0.2	6.0	364.6	(s)	615.6	1.4	0.1	622.5	0.1	622.6

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels. Transportation use of natural gas is gas consumed in the operation of pipelines, primarily in compressors, and, since 1990, is also gas consumed as vehicle fuel.

<sup>c</sup> Ethanol blended into motor gasoline, which is accounted for under motor gasoline, is shown separately here to display the use of renewable energy by the transportation sector and is included only once in the total.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1980 and 1981 due to the expanded coverage of renewable energy sources beginning in 1981.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

Table 172. Estimates of Energy Input at Electric Utilities, Selected Years, 1960-1999, Missouri

Year	Coal	Natural Gas <sup>a</sup>	Petroleum				Nuclear Electric Power	Hydroelectric Power <sup>e</sup>	Wood and Waste	Geothermal Energy	Other <sup>b,f</sup>	Total <sup>g</sup>
			Heavy Oil <sup>b,c</sup>	Light Oil <sup>b,d</sup>	Petroleum Coke <sup>b</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels				Million Kilowatthours					
1960	3,674	30	150	178	0	328	0	726	0	0	0	—
1965	5,690	48	77	92	0	168	0	802	0	0	0	—
1970	10,846	63	133	159	0	291	0	927	0	0	0	—
1975	17,734	26	375	710	15	1,100	0	1,280	0	0	0	—
1980	23,168	15	29	538	101	668	0	558	0	0	0	—
1985	22,779	1	16	202	1	219	8,030	2,993	0	0	0	—
1990	24,231	4	8	207	0	215	7,998	2,156	0	0	0	—
1991	24,286	13	42	245	0	287	9,979	1,072	0	0	0	—
1992	23,815	2	24	185	0	209	8,084	1,450	0	0	0	—
1993	21,945	5	22	367	915	1,305	8,381	3,110	1	0	0	—
1994	26,375	4	27	255	1,204	1,486	10,006	1,844	7	0	0	—
1995	30,440	13	13	283	1,114	1,410	8,242	1,854	25	0	0	—
1996	33,059	5	28	228	0	256	8,890	1,239	31	0	0	—
1997	35,193	7	25	275	0	300	8,955	<sup>R</sup> 1,479	42	0	0	—
1998	37,165	16	13	701	0	714	8,517	2,269	78	0	0	—
1999	36,546	19	(s)	703	0	703	8,587	1,743	50	0	0	—
Trillion Btu												
1960	80.5	31.3	0.9	1.0	0.0	2.0	0.0	7.8	0.0	0.0	0.0	121.6
1965	122.6	48.5	0.5	0.5	0.0	1.0	0.0	8.4	0.0	0.0	0.0	180.5
1970	233.4	63.4	0.8	0.9	0.0	1.8	0.0	9.7	0.0	0.0	0.0	308.3
1975	381.2	25.7	2.4	4.1	0.1	6.6	0.0	13.3	0.0	0.0	0.0	426.8
1980	493.6	15.0	0.2	3.1	0.6	3.9	0.0	5.8	0.0	0.0	0.0	518.3
1985	484.9	1.5	0.1	1.2	(s)	1.3	86.8	31.3	0.0	0.0	0.0	605.8
1990	504.0	3.6	(s)	1.2	0.0	1.3	85.4	22.4	0.0	0.0	0.0	616.7
1991	500.2	12.9	0.3	1.4	0.0	1.7	107.2	11.2	0.0	0.0	0.0	633.1
1992	491.6	2.4	0.2	1.1	0.0	1.2	86.3	15.0	0.0	0.0	0.0	596.5
1993	432.7	4.9	0.1	2.1	5.5	7.8	89.5	32.1	(s)	0.0	0.0	567.1
1994	512.6	4.4	0.2	1.5	7.3	8.9	106.8	19.0	0.1	0.0	0.0	651.8
1995	561.1	12.9	0.1	1.7	6.7	8.4	87.8	19.1	0.3	0.0	0.0	689.6
1996	599.2	5.3	0.2	1.3	0.0	1.5	94.4	12.8	0.3	0.0	0.0	713.6
1997	633.1	7.5	0.2	1.6	0.0	1.8	95.1	<sup>R</sup> 15.3	0.4	0.0	0.0	<sup>R</sup> 753.2
1998	664.4	16.2	0.1	4.1	0.0	4.2	90.5	23.5	0.8	0.0	0.0	799.5
1999	654.0	19.5	(s)	4.1	0.0	4.1	91.2	18.0	0.5	0.0	0.0	787.4

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> Prior to 1980, based on oil used in steam plants. Since 1980, heavy oil includes fuel oil nos. 4, 5, and 6 and residual fuel oils.

<sup>d</sup> Prior to 1980, based on oil used in internal combustion and gas turbine engine plants. Since 1980, light oil includes fuel oil nos. 1 and 2, kerosene, and jet fuel.

<sup>e</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>f</sup> "Other" is electricity generated for distribution from wind, photovoltaic, and solar thermal energy.

<sup>g</sup> If applicable, from 1989, includes net imports of electricity generated from nonrenewable energy sources not shown in other columns. See data in appendix Table A8.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 173. Energy Consumption Estimates by Source, Selected Years 1960-1999, Montana**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum											Nuclear Electric Power	Hydro-electric Power <sup>d</sup>	Wood and Waste	Other <sup>a,e</sup>	Net Inter-state Flow of Electricity/Losses <sup>f</sup>	Total <sup>g</sup>
			Asphalt & Road Oil <sup>a</sup>	Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	Kero-sene <sup>a</sup>	LPG <sup>a</sup>	Lubri-cants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Other <sup>a,c</sup>	Total						
			Thousand Barrels															Million kWh	
1960	254	56	865	1,006	4,898	265	477	737	161	6,922	2,063	R 1,725	R 19,118	0	5,800	—	—	-3,181	—
1965	370	71	1,003	312	4,962	384	248	926	189	7,709	1,241	R 2,835	R 19,809	0	8,388	—	—	-6,938	—
1970	763	88	1,347	43	4,827	649	376	1,326	200	9,262	1,268	R 3,372	R 22,670	0	8,744	—	—	-1,251	—
1975	1,149	80	924	79	7,586	818	122	1,370	208	10,630	2,178	R 3,772	R 27,687	0	10,164	—	—	-6,056	—
1980	3,520	61	1,020	159	7,509	920	0	1,806	247	10,416	4,025	R 3,159	R 29,262	0	9,963	—	—	-11,328	—
1985	5,713	47	1,463	91	11,317	678	10	1,576	225	10,188	133	R 2,512	R 28,193	0	10,244	—	—	-13,692	—
1990	9,676	43	1,487	111	7,422	708	8	1,740	253	10,328	221	R 4,054	R 26,332	0	R <sup>h</sup> 10,752	—	—	-38,514	—
1991	10,549	45	1,350	108	8,321	615	3	1,053	227	10,360	146	R 3,568	R 25,750	0	R 11,980	—	—	R -45,407	—
1992	11,040	46	1,309	75	7,716	864	1	1,018	231	10,727	89	R 4,473	R 26,503	0	R 8,281	—	—	R -38,451	—
1993	9,247	53	1,707	64	8,004	901	8	2,200	235	10,999	689	R 3,906	R 28,712	0	R 9,613	—	—	R -33,200	—
1994	11,089	52	1,964	75	8,254	855	7	1,055	246	11,097	374	R 4,327	R 28,255	0	R 8,162	—	—	R -36,557	—
1995	10,005	58	1,293	78	8,924	1,052	1	918	242	11,328	240	R 4,269	R 28,344	0	R 10,760	—	—	R -37,963	—
1996	8,032	61	1,702	99	9,818	999	1	R 1,618	235	11,753	184	R 4,876	R 31,284	0	R 13,833	—	—	R -38,417	—
1997	9,517	60	1,448	71	10,782	792	2	R 277	248	11,480	165	R 4,704	R 29,969	0	R 13,395	—	—	R -49,906	—
1998	10,724	60	1,594	102	8,586	797	3	271	259	11,596	113	5,281	28,603	0	11,136	—	—	-44,109	—
1999	10,302	62	2,625	121	8,653	836	2	527	262	11,768	24	5,915	30,735	0	13,834	—	—	-46,327	—

  

Trillion Btu																				
1960	4.0	57.6	5.7	5.1	28.5	1.4	2.7	3.0	1.0	36.4	13.0	R 10.4	R 107.1	0.0	62.4	7.5	0.0	-10.9	R 227.8	
1965	5.5	70.8	6.7	1.6	28.9	2.1	1.4	3.7	1.1	40.5	7.8	R 17.0	R 110.8	0.0	87.7	7.8	0.0	-23.7	R 259.0	
1970	12.0	90.6	8.9	0.2	28.1	3.6	2.1	5.0	1.2	48.7	8.0	R 20.3	R 126.1	0.0	91.8	6.6	0.0	-4.3	R 322.9	
1975	18.6	81.2	6.1	0.4	44.2	4.6	0.7	5.1	1.3	55.8	13.7	R 22.7	R 154.6	0.0	105.8	6.2	0.0	-20.7	R 345.7	
1980	60.2	61.5	6.8	0.8	43.7	5.2	0.0	6.6	1.5	54.7	25.3	R 19.0	R 163.6	0.0	103.5	R 11.1	0.0	-38.6	R 361.2	
1985	99.1	47.3	9.7	0.5	65.9	3.8	0.1	5.7	1.4	53.5	0.8	R 15.5	R 156.8	0.0	107.0	R 14.0	(s)	-46.7	R 377.4	
1990	166.1	44.4	9.9	0.6	43.2	4.0	(s)	6.3	1.5	54.3	1.4	R 24.4	R 145.6	0.0	R <sup>h</sup> 111.8	R 19.9	h 0.1	-131.4	R <sup>h</sup> 356.7	
1991	180.2	46.7	9.0	0.5	48.5	3.5	(s)	3.8	1.4	54.4	0.9	R 21.6	R 143.6	0.0	R 125.0	R 18.2	0.1	R -154.9	R 359.1	
1992	189.8	46.6	8.7	0.4	44.9	4.8	(s)	3.7	1.4	56.3	0.6	R 26.9	R 147.7	0.0	R 85.6	R 6.7	0.1	R -131.2	R 345.4	
1993	157.7	54.3	11.3	0.3	46.6	5.0	(s)	7.9	1.4	57.8	4.3	R 23.6	R 158.4	0.0	R 99.1	R 6.6	0.1	R -113.3	R 362.9	
1994	189.3	53.3	13.0	0.4	48.1	4.8	(s)	3.8	1.5	R 58.0	2.4	R 26.1	R 158.1	0.0	R 84.2	R 5.9	0.1	R -124.7	R 366.2	
1995	171.2	59.6	8.6	0.4	52.0	5.9	(s)	3.3	1.5	R 59.1	1.5	R 25.8	R 158.0	0.0	R 111.0	R 18.0	0.1	R -129.5	R 388.3	
1996	135.7	63.2	11.3	0.5	57.2	5.7	(s)	R 5.8	1.4	R 61.3	1.2	R 29.3	R 173.7	0.0	R 143.0	R 17.2	0.1	R -131.1	R 402.1	
1997	160.7	61.7	9.6	0.4	62.8	4.5	(s)	R 1.0	1.5	R 59.8	1.0	R 28.3	R 169.0	0.0	R 138.7	R 17.6	0.1	R -170.3	377.5	
1998	181.0	61.4	10.6	0.5	50.0	4.5	(s)	1.0	1.6	60.4	0.7	31.9	161.2	0.0	115.2	12.5	0.1	-150.5	381.0	
1999	173.9	63.6	17.4	0.6	50.4	4.7	(s)	1.9	1.6	61.3	0.2	35.7	173.8	0.0	143.1	16.0	0.3	-158.1	412.4	

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products consumed in the industrial sector. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>e</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>f</sup> Net interstate flow of electricity is the difference between the amount of energy in the electricity sold within a State (including associated losses) and the energy input at the electric utilities within the State. A positive number

indicates that more electricity (including associated losses) came into the State than went out of the State during the year; conversely, a negative number indicates that more electricity (including associated losses) went out of the State than came into the State.

<sup>g</sup> From 1989, "Total" does not equal the sum of the columns. Net imports of electricity generated from nonrenewable energy sources (shown in appendix Table A8) is included in the total but not in any other columns.

<sup>h</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

kWh=kilowatthours. R=Revised data. — =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.



**Table 174. Residential Energy Consumption Estimates, Selected Years 1960-1999, Montana**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum				Wood Thousand Cords	Geothermal	Solar <sup>c</sup>	Electricity <sup>a</sup> Million Kilowatthours	Net Energy	Electrical System Energy Losses <sup>d</sup>		Total
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Total						Million Kilowatthours		
			Thousand Barrels											
1960	11	17	262	0	506	768	237	—	—	935	—	2,327	—	
1965	8	20	277	0	636	914	182	—	—	1,216	—	2,904	—	
1970	4	25	249	0	887	1,137	139	—	—	1,534	—	3,717	—	
1975	4	24	589	0	973	1,562	153	—	—	2,143	—	5,169	—	
1980	5	19	421	0	829	1,250	125	—	—	2,916	—	7,091	—	
1985	3	19	345	9	604	959	174	—	—	3,614	—	8,491	—	
1990	20	17	288	1	813	1,102	89	—	—	3,358	—	R 7,347	—	
1991	16	18	356	1	703	1,060	94	—	—	3,459	—	R 7,519	—	
1992	7	17	218	(s)	598	816	99	—	—	3,286	—	R 7,009	—	
1993	4	20	267	7	548	822	91	—	—	3,598	—	R 7,599	—	
1994	1	19	189	6	541	736	89	—	—	3,567	—	R 7,444	—	
1995	4	20	252	1	473	726	99	—	—	3,640	—	R 7,589	—	
1996	1	22	438	1	519	958	99	—	—	3,911	—	R 8,150	—	
1997	29	21	910	2	R 152	R 1,064	R 95	—	—	3,804	—	R 7,913	—	
1998	1	19	461	3	86	549	84	—	—	3,722	—	7,690	—	
1999	1	20	256	1	342	600	89	—	—	3,664	—	7,180	—	
<b>Trillion Btu</b>														
1960	0.2	17.5	1.5	0.0	2.0	3.6	4.7	0.0	0.0	3.2	29.2	7.9	37.2	
1965	0.2	19.9	1.6	0.0	2.6	4.2	3.6	0.0	0.0	4.1	32.1	9.9	42.0	
1970	0.1	25.6	1.5	0.0	3.4	4.8	2.8	0.0	0.0	5.2	38.5	12.7	51.2	
1975	0.1	24.6	3.4	0.0	3.6	7.0	3.1	0.0	0.0	7.3	42.1	17.6	59.7	
1980	0.1	19.5	2.5	0.0	3.0	5.5	2.5	0.0	0.0	9.9	37.5	24.2	61.7	
1985	(s)	19.4	2.0	0.1	2.2	4.2	3.5	0.0	0.0	12.3	39.4	29.0	68.4	
1990	0.4	17.3	1.7	(s)	2.9	4.6	1.8	e (s)	e (s)	11.5	e 35.6	25.1	R e 60.7	
1991	0.3	18.9	2.1	(s)	2.5	4.6	1.9	(s)	(s)	11.8	37.6	25.7	63.2	
1992	0.1	17.0	1.3	(s)	2.2	3.4	2.0	(s)	(s)	11.2	33.8	R 23.9	57.8	
1993	0.1	20.7	1.6	(s)	2.0	3.6	1.8	(s)	(s)	12.3	38.5	25.9	64.4	
1994	(s)	19.2	1.1	(s)	2.0	3.1	1.8	(s)	(s)	12.2	36.3	25.4	61.7	
1995	0.1	20.2	1.5	(s)	1.7	3.2	2.0	(s)	(s)	12.4	37.9	25.9	63.8	
1996	(s)	22.8	2.6	(s)	1.9	4.4	2.0	(s)	(s)	13.3	42.6	27.8	R 70.5	
1997	0.5	21.6	5.3	(s)	R 0.5	R 5.9	R 1.9	(s)	(s)	13.0	R 42.9	27.0	R 69.9	
1998	(s)	19.7	2.7	(s)	0.3	3.0	1.7	(s)	(s)	12.7	37.1	26.2	63.3	
1999	(s)	20.1	1.5	(s)	1.2	2.7	1.8	0.1	(s)	12.5	37.3	24.5	61.8	

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Includes small amounts of solar thermal and photovoltaic energy consumed by the commercial sector that cannot be separately identified. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 175. Commercial Energy Consumption Estimates, Selected Years 1960-1999, Montana**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum						Wood	Geothermal	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>c</sup>	Total <sup>d</sup>
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels						Thousand Cords	Million Kilowatthours	Million Kilowatthours			
1960	20	12	297	466	89	135	2	989	4	—	688	—	1,711	—
1965	15	14	315	227	112	144	1	800	3	—	925	—	2,208	—
1970	8	19	283	94	157	220	1	755	3	—	1,187	—	2,877	—
1975	7	19	668	54	172	174	2	1,071	3	—	1,645	—	3,968	—
1980	9	14	346	0	146	92	7	591	3	—	2,094	—	5,092	—
1985	5	15	863	(s)	107	72	126	1,167	R 5	—	4,245	—	9,973	—
1990	37	12	153	(s)	143	84	11	391	R 6	—	3,237	—	R 7,081	—
1991	29	13	204	(s)	124	63	3	394	R 6	—	3,326	—	R 7,230	—
1992	14	12	169	(s)	106	55	4	334	R 6	—	3,396	—	R 7,242	—
1993	7	14	194	1	97	12	5	308	7	—	3,495	—	R 7,381	—
1994	3	13	189	1	95	15	3	304	7	—	3,657	—	R 7,631	—
1995	7	13	118	(s)	83	13	3	218	7	—	3,411	—	R 7,112	—
1996	3	15	308	(s)	92	19	3	422	8	—	3,603	—	R 7,509	—
1997	54	14	215	(s)	R 27	12	1	R 255	R 10	—	3,577	—	R 7,440	—
1998	3	13	130	(s)	15	14	1	160	10	—	3,649	—	7,537	—
1999	2	12	161	(s)	60	14	3	238	13	—	3,359	—	6,582	—
<b>Trillion Btu</b>														
1960	0.4	12.3	1.7	2.6	0.4	0.7	(s)	5.5	0.1	0.0	2.3	20.6	5.8	26.4
1965	0.3	14.1	1.8	1.3	0.5	0.8	(s)	4.3	0.1	0.0	3.2	22.0	7.5	29.5
1970	0.2	19.2	1.6	0.5	0.6	1.2	(s)	3.9	0.1	0.0	4.1	27.4	9.8	37.2
1975	0.1	19.0	3.9	0.3	0.6	0.9	(s)	5.8	0.1	0.0	5.6	30.6	13.5	44.1
1980	0.2	14.4	2.0	0.0	0.5	0.5	(s)	3.1	0.1	0.0	7.1	24.9	17.4	42.3
1985	0.1	14.8	5.0	(s)	0.4	0.4	0.8	6.6	R 0.1	0.0	14.5	R 36.1	34.0	R 70.1
1990	0.7	12.5	0.9	(s)	0.5	0.4	0.1	1.9	R 0.1	e 0.1	11.0	R e 26.3	24.2	R e 50.5
1991	0.5	13.2	1.2	(s)	0.4	0.3	(s)	2.0	R 0.1	0.1	11.3	R 27.2	24.7	R 51.9
1992	0.2	11.8	1.0	(s)	0.4	0.3	(s)	1.7	R 0.1	0.1	11.6	R 25.5	24.7	R 50.2
1993	0.1	14.1	1.1	(s)	0.3	0.1	(s)	1.6	0.1	0.1	11.9	28.0	25.2	53.1
1994	(s)	13.3	1.1	(s)	0.3	0.1	(s)	1.6	0.1	0.1	12.5	27.6	26.0	53.6
1995	0.1	13.9	0.7	(s)	0.3	0.1	(s)	1.1	0.1	0.1	11.6	26.9	R 24.3	51.2
1996	(s)	15.3	1.8	(s)	0.3	0.1	(s)	2.2	0.2	0.1	12.3	30.1	25.6	55.7
1997	1.0	14.3	1.3	(s)	R 0.1	0.1	(s)	R 1.4	R 0.2	0.1	12.2	R 29.2	R 25.4	R 54.6
1998	(s)	13.3	0.8	(s)	0.1	0.1	(s)	0.9	0.2	0.1	12.4	26.9	25.7	52.6
1999	(s)	12.4	0.9	(s)	0.2	0.1	(s)	1.2	0.3	0.1	11.5	25.5	22.5	48.0

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>d</sup> Small amounts of solar thermal and photovoltaic energy consumed in the commercial sector cannot be separately identified and are included in residential consumption.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 176. Industrial Energy Consumption Estimates, Selected Years 1960-1999, Montana**

Year	Coal Thousand Short Tons	Natural Gas <sup>a</sup> Billion Cubic Feet	Petroleum									Hydro-electric Power <sup>b</sup> Million kWh	Wood and Waste	Other <sup>b,d</sup>	Electricity <sup>b</sup> Million kWh	Net Energy	Electrical System Energy Losses <sup>e</sup> Million kWh	Total
			Asphalt and Road Oil <sup>b</sup>	Distillate Fuel <sup>b</sup>	Kero-sene <sup>b</sup>	LPG <sup>b</sup>	Lubri-cants <sup>b</sup>	Motor Gasoline	Residual Fuel <sup>b</sup>	Other <sup>b,c</sup>	Total							
			Thousand Barrels															
1960	36	26	865	1,500	11	112	23	816	1,684	R 1,725	R 6,737	0	—	—	2,951	—	7,341	—
1965	52	34	1,003	1,693	21	164	41	887	914	R 2,835	R 7,559	0	—	—	3,939	—	9,406	—
1970	28	41	1,347	1,274	282	246	46	635	1,123	R 3,372	R 8,324	0	—	—	6,029	—	14,610	—
1975	50	34	924	2,494	68	174	46	774	1,963	R 3,772	R 10,215	0	—	—	5,160	—	12,447	—
1980	154	20	1,020	1,925	0	786	51	619	4,018	R 3,159	R 11,577	0	—	—	5,815	—	14,140	—
1985	225	10	1,463	5,798	(s)	814	46	677	7	R 2,512	R 11,318	0	—	—	5,841	—	13,722	—
1990	220	12	1,487	2,749	7	717	52	615	209	R 4,054	R 9,890	R f 53	—	—	6,529	—	R 14,284	—
1991	281	12	1,350	3,559	2	178	47	611	143	R 3,568	R 9,457	R 42	—	—	6,622	—	R 14,396	—
1992	251	14	1,309	2,589	(s)	279	48	572	86	R 4,473	R 9,356	R 46	—	—	6,414	—	R 13,680	—
1993	367	15	1,707	2,737	(s)	1,513	49	567	684	R 3,906	R 11,162	R 61	—	—	5,837	—	R 12,328	—
1994	572	16	1,964	2,275	(s)	360	51	603	371	R 4,327	R 9,952	R 65	—	—	5,961	—	R 12,439	—
1995	622	20	1,293	2,645	(s)	333	50	646	237	R 4,269	R 9,473	R 62	—	—	6,368	—	R 13,276	—
1996	131	21	1,702	3,461	(s)	R 991	48	663	181	R 4,876	R 11,923	R 66	—	—	6,306	—	R 13,141	—
1997	148	21	1,448	3,220	(s)	R 90	51	686	164	R 4,704	R 10,364	R 38	—	—	4,537	—	R 9,437	—
1998	93	23	1,594	2,229	(s)	108	54	437	112	5,281	9,815	64	—	—	6,403	—	13,226	—
1999	101	24	2,625	2,253	(s)	112	54	420	22	5,915	11,403	2,241	—	—	6,258	—	12,261	—

  

Trillion Btu																		
1960	0.8	27.0	5.7	8.7	0.1	0.5	0.1	4.3	10.6	R 10.4	R 40.4	0.0	2.7	0.0	10.1	R 80.9	25.0	R 106.0
1965	1.2	34.3	6.7	9.9	0.1	0.7	0.3	4.7	5.7	R 17.0	R 45.0	0.0	3.7	0.0	13.4	R 97.6	32.1	R 129.7
1970	0.6	42.5	8.9	7.4	1.6	0.9	0.3	3.3	7.1	R 20.3	R 49.8	0.0	3.0	0.0	20.6	R 116.5	49.8	R 166.4
1975	1.0	34.6	6.1	14.5	0.4	0.6	0.3	4.1	12.3	R 22.7	R 61.1	0.0	3.0	0.0	17.6	R 117.3	42.5	R 159.7
1980	2.9	20.3	6.8	11.2	0.0	2.9	0.3	3.3	25.3	R 19.0	R 68.7	0.0	R 8.3	0.0	19.8	R 120.1	48.2	R 168.4
1985	4.1	10.3	9.7	33.8	(s)	2.9	0.3	3.6	(s)	R 15.5	R 65.7	0.0	R 9.8	0.0	19.9	R 109.9	46.8	R 156.7
1990	4.0	12.0	9.9	16.0	(s)	2.6	0.3	3.2	1.3	R 24.4	R 57.8	f 0.5	R 17.2	f (s)	22.3	R f 113.9	48.7	R f 162.6
1991	5.2	11.9	9.0	20.7	(s)	0.6	0.3	3.2	0.9	R 21.6	R 56.4	R 0.4	R 15.6	(s)	22.6	R 112.1	R 49.1	R 161.2
1992	4.7	14.4	8.7	15.1	(s)	1.0	0.3	3.0	0.5	R 26.9	R 55.5	0.5	R 3.8	(s)	21.9	R 100.8	46.7	R 147.5
1993	6.8	15.3	11.3	15.9	(s)	5.5	0.3	3.0	4.3	R 23.6	R 63.9	R 0.6	R 3.8	(s)	19.9	R 110.4	42.1	R 152.5
1994	10.5	16.6	13.0	13.3	(s)	1.3	0.3	3.2	2.3	R 26.1	R 59.5	R 0.7	R 3.5	(s)	20.3	R 111.1	42.4	R 153.6
1995	11.2	21.0	8.6	15.4	(s)	1.2	0.3	3.4	1.5	R 25.8	R 56.1	R 0.6	R 15.9	(s)	21.7	R 126.6	45.3	R 171.9
1996	2.4	21.1	11.3	20.2	(s)	R 3.6	0.3	3.5	1.1	R 29.3	R 69.3	R 0.7	R 15.1	(s)	21.5	R 130.1	44.8	R 174.9
1997	2.7	21.7	9.6	18.8	(s)	R 0.3	0.3	3.6	1.0	R 28.3	R 61.9	R 0.4	R 15.5	(s)	15.5	R 117.7	R 32.2	R 149.9
1998	1.7	24.0	10.6	13.0	(s)	0.4	0.3	2.3	0.7	31.9	59.1	0.7	10.6	(s)	21.8	118.0	45.1	163.1
1999	1.8	24.6	17.4	13.1	(s)	0.4	0.3	2.2	0.1	35.7	69.3	23.2	13.9	0.1	21.4	154.3	41.8	196.1

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>e</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>f</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

R=Revised data.

kWh=kilowatthours. — =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 177. Transportation Energy Consumption Estimates, Selected Years 1960-1999, Montana**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum								Ethanol <sup>c</sup>	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total <sup>c</sup>
			Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	LPG <sup>a</sup>	Lubricants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total					
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels								Thousand Barrels	Million Kilowatthours	Million Kilowatthours	Total <sup>c</sup>	
1960	1	(s)	1,006	2,839	265	29	137	5,972	377	10,624	0	0	—	0	—
1965	(s)	(s)	312	2,676	384	13	148	6,678	325	10,536	0	0	—	0	—
1970	(s)	1	43	3,020	649	36	154	8,407	119	12,428	0	0	—	0	—
1975	(s)	2	79	3,835	818	50	162	9,682	160	14,786	0	0	—	0	—
1980	0	3	159	4,759	920	45	196	9,705	0	15,786	0	0	—	0	—
1985	0	2	91	4,273	678	51	179	9,439	(s)	14,711	R e 15	0	—	0	—
1990	0	2	111	4,169	708	67	201	9,630	0	14,885	R 3	0	—	0	—
1991	0	2	108	4,161	615	48	180	9,687	0	14,798	R 13	0	—	0	—
1992	0	3	75	4,705	864	35	183	10,100	0	15,963	R 13	0	—	0	—
1993	0	4	64	4,758	901	43	187	10,421	0	16,373	R 15	0	—	0	—
1994	0	4	75	5,559	855	58	195	10,479	0	17,221	0	0	—	0	—
1995	0	4	78	5,856	1,052	28	192	10,669	0	17,875	R 17	0	—	0	—
1996	0	3	99	5,570	999	16	186	11,070	0	R 17,940	0	0	—	0	—
1997	0	3	71	6,397	792	R 8	197	10,782	0	R 18,248	0	0	—	0	—
1998	0	4	102	5,734	797	62	206	11,145	0	18,047	10	0	—	0	—
1999	0	6	121	5,952	836	12	208	11,334	0	18,464	11	0	—	0	—

  

Trillion Btu															
1960	(s)	0.5	5.1	16.5	1.4	0.1	0.8	31.4	2.4	57.7	0.0	0.0	58.2	0.0	58.2
1965	(s)	0.4	1.6	15.6	2.1	0.1	0.9	35.1	2.0	57.3	0.0	0.0	57.8	0.0	57.8
1970	(s)	0.7	0.2	17.6	3.6	0.1	0.9	44.2	0.7	67.4	0.0	0.0	68.1	0.0	68.1
1975	(s)	1.8	0.4	22.3	4.6	0.2	1.0	50.9	1.0	80.4	0.0	0.0	82.1	0.0	82.1
1980	0.0	2.9	0.8	27.7	5.2	0.2	1.2	51.0	0.0	86.0	0.0	0.0	88.9	0.0	88.9
1985	0.0	2.2	0.5	24.9	3.8	0.2	1.1	49.6	(s)	80.0	R e 0.1	0.0	e 82.2	0.0	e 82.2
1990	0.0	2.1	0.6	24.3	4.0	0.2	1.2	50.6	0.0	80.9	(s)	0.0	83.0	0.0	83.0
1991	0.0	2.4	0.5	24.2	3.5	0.2	1.1	50.9	0.0	80.4	(s)	0.0	82.8	0.0	82.8
1992	0.0	3.1	0.4	27.4	4.8	0.1	1.1	53.1	0.0	86.9	(s)	0.0	90.0	0.0	90.0
1993	0.0	3.8	0.3	27.7	5.0	0.2	1.1	54.7	0.0	89.1	R 0.1	0.0	92.9	0.0	92.9
1994	0.0	3.6	0.4	32.4	4.8	0.2	1.2	R 54.8	0.0	R 93.7	0.0	0.0	R 97.4	0.0	R 97.4
1995	0.0	4.1	0.4	34.1	5.9	0.1	1.2	R 55.6	0.0	R 97.3	0.1	0.0	R 101.3	0.0	R 101.3
1996	0.0	3.5	0.5	32.4	5.7	0.1	1.1	R 57.7	0.0	R 97.5	0.0	0.0	R 101.1	0.0	R 101.1
1997	0.0	3.6	0.4	37.3	4.5	R (s)	1.2	R 56.2	0.0	R 99.5	0.0	0.0	R 103.1	0.0	R 103.1
1998	0.0	3.9	0.5	33.4	4.5	0.2	1.2	58.1	0.0	98.0	(s)	0.0	101.8	0.0	101.8
1999	0.0	6.1	0.6	34.7	4.7	(s)	1.3	59.1	0.0	100.4	(s)	0.0	106.5	0.0	106.5

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels. Transportation use of natural gas is gas consumed in the operation of pipelines, primarily in compressors, and, since 1990, is also gas consumed as vehicle fuel.

<sup>c</sup> Ethanol blended into motor gasoline, which is accounted for under motor gasoline, is shown separately here to display the use of renewable energy by the transportation sector and is included only once in the total.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1980 and 1981 due to the expanded coverage of renewable energy sources beginning in 1981.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 178. Estimates of Energy Input at Electric Utilities, Selected Years, 1960-1999, Montana**

Year	Coal	Natural Gas <sup>a</sup>	Petroleum				Nuclear Electric Power	Hydroelectric Power <sup>e</sup>	Wood and Waste	Geothermal Energy	Other <sup>b,f</sup>	Total <sup>g</sup>
			Heavy Oil <sup>b,c</sup>	Light Oil <sup>b,d</sup>	Petroleum Coke <sup>b</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels				Million Kilowatthours					
1960	187	(s)	(s)	(s)	0	(s)	0	5,800	0	0	0	—
1965	296	2	1	(s)	0	1	0	8,388	37	0	0	—
1970	723	3	26	(s)	0	26	0	8,744	73	0	0	—
1975	1,089	1	53	1	0	54	0	10,164	14	0	0	—
1980	3,352	4	0	59	0	59	0	9,963	17	0	0	—
1985	5,480	(s)	0	38	0	38	0	10,244	59	0	(s)	—
1990	9,399	(s)	0	63	0	63	0	R 10,699	75	0	0	—
1991	10,223	(s)	0	41	0	41	0	R 11,938	62	0	0	—
1992	10,768	(s)	0	35	0	35	0	R 8,236	79	0	(s)	—
1993	8,869	(s)	0	48	0	48	0	R 9,552	78	0	0	—
1994	10,513	1	0	42	0	42	0	R 8,096	42	0	0	—
1995	9,373	(s)	0	53	0	53	0	R 10,698	0	0	0	—
1996	7,897	(s)	0	41	0	41	0	R 13,767	0	0	0	—
1997	9,286	(s)	0	39	0	39	0	13,357	0	0	0	—
1998	10,627	1	0	33	0	33	0	11,071	0	0	0	—
1999	10,198	(s)	0	30	0	30	0	11,593	0	0	0	—

  

Trillion Btu												
1960	2.5	0.4	(s)	(s)	0.0	(s)	0.0	62.4	0.0	0.0	0.0	65.3
1965	3.9	2.0	(s)	(s)	0.0	(s)	0.0	87.7	0.4	0.0	0.0	94.0
1970	11.2	2.6	0.2	(s)	0.0	0.2	0.0	91.8	0.8	0.0	0.0	106.5
1975	17.4	1.2	0.3	(s)	0.0	0.3	0.0	105.8	0.1	0.0	0.0	124.8
1980	57.0	4.4	0.0	0.3	0.0	0.3	0.0	103.5	0.2	0.0	0.0	165.4
1985	94.8	0.6	0.0	0.2	0.0	0.2	0.0	107.0	0.6	0.0	(s)	203.3
1990	161.0	0.5	0.0	0.4	0.0	0.4	0.0	R 111.3	0.8	0.0	0.0	R 274.2
1991	174.2	0.3	0.0	0.2	0.0	0.2	0.0	124.6	0.7	0.0	0.0	300.1
1992	184.7	0.3	0.0	0.2	0.0	0.2	0.0	R 85.2	0.8	0.0	(s)	R 271.2
1993	150.7	0.3	0.0	0.3	0.0	0.3	0.0	R 98.5	0.8	0.0	0.0	R 250.6
1994	178.7	0.7	0.0	0.2	0.0	0.2	0.0	R 83.5	0.4	0.0	0.0	R 263.6
1995	159.7	0.4	0.0	0.3	0.0	0.3	0.0	R 110.3	0.0	0.0	0.0	R 270.8
1996	133.3	0.5	0.0	0.2	0.0	0.2	0.0	142.4	0.0	0.0	0.0	276.5
1997	156.5	0.4	0.0	0.2	0.0	0.2	0.0	R 138.3	0.0	0.0	0.0	R 295.5
1998	179.2	0.6	0.0	0.2	0.0	0.2	0.0	114.5	0.0	0.0	0.0	294.6
1999	172.0	0.3	0.0	0.2	0.0	0.2	0.0	119.9	0.0	0.0	0.0	292.2

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> Prior to 1980, based on oil used in steam plants. Since 1980, heavy oil includes fuel oil nos. 4, 5, and 6 and residual fuel oils.

<sup>d</sup> Prior to 1980, based on oil used in internal combustion and gas turbine engine plants. Since 1980, light oil includes fuel oil nos. 1 and 2, kerosene, and jet fuel.

<sup>e</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>f</sup> "Other" is electricity generated for distribution from wind, photovoltaic, and solar thermal energy.

<sup>g</sup> If applicable, from 1989, includes net imports of electricity generated from nonrenewable energy sources not shown in other columns. See data in appendix Table A8.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 179. Energy Consumption Estimates by Source, Selected Years 1960-1999, Nebraska**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum											Nuclear Electric Power	Hydro-electric Power <sup>d</sup>	Wood and Waste	Other <sup>a,e</sup>	Net Inter-state Flow of Electricity/Losses <sup>f</sup>	Total <sup>g</sup>
			Asphalt & Road Oil <sup>a</sup>	Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	Kero-sene <sup>a</sup>	LPG <sup>a</sup>	Lubri-cants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Other <sup>a,c</sup>	Total						
			Thousand Barrels															Million kWh	
1960	889	136	780	371	4,151	1,202	677	2,650	424	14,998	415	R 62	R 25,731	0	959	—	—	-536	—
1965	896	166	655	410	3,689	1,371	790	3,407	425	15,745	332	50	26,875	-5	1,116	—	—	2,652	—
1970	1,283	222	1,137	199	7,449	1,783	582	5,616	479	18,525	793	R 102	R 36,665	0	1,371	—	—	7,502	—
1975	1,595	219	754	141	8,507	1,679	554	5,740	492	20,636	1,092	R 150	R 39,745	5,916	1,213	—	—	-3,822	—
1980	4,990	163	719	213	9,149	1,588	62	4,499	389	19,100	228	R 130	R 36,076	5,783	1,336	—	—	-5,079	—
1985	6,653	126	473	96	12,384	1,357	74	2,590	354	17,737	62	75	35,203	4,134	1,441	—	—	2,271	—
1990	8,266	111	1,388	83	12,455	1,501	41	2,912	398	18,451	260	316	37,806	7,511	R <sup>h</sup> 1,140	—	—	R -11,408	—
1991	8,859	116	1,418	84	13,022	1,192	17	3,167	356	17,801	200	26	37,285	8,048	R 1,045	—	—	R -13,224	—
1992	8,212	107	898	81	14,091	1,198	20	3,225	363	17,951	187	28	38,042	8,748	R 1,075	—	—	R -15,028	—
1993	9,666	126	797	72	14,049	1,157	24	2,984	370	18,029	278	30	37,791	6,805	R 1,002	—	—	R -13,264	—
1994	9,300	127	1,031	76	15,692	1,259	21	3,080	387	18,043	215	31	39,834	6,345	R 1,312	—	—	R -8,071	—
1995	10,396	136	929	77	15,558	1,001	17	3,020	380	19,302	123	31	40,435	7,485	R 1,426	—	—	R -14,905	—
1996	10,379	133	1,771	75	17,033	1,007	19	R 3,831	369	19,474	170	R 28	R 43,778	9,457	R 1,602	—	—	R -19,657	—
1997	11,210	132	1,450	90	17,674	1,075	23	R 3,130	390	19,825	112	R 25	R 43,794	9,269	R 1,673	—	—	R -19,671	—
1998	11,792	131	1,400	63	18,870	1,080	23	3,300	408	20,305	122	24	45,596	8,259	1,702	—	—	-19,227	—
1999	11,494	121	1,867	71	17,352	1,564	11	3,665	412	20,487	91	22	45,542	10,091	1,736	—	—	-26,337	—

  

Trillion Btu																			
1960	20.0	140.4	5.2	1.9	24.2	6.4	3.8	10.6	2.6	78.8	2.6	0.4	136.5	0.0	10.3	3.1	0.0	-1.8	308.5
1965	20.8	164.7	4.3	2.1	21.5	7.4	4.5	13.7	2.6	82.7	2.1	0.3	141.1	-0.1	11.7	1.9	0.0	9.0	349.2
1970	29.7	224.1	7.5	1.0	43.4	9.8	3.3	21.2	2.9	97.3	5.0	0.6	R 192.1	0.0	14.4	1.6	0.0	25.6	487.4
1975	32.9	217.5	5.0	0.7	49.6	9.2	3.1	21.3	3.0	108.4	6.9	0.9	208.1	65.2	12.6	2.8	0.0	-13.0	526.0
1980	93.9	159.5	4.8	1.1	53.3	8.7	0.4	16.5	2.4	100.3	1.4	R 0.8	R 189.6	63.1	13.9	7.1	0.0	-17.3	R 509.7
1985	115.5	123.9	3.1	0.5	72.1	7.4	0.4	9.3	2.1	93.2	0.4	0.4	189.1	44.7	15.1	R 6.7	0.0	7.8	R 502.6
1990	142.0	109.2	9.2	0.4	72.6	8.3	0.2	10.6	2.4	96.9	1.6	1.7	204.0	80.2	R <sup>h</sup> 11.9	R 4.3	R <sup>h</sup> 0.1	-38.9	R <sup>h</sup> 512.7
1991	152.0	114.0	9.4	0.4	75.9	6.6	0.1	11.4	2.2	93.5	1.3	0.1	200.9	86.4	10.9	R 4.5	0.1	R -45.1	R 523.7
1992	140.9	104.6	6.0	0.4	82.1	6.6	0.1	11.7	2.2	94.3	1.2	0.2	204.7	93.4	11.1	R 4.8	0.1	R -51.3	R 508.4
1993	166.1	123.0	5.3	0.4	81.8	6.4	0.1	10.8	2.2	94.7	1.7	0.2	203.7	72.7	10.3	R 4.1	0.2	R -45.3	R 534.7
1994	160.3	124.8	6.8	0.4	91.4	7.0	0.1	11.2	2.3	R 94.4	1.4	0.2	R 215.2	67.7	13.5	R 4.0	0.2	R -27.5	R 558.3
1995	179.4	133.7	6.2	0.4	90.6	5.7	0.1	10.9	2.3	R 100.7	0.8	0.2	R 217.8	79.8	14.7	R 4.5	0.2	R -50.9	R 579.2
1996	179.0	133.8	11.8	0.4	99.2	5.7	0.1	R 13.8	2.2	R 101.6	1.1	0.2	R 236.1	100.5	16.6	R 5.2	0.2	R -67.1	R 604.2
1997	193.3	131.9	9.6	0.5	103.0	6.1	0.1	R 11.3	2.4	R 103.3	0.7	R 0.1	R 237.1	98.5	R 17.3	R 3.9	0.3	R -67.1	R 615.2
1998	203.0	131.1	9.3	0.3	109.9	6.1	0.1	11.9	2.5	105.8	0.8	0.1	246.9	87.7	17.6	3.1	0.3	-65.6	623.4
1999	195.9	121.3	12.4	0.4	101.1	8.9	0.1	13.3	2.5	106.8	0.6	0.1	246.0	107.2	18.0	3.7	0.3	-89.9	602.0

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.  
<sup>b</sup> Includes supplemental gaseous fuels.  
<sup>c</sup> "Other" is the subtotal of 16 petroleum products consumed in the industrial sector. See a full description in Appendix A, Section 4, "Other Petroleum Products."  
<sup>d</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.  
<sup>e</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.  
<sup>f</sup> Net interstate flow of electricity is the difference between the amount of energy in the electricity sold within a State (including associated losses) and the energy input at the electric utilities within the State. A positive number

indicates that more electricity (including associated losses) came into the State than went out of the State during the year; conversely, a negative number indicates that more electricity (including associated losses) went out of the State than came into the State.  
<sup>g</sup> From 1989, "Total" does not equal the sum of the columns. Net imports of electricity generated from nonrenewable energy sources (shown in appendix Table A8) is included in the total but not in any other columns.  
<sup>h</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.  
kWh=kilowatthours. R=Revised data. — =Not applicable.  
Note: Totals may not equal sum of components due to independent rounding.  
Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 180. Residential Energy Consumption Estimates, Selected Years 1960-1999, Nebraska**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum				Wood Thousand Cords	Geothermal	Solar <sup>c</sup>	Electricity <sup>a</sup> Million Kilowatthours	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Total						Million Kilowatthours	
			Thousand Barrels									Thousand Barrels	
1960	76	39	140	337	1,790	2,267	108	—	—	1,907	—	4,744	—
1965	21	48	111	453	2,545	3,110	69	—	—	2,816	—	6,723	—
1970	13	58	196	379	3,889	4,464	52	—	—	4,107	—	9,953	—
1975	3	54	173	372	3,143	3,688	60	—	—	4,693	—	11,321	—
1980	7	49	360	10	1,406	1,775	344	—	—	5,521	—	13,425	—
1985	4	47	340	40	998	1,379	323	—	—	6,195	—	14,554	—
1990	1	41	169	4	978	1,151	201	—	—	6,800	—	R 14,875	—
1991	5	45	197	5	1,227	1,430	212	—	—	7,138	—	R 15,518	—
1992	3	41	145	10	1,245	1,401	223	—	—	6,561	—	R 13,994	—
1993	2	48	168	11	1,171	1,349	185	—	—	7,226	—	R 15,262	—
1994	2	44	161	5	1,090	1,256	182	—	—	7,379	—	R 15,400	—
1995	3	45	95	4	1,173	1,272	202	—	—	7,597	—	R 15,839	—
1996	1	49	115	4	R 1,575	R 1,693	201	—	—	7,741	—	R 16,132	—
1997	41	47	95	7	R 1,265	R 1,367	R 142	—	—	7,989	—	R 16,617	—
1998	(s)	41	64	10	1,674	1,747	125	—	—	8,160	—	16,857	—
1999	0	41	70	6	1,713	1,789	134	—	—	7,929	—	15,536	—

  

Trillion Btu													
1960	1.6	40.9	0.8	1.9	7.2	9.9	2.2	0.0	0.0	6.5	61.0	16.2	77.2
1965	0.4	47.2	0.6	2.6	10.2	13.4	1.4	0.0	0.0	9.6	72.1	22.9	95.0
1970	0.3	58.8	1.1	2.1	14.7	18.0	1.0	0.0	0.0	14.0	92.1	34.0	126.0
1975	0.1	53.6	1.0	2.1	11.7	14.8	1.2	0.0	0.0	16.0	85.7	38.6	124.3
1980	0.1	47.9	2.1	0.1	5.2	7.3	6.9	0.0	0.0	18.8	81.1	45.8	126.9
1985	0.1	45.8	2.0	0.2	3.6	5.8	6.5	0.0	0.0	21.1	79.3	49.7	129.0
1990	(s)	40.8	1.0	(s)	3.5	4.6	4.0	e (s)	e (s)	23.2	e 72.7	R 50.8	R e 123.5
1991	0.1	44.0	1.1	(s)	4.4	5.6	4.2	(s)	(s)	24.4	78.4	R 52.9	R 131.3
1992	0.1	40.6	0.8	0.1	4.5	5.4	4.5	0.1	(s)	22.4	72.9	R 47.7	R 120.7
1993	(s)	47.0	1.0	0.1	4.2	5.3	3.7	0.1	(s)	24.7	80.8	52.1	132.9
1994	0.1	43.7	0.9	(s)	4.0	4.9	3.6	0.1	(s)	25.2	77.6	52.5	130.1
1995	0.1	44.1	0.6	(s)	4.2	4.8	4.0	0.1	(s)	25.9	R 79.1	54.0	R 133.1
1996	(s)	49.3	0.7	(s)	R 5.7	R 6.4	4.0	0.1	(s)	26.4	R 86.2	55.0	R 141.3
1997	0.7	47.0	0.6	(s)	R 4.6	R 5.2	R 2.8	0.1	(s)	27.3	R 83.1	R 56.7	R 139.8
1998	(s)	40.9	0.4	0.1	6.1	6.5	2.5	0.1	(s)	27.8	77.8	57.5	135.3
1999	0.0	40.6	0.4	(s)	6.2	6.6	2.7	0.1	(s)	27.1	77.0	53.0	130.0

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Includes small amounts of solar thermal and photovoltaic energy consumed by the commercial sector that cannot be separately identified. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 181. Commercial Energy Consumption Estimates, Selected Years 1960-1999, Nebraska**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum						Wood	Geothermal	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>c</sup>	Total <sup>d</sup>
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels						Thousand Cords	Million Kilowatthours	Million Kilowatthours			
1960	142	22	140	65	316	84	43	649	2	—	1,269	—	3,157	—
1965	39	26	112	87	449	95	84	827	1	—	2,025	—	4,835	—
1970	24	47	197	73	686	110	241	1,307	1	—	3,505	—	8,493	—
1975	6	43	174	71	555	120	159	1,079	1	—	3,660	—	8,829	—
1980	12	43	181	21	248	149	23	622	8	—	4,068	—	9,892	—
1985	8	39	800	12	176	158	0	1,146	R 9	—	5,714	—	13,425	—
1990	3	36	247	23	173	155	20	618	R 13	—	6,451	—	R 14,111	—
1991	6	40	183	3	217	100	27	529	R 13	—	6,777	—	R 14,733	—
1992	3	34	270	1	220	92	41	624	R 14	—	6,470	—	R 13,800	—
1993	3	35	306	4	207	21	19	557	15	—	6,560	—	R 13,857	—
1994	5	39	362	5	192	21	19	600	15	—	7,149	—	R 14,919	—
1995	6	40	175	4	207	21	1	408	15	—	7,494	—	R 15,625	—
1996	(s)	41	234	4	R 278	21	0	R 537	17	—	7,563	—	R 15,762	—
1997	77	34	175	3	R 223	21	10	R 431	R 16	—	8,014	—	R 16,670	—
1998	(s)	29	218	3	295	21	8	545	16	—	8,069	—	16,669	—
1999	0	28	199	1	302	21	4	527	19	—	7,997	—	15,669	—

  

Trillion Btu														
1960	3.0	22.7	0.8	0.4	1.3	0.4	0.3	3.2	(s)	0.0	4.3	33.2	10.8	44.0
1965	0.8	25.3	0.7	0.5	1.8	0.5	0.5	4.0	(s)	0.0	6.9	37.0	16.5	53.5
1970	0.5	47.2	1.1	0.4	2.6	0.6	1.5	6.2	(s)	0.0	12.0	65.9	29.0	94.9
1975	0.1	43.0	1.0	0.4	2.1	0.6	1.0	5.1	(s)	0.0	12.5	60.7	30.1	90.8
1980	0.2	42.5	1.1	0.1	0.9	0.8	0.1	3.0	0.2	0.0	13.9	59.8	33.8	93.5
1985	0.2	38.7	4.7	0.1	0.6	0.8	0.0	6.2	R 0.2	0.0	19.5	R 64.7	45.8	R 110.5
1990	0.1	35.9	1.4	0.1	0.6	0.8	0.1	3.1	R 0.3	e (s)	22.0	R e 61.4	48.1	R e 109.6
1991	0.1	39.7	1.1	(s)	0.8	0.5	0.2	2.6	R 0.3	0.1	23.1	R 65.8	50.3	R 116.1
1992	0.1	33.8	1.6	(s)	0.8	0.5	0.3	3.1	R 0.3	0.1	22.1	R 59.4	R 47.1	R 106.5
1993	0.1	33.9	1.8	(s)	0.7	0.1	0.1	2.8	0.3	0.1	22.4	59.5	47.3	106.8
1994	0.1	38.4	2.1	(s)	0.7	0.1	0.1	3.1	0.3	0.1	24.4	66.3	50.9	117.2
1995	0.1	39.2	1.0	(s)	0.7	0.1	(s)	1.9	0.3	0.1	25.6	67.3	53.3	R 120.6
1996	(s)	41.1	1.4	(s)	R 1.0	0.1	0.0	R 2.5	0.3	0.2	25.8	R 69.9	R 53.8	R 123.7
1997	1.3	33.8	1.0	(s)	R 0.8	0.1	0.1	R 2.0	0.3	0.2	27.3	65.0	R 56.9	121.8
1998	(s)	29.0	1.3	(s)	1.1	0.1	(s)	2.5	0.3	0.2	27.5	59.6	56.9	116.5
1999	0.0	27.6	1.2	(s)	1.1	0.1	(s)	2.4	0.4	0.2	27.3	57.9	53.5	111.3

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>d</sup> Small amounts of solar thermal and photovoltaic energy consumed in the commercial sector cannot be separately identified and are included in residential consumption.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.



**Table 182. Industrial Energy Consumption Estimates, Selected Years 1960-1999, Nebraska**

Year	Coal Thousand Short Tons	Natural Gas <sup>a</sup> Billion Cubic Feet	Petroleum									Hydro-electric Power <sup>b</sup> Million kWh	Wood and Waste	Other <sup>b,d</sup>	Electricity <sup>b</sup> Million kWh	Net Energy	Electrical System Energy Losses <sup>e</sup> Million kWh	Total
			Asphalt and Road Oil <sup>b</sup>	Distillate Fuel <sup>b</sup>	Kero-sene <sup>b</sup>	LPG <sup>b</sup>	Lubri-cants <sup>b</sup>	Motor Gasoline	Residual Fuel <sup>b</sup>	Other <sup>b,c</sup>	Total							
			Thousand Barrels															
1960	408	37	780	2,405	275	441	97	2,146	18	R 62	R 6,224	(s)	—	—	889	—	2,210	—
1965	349	48	655	1,956	250	314	130	1,790	32	50	5,177	(s)	—	—	1,182	—	2,821	—
1970	240	56	1,137	3,271	130	823	160	1,319	139	R 102	R 7,082	(s)	—	—	2,145	—	5,198	—
1975	308	74	754	3,234	111	1,811	193	1,644	137	R 150	R 8,035	0	—	—	3,200	—	7,718	—
1980	269	52	719	3,411	31	2,675	41	1,471	29	R 130	R 8,506	0	—	—	4,155	—	10,104	—
1985	261	33	473	4,292	22	1,359	38	1,392	62	75	7,713	0	—	—	3,794	—	8,913	—
1990	235	26	1,388	4,140	14	1,700	42	950	239	316	8,790	f 0	—	—	4,618	—	R 10,103	—
1991	324	25	1,418	4,654	9	1,659	38	940	170	26	8,915	0	—	—	4,690	—	R 10,195	—
1992	325	26	898	4,915	8	1,713	39	825	146	28	8,571	0	—	—	4,752	—	R 10,136	—
1993	364	39	797	4,922	9	1,559	39	696	259	30	8,312	0	—	—	4,963	—	R 10,482	—
1994	414	37	1,031	5,884	10	1,726	41	734	196	31	9,652	0	—	—	5,345	—	R 11,154	—
1995	339	45	929	5,131	9	1,617	40	759	122	31	8,638	0	—	—	5,802	—	R 12,096	—
1996	287	36	1,771	4,668	12	R 1,957	39	773	170	R 28	R 9,418	0	—	—	6,193	—	R 12,907	—
1997	296	44	1,450	4,975	14	R 1,571	41	810	103	R 25	R 8,989	0	—	—	6,580	—	R 13,686	—
1998	287	53	1,400	4,949	11	1,308	43	1,047	104	24	8,886	0	—	—	6,916	—	14,286	—
1999	275	46	1,867	3,822	4	1,636	44	686	83	22	8,163	0	—	—	6,883	—	13,487	—
<b>Trillion Btu</b>																		
1960	9.0	38.3	5.2	14.0	1.6	1.8	0.6	11.3	0.1	0.4	R 34.9	(s)	0.4	0.0	3.0	85.5	7.5	R 93.1
1965	7.6	47.7	4.3	11.4	1.4	1.3	0.8	9.4	0.2	0.3	29.1	(s)	0.5	0.0	4.0	88.9	9.6	98.6
1970	4.9	56.9	7.5	19.1	0.7	3.1	1.0	6.9	0.9	0.6	39.8	(s)	0.5	0.0	7.3	R 109.5	17.7	127.2
1975	5.9	73.5	5.0	18.8	0.6	6.7	1.2	8.6	0.9	0.9	R 42.8	0.0	1.5	0.0	10.9	R 134.7	26.3	161.0
1980	5.2	50.9	4.8	19.9	0.2	9.8	0.3	7.7	0.2	R 0.8	R 43.6	0.0	R (s)	0.0	14.2	R 113.8	34.5	R 148.3
1985	4.9	32.6	3.1	25.0	0.1	4.9	0.2	7.3	0.4	0.4	41.5	0.0	R (s)	0.0	12.9	R 92.0	30.4	R 122.4
1990	4.5	25.4	9.2	24.1	0.1	6.2	0.3	5.0	1.5	1.7	48.0	f 0.0	R 0.0	f 0.0	15.8	R f 93.7	34.5	R f 128.1
1991	6.1	24.4	9.4	27.1	0.1	6.0	0.2	4.9	1.1	0.1	49.0	0.0	R 0.0	0.0	16.0	R 95.5	34.8	R 130.3
1992	6.0	25.9	6.0	28.6	(s)	6.2	0.2	4.3	0.9	0.2	46.5	0.0	R 0.0	0.0	16.2	R 94.6	34.6	R 129.2
1993	6.8	37.7	5.3	28.7	0.1	5.6	0.2	3.7	1.6	0.2	45.3	0.0	R 0.0	0.0	16.9	R 106.8	35.8	R 142.6
1994	7.9	36.5	6.8	34.3	0.1	6.3	0.2	R 3.8	1.2	0.2	R 52.9	0.0	R 0.0	0.0	18.2	R 115.6	38.1	R 153.6
1995	6.6	43.9	6.2	29.9	0.1	5.9	0.2	4.0	0.8	0.2	47.1	0.0	R 0.0	0.0	19.8	R 117.4	R 41.3	R 158.6
1996	5.4	36.4	11.8	27.2	0.1	R 7.1	0.2	R 4.0	1.1	0.2	R 51.6	0.0	R 0.7	0.0	21.1	R 115.2	44.0	R 159.3
1997	5.7	44.4	9.6	29.0	0.1	R 5.7	0.3	R 4.2	0.6	R 0.1	R 49.6	0.0	R 0.8	0.0	22.4	R 122.9	R 46.7	R 169.6
1998	5.5	53.3	9.3	28.8	0.1	4.7	0.3	5.5	0.7	0.1	49.4	0.0	0.3	0.0	23.6	132.0	48.7	180.8
1999	5.2	45.7	12.4	22.3	(s)	5.9	0.3	3.6	0.5	0.1	45.1	0.0	0.7	0.0	23.5	120.2	46.0	166.2

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>e</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>f</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

R=Revised data.

kWh=kilowatthours. — =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 183. Transportation Energy Consumption Estimates, Selected Years 1960-1999, Nebraska**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum								Ethanol <sup>c</sup>	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total <sup>c</sup>
			Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	LPG <sup>a</sup>	Lubricants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total				Million Kilowatthours	
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels								Thousand Barrels	Million Kilowatthours	Million Kilowatthours	Total <sup>c</sup>	
1960	7	6	371	1,402	1,202	103	328	12,768	258	16,432	0	0	—	0	—
1965	1	9	410	1,439	1,371	99	295	13,861	109	17,583	0	0	—	0	—
1970	(s)	13	199	3,658	1,783	217	319	17,096	225	23,497	0	0	—	0	—
1975	(s)	10	141	4,618	1,679	231	299	18,871	138	25,976	0	0	—	0	—
1980	0	7	213	5,112	1,588	171	348	17,480	0	24,911	0	0	—	0	—
1985	0	6	96	6,890	1,357	57	317	16,187	0	24,903	R <sup>e</sup> 456	0	—	0	—
1990	0	4	83	7,869	1,501	61	356	17,346	0	27,216	R <sup>e</sup> 710	0	—	0	—
1991	0	2	84	7,961	1,192	64	319	16,760	0	26,380	R <sup>e</sup> 837	0	—	0	—
1992	0	3	81	8,737	1,198	47	325	17,034	0	27,422	R <sup>e</sup> 987	0	—	0	—
1993	0	3	72	8,611	1,157	48	331	17,312	0	27,531	R <sup>e</sup> 807	0	—	0	—
1994	0	3	76	9,240	1,259	72	346	17,288	0	28,281	R <sup>e</sup> 545	0	—	0	—
1995	0	3	77	10,096	1,001	23	340	18,521	0	30,056	R <sup>e</sup> 647	0	—	0	—
1996	0	5	75	11,970	1,007	R <sup>e</sup> 21	330	18,679	0	R <sup>e</sup> 32,083	R <sup>e</sup> 419	0	—	0	—
1997	0	4	90	12,358	1,075	R <sup>e</sup> 71	348	18,994	0	R <sup>e</sup> 32,936	R <sup>e</sup> 478	0	—	0	—
1998	0	3	63	13,557	1,080	23	365	19,237	0	34,325	504	0	—	0	—
1999	0	3	71	13,195	1,564	14	368	19,781	0	34,993	589	0	—	0	—

  

Trillion Btu															
1960	0.2	6.5	1.9	8.2	6.4	0.4	2.0	67.1	1.6	87.6	0.0	0.0	94.2	0.0	94.2
1965	(s)	8.6	2.1	8.4	7.4	0.4	1.8	72.8	0.7	93.5	0.0	0.0	102.2	0.0	102.2
1970	(s)	13.2	1.0	21.3	9.8	0.8	1.9	89.8	1.4	126.1	0.0	0.0	139.3	0.0	139.3
1975	(s)	10.4	0.7	26.9	9.2	0.9	1.8	99.1	0.9	139.5	0.0	0.0	149.9	0.0	149.9
1980	0.0	6.9	1.1	29.8	8.7	0.6	2.1	91.8	0.0	134.1	0.0	0.0	141.0	0.0	141.0
1985	0.0	5.5	0.5	40.1	7.4	0.2	1.9	85.0	0.0	135.2	R <sup>e</sup> 1.6	0.0	<sup>e</sup> 140.7	0.0	<sup>e</sup> 140.7
1990	0.0	3.5	0.4	45.8	8.3	0.2	2.2	91.1	0.0	148.0	R <sup>e</sup> 2.5	0.0	151.5	0.0	151.5
1991	0.0	2.3	0.4	46.4	6.6	0.2	1.9	88.0	0.0	143.6	R <sup>e</sup> 3.0	0.0	145.9	0.0	145.9
1992	0.0	2.5	0.4	50.9	6.6	0.2	2.0	89.5	0.0	149.5	R <sup>e</sup> 3.5	0.0	152.0	0.0	152.0
1993	0.0	2.5	0.4	50.2	6.4	0.2	2.0	90.9	0.0	150.1	R <sup>e</sup> 2.9	0.0	152.5	0.0	152.5
1994	0.0	3.2	0.4	53.8	7.0	0.3	2.1	R <sup>e</sup> 90.4	0.0	R <sup>e</sup> 154.0	R <sup>e</sup> 1.9	0.0	R <sup>e</sup> 157.3	0.0	R <sup>e</sup> 157.3
1995	0.0	3.3	0.4	58.8	5.7	0.1	2.1	R <sup>e</sup> 96.6	0.0	R <sup>e</sup> 163.6	R <sup>e</sup> 2.3	0.0	R <sup>e</sup> 166.9	0.0	R <sup>e</sup> 166.9
1996	0.0	4.6	0.4	69.7	5.7	0.1	2.0	R <sup>e</sup> 97.4	0.0	R <sup>e</sup> 175.3	R <sup>e</sup> 1.5	0.0	R <sup>e</sup> 179.9	0.0	R <sup>e</sup> 179.9
1997	0.0	4.1	0.5	72.0	6.1	R <sup>e</sup> 0.3	2.1	R <sup>e</sup> 99.0	0.0	R <sup>e</sup> 179.9	R <sup>e</sup> 1.7	0.0	R <sup>e</sup> 184.0	0.0	R <sup>e</sup> 184.0
1998	0.0	2.9	0.3	79.0	6.1	0.1	2.2	100.3	0.0	188.0	1.8	0.0	190.8	0.0	190.8
1999	0.0	2.9	0.4	76.9	8.9	0.1	2.2	103.1	0.0	191.5	2.1	0.0	194.4	0.0	194.4

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels. Transportation use of natural gas is gas consumed in the operation of pipelines, primarily in compressors, and, since 1990, is also gas consumed as vehicle fuel.

<sup>c</sup> Ethanol blended into motor gasoline, which is accounted for under motor gasoline, is shown separately here to display the use of renewable energy by the transportation sector and is included only once in the total.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1980 and 1981 due to the expanded coverage of renewable energy sources beginning in 1981.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 184. Estimates of Energy Input at Electric Utilities, Selected Years, 1960-1999, Nebraska**

Year	Coal	Natural Gas <sup>a</sup>	Petroleum				Nuclear Electric Power	Hydroelectric Power <sup>e</sup>	Wood and Waste	Geothermal Energy	Other <sup>b,f</sup>	Total <sup>g</sup>
			Heavy Oil <sup>b,c</sup>	Light Oil <sup>b,d</sup>	Petroleum Coke <sup>b</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels				Million Kilowatthours					
1960	256	31	96	64	0	160	0	959	48	0	0	—
1965	486	36	107	71	0	178	-5	1,115	0	0	0	—
1970	1,006	48	188	126	0	314	0	1,370	0	0	0	—
1975	1,278	38	658	308	0	967	5,916	1,213	0	0	0	—
1980	4,702	12	176	86	0	262	5,783	1,336	0	0	0	—
1985	6,380	1	0	62	0	62	4,134	1,441	0	0	0	—
1990	8,027	4	1	31	0	31	7,511	1,140	0	0	0	—
1991	8,524	4	3	27	0	30	8,048	1,045	0	0	0	—
1992	7,881	2	0	25	0	25	8,748	1,075	6	0	0	—
1993	9,297	2	0	42	0	42	6,805	1,002	6	0	0	—
1994	8,879	3	1	45	0	45	6,345	1,312	9	0	0	—
1995	10,048	3	0	61	0	61	7,485	1,426	16	0	0	—
1996	10,091	2	0	47	0	47	9,457	1,602	12	0	0	—
1997	10,796	3	(s)	71	0	72	9,269	<sup>R</sup> 1,673	1	0	0	—
1998	11,505	5	11	83	0	93	8,259	1,702	1	0	0	—
1999	11,219	5	4	65	0	70	10,091	1,736	0	0	0	—

  

Trillion Btu												
1960	6.3	32.1	0.6	0.4	0.0	1.0	0.0	10.3	0.5	0.0	0.0	50.2
1965	11.9	35.9	0.7	0.4	0.0	1.1	-0.1	11.7	0.0	0.0	0.0	60.6
1970	24.1	48.0	1.2	0.7	0.0	1.9	0.0	14.4	0.0	0.0	0.0	88.4
1975	26.8	37.0	4.1	1.8	0.0	5.9	65.2	12.6	0.0	0.0	0.0	147.5
1980	88.4	11.3	1.1	0.5	0.0	1.6	63.1	13.9	0.0	0.0	0.0	178.3
1985	110.4	1.2	0.0	0.4	0.0	0.4	44.7	15.1	0.0	0.0	0.0	171.7
1990	137.4	3.6	(s)	0.2	0.0	0.2	80.2	11.9	0.0	0.0	0.0	233.3
1991	145.6	3.5	(s)	0.2	0.0	0.2	86.4	10.9	0.0	0.0	0.0	246.6
1992	134.8	1.8	0.0	0.1	0.0	0.1	93.4	11.1	0.1	0.0	0.0	241.4
1993	159.2	1.8	0.0	0.2	0.0	0.2	72.7	10.3	0.1	0.0	0.0	244.3
1994	152.2	3.0	(s)	0.3	0.0	0.3	67.7	13.5	0.1	0.0	0.0	236.9
1995	172.7	3.1	0.0	0.4	0.0	0.4	79.8	14.7	0.2	0.0	0.0	270.8
1996	173.5	2.3	0.0	0.3	0.0	0.3	100.5	16.6	0.1	0.0	0.0	293.3
1997	185.6	2.7	(s)	0.4	0.0	0.4	98.5	<sup>R</sup> 17.3	(s)	0.0	0.0	304.4
1998	197.5	5.0	0.1	0.5	0.0	0.5	87.7	17.6	(s)	0.0	0.0	307.7
1999	190.7	4.5	(s)	0.4	0.0	0.4	107.2	18.0	0.0	0.0	0.0	320.2

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> Prior to 1980, based on oil used in steam plants. Since 1980, heavy oil includes fuel oil nos. 4, 5, and 6 and residual fuel oils.

<sup>d</sup> Prior to 1980, based on oil used in internal combustion and gas turbine engine plants. Since 1980, light oil includes fuel oil nos. 1 and 2, kerosene, and jet fuel.

<sup>e</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>f</sup> "Other" is electricity generated for distribution from wind, photovoltaic, and solar thermal energy.

<sup>g</sup> If applicable, from 1989, includes net imports of electricity generated from nonrenewable energy sources not shown in other columns. See data in appendix Table A8.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 185. Energy Consumption Estimates by Source, Selected Years 1960-1999, Nevada**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum											Nuclear Electric Power	Hydro-electric Power <sup>d</sup>	Wood and Waste	Other <sup>a,e</sup>	Net Inter-state Flow of Electricity/Losses <sup>f</sup>	Total <sup>g</sup>
			Asphalt & Road Oil <sup>a</sup>	Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	Kero-sene <sup>a</sup>	LPG <sup>a</sup>	Lubri-cants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Other <sup>a,c</sup>	Total						
			Thousand Barrels															Million kWh	
1960	151	12	247	281	2,409	2,462	3	773	92	3,621	246	0	10,134	0	1,967	—	—	-655	—
1965	309	28	367	335	2,775	2,999	5	720	121	5,504	137	0	12,963	0	1,595	—	—	1,603	—
1970	680	53	609	186	2,834	4,584	16	839	105	7,374	143	11	16,700	0	1,646	—	—	2,134	—
1975	4,521	61	837	197	2,565	5,859	29	493	120	9,633	1,339	0	21,070	0	1,690	—	—	-18,450	—
1980	4,215	58	614	206	3,966	7,223	0	880	108	11,224	2,439	53	26,715	0	2,372	—	—	-10,964	—
1985	5,539	39	844	105	5,410	5,715	53	1,043	99	11,627	165	36	25,097	0	4,374	—	—	-14,328	—
1990	7,442	65	1,083	111	7,355	6,114	19	1,430	111	14,942	454	0	31,619	0	R <sup>h</sup> 1,745	—	—	-8,888	—
1991	8,091	65	1,072	111	7,102	6,556	23	1,157	99	15,353	464	73	32,008	0	R <sup>h</sup> 2,377	—	—	R <sup>h</sup> -13,267	—
1992	8,088	68	841	105	7,356	6,162	23	1,009	101	16,040	598	92	32,329	0	R <sup>h</sup> 1,995	—	—	R <sup>h</sup> -10,228	—
1993	7,806	85	1,147	113	7,629	6,510	14	910	103	16,233	497	81	33,237	0	R <sup>h</sup> 1,975	—	—	R <sup>h</sup> -4,687	—
1994	7,968	102	1,258	108	7,576	6,813	8	1,446	108	17,231	382	90	35,019	0	R <sup>h</sup> 1,899	—	—	R <sup>h</sup> -5,535	—
1995	7,340	111	1,486	63	7,700	7,374	9	815	106	18,017	1,125	85	36,780	0	R <sup>h</sup> 2,020	—	—	R <sup>h</sup> -267	—
1996	7,604	123	1,432	93	9,506	7,843	9	R <sup>h</sup> 970	103	18,962	279	R <sup>h</sup> 122	R <sup>h</sup> 39,319	0	R <sup>h</sup> 2,159	—	—	R <sup>h</sup> 221	—
1997	7,440	129	445	76	9,134	7,556	8	R <sup>h</sup> 852	109	19,952	234	R <sup>h</sup> 121	R <sup>h</sup> 38,487	0	R <sup>h</sup> 2,582	—	—	R <sup>h</sup> 3,532	—
1998	8,170	144	1,388	65	9,138	6,715	13	911	114	22,070	151	110	40,675	0	3,166	—	—	-3,704	—
1999	7,977	152	808	78	8,331	8,354	26	1,378	115	21,583	69	98	40,840	0	2,828	—	—	-1,960	—

Trillion Btu																			
1960	4.0	12.9	1.6	1.4	14.0	13.2	(s)	3.1	0.6	19.0	1.5	0.0	54.5	0.0	21.2	0.9	0.0	-2.2	91.3
1965	7.9	29.4	2.4	1.7	16.2	16.3	(s)	2.9	0.7	28.9	0.9	0.0	70.0	0.0	16.7	0.9	0.0	5.5	130.3
1970	17.3	56.9	4.0	0.9	16.5	25.3	0.1	3.2	0.6	38.7	0.9	0.1	90.4	0.0	17.3	1.1	0.0	7.3	190.2
1975	101.3	65.4	5.6	1.0	14.9	32.7	0.2	1.8	0.7	50.6	8.4	0.0	115.9	0.0	17.6	1.2	0.0	-63.0	238.4
1980	93.2	62.0	4.1	1.0	23.1	40.4	0.0	3.2	0.7	59.0	15.3	0.3	147.1	0.0	24.6	2.8	0.0	-37.4	292.3
1985	126.2	41.6	5.6	0.5	31.5	31.7	0.3	3.8	0.6	61.1	1.0	0.2	136.3	0.0	45.7	R <sup>h</sup> 4.1	0.0	-48.9	R <sup>h</sup> 305.1
1990	165.7	66.9	7.2	0.6	42.8	34.0	0.1	5.2	0.7	78.5	2.9	0.0	171.9	0.0	R <sup>h</sup> 18.2	R <sup>h</sup> 2.7	R <sup>h</sup> 18.8	-30.3	R <sup>h</sup> 413.9
1991	180.1	66.9	7.1	0.6	41.4	36.5	0.1	4.2	0.6	80.6	2.9	0.4	174.5	0.0	R <sup>h</sup> 24.8	R <sup>h</sup> 2.9	21.7	R <sup>h</sup> -45.3	425.7
1992	178.9	70.5	5.6	0.5	42.9	34.4	0.1	3.7	0.6	84.3	3.8	0.6	176.3	0.0	R <sup>h</sup> 20.6	R <sup>h</sup> 3.0	R <sup>h</sup> 25.5	R <sup>h</sup> -34.9	R <sup>h</sup> 440.0
1993	172.2	87.8	7.6	0.6	44.4	36.5	0.1	3.3	0.6	85.3	3.1	0.5	182.0	0.0	R <sup>h</sup> 20.4	R <sup>h</sup> 3.2	R <sup>h</sup> 33.2	R <sup>h</sup> -16.0	R <sup>h</sup> 482.8
1994	180.1	105.4	8.3	0.5	44.1	38.6	(s)	5.3	0.7	R <sup>h</sup> 90.1	2.4	0.5	R <sup>h</sup> 190.7	0.0	R <sup>h</sup> 19.6	R <sup>h</sup> 3.2	R <sup>h</sup> 33.9	-18.9	R <sup>h</sup> 513.9
1995	162.7	114.7	9.9	0.3	44.9	41.8	(s)	3.0	0.6	R <sup>h</sup> 94.0	7.1	0.5	R <sup>h</sup> 202.0	0.0	R <sup>h</sup> 20.8	R <sup>h</sup> 3.5	R <sup>h</sup> 33.1	R <sup>h</sup> -0.9	R <sup>h</sup> 535.9
1996	169.5	127.6	9.5	0.5	55.4	44.5	0.1	R <sup>h</sup> 3.5	0.6	R <sup>h</sup> 98.9	1.8	R <sup>h</sup> 0.7	R <sup>h</sup> 215.4	0.0	R <sup>h</sup> 22.3	R <sup>h</sup> 3.5	R <sup>h</sup> 35.0	R <sup>h</sup> 0.8	R <sup>h</sup> 574.0
1997	166.3	132.1	3.0	0.4	53.2	42.8	(s)	R <sup>h</sup> 3.1	0.7	R <sup>h</sup> 104.0	1.5	R <sup>h</sup> 0.7	R <sup>h</sup> 209.4	0.0	26.7	R <sup>h</sup> 4.0	R <sup>h</sup> 33.2	R <sup>h</sup> 12.0	R <sup>h</sup> 583.8
1998	183.2	149.7	9.2	0.3	53.2	38.1	0.1	3.3	0.7	115.0	0.9	0.6	221.5	0.0	32.8	3.6	33.1	-12.6	611.2
1999	179.7	156.7	5.4	0.4	48.5	47.4	0.1	5.0	0.7	112.5	0.4	0.6	220.9	0.0	29.3	3.9	31.5	-6.7	615.3

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.  
<sup>b</sup> Includes supplemental gaseous fuels.  
<sup>c</sup> "Other" is the subtotal of 16 petroleum products consumed in the industrial sector. See a full description in Appendix A, Section 4, "Other Petroleum Products."  
<sup>d</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.  
<sup>e</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.  
<sup>f</sup> Net interstate flow of electricity is the difference between the amount of energy in the electricity sold within a State (including associated losses) and the energy input at the electric utilities within the State. A positive number

indicates that more electricity (including associated losses) came into the State than went out of the State during the year; conversely, a negative number indicates that more electricity (including associated losses) went out of the State than came into the State.  
<sup>g</sup> From 1989, "Total" does not equal the sum of the columns. Net imports of electricity generated from nonrenewable energy sources (shown in appendix Table A8) is included in the total but not in any other columns.  
<sup>h</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.  
 kWh=kilowatthours. R=Revised data. — =Not applicable.  
 (s)=Btu value less than 0.05 and physical unit value less than 0.5.  
 Note: Totals may not equal sum of components due to independent rounding.  
 Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 186. Residential Energy Consumption Estimates, Selected Years 1960-1999, Nevada**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum				Wood Thousand Cords	Geothermal	Solar <sup>c</sup>	Electricity <sup>a</sup> Million Kilowatthours	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Total						Million Kilowatthours	
			Thousand Barrels									Thousand Barrels	
1960	12	2	219	0	275	493	46	—	—	719	—	1,788	—
1965	25	4	286	0	519	805	43	—	—	1,268	—	3,029	—
1970	24	7	328	0	621	949	52	—	—	1,990	—	4,821	—
1975	3	11	265	0	316	581	61	—	—	2,803	—	6,762	—
1980	2	13	187	0	427	614	135	—	—	3,697	—	8,990	—
1985	1	13	284	47	650	982	201	—	—	4,126	—	9,693	—
1990	1	17	239	8	817	1,064	128	—	—	5,540	—	R 12,118	—
1991	1	19	221	10	733	965	135	—	—	5,782	—	R 12,569	—
1992	(s)	18	217	10	632	859	142	—	—	6,064	—	R 12,934	—
1993	1	21	179	11	623	813	148	—	—	6,281	—	R 13,266	—
1994	(s)	21	151	4	642	797	R 146	—	—	6,845	—	R 14,284	—
1995	(s)	21	130	6	509	644	161	—	—	6,655	—	R 13,876	—
1996	(s)	23	135	6	549	691	161	—	—	7,526	—	R 15,685	—
1997	(s)	25	204	5	R 584	R 793	R 182	—	—	7,801	—	R 16,228	—
1998	(s)	30	251	10	615	876	160	—	—	7,975	—	16,474	—
1999	0	29	123	8	894	1,025	172	—	—	8,386	—	16,430	—
<b>Trillion Btu</b>													
1960	0.3	2.0	1.3	0.0	1.1	2.4	0.9	0.0	0.0	2.5	8.1	6.1	14.2
1965	0.6	4.4	1.7	0.0	2.1	3.7	0.9	0.0	0.0	4.3	14.0	10.3	24.3
1970	0.6	7.9	1.9	0.0	2.3	4.3	1.0	0.0	0.0	6.8	20.5	16.5	37.0
1975	0.1	11.8	1.5	0.0	1.2	2.7	1.2	0.0	0.0	9.6	25.4	23.1	48.5
1980	(s)	13.9	1.1	0.0	1.6	2.7	2.7	0.0	0.0	12.6	31.9	30.7	62.5
1985	(s)	13.4	1.7	0.3	2.3	4.3	4.0	0.0	0.0	14.1	35.7	33.1	68.8
1990	(s)	17.7	1.4	(s)	3.0	4.4	2.6	e 0.1	e 0.1	18.9	e 43.8	41.3	e 85.1
1991	(s)	19.8	1.3	0.1	2.7	4.0	2.7	0.1	0.1	19.7	46.5	42.9	89.4
1992	(s)	18.8	1.3	0.1	2.3	3.6	2.8	0.2	0.1	20.7	46.2	R 44.1	R 90.3
1993	(s)	21.4	1.0	0.1	2.2	3.3	3.0	0.2	0.1	21.4	49.4	45.3	94.7
1994	(s)	22.0	0.9	(s)	2.3	3.2	2.9	0.1	0.1	23.4	51.8	48.7	100.5
1995	(s)	21.4	0.8	(s)	1.8	2.6	3.2	0.1	0.2	22.7	50.3	47.3	R 97.7
1996	(s)	23.5	0.8	(s)	2.0	2.8	3.2	0.1	0.2	25.7	55.6	R 53.5	R 109.1
1997	(s)	25.9	1.2	(s)	R 2.1	R 3.3	R 3.6	R 0.1	R 0.3	26.6	R 59.9	R 55.4	R 115.3
1998	(s)	31.4	1.5	0.1	2.2	3.7	3.2	0.1	0.3	27.2	66.1	56.2	122.3
1999	0.0	29.7	0.7	(s)	3.2	4.0	3.4	0.2	0.4	28.6	66.3	56.1	122.4

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Includes small amounts of solar thermal and photovoltaic energy consumed by the commercial sector that cannot be separately identified. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 187. Commercial Energy Consumption Estimates, Selected Years 1960-1999, Nevada**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum						Wood	Geothermal	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>c</sup>	Total <sup>d</sup>
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels						Thousand Cords	Million Kilowatthours	Million Kilowatthours			
1960	18	1	107	0	48	29	86	271	1	—	655	—	1,629	—
1965	43	2	140	1	92	44	38	316	1	—	1,235	—	2,950	—
1970	42	10	161	10	110	49	29	358	1	—	2,069	—	5,013	—
1975	5	15	130	12	56	69	34	301	1	—	2,876	—	6,938	—
1980	2	10	353	0	75	61	7	496	3	—	1,775	—	4,316	—
1985	1	12	324	5	115	82	25	551	R 5	—	3,408	—	8,006	—
1990	2	15	349	4	144	84	2	583	R 8	—	4,550	—	R 9,953	—
1991	1	17	294	3	129	78	2	507	R 9	—	4,671	—	R 10,155	—
1992	1	16	297	4	112	69	(s)	483	R 9	—	4,909	—	R 10,469	—
1993	1	18	608	3	110	12	0	734	12	—	5,037	—	R 10,639	—
1994	1	19	528	2	113	12	0	656	12	—	5,417	—	R 11,304	—
1995	1	19	614	1	90	13	0	717	12	—	5,509	—	R 11,485	—
1996	1	20	672	2	97	13	0	783	13	—	5,973	—	R 12,448	—
1997	1	22	221	1	R 103	13	1	R 339	R 20	—	6,383	—	R 13,278	—
1998	1	23	285	2	108	13	4	412	20	—	6,544	—	13,518	—
1999	0	23	216	3	158	13	8	397	24	—	7,007	—	13,729	—

  

Trillion Btu														
1960	0.4	0.9	0.6	0.0	0.2	0.2	0.5	1.5	(s)	0.0	2.2	5.1	5.6	10.7
1965	1.1	2.5	0.8	(s)	0.4	0.2	0.2	1.7	(s)	0.0	4.2	9.5	10.1	19.6
1970	1.0	10.4	0.9	0.1	0.4	0.3	0.2	1.8	(s)	0.0	7.1	20.4	17.1	37.5
1975	0.1	16.0	0.8	0.1	0.2	0.4	0.2	1.6	(s)	0.0	9.8	27.5	23.7	51.2
1980	0.1	10.7	2.1	0.0	0.3	0.3	(s)	2.7	0.1	0.0	6.1	19.6	14.7	34.3
1985	(s)	13.0	1.9	(s)	0.4	0.4	0.2	2.9	R 0.1	0.0	11.6	R 27.7	27.3	R 55.0
1990	(s)	15.5	2.0	(s)	0.5	0.4	(s)	3.0	R 0.2	e 0.4	15.5	R e 34.7	34.0	R e 68.7
1991	(s)	17.6	1.7	(s)	0.5	0.4	(s)	2.6	R 0.2	0.4	15.9	R 36.7	R 34.6	R 71.4
1992	(s)	16.7	1.7	(s)	0.4	0.4	(s)	2.5	R 0.2	0.4	16.7	R 36.6	R 35.7	R 72.3
1993	(s)	18.2	3.5	(s)	0.4	0.1	0.0	4.0	0.2	0.4	17.2	40.1	36.3	76.4
1994	(s)	19.4	3.1	(s)	0.4	0.1	0.0	3.6	0.2	0.4	18.5	42.1	38.6	80.7
1995	(s)	19.4	3.6	(s)	0.3	0.1	0.0	4.0	0.2	0.4	18.8	42.8	39.2	R 82.0
1996	(s)	21.2	3.9	(s)	0.4	0.1	0.0	4.3	0.3	0.4	20.4	46.7	R 42.5	89.1
1997	(s)	22.5	1.3	(s)	0.4	0.1	(s)	1.7	R 0.4	0.4	21.8	R 46.9	R 45.3	R 92.2
1998	(s)	24.4	1.7	(s)	0.4	0.1	(s)	2.2	0.4	0.5	22.3	49.8	46.1	95.9
1999	0.0	23.4	1.3	(s)	0.6	0.1	0.1	2.0	0.5	0.5	23.9	50.3	46.8	97.1

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>d</sup> Small amounts of solar thermal and photovoltaic energy consumed in the commercial sector cannot be separately identified and are included in residential consumption.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

—=Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 188. Industrial Energy Consumption Estimates, Selected Years 1960-1999, Nevada**

Year	Coal Thousand Short Tons	Natural Gas <sup>a</sup> Billion Cubic Feet	Petroleum									Hydro-electric Power <sup>b</sup> Million kWh	Wood and Waste	Other <sup>b,d</sup>	Electricity <sup>b</sup>		Electrical System Energy Losses <sup>e</sup> Million kWh	Total
			Asphalt and Road Oil <sup>b</sup>	Distillate Fuel <sup>b</sup>	Kero-sene <sup>b</sup>	LPG <sup>b</sup>	Lubri-cants <sup>b</sup>	Motor Gasoline	Residual Fuel <sup>b</sup>	Other <sup>b,c</sup>	Total				Million kWh	Net Energy		
			Thousand Barrels															
1960	119	3	247	575	3	445	18	120	118	0	1,527	(s)	—	—	793	—	1,974	—
1965	61	8	367	740	4	101	36	131	40	0	1,419	(s)	—	—	1,059	—	2,529	—
1970	70	10	609	840	6	99	23	166	34	11	1,788	(s)	—	—	1,635	—	3,963	—
1975	77	10	837	705	17	107	26	115	44	0	1,852	0	—	—	1,964	—	4,737	—
1980	147	7	614	651	0	374	25	111	1	53	1,830	0	—	—	4,936	—	12,003	—
1985	110	6	844	1,540	1	247	23	131	88	36	2,910	0	—	—	3,808	—	8,946	—
1990	169	8	1,083	3,257	7	446	26	170	8	0	4,997	R <sup>f</sup> 12	—	—	6,263	—	R <sup>f</sup> 13,701	—
1991	197	7	1,072	2,984	9	273	23	179	82	73	4,694	R <sup>f</sup> 10	—	—	6,173	—	R <sup>f</sup> 13,419	—
1992	173	9	841	3,000	10	241	23	172	80	92	4,459	R <sup>f</sup> 11	—	—	6,723	—	R <sup>f</sup> 14,339	—
1993	196	25	1,147	2,596	1	151	24	140	101	81	4,241	R <sup>f</sup> 14	—	—	7,181	—	R <sup>f</sup> 15,167	—
1994	195	29	1,258	2,531	1	647	25	191	141	90	4,884	R <sup>f</sup> 28	—	—	7,775	—	R <sup>f</sup> 16,226	—
1995	255	31	1,486	2,547	2	197	25	201	1,099	85	5,641	R <sup>f</sup> 98	—	—	8,496	—	R <sup>f</sup> 17,713	—
1996	179	33	1,432	2,695	2	R <sup>f</sup> 302	24	206	131	R <sup>f</sup> 122	R <sup>f</sup> 4,915	R <sup>f</sup> 15	—	—	9,075	—	R <sup>f</sup> 18,912	—
1997	178	29	445	3,190	2	R <sup>f</sup> 147	25	299	210	R <sup>f</sup> 121	R <sup>f</sup> 4,439	R <sup>f</sup> 15	—	—	10,034	—	R <sup>f</sup> 20,872	—
1998	208	29	1,388	2,982	1	180	26	434	82	110	5,205	15	—	—	10,518	—	21,729	—
1999	214	34	808	1,621	15	326	27	134	23	98	3,051	21	—	—	10,861	—	21,280	—
<b>Trillion Btu</b>																		
1960	3.2	3.4	1.6	3.3	(s)	1.8	0.1	0.6	0.7	0.0	8.3	(s)	0.0	0.0	2.7	17.6	6.7	24.3
1965	1.6	8.4	2.4	4.3	(s)	0.4	0.2	0.7	0.3	0.0	8.3	(s)	0.0	0.0	3.6	21.9	8.6	30.5
1970	1.7	11.2	4.0	4.9	(s)	0.4	0.1	0.9	0.2	0.1	10.6	(s)	0.0	0.0	5.6	29.1	13.5	42.7
1975	1.8	10.7	5.6	4.1	0.1	0.4	0.2	0.6	0.3	0.0	11.2	0.0	0.0	0.0	6.7	30.4	16.2	46.6
1980	3.4	7.7	4.1	3.8	0.0	1.4	0.2	0.6	(s)	0.3	10.3	0.0	0.0	0.0	16.8	38.3	41.0	79.2
1985	2.6	6.6	5.6	9.0	(s)	0.9	0.1	0.7	0.6	0.2	17.1	0.0	0.0	0.0	13.0	39.2	30.5	69.7
1990	3.9	7.7	7.2	19.0	(s)	1.6	0.2	0.9	(s)	0.0	28.9	R <sup>f</sup> 0.1	R <sup>f</sup> 0.0	R <sup>f</sup> 18.2	21.4	R <sup>f</sup> 80.3	46.7	R <sup>f</sup> 127.1
1991	4.6	6.9	7.1	17.4	0.1	1.0	0.1	0.9	0.5	0.4	27.6	R <sup>f</sup> 0.1	R <sup>f</sup> 0.0	R <sup>f</sup> 21.0	21.1	R <sup>f</sup> 81.2	45.8	R <sup>f</sup> 127.0
1992	4.0	9.6	5.6	17.5	0.1	0.9	0.1	0.9	0.5	0.6	26.1	R <sup>f</sup> 0.1	R <sup>f</sup> 0.0	R <sup>f</sup> 24.8	22.9	R <sup>f</sup> 87.5	R <sup>f</sup> 48.9	R <sup>f</sup> 136.4
1993	4.5	25.6	7.6	15.1	(s)	0.5	0.1	0.7	0.6	0.5	25.3	0.1	R <sup>f</sup> 0.0	R <sup>f</sup> 32.5	24.5	R <sup>f</sup> 112.6	51.8	R <sup>f</sup> 164.4
1994	4.5	29.9	8.3	14.7	(s)	2.4	0.2	1.0	0.9	0.5	28.0	R <sup>f</sup> 0.3	R <sup>f</sup> 0.0	R <sup>f</sup> 33.2	26.5	R <sup>f</sup> 122.5	55.4	R <sup>f</sup> 177.9
1995	5.8	31.7	9.9	14.8	(s)	0.7	0.1	1.1	6.9	0.5	34.0	R <sup>f</sup> 1.0	R <sup>f</sup> 0.0	R <sup>f</sup> 32.4	29.0	R <sup>f</sup> 133.9	60.4	R <sup>f</sup> 194.3
1996	4.0	33.9	9.5	15.7	(s)	R <sup>f</sup> 1.1	0.1	1.1	0.8	R <sup>f</sup> 0.7	29.1	0.2	R <sup>f</sup> 0.0	R <sup>f</sup> 34.2	31.0	R <sup>f</sup> 132.4	R <sup>f</sup> 64.5	R <sup>f</sup> 196.9
1997	4.1	29.7	3.0	18.6	(s)	R <sup>f</sup> 0.5	0.2	1.6	1.3	R <sup>f</sup> 0.7	R <sup>f</sup> 25.8	0.2	R <sup>f</sup> 0.0	R <sup>f</sup> 32.4	34.2	R <sup>f</sup> 126.4	R <sup>f</sup> 71.2	R <sup>f</sup> 197.6
1998	4.8	30.0	9.2	17.4	(s)	0.7	0.2	2.3	0.5	0.6	30.8	0.2	0.0	32.1	35.9	133.8	74.1	208.0
1999	5.0	35.2	5.4	9.4	0.1	1.2	0.2	0.7	0.1	0.6	17.6	0.2	0.0	30.4	37.1	125.4	72.6	198.0

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>e</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>f</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

R=Revised data.

kWh=kilowatthours. — =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 189. Transportation Energy Consumption Estimates, Selected Years 1960-1999, Nevada**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum								Ethanol <sup>c</sup>	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total <sup>c</sup>
			Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	LPG <sup>a</sup>	Lubricants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total					
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels								Thousand Barrels	Million Kilowatthours	Million Kilowatthours	Total <sup>c</sup>	
1960	2	0	281	1,501	2,462	5	73	3,472	0	7,795	0	0	—	0	—
1965	(s)	0	335	1,599	2,999	9	86	5,329	7	10,364	0	0	—	0	—
1970	(s)	0	186	1,492	4,584	9	83	7,158	1	13,512	0	0	—	0	—
1975	(s)	0	197	1,407	5,859	13	94	9,449	5	17,023	0	0	—	0	—
1980	0	(s)	206	2,754	7,223	3	83	11,052	0	21,322	0	0	—	0	—
1985	0	(s)	105	3,209	5,715	31	76	11,414	0	20,549	R e 2	0	—	0	—
1990	0	1	111	3,420	6,114	22	85	14,688	0	24,440	R 116	0	—	0	—
1991	0	(s)	111	3,536	6,556	21	76	15,096	0	25,395	R 158	0	—	0	—
1992	0	(s)	105	3,776	6,162	24	78	15,799	0	25,944	R 190	0	—	0	—
1993	0	1	113	4,206	6,510	26	79	16,080	0	27,015	R 228	0	—	0	—
1994	0	1	108	4,320	6,813	43	83	17,028	0	28,395	0	0	—	0	—
1995	0	1	63	4,383	7,374	19	81	17,803	0	29,724	R 304	0	—	0	—
1996	0	1	93	5,974	7,843	R 22	79	18,743	0	R 32,754	0	0	—	0	—
1997	0	1	76	5,473	7,556	R 19	83	19,640	0	R 32,848	0	0	—	0	—
1998	0	1	65	5,585	6,715	7	87	21,623	0	34,083	352	0	—	0	—
1999	0	1	78	6,337	8,354	(s)	88	21,437	0	36,294	636	0	—	0	—

  

Trillion Btu															
1960	0.1	0.0	1.4	8.7	13.2	(s)	0.4	18.2	0.0	42.1	0.0	0.0	42.1	0.0	42.1
1965	(s)	0.0	1.7	9.3	16.3	(s)	0.5	28.0	(s)	55.9	0.0	0.0	55.9	0.0	55.9
1970	(s)	0.0	0.9	8.7	25.3	(s)	0.5	37.6	(s)	73.1	0.0	0.0	73.1	0.0	73.1
1975	(s)	0.0	1.0	8.2	32.7	(s)	0.6	49.6	(s)	92.1	0.0	0.0	92.1	0.0	92.1
1980	0.0	0.2	1.0	16.0	40.4	(s)	0.5	58.1	0.0	116.0	0.0	0.0	116.2	0.0	116.2
1985	0.0	0.1	0.5	18.7	31.7	0.1	0.5	60.0	0.0	111.4	R e (s)	0.0	e 111.5	0.0	e 111.5
1990	0.0	0.8	0.6	19.9	34.0	0.1	0.5	77.2	0.0	132.3	R 0.4	0.0	133.1	0.0	133.1
1991	0.0	0.4	0.6	20.6	36.5	0.1	0.5	79.3	0.0	137.5	R 0.6	0.0	137.9	0.0	137.9
1992	0.0	0.5	0.5	22.0	34.4	0.1	0.5	83.0	0.0	140.5	0.7	0.0	141.0	0.0	141.0
1993	0.0	0.7	0.6	24.5	36.5	0.1	0.5	84.5	0.0	146.6	R 0.8	0.0	147.3	0.0	147.3
1994	0.0	0.7	0.5	25.2	38.6	0.2	0.5	R 89.1	0.0	R 154.0	0.0	0.0	R 154.8	0.0	R 154.8
1995	0.0	0.9	0.3	25.5	41.8	0.1	0.5	R 92.8	0.0	R 161.1	R 1.1	0.0	R 161.9	0.0	R 161.9
1996	0.0	0.8	0.5	34.8	44.5	0.1	0.5	R 97.8	0.0	R 178.1	0.0	0.0	R 178.9	0.0	R 178.9
1997	0.0	0.7	0.4	31.9	42.8	0.1	0.5	R 102.4	0.0	R 178.1	0.0	0.0	R 178.8	0.0	R 178.8
1998	0.0	0.9	0.3	32.5	38.1	(s)	0.5	112.7	0.0	184.2	1.2	0.0	185.0	0.0	185.0
1999	0.0	0.9	0.4	36.9	47.4	(s)	0.5	111.7	0.0	196.9	2.3	0.0	197.8	0.0	197.8

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels. Transportation use of natural gas is gas consumed in the operation of pipelines, primarily in compressors, and, since 1990, is also gas consumed as vehicle fuel.

<sup>c</sup> Ethanol blended into motor gasoline, which is accounted for under motor gasoline, is shown separately here to display the use of renewable energy by the transportation sector and is included only once in the total.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1980 and 1981 due to the expanded coverage of renewable energy sources beginning in 1981.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.



**Table 190. Estimates of Energy Input at Electric Utilities, Selected Years, 1960-1999, Nevada**

Year	Coal	Natural Gas <sup>a</sup>	Petroleum				Nuclear Electric Power	Hydroelectric Power <sup>e</sup>	Wood and Waste	Geothermal Energy	Other <sup>b,f</sup>	Total <sup>g</sup>
			Heavy Oil <sup>b,c</sup>	Light Oil <sup>b,d</sup>	Petroleum Coke <sup>b</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels				Million Kilowatthours					
1960	0	6	41	7	0	48	0	1,967	0	0	0	—
1965	180	13	51	8	0	60	0	1,594	0	0	0	—
1970	544	25	80	13	0	93	0	1,645	0	0	0	—
1975	4,435	25	1,256	58	0	1,314	0	1,690	0	0	0	—
1980	4,064	28	2,431	22	0	2,453	0	2,372	0	0	0	—
1985	5,427	8	51	54	0	104	0	4,374	0	0	0	—
1990	7,270	24	444	91	0	535	0	R 1,733	0	0	0	—
1991	7,892	22	380	67	0	447	0	R 2,367	0	0	0	—
1992	7,914	24	518	67	0	584	0	R 1,984	0	0	0	—
1993	7,608	21	396	40	0	436	0	R 1,961	0	0	0	—
1994	7,772	32	241	46	0	287	0	R 1,871	0	0	0	—
1995	7,084	40	26	27	0	54	0	R 1,922	0	0	0	—
1996	7,424	47	147	30	0	177	0	2,143	0	0	0	—
1997	7,261	52	23	45	0	69	0	2,567	0	0	0	—
1998	7,961	61	64	35	0	99	0	3,151	0	0	0	—
1999	7,763	65	38	35	0	73	0	2,807	0	0	0	—

  

Trillion Btu												
1960	0.0	6.6	0.3	(s)	0.0	0.3	0.0	21.2	0.0	0.0	0.0	28.0
1965	4.6	14.1	0.3	(s)	0.0	0.4	0.0	16.7	0.0	0.0	0.0	35.7
1970	14.0	27.4	0.5	0.1	0.0	0.6	0.0	17.3	0.0	0.0	0.0	59.2
1975	99.3	26.8	7.9	0.3	0.0	8.2	0.0	17.6	0.0	0.0	0.0	151.9
1980	89.7	29.5	15.3	0.1	0.0	15.4	0.0	24.6	0.0	0.0	0.0	159.3
1985	123.6	8.6	0.3	0.3	0.0	0.6	0.0	45.7	0.0	0.0	0.0	178.5
1990	161.7	25.1	2.8	0.5	0.0	3.3	0.0	18.0	0.0	0.0	0.0	208.2
1991	175.5	22.3	2.4	0.4	0.0	2.8	0.0	24.7	0.0	0.0	0.0	225.3
1992	174.9	25.0	3.3	0.4	0.0	3.6	0.0	R 20.5	0.0	0.0	0.0	R 224.1
1993	167.6	21.9	2.5	0.2	0.0	2.7	0.0	R 20.2	0.0	0.0	0.0	R 212.4
1994	175.5	33.3	1.5	0.3	0.0	1.8	0.0	19.3	0.0	0.0	0.0	R 229.9
1995	156.9	41.3	0.2	0.2	0.0	0.3	0.0	R 19.8	0.0	0.0	0.0	R 218.4
1996	165.4	48.1	0.9	0.2	0.0	1.1	0.0	22.2	0.0	0.0	0.0	236.8
1997	162.2	53.3	0.1	0.3	0.0	0.4	0.0	R 26.6	0.0	0.0	0.0	R 242.5
1998	178.3	63.0	0.4	0.2	0.0	0.6	0.0	32.6	0.0	0.0	0.0	274.5
1999	174.8	67.5	0.2	0.2	0.0	0.4	0.0	29.0	0.0	0.0	0.0	271.8

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> Prior to 1980, based on oil used in steam plants. Since 1980, heavy oil includes fuel oil nos. 4, 5, and 6 and residual fuel oils.

<sup>d</sup> Prior to 1980, based on oil used in internal combustion and gas turbine engine plants. Since 1980, light oil includes fuel oil nos. 1 and 2, kerosene, and jet fuel.

<sup>e</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>f</sup> "Other" is electricity generated for distribution from wind, photovoltaic, and solar thermal energy.

<sup>g</sup> If applicable, from 1989, includes net imports of electricity generated from nonrenewable energy sources not shown in other columns. See data in appendix Table A8.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 191. Energy Consumption Estimates by Source, Selected Years 1960-1999, New Hampshire**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum											Nuclear Electric Power	Hydro-electric Power <sup>d</sup>	Wood and Waste	Other <sup>a,e</sup>	Net Inter-state Flow of Electricity/Losses <sup>f</sup>	Total <sup>g</sup>
			Asphalt & Road Oil <sup>a</sup>	Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	Kero-sene <sup>a</sup>	LPG <sup>a</sup>	Lubri-cants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Other <sup>a,c</sup>	Total						
			Thousand Barrels															Million kWh	
1960	216	3	470	18	4,590	1,151	843	532	97	4,940	2,195	22	14,856	0	1,373	—	—	-1,500	—
1965	407	4	424	46	5,912	1,097	758	657	84	5,773	2,416	29	17,195	0	1,053	—	—	-692	—
1970	992	7	541	38	7,681	1,053	777	829	72	8,122	5,520	170	24,802	0	1,239	—	—	-3,659	—
1975	982	8	431	33	7,194	916	463	1,436	70	9,373	4,611	181	24,707	0	1,251	—	—	1,442	—
1980	1,093	9	253	40	5,820	777	340	1,280	83	9,382	5,692	434	24,103	0	1,027	—	—	1,383	—
1985	1,481	11	854	24	5,243	521	902	1,586	76	10,340	3,442	153	23,141	0	2,023	—	—	3,441	—
1990	1,186	14	1,198	21	6,325	647	266	2,122	85	11,778	5,252	145	27,839	4,081	R <sup>h</sup> 2,009	—	—	R <sup>h</sup> -5,106	—
1991	1,315	14	659	26	6,353	468	322	1,652	76	12,135	4,006	122	25,819	6,788	R <sup>h</sup> 1,957	—	—	R <sup>h</sup> -13,455	—
1992	1,311	17	791	19	6,612	378	293	1,761	78	12,111	3,763	126	25,931	7,869	R <sup>h</sup> 2,038	—	—	R <sup>h</sup> -16,404	—
1993	1,428	17	320	43	6,721	388	395	2,163	79	12,494	4,105	127	26,836	9,047	R <sup>h</sup> 2,258	—	—	R <sup>h</sup> -22,018	—
1994	1,287	20	381	33	6,848	342	337	2,221	83	12,811	4,199	132	27,386	6,204	R <sup>h</sup> 2,304	—	—	R <sup>h</sup> -13,103	—
1995	1,355	20	365	22	7,410	333	394	2,285	81	13,495	3,319	127	27,832	8,379	R <sup>h</sup> 2,274	—	—	R <sup>h</sup> -19,574	—
1996	1,377	19	627	20	7,947	360	451	R <sup>h</sup> 2,466	79	13,939	2,915	R <sup>h</sup> 2,404	R <sup>h</sup> 31,207	9,845	R <sup>h</sup> 2,854	—	—	R <sup>h</sup> -24,163	—
1997	1,705	21	412	23	8,054	408	560	R <sup>h</sup> 2,183	83	14,666	3,142	R <sup>h</sup> 2,630	R <sup>h</sup> 32,160	7,979	R <sup>h</sup> 2,705	—	—	R <sup>h</sup> -22,129	—
1998	1,469	19	269	20	8,561	609	697	2,447	87	15,086	3,402	2,613	33,792	8,387	2,519	—	—	-20,635	—
1999	1,344	20	288	28	9,000	820	437	2,407	88	15,659	3,491	2,591	34,807	8,676	2,368	—	—	-18,778	—

  

Trillion Btu																			
1960	5.4	3.0	3.1	0.1	26.7	6.2	4.8	2.1	0.6	25.9	13.8	0.1	83.5	0.0	14.8	10.9	0.0	-5.1	112.3
1965	11.2	4.1	2.8	0.2	34.4	5.9	4.3	2.6	0.5	30.3	15.2	0.2	96.5	0.0	11.0	11.0	0.0	-2.4	131.4
1970	27.1	6.8	3.6	0.2	44.7	5.7	4.4	3.1	0.4	42.7	34.7	0.9	140.5	0.0	13.0	12.3	0.0	-12.5	187.2
1975	26.2	7.7	2.9	0.2	41.9	4.9	2.6	5.3	0.4	49.2	29.0	1.1	137.5	0.0	13.0	12.8	0.0	4.9	202.2
1980	29.3	9.7	1.7	0.2	33.9	4.2	1.9	4.7	0.5	49.3	35.8	2.5	134.6	0.0	10.7	R <sup>h</sup> 19.8	0.0	4.7	R <sup>h</sup> 208.7
1985	39.7	10.9	5.7	0.1	30.5	2.8	5.1	5.7	0.5	54.3	21.6	0.8	127.2	0.0	21.1	R <sup>h</sup> 21.5	0.0	11.7	R <sup>h</sup> 232.2
1990	31.5	14.5	8.0	0.1	36.8	3.6	1.5	7.7	0.5	61.9	33.0	0.8	153.9	43.6	R <sup>h</sup> 20.9	R <sup>h</sup> 23.7	h (s)	R <sup>h</sup> -17.4	R <sup>h</sup> 270.8
1991	34.8	14.2	4.4	0.1	37.0	2.6	1.8	6.0	0.5	63.7	25.2	0.7	142.0	72.9	R <sup>h</sup> 20.4	R <sup>h</sup> 23.4	(s)	R <sup>h</sup> -45.9	R <sup>h</sup> 263.6
1992	34.7	17.0	5.2	0.1	38.5	2.1	1.7	6.4	0.5	63.6	23.7	0.7	142.4	84.0	R <sup>h</sup> 21.1	R <sup>h</sup> 34.6	(s)	R <sup>h</sup> -56.0	R <sup>h</sup> 280.6
1993	37.5	17.1	2.1	0.2	39.1	2.2	2.2	7.8	0.5	65.6	25.8	0.7	146.3	96.6	R <sup>h</sup> 23.3	R <sup>h</sup> 33.0	(s)	-75.1	R <sup>h</sup> 281.1
1994	33.5	20.0	2.5	0.2	39.9	1.9	1.9	8.1	0.5	R <sup>h</sup> 67.0	26.4	0.7	R <sup>h</sup> 149.1	66.2	R <sup>h</sup> 23.8	R <sup>h</sup> 30.9	(s)	R <sup>h</sup> -44.7	R <sup>h</sup> 282.3
1995	35.5	20.1	2.4	0.1	43.2	1.9	2.2	8.3	0.5	R <sup>h</sup> 70.4	20.9	0.7	R <sup>h</sup> 150.5	89.3	R <sup>h</sup> 23.4	R <sup>h</sup> 31.7	(s)	R <sup>h</sup> -66.8	R <sup>h</sup> 287.9
1996	36.2	19.4	4.2	0.1	46.3	2.0	2.6	R <sup>h</sup> 8.9	0.5	R <sup>h</sup> 72.7	18.3	R <sup>h</sup> 12.9	R <sup>h</sup> 168.4	104.6	R <sup>h</sup> 29.5	R <sup>h</sup> 35.8	(s)	R <sup>h</sup> -82.4	R <sup>h</sup> 315.7
1997	44.5	21.1	2.7	0.1	46.9	2.3	3.2	R <sup>h</sup> 7.9	0.5	R <sup>h</sup> 76.5	19.8	R <sup>h</sup> 14.2	R <sup>h</sup> 174.0	84.8	R <sup>h</sup> 28.0	R <sup>h</sup> 33.9	(s)	R <sup>h</sup> -75.5	R <sup>h</sup> 317.4
1998	38.6	19.3	1.8	0.1	49.9	3.5	4.0	8.8	0.5	78.6	21.4	14.1	182.7	89.1	26.1	28.4	(s)	-70.4	318.8
1999	35.3	20.5	1.9	0.1	52.4	4.6	2.5	8.7	0.5	81.6	21.9	13.9	188.3	92.2	24.5	31.0	1.9	-64.1	335.4

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.  
<sup>b</sup> Includes supplemental gaseous fuels.  
<sup>c</sup> "Other" is the subtotal of 16 petroleum products consumed in the industrial sector. See a full description in Appendix A, Section 4, "Other Petroleum Products."  
<sup>d</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.  
<sup>e</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.  
<sup>f</sup> Net interstate flow of electricity is the difference between the amount of energy in the electricity sold within a State (including associated losses) and the energy input at the electric utilities within the State. A positive number

indicates that more electricity (including associated losses) came into the State than went out of the State during the year; conversely, a negative number indicates that more electricity (including associated losses) went out of the State than came into the State.  
<sup>g</sup> From 1989, "Total" does not equal the sum of the columns. Net imports of electricity generated from nonrenewable energy sources (shown in appendix Table A8) is included in the total but not in any other columns.  
<sup>h</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.  
 kWh=kilowatthours. R=Revised data. — =Not applicable.  
 (s)=Btu value less than 0.05 and physical unit value less than 0.5.  
 Note: Totals may not equal sum of components due to independent rounding.  
 Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 192. Residential Energy Consumption Estimates, Selected Years 1960-1999, New Hampshire**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum				Wood Thousand Cords	Geothermal	Solar <sup>c</sup>	Electricity <sup>a</sup> Million Kilowatthours	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Total						Million Kilowatthours	
			Thousand Barrels										
1960	12	2	3,622	803	412	4,837	186	—	—	619	—	1,540	—
1965	8	3	4,724	710	460	5,894	156	—	—	868	—	2,072	—
1970	5	4	6,039	705	474	7,218	136	—	—	1,476	—	3,577	—
1975	3	4	5,709	406	692	6,807	159	—	—	2,148	—	5,181	—
1980	2	4	3,519	322	588	4,430	R 277	—	—	2,478	—	6,026	—
1985	5	5	3,241	855	856	4,951	241	—	—	2,851	—	6,697	—
1990	7	6	3,395	233	1,449	5,078	184	—	—	3,444	—	R 7,535	—
1991	13	6	3,566	269	1,229	5,064	194	—	—	3,357	—	R 7,297	—
1992	9	6	3,683	250	1,285	5,218	204	—	—	3,428	—	R 7,312	—
1993	6	6	3,815	351	1,480	5,646	212	—	—	3,420	—	R 7,224	—
1994	5	7	3,814	282	1,533	5,629	208	—	—	3,431	—	7,159	—
1995	4	7	4,307	331	1,662	6,300	231	—	—	3,364	—	R 7,015	—
1996	4	7	4,709	393	R 1,834	R 6,936	230	—	—	3,427	—	R 7,143	—
1997	3	7	4,783	476	R 1,607	R 6,866	R 152	—	—	3,368	—	R 7,005	—
1998	2	6	4,404	620	1,803	6,827	134	—	—	3,384	—	6,990	—
1999	2	7	4,555	377	1,880	6,813	143	—	—	3,640	—	7,132	—
<b>Trillion Btu</b>													
1960	0.3	1.8	21.1	4.6	1.7	27.3	3.7	0.0	0.0	2.1	35.2	5.3	40.4
1965	0.2	2.7	27.5	4.0	1.8	33.4	3.1	0.0	0.0	3.0	42.3	7.1	49.4
1970	0.1	3.7	35.2	4.0	1.8	41.0	2.7	0.0	0.0	5.0	52.5	12.2	64.7
1975	0.1	3.8	33.3	2.3	2.6	38.1	3.2	0.0	0.0	7.3	52.5	17.7	70.1
1980	(s)	4.4	20.5	1.8	2.2	24.5	5.5	0.0	0.0	8.5	42.9	20.6	63.5
1985	0.1	4.8	18.9	4.8	3.1	26.8	4.8	0.0	0.0	9.7	46.3	22.9	69.1
1990	0.2	6.0	19.8	1.3	5.3	26.4	3.7	e 0.0	e (s)	11.8	e 48.0	25.7	e 73.7
1991	0.3	5.6	20.8	1.5	4.4	26.7	3.9	0.0	(s)	11.5	48.1	24.9	73.0
1992	0.2	6.5	21.5	1.4	4.7	27.5	4.1	0.0	(s)	11.7	R 50.1	R 24.9	75.0
1993	0.1	6.6	22.2	2.0	5.3	29.5	4.2	0.0	(s)	11.7	52.2	R 24.6	76.8
1994	0.1	6.7	22.2	1.6	5.6	29.4	4.2	0.0	(s)	11.7	52.1	24.4	76.5
1995	0.1	6.6	25.1	1.9	6.0	33.0	4.6	0.0	(s)	11.5	55.8	23.9	79.7
1996	0.1	7.1	27.4	2.2	R 6.6	R 36.3	4.6	0.0	(s)	11.7	R 59.9	R 24.4	R 84.2
1997	0.1	7.0	27.9	2.7	R 5.8	R 36.4	R 3.0	0.0	(s)	11.5	R 58.0	23.9	R 81.9
1998	0.1	6.3	25.7	3.5	6.5	35.7	2.7	0.0	(s)	11.5	56.3	23.9	80.2
1999	(s)	6.7	26.5	2.1	6.8	35.5	2.9	(s)	(s)	12.4	57.5	24.3	81.9

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Includes small amounts of solar thermal and photovoltaic energy consumed by the commercial sector that cannot be separately identified. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 193. Commercial Energy Consumption Estimates, Selected Years 1960-1999, New Hampshire**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum						Wood	Geothermal	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>c</sup>	Total <sup>d</sup>
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels						Thousand Cords	Million Kilowatthours	Million Kilowatthours			
1960	8	1	376	30	73	37	18	534	4	—	371	—	922	—
1965	5	1	491	26	81	43	26	667	3	—	468	—	1,117	—
1970	3	2	628	26	84	46	71	854	3	—	699	—	1,694	—
1975	2	3	593	15	122	52	56	839	3	—	883	—	2,131	—
1980	1	4	1,044	9	104	116	372	1,645	7	—	1,110	—	2,699	—
1985	3	5	550	41	151	126	87	956	R 6	—	1,582	—	3,718	—
1990	5	5	1,191	25	256	74	657	2,202	R 12	—	2,117	—	R 4,631	—
1991	9	5	1,140	21	217	55	675	2,109	R 12	—	2,140	—	R 4,652	—
1992	7	6	1,129	22	227	48	326	1,752	R 13	—	2,193	—	R 4,678	—
1993	4	6	1,123	35	261	11	380	1,809	17	—	2,241	—	R 4,733	—
1994	3	6	1,279	41	271	11	453	2,053	17	—	3,343	—	6,977	—
1995	4	7	1,093	44	293	11	443	1,883	17	—	3,357	—	R 6,998	—
1996	4	7	1,339	42	R 324	11	455	R 2,170	19	—	3,366	—	R 7,015	—
1997	2	7	1,367	58	R 284	11	484	R 2,204	R 17	—	3,375	—	R 7,021	—
1998	2	7	1,259	57	318	11	294	1,940	17	—	3,455	—	7,138	—
1999	1	7	1,442	42	332	11	151	1,978	20	—	3,732	—	7,311	—
<b>Trillion Btu</b>														
1960	0.2	0.5	2.2	0.2	0.3	0.2	0.1	3.0	0.1	0.0	1.3	5.0	3.1	8.2
1965	0.1	0.8	2.9	0.1	0.3	0.2	0.2	3.7	0.1	0.0	1.6	6.3	3.8	10.1
1970	0.1	2.3	3.7	0.1	0.3	0.2	0.4	4.8	0.1	0.0	2.4	9.6	5.8	15.4
1975	(s)	2.6	3.5	0.1	0.5	0.3	0.4	4.6	0.1	0.0	3.0	10.4	7.3	17.7
1980	(s)	4.2	6.1	0.1	0.4	0.6	2.3	9.5	0.1	0.0	3.8	17.6	9.2	26.8
1985	0.1	5.1	3.2	0.2	0.5	0.7	0.5	5.2	R 0.1	0.0	5.4	R 15.9	12.7	R 28.6
1990	0.1	5.1	6.9	0.1	0.9	0.4	4.1	12.5	R 0.2	e 0.0	7.2	R e 25.2	15.8	R e 41.1
1991	0.2	5.1	6.6	0.1	0.8	0.3	4.2	12.1	R 0.2	0.0	7.3	R 24.9	15.9	R 40.8
1992	0.2	5.9	6.6	0.1	0.8	0.3	2.0	9.8	R 0.3	0.0	7.5	R 23.7	16.0	R 39.6
1993	0.1	6.2	6.5	0.2	0.9	0.1	2.4	10.1	0.3	0.0	7.6	24.4	16.2	40.6
1994	0.1	6.5	7.5	0.2	1.0	0.1	2.8	11.6	0.3	0.0	11.4	29.9	23.8	53.7
1995	0.1	6.6	6.4	0.2	1.1	0.1	2.8	10.5	0.3	0.0	11.5	29.0	23.9	52.9
1996	0.1	7.2	7.8	0.2	R 1.2	0.1	2.9	12.1	0.4	0.0	11.5	31.3	23.9	55.2
1997	0.1	7.6	8.0	0.3	R 1.0	0.1	3.0	R 12.4	0.3	0.0	11.5	R 31.9	R 24.0	55.9
1998	(s)	6.9	7.3	0.3	1.2	0.1	1.8	10.7	0.3	0.0	11.8	29.8	24.4	54.1
1999	(s)	7.3	8.4	0.2	1.2	0.1	0.9	10.8	0.4	0.0	12.7	31.3	24.9	56.2

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>d</sup> Small amounts of solar thermal and photovoltaic energy consumed in the commercial sector cannot be separately identified and are included in residential consumption.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

—=Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 194. Industrial Energy Consumption Estimates, Selected Years 1960-1999, New Hampshire**

Year	Coal Thousand Short Tons	Natural Gas <sup>a</sup> Billion Cubic Feet	Petroleum									Hydro-electric Power <sup>b</sup> Million kWh	Wood and Waste	Other <sup>b,d</sup>	Electricity <sup>b</sup> Million kWh	Net Energy	Electrical System Energy Losses <sup>e</sup> Million kWh	Total
			Asphalt and Road Oil <sup>b</sup>	Distillate Fuel <sup>b</sup>	Kero-sene <sup>b</sup>	LPG <sup>b</sup>	Lubri-cants <sup>b</sup>	Motor Gasoline	Residual Fuel <sup>b</sup>	Other <sup>b,c</sup>	Total							
			Thousand Barrels															
1960	100	1	470	280	10	47	22	66	727	22	1,644	239	—	—	596	—	1,483	—
1965	36	1	424	421	22	114	24	53	1,046	29	2,132	170	—	—	902	—	2,152	—
1970	9	1	541	511	46	267	17	38	2,842	170	4,432	184	—	—	1,452	—	3,519	—
1975	6	1	431	460	42	617	22	31	2,266	181	4,048	178	—	—	1,839	—	4,436	—
1980	10	1	253	558	9	514	23	27	923	434	2,741	155	—	—	2,406	—	5,851	—
1985	40	1	854	384	6	556	21	61	1,024	153	3,059	155	—	—	2,974	—	6,987	—
1990	28	3	1,198	435	8	402	24	55	529	145	2,797	R <sup>f</sup> 510	—	—	3,418	—	R <sup>f</sup> 7,478	—
1991	51	3	659	446	31	198	21	50	461	122	1,988	R <sup>f</sup> 410	—	—	3,265	—	R <sup>f</sup> 7,098	—
1992	44	4	791	500	20	239	22	51	1,031	126	2,781	R <sup>f</sup> 429	—	—	3,333	—	R <sup>f</sup> 7,108	—
1993	79	4	320	423	9	405	22	91	1,432	127	2,830	R <sup>f</sup> 409	—	—	3,100	—	R <sup>f</sup> 6,547	—
1994	0	4	381	365	14	393	23	99	1,323	132	2,730	R <sup>f</sup> 426	—	—	2,182	—	4,554	—
1995	1	5	365	419	19	312	23	109	1,109	127	2,482	R <sup>f</sup> 402	—	—	2,286	—	R <sup>f</sup> 4,767	—
1996	0	5	627	399	17	R <sup>f</sup> 294	22	108	973	R <sup>f</sup> 2,404	R <sup>f</sup> 4,843	R <sup>f</sup> 498	—	—	2,334	—	R <sup>f</sup> 4,864	—
1997	0	6	412	321	26	R <sup>f</sup> 282	23	116	846	R <sup>f</sup> 2,630	R <sup>f</sup> 4,656	R <sup>f</sup> 469	—	—	2,339	—	R <sup>f</sup> 4,864	—
1998	0	6	269	381	20	323	24	74	761	2,613	4,466	622	—	—	2,415	—	4,988	—
1999	0	6	288	472	19	194	25	151	711	2,591	4,450	1,072	—	—	2,516	—	4,930	—
Trillion Btu																		
1960	2.5	0.7	3.1	1.6	0.1	0.2	0.1	0.3	4.6	0.1	10.2	2.6	7.1	0.0	2.0	25.0	5.1	30.0
1965	0.9	0.7	2.8	2.5	0.1	0.5	0.1	0.3	6.6	0.2	13.0	1.8	7.8	0.0	3.1	27.2	7.3	34.6
1970	0.2	0.8	3.6	3.0	0.3	1.0	0.1	0.2	17.9	0.9	26.9	1.9	9.5	0.0	5.0	44.4	12.0	56.4
1975	0.1	1.1	2.9	2.7	0.2	2.3	0.1	0.2	14.2	1.1	23.7	1.9	9.6	0.0	6.3	42.6	15.1	57.8
1980	0.2	1.0	1.7	3.2	0.1	1.9	0.1	0.1	5.8	2.5	15.4	1.6	R <sup>f</sup> 14.1	0.0	8.2	R <sup>f</sup> 40.6	20.0	R <sup>f</sup> 60.6
1985	1.0	0.9	5.7	2.2	(s)	2.0	0.1	0.3	6.4	0.8	17.7	1.6	R <sup>f</sup> 16.5	0.0	10.1	R <sup>f</sup> 47.8	23.8	R <sup>f</sup> 71.7
1990	0.7	3.3	8.0	2.5	(s)	1.5	0.1	0.3	3.3	0.8	16.5	R <sup>f</sup> 5.3	R <sup>f</sup> 19.8	f <sup>f</sup> 0.0	11.7	R <sup>f</sup> 57.3	25.5	R <sup>f</sup> 82.8
1991	1.3	3.5	4.4	2.6	0.2	0.7	0.1	0.3	2.9	0.7	11.8	R <sup>f</sup> 4.3	R <sup>f</sup> 19.2	0.0	11.1	R <sup>f</sup> 51.2	R <sup>f</sup> 24.2	R <sup>f</sup> 75.5
1992	1.1	3.9	5.2	2.9	0.1	0.9	0.1	0.3	6.5	0.7	16.7	R <sup>f</sup> 4.4	R <sup>f</sup> 30.3	0.0	11.4	R <sup>f</sup> 67.8	24.3	R <sup>f</sup> 92.0
1993	2.0	3.8	2.1	2.5	0.1	1.5	0.1	0.5	9.0	0.7	16.4	R <sup>f</sup> 4.2	R <sup>f</sup> 28.4	0.0	10.6	R <sup>f</sup> 65.4	22.3	R <sup>f</sup> 87.8
1994	0.0	4.5	2.5	2.1	0.1	1.4	0.1	0.5	8.3	0.7	15.9	4.4	R <sup>f</sup> 26.4	0.0	7.4	R <sup>f</sup> 58.6	15.5	R <sup>f</sup> 74.2
1995	(s)	4.7	2.4	2.4	0.1	1.1	0.1	0.6	7.0	0.7	14.5	R <sup>f</sup> 4.1	R <sup>f</sup> 26.8	0.0	7.8	R <sup>f</sup> 57.8	16.3	R <sup>f</sup> 74.1
1996	0.0	5.0	4.2	2.3	0.1	R <sup>f</sup> 1.1	0.1	0.6	6.1	R <sup>f</sup> 12.9	R <sup>f</sup> 27.3	5.2	R <sup>f</sup> 30.9	0.0	8.0	R <sup>f</sup> 76.3	16.6	R <sup>f</sup> 92.9
1997	0.0	5.9	2.7	1.9	0.1	R <sup>f</sup> 1.0	0.1	0.6	5.3	R <sup>f</sup> 14.2	R <sup>f</sup> 26.0	R <sup>f</sup> 4.9	R <sup>f</sup> 30.6	0.0	8.0	R <sup>f</sup> 75.3	16.6	R <sup>f</sup> 91.9
1998	0.0	5.9	1.8	2.2	0.1	1.2	0.1	0.4	4.8	14.1	24.7	6.4	25.4	0.0	8.2	70.8	17.0	87.8
1999	0.0	6.0	1.9	2.7	0.1	0.7	0.1	0.8	4.5	13.9	24.8	11.1	27.8	1.8	8.6	80.0	16.8	96.9

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>e</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>f</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

R=Revised data.

kWh=kilowatthours. — =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 195. Transportation Energy Consumption Estimates, Selected Years 1960-1999, New Hampshire**

Year	Coal <sup>a</sup>		Natural Gas <sup>b</sup>		Petroleum						Ethanol <sup>c</sup>	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>d</sup>	
	Thousand Short Tons	Billion Cubic Feet	Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	LPG <sup>a</sup>	Lubricants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total				Thousand Barrels	Million Kilowatthours
	Thousand Barrels										Thousand Barrels	Million Kilowatthours	Net Energy	Million Kilowatthours	Total <sup>c</sup>
1960	2	0	18	209	1,151	(s)	74	4,837	49	6,338	0	0	—	0	—
1965	(s)	0	46	178	1,097	1	60	5,677	1	7,061	0	0	—	0	—
1970	(s)	0	38	319	1,053	5	55	8,038	69	9,577	0	0	—	0	—
1975	(s)	0	33	418	903	5	48	9,290	9	10,706	0	0	—	0	—
1980	0	(s)	40	687	771	74	60	9,240	49	10,921	0	0	—	0	—
1985	0	(s)	24	1,038	521	24	55	10,152	0	11,813	<sup>e</sup> 0	0	—	0	—
1990	0	(s)	21	1,267	647	15	61	11,649	83	13,743	0	0	—	0	—
1991	0	(s)	26	1,166	468	9	55	12,030	200	13,954	0	0	—	0	—
1992	0	(s)	19	1,268	378	10	56	12,012	122	13,865	0	0	—	0	—
1993	0	(s)	43	1,314	388	17	57	12,393	1	14,213	0	0	—	0	—
1994	0	1	33	1,362	342	24	60	12,702	10	14,531	0	0	—	0	—
1995	0	(s)	22	1,543	333	18	59	13,376	0	15,351	0	0	—	0	—
1996	0	(s)	20	1,473	360	15	57	13,820	5	15,749	0	0	—	0	—
1997	0	(s)	23	1,548	408	<sup>R</sup> 10	60	14,540	3	<sup>R</sup> 16,591	0	0	—	0	—
1998	0	(s)	20	2,485	609	2	63	15,001	6	18,187	0	0	—	0	—
1999	0	(s)	28	2,496	820	(s)	64	15,496	1	18,904	0	0	—	0	—

  

Trillion Btu															
1960	(s)	0.0	0.1	1.2	6.2	(s)	0.5	25.4	0.3	33.6	0.0	0.0	33.7	0.0	33.7
1965	(s)	0.0	0.2	1.0	5.9	(s)	0.4	29.8	(s)	37.3	0.0	0.0	37.3	0.0	37.3
1970	(s)	0.0	0.2	1.9	5.7	(s)	0.3	42.2	0.4	50.7	0.0	0.0	50.7	0.0	50.7
1975	(s)	0.0	0.2	2.4	4.8	(s)	0.3	48.8	0.1	56.6	0.0	0.0	56.6	0.0	56.6
1980	0.0	(s)	0.2	4.0	4.1	0.3	0.4	48.5	0.3	57.8	0.0	0.0	57.9	0.0	57.9
1985	0.0	0.1	0.1	6.0	2.8	0.1	0.3	53.3	0.0	62.7	<sup>e</sup> 0.0	0.0	<sup>e</sup> 62.8	0.0	<sup>e</sup> 62.8
1990	0.0	(s)	0.1	7.4	3.6	0.1	0.4	61.2	0.5	73.2	0.0	0.0	73.2	0.0	73.2
1991	0.0	(s)	0.1	6.8	2.6	(s)	0.3	63.2	1.3	74.3	0.0	0.0	74.4	0.0	74.4
1992	0.0	0.1	0.1	7.4	2.1	(s)	0.3	63.1	0.8	73.8	0.0	0.0	73.9	0.0	73.9
1993	0.0	0.3	0.2	7.7	2.2	0.1	0.3	65.1	(s)	75.5	0.0	0.0	75.9	0.0	75.9
1994	0.0	1.0	0.2	7.9	1.9	0.1	0.4	<sup>R</sup> 66.4	0.1	<sup>R</sup> 77.0	0.0	0.0	<sup>R</sup> 77.9	0.0	<sup>R</sup> 77.9
1995	0.0	(s)	0.1	9.0	1.9	0.1	0.4	<sup>R</sup> 69.8	0.0	<sup>R</sup> 81.2	0.0	0.0	<sup>R</sup> 81.2	0.0	<sup>R</sup> 81.2
1996	0.0	(s)	0.1	8.6	2.0	0.1	0.3	<sup>R</sup> 72.1	(s)	<sup>R</sup> 83.2	0.0	0.0	<sup>R</sup> 83.3	0.0	<sup>R</sup> 83.3
1997	0.0	(s)	0.1	9.0	2.3	(s)	0.4	<sup>R</sup> 75.8	(s)	<sup>R</sup> 87.7	0.0	0.0	<sup>R</sup> 87.7	0.0	<sup>R</sup> 87.7
1998	0.0	(s)	0.1	14.5	3.5	(s)	0.4	78.2	(s)	96.6	0.0	0.0	96.7	0.0	96.7
1999	0.0	(s)	0.1	14.5	4.6	(s)	0.4	80.8	(s)	100.5	0.0	0.0	100.5	0.0	100.5

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels. Transportation use of natural gas is gas consumed in the operation of pipelines, primarily in compressors, and, since 1990, is also gas consumed as vehicle fuel.

<sup>c</sup> Ethanol blended into motor gasoline, which is accounted for under motor gasoline, is shown separately here to display the use of renewable energy by the transportation sector and is included only once in the total.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1980 and 1981 due to the expanded coverage of renewable energy sources beginning in 1981.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

Table 196. Estimates of Energy Input at Electric Utilities, Selected Years, 1960-1999, New Hampshire

Year	Coal	Natural Gas <sup>a</sup>	Petroleum				Nuclear Electric Power	Hydroelectric Power <sup>e</sup>	Wood and Waste	Geothermal Energy	Other <sup>b,f</sup>	Total <sup>g</sup>
			Heavy Oil <sup>b,c</sup>	Light Oil <sup>b,d</sup>	Petroleum Coke <sup>b</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels				Million Kilowatthours					
1960	94	0	1,401	102	0	1,504	0	1,134	0	0	0	—
1965	358	0	1,343	98	0	1,441	0	882	0	0	0	—
1970	975	0	2,537	184	0	2,721	0	1,056	0	0	0	—
1975	972	(s)	2,279	27	0	2,306	0	1,073	0	0	0	—
1980	1,080	0	4,348	18	0	4,366	0	872	0	0	0	—
1985	1,433	0	2,332	31	0	2,363	0	1,868	0	0	0	—
1990	1,146	0	3,983	37	0	4,020	4,081	R 1,498	0	0	0	—
1991	1,242	0	2,669	35	0	2,704	6,788	R 1,546	0	0	0	—
1992	1,251	1	2,283	32	0	2,315	7,869	R 1,609	0	0	0	—
1993	1,339	(s)	2,291	46	0	2,338	9,047	R 1,849	0	0	0	—
1994	1,279	1	2,414	28	0	2,442	6,204	R 1,878	0	0	0	—
1995	1,346	2	1,768	48	0	1,816	8,379	R 1,872	0	0	0	—
1996	1,369	(s)	1,482	26	0	1,508	9,845	R 2,356	0	0	0	—
1997	1,699	1	1,809	35	0	1,843	7,979	R 2,236	0	0	0	—
1998	1,465	(s)	2,341	32	0	2,372	8,387	1,898	0	0	0	—
1999	1,341	1	2,628	35	0	2,663	8,676	1,295	0	0	0	—

  

Trillion Btu												
1960	2.4	0.0	8.8	0.6	0.0	9.4	0.0	12.2	0.0	0.0	0.0	24.0
1965	10.0	0.0	8.4	0.6	0.0	9.0	0.0	9.2	0.0	0.0	0.0	28.2
1970	26.7	0.0	16.0	1.1	0.0	17.0	0.0	11.1	0.0	0.0	0.0	54.9
1975	26.0	0.2	14.3	0.2	0.0	14.5	0.0	11.2	0.0	0.0	0.0	51.8
1980	29.0	0.0	27.3	0.1	0.0	27.4	0.0	9.1	0.0	0.0	0.0	65.5
1985	38.6	0.0	14.7	0.2	0.0	14.8	0.0	19.5	0.0	0.0	0.0	72.9
1990	30.5	0.0	25.0	0.2	0.0	25.3	43.6	R 15.6	0.0	0.0	0.0	R 115.1
1991	32.9	0.0	16.8	0.2	0.0	17.0	72.9	R 16.1	0.0	0.0	0.0	R 140.8
1992	33.2	0.6	14.4	0.2	0.0	14.5	84.0	R 16.6	0.0	0.0	0.0	R 151.7
1993	35.3	0.1	14.4	0.3	0.0	14.7	96.6	R 19.1	0.0	0.0	0.0	168.2
1994	33.3	1.3	15.2	0.2	0.0	15.3	66.2	R 19.4	0.0	0.0	0.0	R 139.0
1995	35.3	2.3	11.1	0.3	0.0	11.4	89.3	R 19.3	0.0	0.0	0.0	R 161.6
1996	36.0	(s)	9.3	0.2	0.0	9.5	104.6	R 24.4	0.0	0.0	0.0	R 178.5
1997	44.4	0.6	11.4	0.2	0.0	11.6	84.8	R 23.2	0.0	0.0	0.0	R 170.9
1998	38.5	0.2	14.7	0.2	0.0	14.9	89.1	19.6	0.0	0.0	0.0	167.2
1999	35.2	0.6	16.5	0.2	0.0	16.7	92.2	13.4	0.0	0.0	0.0	163.9

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> Prior to 1980, based on oil used in steam plants. Since 1980, heavy oil includes fuel oil nos. 4, 5, and 6 and residual fuel oils.

<sup>d</sup> Prior to 1980, based on oil used in internal combustion and gas turbine engine plants. Since 1980, light oil includes fuel oil nos. 1 and 2, kerosene, and jet fuel.

<sup>e</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>f</sup> "Other" is electricity generated for distribution from wind, photovoltaic, and solar thermal energy.

<sup>g</sup> If applicable, from 1989, includes net imports of electricity generated from nonrenewable energy sources not shown in other columns. See data in appendix Table A8.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 197. Energy Consumption Estimates by Source, Selected Years 1960-1999, New Jersey**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum											Nuclear Electric Power	Hydro-electric Power <sup>d</sup>	Wood and Waste	Other <sup>a,e</sup>	Net Inter-state Flow of Electricity/Losses <sup>f</sup>	Total <sup>g</sup>
			Asphalt & Road Oil <sup>a</sup>	Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	Kero-sene <sup>a</sup>	LPG <sup>a</sup>	Lubri-cants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Other <sup>a,c</sup>	Total						
			Thousand Barrels															Million kWh	
1960	6,424	139	4,657	1,147	46,051	2,125	2,468	3,213	1,879	48,706	42,854	R 12,834	R 165,934	0	45	—	—	4,034	—
1965	9,034	210	5,340	1,153	53,611	5,280	2,096	4,268	2,052	55,149	42,900	R 20,232	R 192,082	0	-31	—	—	5,282	—
1970	4,946	323	5,828	160	63,391	6,705	1,829	6,748	1,952	66,231	80,770	R 24,746	R 258,360	3,454	-403	—	—	5,934	—
1975	2,397	244	5,012	92	59,630	6,267	1,211	7,328	1,741	77,617	49,463	R 25,281	R 233,642	3,146	-272	—	—	70,001	—
1980	2,634	340	4,369	83	52,854	8,781	1,694	7,383	2,371	72,740	53,617	R 29,901	R 233,792	7,627	-282	—	—	74,427	—
1985	3,943	379	4,733	184	40,389	43,910	1,404	7,184	2,158	75,405	23,986	R 22,893	R 222,246	17,770	-244	—	—	68,612	—
1990	3,029	428	3,586	119	34,884	46,377	729	4,295	2,428	78,343	15,364	R 31,916	R 218,041	23,770	R <sup>h</sup> -133	—	—	R 84,169	—
1991	2,326	463	3,137	100	33,247	43,733	615	6,066	2,172	79,704	17,673	R 29,816	R 216,264	24,807	R -142	—	—	R 86,635	—
1992	2,348	546	3,378	122	33,601	46,133	820	6,594	2,214	76,633	15,949	R 31,712	R 217,158	21,595	R -124	—	—	R 98,308	—
1993	2,353	552	8,291	121	34,087	48,161	519	3,722	2,255	70,463	12,813	R 31,658	R 212,090	24,932	R -104	—	—	R 95,259	—
1994	1,969	585	5,220	158	37,272	48,376	1,504	3,827	2,357	81,556	13,603	R 33,215	R 227,086	22,129	R -146	—	—	R 102,244	—
1995	2,074	591	6,151	145	33,032	50,059	1,216	4,062	2,316	82,325	12,700	R 32,076	R 224,082	16,806	R -75	—	—	R 120,770	—
1996	2,402	603	5,373	114	35,912	43,002	841	R 3,813	2,248	86,044	9,861	R 26,011	R 213,219	11,028	R -93	—	—	R 144,278	—
1997	2,867	621	8,214	133	36,317	38,738	1,701	R 4,268	2,375	88,850	9,348	R 27,284	R 217,228	13,908	R -117	—	—	R 128,027	—
1998	2,372	582	7,620	132	35,189	37,069	1,839	3,717	2,486	91,734	9,176	25,018	213,981	27,132	-126	—	—	95,384	—
1999	2,596	617	10,741	106	37,324	36,343	1,725	7,569	2,512	91,783	9,938	25,874	223,915	28,971	-128	—	—	87,547	—

  

Trillion Btu																			
1960	168.8	144.1	30.9	5.8	268.2	11.5	14.0	12.9	11.4	255.9	269.4	R 76.3	R 956.3	0.0	0.5	20.0	0.0	13.8	R 1,303.5
1965	236.6	219.2	35.4	5.8	312.3	29.4	11.9	17.1	12.4	289.7	269.7	R 115.9	R 1,099.7	0.0	-0.3	24.0	0.0	18.0	R 1,597.2
1970	123.3	331.2	38.7	0.8	369.3	37.5	10.4	25.5	11.8	347.9	507.8	R 140.1	R 1,489.8	37.9	-4.2	30.1	0.0	20.2	R 2,028.4
1975	60.5	251.7	33.3	0.5	347.3	35.1	6.9	27.2	10.6	407.7	311.0	R 144.1	R 1,323.6	34.6	-2.8	33.8	0.0	238.8	R 1,940.2
1980	68.7	351.0	29.0	0.4	307.9	49.3	9.6	27.1	14.4	382.1	337.1	R 168.6	R 1,325.5	83.2	-2.9	R 58.4	0.0	253.9	R 2,137.9
1985	103.3	389.1	31.4	0.9	235.3	248.6	8.0	25.9	13.1	396.1	150.8	R 128.5	R 1,238.5	192.1	-2.6	R 48.8	0.0	234.1	R 2,203.4
1990	80.9	439.0	23.8	0.6	203.2	262.6	4.1	15.6	14.7	411.5	96.6	R 178.8	R 1,211.6	253.9	R <sup>h</sup> -1.4	R 23.1	R <sup>h</sup> 0.4	R 287.2	R <sup>h</sup> 2,294.6
1991	62.0	475.5	20.8	0.5	193.7	247.0	3.5	21.9	13.2	418.7	111.1	R 168.2	R 1,198.5	266.4	R -1.5	R 32.0	R 0.5	R 295.6	R 2,329.0
1992	62.8	560.5	22.4	0.6	195.7	261.2	4.7	23.9	13.4	402.6	100.3	R 177.7	R 1,202.5	230.6	R -1.3	R 35.0	R 0.5	R 335.4	R 2,426.0
1993	62.7	571.8	55.0	0.6	198.6	272.8	2.9	13.4	13.7	370.1	80.6	R 177.8	R 1,185.5	266.3	-1.1	R 37.0	R 0.5	R 325.0	R 2,447.7
1994	52.4	607.7	34.6	0.8	217.1	274.2	8.5	13.9	14.3	R 426.5	85.5	R 186.6	R 1,262.1	236.3	R -1.5	R 41.6	R 0.6	R 348.9	R 2,548.0
1995	55.0	610.9	40.8	0.7	192.4	283.8	6.9	14.7	14.0	R 429.3	79.8	R 180.3	R 1,242.9	179.1	R -0.8	R 51.7	R 0.6	R 412.1	R 2,551.5
1996	62.4	624.6	35.7	0.6	209.2	243.8	4.8	R 13.8	13.6	R 448.8	62.0	R 148.6	R 1,180.8	117.1	-1.0	R 46.2	0.6	R 492.3	R 2,523.1
1997	75.0	642.8	54.5	0.7	211.5	219.6	9.6	R 15.4	14.4	R 463.2	58.8	R 156.1	R 1,203.9	147.7	R -1.2	R 38.3	0.6	R 436.8	R 2,544.0
1998	62.2	603.9	50.6	0.7	205.0	210.2	10.4	13.4	15.1	478.1	57.7	142.6	1,183.7	288.2	-1.3	33.4	0.7	325.5	2,496.2
1999	68.2	640.9	71.3	0.5	217.4	206.1	9.8	27.4	15.2	478.3	62.5	147.1	1,235.6	307.8	-1.3	38.2	0.7	298.7	2,588.7

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.  
<sup>b</sup> Includes supplemental gaseous fuels.  
<sup>c</sup> "Other" is the subtotal of 16 petroleum products consumed in the industrial sector. See a full description in Appendix A, Section 4, "Other Petroleum Products."  
<sup>d</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.  
<sup>e</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.  
<sup>f</sup> Net interstate flow of electricity is the difference between the amount of energy in the electricity sold within a State (including associated losses) and the energy input at the electric utilities within the State. A positive number

indicates that more electricity (including associated losses) came into the State than went out of the State during the year; conversely, a negative number indicates that more electricity (including associated losses) went out of the State than came into the State.  
<sup>g</sup> From 1989, "Total" does not equal the sum of the columns. Net imports of electricity generated from nonrenewable energy sources (shown in appendix Table A8) is included in the total but not in any other columns.  
<sup>h</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.  
 kWh=kilowatthours. R=Revised data. — =Not applicable.  
 Note: Totals may not equal sum of components due to independent rounding.  
 Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.



**Table 198. Residential Energy Consumption Estimates, Selected Years 1960-1999, New Jersey**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum				Wood Thousand Cords	Geothermal	Solar <sup>c</sup>	Electricity <sup>a</sup> Million Kilowatthours	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Total						Million Kilowatthours	
			Thousand Barrels									Thousand Barrels	
1960	255	75	25,587	1,200	737	27,524	353	—	—	5,080	—	12,635	—
1965	158	114	29,038	969	672	30,679	338	—	—	7,410	—	17,692	—
1970	90	140	32,933	769	834	34,536	503	—	—	12,131	—	29,398	—
1975	47	129	30,655	431	964	32,050	550	—	—	14,495	—	34,964	—
1980	34	136	23,976	262	777	25,015	R 1,958	—	—	16,329	—	39,707	—
1985	62	151	18,071	907	918	19,896	1,331	—	—	17,177	—	40,356	—
1990	8	172	11,498	295	899	12,692	647	—	—	20,498	—	R 44,841	—
1991	7	177	11,069	329	1,108	12,505	682	—	—	21,539	—	R 46,825	—
1992	8	198	11,201	273	1,317	12,790	717	—	—	20,547	—	R 43,822	—
1993	5	196	11,535	223	1,391	13,149	R 765	—	—	22,042	—	R 46,556	—
1994	6	217	12,340	291	1,304	13,935	R 750	—	—	22,154	—	R 46,233	—
1995	4	194	11,647	236	1,548	13,431	R 833	—	—	22,470	—	R 46,848	—
1996	5	223	12,344	284	R 1,685	R 14,312	R 831	—	—	22,632	—	R 47,166	—
1997	4	217	11,723	292	R 1,394	R 13,409	R 427	—	—	22,286	—	R 46,358	—
1998	3	197	9,306	308	1,755	11,369	377	—	—	23,191	—	47,907	—
1999	3	209	9,824	270	1,876	11,970	404	—	—	24,551	—	48,103	—

**Trillion Btu**

1960	6.3	77.7	149.0	6.8	3.0	158.8	7.1	0.0	0.0	17.3	267.2	43.1	310.4
1965	3.8	119.6	169.1	5.5	2.7	177.3	6.8	0.0	0.0	25.3	332.8	60.4	393.1
1970	2.1	143.9	191.8	4.4	3.2	199.3	10.1	0.0	0.0	41.4	396.8	100.3	497.1
1975	1.1	133.4	178.6	2.4	3.6	184.6	11.0	0.0	0.0	49.5	379.5	119.3	498.8
1980	0.8	140.9	139.7	1.5	2.9	144.0	R 39.2	0.0	0.0	55.7	R 380.6	135.5	R 516.1
1985	1.4	154.3	105.3	5.1	3.3	113.7	26.6	0.0	0.0	58.6	354.6	137.7	492.3
1990	0.2	176.0	67.0	1.7	3.3	71.9	12.9	e 0.1	R e 0.4	69.9	e 331.4	153.0	R e 484.4
1991	0.2	181.1	64.5	1.9	4.0	70.3	13.6	0.1	R 0.4	73.5	R 339.2	R 159.8	R 498.9
1992	0.2	203.5	65.2	1.5	4.8	71.6	14.3	0.1	0.4	70.1	R 360.2	R 149.5	R 509.7
1993	0.1	202.6	67.2	1.3	5.0	73.5	15.3	0.1	0.4	75.2	367.2	R 158.8	526.1
1994	0.2	225.4	71.9	1.7	4.7	78.3	15.0	0.1	R 0.5	75.6	R 395.0	157.7	R 552.7
1995	0.1	201.1	67.8	1.3	5.6	74.8	R 16.7	0.1	R 0.5	76.7	R 369.9	R 159.8	R 529.7
1996	0.1	230.8	71.9	1.6	R 6.1	R 79.6	16.6	0.1	0.5	77.2	R 405.0	R 160.9	R 565.9
1997	0.1	224.5	68.3	1.7	R 5.0	R 75.0	R 8.5	0.1	0.5	76.0	R 384.8	R 158.2	R 542.9
1998	0.1	204.1	54.2	1.7	6.3	62.3	7.5	0.1	0.6	79.1	353.7	163.5	517.2
1999	0.1	217.7	57.2	1.5	6.8	65.5	8.1	0.1	0.6	83.8	375.8	164.1	539.9

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Includes small amounts of solar thermal and photovoltaic energy consumed by the commercial sector that cannot be separately identified. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 199. Commercial Energy Consumption Estimates, Selected Years 1960-1999, New Jersey**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum						Wood Thousand Cords	Geothermal	Electricity <sup>a</sup> Million Kilowatthours	Net Energy	Electrical System Energy Losses <sup>c</sup> Million Kilowatthours	Total <sup>d</sup>
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total						
			Thousand Barrels											
1960	197	10	8,640	466	130	308	7,117	16,661	7	—	4,391	—	10,922	—
1965	120	20	9,805	377	119	420	7,473	18,194	6	—	6,945	—	16,582	—
1970	61	56	11,121	299	147	613	11,415	23,595	9	—	10,799	—	26,170	—
1975	32	53	10,351	168	170	634	6,484	17,807	10	—	13,849	—	33,405	—
1980	22	60	9,167	39	137	297	10,950	20,590	47	—	16,878	—	41,041	—
1985	46	83	5,638	77	162	660	3,128	9,665	R 36	—	20,903	—	49,109	—
1990	5	116	6,916	178	159	754	1,480	9,487	R 41	—	27,201	—	R 59,504	—
1991	4	121	6,559	192	195	692	1,607	9,244	R 43	—	27,992	—	R 60,853	—
1992	7	131	6,364	389	232	613	1,371	8,970	R 47	—	27,764	—	R 59,215	—
1993	3	129	5,605	160	245	77	1,997	8,084	61	—	28,862	—	R 60,960	—
1994	4	132	4,983	615	230	84	2,109	8,022	63	—	29,727	—	R 62,038	—
1995	3	139	3,357	566	273	78	1,257	5,531	63	—	30,170	—	R 62,903	—
1996	3	150	5,015	243	R 297	77	1,303	R 6,936	68	—	30,520	—	R 63,603	—
1997	2	169	3,515	750	R 246	79	810	R 5,399	R 47	—	30,127	—	R 62,668	—
1998	2	147	3,121	1,084	310	76	520	5,112	47	—	31,489	—	65,050	—
1999	2	164	4,144	1,244	331	75	709	6,503	57	—	32,897	—	64,455	—
<b>Trillion Btu</b>														
1960	4.9	10.7	50.3	2.6	0.5	1.6	44.7	99.9	0.1	0.0	15.0	130.5	37.3	167.8
1965	2.9	21.1	57.1	2.1	0.5	2.2	47.0	108.9	0.1	0.0	23.7	156.8	56.6	213.4
1970	1.4	57.4	64.8	1.7	0.6	3.2	71.8	142.0	0.2	0.0	36.8	237.9	89.3	327.2
1975	0.7	55.0	60.3	1.0	0.6	3.3	40.8	106.0	0.2	0.0	47.3	209.2	114.0	323.1
1980	0.5	62.5	53.4	0.2	0.5	1.6	68.8	124.5	0.9	0.0	57.6	246.0	140.0	386.1
1985	1.1	85.3	32.8	0.4	0.6	3.5	19.7	57.0	R 0.7	0.0	71.3	R 215.4	167.6	R 383.0
1990	0.1	118.5	40.3	1.0	0.6	4.0	9.3	55.1	R 0.8	e 0.0	92.8	R 267.4	203.0	R 470.4
1991	0.1	124.3	38.2	1.1	0.7	3.6	10.1	53.7	R 0.9	0.0	95.5	R 274.5	R 207.6	R 482.1
1992	0.2	134.2	37.1	2.2	0.8	3.2	8.6	52.0	R 0.9	0.0	94.7	R 282.0	R 202.0	R 484.0
1993	0.1	133.6	32.6	0.9	0.9	0.4	12.6	47.4	1.2	0.0	98.5	280.8	R 208.0	488.8
1994	0.1	137.2	29.0	3.5	0.8	0.4	13.3	47.1	1.3	0.0	101.4	287.0	211.7	498.7
1995	0.1	143.7	19.6	3.2	1.0	0.4	7.9	32.1	1.3	0.0	102.9	280.1	R 214.6	R 494.7
1996	0.1	156.0	29.2	1.4	R 1.1	0.4	8.2	R 40.3	1.4	0.0	104.1	R 301.8	R 217.0	R 518.8
1997	0.1	174.6	20.5	4.3	R 0.9	0.4	5.1	R 31.1	R 0.9	0.0	102.8	R 309.6	R 213.8	523.4
1998	(s)	152.2	18.2	6.1	1.1	0.4	3.3	29.1	0.9	0.0	107.4	289.7	221.9	511.7
1999	(s)	170.2	24.1	7.1	1.2	0.4	4.5	37.2	1.1	0.0	112.2	320.9	219.9	540.8

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>d</sup> Small amounts of solar thermal and photovoltaic energy consumed in the commercial sector cannot be separately identified and are included in residential consumption.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 200. Industrial Energy Consumption Estimates, Selected Years 1960-1999, New Jersey**

Year	Coal Thousand Short Tons	Natural Gas <sup>a</sup> Billion Cubic Feet	Petroleum									Hydro-electric Power <sup>b</sup> Million kWh	Wood and Waste	Other <sup>b,d</sup>	Electricity <sup>b</sup> Million kWh	Net Energy	Electrical System Energy Losses <sup>e</sup> Million kWh	Total
			Asphalt and Road Oil <sup>b</sup>	Distillate Fuel <sup>b</sup>	Kero-sene <sup>b</sup>	LPG <sup>b</sup>	Lubri-cants <sup>b</sup>	Motor Gasoline	Residual Fuel <sup>b</sup>	Other <sup>b,c</sup>	Total							
			Thousand Barrels															
1960	2,368	28	4,657	6,719	802	2,340	1,194	612	18,822	R 12,834	R 47,980	10	—	—	8,021	—	19,952	—
1965	1,921	52	5,340	8,423	750	3,438	1,433	532	17,049	R 20,232	R 57,196	4	—	—	11,519	—	27,503	—
1970	740	80	5,828	9,560	761	5,665	1,379	401	22,609	R 24,746	R 70,948	4	—	—	15,215	—	36,872	—
1975	67	52	5,012	7,963	612	6,096	1,136	233	14,809	R 25,281	R 61,142	4	—	—	14,562	—	35,126	—
1980	33	63	4,369	7,339	1,393	6,429	1,658	147	17,694	R 29,901	R 68,931	3	—	—	16,345	—	39,745	—
1985	359	81	4,733	2,539	420	5,994	1,509	462	4,851	R 22,893	R 43,401	3	—	—	15,657	—	36,784	—
1990	276	90	3,586	2,907	256	3,163	1,698	460	3,673	R 31,916	R 47,658	R f 17	—	—	15,041	—	R 32,903	—
1991	234	101	3,137	2,529	95	4,693	1,519	420	3,146	R 29,816	R 45,356	R 14	—	—	15,031	—	R 32,677	—
1992	215	175	3,378	2,001	158	4,969	1,549	423	3,114	R 31,712	R 47,305	R 15	—	—	14,687	—	R 31,325	—
1993	222	189	8,291	2,074	136	2,005	1,577	542	2,615	R 31,658	R 48,900	R 20	—	—	14,596	—	R 30,829	—
1994	72	191	5,220	2,228	597	2,157	1,648	556	2,527	R 33,215	R 48,149	R 21	—	—	14,251	—	R 29,741	—
1995	13	209	6,151	1,931	414	2,172	1,620	602	1,930	R 32,076	R 46,897	R 20	—	—	13,989	—	R 29,166	—
1996	7	201	5,373	1,954	314	R 1,773	1,572	597	1,689	R 26,011	R 39,284	R 21	—	—	13,603	—	R 28,348	—
1997	10	202	8,214	1,846	658	R 2,523	1,661	628	1,384	R 27,284	R 44,198	R 12	—	—	13,369	—	R 27,809	—
1998	10	205	7,620	2,041	447	1,599	1,739	509	909	25,018	39,882	21	—	—	13,339	—	27,556	—
1999	8	207	10,741	2,088	211	5,352	1,757	242	760	25,874	47,026	17	—	—	13,121	—	25,709	—

  

Trillion Btu																		
1960	61.2	28.7	30.9	39.1	4.5	9.4	7.2	3.2	118.3	R 76.3	R 289.1	0.1	12.8	0.0	27.4	R 419.3	68.1	R 487.4
1965	49.0	54.6	35.4	49.1	4.3	13.8	8.7	2.8	107.2	R 115.9	R 337.1	(s)	17.1	0.0	39.3	R 497.2	93.8	R 591.1
1970	18.6	81.9	38.7	55.7	4.3	21.4	8.4	2.1	142.1	R 140.1	R 412.8	(s)	19.9	0.0	51.9	R 585.2	125.8	R 711.0
1975	1.6	54.0	33.3	46.4	3.5	22.6	6.9	1.2	93.1	R 144.1	R 351.1	(s)	22.6	0.0	49.7	R 478.9	119.9	R 598.7
1980	0.8	64.9	29.0	42.7	7.9	23.6	10.1	0.8	111.2	R 168.6	R 394.0	(s)	R 18.3	0.0	55.8	R 533.8	135.6	R 669.4
1985	8.8	83.0	31.4	14.8	2.4	21.6	9.2	2.4	30.5	R 128.5	R 240.8	(s)	R 21.5	0.0	53.4	R 407.5	125.5	R 533.0
1990	7.0	92.7	23.8	16.9	1.5	11.5	10.3	2.4	23.1	R 178.8	R 268.2	R f 0.2	R 9.3	f 0.0	51.3	R f 428.7	R 112.3	R f 541.0
1991	5.9	103.3	20.8	14.7	0.5	17.0	9.2	2.2	19.8	R 168.2	R 252.4	R 0.1	R 17.5	0.0	51.3	R 430.6	R 111.5	R 542.1
1992	5.4	179.0	22.4	11.7	0.9	18.0	9.4	2.2	19.6	R 177.7	R 261.9	0.2	R 19.7	0.0	50.1	R 516.3	R 106.9	R 623.2
1993	5.6	195.7	55.0	12.1	0.8	7.2	9.6	2.8	16.4	R 177.8	R 281.7	0.2	R 20.4	0.0	49.8	R 553.5	105.2	R 658.7
1994	1.8	198.3	34.6	13.0	3.4	7.8	10.0	2.9	15.9	R 186.6	R 274.2	0.2	R 25.3	0.0	48.6	R 548.6	101.5	R 650.0
1995	0.3	216.2	40.8	11.2	2.3	7.9	9.8	R 3.1	12.1	R 180.3	R 267.6	R 0.2	R 33.8	0.0	47.7	R 565.8	R 99.5	R 665.3
1996	0.2	208.3	35.7	11.4	1.8	6.4	9.5	3.1	10.6	R 148.6	R 227.1	0.2	R 28.2	0.0	46.4	R 510.4	R 96.7	R 607.1
1997	0.3	209.5	54.5	10.8	3.7	R 9.1	10.1	3.3	8.7	R 156.1	R 256.2	R 0.1	R 28.9	0.0	45.6	R 540.6	R 94.9	R 635.5
1998	0.2	212.5	50.6	11.9	2.5	5.8	10.5	2.7	5.7	142.6	232.3	0.2	24.9	0.0	45.5	515.6	94.0	609.7
1999	0.2	215.1	71.3	12.2	1.2	19.4	10.7	1.3	4.8	147.1	267.8	0.2	29.0	0.0	44.8	557.0	87.7	644.7

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>e</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>f</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

R=Revised data.

kWh=kilowatthours. — =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 201. Transportation Energy Consumption Estimates, Selected Years 1960-1999, New Jersey**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum								Ethanol <sup>c</sup>	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total <sup>c</sup>
			Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	LPG <sup>a</sup>	Lubricants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total				Million Kilowatthours	
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels								Thousand Barrels	Million Kilowatthours	Million Kilowatthours	Total <sup>c</sup>	
1960	40	1	1,147	4,748	2,125	6	685	47,786	5,754	62,252	0	4	—	9	—
1965	6	(s)	1,153	5,964	5,280	40	619	54,198	6,431	73,684	0	4	—	10	—
1970	1	1	160	8,558	6,705	102	574	65,217	9,081	90,396	0	39	—	95	—
1975	(s)	(s)	92	8,907	5,777	98	605	76,750	4,246	96,475	0	43	—	105	—
1980	0	(s)	83	10,243	8,088	40	713	72,296	12,053	103,516	0	33	—	80	—
1985	0	2	184	13,470	43,910	111	649	74,283	11,010	143,615	<sup>e</sup> 0	95	—	224	—
1990	0	3	119	12,950	46,377	75	730	77,129	7,374	144,754	<sup>R</sup> 0	117	—	256	—
1991	0	3	100	12,515	43,733	69	653	78,592	10,203	145,866	<sup>R</sup> 0	120	—	261	—
1992	0	4	122	13,718	46,133	76	666	75,597	9,688	146,000	<sup>R</sup> 0	124	—	264	—
1993	0	3	121	14,486	48,161	80	678	69,845	6,492	139,863	<sup>R</sup> 27	121	—	256	—
1994	0	3	158	17,082	48,376	135	708	80,915	6,376	153,751	<sup>R</sup> 95	126	—	262	—
1995	0	2	145	15,732	50,059	69	696	81,644	8,174	156,519	<sup>R</sup> 292	125	—	<sup>R</sup> 261	—
1996	0	3	114	16,176	43,002	<sup>R</sup> 58	676	85,370	6,111	<sup>R</sup> 151,506	<sup>R</sup> 246	135	—	281	—
1997	0	3	133	18,882	38,738	<sup>R</sup> 106	714	88,143	6,802	<sup>R</sup> 153,517	<sup>R</sup> 279	132	—	274	—
1998	0	3	132	20,302	37,069	53	747	91,149	7,080	156,532	219	143	—	295	—
1999	0	4	106	20,755	36,343	10	755	91,466	7,778	157,212	187	134	—	263	—
<b>Trillion Btu</b>															
1960	1.0	0.6	5.8	27.7	11.5	(s)	4.2	251.0	36.2	336.3	0.0	(s)	337.9	(s)	338.0
1965	0.2	0.5	5.8	34.7	29.4	0.2	3.8	284.7	40.4	399.0	0.0	(s)	399.6	(s)	399.7
1970	(s)	1.0	0.8	49.8	37.5	0.4	3.5	342.6	57.1	491.7	0.0	0.1	492.8	0.3	493.1
1975	(s)	0.4	0.5	51.9	32.3	0.4	3.7	403.2	26.7	518.6	0.0	0.1	519.1	0.4	519.5
1980	0.0	0.5	0.4	59.7	45.4	0.1	4.3	379.8	75.8	565.5	0.0	0.1	566.1	0.3	566.3
1985	0.0	2.3	0.9	78.5	248.6	0.4	3.9	390.2	69.2	791.7	<sup>e</sup> 0.0	0.3	<sup>e</sup> 794.3	0.8	<sup>e</sup> 795.1
1990	0.0	2.7	0.6	75.4	262.6	0.3	4.4	405.2	46.4	794.9	<sup>R</sup> 0.0	0.4	797.9	0.9	798.8
1991	0.0	3.0	0.5	72.9	247.0	0.3	4.0	412.8	64.1	801.6	<sup>R</sup> 0.0	0.4	805.0	0.9	805.9
1992	0.0	3.7	0.6	79.9	261.2	0.3	4.0	397.1	60.9	804.0	<sup>R</sup> 0.0	0.4	808.1	0.9	809.0
1993	0.0	3.0	0.6	84.4	272.8	0.3	4.1	366.9	40.8	769.9	0.1	0.4	773.3	0.9	774.2
1994	0.0	2.6	0.8	99.5	274.2	0.5	4.3	<sup>R</sup> 423.2	40.1	<sup>R</sup> 842.6	0.3	0.4	<sup>R</sup> 845.6	0.9	<sup>R</sup> 846.5
1995	0.0	2.6	0.7	91.6	283.8	0.2	4.2	<sup>R</sup> 425.8	51.4	<sup>R</sup> 857.8	<sup>R</sup> 1.0	0.4	<sup>R</sup> 860.8	0.9	<sup>R</sup> 861.7
1996	0.0	3.2	0.6	94.2	243.8	0.2	4.1	<sup>R</sup> 445.3	38.4	<sup>R</sup> 826.6	<sup>R</sup> 0.9	0.5	<sup>R</sup> 830.3	1.0	<sup>R</sup> 831.3
1997	0.0	3.5	0.7	110.0	219.6	<sup>R</sup> 0.4	4.3	<sup>R</sup> 459.5	42.8	<sup>R</sup> 837.3	<sup>R</sup> 1.0	0.5	<sup>R</sup> 841.2	0.9	<sup>R</sup> 842.2
1998	0.0	2.8	0.7	118.3	210.2	0.2	4.5	475.1	44.5	853.4	0.8	0.5	856.7	1.0	857.7
1999	0.0	4.3	0.5	120.9	206.1	(s)	4.6	476.6	48.9	857.6	0.7	0.5	862.4	0.9	863.3

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels. Transportation use of natural gas is gas consumed in the operation of pipelines, primarily in compressors, and, since 1990, is also gas consumed as vehicle fuel.

<sup>c</sup> Ethanol blended into motor gasoline, which is accounted for under motor gasoline, is shown separately here to display the use of renewable energy by the transportation sector and is included only once in the total.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1980 and 1981 due to the expanded coverage of renewable energy sources beginning in 1981.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

Table 202. Estimates of Energy Input at Electric Utilities, Selected Years, 1960-1999, New Jersey

Year	Coal	Natural Gas <sup>a</sup>	Petroleum				Nuclear Electric Power	Hydroelectric Power <sup>e</sup>	Wood and Waste	Geothermal Energy	Other <sup>b,f</sup>	Total <sup>g</sup>
			Heavy Oil <sup>b,c</sup>	Light Oil <sup>b,d</sup>	Petroleum Coke <sup>b</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels				Million Kilowatthours					
1960	3,565	25	11,160	357	0	11,518	0	35	0	0	0	—
1965	6,829	22	11,947	382	0	12,329	0	-35	0	0	0	—
1970	4,054	46	37,665	1,220	0	38,885	3,454	-407	0	0	0	—
1975	2,250	9	23,924	2,244	0	26,168	3,146	-276	0	0	0	—
1980	2,545	80	12,919	2,821	0	15,740	7,627	-286	0	0	0	—
1985	3,476	61	4,997	671	0	5,668	17,770	-247	0	0	0	—
1990	2,740	48	2,836	613	0	3,450	23,770	-150	0	0	0	—
1991	2,081	62	2,717	576	0	3,293	24,807	-155	0	0	0	—
1992	2,118	39	1,775	317	0	2,092	21,595	-138	0	0	0	—
1993	2,123	36	1,708	387	0	2,095	24,932	-123	0	0	0	—
1994	1,887	43	2,590	639	0	3,229	22,129	-167	0	0	0	—
1995	2,054	46	1,339	366	0	1,704	16,806	-95	0	0	0	—
1996	2,387	26	759	423	0	1,182	11,028	-114	0	0	0	—
1997	2,851	30	352	352	0	705	13,908	-130	0	0	0	—
1998	2,357	31	668	418	0	1,085	27,132	-146	0	0	0	—
1999	2,583	33	691	513	0	1,205	28,971	-145	0	0	0	—

Trillion Btu

1960	95.4	26.4	70.2	2.1	0.0	72.2	0.0	0.4	0.0	0.0	0.0	194.4
1965	180.7	23.4	75.1	2.2	0.0	77.3	0.0	-0.4	0.0	0.0	0.0	281.1
1970	101.1	47.1	236.8	7.1	0.0	243.9	37.9	-4.3	0.0	0.0	0.0	425.8
1975	57.2	8.8	150.4	13.0	0.0	163.4	34.6	-2.9	0.0	0.0	0.0	261.2
1980	66.6	82.2	81.2	16.3	0.0	97.5	83.2	-3.0	0.0	0.0	0.0	326.6
1985	92.0	64.2	31.4	3.9	0.0	35.3	192.1	-2.6	0.0	0.0	0.0	381.1
1990	73.6	49.1	17.8	3.6	0.0	21.4	253.9	-1.6	0.0	0.0	0.0	396.4
1991	55.8	63.9	17.1	3.4	0.0	20.4	266.4	-1.6	0.0	0.0	0.0	404.9
1992	57.0	40.1	11.2	1.8	0.0	13.0	230.6	-1.4	0.0	0.0	0.0	339.3
1993	56.9	36.8	10.7	2.3	0.0	13.0	266.3	-1.3	0.0	0.0	0.0	371.8
1994	50.4	44.1	16.3	3.7	0.0	20.0	236.3	-1.7	0.0	0.0	0.0	349.0
1995	54.6	47.3	8.4	2.1	0.0	10.5	179.1	-1.0	0.0	0.0	0.0	290.6
1996	62.0	26.3	4.8	2.5	0.0	7.2	117.1	-1.2	0.0	0.0	0.0	211.6
1997	74.6	30.6	2.2	2.1	0.0	4.3	147.7	-1.3	0.0	0.0	0.0	255.9
1998	61.8	32.4	4.2	2.4	0.0	6.6	288.2	-1.5	0.0	0.0	0.0	387.6
1999	67.9	33.7	4.3	3.0	0.0	7.3	307.8	-1.5	0.0	0.0	0.0	415.2

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> Prior to 1980, based on oil used in steam plants. Since 1980, heavy oil includes fuel oil nos. 4, 5, and 6 and residual fuel oils.

<sup>d</sup> Prior to 1980, based on oil used in internal combustion and gas turbine engine plants. Since 1980, light oil includes fuel oil nos. 1 and 2, kerosene, and jet fuel.

<sup>e</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of

imports of electricity that is derived from hydroelectric power.

<sup>f</sup> "Other" is electricity generated for distribution from wind, photovoltaic, and solar thermal energy.

<sup>g</sup> If applicable, from 1989, includes net imports of electricity generated from nonrenewable energy sources not shown in other columns. See data in appendix Table A8.

— =Not applicable.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 203. Energy Consumption Estimates by Source, Selected Years 1960-1999, New Mexico**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum											Nuclear Electric Power	Hydro-electric Power <sup>d</sup>	Wood and Waste	Other <sup>a,e</sup>	Net Interstate Flow of Electricity/Losses <sup>f</sup>	Total <sup>g</sup>
			Asphalt & Road Oil <sup>a</sup>	Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	Kero-sene <sup>a</sup>	LPG <sup>a</sup>	Lubri-cants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Other <sup>a,c</sup>	Total						
			Thousand Barrels															Million kWh	
1960	174	200	964	201	3,067	2,186	485	3,014	226	9,555	191	R 437	R 20,325	0	69	—	—	951	—
1965	2,450	202	1,388	239	3,895	2,530	376	3,334	237	10,806	699	R 624	R 24,127	0	43	—	—	-14,477	—
1970	5,529	270	1,208	111	5,410	3,110	994	4,413	270	13,146	220	R 717	R 29,601	0	66	—	—	-27,673	—
1975	7,425	240	1,632	81	6,717	2,667	654	3,865	317	16,493	3,046	R 1,482	R 36,955	0	63	—	—	-39,258	—
1980	11,458	222	1,138	167	7,967	2,673	1,339	4,710	332	16,913	1,033	R 1,664	R 37,937	0	94	—	—	-46,980	—
1985	14,589	151	1,501	95	8,517	2,873	191	3,002	302	17,905	825	R 987	R 36,196	0	128	—	—	-47,212	—
1990	15,111	239	1,451	86	9,127	2,912	56	7,943	340	18,647	149	R 1,574	R 42,284	0	R h 205	—	—	R -44,906	—
1991	12,858	219	1,525	94	9,435	2,441	65	11,735	304	19,148	129	R 1,796	R 46,670	0	R 237	—	—	R -32,774	—
1992	14,832	203	1,874	94	9,980	2,834	23	10,457	310	19,432	130	R 2,091	R 47,223	0	R 255	—	—	R -40,446	—
1993	15,012	216	2,438	71	8,234	3,303	17	9,616	315	20,394	184	R 2,008	R 46,580	0	R 294	—	—	R -41,562	—
1994	15,374	221	2,114	62	7,278	2,576	11	8,767	330	20,806	179	R 2,097	R 44,220	0	R 213	—	—	R -42,500	—
1995	15,221	215	1,859	53	4,739	2,222	16	8,191	324	21,014	182	R 2,003	R 40,603	0	R 264	—	—	R -39,893	—
1996	15,297	222	1,648	R 101	9,960	1,615	17	R 2,015	314	20,247	198	R 4,490	R 40,605	0	R 211	—	—	R -37,944	—
1997	15,887	R 250	1,233	R 102	10,247	1,751	14	R 2,667	332	21,505	162	R 4,723	R 42,736	0	R 259	—	—	R -40,819	—
1998	15,963	239	2,048	61	11,047	2,196	17	2,801	348	21,918	144	4,420	45,001	0	236	—	—	-41,188	—
1999	16,303	229	1,902	70	12,050	2,723	47	4,115	351	22,189	169	4,418	48,035	0	243	—	—	-44,880	—

  

Trillion Btu																			
1960	4.1	207.3	6.4	1.0	17.9	11.7	2.7	12.1	1.4	50.2	1.2	R 2.6	R 107.2	0.0	0.7	6.6	0.0	3.2	R 329.2
1965	44.3	224.3	9.2	1.2	22.7	13.7	2.1	13.4	1.4	56.8	4.4	R 3.7	R 128.6	0.0	0.4	5.6	0.0	-49.4	R 353.8
1970	99.4	292.5	8.0	0.6	31.5	17.0	5.6	16.7	1.6	69.1	1.4	R 4.3	R 155.8	0.0	0.7	4.9	0.0	-94.4	R 458.8
1975	132.5	255.6	10.8	0.4	39.1	14.6	3.7	14.4	1.9	86.6	19.1	R 8.9	R 199.7	0.0	0.7	5.3	0.0	-133.9	R 459.9
1980	202.9	231.3	7.6	0.8	46.4	14.6	7.6	17.3	2.0	88.8	6.5	R 10.0	R 201.6	0.0	1.0	5.2	0.0	-160.3	R 481.7
1985	268.4	162.3	10.0	0.5	49.6	15.7	1.1	10.8	1.8	94.1	5.2	R 6.1	R 194.8	0.0	1.3	R 7.2	0.0	-161.1	473.0
1990	275.7	251.4	9.6	0.4	53.2	16.0	0.3	28.8	2.1	98.0	0.9	R 9.4	R 218.7	0.0	h 2.1	R 3.8	R h 0.7	-153.2	R h 599.2
1991	234.0	227.3	10.1	0.5	55.0	13.5	0.4	42.4	1.8	100.6	0.8	R 10.7	R 235.8	0.0	2.5	R 3.9	R 0.7	R -111.8	R 592.3
1992	267.5	211.0	12.4	0.5	58.1	15.6	0.1	37.9	1.9	102.1	0.8	R 12.4	R 241.8	0.0	2.6	R 4.2	R 0.7	R -138.0	R 589.8
1993	270.2	224.9	16.2	0.4	48.0	18.3	0.1	34.7	1.9	107.1	1.2	R 11.9	R 239.7	0.0	3.0	R 4.0	R 0.7	-141.8	R 600.8
1994	278.3	221.4	14.0	0.3	42.4	14.6	0.1	31.9	2.0	R 108.8	1.1	R 12.4	R 227.6	0.0	2.2	R 4.0	R 0.8	-145.0	R 589.3
1995	275.3	219.4	12.3	0.3	27.6	12.6	0.1	29.7	2.0	R 109.6	1.1	R 11.9	R 207.1	0.0	2.7	R 4.4	R 0.8	R -136.1	R 573.6
1996	279.2	228.2	10.9	0.5	58.0	9.2	0.1	R 7.3	1.9	R 105.6	1.2	R 25.3	R 220.1	0.0	2.2	R 4.4	R 0.8	R -129.5	R 605.3
1997	288.4	R 254.4	8.2	0.5	59.7	9.9	0.1	R 9.6	2.0	R 112.1	1.0	R 26.7	R 229.8	0.0	2.7	R 4.6	0.7	R -139.3	R 641.4
1998	290.2	235.1	13.6	0.3	64.3	12.5	0.1	10.1	2.1	114.2	0.9	24.9	243.1	0.0	2.4	3.8	0.7	-140.5	634.9
1999	298.0	224.7	12.6	0.4	70.2	15.4	0.3	14.9	2.1	115.6	1.1	24.8	257.4	0.0	2.5	4.4	1.2	-153.1	635.0

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products consumed in the industrial sector. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>e</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>f</sup> Net interstate flow of electricity is the difference between the amount of energy in the electricity sold within a State (including associated losses) and the energy input at the electric utilities within the State. A positive number

indicates that more electricity (including associated losses) came into the State than went out of the State during the year; conversely, a negative number indicates that more electricity (including associated losses) went out of the State than came into the State.

<sup>g</sup> From 1989, "Total" does not equal the sum of the columns. Net imports of electricity generated from nonrenewable energy sources (shown in appendix Table A8) is included in the total but not in any other columns.

<sup>h</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

kWh=kilowatthours. R=Revised data. — =Not applicable.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 204. Residential Energy Consumption Estimates, Selected Years 1960-1999, New Mexico**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum				Wood Thousand Cords	Geothermal	Solar <sup>c</sup>	Electricity <sup>a</sup> Million Kilowatthours	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Total						Million Kilowatthours	
			Thousand Barrels									Million Kilowatthours	
1960	15	20	3	17	1,441	1,461	287	—	—	872	—	2,169	—
1965	4	24	2	14	1,518	1,534	234	—	—	988	—	2,360	—
1970	(s)	31	3	29	2,004	2,036	202	—	—	1,475	—	3,574	—
1975	0	28	5	27	1,270	1,301	210	—	—	1,957	—	4,720	—
1980	15	29	11	132	1,209	1,352	196	—	—	2,453	—	5,965	—
1985	3	22	21	41	2,091	2,153	281	—	—	3,098	—	7,279	—
1990	2	28	12	4	1,705	1,721	157	—	—	3,566	—	R 7,800	—
1991	3	30	9	6	1,349	1,364	165	—	—	3,665	—	R 7,968	—
1992	3	31	14	5	1,096	1,115	174	—	—	3,791	—	R 8,086	—
1993	4	32	6	4	808	818	163	—	—	3,884	—	R 8,204	—
1994	3	31	8	3	772	784	160	—	—	4,080	—	R 8,514	—
1995	3	29	2	6	860	868	178	—	—	4,124	—	R 8,598	—
1996	3	34	2	7	853	862	R 177	—	—	4,328	—	R 9,021	—
1997	3	37	2	5	R 1,085	R 1,093	R 182	—	—	4,502	—	R 9,365	—
1998	3	36	1	6	1,593	1,600	160	—	—	4,642	—	9,589	—
1999	2	36	20	23	2,045	2,088	172	—	—	4,649	—	9,109	—
<b>Trillion Btu</b>													
1960	0.3	21.1	(s)	0.1	5.8	5.9	5.7	0.0	0.0	3.0	36.0	7.4	43.4
1965	0.1	26.9	(s)	0.1	6.1	6.2	4.7	0.0	0.0	3.4	41.2	8.1	49.2
1970	(s)	33.3	(s)	0.2	7.6	7.8	4.0	0.0	0.0	5.0	50.2	12.2	62.4
1975	0.0	29.9	(s)	0.2	4.7	4.9	4.2	0.0	0.0	6.7	45.7	16.1	61.8
1980	0.3	29.9	0.1	0.7	4.4	5.3	3.9	0.0	0.0	8.4	47.8	20.4	68.1
1985	0.1	23.9	0.1	0.2	7.5	7.9	5.6	0.0	0.0	10.6	48.0	24.8	72.9
1990	(s)	29.7	0.1	(s)	6.2	6.3	3.1	e (s)	R e 0.6	12.2	R e 51.9	26.6	e 78.5
1991	0.1	31.0	(s)	(s)	4.9	5.0	3.3	(s)	R 0.6	12.5	52.4	27.2	79.6
1992	0.1	32.8	0.1	(s)	4.0	4.1	3.5	(s)	R 0.6	12.9	53.9	27.6	81.5
1993	0.1	33.2	(s)	(s)	2.9	3.0	3.3	(s)	R 0.6	13.3	R 53.4	28.0	R 81.4
1994	0.1	30.9	(s)	(s)	2.8	2.9	3.2	(s)	R 0.6	13.9	51.5	29.0	R 80.6
1995	0.1	29.4	(s)	(s)	3.1	3.2	3.6	(s)	R 0.6	14.1	R 50.8	29.3	R 80.2
1996	0.1	34.8	(s)	(s)	3.1	3.1	R 3.5	(s)	R 0.6	14.8	R 56.9	R 30.8	R 87.6
1997	0.1	R 37.3	(s)	(s)	R 3.9	R 4.0	R 3.6	(s)	R 0.6	15.4	R 60.9	R 32.0	R 92.9
1998	0.1	35.0	(s)	(s)	5.8	5.8	3.2	(s)	0.5	15.8	60.5	32.7	93.2
1999	(s)	34.6	0.1	0.1	7.4	7.6	3.4	(s)	0.5	15.9	62.1	31.1	93.2

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Includes small amounts of solar thermal and photovoltaic energy consumed by the commercial sector that cannot be separately identified. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 205. Commercial Energy Consumption Estimates, Selected Years 1960-1999, New Mexico**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum						Wood	Geothermal	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>c</sup>	Total <sup>d</sup>
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels						Thousand Cords	Million Kilowatthours	Million Kilowatthours			
1960	27	9	107	4	254	46	0	412	5	—	963	—	2,395	—
1965	7	13	65	4	268	54	0	391	4	—	1,485	—	3,547	—
1970	1	33	114	8	354	70	0	545	4	—	2,216	—	5,371	—
1975	0	23	179	7	224	91	0	501	4	—	2,743	—	6,618	—
1980	29	25	133	659	213	108	0	1,113	5	—	3,380	—	8,219	—
1985	5	17	452	61	369	113	4	999	R 7	—	4,664	—	10,958	—
1990	3	24	627	15	301	127	0	1,069	R 10	—	5,842	—	R 12,781	—
1991	5	25	462	20	238	113	0	833	R 10	—	5,872	—	R 12,766	—
1992	6	28	241	9	193	100	0	543	R 11	—	6,031	—	R 12,864	—
1993	6	28	339	6	143	18	0	506	13	—	6,226	—	R 13,151	—
1994	6	25	212	3	136	18	0	369	13	—	6,595	—	R 13,763	—
1995	5	24	200	4	152	18	0	374	13	—	6,641	—	R 13,846	—
1996	5	26	154	1	150	18	(s)	324	15	—	6,924	—	R 14,430	—
1997	5	R 27	120	3	R 192	18	0	R 333	R 20	—	6,839	—	R 14,226	—
1998	6	27	95	3	281	18	0	397	20	—	7,346	—	15,175	—
1999	4	27	308	6	361	18	0	694	24	—	7,435	—	14,567	—

  

Trillion Btu														
1960	0.6	9.3	0.6	(s)	1.0	0.2	0.0	1.9	0.1	0.0	3.3	15.3	8.2	23.4
1965	0.2	13.9	0.4	(s)	1.1	0.3	0.0	1.8	0.1	0.0	5.1	21.0	12.1	33.1
1970	(s)	35.8	0.7	(s)	1.3	0.4	0.0	2.4	0.1	0.0	7.6	45.8	18.3	64.2
1975	0.0	24.5	1.0	(s)	0.8	0.5	0.0	2.4	0.1	0.0	9.4	36.4	22.6	58.9
1980	0.6	25.7	0.8	3.7	0.8	0.6	0.0	5.9	0.1	0.0	11.5	43.7	28.0	71.8
1985	0.1	18.2	2.6	0.3	1.3	0.6	(s)	4.9	R 0.1	0.0	15.9	R 39.3	37.4	R 76.7
1990	0.1	25.0	3.7	0.1	1.1	0.7	0.0	5.5	R 0.2	e (s)	19.9	R e 50.8	43.6	R e 94.4
1991	0.1	26.1	2.7	0.1	0.9	0.6	0.0	4.3	R 0.2	(s)	20.0	R 50.7	43.6	R 94.3
1992	0.1	29.1	1.4	(s)	0.7	0.5	0.0	2.7	R 0.2	(s)	20.6	R 52.7	R 43.9	R 96.6
1993	0.1	29.1	2.0	(s)	0.5	0.1	0.0	2.6	0.3	(s)	21.2	53.4	44.9	R 98.2
1994	0.1	25.0	1.2	(s)	0.5	0.1	0.0	1.8	0.3	(s)	22.5	49.7	47.0	96.7
1995	0.1	24.4	1.2	(s)	0.6	0.1	0.0	1.8	0.3	(s)	22.7	49.3	47.2	R 96.6
1996	0.1	27.3	0.9	(s)	0.5	0.1	(s)	1.5	0.3	(s)	23.6	52.9	49.2	102.1
1997	0.1	R 27.9	0.7	(s)	R 0.7	0.1	0.0	R 1.5	R 0.4	(s)	23.3	R 53.3	48.5	R 101.8
1998	0.1	26.6	0.6	(s)	1.0	0.1	0.0	1.7	0.4	(s)	25.1	53.9	51.8	105.6
1999	0.1	26.6	1.8	(s)	1.3	0.1	0.0	3.2	0.5	0.1	25.4	55.8	49.7	105.6

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>d</sup> Small amounts of solar thermal and photovoltaic energy consumed in the commercial sector cannot be separately identified and are included in residential consumption.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.



**Table 206. Industrial Energy Consumption Estimates, Selected Years 1960-1999, New Mexico**

Year	Coal Thousand Short Tons	Natural Gas <sup>a</sup> Billion Cubic Feet	Petroleum									Hydro-electric Power <sup>b</sup> Million kWh	Wood and Waste	Other <sup>b,d</sup>	Electricity <sup>b</sup> Million kWh	Net Energy	Electrical System Energy Losses <sup>e</sup> Million kWh	Total
			Asphalt and Road Oil <sup>b</sup>	Distillate Fuel <sup>b</sup>	Kero-sene <sup>b</sup>	LPG <sup>b</sup>	Lubri-cants <sup>b</sup>	Motor Gasoline	Residual Fuel <sup>b</sup>	Other <sup>b,c</sup>	Total							
			Thousand Barrels															
1960	105	120	964	1,028	463	1,194	67	295	59	R 437	R 4,508	0	—	—	1,548	—	3,851	—
1965	22	97	1,388	1,206	358	1,345	72	241	621	R 624	R 5,855	0	—	—	1,299	—	3,103	—
1970	11	121	1,208	2,127	957	1,813	104	192	123	R 717	R 7,242	0	—	—	1,911	—	4,632	—
1975	0	95	1,632	2,299	620	2,160	120	145	1,342	R 1,482	R 9,800	0	—	—	1,960	—	4,728	—
1980	8	74	1,138	2,196	548	3,260	118	84	858	R 1,664	R 9,866	0	—	—	2,945	—	7,161	—
1985	83	58	1,501	3,669	89	447	108	361	781	R 987	R 7,942	0	—	—	4,111	—	9,658	—
1990	41	85	1,451	2,187	37	5,819	121	330	117	R 1,574	R 11,637	f 0	—	—	4,413	—	R 9,654	—
1991	41	64	1,525	2,366	39	10,067	108	361	119	R 1,796	R 16,379	0	—	—	4,546	—	R 9,884	—
1992	48	71	1,874	1,911	10	9,068	111	328	128	R 2,091	R 15,519	0	—	—	4,609	—	R 9,830	—
1993	60	67	2,438	1,515	7	8,568	113	561	182	R 2,008	R 15,393	0	—	—	4,816	—	R 10,172	—
1994	68	74	2,114	1,235	5	7,715	118	600	179	R 2,097	R 14,063	0	—	—	5,184	—	R 10,819	—
1995	76	74	1,859	1,577	7	7,085	116	653	181	R 2,003	R 13,481	0	—	—	5,651	—	R 11,781	—
1996	74	105	1,648	1,776	10	R 926	112	658	198	R 4,490	R 9,819	0	—	—	5,921	—	R 12,339	—
1997	77	R 90	1,233	1,484	6	R 1,316	119	693	161	R 4,723	R 9,734	0	—	—	6,187	—	R 12,869	—
1998	71	85	2,048	1,302	9	927	124	497	144	4,420	9,471	0	—	—	6,186	—	12,778	—
1999	73	82	1,902	2,123	18	1,692	125	342	169	4,418	10,791	0	—	—	5,957	—	11,672	—
<b>Trillion Btu</b>																		
1960	2.4	124.5	6.4	6.0	2.6	4.8	0.4	1.6	0.4	R 2.6	R 24.8	0.0	0.8	0.0	5.3	R 157.7	13.1	R 170.8
1965	0.5	107.1	9.2	7.0	2.0	5.4	0.4	1.3	3.9	R 3.7	R 33.0	0.0	0.9	0.0	4.4	R 145.9	10.6	R 156.5
1970	0.2	131.2	8.0	12.4	5.4	6.8	0.6	1.0	0.8	R 4.3	R 39.4	0.0	0.7	0.0	6.5	R 178.1	15.8	R 193.9
1975	0.0	102.6	10.8	13.4	3.5	8.0	0.7	0.8	8.4	R 8.9	R 54.6	0.0	1.1	0.0	6.7	R 164.9	16.1	R 181.1
1980	0.2	77.6	7.6	12.8	3.1	12.0	0.7	0.4	5.4	R 10.0	R 52.0	0.0	1.2	0.0	10.0	R 141.0	24.4	R 165.5
1985	1.8	63.5	10.0	21.4	0.5	1.6	0.7	1.9	4.9	R 6.1	R 47.0	0.0	1.4	0.0	14.0	R 127.8	33.0	R 160.7
1990	0.9	90.0	9.6	12.7	0.2	21.1	0.7	1.7	0.7	R 9.4	R 56.3	f 0.0	R 0.5	f 0.1	15.1	R 162.7	32.9	R 195.7
1991	0.9	66.8	10.1	13.8	0.2	36.4	0.7	1.9	0.7	R 10.7	R 74.5	0.0	R 0.4	0.1	15.5	R 158.2	R 33.7	R 191.9
1992	1.0	73.8	12.4	11.1	0.1	32.9	0.7	1.7	0.8	R 12.4	R 72.0	0.0	R 0.5	0.1	15.7	R 163.1	R 33.5	R 196.7
1993	1.3	69.5	16.2	8.8	(s)	30.9	0.7	2.9	1.1	R 11.9	R 72.7	0.0	R 0.5	0.1	16.4	R 160.5	34.7	R 195.2
1994	1.5	73.5	14.0	7.2	(s)	28.0	0.7	R 3.1	1.1	R 12.4	R 66.7	0.0	R 0.5	0.1	17.7	R 160.0	36.9	R 196.9
1995	1.7	75.2	12.3	9.2	(s)	25.7	0.7	3.4	1.1	R 11.9	R 64.4	0.0	R 0.6	0.1	19.3	R 161.2	40.2	R 201.4
1996	1.6	107.9	10.9	10.3	0.1	R 3.3	0.7	R 3.4	1.2	R 25.3	R 55.4	0.0	R 0.6	0.1	20.2	R 185.8	R 42.1	R 227.9
1997	1.7	R 92.1	8.2	8.6	(s)	R 4.8	0.7	3.6	1.0	R 26.7	R 53.6	0.0	R 0.6	0.1	21.1	R 169.2	R 43.9	R 213.1
1998	1.6	82.7	13.6	7.6	0.1	3.3	0.8	2.6	0.9	24.9	53.8	0.0	0.2	0.1	21.1	159.5	43.6	203.1
1999	1.6	80.0	12.6	12.4	0.1	6.1	0.8	1.8	1.1	24.8	59.7	0.0	0.5	0.6	20.3	162.6	39.8	202.4

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>e</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>f</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

R=Revised data.

kWh=kilowatthours. — =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 207. Transportation Energy Consumption Estimates, Selected Years 1960-1999, New Mexico**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum								Ethanol <sup>c</sup>	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total <sup>c</sup>
			Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	LPG <sup>a</sup>	Lubricants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total				Million Kilowatthours	
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels								Thousand Barrels	Million Kilowatthours	Net Energy	Million Kilowatthours	Total <sup>c</sup>
1960	2	17	201	1,919	2,186	124	159	9,213	25	13,826	0	0	—	0	—
1965	(s)	25	239	2,618	2,530	203	165	10,511	36	16,301	0	0	—	0	—
1970	(s)	30	111	3,158	3,110	243	166	12,884	11	19,684	0	0	—	0	—
1975	0	29	81	4,200	2,667	211	197	16,257	0	23,615	0	0	—	0	—
1980	0	38	167	5,411	2,673	29	213	16,721	0	25,214	0	0	—	0	—
1985	0	26	95	4,330	2,873	95	194	17,431	0	25,018	R e 142	0	—	0	—
1990	0	76	86	6,264	2,912	118	218	18,190	0	27,788	R 371	0	—	0	—
1991	0	72	94	6,542	2,441	80	195	18,674	0	28,026	R 365	0	—	0	—
1992	0	50	94	7,743	2,834	100	199	19,004	0	29,973	R 288	0	—	0	—
1993	0	62	71	6,303	3,303	97	203	19,815	0	29,792	R 59	0	—	0	—
1994	0	59	62	5,777	2,576	143	212	20,187	0	28,958	R 153	0	—	0	—
1995	0	57	53	2,916	2,222	94	208	20,342	0	25,835	R 472	0	—	0	—
1996	0	27	R 101	7,984	1,615	R 85	202	19,570	0	R 29,557	R 398	0	—	0	—
1997	0	62	R 102	8,599	1,751	R 75	214	20,794	0	R 31,534	R 399	0	—	0	—
1998	0	53	61	9,603	2,196	1	224	21,403	0	33,488	671	0	—	0	—
1999	0	49	70	9,526	2,723	17	226	21,828	0	34,391	560	0	—	0	—

**Trillion Btu**

1960	(s)	17.6	1.0	11.2	11.7	0.5	1.0	48.4	0.2	73.9	0.0	0.0	91.5	0.0	91.5
1965	(s)	27.6	1.2	15.3	13.7	0.8	1.0	55.2	0.2	87.4	0.0	0.0	115.0	0.0	115.0
1970	(s)	32.8	0.6	18.4	17.0	0.9	1.0	67.7	0.1	105.7	0.0	0.0	138.5	0.0	138.5
1975	0.0	31.2	0.4	24.5	14.6	0.8	1.2	85.4	0.0	126.9	0.0	0.0	158.1	0.0	158.1
1980	0.0	40.2	0.8	31.5	14.6	0.1	1.3	87.8	0.0	136.2	0.0	0.0	176.3	0.0	176.3
1985	0.0	28.2	0.5	25.2	15.7	0.3	1.2	91.6	0.0	134.5	R e 0.5	0.0	e 162.7	0.0	e 162.7
1990	0.0	80.4	0.4	36.5	16.0	0.4	1.3	95.6	0.0	150.2	R 1.3	0.0	230.6	0.0	230.6
1991	0.0	74.8	0.5	38.1	13.5	0.3	1.2	98.1	0.0	151.6	R 1.3	0.0	226.5	0.0	226.5
1992	0.0	52.5	0.5	45.1	15.6	0.4	1.2	99.8	0.0	162.6	R 1.0	0.0	215.0	0.0	215.0
1993	0.0	64.9	0.4	36.7	18.3	0.4	1.2	104.1	0.0	161.1	0.2	0.0	226.0	0.0	226.0
1994	0.0	59.2	0.3	33.7	14.6	0.5	1.3	R 105.6	0.0	R 156.0	0.5	0.0	R 215.1	0.0	R 215.1
1995	0.0	58.0	0.3	17.0	12.6	0.3	1.3	R 106.1	0.0	R 137.5	R 1.7	0.0	R 195.5	0.0	R 195.5
1996	0.0	27.9	0.5	46.5	9.2	0.3	1.2	R 102.1	0.0	R 159.8	R 1.4	0.0	R 187.6	0.0	R 187.6
1997	0.0	R 63.1	0.5	50.1	9.9	0.3	1.3	R 108.4	0.0	R 170.5	R 1.4	0.0	R 233.6	0.0	R 233.6
1998	0.0	51.4	0.3	55.9	12.5	(s)	1.4	111.6	0.0	181.6	2.4	0.0	233.0	0.0	233.0
1999	0.0	47.4	0.4	55.5	15.4	0.1	1.4	113.7	0.0	186.5	2.0	0.0	233.9	0.0	233.9

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels. Transportation use of natural gas is gas consumed in the operation of pipelines, primarily in compressors, and, since 1990, is also gas consumed as vehicle fuel.

<sup>c</sup> Ethanol blended into motor gasoline, which is accounted for under motor gasoline, is shown separately here to display the use of renewable energy by the transportation sector and is included only once in the total.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1980 and 1981 due to the expanded coverage of renewable energy sources beginning in 1981.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 208. Estimates of Energy Input at Electric Utilities, Selected Years, 1960-1999, New Mexico**

Year	Coal	Natural Gas <sup>a</sup>	Petroleum				Nuclear Electric Power	Hydroelectric Power <sup>e</sup>	Wood and Waste	Geothermal Energy	Other <sup>b,f</sup>	Total <sup>g</sup>
			Heavy Oil <sup>b,c</sup>	Light Oil <sup>b,d</sup>	Petroleum Coke <sup>b</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels				Million Kilowatthours					
1960	26	34	107	10	0	117	0	69	0	0	0	—
1965	2,418	44	42	4	0	46	0	43	0	0	0	—
1970	5,518	55	86	8	0	94	0	66	0	0	0	—
1975	7,425	65	1,704	34	0	1,738	0	63	0	0	0	—
1980	11,406	56	175	216	0	391	0	94	0	0	0	—
1985	14,498	28	41	45	0	86	0	128	0	0	0	—
1990	15,065	25	32	37	0	69	0	205	0	0	0	—
1991	12,809	28	10	57	0	67	0	237	0	0	0	—
1992	14,775	22	2	71	0	73	0	255	0	0	0	—
1993	14,942	28	1	70	0	72	0	294	0	0	0	—
1994	15,297	32	(s)	46	0	47	0	213	0	0	0	—
1995	15,137	32	1	44	0	44	0	264	0	0	0	—
1996	15,215	30	(s)	43	0	43	0	211	0	0	0	—
1997	15,802	33	(s)	41	0	42	0	259	0	0	0	—
1998	15,883	39	0	45	0	45	0	236	0	0	0	—
1999	16,224	36	0	72	0	72	0	243	0	0	0	—

  

Trillion Btu												
1960	0.6	34.9	0.7	0.1	0.0	0.7	0.0	0.7	0.0	0.0	0.0	37.0
1965	43.5	48.7	0.3	(s)	0.0	0.3	0.0	0.4	0.0	0.0	0.0	93.0
1970	99.1	59.5	0.5	(s)	0.0	0.6	0.0	0.7	0.0	0.0	0.0	159.9
1975	132.5	67.4	10.7	0.2	0.0	10.9	0.0	0.7	0.0	0.0	0.0	211.5
1980	201.8	57.9	1.1	1.3	0.0	2.4	0.0	1.0	0.0	0.0	0.0	263.1
1985	266.4	28.5	0.3	0.3	0.0	0.5	0.0	1.3	0.0	0.0	0.0	296.8
1990	274.7	26.3	0.2	0.2	0.0	0.4	0.0	2.1	0.0	0.0	0.0	303.5
1991	232.9	28.6	0.1	0.3	0.0	0.4	0.0	2.5	0.0	0.0	0.0	264.3
1992	266.3	22.9	(s)	0.4	0.0	0.4	0.0	2.6	0.0	0.0	0.0	292.3
1993	268.7	28.2	(s)	0.4	0.0	0.4	0.0	3.0	0.0	0.0	0.0	300.3
1994	276.7	32.9	(s)	0.3	0.0	0.3	0.0	2.2	0.0	0.0	0.0	312.0
1995	273.5	32.5	(s)	0.3	0.0	0.3	0.0	2.7	0.0	0.0	0.0	308.9
1996	277.4	30.3	(s)	0.3	0.0	0.3	0.0	2.2	0.0	0.0	0.0	310.2
1997	286.6	33.9	(s)	0.2	0.0	0.2	0.0	2.7	0.0	0.0	0.0	323.5
1998	288.5	39.4	0.0	0.3	0.0	0.3	0.0	2.4	0.0	0.0	0.0	330.6
1999	296.3	36.0	0.0	0.4	0.0	0.4	0.0	2.5	0.0	0.0	0.0	335.3

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> Prior to 1980, based on oil used in steam plants. Since 1980, heavy oil includes fuel oil nos. 4, 5, and 6 and residual fuel oils.

<sup>d</sup> Prior to 1980, based on oil used in internal combustion and gas turbine engine plants. Since 1980, light oil includes fuel oil nos. 1 and 2, kerosene, and jet fuel.

<sup>e</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>f</sup> "Other" is electricity generated for distribution from wind, photovoltaic, and solar thermal energy.

<sup>g</sup> If applicable, from 1989, includes net imports of electricity generated from nonrenewable energy sources not shown in other columns. See data in appendix Table A8.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 209. Energy Consumption Estimates by Source, Selected Years 1960-1999, New York**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum											Nuclear Electric Power	Hydro-electric Power <sup>d</sup>	Wood and Waste	Other <sup>a,e</sup>	Net Interstate Flow of Electricity/Losses <sup>f</sup>	Total <sup>g</sup>
			Asphalt & Road Oil <sup>a</sup>	Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	Kero-sene <sup>a</sup>	LPG <sup>a</sup>	Lubri-cants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Other <sup>a,c</sup>	Total						
			Thousand Barrels															Million kWh	
1960	26,413	419	5,424	13,729	82,380	9,411	5,302	2,849	2,312	95,706	77,563	R 2,861	R 297,538	0	15,709	—	—	-18,429	—
1965	28,735	545	6,234	2,427	104,033	23,620	5,623	3,174	2,221	109,226	104,296	R 6,523	R 367,377	727	20,072	—	—	-10,286	—
1970	23,935	711	5,612	249	111,107	38,338	6,994	4,506	2,199	130,737	152,252	R 8,360	R 460,354	4,273	25,995	—	—	-14,477	—
1975	12,678	577	5,733	274	105,118	38,634	5,206	5,188	1,948	133,461	144,721	R 9,326	R 449,609	13,111	29,955	—	—	-17,753	—
1980	12,503	737	4,983	320	72,559	35,936	2,309	5,631	2,091	127,422	115,488	R 11,826	R 378,566	19,276	33,641	—	—	-5,317	—
1985	11,944	763	7,208	221	62,013	3,856	5,319	4,923	1,903	136,330	66,334	6,862	294,971	24,092	44,477	—	—	-25,342	—
1990	13,465	863	5,524	78	66,310	5,447	2,283	5,606	2,141	139,180	77,570	10,619	314,757	23,623	R h 29,351	—	—	R 13,921	—
1991	13,338	875	6,375	65	61,552	5,300	2,646	7,206	1,916	133,311	67,888	9,680	295,939	28,448	R 28,422	—	—	R 13,541	—
1992	12,996	959	6,904	74	65,721	5,357	1,862	7,076	1,953	129,064	51,559	11,110	280,679	24,155	R 29,546	—	—	R 47,484	—
1993	11,878	944	8,068	60	70,070	5,131	2,421	6,139	1,989	131,710	48,130	10,320	284,037	26,889	R 32,852	—	—	R 60,687	—
1994	11,474	1,012	7,439	99	67,740	5,729	2,289	6,351	2,079	128,228	40,402	10,812	271,166	29,231	R 35,912	—	—	R 45,414	—
1995	11,062	1,140	7,073	76	69,385	7,697	2,364	6,332	2,043	132,627	30,392	10,616	268,605	26,336	R 31,097	—	—	R 61,738	—
1996	11,337	1,131	6,184	66	73,165	11,532	2,884	R 7,073	1,983	130,979	36,975	R 23,045	R 293,887	35,226	R 33,085	—	—	R 60,450	—
1997	11,719	1,228	6,327	68	72,805	12,133	2,906	R 6,686	2,094	130,923	30,340	R 24,435	R 288,719	29,570	R 31,456	—	—	R 67,042	—
1998	12,379	1,143	6,624	238	66,205	14,787	3,359	7,306	2,193	131,469	36,526	26,124	294,830	31,314	29,798	—	—	41,983	—
1999	7,250	1,218	6,274	84	73,075	9,122	3,086	7,316	2,216	133,621	36,837	26,892	298,522	37,019	25,640	—	—	107,885	—

**Trillion Btu**

1960	691.6	434.1	36.0	69.3	479.9	52.6	30.1	11.4	14.0	502.7	487.6	R 16.9	R 1,700.6	0.0	169.0	59.3	0.0	-62.9	R 2,991.7
1965	755.2	558.7	41.4	12.3	606.0	133.2	31.9	12.7	13.5	573.8	655.7	R 37.1	R 2,117.5	8.6	209.8	58.1	0.0	-35.1	R 3,672.8
1970	598.9	725.8	37.2	1.3	647.2	216.7	39.7	17.0	13.3	686.8	957.2	R 47.0	R 2,663.4	46.9	272.8	62.6	0.0	-49.4	R 4,321.1
1975	312.5	585.5	38.0	1.4	612.3	218.5	29.5	19.3	11.8	701.1	909.9	R 52.8	R 2,594.6	144.4	311.7	60.2	0.0	-60.6	R 3,948.4
1980	313.7	755.9	33.1	1.6	422.7	203.3	13.1	20.7	12.7	669.3	726.1	R 66.1	R 2,168.7	210.3	349.5	R 147.2	0.0	-18.1	R 3,927.0
1985	301.4	784.7	47.8	1.1	361.2	21.4	30.2	17.7	11.5	716.1	417.0	38.0	1,662.1	260.5	464.6	R 123.2	0.0	-86.5	R 3,510.1
1990	346.1	889.0	36.7	0.4	386.3	30.4	12.9	20.3	13.0	731.1	487.7	59.8	1,778.6	252.3	R h 305.3	R 104.2	h 0.3	R 47.5	R h 3,707.9
1991	344.4	899.7	42.3	0.3	358.5	29.6	15.0	26.0	11.6	700.3	426.8	54.3	1,664.8	305.5	R 296.6	R 105.1	R 0.4	R 46.2	R 3,671.9
1992	336.7	986.8	45.8	0.4	382.8	29.9	10.6	25.6	11.8	678.0	324.2	62.5	1,571.5	257.9	R 305.6	R 117.7	0.4	R 162.0	R 3,744.2
1993	306.5	971.2	53.5	0.3	408.2	28.7	13.7	22.1	12.1	691.9	302.6	57.7	1,590.8	287.2	R 338.7	R 118.9	R 0.5	R 207.1	R 3,831.2
1994	297.3	1,040.8	49.4	0.5	394.6	32.3	13.0	23.1	12.6	R 670.6	254.0	60.5	R 1,510.6	312.1	R 370.5	R 125.1	0.5	R 155.0	R 3,848.2
1995	288.1	1,172.4	46.9	0.4	404.2	43.6	13.4	22.9	12.4	R 691.7	191.1	59.5	R 1,486.1	280.7	R 320.7	R 133.0	0.6	R 210.6	R 3,919.3
1996	294.3	1,159.9	41.0	0.3	426.2	65.4	16.4	R 25.6	12.0	R 683.2	232.5	R 126.0	R 1,628.5	374.2	R 342.1	R 148.1	0.7	R 206.3	R 4,172.5
1997	306.1	1,260.3	42.0	0.3	424.1	68.8	16.5	R 24.2	12.7	R 682.5	190.7	R 134.0	R 1,595.9	314.1	R 325.8	R 178.9	R 0.8	R 228.7	R 4,206.8
1998	322.2	1,175.2	44.0	1.2	385.6	83.8	19.0	26.4	13.3	685.2	229.6	144.4	1,632.7	332.6	308.3	140.6	0.8	143.2	4,047.3
1999	188.2	1,251.1	41.6	0.4	425.7	51.7	17.5	26.5	13.4	696.3	231.6	148.4	1,653.2	393.2	265.3	173.6	0.9	368.1	4,283.0

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products consumed in the industrial sector. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>e</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>f</sup> Net interstate flow of electricity is the difference between the amount of energy in the electricity sold within a State (including associated losses) and the energy input at the electric utilities within the State. A positive number

indicates that more electricity (including associated losses) came into the State than went out of the State during the year; conversely, a negative number indicates that more electricity (including associated losses) went out of the State than came into the State.

<sup>g</sup> From 1989, "Total" does not equal the sum of the columns. Net imports of electricity generated from nonrenewable energy sources (shown in appendix Table A8) is included in the total but not in any other columns.

<sup>h</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

kWh=kilowatthours. R=Revised data. — =Not applicable.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 210. Residential Energy Consumption Estimates, Selected Years 1960-1999, New York**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum				Wood Thousand Cords	Geothermal	Solar <sup>c</sup>	Electricity <sup>a</sup> Million Kilowatthours	Net Energy	Electrical System Energy Losses <sup>d</sup> Million Kilowatthours	Total
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Total							
			Thousand Barrels										
1960	1,074	225	44,927	4,174	2,130	51,232	1,295	—	—	12,496	—	31,082	—
1965	694	288	57,623	4,161	2,254	64,037	1,070	—	—	17,027	—	40,655	—
1970	381	347	60,128	5,581	2,782	68,491	1,096	—	—	25,492	—	61,777	—
1975	228	327	55,966	3,746	3,078	62,790	1,103	—	—	28,710	—	69,253	—
1980	181	334	37,690	1,723	2,511	41,923	R 4,818	—	—	30,583	—	74,367	—
1985	208	320	30,992	3,219	3,227	37,438	3,240	—	—	32,757	—	76,961	—
1990	129	338	26,529	1,765	4,079	32,373	2,325	—	—	38,574	—	R 84,385	—
1991	130	339	25,021	2,098	5,051	32,170	2,450	—	—	39,177	—	R 85,169	—
1992	128	379	27,997	1,252	4,965	34,214	2,577	—	—	38,720	—	R 82,580	—
1993	120	384	28,707	1,565	4,293	34,565	2,758	—	—	39,897	—	R 84,269	—
1994	88	385	26,760	1,396	4,350	32,505	2,704	—	—	40,105	—	R 83,696	—
1995	105	375	27,713	1,240	4,516	33,469	3,001	—	—	39,887	—	R 83,163	—
1996	135	403	30,674	1,450	R 4,937	R 37,061	2,996	—	—	40,285	—	R 83,953	—
1997	114	376	30,303	1,744	R 4,379	R 36,426	R 4,202	—	—	40,059	—	R 83,326	—
1998	66	340	27,159	1,866	4,323	33,349	3,705	—	—	40,240	—	83,127	—
1999	74	371	28,502	2,327	4,691	35,520	3,970	—	—	42,919	—	84,092	—

**Trillion Btu**

1960	26.5	232.5	261.7	23.7	8.5	293.9	25.9	0.0	0.0	42.6	621.4	106.1	727.5
1965	16.9	295.0	335.7	23.6	9.0	368.3	21.4	0.0	0.0	58.1	759.7	138.7	898.4
1970	9.0	353.8	350.2	31.6	10.5	392.4	21.9	0.0	0.0	87.0	864.1	210.8	1,074.8
1975	5.1	332.2	326.0	21.2	11.4	358.7	22.1	0.0	0.0	98.0	816.0	236.3	1,052.3
1980	4.2	341.5	219.5	9.8	9.2	238.5	R 96.4	0.0	0.0	104.3	R 784.9	253.7	R 1,038.7
1985	4.9	328.8	180.5	18.3	11.6	210.4	64.8	0.0	0.0	111.8	720.7	262.6	983.3
1990	3.2	347.8	154.5	10.0	14.8	179.3	46.5	e (s)	R e 0.3	131.6	e 708.7	287.9	R e 996.7
1991	3.3	348.1	145.7	11.9	18.3	175.9	49.0	(s)	R 0.3	133.7	710.2	R 290.6	R 1,000.8
1992	3.2	389.6	163.1	7.1	18.0	188.2	51.5	(s)	0.3	132.1	764.9	R 281.8	R 1,046.7
1993	2.9	395.2	167.2	8.9	15.5	191.6	55.2	0.1	0.3	136.1	R 781.4	R 287.5	1,068.9
1994	2.2	395.9	155.9	7.9	15.8	179.6	54.1	(s)	R 0.4	136.8	R 769.1	R 285.6	R 1,054.7
1995	2.6	385.7	161.4	7.0	16.4	184.8	60.0	0.1	0.4	136.1	R 769.8	R 283.8	R 1,053.5
1996	3.4	413.6	178.7	8.2	R 17.8	R 204.7	59.9	0.1	0.5	137.5	R 819.6	R 286.4	R 1,106.0
1997	2.8	385.4	176.5	9.9	R 15.8	R 202.2	R 84.0	0.1	0.5	136.7	R 811.8	R 284.3	R 1,096.1
1998	1.6	348.9	158.2	10.6	15.6	184.4	74.1	0.1	0.6	137.3	747.0	283.6	1,030.6
1999	1.8	380.9	166.0	13.2	17.0	196.2	79.4	0.1	0.6	146.4	805.4	286.9	1,092.3

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Includes small amounts of solar thermal and photovoltaic energy consumed by the commercial sector that cannot be separately identified. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

—=Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 211. Commercial Energy Consumption Estimates, Selected Years 1960-1999, New York**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum						Wood Thousand Cords	Geothermal	Electricity <sup>a</sup> Million Kilowatthours	Net Energy	Electrical System Energy Losses <sup>c</sup> Million Kilowatthours	Total <sup>d</sup>
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total						
			Thousand Barrels											
1960	890	63	15,225	468	376	636	28,208	44,913	25	—	17,546	—	43,644	—
1965	596	87	19,527	467	398	828	37,514	58,733	20	—	23,528	—	56,176	—
1970	285	139	20,376	626	491	1,052	43,318	65,863	21	—	32,790	—	79,460	—
1975	200	128	18,965	420	543	1,162	28,482	49,573	21	—	37,827	—	91,244	—
1980	177	162	14,492	169	443	1,035	25,431	41,569	R 116	—	40,471	—	98,412	—
1985	226	165	11,835	862	569	1,911	16,677	31,855	R 86	—	48,816	—	114,688	—
1990	144	195	12,974	269	720	1,201	17,643	32,806	R 148	—	56,025	—	R 122,561	—
1991	148	200	12,758	213	891	716	17,102	31,679	R 156	—	56,408	—	R 122,626	—
1992	147	217	13,899	408	876	681	15,951	31,816	R 168	—	56,079	—	R 119,604	—
1993	112	221	15,123	616	758	198	17,531	34,226	222	—	57,410	—	R 121,259	—
1994	97	223	14,592	538	768	180	16,301	32,379	227	—	58,802	—	R 122,716	—
1995	115	231	15,210	714	797	208	13,766	30,695	227	—	62,509	—	R 130,327	—
1996	148	253	15,754	751	R 871	200	13,008	R 30,585	R 246	—	62,663	—	R 130,591	—
1997	139	321	14,794	801	R 773	195	10,315	R 26,877	R 461	—	64,029	—	R 133,186	—
1998	81	335	12,148	981	763	212	7,194	21,298	461	—	63,253	—	130,668	—
1999	106	360	14,023	682	828	200	8,932	24,664	557	—	67,969	—	133,172	—

**Trillion Btu**

1960	22.0	65.2	88.7	2.7	1.5	3.3	177.3	273.5	0.5	0.0	59.9	421.1	148.9	570.0
1965	14.5	88.8	113.7	2.6	1.6	4.3	235.9	358.2	0.4	0.0	80.3	542.2	191.7	733.8
1970	6.7	142.4	118.7	3.5	1.9	5.5	272.3	402.0	0.4	0.0	111.9	663.4	271.1	934.5
1975	4.5	130.2	110.5	2.4	2.0	6.1	179.1	300.0	0.4	0.0	129.1	564.2	311.3	875.6
1980	4.2	165.5	84.4	1.0	1.6	5.4	159.9	252.3	2.3	0.0	138.1	562.4	335.8	898.2
1985	5.4	170.0	68.9	4.9	2.1	10.0	104.8	190.8	R 1.7	0.0	166.6	R 534.5	391.3	R 925.8
1990	3.6	200.6	75.6	1.5	2.6	6.3	110.9	196.9	R 3.0	e (s)	191.2	R e 595.3	R 418.2	R e 1,013.5
1991	3.7	205.0	74.3	1.2	3.2	3.8	107.5	190.0	R 3.1	(s)	192.5	R 594.3	R 418.4	R 1,012.7
1992	3.6	223.5	81.0	2.3	3.2	3.6	100.3	190.3	R 3.4	0.1	191.3	R 612.2	R 408.1	R 1,020.3
1993	2.7	227.0	88.1	3.5	2.7	1.0	110.2	205.6	4.4	0.1	195.9	635.7	R 413.7	R 1,049.5
1994	2.4	229.4	85.0	3.1	2.8	0.9	102.5	194.3	4.5	0.1	200.6	631.3	418.7	1,050.0
1995	2.9	238.0	88.6	4.1	2.9	1.1	86.5	183.2	4.5	0.1	213.3	641.9	R 444.7	R 1,086.6
1996	3.7	259.5	91.8	4.3	R 3.1	R 1.0	81.8	R 182.0	4.9	0.2	213.8	R 664.1	R 445.6	R 1,109.7
1997	3.5	329.2	86.2	4.5	R 2.8	1.0	64.8	R 159.4	R 9.2	0.2	218.5	R 719.9	R 454.4	R 1,174.4
1998	2.0	344.7	70.8	5.6	2.8	1.1	45.2	125.4	9.2	0.2	215.8	697.4	445.8	1,143.2
1999	2.6	370.1	81.7	3.9	3.0	1.0	56.2	145.7	11.1	0.2	231.9	761.8	454.4	1,216.1

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>d</sup> Small amounts of solar thermal and photovoltaic energy consumed in the commercial sector cannot be separately identified and are included in residential consumption.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 212. Industrial Energy Consumption Estimates, Selected Years 1960-1999, New York**

Year	Coal Thousand Short Tons	Natural Gas <sup>a</sup> Billion Cubic Feet	Petroleum									Hydro-electric Power <sup>b</sup> Million kWh	Wood and Waste	Other <sup>b,d</sup>	Electricity <sup>b</sup> Million kWh	Net Energy	Electrical System Energy Losses <sup>e</sup> Million kWh	Total
			Asphalt and Road Oil <sup>b</sup>	Distillate Fuel <sup>b</sup>	Kero-sene <sup>b</sup>	LPG <sup>b</sup>	Lubri-cants <sup>b</sup>	Motor Gasoline	Residual Fuel <sup>b</sup>	Other <sup>b,c</sup>	Total							
			Thousand Barrels															
1960	11,947	72	5,424	12,930	660	325	944	3,369	22,444	R 2,861	R 48,956	341	—	—	14,428	—	35,888	—
1965	13,811	93	6,234	16,909	996	485	1,099	3,708	29,213	R 6,523	R 65,167	275	—	—	23,101	—	55,156	—
1970	12,125	116	5,612	16,810	787	1,125	1,003	3,281	33,696	R 8,360	R 70,676	269	—	—	27,152	—	65,799	—
1975	6,125	105	5,733	15,761	1,039	1,442	998	1,351	23,039	R 9,326	R 58,689	188	—	—	27,247	—	65,723	—
1980	5,699	114	4,983	9,339	417	2,598	1,027	1,535	14,815	R 11,826	R 46,541	233	—	—	32,110	—	78,081	—
1985	3,723	101	7,208	4,816	1,238	980	935	1,224	5,553	R 8,862	R 28,816	233	—	—	28,659	—	67,331	—
1990	3,199	102	5,524	3,428	249	657	1,052	1,145	4,750	10,619	27,423	R f 1,417	—	—	31,929	—	R 69,849	—
1991	3,185	120	6,375	3,043	335	1,107	941	1,097	2,383	9,680	24,961	R 1,341	—	—	31,112	—	R 67,634	—
1992	2,758	148	6,904	3,117	201	1,092	959	1,110	3,095	11,110	27,587	R 1,432	—	—	31,027	—	R 66,174	—
1993	2,947	161	8,068	4,047	241	961	977	984	3,911	10,320	29,509	R 1,320	—	—	30,187	—	R 63,760	—
1994	2,893	215	7,439	3,066	355	948	1,021	1,079	3,208	10,812	27,928	R 1,449	—	—	29,467	—	R 61,495	—
1995	2,791	280	7,073	2,973	409	881	1,004	1,126	2,021	10,616	26,101	R 1,211	—	—	25,317	—	R 52,785	—
1996	2,799	324	6,184	3,097	682	R 1,142	974	1,114	2,498	R 23,045	R 38,736	R 1,844	—	—	25,947	—	R 54,075	—
1997	2,740	306	6,327	3,015	361	R 1,445	1,029	1,173	2,006	R 24,435	R 39,791	R 1,626	—	—	25,282	—	R 52,589	—
1998	2,823	252	6,624	3,075	511	1,687	1,077	1,030	1,986	26,124	42,115	1,570	—	—	25,089	—	51,829	—
1999	2,657	297	6,274	3,460	77	1,772	1,088	899	1,949	26,892	42,411	3,519	—	—	25,835	—	50,620	—

**Trillion Btu**

1960	311.9	74.2	36.0	75.3	3.7	1.3	5.7	17.7	141.1	R 16.9	R 297.7	3.7	32.9	0.0	49.2	R 769.6	122.5	R 892.1
1965	360.1	95.3	41.4	98.5	5.6	1.9	6.7	19.5	183.7	R 37.1	R 394.4	2.9	36.3	0.0	78.8	R 967.8	188.2	R 1,156.0
1970	308.4	118.0	37.2	97.9	4.5	4.3	6.1	17.2	211.8	R 47.0	R 426.0	2.8	40.3	0.0	92.6	R 988.2	224.5	R 1,212.7
1975	155.5	106.2	38.0	91.8	5.9	5.4	6.1	7.1	144.8	R 52.8	R 351.9	2.0	37.7	0.0	93.0	R 746.3	224.2	R 970.6
1980	146.5	116.4	33.1	54.4	2.4	9.5	6.2	8.1	93.1	R 66.1	R 272.9	2.4	R 48.4	0.0	109.6	R 696.2	266.4	R 962.6
1985	94.8	103.6	47.8	28.1	7.0	3.5	5.7	6.4	34.9	R 38.0	171.4	2.4	R 56.7	0.0	97.8	R 526.7	229.7	R 756.5
1990	82.6	105.1	36.7	20.0	1.4	2.4	6.4	6.0	29.9	59.8	162.4	R f 14.7	R 54.7	f 0.0	108.9	R f 528.5	238.3	R f 766.8
1991	82.2	123.3	42.3	17.7	1.9	4.0	5.7	5.8	15.0	54.3	146.7	R 14.0	R 53.0	0.0	106.2	R 525.3	R 230.8	R 756.0
1992	71.3	152.7	45.8	18.2	1.1	4.0	5.8	5.8	19.5	62.5	162.6	R 14.8	R 62.8	0.0	105.9	R 570.2	R 225.8	R 795.9
1993	76.2	165.6	53.5	23.6	1.4	3.5	5.9	5.2	24.6	57.7	175.3	R 13.6	R 59.2	0.0	103.0	R 592.8	R 217.5	R 810.4
1994	75.1	221.1	49.4	17.9	2.0	3.4	6.2	R 5.6	20.2	60.5	165.2	R 14.9	R 66.4	0.0	100.5	R 643.3	209.8	R 853.1
1995	72.4	287.6	46.9	17.3	2.3	3.2	6.1	5.9	12.7	59.5	R 153.9	R 12.5	R 68.3	0.0	86.4	R 681.1	R 180.1	R 861.3
1996	72.5	331.9	41.0	18.0	3.9	R 4.1	5.9	R 5.8	15.7	R 126.0	R 220.5	R 19.1	R 82.9	0.0	88.5	R 815.3	R 184.5	R 999.8
1997	71.1	314.3	42.0	17.6	2.0	R 5.2	6.2	R 6.1	12.6	R 134.0	R 225.8	R 16.8	R 85.5	0.0	86.3	R 799.8	R 179.4	R 979.2
1998	73.0	259.2	44.0	17.9	2.9	6.1	6.5	5.4	12.5	144.4	239.7	16.2	57.3	0.0	85.6	731.0	176.8	907.8
1999	68.7	305.2	41.6	20.2	0.4	6.4	6.6	4.7	12.3	148.4	240.6	36.4	83.1	0.0	88.2	822.2	172.7	994.9

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>e</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for

electrical system energy losses.

<sup>f</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

R=Revised data.

kWh=kilowatthours. — =Not applicable.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 213. Transportation Energy Consumption Estimates, Selected Years 1960-1999, New York**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum								Ethanol <sup>c</sup> Thousand Barrels	Electricity <sup>a</sup> Million Kilowatthours	Net Energy	Electrical System Energy Losses <sup>d</sup> Million Kilowatthours	Total <sup>c</sup>
			Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	LPG <sup>a</sup>	Lubricants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total					
			Thousand Barrels												
1960	201	2	13,729	8,758	9,411	18	1,368	91,701	17,060	142,046	0	2,045	—	5,087	—
1965	44	3	2,427	8,800	23,620	38	1,122	104,690	16,158	156,856	0	2,144	—	5,120	—
1970	19	3	249	10,653	38,338	107	1,196	126,403	18,450	195,396	0	2,366	—	5,734	—
1975	1	3	274	10,488	37,252	125	950	130,948	8,862	188,899	0	2,057	—	4,961	—
1980	0	4	320	10,309	35,916	79	1,064	124,853	11,344	183,885	0	2,146	—	5,218	—
1985	0	4	221	13,551	3,856	147	968	133,195	884	152,822	<sup>e</sup> 0	2,442	—	5,738	—
1990	0	5	78	22,363	5,447	150	1,089	136,834	1,377	167,339	<sup>R</sup> 0	2,795	—	<sup>R</sup> 6,115	—
1991	0	5	65	19,846	5,300	158	975	131,498	3,971	161,813	<sup>R</sup> 0	2,714	—	<sup>R</sup> 5,901	—
1992	0	6	74	20,290	5,357	144	994	127,273	3,730	157,862	<sup>R</sup> 0	2,644	—	<sup>R</sup> 5,639	—
1993	0	6	60	21,625	5,131	127	1,012	130,528	3,258	161,740	<sup>R</sup> 83	2,676	—	<sup>R</sup> 5,651	—
1994	0	6	99	22,381	5,729	286	1,058	126,968	3,169	159,690	<sup>R</sup> 205	2,803	—	5,849	—
1995	0	8	76	22,342	7,697	138	1,039	131,294	2,354	164,941	<sup>R</sup> 654	2,757	—	<sup>R</sup> 5,748	—
1996	0	8	66	22,562	11,532	<sup>R</sup> 123	1,009	129,665	6,550	<sup>R</sup> 171,507	<sup>R</sup> 552	2,632	—	<sup>R</sup> 5,485	—
1997	0	8	68	23,662	12,133	<sup>R</sup> 90	1,066	129,555	5,215	<sup>R</sup> 171,789	<sup>R</sup> 532	2,567	—	<sup>R</sup> 5,340	—
1998	0	8	238	22,541	14,787	533	1,116	130,227	4,278	173,719	394	2,580	—	5,330	—
1999	0	8	84	25,315	9,122	25	1,127	132,521	7,488	175,683	341	2,654	—	5,200	—

  

Trillion Btu															
1960	5.2	2.4	69.3	51.0	52.6	0.1	8.3	481.7	107.3	770.3	0.0	7.0	784.8	17.4	802.2
1965	1.1	3.4	12.3	51.3	133.2	0.2	6.8	549.9	101.6	855.2	0.0	7.3	867.1	17.5	884.5
1970	0.5	3.2	1.3	62.1	216.7	0.4	7.3	664.0	116.0	1,067.7	0.0	8.1	1,079.5	19.6	1,099.0
1975	(s)	3.0	1.4	61.1	210.7	0.5	5.8	687.9	55.7	1,023.0	0.0	7.0	1,033.0	16.9	1,049.9
1980	0.0	3.6	1.6	60.1	203.2	0.3	6.5	655.9	71.3	998.8	0.0	7.3	1,009.7	17.8	1,027.5
1985	0.0	3.6	1.1	78.9	21.4	0.5	5.9	699.7	5.6	813.0	<sup>e</sup> 0.0	8.3	<sup>e</sup> 825.0	19.6	<sup>e</sup> 844.6
1990	0.0	4.9	0.4	130.3	30.4	0.5	6.6	718.8	8.7	895.7	<sup>R</sup> 0.0	9.5	910.1	20.9	931.0
1991	0.0	5.2	0.3	115.6	29.6	0.6	5.9	690.8	25.0	867.7	<sup>R</sup> 0.0	9.3	882.1	<sup>R</sup> 20.1	902.3
1992	0.0	6.1	0.4	118.2	29.9	0.5	6.0	668.6	23.4	847.0	<sup>R</sup> 0.0	9.0	862.1	<sup>R</sup> 19.2	<sup>R</sup> 881.3
1993	0.0	6.3	0.3	126.0	28.7	0.5	6.1	685.7	20.5	867.7	0.3	9.1	883.1	19.3	902.4
1994	0.0	6.3	0.5	130.4	32.3	1.0	6.4	<sup>R</sup> 664.0	19.9	<sup>R</sup> 854.6	0.7	9.6	<sup>R</sup> 870.4	20.0	<sup>R</sup> 890.4
1995	0.0	8.4	0.4	130.1	43.6	0.5	6.3	<sup>R</sup> 684.7	14.8	<sup>R</sup> 880.5	<sup>R</sup> 2.3	9.4	<sup>R</sup> 898.3	19.6	<sup>R</sup> 917.9
1996	0.0	8.1	0.3	131.4	65.4	0.4	6.1	<sup>R</sup> 676.3	41.2	<sup>R</sup> 921.2	<sup>R</sup> 2.0	9.0	<sup>R</sup> 938.3	18.7	<sup>R</sup> 957.0
1997	0.0	8.3	0.3	137.8	68.8	<sup>R</sup> 0.3	6.5	<sup>R</sup> 675.4	32.8	<sup>R</sup> 921.9	<sup>R</sup> 1.9	8.8	<sup>R</sup> 938.9	18.2	<sup>R</sup> 957.2
1998	0.0	8.0	1.2	131.3	83.8	1.9	6.8	678.7	26.9	930.7	1.4	8.8	947.5	18.2	965.7
1999	0.0	8.6	0.4	147.5	51.7	0.1	6.8	690.6	47.1	944.2	1.2	9.1	961.9	17.7	979.6

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels. Transportation use of natural gas is gas consumed in the operation of pipelines, primarily in compressors, and, since 1990, is also gas consumed as vehicle fuel.

<sup>c</sup> Ethanol blended into motor gasoline, which is accounted for under motor gasoline, is shown separately here to display the use of renewable energy by the transportation sector and is included only once in the total.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1980 and 1981 due to the expanded coverage of renewable energy sources beginning in 1981.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.



**Table 214. Estimates of Energy Input at Electric Utilities, Selected Years, 1960-1999, New York**

Year	Coal	Natural Gas <sup>a</sup>	Petroleum				Nuclear Electric Power	Hydroelectric Power <sup>e</sup>	Wood and Waste	Geothermal Energy	Other <sup>b,f</sup>	Total <sup>g</sup>
			Heavy Oil <sup>b,c</sup>	Light Oil <sup>b,d</sup>	Petroleum Coke <sup>b</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels				Million Kilowatthours					
1960	12,302	58	9,851	540	0	10,391	0	15,369	0	0	0	—
1965	13,591	74	21,410	1,174	0	22,584	727	19,797	0	0	0	—
1970	11,125	106	56,787	3,139	0	59,927	4,273	25,726	0	0	0	—
1975	6,124	14	84,338	5,319	0	89,658	13,111	29,766	0	0	0	—
1980	6,446	124	63,898	749	0	64,647	19,276	33,408	13	0	0	—
1985	7,787	173	43,220	821	0	44,041	24,092	44,243	(s)	0	0	—
1990	9,993	223	53,800	1,016	0	54,816	23,623	R 27,934	0	0	0	—
1991	9,874	212	44,432	884	0	45,315	28,448	R 27,081	0	0	0	—
1992	9,963	209	28,784	417	0	29,201	24,155	R 28,113	0	0	0	—
1993	8,699	172	23,430	567	0	23,998	26,889	R 31,532	13	0	0	—
1994	8,395	183	17,724	941	0	18,664	29,231	R 34,463	11	0	0	—
1995	8,051	246	12,251	1,146	0	13,398	26,336	R 29,886	12	0	0	—
1996	8,254	143	14,919	1,079	0	15,998	35,226	R 31,242	40	0	0	—
1997	8,726	218	12,805	1,031	0	13,836	29,570	R 29,830	18	0	0	—
1998	9,410	208	23,068	1,282	0	24,350	31,314	28,229	5	0	0	—
1999	4,412	182	18,468	1,775	0	20,243	37,019	22,121	(s)	0	0	—

  

Trillion Btu												
1960	326.1	59.8	61.9	3.1	0.0	65.1	0.0	165.4	0.0	0.0	0.0	616.4
1965	362.6	76.1	134.6	6.8	0.0	141.4	8.6	206.9	0.0	0.0	0.0	795.7
1970	274.4	108.4	357.0	18.3	0.0	375.3	46.9	270.0	0.0	0.0	0.0	1,074.9
1975	147.3	14.0	530.2	30.8	0.0	561.0	144.4	309.8	0.0	0.0	0.0	1,176.4
1980	158.8	128.9	401.7	4.4	0.0	406.1	210.3	347.0	0.1	0.0	0.0	1,251.2
1985	196.2	178.7	271.7	4.8	0.0	276.5	260.5	462.2	(s)	0.0	0.0	1,374.1
1990	256.7	230.6	338.2	5.9	0.0	344.2	252.3	R 290.6	0.0	0.0	0.0	R 1,359.0
1991	255.2	218.2	279.3	5.1	0.0	284.5	305.5	R 282.6	0.0	0.0	0.0	R 1,355.2
1992	258.6	215.0	181.0	2.4	0.0	183.4	257.9	R 290.7	0.0	0.0	0.0	R 1,211.2
1993	224.7	177.1	147.3	3.3	0.0	150.6	287.2	R 325.1	0.1	0.0	0.0	R 1,175.2
1994	217.6	188.2	111.4	5.5	0.0	116.9	312.1	R 355.5	0.1	0.0	0.0	R 1,226.7
1995	210.1	252.7	77.0	6.7	0.0	83.7	280.7	R 308.2	0.1	0.0	0.0	R 1,162.7
1996	214.8	146.8	93.8	6.3	0.0	100.1	374.2	R 323.0	0.4	0.0	0.0	R 1,177.8
1997	228.7	223.2	80.5	6.0	0.0	86.5	314.1	R 308.9	0.2	0.0	0.0	R 1,157.8
1998	245.6	214.4	145.0	7.5	0.0	152.5	332.6	292.1	(s)	0.0	0.0	1,228.8
1999	115.0	186.2	116.1	10.3	0.0	126.4	393.2	228.9	(s)	0.0	0.0	1,039.2

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> Prior to 1980, based on oil used in steam plants. Since 1980, heavy oil includes fuel oil nos. 4, 5, and 6 and residual fuel oils.

<sup>d</sup> Prior to 1980, based on oil used in internal combustion and gas turbine engine plants. Since 1980, light oil includes fuel oil nos. 1 and 2, kerosene, and jet fuel.

<sup>e</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>f</sup> "Other" is electricity generated for distribution from wind, photovoltaic, and solar thermal energy.

<sup>g</sup> If applicable, from 1989, includes net imports of electricity generated from nonrenewable energy sources not shown in other columns. See data in appendix Table A8.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 215. Energy Consumption Estimates by Source, Selected Years 1960-1999, North Carolina**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum											Nuclear Electric Power	Hydro-electric Power <sup>d</sup>	Wood and Waste	Other <sup>a,e</sup>	Net Inter-state Flow of Electricity/Losses <sup>f</sup>	Total <sup>g</sup>
			Asphalt & Road Oil <sup>a</sup>	Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	Kero-sene <sup>a</sup>	LPG <sup>a</sup>	Lubri-cants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Other <sup>a,c</sup>	Total						
			Thousand Barrels															Million kWh	
1960	8,948	45	2,617	692	13,445	3,401	12,091	2,635	724	35,875	4,603	186	76,268	0	4,998	—	—	735	—
1965	12,708	76	2,699	714	17,182	3,649	12,717	4,188	835	43,144	4,723	835	90,687	0	5,385	—	—	-6,408	—
1970	20,417	151	3,621	151	22,612	4,702	11,612	5,489	851	56,348	6,778	1,416	113,580	0	4,374	—	—	-9,690	—
1975	20,055	115	3,049	219	21,259	3,809	5,832	6,445	944	66,935	7,779	1,815	118,083	1,405	7,055	—	—	22,308	—
1980	25,466	153	3,089	215	24,116	5,209	3,259	7,979	1,206	66,222	9,058	3,112	123,465	5,775	5,486	—	—	10,592	—
1985	22,052	134	3,450	174	24,824	6,668	4,775	7,546	1,097	70,856	6,233	2,493	128,116	19,303	4,094	—	—	23,946	—
1990	21,150	161	4,207	213	25,075	5,567	1,625	8,892	1,235	77,525	5,939	5,173	135,450	25,905	R <sup>h</sup> 7,037	—	—	R <sup>h</sup> 50,579	—
1991	20,877	166	3,821	170	23,954	4,384	1,937	10,308	1,104	77,046	6,108	5,192	134,024	30,312	R <sup>h</sup> 6,106	—	—	R <sup>h</sup> 45,134	—
1992	24,075	180	4,250	154	25,733	4,684	2,026	11,092	1,126	77,196	7,529	5,801	139,592	22,754	R <sup>h</sup> 5,908	—	—	R <sup>h</sup> 51,286	—
1993	25,760	186	4,645	118	26,479	4,897	2,097	11,870	1,147	81,432	8,090	5,541	146,317	23,759	R <sup>h</sup> 5,275	—	—	R <sup>h</sup> 50,477	—
1994	23,282	188	4,824	136	28,599	4,359	1,732	12,331	1,198	83,445	6,395	5,693	148,712	32,346	R <sup>h</sup> 7,323	—	—	R <sup>h</sup> 38,758	—
1995	24,084	203	6,426	139	31,828	4,947	2,360	12,137	1,178	86,421	6,361	5,528	157,325	35,910	R <sup>h</sup> 5,634	—	—	R <sup>h</sup> 40,303	—
1996	27,624	213	4,046	148	33,386	9,127	2,890	R <sup>h</sup> 13,917	1,143	88,147	6,944	R <sup>h</sup> 11,684	R <sup>h</sup> 171,431	33,718	R <sup>h</sup> 6,253	—	—	R <sup>h</sup> 30,990	—
1997	29,608	214	4,163	159	33,792	7,153	2,968	R <sup>h</sup> 15,789	1,207	90,933	6,124	R <sup>h</sup> 12,418	R <sup>h</sup> 174,706	32,453	R <sup>h</sup> 5,145	—	—	R <sup>h</sup> 22,852	—
1998	28,917	213	4,422	138	34,459	6,755	3,394	13,100	1,264	94,177	5,193	13,148	176,050	38,778	5,804	—	—	15,164	—
1999	28,410	221	4,587	187	32,504	6,802	2,216	11,858	1,277	97,421	5,239	13,546	175,638	37,524	3,860	—	—	17,772	—

  

Trillion Btu																			
1960	231.4	47.0	17.4	3.5	78.3	18.2	68.6	10.6	4.4	188.4	28.9	1.1	419.4	0.0	53.8	73.7	0.0	2.5	827.8
1965	325.9	78.2	17.9	3.6	100.1	19.7	72.1	16.8	5.1	226.6	29.7	4.7	496.3	0.0	56.3	67.3	0.0	-21.9	1,002.2
1970	491.4	154.9	24.0	0.8	131.7	25.7	65.8	20.7	5.2	296.0	42.6	8.0	620.6	0.0	45.9	65.9	0.0	-33.1	1,345.6
1975	476.5	116.9	20.2	1.1	123.8	20.8	33.1	23.9	5.7	351.6	48.9	10.2	639.5	15.5	73.4	66.4	0.0	76.1	1,464.3
1980	624.7	155.2	20.5	1.1	140.5	28.7	18.5	29.3	7.3	347.9	56.9	17.2	667.9	63.0	57.0	R <sup>h</sup> 71.9	0.0	36.1	R <sup>h</sup> 1,675.7
1985	550.5	138.4	22.9	0.9	144.6	37.0	27.1	27.2	6.7	372.2	39.2	13.7	691.5	208.7	42.8	R <sup>h</sup> 90.8	0.0	81.7	R <sup>h</sup> 1,804.3
1990	530.2	166.4	27.9	1.1	146.1	30.8	9.2	32.2	7.5	407.2	37.3	28.7	728.1	276.7	R <sup>h</sup> 73.2	R <sup>h</sup> 81.2	h <sup>0,3</sup>	R <sup>h</sup> 172.6	R <sup>h</sup> 2,028.6
1991	522.5	171.7	25.4	0.9	139.5	24.3	11.0	37.3	6.7	404.7	38.4	28.8	716.9	325.6	R <sup>h</sup> 63.7	R <sup>h</sup> 81.2	0.3	R <sup>h</sup> 154.0	R <sup>h</sup> 2,035.9
1992	600.3	185.7	28.2	0.8	149.9	26.0	11.5	40.2	6.8	405.5	47.3	32.2	748.4	243.0	R <sup>h</sup> 61.1	R <sup>h</sup> 106.4	0.3	R <sup>h</sup> 175.0	R <sup>h</sup> 2,120.2
1993	642.7	192.1	30.8	0.6	154.2	27.2	11.9	42.8	7.0	427.8	50.9	30.6	783.8	253.8	R <sup>h</sup> 54.4	R <sup>h</sup> 107.0	0.3	R <sup>h</sup> 172.2	R <sup>h</sup> 2,206.4
1994	578.8	194.6	32.0	0.7	166.6	24.5	9.8	44.8	7.3	R <sup>h</sup> 436.4	40.2	31.5	R <sup>h</sup> 793.8	345.3	R <sup>h</sup> 75.5	R <sup>h</sup> 110.5	0.3	132.2	R <sup>h</sup> 2,231.2
1995	601.1	209.4	42.6	0.7	185.4	28.0	13.4	44.0	7.1	R <sup>h</sup> 450.7	40.0	30.6	R <sup>h</sup> 842.5	382.7	R <sup>h</sup> 58.1	R <sup>h</sup> 113.9	0.3	R <sup>h</sup> 137.5	R <sup>h</sup> 2,345.7
1996	687.0	220.8	26.8	0.7	194.5	51.7	16.4	R <sup>h</sup> 50.3	6.9	R <sup>h</sup> 459.8	43.7	R <sup>h</sup> 63.5	R <sup>h</sup> 914.3	358.2	R <sup>h</sup> 64.7	R <sup>h</sup> 110.0	0.3	R <sup>h</sup> 105.7	R <sup>h</sup> 2,461.0
1997	733.1	221.9	27.6	0.8	196.8	40.6	16.8	R <sup>h</sup> 57.1	7.3	R <sup>h</sup> 474.0	38.5	R <sup>h</sup> 67.8	R <sup>h</sup> 927.4	344.7	R <sup>h</sup> 53.3	R <sup>h</sup> 106.3	0.3	R <sup>h</sup> 78.0	R <sup>h</sup> 2,465.0
1998	717.5	221.3	29.3	0.7	200.7	38.3	19.2	47.3	7.7	490.9	32.6	72.1	939.0	411.9	60.0	68.7	0.3	51.7	2,470.5
1999	707.7	228.6	30.4	0.9	189.3	38.6	12.6	42.9	7.7	507.7	32.9	74.1	937.2	398.6	39.9	73.9	0.4	60.6	2,446.9

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products consumed in the industrial sector. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>e</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>f</sup> Net interstate flow of electricity is the difference between the amount of energy in the electricity sold within a State (including associated losses) and the energy input at the electric utilities within the State. A positive number

indicates that more electricity (including associated losses) came into the State than went out of the State during the year; conversely, a negative number indicates that more electricity (including associated losses) went out of the State than came into the State.

<sup>g</sup> From 1989, "Total" does not equal the sum of the columns. Net imports of electricity generated from nonrenewable energy sources (shown in appendix Table A8) is included in the total but not in any other columns.

<sup>h</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

kWh=kilowatthours. R=Revised data. — =Not applicable.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 216. Residential Energy Consumption Estimates, Selected Years 1960-1999, North Carolina**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum				Wood Thousand Cords	Geothermal	Solar <sup>c</sup>	Electricity <sup>a</sup> Million Kilowatthours	Net Energy	Electrical System Energy Losses <sup>d</sup> Million Kilowatthours	Total
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Total							
			Thousand Barrels										
1960	348	9	5,887	10,429	1,615	17,931	2,196	—	—	5,796	—	14,417	—
1965	190	15	6,654	10,547	2,563	19,765	1,527	—	—	8,601	—	20,537	—
1970	153	27	8,663	10,045	3,003	21,711	1,024	—	—	14,660	—	35,527	—
1975	129	27	7,261	4,901	2,245	14,408	1,047	—	—	18,999	—	45,828	—
1980	60	34	7,044	2,747	2,846	12,637	R 811	—	—	24,377	—	59,277	—
1985	69	29	4,880	3,994	3,194	12,067	1,267	—	—	26,852	—	63,086	—
1990	55	35	3,556	1,408	4,277	9,241	772	—	—	33,144	—	R 72,506	—
1991	34	38	3,201	1,674	4,790	9,664	813	—	—	34,391	—	R 74,763	—
1992	71	43	3,501	1,834	5,377	10,713	856	—	—	34,761	—	R 74,137	—
1993	80	47	3,701	1,888	5,552	11,140	R 932	—	—	37,742	—	R 79,718	—
1994	92	47	3,258	1,308	5,568	10,133	R 914	—	—	37,207	—	R 77,648	—
1995	78	49	3,895	2,098	5,850	11,842	R 1,014	—	—	39,506	—	R 82,368	—
1996	72	59	4,318	2,546	R 6,696	R 13,560	R 1,013	—	—	41,592	—	R 86,678	—
1997	67	53	3,535	2,603	R 6,664	R 12,803	R 725	—	—	40,611	—	R 84,475	—
1998	70	51	3,052	2,988	6,358	12,398	640	—	—	42,890	—	88,603	—
1999	53	53	2,984	1,985	6,430	11,399	685	—	—	43,648	—	85,521	—

  

Trillion Btu													
1960	8.6	8.9	34.3	59.1	6.5	99.9	43.9	0.0	0.0	19.8	181.1	49.2	230.3
1965	4.7	15.1	38.8	59.8	10.3	108.8	30.5	0.0	0.0	29.3	188.5	70.1	258.5
1970	3.6	28.0	50.5	57.0	11.3	118.8	20.5	0.0	0.0	50.0	220.9	121.2	342.1
1975	3.0	28.0	42.3	27.8	8.3	78.4	20.9	0.0	0.0	64.8	195.2	156.4	351.6
1980	1.5	34.4	41.0	15.6	10.5	67.1	16.2	0.0	0.0	83.2	202.3	202.3	404.5
1985	1.7	29.6	28.4	22.6	11.5	62.6	25.3	0.0	0.0	91.6	210.9	215.2	426.1
1990	1.4	36.1	20.7	8.0	15.5	44.2	15.4	e 0.1	R e 0.2	113.1	e 210.5	R 247.4	R e 457.9
1991	0.9	39.2	18.6	9.5	17.3	45.4	16.3	0.1	R 0.2	117.3	219.4	R 255.1	R 474.5
1992	1.8	44.0	20.4	10.4	19.5	50.3	17.1	0.1	R 0.2	118.6	232.1	R 253.0	R 485.1
1993	2.0	48.8	21.6	10.7	20.0	52.3	18.6	0.2	R 0.2	128.8	R 250.8	R 272.0	522.8
1994	2.3	49.2	19.0	7.4	20.2	46.6	18.3	0.1	R 0.2	126.9	243.6	264.9	R 508.6
1995	2.0	51.0	22.7	11.9	21.2	55.8	20.3	0.2	R 0.2	134.8	R 264.2	R 281.0	R 545.2
1996	1.8	60.9	25.2	14.4	R 24.2	R 63.8	R 20.3	0.2	0.2	141.9	R 289.0	R 295.7	R 584.7
1997	1.7	54.8	20.6	14.8	R 24.1	R 59.5	R 14.5	0.2	0.2	138.6	R 269.3	R 288.2	R 557.6
1998	1.7	52.8	17.8	16.9	23.0	57.7	12.8	0.2	0.2	146.3	271.7	302.3	574.0
1999	1.3	54.7	17.4	11.3	23.3	51.9	13.7	0.2	0.2	148.9	270.9	291.8	562.7

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Includes small amounts of solar thermal and photovoltaic energy consumed by the commercial sector that cannot be separately identified. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

R=Revised data.

—=Not applicable.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 217. Commercial Energy Consumption Estimates, Selected Years 1960-1999, North Carolina**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum						Wood	Geothermal	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>c</sup>	Total <sup>d</sup>
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels						Thousand Cords	Million Kilowatthours	Million Kilowatthours			
1960	647	4	1,156	248	285	206	122	2,018	42	—	2,667	—	6,634	—
1965	352	7	1,307	251	452	278	120	2,409	29	—	5,360	—	12,797	—
1970	284	22	1,701	239	530	355	179	3,004	19	—	9,697	—	23,499	—
1975	240	22	1,426	117	396	414	233	2,586	20	—	11,679	—	28,170	—
1980	111	26	1,673	118	502	790	491	3,574	19	—	14,258	—	34,671	—
1985	126	25	2,649	245	564	633	322	4,412	R 34	—	19,163	—	45,021	—
1990	102	31	1,938	78	755	782	226	3,778	R 49	—	25,516	—	R 55,818	—
1991	63	34	1,821	93	845	375	118	3,252	R 52	—	26,411	—	R 57,417	—
1992	132	36	1,639	46	949	323	112	3,070	R 56	—	26,912	—	R 57,398	—
1993	149	37	1,886	50	980	59	288	3,264	75	—	28,547	—	R 60,297	—
1994	171	39	1,959	340	983	78	268	3,627	77	—	29,275	—	R 61,095	—
1995	145	37	2,270	147	1,032	61	188	3,699	77	—	31,104	—	R 64,849	—
1996	134	40	2,864	178	R 1,182	312	223	R 4,760	83	—	32,563	—	R 67,861	—
1997	125	38	2,952	205	R 1,176	176	172	R 4,682	R 80	—	33,344	—	R 69,358	—
1998	130	36	2,635	261	1,122	347	121	4,485	80	—	35,720	—	73,791	—
1999	98	38	2,173	185	1,135	311	120	3,924	96	—	37,202	—	72,890	—
<b>Trillion Btu</b>														
1960	16.0	3.8	6.7	1.4	1.1	1.1	0.8	11.1	0.8	0.0	9.1	40.9	22.6	63.6
1965	8.7	7.5	7.6	1.4	1.8	1.5	0.8	13.1	0.6	0.0	18.3	48.1	43.7	91.8
1970	6.7	22.0	9.9	1.4	2.0	1.9	1.1	16.3	0.4	0.0	33.1	78.5	80.2	158.7
1975	5.6	22.0	8.3	0.7	1.5	2.2	1.5	14.1	0.4	0.0	39.8	82.0	96.1	178.1
1980	2.7	26.5	9.7	0.7	1.8	4.1	3.1	19.5	0.4	0.0	48.6	97.7	118.3	216.0
1985	3.1	25.9	15.4	1.4	2.0	3.3	2.0	24.2	R 0.7	0.0	65.4	R 119.3	153.6	R 272.9
1990	2.6	32.3	11.3	0.4	2.7	4.1	1.4	20.0	R 1.0	e 0.0	87.1	R e 142.9	R 190.5	R e 333.3
1991	1.6	35.4	10.6	0.5	3.1	2.0	0.7	16.9	R 1.0	0.0	90.1	R 145.1	R 195.9	R 341.0
1992	3.3	37.7	9.5	0.3	3.4	1.7	0.7	15.7	R 1.1	0.0	91.8	R 149.6	R 195.8	R 345.4
1993	3.7	38.7	11.0	0.3	3.5	0.3	1.8	16.9	1.5	0.0	97.4	158.2	R 205.7	364.0
1994	4.3	40.3	11.4	1.9	3.6	0.4	1.7	19.0	1.5	0.0	99.9	165.0	R 208.5	373.5
1995	3.7	38.6	13.2	0.8	3.7	0.3	1.2	19.3	1.5	0.0	106.1	169.2	R 221.3	R 390.5
1996	3.3	41.9	16.7	1.0	R 4.3	1.6	1.4	R 25.0	1.7	0.0	111.1	R 183.0	R 231.5	R 414.5
1997	3.1	39.4	17.2	1.2	R 4.3	0.9	1.1	R 24.6	R 1.6	0.0	113.8	R 182.5	R 236.7	R 419.1
1998	3.2	37.9	15.3	1.5	4.1	1.8	0.8	23.4	1.6	0.0	121.9	188.0	251.8	439.8
1999	2.4	39.4	12.7	1.0	4.1	1.6	0.8	20.2	1.9	0.0	126.9	190.8	248.7	439.5

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>d</sup> Small amounts of solar thermal and photovoltaic energy consumed in the commercial sector cannot be separately identified and are included in residential consumption.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

R=Revised data.

—=Not applicable.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 218. Industrial Energy Consumption Estimates, Selected Years 1960-1999, North Carolina**

Year	Coal Thousand Short Tons	Natural Gas <sup>a</sup> Billion Cubic Feet	Petroleum									Hydro-electric Power <sup>b</sup> Million kWh	Wood and Waste	Other <sup>b,d</sup>	Electricity <sup>b</sup> Million kWh	Net Energy	Electrical System Energy Losses <sup>e</sup> Million kWh	Total
			Asphalt and Road Oil <sup>b</sup>	Distillate Fuel <sup>b</sup>	Kero-sene <sup>b</sup>	LPG <sup>b</sup>	Lubri-cants <sup>b</sup>	Motor Gasoline	Residual Fuel <sup>b</sup>	Other <sup>b,c</sup>	Total							
			Thousand Barrels															
1960	2,421	26	2,617	3,155	1,413	730	179	1,089	3,967	186	13,336	48	—	—	8,773	—	21,822	—
1965	2,563	47	2,699	4,710	1,919	1,156	258	1,315	4,005	835	16,896	37	—	—	10,707	—	25,565	—
1970	2,267	75	3,621	4,514	1,328	1,891	328	1,004	5,809	1,416	19,911	10	—	—	16,099	—	39,013	—
1975	1,479	62	3,049	4,271	814	3,695	446	782	7,045	1,815	21,915	5	—	—	20,875	—	50,354	—
1980	1,375	86	3,089	4,131	394	4,581	571	514	8,468	3,112	24,859	3	—	—	25,254	—	61,409	—
1985	2,247	75	3,450	3,236	537	3,606	520	832	5,814	2,493	20,486	3	—	—	26,272	—	61,725	—
1990	2,989	86	4,207	2,918	139	3,700	585	807	5,193	5,173	22,722	R <sup>f</sup> 81	—	—	31,265	—	R <sup>f</sup> 68,395	—
1991	2,702	85	3,821	2,977	170	4,487	523	860	5,244	5,192	23,275	R <sup>f</sup> 82	—	—	31,514	—	R <sup>f</sup> 68,510	—
1992	2,860	91	4,250	3,205	146	4,623	533	819	6,758	5,801	26,135	R <sup>f</sup> 73	—	—	32,522	—	R <sup>f</sup> 69,362	—
1993	2,476	92	4,645	3,138	158	5,184	543	845	7,374	5,541	27,430	R <sup>f</sup> 69	—	—	33,488	—	R <sup>f</sup> 70,731	—
1994	2,396	95	4,824	3,117	84	5,503	568	890	5,915	5,693	26,593	R <sup>f</sup> 1,717	—	—	33,307	—	R <sup>f</sup> 69,509	—
1995	2,437	107	6,426	4,492	115	5,115	558	977	5,869	5,528	29,080	R <sup>f</sup> 1,620	—	—	34,063	—	R <sup>f</sup> 71,019	—
1996	2,336	104	4,046	4,434	165	R <sup>f</sup> 5,908	541	1,003	6,387	R <sup>f</sup> 11,684	R <sup>f</sup> 34,167	R <sup>f</sup> 1,736	—	—	34,142	—	R <sup>f</sup> 71,152	—
1997	2,210	112	4,163	4,147	160	R <sup>f</sup> 7,827	572	1,041	5,669	R <sup>f</sup> 12,418	R <sup>f</sup> 35,996	R <sup>f</sup> 997	—	—	35,095	—	R <sup>f</sup> 73,001	—
1998	1,883	106	4,422	4,916	145	5,409	599	923	4,914	13,148	34,477	1,693	—	—	34,986	—	72,274	—
1999	1,753	109	4,587	3,957	46	4,221	605	657	4,961	13,546	32,580	1,206	—	—	34,165	—	66,940	—

**Trillion Btu**

1960	61.6	27.0	17.4	18.4	8.0	2.9	1.1	5.7	24.9	1.1	79.5	0.5	29.0	0.0	29.9	227.6	74.5	302.0
1965	64.6	48.3	17.9	27.4	10.9	4.6	1.6	6.9	25.2	4.7	99.2	0.4	36.2	0.0	36.5	285.3	87.2	372.5
1970	53.9	76.9	24.0	26.3	7.5	7.1	2.0	5.3	36.5	8.0	116.8	0.1	45.0	0.0	54.9	347.6	133.1	480.7
1975	34.7	63.2	20.2	24.9	4.6	13.7	2.7	4.1	44.3	10.2	124.8	0.1	45.1	0.0	71.2	339.1	171.8	510.9
1980	33.6	86.6	20.5	24.1	2.2	16.8	3.5	2.7	53.2	17.2	140.2	(s)	R <sup>f</sup> 55.3	0.0	86.2	R <sup>f</sup> 401.9	209.5	R <sup>f</sup> 611.4
1985	55.9	77.4	22.9	18.8	3.0	13.0	3.2	4.4	36.6	13.7	115.6	(s)	R <sup>f</sup> 64.8	0.0	89.6	R <sup>f</sup> 403.3	210.6	R <sup>f</sup> 613.9
1990	74.5	88.9	27.9	17.0	0.8	13.4	3.5	4.2	32.6	28.7	128.2	R <sup>f</sup> 0.8	R <sup>f</sup> 64.8	f <sup>f</sup> 0.0	106.7	R <sup>f</sup> 464.1	R <sup>f</sup> 233.4	R <sup>f</sup> 697.4
1991	67.8	87.6	25.4	17.3	1.0	16.2	3.2	4.5	33.0	28.8	129.3	R <sup>f</sup> 0.9	R <sup>f</sup> 63.9	0.0	107.5	R <sup>f</sup> 457.1	R <sup>f</sup> 233.8	R <sup>f</sup> 690.8
1992	71.7	94.1	28.2	18.7	0.8	16.8	3.2	4.3	42.5	32.2	146.6	R <sup>f</sup> 0.8	R <sup>f</sup> 88.2	0.0	111.0	R <sup>f</sup> 512.4	R <sup>f</sup> 236.7	R <sup>f</sup> 749.0
1993	62.3	95.5	30.8	18.3	0.9	18.7	3.3	4.4	46.4	30.6	153.4	R <sup>f</sup> 0.7	R <sup>f</sup> 86.9	0.0	114.3	R <sup>f</sup> 513.0	R <sup>f</sup> 241.3	R <sup>f</sup> 754.4
1994	60.1	98.3	32.0	18.2	0.5	20.0	3.4	4.7	37.2	31.5	147.4	R <sup>f</sup> 17.7	R <sup>f</sup> 90.7	0.0	113.6	R <sup>f</sup> 527.8	R <sup>f</sup> 237.2	R <sup>f</sup> 765.0
1995	61.6	110.3	42.6	26.2	0.7	18.5	3.4	5.1	36.9	30.6	164.0	R <sup>f</sup> 16.7	R <sup>f</sup> 92.1	0.0	116.2	R <sup>f</sup> 560.8	R <sup>f</sup> 242.3	R <sup>f</sup> 803.1
1996	58.7	107.9	26.8	25.8	0.9	R <sup>f</sup> 21.3	3.3	R <sup>f</sup> 5.2	40.2	R <sup>f</sup> 63.5	R <sup>f</sup> 187.1	R <sup>f</sup> 18.0	R <sup>f</sup> 88.0	0.0	116.5	R <sup>f</sup> 576.2	R <sup>f</sup> 242.8	R <sup>f</sup> 819.0
1997	55.4	115.5	27.6	24.2	0.9	R <sup>f</sup> 28.3	3.5	R <sup>f</sup> 5.4	35.6	R <sup>f</sup> 67.8	R <sup>f</sup> 193.3	R <sup>f</sup> 10.3	R <sup>f</sup> 90.2	0.0	119.7	R <sup>f</sup> 584.4	R <sup>f</sup> 249.1	R <sup>f</sup> 833.5
1998	47.2	110.7	29.3	28.6	0.8	19.5	3.6	4.8	30.9	72.1	189.8	17.5	54.3	0.0	119.4	538.9	246.6	785.5
1999	43.9	112.7	30.4	23.0	0.3	15.3	3.7	3.4	31.2	74.1	181.4	12.5	58.3	0.0	116.6	525.3	228.4	753.7

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>e</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>f</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

R=Revised data.

kWh=kilowatthours. — =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 219. Transportation Energy Consumption Estimates, Selected Years 1960-1999, North Carolina**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum								Ethanol <sup>c</sup>	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total <sup>c</sup>
			Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	LPG <sup>a</sup>	Lubricants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total					
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels								Thousand Barrels	Million Kilowatthours	Million Kilowatthours	Total <sup>c</sup>	
1960	43	2	692	3,187	3,401	5	545	34,580	494	42,905	0	0	—	0	—
1965	9	4	714	4,458	3,649	17	578	41,551	581	51,548	0	0	—	0	—
1970	4	6	151	6,301	4,702	65	523	54,989	345	67,077	0	0	—	0	—
1975	(s)	4	219	8,207	3,809	108	498	65,739	263	78,844	0	0	—	0	—
1980	0	6	215	10,707	5,209	50	635	64,918	99	81,834	0	0	—	0	—
1985	0	5	174	13,617	6,668	183	578	69,392	97	90,708	R <sup>e</sup> 228	0	—	0	—
1990	0	6	213	16,289	5,567	160	650	75,937	520	99,336	R <sup>e</sup> 0	0	—	0	—
1991	0	6	170	15,605	4,384	186	581	75,811	746	97,483	R <sup>e</sup> 121	0	—	0	—
1992	0	6	154	17,073	4,684	143	593	76,054	659	99,361	R <sup>e</sup> 78	0	—	0	—
1993	0	6	118	17,403	4,897	155	604	80,528	428	104,133	R <sup>e</sup> 78	0	—	0	—
1994	0	6	136	19,819	4,359	278	631	82,476	213	107,912	R <sup>e</sup> 298	0	—	0	—
1995	0	6	139	20,665	4,947	141	620	85,383	304	112,199	R <sup>e</sup> 28	0	—	0	—
1996	0	7	148	21,201	9,127	R <sup>e</sup> 131	602	86,832	334	R <sup>e</sup> 118,375	R <sup>e</sup> 790	0	—	0	—
1997	0	7	159	22,690	7,153	R <sup>e</sup> 122	636	89,716	283	120,757	R <sup>e</sup> 798	0	—	0	—
1998	0	7	138	23,221	6,755	211	665	92,908	157	124,055	975	0	—	0	—
1999	0	11	187	22,758	6,802	72	672	96,454	158	127,102	836	0	—	0	—
<b>Trillion Btu</b>															
1960	1.1	2.5	3.5	18.6	18.2	(s)	3.3	181.6	3.1	228.4	0.0	0.0	232.0	0.0	232.0
1965	0.2	4.4	3.6	26.0	19.7	0.1	3.5	218.3	3.7	274.8	0.0	0.0	279.4	0.0	279.4
1970	0.1	6.3	0.8	36.7	25.7	0.2	3.2	288.9	2.2	357.7	0.0	0.0	364.0	0.0	364.0
1975	(s)	3.6	1.1	47.8	20.8	0.4	3.0	345.3	1.7	420.1	0.0	0.0	423.8	0.0	423.8
1980	0.0	5.9	1.1	62.4	28.7	0.2	3.8	341.0	0.6	437.8	0.0	0.0	443.7	0.0	443.7
1985	0.0	4.9	0.9	79.3	37.0	0.7	3.5	364.5	0.6	486.5	R <sup>e</sup> 0.8	0.0	<sup>e</sup> 491.4	0.0	<sup>e</sup> 491.4
1990	0.0	6.5	1.1	94.9	30.8	0.6	3.9	398.9	3.3	533.5	R <sup>e</sup> 0.0	0.0	539.9	0.0	539.9
1991	0.0	6.4	0.9	90.9	24.3	0.7	3.5	398.2	4.7	523.2	R <sup>e</sup> 0.4	0.0	529.6	0.0	529.6
1992	0.0	6.7	0.8	99.5	26.0	0.5	3.6	399.5	4.1	534.0	R <sup>e</sup> 0.3	0.0	540.6	0.0	540.6
1993	0.0	6.2	0.6	101.4	27.2	0.6	3.7	423.0	2.7	559.1	0.3	0.0	565.3	0.0	565.3
1994	0.0	6.0	0.7	115.4	24.5	1.0	3.8	R <sup>e</sup> 431.4	1.3	R <sup>e</sup> 578.2	R <sup>e</sup> 1.1	0.0	R <sup>e</sup> 584.2	0.0	R <sup>e</sup> 584.2
1995	0.0	6.3	0.7	120.4	28.0	0.5	3.8	R <sup>e</sup> 445.3	1.9	R <sup>e</sup> 600.6	0.1	0.0	R <sup>e</sup> 606.9	0.0	R <sup>e</sup> 606.9
1996	0.0	7.6	0.7	123.5	51.7	0.5	3.6	R <sup>e</sup> 452.9	2.1	R <sup>e</sup> 635.1	R <sup>e</sup> 2.8	0.0	R <sup>e</sup> 642.8	0.0	R <sup>e</sup> 642.8
1997	0.0	7.5	0.8	132.2	40.6	0.4	3.9	R <sup>e</sup> 467.7	1.8	R <sup>e</sup> 647.3	R <sup>e</sup> 2.8	0.0	R <sup>e</sup> 654.8	0.0	R <sup>e</sup> 654.8
1998	0.0	6.9	0.7	135.3	38.3	0.8	4.0	484.2	1.0	664.3	3.5	0.0	671.2	0.0	671.2
1999	0.0	10.9	0.9	132.6	38.6	0.3	4.1	502.6	1.0	680.0	3.0	0.0	690.9	0.0	690.9

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels. Transportation use of natural gas is gas consumed in the operation of pipelines, primarily in compressors, and, since 1990, is also gas consumed as vehicle fuel.

<sup>c</sup> Ethanol blended into motor gasoline, which is accounted for under motor gasoline, is shown separately here to display the use of renewable energy by the transportation sector and is included only once in the total.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1980 and 1981 due to the expanded coverage of renewable energy sources beginning in 1981.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 220. Estimates of Energy Input at Electric Utilities, Selected Years, 1960-1999, North Carolina**

Year	Coal	Natural Gas <sup>a</sup>	Petroleum				Nuclear Electric Power	Hydroelectric Power <sup>e</sup>	Wood and Waste	Geothermal Energy	Other <sup>b,f</sup>	Total <sup>g</sup>
			Heavy Oil <sup>b,c</sup>	Light Oil <sup>b,d</sup>	Petroleum Coke <sup>b</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels				Million Kilowatthours					
1960	5,488	5	19	60	0	79	0	4,951	0	0	0	—
1965	9,595	3	16	53	0	70	0	5,349	0	0	0	—
1970	17,709	21	445	1,432	0	1,877	0	4,363	0	0	0	—
1975	18,206	(s)	237	93	0	330	1,405	7,050	0	0	0	—
1980	23,920	2	(s)	561	0	561	5,775	5,483	0	0	0	—
1985	19,610	1	0	443	0	443	19,303	4,091	0	0	0	—
1990	18,005	2	0	373	0	373	25,905	6,957	0	0	0	—
1991	18,078	3	0	349	0	349	30,312	6,024	0	0	0	—
1992	21,011	3	0	314	0	314	22,754	5,835	0	0	0	—
1993	23,055	3	0	351	0	351	23,759	5,207	0	0	0	—
1994	20,624	1	0	447	0	447	32,346	5,606	0	0	0	—
1995	21,424	3	0	505	0	505	35,910	4,014	0	0	0	—
1996	25,083	2	0	569	0	569	33,718	4,517	0	0	0	—
1997	27,206	5	0	467	0	467	32,453	4,148	0	0	0	—
1998	26,834	12	0	635	0	635	38,778	4,111	0	0	0	—
1999	26,507	11	0	632	0	632	37,524	2,654	0	0	0	—
<b>Trillion Btu</b>												
1960	144.0	4.8	0.1	0.4	0.0	0.5	0.0	53.3	0.0	0.0	0.0	202.6
1965	247.7	3.0	0.1	0.3	0.0	0.4	0.0	55.9	0.0	0.0	0.0	307.0
1970	427.0	21.6	2.8	8.3	0.0	11.1	0.0	45.8	0.0	0.0	0.0	505.6
1975	433.1	0.1	1.5	0.5	0.0	2.0	15.5	73.4	0.0	0.0	0.0	524.1
1980	586.9	1.8	(s)	3.3	0.0	3.3	63.0	57.0	0.0	0.0	0.0	711.9
1985	489.8	0.6	0.0	2.6	0.0	2.6	208.7	42.7	0.0	0.0	0.0	744.4
1990	451.7	2.5	0.0	2.2	0.0	2.2	276.7	72.4	0.0	0.0	0.0	805.5
1991	452.2	3.1	0.0	2.0	0.0	2.0	325.6	62.9	0.0	0.0	0.0	845.7
1992	523.4	3.3	0.0	1.8	0.0	1.8	243.0	60.4	0.0	0.0	0.0	831.9
1993	574.8	3.0	0.0	2.0	0.0	2.0	253.8	53.7	0.0	0.0	0.0	887.3
1994	512.1	0.9	0.0	2.6	0.0	2.6	345.3	57.8	0.0	0.0	0.0	918.8
1995	533.9	3.2	0.0	2.9	0.0	2.9	382.7	41.4	0.0	0.0	0.0	964.3
1996	623.2	2.5	0.0	3.3	0.0	3.3	358.2	46.7	0.0	0.0	0.0	1,033.8
1997	673.0	4.7	0.0	2.7	0.0	2.7	344.7	R 43.0	0.0	0.0	0.0	R 1,068.1
1998	665.3	13.0	0.0	3.7	0.0	3.7	411.9	42.5	0.0	0.0	0.0	1,136.5
1999	660.0	10.9	0.0	3.7	0.0	3.7	398.6	27.5	0.0	0.0	0.0	1,100.7

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> Prior to 1980, based on oil used in steam plants. Since 1980, heavy oil includes fuel oil nos. 4, 5, and 6 and residual fuel oils.

<sup>d</sup> Prior to 1980, based on oil used in internal combustion and gas turbine engine plants. Since 1980, light oil includes fuel oil nos. 1 and 2, kerosene, and jet fuel.

<sup>e</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>f</sup> "Other" is electricity generated for distribution from wind, photovoltaic, and solar thermal energy.

<sup>g</sup> If applicable, from 1989, includes net imports of electricity generated from nonrenewable energy sources not shown in other columns. See data in appendix Table A8.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 221. Energy Consumption Estimates by Source, Selected Years 1960-1999, North Dakota**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum											Nuclear Electric Power	Hydro-electric Power <sup>d</sup>	Wood and Waste	Other <sup>a,e</sup>	Net Inter-state Flow of Electricity/Losses <sup>f</sup>	Total <sup>g</sup>
			Asphalt & Road Oil <sup>a</sup>	Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	Kero-sene <sup>a</sup>	LPG <sup>a</sup>	Lubri-cants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Other <sup>a,c</sup>	Total						
			Thousand Barrels															Million kWh	
1960	2,101	26	1,123	66	3,773	2,103	904	1,212	202	7,719	687	R 794	R 18,583	0	1,060	—	—	-3,501	—
1965	1,719	32	795	165	5,170	2,069	52	1,154	167	8,212	868	R 875	R 19,526	0	2,497	—	—	-6,185	—
1970	4,186	33	1,402	95	4,975	2,074	245	1,719	166	8,766	728	R 972	R 21,141	0	3,108	—	—	-14,183	—
1975	5,100	37	1,054	85	4,446	1,855	70	1,580	158	10,044	1,089	R 1,095	R 21,477	0	4,511	—	—	-18,295	—
1980	12,346	23	753	64	8,139	1,702	15	1,302	177	9,167	716	R 1,048	R 23,083	0	5,364	—	—	-43,747	—
1985	22,958	28	1,047	4	7,505	1,682	15	549	162	8,822	505	R 824	R 21,115	0	4,818	—	—	-58,231	—
1990	28,114	32	814	28	6,764	1,178	6	1,426	182	8,151	331	R 1,138	R 20,017	0	R <sup>h</sup> 1,855	—	—	R -66,959	—
1991	28,597	40	778	28	7,413	964	10	2,025	163	8,255	306	R 986	R 20,928	0	R 1,926	—	—	R -68,826	—
1992	30,301	37	1,465	28	7,034	1,405	7	1,771	166	8,233	291	R 1,174	R 21,574	0	R 2,186	—	—	R -74,111	—
1993	30,302	40	915	62	7,443	1,254	10	1,369	169	8,482	399	R 1,097	R 21,199	0	R 2,439	—	—	R -74,179	—
1994	30,363	43	1,252	43	8,338	846	7	1,316	176	8,387	343	R 1,151	R 21,861	0	R 2,639	—	—	R -74,870	—
1995	30,237	45	791	65	8,553	333	5	1,754	173	8,650	166	R 1,106	R 21,597	0	R 3,004	—	—	R -73,026	—
1996	30,511	49	911	50	8,511	246	8	R 2,226	168	8,683	138	R 1,254	R 22,194	0	R 3,802	—	—	R -78,214	—
1997	29,360	56	1,241	33	8,424	189	7	R 2,534	178	8,628	190	R 1,239	R 22,664	0	R 3,490	—	—	R -72,673	—
1998	31,060	50	1,440	43	7,273	211	8	1,976	186	8,681	46	1,074	20,939	0	2,443	—	—	-74,749	—
1999	31,285	56	2,097	39	7,344	405	19	2,675	188	8,711	73	1,107	22,658	0	2,723	—	—	-74,776	—

  

Trillion Btu																			
1960	30.5	27.4	7.5	0.3	22.0	11.3	5.1	4.9	1.2	40.5	4.3	4.8	101.9	0.0	11.4	0.5	0.0	-11.9	R 159.7
1965	24.7	32.4	5.3	0.8	30.1	11.1	0.3	4.6	1.0	43.1	5.5	R 5.3	R 107.1	0.0	26.1	0.3	0.0	-21.1	R 169.6
1970	57.5	33.7	9.3	0.5	29.0	11.2	1.4	6.5	1.0	46.0	4.6	R 5.8	R 115.3	0.0	32.6	0.4	0.0	-48.4	R 191.1
1975	67.9	36.9	7.0	0.4	25.9	10.0	0.4	5.9	1.0	52.8	6.8	R 6.6	R 116.8	0.0	46.9	0.5	0.0	-62.4	R 206.5
1980	163.3	24.0	5.0	0.3	47.4	9.2	0.1	4.8	1.1	48.2	4.5	R 6.3	R 126.8	0.0	55.7	2.9	0.0	-149.3	R 223.6
1985	302.0	29.8	6.9	(s)	43.7	9.1	0.1	2.0	1.0	46.3	3.2	R 5.1	R 117.4	0.0	50.3	R 2.8	(s)	-198.7	R 303.7
1990	374.6	33.5	5.4	0.1	39.4	6.4	(s)	5.2	1.1	42.8	2.1	R 6.8	R 109.4	0.0	R <sup>h</sup> 19.3	R 1.9	h 0.1	R -228.5	R <sup>h</sup> 309.0
1991	379.2	41.6	5.2	0.1	43.2	5.2	0.1	7.3	1.0	43.4	1.9	R 6.0	R 113.4	0.0	R 20.1	R 1.9	0.1	R -234.8	R 321.4
1992	399.1	38.2	9.7	0.1	41.0	7.6	(s)	6.4	1.0	43.3	1.8	R 7.1	R 118.0	0.0	R 22.6	R 2.0	0.1	-252.9	329.2
1993	399.7	42.4	6.1	0.3	43.4	6.8	0.1	4.9	1.0	44.6	2.5	R 6.6	R 116.2	0.0	R 25.1	R 1.7	0.1	R -253.1	R 332.6
1994	402.4	45.3	8.3	0.2	48.6	4.6	(s)	4.8	1.1	R 43.9	2.2	R 6.9	R 120.6	0.0	R 27.2	R 1.7	0.1	R -255.5	R 343.8
1995	399.8	47.6	5.2	0.3	49.8	1.9	(s)	6.4	1.1	R 45.1	1.0	R 6.7	R 117.5	0.0	R 31.0	R 1.8	0.1	R -249.2	R 350.7
1996	404.1	51.5	6.0	0.3	49.6	1.4	(s)	R 8.0	1.0	R 45.3	0.9	R 7.5	R 120.1	0.0	R 39.3	2.3	0.2	R -266.9	R 352.9
1997	386.5	58.9	8.2	0.2	49.1	1.1	(s)	R 9.2	1.1	R 45.0	1.2	R 7.5	R 122.5	0.0	R 36.1	R 2.0	0.2	R -248.0	R 357.7
1998	409.6	51.4	9.6	0.2	42.4	1.2	(s)	7.1	1.1	45.2	0.3	6.5	113.7	0.0	25.3	1.9	0.2	-255.0	343.4
1999	411.6	58.9	13.9	0.2	42.8	2.3	0.1	9.7	1.1	45.4	0.5	6.7	122.6	0.0	28.2	2.1	0.2	-255.1	365.7

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products consumed in the industrial sector. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>e</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>f</sup> Net interstate flow of electricity is the difference between the amount of energy in the electricity sold within a State (including associated losses) and the energy input at the electric utilities within the State. A positive number

indicates that more electricity (including associated losses) came into the State than went out of the State during the year; conversely, a negative number indicates that more electricity (including associated losses) went out of the State than came into the State.

<sup>g</sup> From 1989, "Total" does not equal the sum of the columns. Net imports of electricity generated from nonrenewable energy sources (shown in appendix Table A8) is included in the total but not in any other columns.

<sup>h</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

kWh=kilowatthours. R=Revised data. — =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.



**Table 222. Residential Energy Consumption Estimates, Selected Years 1960-1999, North Dakota**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum				Wood Thousand Cords	Geothermal	Solar <sup>c</sup>	Electricity <sup>a</sup> Million Kilowatthours	Net Energy	Electrical System Energy Losses <sup>d</sup>		Total	
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Total						Thousand Barrels	Million Kilowatthours		Million Kilowatthours
1960	195	4	874	860	787	2,521	23	—	—	728	—	1,810	—		
1965	108	7	1,269	40	758	2,067	16	—	—	911	—	2,176	—		
1970	50	8	1,103	190	1,283	2,576	19	—	—	1,399	—	3,391	—		
1975	53	10	776	21	1,181	1,978	22	—	—	1,901	—	4,584	—		
1980	50	10	1,173	5	511	1,689	143	—	—	2,456	—	5,972	—		
1985	69	10	1,119	14	169	1,302	137	—	—	3,012	—	7,075	—		
1990	47	9	845	5	653	1,502	84	—	—	2,954	—	R 6,462	—		
1991	47	10	902	7	976	1,885	89	—	—	3,096	—	R 6,731	—		
1992	42	10	642	6	1,081	1,729	93	—	—	3,020	—	R 6,441	—		
1993	48	11	751	8	762	1,521	77	—	—	3,209	—	R 6,778	—		
1994	49	11	733	6	693	1,432	75	—	—	3,243	—	R 6,768	—		
1995	38	11	775	4	775	1,553	84	—	—	3,384	—	R 7,055	—		
1996	52	13	829	5	R 945	R 1,779	84	—	—	3,602	—	R 7,506	—		
1997	49	11	638	5	R 1,519	R 2,162	R 59	—	—	3,437	—	R 7,149	—		
1998	41	10	524	6	1,088	1,618	52	—	—	3,272	—	6,760	—		
1999	45	11	441	17	1,439	1,898	55	—	—	3,307	—	6,479	—		
<b>Trillion Btu</b>															
1960	3.0	4.0	5.1	4.9	3.2	13.1	0.5	0.0	0.0	2.5	23.1	6.2	29.2		
1965	1.7	6.6	7.4	0.2	3.0	10.7	0.3	0.0	0.0	3.1	22.4	7.4	29.8		
1970	0.7	8.4	6.4	1.1	4.8	12.4	0.4	0.0	0.0	4.8	26.7	11.6	38.3		
1975	0.7	10.2	4.5	0.1	4.4	9.0	0.4	0.0	0.0	6.5	26.9	15.6	42.5		
1980	0.7	10.1	6.8	(s)	1.9	8.7	2.9	0.0	0.0	8.4	30.8	20.4	51.2		
1985	0.9	11.0	6.5	0.1	0.6	7.2	2.7	0.0	0.0	10.3	32.1	24.1	56.3		
1990	0.7	9.5	4.9	(s)	2.4	7.3	1.7	e 0.1	e (s)	10.1	e 29.3	22.0	e 51.3		
1991	0.7	10.8	5.3	(s)	3.5	8.8	1.8	0.1	(s)	10.6	32.7	23.0	55.7		
1992	0.6	10.1	3.7	(s)	3.9	7.7	1.9	0.1	(s)	10.3	30.7	22.0	52.7		
1993	0.7	11.4	4.4	(s)	2.7	7.2	1.5	0.1	(s)	10.9	31.8	23.1	54.9		
1994	0.7	11.3	4.3	(s)	2.5	6.8	1.5	0.1	(s)	11.1	31.5	23.1	54.6		
1995	0.6	11.8	4.5	(s)	2.8	7.3	1.7	0.1	(s)	11.5	33.0	24.1	57.1		
1996	0.8	13.2	4.8	(s)	R 3.4	R 8.3	1.7	0.1	(s)	12.3	36.3	25.6	R 62.0		
1997	0.7	11.9	3.7	(s)	R 5.5	R 9.2	1.2	0.1	(s)	11.7	R 34.9	24.4	R 59.3		
1998	0.6	10.5	3.1	(s)	3.9	7.0	1.0	0.1	(s)	11.2	30.4	23.1	53.5		
1999	0.7	11.0	2.6	0.1	5.2	7.9	1.1	0.1	(s)	11.3	32.1	22.1	54.2		

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Includes small amounts of solar thermal and photovoltaic energy consumed by the commercial sector that cannot be separately identified. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 223. Commercial Energy Consumption Estimates, Selected Years 1960-1999, North Dakota**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum						Wood	Geothermal	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>c</sup>	Total <sup>d</sup>
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels						Thousand Cords	Million Kilowatthours	Million Kilowatthours			
1960	362	3	198	0	139	32	73	442	(s)	—	304	—	757	—
1965	201	5	288	0	134	179	209	809	(s)	—	443	—	1,058	—
1970	93	8	250	0	226	151	104	731	(s)	—	696	—	1,686	—
1975	99	12	176	0	208	95	493	972	(s)	—	805	—	1,942	—
1980	93	11	642	0	90	73	400	1,206	3	—	1,145	—	2,784	—
1985	128	10	484	(s)	30	69	64	647	R 4	—	2,026	—	4,760	—
1990	88	10	151	(s)	115	70	23	359	R 5	—	2,300	—	R 5,032	—
1991	88	11	160	1	172	44	8	384	R 6	—	2,397	—	R 5,211	—
1992	79	10	157	(s)	191	37	12	397	R 6	—	2,273	—	R 4,848	—
1993	89	11	143	1	134	10	16	305	6	—	2,318	—	R 4,896	—
1994	90	11	192	1	122	10	15	340	6	—	2,427	—	5,064	—
1995	71	12	160	1	137	10	19	327	6	—	2,728	—	R 5,687	—
1996	95	12	211	2	R 167	10	6	R 396	7	—	2,877	—	R 5,996	—
1997	91	11	273	1	R 268	10	9	R 560	6	—	2,769	—	R 5,760	—
1998	77	10	265	1	192	21	17	496	6	—	2,761	—	5,704	—
1999	83	10	213	1	254	22	18	507	8	—	2,793	—	5,472	—
<b>Trillion Btu</b>														
1960	5.6	2.9	1.2	0.0	0.6	0.2	0.5	2.3	(s)	0.0	1.0	12.0	2.6	14.5
1965	3.1	5.0	1.7	0.0	0.5	0.9	1.3	4.5	(s)	0.0	1.5	14.1	3.6	17.7
1970	1.4	8.6	1.5	0.0	0.9	0.8	0.7	3.8	(s)	0.0	2.4	16.1	5.8	21.8
1975	1.4	12.4	1.0	0.0	0.8	0.5	3.1	5.4	(s)	0.0	2.7	21.9	6.6	28.6
1980	1.2	11.6	3.7	0.0	0.3	0.4	2.5	7.0	0.1	0.0	3.9	23.8	9.5	33.3
1985	1.7	10.7	2.8	(s)	0.1	0.4	0.4	3.7	R 0.1	0.0	6.9	R 23.1	16.2	39.3
1990	1.2	10.6	0.9	(s)	0.4	0.4	0.1	1.8	R 0.1	e (s)	7.8	R e 21.6	17.2	R e 38.7
1991	1.2	11.2	0.9	(s)	0.6	0.2	(s)	1.8	R 0.1	(s)	8.2	R 22.6	17.8	R 40.4
1992	1.1	10.2	0.9	(s)	0.7	0.2	0.1	1.9	R 0.1	(s)	7.8	R 21.1	R 16.5	R 37.7
1993	1.3	11.3	0.8	(s)	0.5	0.1	0.1	1.5	0.1	(s)	7.9	22.1	16.7	38.9
1994	1.3	11.4	1.1	(s)	0.4	0.1	0.1	1.7	0.1	0.1	8.3	22.9	17.3	40.2
1995	1.1	12.2	0.9	(s)	0.5	0.1	0.1	1.6	0.1	0.1	9.3	24.4	19.4	43.8
1996	1.4	12.8	1.2	(s)	0.6	0.1	(s)	1.9	0.1	0.1	9.8	26.1	R 20.5	46.6
1997	1.4	11.4	1.6	(s)	R 1.0	0.1	0.1	R 2.7	0.1	0.1	9.4	R 25.1	R 19.7	R 44.8
1998	1.2	10.5	1.5	(s)	0.7	0.1	0.1	2.5	0.1	0.1	9.4	23.8	19.5	43.2
1999	1.3	10.5	1.2	(s)	0.9	0.1	0.1	2.4	0.2	0.1	9.5	24.0	18.7	42.6

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>d</sup> Small amounts of solar thermal and photovoltaic energy consumed in the commercial sector cannot be separately identified and are included in residential consumption.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 224. Industrial Energy Consumption Estimates, Selected Years 1960-1999, North Dakota**

Year	Coal Thousand Short Tons	Natural Gas <sup>a</sup> Billion Cubic Feet	Petroleum									Hydro-electric Power <sup>b</sup> Million kWh	Wood and Waste	Other <sup>b,d</sup>	Electricity <sup>b</sup>		Electrical System Energy Losses <sup>e</sup> Million kWh	Total
			Asphalt and Road Oil <sup>b</sup>	Distillate Fuel <sup>b</sup>	Kero-sene <sup>b</sup>	LPG <sup>b</sup>	Lubri-cants <sup>b</sup>	Motor Gasoline	Residual Fuel <sup>b</sup>	Other <sup>b,c</sup>	Total				Million kWh	Net Energy		
			Thousand Barrels															
1960	521	20	1,123	2,104	44	257	44	2,927	530	R 794	R 7,823	0	—	—	121	—	300	—
1965	444	21	795	2,696	12	240	20	2,533	632	R 875	R 7,804	0	—	—	241	—	576	—
1970	523	16	1,402	2,174	55	206	28	2,315	558	R 972	R 7,710	0	—	—	720	—	1,745	—
1975	570	14	1,054	1,613	49	189	21	2,193	577	R 1,095	R 6,792	0	—	—	1,007	—	2,428	—
1980	585	2	753	2,460	10	690	26	1,540	315	R 1,048	R 6,842	0	—	—	1,576	—	3,832	—
1985	5,407	7	1,047	2,783	1	340	24	1,080	440	R 824	R 6,539	0	—	—	1,988	—	4,672	—
1990	6,400	11	814	2,596	1	644	27	799	308	R 1,138	R 6,326	f 0	—	—	1,760	—	R 3,850	—
1991	6,287	17	778	3,063	2	862	24	784	298	R 986	R 6,798	0	—	—	1,762	—	R 3,831	—
1992	6,988	14	1,465	2,940	(s)	483	24	720	279	R 1,174	R 7,085	0	—	—	1,835	—	R 3,915	—
1993	6,875	14	915	2,952	1	455	25	674	383	R 1,097	R 6,501	0	—	—	1,905	—	R 4,023	—
1994	6,976	17	1,252	3,234	1	480	26	698	328	R 1,151	R 7,171	0	—	—	2,011	—	4,197	—
1995	7,447	18	791	3,272	(s)	830	25	685	147	R 1,106	R 6,856	0	—	—	1,771	—	R 3,693	—
1996	6,724	20	911	2,952	1	R 1,093	25	575	132	R 1,254	R 6,941	0	—	—	1,835	—	R 3,825	—
1997	6,466	29	1,241	2,768	1	R 734	26	450	181	R 1,239	R 6,641	0	—	—	2,076	—	R 4,319	—
1998	6,664	29	1,440	2,524	1	691	27	562	29	1,074	6,349	0	—	—	2,187	—	4,518	—
1999	6,617	26	2,097	2,151	1	972	28	434	55	1,107	6,846	0	—	—	3,013	—	5,902	—

  

Trillion Btu																		
1960	7.7	20.3	7.5	12.3	0.2	1.0	0.3	15.4	3.3	4.8	R 44.7	0.0	0.0	0.0	0.4	R 73.2	1.0	R 74.2
1965	6.5	20.9	5.3	15.7	0.1	1.0	0.1	13.3	4.0	R 5.3	R 44.7	0.0	0.0	0.0	0.8	R 72.9	2.0	R 74.8
1970	7.2	16.3	9.3	12.7	0.3	0.8	0.2	12.2	3.5	R 5.8	R 44.7	0.0	0.0	0.0	2.5	70.8	6.0	R 76.7
1975	7.4	14.0	7.0	9.4	0.3	0.7	0.1	11.5	3.6	R 6.6	R 39.2	0.0	0.0	0.0	3.4	R 64.1	8.3	R 72.4
1980	7.7	2.1	5.0	14.3	0.1	2.5	0.2	8.1	2.0	R 6.3	R 38.4	0.0	0.0	0.0	5.4	R 53.6	13.1	R 66.7
1985	71.2	7.3	6.9	16.2	(s)	1.2	0.1	5.7	2.8	R 5.1	R 38.1	0.0	0.0	0.0	6.8	R 123.4	15.9	R 139.3
1990	86.3	11.7	5.4	15.1	(s)	2.3	0.2	4.2	1.9	R 6.8	R 36.0	f 0.0	R 0.1	f 0.0	6.0	f 140.1	13.1	f 153.2
1991	84.3	17.5	5.2	17.8	(s)	3.1	0.1	4.1	1.9	R 6.0	R 38.3	0.0	R 0.1	0.0	6.0	R 146.1	13.1	R 159.2
1992	93.1	15.1	9.7	17.1	(s)	1.8	0.1	3.8	1.8	R 7.1	R 41.3	0.0	R 0.1	0.0	6.3	R 155.8	13.4	R 169.2
1993	91.6	15.2	6.1	17.2	(s)	1.6	0.1	3.5	2.4	R 6.6	R 37.6	0.0	R 0.1	0.0	6.5	R 151.1	13.7	R 164.8
1994	93.8	18.1	8.3	18.8	(s)	1.7	0.2	3.7	2.1	R 6.9	R 41.7	0.0	R (s)	0.0	6.9	R 160.6	14.3	R 174.9
1995	99.4	18.7	5.2	19.1	(s)	3.0	0.2	3.6	0.9	R 6.7	R 38.6	0.0	R (s)	0.0	6.0	R 162.9	12.6	R 175.5
1996	90.0	20.5	6.0	17.2	(s)	R 3.9	0.1	3.0	0.8	R 7.5	R 38.7	0.0	R 0.5	0.0	6.3	R 156.0	R 13.1	R 169.0
1997	85.9	30.6	8.2	16.1	(s)	R 2.7	0.2	R 2.3	1.1	R 7.5	R 38.1	0.0	R 0.7	0.0	7.1	R 162.4	14.7	R 177.2
1998	88.9	30.0	9.6	14.7	(s)	2.5	0.2	2.9	0.2	6.5	36.5	0.0	0.7	0.0	7.5	163.7	15.4	179.1
1999	88.3	27.4	13.9	12.5	(s)	3.5	0.2	2.3	0.3	6.7	39.4	0.0	0.8	0.0	10.3	166.3	20.1	186.4

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>e</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>f</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

R=Revised data.

kWh=kilowatthours. — =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 225. Transportation Energy Consumption Estimates, Selected Years 1960-1999, North Dakota**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum								Ethanol <sup>c</sup>	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total <sup>c</sup>
			Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	LPG <sup>a</sup>	Lubricants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total				Million Kilowatthours	
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels								Thousand Barrels	Million Kilowatthours	Million Kilowatthours	Total <sup>c</sup>	
1960	9	(s)	66	592	2,103	29	158	4,760	69	7,778	0	0	—	0	—
1965	1	(s)	165	916	2,069	22	147	5,499	25	8,843	0	0	—	0	—
1970	1	(s)	95	1,441	2,074	3	138	6,300	41	10,092	0	0	—	0	—
1975	(s)	(s)	85	1,880	1,855	2	137	7,756	0	11,715	0	0	—	0	—
1980	0	(s)	64	3,795	1,702	12	151	7,553	0	13,278	0	0	—	0	—
1985	0	1	4	3,046	1,682	11	138	7,673	0	12,553	R <sup>e</sup> 69	0	—	0	—
1990	0	2	28	3,116	1,178	14	155	7,282	0	11,774	R <sup>e</sup> 85	0	—	0	—
1991	0	2	28	3,219	964	15	139	7,427	0	11,792	R <sup>e</sup> 127	0	—	0	—
1992	0	3	28	3,238	1,405	16	141	7,477	0	12,305	R <sup>e</sup> 148	0	—	0	—
1993	0	4	62	3,527	1,254	18	144	7,798	0	12,803	R <sup>e</sup> 147	0	—	0	—
1994	0	4	43	4,067	846	20	151	7,679	0	12,805	R <sup>e</sup> 174	0	—	0	—
1995	0	5	65	4,248	333	13	148	7,955	0	12,762	R <sup>e</sup> 164	0	—	0	—
1996	0	5	50	4,363	246	R <sup>e</sup> 21	144	8,098	0	R <sup>e</sup> 12,923	R <sup>e</sup> 122	0	—	0	—
1997	0	5	33	4,593	189	R <sup>e</sup> 12	152	8,168	0	R <sup>e</sup> 13,147	R <sup>e</sup> 119	0	—	0	—
1998	0	(s)	43	3,871	211	4	159	8,098	0	12,387	116	0	—	0	—
1999	0	10	39	4,457	405	9	160	8,255	0	13,326	123	0	—	0	—
<b>Trillion Btu</b>															
1960	0.1	(s)	0.3	3.5	11.3	0.1	1.0	25.0	0.4	41.6	0.0	0.0	41.7	0.0	41.7
1965	(s)	(s)	0.8	5.3	11.1	0.1	0.9	28.9	0.2	47.3	0.0	0.0	47.3	0.0	47.3
1970	(s)	(s)	0.5	8.4	11.2	(s)	0.8	33.1	0.3	54.2	0.0	0.0	54.3	0.0	54.3
1975	(s)	0.1	0.4	11.0	10.0	(s)	0.8	40.7	0.0	63.0	0.0	0.0	63.1	0.0	63.1
1980	0.0	0.2	0.3	22.1	9.2	(s)	0.9	39.7	0.0	72.3	0.0	0.0	72.5	0.0	72.5
1985	0.0	0.7	(s)	17.7	9.1	(s)	0.8	40.3	0.0	68.0	R <sup>e</sup> 0.2	0.0	<sup>e</sup> 68.8	0.0	<sup>e</sup> 68.8
1990	0.0	1.8	0.1	18.2	6.4	0.1	0.9	38.3	0.0	63.9	R <sup>e</sup> 0.3	0.0	65.7	0.0	65.7
1991	0.0	2.1	0.1	18.8	5.2	0.1	0.8	39.0	0.0	64.0	R <sup>e</sup> 0.5	0.0	66.1	0.0	66.1
1992	0.0	2.9	0.1	18.9	7.6	0.1	0.9	39.3	0.0	66.8	R <sup>e</sup> 0.5	0.0	69.6	0.0	69.6
1993	0.0	4.5	0.3	20.5	6.8	0.1	0.9	41.0	0.0	69.5	0.5	0.0	74.1	0.0	74.1
1994	0.0	4.5	0.2	23.7	4.6	0.1	0.9	R <sup>e</sup> 40.2	0.0	R <sup>e</sup> 69.7	0.6	0.0	R <sup>e</sup> 74.2	0.0	R <sup>e</sup> 74.2
1995	0.0	4.9	0.3	24.7	1.9	(s)	0.9	R <sup>e</sup> 41.5	0.0	R <sup>e</sup> 69.4	R <sup>e</sup> 0.6	0.0	R <sup>e</sup> 74.3	0.0	R <sup>e</sup> 74.3
1996	0.0	5.0	0.3	25.4	1.4	R <sup>e</sup> 0.1	0.9	R <sup>e</sup> 42.2	0.0	R <sup>e</sup> 70.3	0.4	0.0	R <sup>e</sup> 75.3	0.0	R <sup>e</sup> 75.3
1997	0.0	5.0	0.2	26.8	1.1	(s)	0.9	R <sup>e</sup> 42.6	0.0	R <sup>e</sup> 71.5	0.4	0.0	R <sup>e</sup> 76.5	0.0	R <sup>e</sup> 76.5
1998	0.0	0.4	0.2	22.5	1.2	(s)	1.0	42.2	0.0	67.1	0.4	0.0	67.6	0.0	67.6
1999	0.0	9.9	0.2	26.0	2.3	(s)	1.0	43.0	0.0	72.5	0.4	0.0	82.4	0.0	82.4

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels. Transportation use of natural gas is gas consumed in the operation of pipelines, primarily in compressors, and, since 1990, is also gas consumed as vehicle fuel.

<sup>c</sup> Ethanol blended into motor gasoline, which is accounted for under motor gasoline, is shown separately here to display the use of renewable energy by the transportation sector and is included only once in the total.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1980 and 1981 due to the expanded coverage of renewable energy sources beginning in 1981.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 226. Estimates of Energy Input at Electric Utilities, Selected Years, 1960-1999, North Dakota**

Year	Coal	Natural Gas <sup>a</sup>	Petroleum				Nuclear Electric Power	Hydroelectric Power <sup>e</sup>	Wood and Waste	Geothermal Energy	Other <sup>b,f</sup>	Total <sup>g</sup>
			Heavy Oil <sup>b,c</sup>	Light Oil <sup>b,d</sup>	Petroleum Coke <sup>b</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels				Million Kilowatthours					
1960	1,014	(s)	15	4	0	20	0	1,060	0	0	0	—
1965	964	(s)	2	1	0	3	0	2,497	0	0	0	—
1970	3,519	(s)	25	7	0	32	0	3,108	0	0	0	—
1975	4,377	(s)	18	2	0	20	0	4,511	0	0	0	—
1980	11,618	(s)	0	68	0	68	0	5,364	0	0	0	—
1985	17,354	(s)	0	74	0	74	0	4,818	0	0	(s)	—
1990	21,579	(s)	0	57	0	57	0	R 1,855	0	0	0	—
1991	22,174	(s)	0	69	0	69	0	R 1,926	0	0	0	—
1992	23,192	(s)	0	58	0	58	0	R 2,186	0	0	0	—
1993	23,290	(s)	0	69	0	69	0	R 2,439	0	0	0	—
1994	23,248	(s)	0	112	0	112	0	R 2,639	0	0	0	—
1995	22,680	(s)	0	99	0	99	0	R 3,004	0	0	0	—
1996	23,640	(s)	0	155	0	155	0	R 3,802	0	0	0	—
1997	22,754	(s)	0	153	0	153	0	R 3,490	0	0	0	—
1998	24,278	0	0	89	0	89	0	2,443	0	0	0	—
1999	24,540	0	0	81	0	81	0	2,723	0	0	0	—

  

Trillion Btu												
1960	14.0	0.1	0.1	(s)	0.0	0.1	0.0	11.4	0.0	0.0	0.0	25.7
1965	13.4	(s)	(s)	(s)	0.0	(s)	0.0	26.1	0.0	0.0	0.0	39.6
1970	48.1	0.4	0.2	(s)	0.0	0.2	0.0	32.6	0.0	0.0	0.0	81.3
1975	58.4	0.2	0.1	(s)	0.0	0.1	0.0	46.9	0.0	0.0	0.0	105.6
1980	153.8	(s)	0.0	0.4	0.0	0.4	0.0	55.7	0.0	0.0	0.0	209.9
1985	228.2	(s)	0.0	0.4	0.0	0.4	0.0	50.3	0.0	0.0	(s)	279.0
1990	286.4	(s)	0.0	0.3	0.0	0.3	0.0	R 19.3	0.0	0.0	0.0	R 304.7
1991	293.0	(s)	0.0	0.4	0.0	0.4	0.0	R 20.1	0.0	0.0	0.0	R 313.4
1992	304.2	(s)	0.0	0.3	0.0	0.3	0.0	R 22.6	0.0	0.0	0.0	R 329.1
1993	306.0	(s)	0.0	0.4	0.0	0.4	0.0	R 25.1	0.0	0.0	0.0	R 332.0
1994	306.5	(s)	0.0	0.7	0.0	0.7	0.0	R 27.2	0.0	0.0	0.0	R 336.4
1995	298.7	(s)	0.0	0.6	0.0	0.6	0.0	R 31.0	0.0	0.0	0.0	R 332.1
1996	311.9	(s)	0.0	0.9	0.0	0.9	0.0	R 39.3	0.0	0.0	0.0	R 354.4
1997	298.5	(s)	0.0	0.9	0.0	0.9	0.0	R 36.1	0.0	0.0	0.0	R 335.0
1998	318.8	0.0	0.0	0.5	0.0	0.5	0.0	25.3	0.0	0.0	0.0	341.0
1999	321.3	0.0	0.0	0.5	0.0	0.5	0.0	28.2	0.0	0.0	0.0	347.1

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> Prior to 1980, based on oil used in steam plants. Since 1980, heavy oil includes fuel oil nos. 4, 5, and 6 and residual fuel oils.

<sup>d</sup> Prior to 1980, based on oil used in internal combustion and gas turbine engine plants. Since 1980, light oil includes fuel oil nos. 1 and 2, kerosene, and jet fuel.

<sup>e</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>f</sup> "Other" is electricity generated for distribution from wind, photovoltaic, and solar thermal energy.

<sup>g</sup> If applicable, from 1989, includes net imports of electricity generated from nonrenewable energy sources not shown in other columns. See data in appendix Table A8.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

Table 227. Energy Consumption Estimates by Source, Selected Years 1960-1999, Ohio

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum											Nuclear Electric Power	Hydro-electric Power <sup>d</sup>	Wood and Waste	Other <sup>a,e</sup>	Net Interstate Flow of Electricity/Losses <sup>f</sup>	Total <sup>g</sup>
			Asphalt & Road Oil <sup>a</sup>	Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	Kero-sene <sup>a</sup>	LPG <sup>a</sup>	Lubri-cants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Other <sup>a,c</sup>	Total						
			Thousand Barrels															Million kWh	
1960	51,256	700	6,862	1,395	23,919	1,808	3,955	3,680	3,064	78,170	11,605	R 9,400	R 143,859	0	20	—	—	49,779	—
1965	54,023	880	7,344	2,125	27,663	3,075	6,328	5,441	3,312	86,271	10,963	R 14,683	R 167,205	22	11	—	—	52,423	—
1970	66,863	1,053	9,017	712	34,458	5,857	6,494	8,712	3,631	106,296	6,445	R 16,418	R 198,040	0	7	—	—	49,736	—
1975	70,764	957	8,749	491	42,168	6,039	3,600	9,910	3,609	118,808	10,399	R 17,782	R 221,554	0	7	—	—	41,054	—
1980	64,914	897	7,324	473	48,833	7,219	2,452	44,263	3,821	113,232	6,918	R 23,356	R 257,892	2,119	6	—	—	47,144	—
1985	57,979	733	6,339	330	35,980	7,204	1,709	27,919	3,477	108,763	2,322	R 15,667	R 209,710	1,943	175	—	—	84,049	—
1990	59,205	747	9,880	239	36,666	10,602	901	10,994	3,912	110,487	1,677	R 20,439	R 205,797	10,664	R <sup>h</sup> 177	—	—	R 77,793	—
1991	58,578	766	8,993	214	35,684	10,400	971	11,120	3,500	109,920	1,345	R 18,581	R 200,728	14,833	R 149	—	—	R 64,867	—
1992	58,671	810	9,910	224	38,323	10,631	932	14,638	3,568	108,696	1,623	R 21,548	R 210,093	14,805	R 248	—	—	R 50,850	—
1993	59,031	834	7,682	207	39,642	10,650	1,352	15,065	3,633	114,756	2,164	R 20,341	R 215,491	10,011	R 188	—	—	R 65,082	—
1994	56,711	843	8,847	186	43,195	11,678	1,063	15,234	3,797	113,178	2,048	R 21,088	R 220,314	10,952	R 194	—	—	R 90,893	—
1995	56,580	896	8,973	235	42,641	11,236	1,024	14,273	3,732	116,222	1,444	R 20,257	R 220,038	16,768	R 232	—	—	R 79,205	—
1996	59,835	936	11,258	345	45,241	11,960	1,194	R 16,019	3,622	115,361	1,713	R 23,567	R 230,280	13,919	R 398	—	—	R 64,322	—
1997	58,933	899	14,376	379	49,086	12,604	1,144	R 11,105	3,826	118,336	1,272	R 23,869	R 235,996	15,331	R 507	—	—	R 68,253	—
1998	60,338	813	12,638	365	47,072	13,825	1,255	8,687	4,006	119,932	962	24,582	233,324	16,476	406	—	—	53,713	—
1999	57,551	847	14,091	244	48,763	16,457	1,526	12,929	4,047	120,902	1,440	26,087	246,488	16,422	423	—	—	64,566	—

  

Trillion Btu																			
1960	1,269.4	724.8	45.5	7.0	139.3	9.8	22.4	14.8	18.6	410.6	73.0	R 56.4	R 797.4	0.0	0.2	36.8	0.0	169.8	R 2,998.4
1965	1,324.4	909.4	48.7	10.7	161.1	17.0	35.9	21.8	20.1	453.2	68.9	R 85.7	R 923.2	0.3	0.1	38.6	0.0	178.9	R 3,374.8
1970	1,571.4	1,077.2	59.8	3.6	200.7	32.8	36.8	32.9	22.0	558.4	40.5	R 94.9	R 1,082.5	0.0	0.1	44.1	0.0	169.7	R 3,944.9
1975	1,619.1	978.9	58.1	2.5	245.6	33.9	20.4	36.8	21.9	624.1	65.4	R 103.5	R 1,212.2	0.0	0.1	46.2	0.0	140.1	R 3,996.5
1980	1,528.1	911.3	48.6	2.4	284.5	40.6	13.9	162.6	23.2	594.8	43.5	R 133.1	R 1,347.2	23.1	0.1	R 103.9	0.0	160.9	R 4,074.6
1985	1,389.5	765.4	42.1	1.7	209.6	40.6	9.7	100.6	21.1	571.3	14.6	R 90.4	R 1,101.6	21.0	1.8	R 116.3	0.0	286.8	R 3,682.3
1990	1,424.8	776.6	65.6	1.2	213.6	59.9	5.1	39.9	23.7	580.4	10.5	R 117.0	R 1,116.9	113.9	R <sup>h</sup> 1.8	R 70.2	h 0.4	R 265.4	R <sup>h</sup> 3,770.0
1991	1,413.0	799.3	59.7	1.1	207.9	58.8	5.5	40.2	21.2	577.4	8.5	R 106.6	R 1,086.8	159.3	1.6	R 71.9	0.4	R 221.3	R 3,753.7
1992	1,418.7	839.3	65.8	1.1	223.2	60.1	5.3	53.0	21.6	571.0	10.2	R 123.2	R 1,134.5	158.1	2.6	R 67.9	0.4	R 173.5	R 3,795.0
1993	1,432.3	865.5	51.0	1.0	230.9	60.2	7.7	54.3	22.0	602.8	13.6	R 116.3	R 1,159.9	106.9	R 1.9	R 45.6	0.5	R 222.1	R 3,834.8
1994	1,377.1	874.5	58.7	0.9	251.6	66.1	6.0	55.4	23.0	R 591.9	12.9	R 120.9	R 1,187.4	116.9	2.0	R 45.5	0.5	R 310.1	R 3,914.2
1995	1,379.8	930.1	59.5	1.2	248.4	63.7	5.8	51.7	22.6	R 606.1	9.1	R 116.3	R 1,184.4	178.7	2.4	R 58.0	0.6	R 270.2	R 4,004.3
1996	1,448.8	972.0	74.7	1.7	263.5	67.8	6.8	R 57.9	22.0	R 601.7	10.8	R 134.7	R 1,241.6	147.9	4.1	R 56.7	0.6	R 219.5	R 4,091.2
1997	1,409.7	939.2	95.4	1.9	285.9	71.5	6.5	R 40.2	23.2	R 616.9	8.0	R 136.4	R 1,285.9	162.9	R 5.3	R 73.9	0.7	R 232.9	R 4,110.4
1998	1,445.2	845.5	83.9	1.8	274.2	78.4	7.1	31.4	24.3	625.1	6.0	140.5	1,272.7	175.0	4.2	51.2	0.8	183.3	3,978.0
1999	1,379.0	878.1	93.5	1.2	284.0	93.3	8.7	46.8	24.5	630.0	9.1	148.6	1,339.8	174.5	4.4	326.6	0.9	220.3	4,323.4

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products consumed in the industrial sector. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>e</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>f</sup> Net interstate flow of electricity is the difference between the amount of energy in the electricity sold within a State (including associated losses) and the energy input at the electric utilities within the State. A positive number

indicates that more electricity (including associated losses) came into the State than went out of the State during the year; conversely, a negative number indicates that more electricity (including associated losses) went out of the State than came into the State.

<sup>g</sup> From 1989, "Total" does not equal the sum of the columns. Net imports of electricity generated from nonrenewable energy sources (shown in appendix Table A8) is included in the total but not in any other columns.

<sup>h</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

kWh=kilowatthours. R=Revised data. — =Not applicable.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 228. Residential Energy Consumption Estimates, Selected Years 1960-1999, Ohio**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum				Wood Thousand Cords	Geothermal	Solar <sup>c</sup>	Electricity <sup>a</sup> Million Kilowatthours	Net Energy	Electrical System Energy Losses <sup>d</sup> Million Kilowatthours	Total
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Total							
			Thousand Barrels										
1960	1,206	362	7,270	1,837	1,750	10,857	990	—	—	10,786	—	26,830	—
1965	797	412	7,795	3,626	2,293	13,715	805	—	—	14,504	—	34,630	—
1970	571	460	9,320	2,979	3,892	16,191	925	—	—	22,266	—	53,958	—
1975	399	428	10,776	2,060	4,876	17,713	963	—	—	27,890	—	67,275	—
1980	196	394	7,430	1,016	2,556	11,003	R 2,257	—	—	33,459	—	81,361	—
1985	304	328	4,474	941	3,339	8,754	2,237	—	—	33,945	—	79,750	—
1990	229	308	4,080	625	4,205	8,909	1,560	—	—	37,889	—	R 82,887	—
1991	172	322	4,221	677	4,451	9,348	1,644	—	—	40,942	—	R 89,006	—
1992	209	341	4,662	728	3,987	9,377	1,729	—	—	39,141	—	R 83,478	—
1993	205	354	4,473	839	4,721	10,032	R 883	—	—	41,950	—	R 88,606	—
1994	177	343	4,895	709	4,623	10,227	R 866	—	—	41,791	—	R 87,215	—
1995	143	358	4,321	748	4,979	10,048	R 961	—	—	44,010	—	R 91,759	—
1996	232	375	3,829	818	R 6,683	R 11,331	R 959	—	—	44,573	—	R 92,891	—
1997	118	355	3,522	774	R 6,467	R 10,764	R 567	—	—	43,635	—	R 90,765	—
1998	138	297	2,849	774	5,593	9,217	500	—	—	44,516	—	91,962	—
1999	76	318	3,126	1,295	7,483	11,903	535	—	—	46,629	—	91,360	—

**Trillion Btu**

1960	28.8	374.5	42.3	10.4	7.0	59.8	19.8	0.0	0.0	36.8	519.7	91.5	611.2
1965	18.9	425.6	45.4	20.6	9.2	75.2	16.1	0.0	0.0	49.5	585.3	118.2	703.4
1970	13.1	470.6	54.3	16.9	14.7	85.9	18.5	0.0	0.0	76.0	664.0	184.1	848.1
1975	8.9	438.1	62.8	11.7	18.1	92.6	19.3	0.0	0.0	95.2	654.0	229.5	883.5
1980	4.6	400.1	43.3	5.8	9.4	58.4	45.1	0.0	0.0	114.2	R 622.4	277.6	R 900.0
1985	7.2	342.0	26.1	5.3	12.0	43.4	44.7	0.0	0.0	115.8	553.2	272.1	825.3
1990	5.5	320.7	23.8	3.5	15.2	42.5	31.2	e 0.3	e (s)	129.3	e 529.6	282.8	e 812.4
1991	4.2	335.9	24.6	3.8	16.1	44.5	32.9	0.4	(s)	139.7	557.6	R 303.7	R 861.3
1992	5.1	352.9	27.2	4.1	14.4	45.7	34.6	0.4	(s)	133.5	572.3	R 284.8	R 857.1
1993	5.0	367.6	26.1	4.8	17.0	47.8	R 17.7	0.4	(s)	143.1	R 581.7	R 302.3	R 884.0
1994	4.3	356.0	28.5	4.0	16.8	49.3	17.3	0.4	(s)	142.6	570.0	297.6	R 867.6
1995	3.5	371.4	25.2	4.2	18.0	47.5	19.2	0.4	(s)	150.2	R 592.2	R 313.1	R 905.3
1996	5.5	389.1	22.3	4.6	R 24.1	R 51.1	19.2	0.5	(s)	152.1	R 617.5	R 316.9	R 934.4
1997	2.8	370.5	20.5	4.4	R 23.4	R 48.3	R 11.3	0.5	R 0.1	148.9	R 582.4	R 309.7	R 892.1
1998	3.4	308.5	16.6	4.4	20.2	41.2	10.0	0.5	0.1	151.9	515.5	313.8	829.3
1999	1.9	330.0	18.2	7.3	27.1	52.6	10.7	0.6	0.1	159.1	555.0	311.7	866.7

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Includes small amounts of solar thermal and photovoltaic energy consumed by the commercial sector that cannot be separately identified. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

—=Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

Table 229. Commercial Energy Consumption Estimates, Selected Years 1960-1999, Ohio

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum						Wood Thousand Cords	Geothermal	Electricity <sup>a</sup> Million Kilowatthours	Net Energy	Electrical System Energy Losses <sup>c</sup> Million Kilowatthours	Total <sup>d</sup>
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total						
			Thousand Barrels											
1960	2,206	108	1,443	95	309	541	2,118	4,507	19	—	7,594	—	18,890	—
1965	1,458	127	1,548	188	405	572	1,997	4,710	15	—	10,384	—	24,793	—
1970	1,047	183	1,850	155	687	401	824	3,917	17	—	17,073	—	41,374	—
1975	733	169	2,139	107	861	956	1,457	5,520	18	—	20,047	—	48,355	—
1980	360	166	2,591	130	451	2,058	380	5,610	54	—	23,323	—	56,715	—
1985	555	143	2,036	440	589	604	83	3,752	R 60	—	29,176	—	68,546	—
1990	425	144	1,652	189	742	1,059	22	3,665	R 99	—	34,850	—	R 76,238	—
1991	317	150	1,615	180	785	925	40	3,547	R 105	—	36,813	—	R 80,030	—
1992	379	161	1,683	68	704	673	74	3,201	R 113	—	36,150	—	R 77,100	—
1993	378	164	1,384	201	833	393	27	2,838	71	—	37,740	—	R 79,712	—
1994	322	167	1,501	144	816	448	8	2,916	R 73	—	38,526	—	R 80,401	—
1995	265	175	1,847	89	879	438	5	3,257	R 73	—	40,093	—	R 83,591	—
1996	423	190	1,354	155	R 1,179	365	2	R 3,054	79	—	40,570	—	R 84,548	—
1997	211	184	1,485	127	R 1,141	1,956	2	R 4,711	R 62	—	40,935	—	R 85,148	—
1998	253	157	1,107	218	987	744	1	3,057	62	—	42,232	—	87,242	—
1999	141	168	1,649	129	1,321	175	0	3,273	75	—	43,297	—	84,833	—
Trillion Btu														
1960	52.6	111.7	8.4	0.5	1.2	2.8	13.3	26.3	0.4	0.0	25.9	217.0	64.5	281.4
1965	34.6	131.0	9.0	1.1	1.6	3.0	12.6	27.3	0.3	0.0	35.4	228.6	84.6	313.2
1970	24.0	187.6	10.8	0.9	2.6	2.1	5.2	21.5	0.3	0.0	58.3	291.8	141.2	432.9
1975	16.4	173.4	12.5	0.6	3.2	5.0	9.2	30.4	0.4	0.0	68.4	289.0	165.0	454.0
1980	8.3	168.9	15.1	0.7	1.7	10.8	2.4	30.7	1.1	0.0	79.6	288.6	193.5	482.1
1985	13.2	149.6	11.9	2.5	2.1	3.2	0.5	20.2	R 1.2	0.0	99.5	R 283.8	233.9	R 517.6
1990	10.3	149.3	9.6	1.1	2.7	5.6	0.1	19.1	R 2.0	e 0.0	118.9	R e 299.5	260.1	R e 559.6
1991	7.7	157.0	9.4	1.0	2.8	4.9	0.3	18.4	R 2.1	0.0	125.6	R 310.7	R 273.1	R 583.8
1992	9.2	166.4	9.8	0.4	2.5	3.5	0.5	16.7	R 2.3	0.0	123.3	R 318.0	R 263.1	R 581.1
1993	9.2	170.3	8.1	1.1	3.0	2.1	0.2	14.4	1.4	0.0	128.8	324.1	R 272.0	R 596.1
1994	7.8	173.0	8.7	0.8	3.0	R 2.3	(s)	14.9	R 1.5	0.1	131.5	328.7	274.3	603.0
1995	6.5	181.8	10.8	0.5	3.2	2.3	(s)	16.8	R 1.5	0.1	136.8	343.4	R 285.2	R 628.6
1996	10.1	197.2	7.9	0.9	R 4.3	1.9	(s)	R 14.9	1.6	0.1	138.4	R 362.3	R 288.5	R 650.8
1997	5.0	192.1	8.7	0.7	R 4.1	R 10.2	(s)	R 23.7	R 1.2	0.2	139.7	R 362.0	R 290.5	R 652.5
1998	6.2	162.9	6.4	1.2	3.6	3.9	(s)	15.1	1.2	0.2	144.1	329.8	297.7	627.4
1999	3.4	173.8	9.6	0.7	4.8	0.9	0.0	16.0	1.5	0.2	147.7	342.7	289.5	632.1

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>d</sup> Small amounts of solar thermal and photovoltaic energy consumed in the commercial sector cannot be separately identified and are included in residential consumption.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.



**Table 230. Industrial Energy Consumption Estimates, Selected Years 1960-1999, Ohio**

Year	Coal Thousand Short Tons	Natural Gas <sup>a</sup> Billion Cubic Feet	Petroleum									Hydro-electric Power <sup>b</sup> Million kWh	Wood and Waste	Other <sup>b,d</sup>	Electricity <sup>b</sup> Million kWh	Net Energy	Electrical System Energy Losses <sup>e</sup> Million kWh	Total
			Asphalt and Road Oil <sup>b</sup>	Distillate Fuel <sup>b</sup>	Kero-sene <sup>b</sup>	LPG <sup>b</sup>	Lubri-cants <sup>b</sup>	Motor Gasoline	Residual Fuel <sup>b</sup>	Other <sup>b,c</sup>	Total							
			Thousand Barrels															
1960	25,835	218	6,862	7,112	2,023	1,585	1,683	3,354	9,082	R 9,400	R 41,102	12	—	—	39,246	—	97,619	—
1965	26,758	327	7,344	8,479	2,513	2,649	2,050	2,598	8,228	R 14,683	R 48,544	1	—	—	41,757	—	99,701	—
1970	29,875	376	9,017	11,429	3,360	3,999	2,390	1,926	4,166	R 16,418	R 52,706	0	—	—	45,827	—	111,055	—
1975	22,307	345	8,749	11,150	1,433	3,993	1,987	1,519	7,038	R 17,782	R 53,651	0	—	—	55,597	—	134,108	—
1980	15,821	321	7,324	12,591	1,306	41,031	2,395	1,154	5,678	R 23,356	R 94,834	0	—	—	55,283	—	134,429	—
1985	10,420	253	6,339	6,688	328	23,612	2,180	1,074	2,098	R 15,667	R 57,986	0	—	—	61,109	—	143,571	—
1990	9,703	284	9,880	5,141	87	5,689	2,453	973	1,514	R 20,439	R 46,177	R f 4	—	—	69,682	—	R 152,436	—
1991	8,511	281	8,993	5,254	114	5,592	2,194	963	1,128	R 18,581	R 42,820	R 3	—	—	67,856	—	R 147,514	—
1992	7,725	296	9,910	6,395	136	9,696	2,237	2,794	1,433	R 21,548	R 54,149	R 4	—	—	69,674	—	R 148,599	—
1993	6,992	303	7,682	6,524	313	9,265	2,278	1,123	2,100	R 20,341	R 49,626	R 5	—	—	68,831	—	R 145,381	—
1994	6,886	312	8,847	7,127	209	9,334	2,381	1,099	1,949	R 21,088	R 52,034	R 5	—	—	74,010	—	R 154,453	—
1995	6,386	338	8,973	6,334	187	8,159	2,340	1,200	1,383	R 20,257	R 48,834	R 5	—	—	74,473	—	R 155,273	—
1996	5,636	348	11,258	5,686	221	R 7,922	2,271	1,203	1,627	R 23,567	R 53,756	R 5	—	—	73,394	—	R 152,954	—
1997	5,711	337	14,376	6,060	244	R 3,219	2,399	1,231	1,210	R 23,869	R 52,607	0	—	—	73,888	—	R 153,695	—
1998	5,492	334	12,638	5,288	263	1,998	2,511	1,311	900	24,582	49,491	0	—	—	72,998	—	150,800	—
1999	5,211	332	14,091	4,800	103	3,936	2,537	1,126	1,432	26,087	54,112	0	—	—	74,293	—	145,563	—

  

Trillion Btu																		
1960	664.3	226.1	45.5	41.4	11.5	6.4	10.2	17.6	57.1	R 56.4	R 246.1	0.1	16.5	0.0	133.9	R 1,287.1	333.1	R 1,620.1
1965	681.5	338.3	48.7	49.4	14.2	10.6	12.4	13.6	51.7	R 85.7	R 286.5	(s)	22.1	0.0	142.5	R 1,470.8	340.2	R 1,811.0
1970	738.5	384.8	59.8	66.6	19.1	15.1	14.5	10.1	26.2	R 94.9	R 306.3	0.0	25.2	0.0	156.4	R 1,611.1	378.9	R 1,990.1
1975	556.5	352.8	58.1	64.9	8.1	14.8	12.1	8.0	44.2	R 103.5	R 313.8	0.0	26.6	0.0	189.7	R 1,439.3	457.6	R 1,896.9
1980	404.7	326.0	48.6	73.3	7.4	150.7	14.5	6.1	35.7	R 133.1	R 469.5	0.0	R 57.7	0.0	188.6	R 1,446.5	458.7	R 1,905.1
1985	265.7	264.4	42.1	39.0	1.9	85.1	13.2	5.6	13.2	R 90.4	R 290.4	0.0	R 67.6	0.0	208.5	R 1,096.5	489.9	R 1,586.4
1990	248.2	294.9	65.6	29.9	0.5	20.6	14.9	5.1	9.5	R 117.0	R 263.2	R f (s)	R 34.3	f 0.0	237.8	R f 1,078.3	R 520.1	R f 1,598.4
1991	216.8	293.6	59.7	30.6	0.6	20.2	13.3	5.1	7.1	R 106.6	R 243.2	R (s)	R 33.9	0.0	231.5	R 1,019.1	R 503.3	R 1,522.4
1992	197.6	306.9	65.8	37.3	0.8	35.1	13.6	14.7	9.0	R 123.2	R 299.4	R (s)	R 27.8	0.0	237.7	R 1,069.5	R 507.0	R 1,576.5
1993	178.2	314.1	51.0	38.0	1.8	33.4	13.8	5.9	13.2	R 116.3	R 273.4	R (s)	R 25.9	0.0	234.9	R 1,026.5	R 496.0	R 1,522.5
1994	176.0	324.0	58.7	41.5	1.2	33.9	14.4	R 5.7	12.3	R 120.9	R 288.7	R 0.1	R 26.7	0.0	252.5	R 1,068.0	R 527.0	R 1,595.0
1995	162.9	350.7	59.5	36.9	1.1	29.6	14.2	6.3	8.7	R 116.3	R 272.5	R (s)	R 37.4	0.0	254.1	R 1,077.6	R 529.8	R 1,607.4
1996	142.2	361.6	74.7	33.1	1.3	R 28.6	13.8	6.3	10.2	R 134.7	R 302.7	0.1	R 35.9	0.0	250.4	R 1,092.9	R 521.9	R 1,614.8
1997	143.9	352.4	95.4	35.3	1.4	R 11.6	14.5	R 6.4	7.6	R 136.4	R 308.7	0.0	R 61.3	0.0	252.1	R 1,118.5	R 524.4	R 1,642.9
1998	138.3	347.5	83.9	30.8	1.5	7.2	15.2	6.8	5.7	140.5	291.6	0.0	39.9	0.0	249.1	1,066.3	514.5	1,580.9
1999	131.3	344.3	93.5	28.0	0.6	14.2	15.4	5.9	9.0	148.6	315.2	0.0	314.4	0.0	253.5	1,358.7	496.7	1,855.3

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>e</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>f</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

R=Revised data.

kWh=kilowatthours. — =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 231. Transportation Energy Consumption Estimates, Selected Years 1960-1999, Ohio**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum								Ethanol <sup>c</sup> Thousand Barrels	Electricity <sup>a</sup> Million Kilowatthours	Net Energy	Electrical System Energy Losses <sup>d</sup> Million Kilowatthours	Total <sup>c</sup>
			Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	LPG <sup>a</sup>	Lubricants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total					
			Thousand Barrels												
1960	449	9	1,395	7,987	1,808	36	1,381	74,274	310	87,192	0	91	—	226	—
1965	88	11	2,125	9,722	3,075	94	1,263	83,101	633	100,013	0	57	—	135	—
1970	48	12	712	11,068	5,857	133	1,241	103,970	758	123,739	0	54	—	131	—
1975	4	9	491	15,647	5,926	180	1,622	116,333	592	140,790	0	45	—	108	—
1980	0	11	473	24,578	7,219	225	1,425	100,021	255	144,198	0	46	—	111	—
1985	0	8	330	22,274	7,204	379	1,297	107,086	0	138,569	R <sup>e</sup> 1,300	46	—	107	—
1990	0	10	239	25,341	10,602	358	1,459	108,455	5	146,458	R <sup>e</sup> 2,531	44	—	97	—
1991	0	9	214	24,010	10,400	292	1,306	108,032	8	144,260	R <sup>e</sup> 2,665	46	—	101	—
1992	0	10	224	25,156	10,631	251	1,331	105,229	55	142,877	R <sup>e</sup> 3,317	51	—	R <sup>e</sup> 109	—
1993	0	10	207	26,716	10,650	246	1,355	113,239	16	152,430	R <sup>e</sup> 4,692	49	—	105	—
1994	0	18	186	28,828	11,678	460	1,417	111,632	64	154,265	R <sup>e</sup> 5,499	49	—	103	—
1995	0	18	235	29,497	11,236	256	1,392	114,584	57	157,258	R <sup>e</sup> 5,147	49	—	R <sup>e</sup> 103	—
1996	0	20	345	33,788	11,960	R <sup>e</sup> 234	1,351	113,793	84	R <sup>e</sup> 161,555	R <sup>e</sup> 2,030	50	—	105	—
1997	0	20	379	37,444	12,604	R <sup>e</sup> 277	1,427	115,149	60	R <sup>e</sup> 167,341	R <sup>e</sup> 3,675	50	—	104	—
1998	0	18	365	37,193	13,825	109	1,494	117,877	61	170,924	5,404	47	—	97	—
1999	0	18	244	38,204	16,457	190	1,510	119,601	9	176,214	5,537	52	—	102	—
<b>Trillion Btu</b>															
1960	11.1	9.4	7.0	46.5	9.8	0.1	8.4	390.2	2.0	464.0	0.0	0.3	484.9	0.8	485.6
1965	2.2	11.4	10.7	56.6	17.0	0.4	7.7	436.5	4.0	532.9	0.0	0.2	546.7	0.5	547.2
1970	1.1	12.3	3.6	64.5	32.8	0.5	7.5	546.2	4.8	659.8	0.0	0.2	673.4	0.4	673.8
1975	0.1	9.2	2.5	91.1	33.3	0.7	9.8	611.1	3.7	752.2	0.0	0.2	761.7	0.4	762.1
1980	0.0	11.6	2.4	143.2	40.6	0.8	8.6	577.9	1.6	775.2	0.0	0.2	787.0	0.4	787.4
1985	0.0	8.6	1.7	129.7	40.6	1.4	7.9	562.5	0.0	743.8	R <sup>e</sup> 4.6	0.2	<sup>e</sup> 752.6	0.4	<sup>e</sup> 752.9
1990	0.0	10.5	1.2	147.6	59.9	1.3	8.9	569.7	(s)	788.6	R <sup>e</sup> 9.0	0.2	799.2	0.3	799.6
1991	0.0	9.5	1.1	139.9	58.8	1.1	7.9	567.5	(s)	776.3	R <sup>e</sup> 9.4	0.2	785.9	0.3	786.3
1992	0.0	10.0	1.1	146.5	60.1	0.9	8.1	552.8	0.3	769.8	R <sup>e</sup> 11.7	0.2	780.0	0.4	780.4
1993	0.0	10.7	1.0	155.6	60.2	0.9	8.2	594.8	0.1	820.9	R <sup>e</sup> 16.6	0.2	831.8	0.4	832.2
1994	0.0	18.6	0.9	167.9	66.1	1.7	8.6	R <sup>e</sup> 583.8	0.4	R <sup>e</sup> 829.4	R <sup>e</sup> 19.5	0.2	R <sup>e</sup> 848.2	0.4	R <sup>e</sup> 848.5
1995	0.0	18.5	1.2	171.8	63.7	0.9	8.4	R <sup>e</sup> 597.6	0.4	R <sup>e</sup> 844.0	R <sup>e</sup> 18.2	0.2	R <sup>e</sup> 862.7	0.3	R <sup>e</sup> 863.0
1996	0.0	21.2	1.7	196.8	67.8	0.8	8.2	R <sup>e</sup> 593.5	0.5	R <sup>e</sup> 869.5	R <sup>e</sup> 7.2	0.2	R <sup>e</sup> 890.8	0.4	R <sup>e</sup> 891.2
1997	0.0	20.6	1.9	218.1	71.5	R <sup>e</sup> 1.0	8.7	R <sup>e</sup> 600.3	0.4	R <sup>e</sup> 901.8	R <sup>e</sup> 13.0	0.2	R <sup>e</sup> 922.6	0.4	R <sup>e</sup> 922.9
1998	0.0	18.8	1.8	216.6	78.4	0.4	9.1	614.4	0.4	921.1	19.1	0.2	940.1	0.3	940.4
1999	0.0	18.5	1.2	222.5	93.3	0.7	9.2	623.2	0.1	950.2	19.6	0.2	968.9	0.3	969.2

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels. Transportation use of natural gas is gas consumed in the operation of pipelines, primarily in compressors, and, since 1990, is also gas consumed as vehicle fuel.

<sup>c</sup> Ethanol blended into motor gasoline, which is accounted for under motor gasoline, is shown separately here to display the use of renewable energy by the transportation sector and is included only once in the total.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1980 and 1981 due to the expanded coverage of renewable energy sources beginning in 1981.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 232. Estimates of Energy Input at Electric Utilities, Selected Years, 1960-1999, Ohio**

Year	Coal Thousand Short Tons	Natural Gas <sup>a</sup> Billion Cubic Feet	Petroleum				Nuclear Electric Power	Hydroelectric Power <sup>e</sup>	Wood and Waste	Geothermal Energy	Other <sup>b,f</sup>	Total <sup>g</sup>
			Heavy Oil <sup>b,c</sup>	Light Oil <sup>b,d</sup>	Petroleum Coke <sup>b</sup>	Total						
			Thousand Barrels									
1960	21,559	3	94	107	0	201	0	7	8	0	0	—
1965	24,923	3	105	119	0	223	22	10	7	0	0	—
1970	35,321	21	697	791	0	1,487	0	7	5	0	0	—
1975	47,321	6	1,312	2,568	0	3,880	0	7	(s)	0	0	—
1980	48,537	5	605	1,643	0	2,248	2,119	6	1	0	0	—
1985	46,700	1	141	508	0	649	1,943	175	265	0	0	—
1990	48,848	1	136	452	0	588	10,664	173	267	0	0	—
1991	49,577	3	169	584	0	753	14,833	145	298	0	0	—
1992	50,358	3	62	427	0	489	14,805	244	310	0	0	—
1993	51,456	3	21	545	0	565	10,011	183	64	0	0	—
1994	49,326	3	28	844	0	872	10,952	189	0	0	0	—
1995	49,785	7	0	642	0	642	16,768	227	0	0	0	—
1996	53,543	3	0	584	0	584	13,919	392	0	0	0	—
1997	52,893	3	0	574	0	574	15,331	507	0	0	0	—
1998	54,456	8	0	635	0	635	16,476	406	0	0	0	—
1999	52,122	11	0	985	0	985	16,422	423	0	0	0	—
<b>Trillion Btu</b>												
1960	512.5	3.1	0.6	0.6	0.0	1.2	0.0	0.1	0.1	0.0	0.0	516.9
1965	587.3	3.0	0.7	0.7	0.0	1.3	0.3	0.1	0.1	0.0	0.0	592.1
1970	794.7	21.9	4.4	4.6	0.0	9.0	0.0	0.1	0.1	0.0	0.0	825.7
1975	1,037.2	5.3	8.2	14.9	0.0	23.2	0.0	0.1	(s)	0.0	0.0	1,065.8
1980	1,110.5	4.7	3.8	9.6	0.0	13.4	23.1	0.1	(s)	0.0	0.0	1,151.8
1985	1,103.3	0.7	0.9	3.0	0.0	3.8	21.0	1.8	2.8	0.0	0.0	1,133.5
1990	1,160.8	1.3	0.9	2.6	0.0	3.5	113.9	1.8	2.8	0.0	0.0	1,284.0
1991	1,184.4	3.3	1.1	3.4	0.0	4.5	159.3	1.5	3.1	0.0	0.0	1,356.1
1992	1,206.8	3.1	0.4	2.5	0.0	2.9	158.1	2.5	3.2	0.0	0.0	1,376.6
1993	1,240.0	2.8	0.1	3.2	0.0	3.3	106.9	1.9	0.7	0.0	0.0	1,355.6
1994	1,189.0	2.9	0.2	4.9	0.0	5.1	116.9	1.9	0.0	0.0	0.0	1,315.9
1995	1,207.0	7.7	0.0	3.7	0.0	3.7	178.7	2.3	0.0	0.0	0.0	1,399.4
1996	1,291.0	3.0	0.0	3.4	0.0	3.4	147.9	4.1	0.0	0.0	0.0	1,449.3
1997	1,257.9	3.6	0.0	3.3	0.0	3.3	162.9	R 5.3	0.0	0.0	0.0	1,432.9
1998	1,297.5	7.9	0.0	3.7	0.0	3.7	175.0	4.2	0.0	0.0	0.0	1,488.3
1999	1,242.4	11.4	0.0	5.7	0.0	5.7	174.5	4.4	0.0	0.0	0.0	1,438.4

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> Prior to 1980, based on oil used in steam plants. Since 1980, heavy oil includes fuel oil nos. 4, 5, and 6 and residual fuel oils.

<sup>d</sup> Prior to 1980, based on oil used in internal combustion and gas turbine engine plants. Since 1980, light oil includes fuel oil nos. 1 and 2, kerosene, and jet fuel.

<sup>e</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>f</sup> "Other" is electricity generated for distribution from wind, photovoltaic, and solar thermal energy.

<sup>g</sup> If applicable, from 1989, includes net imports of electricity generated from nonrenewable energy sources not shown in other columns. See data in appendix Table A8.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 233. Energy Consumption Estimates by Source, Selected Years 1960-1999, Oklahoma**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum											Nuclear Electric Power	Hydro-electric Power <sup>d</sup>	Wood and Waste	Other <sup>a,e</sup>	Net Inter-state Flow of Electricity/Losses <sup>f</sup>	Total <sup>g</sup>
			Asphalt & Road Oil <sup>a</sup>	Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	Kero-sene <sup>a</sup>	LPG <sup>a</sup>	Lubri-cants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Other <sup>a,c</sup>	Total						
			Thousand Barrels															Million kWh	
1960	77	308	2,034	562	2,618	2,920	431	6,433	661	22,708	1,454	R 7,983	R 47,803	0	705	—	—	-3,605	—
1965	30	468	3,586	745	2,877	3,453	945	7,654	679	25,815	851	R 8,673	R 55,278	0	825	—	—	-4,992	—
1970	7	597	4,598	448	5,584	4,378	1,103	9,618	622	32,521	807	R 8,988	R 68,667	0	1,406	—	—	-18,718	—
1975	23	669	5,675	309	9,449	3,916	328	9,342	810	38,469	641	R 9,645	R 78,585	0	2,945	—	—	-21,277	—
1980	6,046	722	4,826	328	12,125	4,900	342	8,987	1,356	39,633	732	R 9,336	R 82,565	0	1,315	—	—	-28,011	—
1985	13,602	587	4,003	217	18,377	5,870	114	8,035	1,234	42,170	219	R 4,753	R 84,992	0	3,980	—	—	-15,019	—
1990	15,423	604	3,508	146	15,348	7,832	38	3,289	1,389	38,998	631	R 7,473	R 78,651	0	R <sup>h</sup> 2,750	—	—	R -2,304	—
1991	16,345	570	3,433	111	14,175	10,569	31	4,878	1,242	38,816	242	R 6,816	R 80,315	0	R 1,857	—	—	R -12,392	—
1992	17,430	544	2,930	124	16,287	12,948	31	4,502	1,267	39,883	628	R 8,070	R 86,669	0	R 3,210	—	—	R -20,335	—
1993	18,866	579	3,721	104	16,391	9,012	26	5,687	1,290	40,814	713	R 7,626	R 85,383	0	R 4,296	—	—	R -22,967	—
1994	17,726	572	3,542	84	17,325	10,345	32	5,626	1,348	41,524	557	R 7,513	R 87,896	0	R 2,465	—	—	R -12,121	—
1995	19,596	568	3,181	154	17,675	5,359	15	3,625	1,325	42,382	447	R 7,299	R 81,462	0	R 2,715	—	—	R -18,385	—
1996	20,125	567	2,762	117	20,479	4,707	32	R 4,076	1,286	43,763	396	R 8,929	R 86,546	0	R 2,078	—	—	R -11,899	—
1997	21,109	560	1,426	80	21,857	5,257	45	R 4,693	1,358	42,670	274	R 9,087	R 86,747	0	R 2,824	—	—	R -12,484	—
1998	19,586	569	2,582	133	22,106	5,343	46	3,821	1,422	43,349	109	8,258	87,169	0	3,420	—	—	-12,020	—
1999	19,088	531	1,719	102	22,195	6,576	45	9,198	1,437	43,571	133	8,622	93,600	0	3,069	—	—	-14,938	—

  

Trillion Btu																			
1960	1.8	319.3	13.5	2.8	15.3	15.7	2.4	25.8	4.0	119.3	9.1	R 47.9	R 255.9	0.0	7.6	10.2	0.0	-12.3	R 582.4
1965	0.7	480.1	23.8	3.8	16.8	18.7	5.4	30.7	4.1	135.6	5.4	R 52.0	R 296.2	0.0	8.6	7.6	0.0	-17.0	R 776.2
1970	0.2	616.3	30.5	2.3	32.5	24.0	6.3	36.3	3.8	170.8	5.1	R 53.9	R 365.5	0.0	14.8	7.0	0.0	-63.9	R 939.8
1975	0.5	678.9	37.7	1.6	55.0	21.5	1.9	34.7	4.9	202.1	4.0	R 57.9	R 421.2	0.0	30.6	12.0	0.0	-72.6	R 1,070.7
1980	106.3	738.9	32.0	1.7	70.6	26.9	1.9	33.0	8.2	208.2	4.6	R 56.0	R 443.2	0.0	13.7	R 17.3	0.0	-95.6	R 1,223.8
1985	237.2	603.9	26.6	1.1	107.0	32.5	0.6	29.0	7.5	221.5	1.4	R 29.5	R 456.6	0.0	41.6	R 14.9	0.0	-51.2	R 1,302.9
1990	277.1	620.7	23.3	0.7	89.4	43.8	0.2	11.9	8.4	204.9	4.0	R 44.8	R 431.4	0.0	<sup>h</sup> 28.6	R 29.0	<sup>h</sup> 0.1	-7.9	R <sup>h</sup> 1,379.1
1991	291.6	582.1	22.8	0.6	82.6	59.1	0.2	17.6	7.5	203.9	1.5	R 41.0	R 436.8	0.0	19.4	R 23.3	0.1	R -42.3	R 1,311.0
1992	307.2	558.0	19.4	0.6	94.9	72.8	0.2	16.3	7.7	209.5	3.9	R 48.0	R 473.4	0.0	33.2	R 27.0	0.1	R -69.4	R 1,329.4
1993	331.5	593.8	24.7	0.5	95.5	50.5	0.1	20.5	7.8	214.4	4.5	R 45.7	R 464.2	0.0	44.3	R 23.7	0.1	R -78.4	R 1,379.3
1994	307.0	588.1	23.5	0.4	100.9	58.1	0.2	20.5	8.2	R 217.2	3.5	R 44.9	R 477.3	0.0	25.4	R 25.0	0.1	-41.4	R 1,381.5
1995	343.5	579.5	21.1	0.8	103.0	30.3	0.1	13.1	8.0	R 221.0	2.8	R 43.7	R 443.9	0.0	28.0	R 29.8	0.1	R -62.7	R 1,362.1
1996	349.9	580.2	18.3	0.6	119.3	26.7	0.2	R 14.7	7.8	R 228.3	2.5	R 52.8	R 471.2	0.0	21.5	R 25.5	0.1	R -40.6	R 1,407.8
1997	367.4	R 566.8	9.5	0.4	127.3	29.8	0.3	R 17.0	8.2	R 222.4	1.7	R 53.8	R 470.4	0.0	R 29.2	R 20.5	0.1	R -42.6	R 1,411.8
1998	343.1	576.9	17.1	0.7	128.8	30.3	0.3	13.8	8.6	225.9	0.7	49.0	475.2	0.0	35.4	21.0	0.1	-41.0	1,410.6
1999	333.5	543.0	11.4	0.5	129.3	37.3	0.3	33.3	8.7	227.0	0.8	51.1	499.7	0.0	31.8	20.4	0.1	-51.0	1,377.5

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.  
<sup>b</sup> Includes supplemental gaseous fuels.  
<sup>c</sup> "Other" is the subtotal of 16 petroleum products consumed in the industrial sector. See a full description in Appendix A, Section 4, "Other Petroleum Products."  
<sup>d</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.  
<sup>e</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.  
<sup>f</sup> Net interstate flow of electricity is the difference between the amount of energy in the electricity sold within a State (including associated losses) and the energy input at the electric utilities within the State. A positive number

indicates that more electricity (including associated losses) came into the State than went out of the State during the year; conversely, a negative number indicates that more electricity (including associated losses) went out of the State than came into the State.  
<sup>g</sup> From 1989, "Total" does not equal the sum of the columns. Net imports of electricity generated from nonrenewable energy sources (shown in appendix Table A8) is included in the total but not in any other columns.  
<sup>h</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.  
kWh=kilowatthours. R=Revised data. — =Not applicable.  
Note: Totals may not equal sum of components due to independent rounding.  
Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 234. Residential Energy Consumption Estimates, Selected Years 1960-1999, Oklahoma**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum				Wood	Geothermal	Solar <sup>c</sup>	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Total							
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels				Thousand Cords	Million Kilowatthours	Million Kilowatthours				
1960	18	60	2	18	3,938	3,959	460	—	—	2,372	—	5,900	—
1965	6	65	2	78	4,642	4,722	331	—	—	4,086	—	9,756	—
1970	2	77	3	52	5,802	5,856	308	—	—	7,293	—	17,674	—
1975	1	80	12	24	5,628	5,663	341	—	—	9,222	—	22,245	—
1980	11	77	15	21	1,759	1,795	R 442	—	—	12,309	—	29,931	—
1985	1	76	82	30	2,027	2,140	251	—	—	14,400	—	33,831	—
1990	(s)	66	(s)	10	1,274	1,284	345	—	—	17,077	—	R 37,358	—
1991	(s)	69	(s)	10	1,373	1,383	364	—	—	15,325	—	R 33,315	—
1992	(s)	66	2	11	1,112	1,124	383	—	—	14,254	—	R 30,400	—
1993	(s)	78	(s)	7	1,286	1,293	334	—	—	15,901	—	R 33,586	—
1994	(s)	69	(s)	5	1,198	1,203	R 327	—	—	16,128	—	R 33,658	—
1995	4	69	12	4	1,214	1,230	R 363	—	—	16,319	—	R 34,024	—
1996	(s)	77	24	20	R 1,630	R 1,674	363	—	—	17,303	—	R 36,059	—
1997	102	72	4	14	R 1,533	R 1,550	R 158	—	—	17,376	—	R 36,143	—
1998	(s)	67	1	13	1,619	1,632	139	—	—	19,511	—	40,305	—
1999	1	62	2	9	2,292	2,302	149	—	—	18,301	—	35,858	—

**Trillion Btu**

1960	0.4	61.9	(s)	0.1	15.8	15.9	9.2	0.0	0.0	8.1	95.5	20.1	115.6
1965	0.1	66.5	(s)	0.4	18.6	19.1	6.6	0.0	0.0	13.9	106.3	33.3	139.6
1970	(s)	79.9	(s)	0.3	21.9	22.2	6.2	0.0	0.0	24.9	133.3	60.3	193.6
1975	(s)	79.6	0.1	0.1	20.9	21.1	6.8	0.0	0.0	31.5	139.0	75.9	214.9
1980	0.2	76.8	0.1	0.1	6.5	6.7	8.8	0.0	0.0	42.0	134.5	102.1	236.6
1985	(s)	77.6	0.5	0.2	7.3	8.0	5.0	0.0	0.0	49.1	139.8	115.4	255.2
1990	(s)	66.9	(s)	0.1	4.6	4.7	6.9	e (s)	e 0.1	58.3	e 136.9	R 127.5	e 264.3
1991	(s)	70.1	(s)	0.1	5.0	5.0	7.3	(s)	0.1	52.3	134.8	R 113.7	R 248.5
1992	(s)	67.2	(s)	0.1	4.0	4.1	7.7	(s)	0.1	48.6	127.7	R 103.7	R 231.5
1993	(s)	80.0	(s)	(s)	4.6	4.7	6.7	(s)	0.1	54.3	145.7	114.6	R 260.3
1994	(s)	71.0	(s)	(s)	4.4	4.4	R 6.5	(s)	0.1	55.0	137.1	114.8	251.9
1995	0.1	69.7	0.1	(s)	4.4	4.5	7.3	(s)	0.1	55.7	137.3	R 116.1	R 253.4
1996	(s)	78.4	0.1	0.1	R 5.9	R 6.1	7.3	(s)	0.1	59.0	R 150.9	R 123.0	R 273.9
1997	1.8	72.2	(s)	0.1	R 5.5	R 5.6	R 3.2	(s)	0.1	59.3	R 142.1	R 123.3	R 265.4
1998	(s)	67.0	(s)	0.1	5.8	5.9	2.8	(s)	0.1	66.6	142.4	137.5	279.9
1999	(s)	62.9	(s)	0.1	8.3	8.3	3.0	(s)	0.1	62.4	136.8	122.3	259.1

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Includes small amounts of solar thermal and photovoltaic energy consumed by the commercial sector that cannot be separately identified. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

—=Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 235. Commercial Energy Consumption Estimates, Selected Years 1960-1999, Oklahoma**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum						Wood Thousand Cords	Geothermal	Electricity <sup>a</sup> Million Kilowatthours	Net Energy	Electrical System Energy Losses <sup>c</sup>		Total <sup>d</sup>
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total					Million Kilowatthours		
			Thousand Barrels												
1960	33	29	72	83	695	177	395	1,422	9	—	1,904	—	4,737	—	
1965	12	27	68	353	819	204	233	1,677	6	—	2,945	—	7,032	—	
1970	4	44	95	233	1,024	229	190	1,771	6	—	4,415	—	10,699	—	
1975	2	42	406	106	993	264	196	1,965	6	—	6,810	—	16,427	—	
1980	20	47	315	15	310	301	30	972	11	—	9,005	—	21,897	—	
1985	2	41	705	20	358	338	0	1,420	R 7	—	11,706	—	27,501	—	
1990	(s)	37	539	13	225	374	82	1,231	R 22	—	13,663	—	R 29,890	—	
1991	1	40	485	10	242	231	76	1,045	R 23	—	12,665	—	R 27,532	—	
1992	1	35	374	4	196	172	43	790	R 25	—	12,414	—	R 26,477	—	
1993	(s)	41	324	5	227	37	0	593	27	—	12,931	—	R 27,312	—	
1994	1	37	263	4	211	37	0	515	27	—	13,294	—	R 27,744	—	
1995	7	40	292	5	214	38	(s)	549	27	—	13,359	—	R 27,853	—	
1996	1	46	388	5	R 288	38	0	R 719	30	—	13,828	—	R 28,818	—	
1997	189	45	600	16	R 270	37	0	R 924	R 17	—	14,275	—	R 29,694	—	
1998	1	44	610	21	286	37	0	954	17	—	15,211	—	31,423	—	
1999	1	40	330	12	404	37	0	783	21	—	15,164	—	29,712	—	

**Trillion Btu**

1960	0.8	29.8	0.4	0.5	2.8	0.9	2.5	7.1	0.2	0.0	6.5	44.4	16.2	60.5
1965	0.3	27.9	0.4	2.0	3.3	1.1	1.5	8.2	0.1	0.0	10.0	46.6	24.0	70.6
1970	0.1	45.3	0.6	1.3	3.9	1.2	1.2	8.1	0.1	0.0	15.1	68.7	36.5	105.2
1975	(s)	41.6	2.4	0.6	3.7	1.4	1.2	9.3	0.1	0.0	23.2	74.3	56.0	130.4
1980	0.5	47.2	1.8	0.1	1.1	1.6	0.2	4.8	0.2	0.0	30.7	83.5	74.7	158.2
1985	(s)	41.6	4.1	0.1	1.3	1.8	0.0	7.3	R 0.1	0.0	39.9	R 89.0	93.8	R 182.8
1990	(s)	38.0	3.1	0.1	0.8	2.0	0.5	6.5	R 0.4	e 0.0	46.6	R e 91.5	102.0	R e 193.5
1991	(s)	40.1	2.8	0.1	0.9	1.2	0.5	5.5	R 0.5	0.0	43.2	R 89.2	R 93.9	R 183.2
1992	(s)	36.0	2.2	(s)	0.7	0.9	0.3	4.1	R 0.5	0.0	42.4	R 82.9	R 90.3	R 173.3
1993	(s)	41.6	1.9	(s)	0.8	0.2	0.0	2.9	0.5	0.0	44.1	89.2	93.2	182.4
1994	(s)	37.4	1.5	(s)	0.8	0.2	0.0	2.5	0.5	0.0	45.4	85.9	94.7	180.5
1995	0.2	40.2	1.7	(s)	0.8	0.2	(s)	2.7	0.5	0.0	45.6	89.2	95.0	R 184.3
1996	(s)	47.2	2.3	(s)	R 1.0	0.2	0.0	R 3.5	0.6	0.0	47.2	R 98.5	R 98.3	R 196.8
1997	3.3	45.4	3.5	0.1	R 1.0	0.2	0.0	R 4.8	R 0.3	0.0	48.7	R 102.5	R 101.3	R 203.8
1998	(s)	44.1	3.6	0.1	1.0	0.2	0.0	4.9	0.3	0.0	51.9	101.3	107.2	208.5
1999	(s)	40.4	1.9	0.1	1.5	0.2	0.0	3.6	0.4	0.0	51.7	96.3	101.4	197.7

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>d</sup> Small amounts of solar thermal and photovoltaic energy consumed in the commercial sector cannot be separately identified and are included in residential consumption.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

—=Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 236. Industrial Energy Consumption Estimates, Selected Years 1960-1999, Oklahoma**

Year	Coal Thousand Short Tons	Natural Gas <sup>a</sup> Billion Cubic Feet	Petroleum									Hydro-electric Power <sup>b</sup> Million kWh	Wood and Waste	Other <sup>b,d</sup>	Electricity <sup>b</sup> Million kWh	Net Energy	Electrical System Energy Losses <sup>e</sup> Million kWh	Total
			Asphalt and Road Oil <sup>b</sup>	Distillate Fuel <sup>b</sup>	Kero-sene <sup>b</sup>	LPG <sup>b</sup>	Lubri-cants <sup>b</sup>	Motor Gasoline	Residual Fuel <sup>b</sup>	Other <sup>b,c</sup>	Total							
			Thousand Barrels															
1960	25	128	2,034	1,193	330	1,511	176	1,383	1,017	R 7,983	R 15,626	0	—	—	2,561	—	6,371	—
1965	11	236	3,586	1,203	514	1,704	152	812	346	R 8,673	R 16,990	0	—	—	3,563	—	8,507	—
1970	0	218	4,598	2,084	819	2,277	166	515	477	R 8,988	R 19,924	0	—	—	4,888	—	11,845	—
1975	20	223	5,675	4,166	198	2,248	274	437	374	R 9,645	R 23,018	0	—	—	7,233	—	17,447	—
1980	264	246	4,826	3,705	306	6,683	579	359	702	R 9,336	R 26,495	0	—	—	9,795	—	23,818	—
1985	852	245	4,003	6,949	64	5,517	527	977	211	R 4,753	R 23,001	0	—	—	10,576	—	24,848	—
1990	557	307	3,508	3,091	16	1,693	593	834	491	R 7,473	R 17,699	f 0	—	—	11,764	—	R 25,734	—
1991	676	269	3,433	3,200	12	3,154	530	895	154	R 6,816	R 18,194	0	—	—	11,415	—	R 24,815	—
1992	730	268	2,930	4,200	17	3,114	541	831	574	R 8,070	R 20,278	0	—	—	11,599	—	R 24,738	—
1993	1,198	279	3,721	3,135	14	4,080	551	1,026	708	R 7,626	R 20,860	0	—	—	11,699	—	R 24,710	—
1994	764	287	3,542	3,484	23	4,073	576	1,109	550	R 7,513	R 20,871	0	—	—	11,721	—	R 24,462	—
1995	1,455	275	3,181	3,105	6	2,138	566	1,183	334	R 7,299	R 17,811	0	—	—	11,714	—	R 24,424	—
1996	738	274	2,762	3,435	7	R 2,117	549	1,216	263	R 8,929	R 19,278	0	—	—	12,160	—	R 25,342	—
1997	717	288	1,426	3,668	15	R 2,832	580	1,248	264	R 9,087	R 19,119	0	—	—	12,802	—	R 26,629	—
1998	701	260	2,582	3,279	12	1,846	607	1,319	106	8,258	18,009	0	—	—	13,175	—	27,216	—
1999	733	236	1,719	2,660	25	6,454	613	686	133	8,622	20,913	0	—	—	13,271	—	26,002	—
<b>Trillion Btu</b>																		
1960	0.6	132.5	13.5	7.0	1.9	6.1	1.1	7.3	6.4	R 47.9	R 91.0	0.0	0.8	0.0	8.7	R 233.8	21.7	R 255.5
1965	0.3	242.2	23.8	7.0	2.9	6.8	0.9	4.3	2.2	R 52.0	R 99.9	0.0	0.9	0.0	12.2	R 355.4	29.0	R 384.4
1970	0.0	225.3	30.5	12.1	4.6	8.6	1.0	2.7	3.0	R 53.9	R 116.5	0.0	0.7	0.0	16.7	R 359.1	40.4	R 399.5
1975	0.5	221.7	37.7	24.3	1.1	8.4	1.7	2.3	2.4	R 57.9	R 135.6	0.0	5.1	0.0	24.7	R 387.4	59.5	R 447.0
1980	5.6	246.4	32.0	21.6	1.7	24.6	3.5	1.9	4.4	R 56.0	R 145.7	0.0	R 8.3	0.0	33.4	R 439.4	81.3	R 520.6
1985	18.3	249.3	26.6	40.5	0.4	19.9	3.2	5.1	1.3	R 29.5	R 126.4	0.0	R 9.7	0.0	36.1	R 439.8	84.8	R 524.6
1990	12.7	312.7	23.3	18.0	0.1	6.1	3.6	4.4	3.1	R 44.8	R 103.4	f 0.0	R 21.7	f 0.0	40.1	R 490.6	87.8	R 578.4
1991	16.1	272.6	22.8	18.6	0.1	11.4	3.2	4.7	1.0	R 41.0	R 102.8	0.0	R 15.5	0.0	38.9	R 445.9	R 84.7	R 530.6
1992	16.6	274.0	19.4	24.5	0.1	11.3	3.3	4.4	3.6	R 48.0	R 114.6	0.0	R 18.8	0.0	39.6	R 463.6	R 84.4	R 548.0
1993	26.9	285.2	24.7	18.3	0.1	14.7	3.3	5.4	4.4	R 45.7	R 116.6	0.0	R 16.5	0.0	39.9	R 485.1	84.3	R 569.4
1994	16.1	294.4	23.5	20.3	0.1	14.8	3.5	5.8	3.5	R 44.9	R 116.4	0.0	R 17.9	0.0	40.0	R 484.7	83.5	R 568.2
1995	33.0	279.0	21.1	18.1	(s)	7.7	3.4	6.2	2.1	R 43.7	R 102.3	0.0	R 22.0	0.0	40.0	R 476.3	83.3	R 559.6
1996	16.4	R 280.3	18.3	20.0	(s)	R 7.6	3.3	R 6.3	1.7	R 52.8	R 110.2	0.0	R 17.7	0.0	41.5	R 466.1	R 86.5	R 552.5
1997	15.0	R 289.9	9.5	21.4	0.1	R 10.2	3.5	R 6.5	1.7	R 53.8	R 106.6	0.0	R 17.0	0.0	43.7	R 472.2	R 90.9	R 563.0
1998	16.4	261.4	17.1	19.1	0.1	6.7	3.7	6.9	0.7	49.0	103.2	0.0	17.9	0.0	45.0	443.8	92.9	536.7
1999	17.1	240.5	11.4	15.5	0.1	23.3	3.7	3.6	0.8	51.1	109.6	0.0	17.0	0.0	45.3	429.5	88.7	518.2

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>e</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>f</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

R=Revised data.

kWh=kilowatthours. — =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 237. Transportation Energy Consumption Estimates, Selected Years 1960-1999, Oklahoma**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum								Ethanol <sup>c</sup>	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total <sup>c</sup>
			Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	LPG <sup>a</sup>	Lubricants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total				Million Kilowatthours	
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels								Thousand Barrels	Million Kilowatthours	Net Energy	Million Kilowatthours	Total <sup>c</sup>
1960	(s)	9	562	1,325	2,920	290	485	21,148	8	26,737	0	0	—	0	—
1965	(s)	13	745	1,582	3,453	489	527	24,799	244	31,839	0	0	—	0	—
1970	0	23	448	3,351	4,378	516	457	31,776	75	41,000	0	0	—	0	—
1975	(s)	24	309	4,809	3,916	474	537	37,768	42	47,854	0	0	—	0	—
1980	0	23	328	8,030	4,900	235	777	38,974	0	53,244	0	0	—	0	—
1985	0	25	217	10,562	5,870	133	707	40,855	0	58,345	R e 48	0	—	0	—
1990	0	26	146	11,690	7,832	97	796	37,790	0	58,351	0	0	—	0	—
1991	0	25	111	10,464	10,569	109	712	37,690	0	59,655	0	0	—	0	—
1992	0	26	124	11,692	12,948	80	726	38,880	0	64,450	0	0	—	0	—
1993	0	27	104	12,911	9,012	94	739	39,750	0	62,610	0	0	—	0	—
1994	0	26	84	13,559	10,345	144	772	40,378	0	65,282	0	0	—	0	—
1995	0	31	154	14,250	5,359	59	759	41,161	0	61,742	0	0	—	0	—
1996	0	34	117	16,548	4,707	R 41	737	42,509	0	R 64,659	0	0	—	0	—
1997	0	26	80	17,565	5,257	R 58	778	41,385	0	R 65,123	0	0	—	0	—
1998	0	24	133	18,199	5,343	72	815	41,993	2	66,556	0	0	—	0	—
1999	0	24	102	19,180	6,576	48	823	42,847	0	69,577	0	0	—	0	—

  

Trillion Btu															
Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	LPG <sup>a</sup>	Lubricants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total	Ethanol <sup>c</sup>	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total <sup>c</sup>
1960	(s)	9.3	2.8	7.7	15.7	1.2	2.9	111.1	0.1	141.4	0.0	0.0	150.8	0.0	150.8
1965	(s)	12.9	3.8	9.2	18.7	2.0	3.2	130.3	1.5	168.7	0.0	0.0	181.5	0.0	181.5
1970	0.0	23.5	2.3	19.5	24.0	1.9	2.8	166.9	0.5	217.9	0.0	0.0	241.4	0.0	241.4
1975	(s)	23.6	1.6	28.0	21.5	1.8	3.3	198.4	0.3	254.8	0.0	0.0	278.4	0.0	278.4
1980	0.0	22.8	1.7	46.8	26.9	0.9	4.7	204.7	0.0	285.6	0.0	0.0	308.4	0.0	308.4
1985	0.0	25.8	1.1	61.5	32.5	0.5	4.3	214.6	0.0	314.5	R e 0.2	0.0	e 340.3	0.0	e 340.3
1990	0.0	26.6	0.7	68.1	43.8	0.4	4.8	198.5	0.0	316.3	0.0	0.0	342.9	0.0	342.9
1991	0.0	25.4	0.6	61.0	59.1	0.4	4.3	198.0	0.0	323.3	0.0	0.0	348.7	0.0	348.7
1992	0.0	26.3	0.6	68.1	72.8	0.3	4.4	204.2	0.0	350.4	0.0	0.0	376.7	0.0	376.7
1993	0.0	27.3	0.5	75.2	50.5	0.3	4.5	208.8	0.0	339.9	0.0	0.0	367.1	0.0	367.1
1994	0.0	27.0	0.4	79.0	58.1	0.5	4.7	R 211.2	0.0	R 353.9	0.0	0.0	R 380.9	0.0	R 380.9
1995	0.0	31.2	0.8	83.0	30.3	0.2	4.6	R 214.7	0.0	R 333.6	0.0	0.0	R 364.8	0.0	R 364.8
1996	0.0	34.5	0.6	96.4	26.7	0.1	4.5	R 221.7	0.0	R 350.0	0.0	0.0	R 384.5	0.0	R 384.5
1997	0.0	26.4	0.4	102.3	29.8	R 0.2	4.7	R 215.7	0.0	R 353.2	0.0	0.0	R 379.6	0.0	R 379.6
1998	0.0	24.5	0.7	106.0	30.3	0.3	4.9	218.9	(s)	361.1	0.0	0.0	385.6	0.0	385.6
1999	0.0	24.5	0.5	111.7	37.3	0.2	5.0	223.3	0.0	378.0	0.0	0.0	402.5	0.0	402.5

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels. Transportation use of natural gas is gas consumed in the operation of pipelines, primarily in compressors, and, since 1990, is also gas consumed as vehicle fuel.

<sup>c</sup> Ethanol blended into motor gasoline, which is accounted for under motor gasoline, is shown separately here to display the use of renewable energy by the transportation sector and is included only once in the total.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1980 and 1981 due to the expanded coverage of renewable energy sources beginning in 1981.

R=Revised data.

—=Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.



**Table 238. Estimates of Energy Input at Electric Utilities, Selected Years, 1960-1999, Oklahoma**

Year	Coal	Natural Gas <sup>a</sup>	Petroleum				Nuclear Electric Power	Hydroelectric Power <sup>e</sup>	Wood and Waste	Geothermal Energy	Other <sup>b,f</sup>	Total <sup>g</sup>
			Heavy Oil <sup>b,c</sup>	Light Oil <sup>b,d</sup>	Petroleum Coke <sup>b</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels				Million Kilowatthours					
1960	(s)	83	33	26	0	59	0	705	0	0	0	—
1965	1	127	28	22	0	50	0	825	0	0	0	—
1970	1	235	64	51	0	116	0	1,406	0	0	0	—
1975	(s)	301	29	55	0	85	0	2,945	0	0	0	—
1980	5,752	330	(s)	59	0	59	0	1,315	0	0	0	—
1985	12,747	201	9	79	0	87	0	3,980	0	0	0	—
1990	14,866	169	58	28	0	86	0	2,750	0	0	0	—
1991	15,668	167	12	26	0	38	0	1,857	0	0	0	—
1992	16,699	149	10	18	0	28	0	3,210	0	0	0	—
1993	17,668	154	6	21	0	27	0	4,296	0	0	0	—
1994	16,961	153	6	19	0	25	0	2,465	0	0	0	—
1995	18,130	154	112	17	0	129	0	2,715	0	0	0	—
1996	19,386	136	133	84	0	217	0	2,078	0	0	0	—
1997	20,101	129	10	20	0	30	0	2,824	0	0	0	—
1998	18,884	175	0	18	0	18	0	3,420	0	0	0	—
1999	18,353	170	(s)	24	0	24	0	3,069	0	0	0	—
<b>Trillion Btu</b>												
1960	(s)	85.7	0.2	0.2	0.0	0.4	0.0	7.6	0.0	0.0	0.0	93.7
1965	(s)	130.5	0.2	0.1	0.0	0.3	0.0	8.6	0.0	0.0	0.0	139.5
1970	(s)	242.2	0.4	0.3	0.0	0.7	0.0	14.8	0.0	0.0	0.0	257.7
1975	(s)	312.3	0.2	0.3	0.0	0.5	0.0	30.6	0.0	0.0	0.0	343.5
1980	100.0	345.8	(s)	0.3	0.0	0.3	0.0	13.7	0.0	0.0	0.0	459.8
1985	218.8	209.5	0.1	0.5	0.0	0.5	0.0	41.6	0.0	0.0	0.0	470.4
1990	264.4	176.6	0.4	0.2	0.0	0.5	0.0	28.6	0.0	0.0	0.0	470.1
1991	275.5	173.9	0.1	0.2	0.0	0.2	0.0	19.4	0.0	0.0	0.0	469.0
1992	290.6	154.5	0.1	0.1	0.0	0.2	0.0	33.2	0.0	0.0	0.0	478.4
1993	304.6	159.7	(s)	0.1	0.0	0.2	0.0	44.3	0.0	0.0	0.0	508.8
1994	290.8	158.3	(s)	0.1	0.0	0.1	0.0	25.4	0.0	0.0	0.0	474.7
1995	310.3	159.4	0.7	0.1	0.0	0.8	0.0	28.0	0.0	0.0	0.0	498.4
1996	333.4	139.9	0.8	0.5	0.0	1.3	0.0	21.5	0.0	0.0	0.0	496.1
1997	347.4	132.9	0.1	0.1	0.0	0.2	0.0	<sup>R</sup> 29.2	0.0	0.0	0.0	<sup>R</sup> 509.8
1998	326.7	179.8	0.0	0.1	0.0	0.1	0.0	35.4	0.0	0.0	0.0	542.0
1999	316.4	174.6	(s)	0.1	0.0	0.1	0.0	31.8	0.0	0.0	0.0	522.9

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> Prior to 1980, based on oil used in steam plants. Since 1980, heavy oil includes fuel oil nos. 4, 5, and 6 and residual fuel oils.

<sup>d</sup> Prior to 1980, based on oil used in internal combustion and gas turbine engine plants. Since 1980, light oil includes fuel oil nos. 1 and 2, kerosene, and jet fuel.

<sup>e</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>f</sup> "Other" is electricity generated for distribution from wind, photovoltaic, and solar thermal energy.

<sup>g</sup> If applicable, from 1989, includes net imports of electricity generated from nonrenewable energy sources not shown in other columns. See data in appendix Table A8.

R=Revised data.

—=Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 239. Energy Consumption Estimates by Source, Selected Years 1960-1999, Oregon**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum											Nuclear Electric Power	Hydro-electric Power <sup>d</sup>	Wood and Waste	Other <sup>a,e</sup>	Net Inter-state Flow of Electricity/Losses <sup>f</sup>	Total <sup>g</sup>
			Asphalt & Road Oil <sup>a</sup>	Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	Kero-sene <sup>a</sup>	LPG <sup>a</sup>	Lubri-cants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Other <sup>a,c</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels											Million kWh		Million kWh			
1960	381	31	1,820	655	10,966	384	45	1,164	476	16,361	5,562	434	37,866	0	12,466	—	—	8,038	—
1965	305	56	1,960	277	13,085	812	19	961	612	19,838	5,115	1,653	44,332	0	16,508	—	—	13,499	—
1970	140	95	2,167	305	12,904	2,086	218	1,251	768	24,958	6,632	1,613	52,903	0	29,912	—	—	-4,443	—
1975	130	110	3,218	171	13,267	2,079	225	726	679	28,904	4,321	1,395	54,984	2	34,562	—	—	8,289	—
1980	715	79	2,483	260	16,764	2,465	112	1,354	751	30,511	4,511	1,043	60,254	5,395	30,222	—	—	17,611	—
1985	591	83	2,838	141	15,394	2,142	68	1,527	684	29,047	4,961	813	57,615	6,911	45,876	—	—	-43,920	—
1990	934	109	3,026	121	17,051	3,319	26	1,384	769	31,728	4,492	2,150	64,066	6,074	R <sup>h</sup> 41,732	—	—	R <sup>h</sup> -15,964	—
1991	1,940	123	2,657	126	16,152	3,744	21	1,559	688	32,125	6,333	2,167	65,571	1,465	R <sup>h</sup> 42,008	—	—	R <sup>h</sup> -7,344	—
1992	2,124	122	3,297	129	15,351	4,011	31	1,430	702	31,921	6,570	2,904	66,346	4,573	R <sup>h</sup> 32,340	—	—	R <sup>h</sup> 6,530	—
1993	2,100	136	3,329	110	14,126	4,310	41	1,561	714	33,528	4,656	2,389	64,765	-21	R <sup>h</sup> 36,761	—	—	R <sup>h</sup> 13,044	—
1994	2,479	146	3,422	156	14,008	4,649	74	1,423	747	33,837	4,452	2,578	65,346	0	R <sup>h</sup> 32,077	—	—	R <sup>h</sup> 22,140	—
1995	1,125	146	2,758	143	14,700	5,114	62	1,535	734	34,021	3,645	2,631	65,344	0	R <sup>h</sup> 41,372	—	—	R <sup>h</sup> 5,631	—
1996	1,134	169	2,745	191	14,089	5,235	89	R <sup>h</sup> 1,627	712	35,161	3,304	R <sup>h</sup> 2,544	R <sup>h</sup> 65,697	0	R <sup>h</sup> 46,868	—	—	R <sup>h</sup> -7,318	—
1997	918	172	2,965	176	15,433	5,720	62	R <sup>h</sup> 898	752	33,594	3,521	R <sup>h</sup> 2,315	R <sup>h</sup> 65,437	0	R <sup>h</sup> 47,004	—	—	R <sup>h</sup> -3,637	—
1998	2,074	205	4,187	150	15,949	5,861	147	773	788	36,360	4,116	3,438	71,768	0	40,366	—	—	-2,393	—
1999	2,154	209	3,649	160	14,805	6,437	170	1,179	796	36,512	3,099	4,022	70,827	0	45,940	—	—	-15,650	—

  

Trillion Btu																				
1960	8.9	31.9	12.1	3.3	63.9	2.1	0.3	4.7	2.9	85.9	35.0	2.6	212.7	0.0	134.1	56.4	0.0	27.4	471.5	
1965	7.1	60.0	13.0	1.4	76.2	4.5	0.1	3.9	3.7	104.2	32.2	9.8	249.0	0.0	172.6	57.8	0.0	46.1	592.6	
1970	3.0	99.6	14.4	1.5	75.2	11.8	1.2	4.7	4.7	131.1	41.7	9.5	295.7	0.0	313.9	57.4	0.0	-15.2	754.5	
1975	2.7	114.2	21.4	0.9	77.3	11.7	1.3	2.7	4.1	151.8	27.2	8.3	306.6	(s)	359.6	57.7	0.0	28.3	869.2	
1980	12.1	82.3	16.5	1.3	97.7	13.9	0.6	5.0	4.6	160.3	28.4	6.1	334.3	58.8	314.0	R <sup>h</sup> 89.3	0.0	60.1	R <sup>h</sup> 950.9	
1985	10.0	85.5	18.8	0.7	89.7	12.1	0.4	5.5	4.1	152.6	31.2	4.8	319.9	74.7	479.3	R <sup>h</sup> 102.4	0.0	-149.9	R <sup>h</sup> 922.1	
1990	15.7	111.7	20.1	0.6	99.3	18.8	0.1	5.0	4.7	166.7	28.2	12.8	356.3	64.9	R <sup>h</sup> 434.1	R <sup>h</sup> 74.4	h <sup>o</sup> 0.7	R <sup>h</sup> -54.5	R <sup>h</sup> 1,007.1	
1991	32.8	127.0	17.6	0.6	94.1	21.1	0.1	5.6	4.2	168.8	39.8	12.8	364.8	15.7	R <sup>h</sup> 438.4	R <sup>h</sup> 65.6	R <sup>h</sup> 0.8	R <sup>h</sup> -25.1	R <sup>h</sup> 1,024.6	
1992	40.8	126.6	21.9	0.7	89.4	22.7	0.2	5.2	4.3	167.7	41.3	17.2	370.4	48.8	R <sup>h</sup> 334.5	R <sup>h</sup> 52.2	0.8	R <sup>h</sup> 22.3	R <sup>h</sup> 999.0	
1993	37.1	140.6	22.1	0.6	82.3	24.4	0.2	5.6	4.3	176.1	29.3	14.1	359.0	-0.2	R <sup>h</sup> 379.0	R <sup>h</sup> 49.5	0.8	R <sup>h</sup> 44.5	R <sup>h</sup> 1,012.7	
1994	44.6	152.3	22.7	0.8	81.6	26.4	0.4	5.2	4.5	R <sup>h</sup> 177.0	28.0	15.3	R <sup>h</sup> 361.8	0.0	R <sup>h</sup> 330.9	R <sup>h</sup> 50.1	R <sup>h</sup> 0.9	R <sup>h</sup> 75.5	R <sup>h</sup> 1,019.2	
1995	20.2	151.7	18.3	0.7	85.6	29.0	0.4	5.6	4.5	R <sup>h</sup> 177.4	22.9	15.6	R <sup>h</sup> 359.9	0.0	R <sup>h</sup> 426.6	R <sup>h</sup> 52.6	0.9	R <sup>h</sup> 19.2	R <sup>h</sup> 1,033.7	
1996	20.3	175.3	18.2	1.0	82.1	29.7	0.5	R <sup>h</sup> 5.9	4.3	R <sup>h</sup> 183.4	20.8	R <sup>h</sup> 15.2	R <sup>h</sup> 361.0	0.0	R <sup>h</sup> 484.6	R <sup>h</sup> 47.7	1.0	R <sup>h</sup> -25.0	R <sup>h</sup> 1,073.6	
1997	16.4	179.5	19.7	0.9	89.9	32.4	0.4	R <sup>h</sup> 3.2	4.6	R <sup>h</sup> 175.1	22.1	R <sup>h</sup> 13.8	R <sup>h</sup> 362.2	0.0	R <sup>h</sup> 486.8	R <sup>h</sup> 46.5	R <sup>h</sup> 1.1	R <sup>h</sup> -12.4	R <sup>h</sup> 1,083.0	
1998	36.1	214.3	27.8	0.8	92.9	33.2	0.8	2.8	4.8	189.5	25.9	20.6	399.0	0.0	417.6	26.8	1.4	-8.2	1,088.3	
1999	38.6	219.3	24.2	0.8	86.2	36.5	1.0	4.3	4.8	190.3	19.5	24.1	391.6	0.0	475.3	35.5	2.2	-53.4	1,109.2	

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products consumed in the industrial sector. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>e</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>f</sup> Net interstate flow of electricity is the difference between the amount of energy in the electricity sold within a State (including associated losses) and the energy input at the electric utilities within the State. A positive number

indicates that more electricity (including associated losses) came into the State than went out of the State during the year; conversely, a negative number indicates that more electricity (including associated losses) went out of the State than came into the State.

<sup>g</sup> From 1989, "Total" does not equal the sum of the columns. Net imports of electricity generated from nonrenewable energy sources (shown in appendix Table A8) is included in the total but not in any other columns.

<sup>h</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

kWh=kilowatthours. R=Revised data. — =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 240. Residential Energy Consumption Estimates, Selected Years 1960-1999, Oregon**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum				Wood Thousand Cords	Geothermal	Solar <sup>c</sup>	Electricity <sup>a</sup> Million Kilowatthours	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Total						Million Kilowatthours	
			Thousand Barrels										
1960	56	7	2,865	1	507	3,373	922	—	—	5,263	—	13,090	—
1965	45	11	3,382	5	785	4,172	661	—	—	7,169	—	17,118	—
1970	11	20	3,101	65	867	4,033	460	—	—	9,850	—	23,871	—
1975	5	29	2,390	48	362	2,800	489	—	—	12,096	—	29,178	—
1980	6	18	2,019	37	574	2,630	R 416	—	—	13,545	—	32,937	—
1985	1	21	2,374	41	517	2,932	473	—	—	14,526	—	34,128	—
1990	1	23	1,784	13	380	2,177	558	—	—	15,380	—	R 33,644	—
1991	(s)	26	1,487	13	488	1,989	587	—	—	15,949	—	R 34,672	—
1992	(s)	23	1,068	17	432	1,517	618	—	—	15,202	—	R 32,423	—
1993	1	30	1,036	18	483	1,537	522	—	—	16,696	—	R 35,265	—
1994	(s)	29	933	50	510	1,493	R 511	—	—	16,462	—	R 34,355	—
1995	(s)	28	942	26	488	1,456	568	—	—	16,315	—	R 34,015	—
1996	0	33	821	40	463	1,324	567	—	—	17,285	—	R 36,021	—
1997	(s)	33	842	34	R 393	R 1,269	R 438	—	—	17,185	—	R 35,746	—
1998	(s)	34	882	66	484	1,431	386	—	—	17,496	—	36,143	—
1999	0	39	644	81	544	1,270	414	—	—	18,058	—	35,381	—
<b>Trillion Btu</b>													
1960	1.4	7.0	16.7	(s)	2.0	18.7	18.4	0.0	0.0	18.0	63.5	44.7	108.2
1965	1.1	11.6	19.7	(s)	3.2	22.9	13.2	0.0	0.0	24.5	73.3	58.4	131.7
1970	0.3	20.6	18.1	0.4	3.3	21.7	9.2	0.0	0.0	33.6	85.4	81.4	166.9
1975	0.1	29.9	13.9	0.3	1.3	15.5	9.8	0.0	0.0	41.3	96.6	99.6	196.1
1980	0.1	19.2	11.8	0.2	2.1	14.1	8.3	0.0	0.0	46.2	88.0	112.4	200.4
1985	(s)	22.1	13.8	0.2	1.9	15.9	9.5	0.0	0.0	49.6	97.1	116.4	213.5
1990	(s)	23.9	10.4	0.1	1.4	11.8	11.2	e 0.1	e 0.3	52.5	e 99.8	114.8	R e 214.6
1991	(s)	27.1	8.7	0.1	1.8	10.5	11.7	0.1	R 0.4	54.4	R 104.3	R 118.3	R 222.6
1992	(s)	24.0	6.2	0.1	1.6	7.9	12.4	0.1	R 0.4	51.9	R 96.6	R 110.6	R 207.2
1993	(s)	31.0	6.0	0.1	1.7	7.9	10.4	0.1	0.4	57.0	106.8	R 120.3	227.1
1994	(s)	30.2	5.4	0.3	1.9	7.6	10.2	0.1	R 0.5	56.2	104.7	117.2	221.9
1995	(s)	29.3	5.5	0.1	1.8	7.4	11.4	0.1	0.5	55.7	R 104.4	R 116.1	R 220.4
1996	0.0	34.7	4.8	0.2	1.7	6.7	11.3	0.1	R 0.6	59.0	112.3	R 122.9	R 235.2
1997	(s)	34.1	4.9	0.2	R 1.4	R 6.5	R 8.8	0.1	0.6	58.6	R 108.8	R 122.0	R 230.7
1998	(s)	36.1	5.1	0.4	1.7	7.3	7.7	0.1	0.7	59.7	111.5	123.3	234.8
1999	0.0	40.7	3.8	0.5	2.0	6.2	8.3	0.2	0.7	61.6	117.7	120.7	238.4

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Includes small amounts of solar thermal and photovoltaic energy consumed by the commercial sector that cannot be separately identified. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 241. Commercial Energy Consumption Estimates, Selected Years 1960-1999, Oregon**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum						Wood	Geothermal	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>c</sup>	Total <sup>d</sup>
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels						Thousand Cords	Million Kilowatthours	Million Kilowatthours			
1960	104	3	1,485	(s)	89	139	991	2,704	17	—	3,083	—	7,669	—
1965	84	6	1,752	4	139	206	1,046	3,147	13	—	4,557	—	10,881	—
1970	20	11	1,607	46	153	249	1,326	3,382	9	—	6,674	—	16,173	—
1975	9	16	1,238	34	64	218	962	2,517	9	—	8,804	—	21,235	—
1980	11	15	1,792	37	101	291	876	3,098	10	—	10,456	—	25,425	—
1985	2	19	1,384	26	91	231	191	1,922	R 13	—	10,340	—	24,292	—
1990	1	20	1,336	8	67	272	287	1,971	R 35	—	12,091	—	R 26,450	—
1991	1	22	995	4	86	174	256	1,514	R 37	—	12,395	—	R 26,946	—
1992	1	20	767	5	76	165	243	1,256	R 40	—	12,575	—	R 26,819	—
1993	1	24	548	11	85	32	175	851	42	—	12,859	—	R 27,160	—
1994	1	23	513	14	90	32	111	760	43	—	13,426	—	R 28,019	—
1995	1	22	783	14	86	33	88	1,004	43	—	13,558	—	R 28,267	—
1996	0	26	620	38	82	33	84	856	R 46	—	14,085	—	R 29,353	—
1997	1	25	748	22	R 69	30	49	R 919	R 48	—	14,476	—	R 30,112	—
1998	(s)	26	917	63	85	30	76	1,171	48	—	14,502	—	29,959	—
1999	0	29	493	31	96	30	57	707	58	—	15,347	—	30,070	—

  

Trillion Btu														
1960	2.6	3.2	8.6	(s)	0.4	0.7	6.2	16.0	0.3	0.0	10.5	32.6	26.2	58.8
1965	2.1	6.0	10.2	(s)	0.6	1.1	6.6	18.4	0.3	0.0	15.5	42.3	37.1	79.4
1970	0.5	11.9	9.4	0.3	0.6	1.3	8.3	19.8	0.2	0.0	22.8	55.1	55.2	110.3
1975	0.2	16.5	7.2	0.2	0.2	1.1	6.0	14.8	0.2	0.0	30.0	61.8	72.5	134.2
1980	0.3	15.9	10.4	0.2	0.4	1.5	5.5	18.1	0.2	0.0	35.7	70.1	86.8	156.8
1985	(s)	19.6	8.1	0.1	0.3	1.2	1.2	10.9	R 0.3	0.0	35.3	R 66.1	82.9	R 149.0
1990	(s)	20.9	7.8	(s)	0.2	1.4	1.8	11.3	R 0.7	e 0.2	41.3	R e 74.5	90.2	R e 164.7
1991	(s)	23.0	5.8	(s)	0.3	0.9	1.6	8.6	R 0.7	0.2	42.3	R 75.0	R 91.9	R 166.9
1992	(s)	20.3	4.5	(s)	0.3	0.9	1.5	7.2	R 0.8	0.2	42.9	R 71.4	R 91.5	R 163.0
1993	(s)	25.0	3.2	0.1	0.3	0.2	1.1	4.8	0.8	0.2	43.9	74.8	92.7	167.5
1994	(s)	24.0	3.0	0.1	0.3	0.2	0.7	4.3	0.9	0.2	45.8	75.2	95.6	170.8
1995	(s)	23.4	4.6	0.1	0.3	0.2	0.6	5.7	0.9	0.2	46.3	R 76.4	96.4	R 172.9
1996	0.0	26.7	3.6	0.2	0.3	0.2	0.5	4.8	0.9	R 0.3	48.1	80.8	R 100.2	R 180.9
1997	(s)	26.7	4.4	0.1	0.3	0.2	0.3	5.2	R 1.0	R 0.2	49.4	R 82.5	R 102.7	R 185.3
1998	(s)	27.2	5.3	0.4	0.3	0.2	0.5	6.6	1.0	0.3	49.5	84.6	102.2	186.9
1999	0.0	30.1	2.9	0.2	0.3	0.2	0.4	3.9	1.2	0.3	52.4	87.9	102.6	190.5

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>d</sup> Small amounts of solar thermal and photovoltaic energy consumed in the commercial sector cannot be separately identified and are included in residential consumption.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

—=Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 242. Industrial Energy Consumption Estimates, Selected Years 1960-1999, Oregon**

Year	Coal	Natural Gas <sup>a</sup>	Petroleum									Hydro-electric Power <sup>b</sup>	Wood and Waste	Other <sup>b,d</sup>	Electricity <sup>b</sup>		Electrical System Energy Losses <sup>e</sup>	Total
			Asphalt and Road Oil <sup>b</sup>	Distillate Fuel <sup>b</sup>	Kero-sene <sup>b</sup>	LPG <sup>b</sup>	Lubri-cants <sup>b</sup>	Motor Gasoline	Residual Fuel <sup>b</sup>	Other <sup>b,c</sup>	Total				Million kWh	Net Energy		
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels									Million kWh			Million kWh			
1960	217	20	1,820	3,723	44	558	175	1,080	3,411	434	11,244	77	—	—	5,247	—	13,051	—
1965	175	39	1,960	4,287	10	33	208	808	3,398	1,653	12,358	61	—	—	7,167	—	17,111	—
1970	109	58	2,167	3,413	107	212	281	722	4,217	1,613	12,733	77	—	—	9,123	—	22,109	—
1975	116	57	3,218	2,827	143	287	189	560	2,922	1,395	11,541	40	—	—	12,402	—	29,916	—
1980	213	39	2,483	3,992	38	614	221	417	2,528	1,043	11,337	28	—	—	13,847	—	33,671	—
1985	170	38	2,838	2,545	1	728	201	482	1,679	813	9,289	28	—	—	11,081	—	26,033	—
1990	82	49	3,026	2,843	4	755	227	425	453	2,150	9,884	R 280	—	—	15,498	—	R 33,904	—
1991	108	55	2,657	2,291	4	826	203	489	349	2,167	8,986	R 281	—	—	15,297	—	R 33,254	—
1992	129	59	3,297	2,270	9	776	207	254	503	2,904	10,220	R 243	—	—	15,123	—	R 32,254	—
1993	117	61	3,329	2,433	12	849	211	452	677	2,389	10,352	R 378	—	—	15,012	—	R 31,708	—
1994	145	63	3,422	2,091	10	603	220	498	420	2,578	9,843	R 399	—	—	15,072	—	R 31,454	—
1995	147	69	2,758	2,624	23	850	216	513	330	2,631	9,945	R 381	—	—	15,839	—	R 33,024	—
1996	90	88	2,745	1,738	11	R 983	210	565	136	R 2,544	R 8,933	R 408	—	—	15,804	—	R 32,936	—
1997	95	90	2,965	2,211	6	R 370	222	584	169	R 2,315	R 8,842	R 234	—	—	15,931	—	R 33,138	—
1998	37	103	4,187	2,428	18	203	232	692	148	3,438	11,346	398	—	—	13,070	—	27,000	—
1999	0	108	3,649	1,609	58	516	235	396	172	4,022	10,655	405	—	—	14,106	—	27,638	—
<b>Trillion Btu</b>																		
1960	4.9	20.9	12.1	21.7	0.3	2.2	1.1	5.7	21.4	2.6	67.0	0.8	37.3	0.0	17.9	148.9	44.5	193.4
1965	3.9	41.5	13.0	25.0	0.1	0.1	1.3	4.2	21.4	9.8	74.8	0.6	44.1	0.0	24.5	189.5	58.4	247.9
1970	2.3	60.3	14.4	19.9	0.6	0.8	1.7	3.8	26.5	9.5	77.1	0.8	47.6	0.0	31.1	219.2	75.4	294.7
1975	2.4	59.6	21.4	16.5	0.8	1.1	1.1	2.9	18.4	8.3	70.4	0.4	47.8	0.0	42.3	222.9	102.1	325.0
1980	3.8	41.0	16.5	23.3	0.2	2.3	1.3	2.2	15.9	6.1	67.8	0.3	R 79.2	0.0	47.2	R 239.2	114.9	R 354.1
1985	3.0	39.0	18.8	14.8	(s)	2.6	1.2	2.5	10.6	4.8	55.4	0.3	R 92.7	0.0	37.8	R 228.3	88.8	R 317.2
1990	1.4	50.1	20.1	16.6	(s)	2.7	1.4	2.2	2.8	12.8	58.7	R 2.9	R 62.6	f 0.1	52.9	R 228.7	115.7	R 344.3
1991	1.9	56.8	17.6	13.3	(s)	3.0	1.2	2.6	2.2	12.8	52.8	R 2.9	R 53.1	0.1	52.2	R 219.8	R 113.5	R 333.2
1992	2.3	60.8	21.9	13.2	0.1	2.8	1.3	1.3	3.2	17.2	60.9	2.5	R 39.0	0.1	51.6	R 217.2	R 110.1	R 327.3
1993	2.2	63.2	22.1	14.2	0.1	3.1	1.3	2.4	4.3	14.1	61.4	R 3.9	R 38.1	0.1	51.2	R 220.1	108.2	R 328.3
1994	2.9	65.6	22.7	12.2	0.1	2.2	1.3	2.6	2.6	15.3	59.0	R 4.1	R 39.0	0.1	51.4	R 222.0	107.3	R 329.3
1995	2.8	72.0	18.3	15.3	0.1	3.1	1.3	2.7	2.1	15.6	R 58.4	R 3.9	R 40.3	0.1	54.0	R 231.7	R 112.7	R 344.3
1996	1.9	91.6	18.2	10.1	0.1	R 3.6	1.3	R 2.9	0.9	R 15.2	R 52.3	4.2	R 35.5	0.1	53.9	R 239.4	R 112.4	R 351.8
1997	1.9	94.8	19.7	12.9	(s)	R 1.3	1.3	R 3.0	1.1	R 13.8	R 53.2	R 2.4	R 36.8	0.1	54.4	R 243.6	R 113.1	R 356.7
1998	0.8	107.7	27.8	14.1	0.1	0.7	1.4	3.6	0.9	20.6	69.3	4.1	18.1	0.3	44.6	244.8	92.1	337.0
1999	0.0	114.0	24.2	9.4	0.3	1.9	1.4	2.1	1.1	24.1	64.4	4.2	26.0	1.0	48.1	257.8	94.3	352.1

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>e</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>f</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

R=Revised data.

kWh=kilowatthours. — =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 243. Transportation Energy Consumption Estimates, Selected Years 1960-1999, Oregon**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum								Ethanol <sup>c</sup>	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total <sup>c</sup>
			Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	LPG <sup>a</sup>	Lubricants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total					
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels								Thousand Barrels	Million Kilowatthours	Million Kilowatthours	Total <sup>c</sup>	
1960	4	(s)	655	2,893	384	10	301	15,142	1,157	20,542	0	0	—	0	—
1965	1	1	277	3,664	812	4	404	18,824	670	24,654	0	0	—	0	—
1970	(s)	6	305	4,782	2,086	18	487	23,987	1,070	32,736	0	0	—	0	—
1975	(s)	8	171	6,783	2,079	13	490	28,125	438	38,098	0	0	—	0	—
1980	0	6	260	8,851	2,465	65	530	29,803	1,107	43,080	0	0	—	0	—
1985	0	5	141	9,088	2,142	191	482	28,335	3,091	43,469	R e (s)	0	—	0	—
1990	0	9	121	11,032	3,319	183	542	31,030	3,752	49,979	R 0	9	—	20	—
1991	0	9	126	11,356	3,744	158	485	31,462	5,729	53,060	R 0	10	—	22	—
1992	0	7	129	11,227	4,011	146	495	31,502	5,824	53,334	R 508	10	—	22	—
1993	0	5	110	10,054	4,310	144	504	33,044	3,804	51,970	R 874	10	—	22	—
1994	0	6	156	10,460	4,649	220	527	33,306	3,921	53,239	0	11	—	22	—
1995	0	7	143	10,340	5,114	110	518	33,476	3,227	52,928	0	14	—	28	—
1996	0	8	191	10,899	5,235	R 99	502	34,562	3,084	R 54,573	0	11	—	23	—
1997	0	13	176	11,609	5,720	R 66	531	32,980	3,302	R 54,384	0	11	—	23	—
1998	0	13	150	11,664	5,861	1	555	35,638	3,892	57,761	353	14	—	30	—
1999	0	10	160	12,043	6,437	23	561	36,085	2,869	58,180	299	33	—	64	—

  

Trillion Btu															
1960	0.1	0.1	3.3	16.9	2.1	(s)	1.8	79.5	7.3	111.0	0.0	0.0	111.1	0.0	111.1
1965	(s)	0.7	1.4	21.3	4.5	(s)	2.4	98.9	4.2	132.8	0.0	0.0	133.6	0.0	133.6
1970	(s)	5.8	1.5	27.9	11.8	0.1	3.0	126.0	6.7	176.9	0.0	0.0	182.7	0.0	182.7
1975	(s)	8.2	0.9	39.5	11.7	(s)	3.0	147.7	2.8	205.6	0.0	0.0	213.8	0.0	213.8
1980	0.0	5.9	1.3	51.6	13.9	0.2	3.2	156.6	7.0	233.8	0.0	0.0	239.6	0.0	239.6
1985	0.0	4.7	0.7	52.9	12.1	0.7	2.9	148.8	19.4	237.6	R e (s)	0.0	e 242.3	0.0	e 242.3
1990	0.0	9.2	0.6	64.3	18.8	0.7	3.3	163.0	23.6	274.2	R 0.0	(s)	283.4	0.1	283.5
1991	0.0	9.1	0.6	66.2	21.1	0.6	2.9	165.3	36.0	292.7	R 0.0	(s)	301.8	0.1	301.9
1992	0.0	7.1	0.7	65.4	22.7	0.5	3.0	165.5	36.6	294.3	R 1.8	(s)	301.5	0.1	301.5
1993	0.0	5.1	0.6	58.6	24.4	0.5	3.1	173.6	23.9	284.6	R 3.1	(s)	289.7	0.1	289.8
1994	0.0	6.1	0.8	60.9	26.4	0.8	3.2	R 174.2	24.7	R 290.9	0.0	(s)	R 297.0	0.1	R 297.1
1995	0.0	7.6	0.7	60.2	29.0	0.4	3.1	R 174.6	20.3	R 288.3	0.0	(s)	R 296.0	0.1	R 296.1
1996	0.0	8.3	1.0	63.5	29.7	0.4	3.0	R 180.3	19.4	R 297.2	0.0	(s)	R 305.5	0.1	R 305.6
1997	0.0	13.1	0.9	67.6	32.4	R 0.2	3.2	R 171.9	20.8	R 297.1	0.0	(s)	R 310.2	0.1	R 310.3
1998	0.0	14.0	0.8	67.9	33.2	(s)	3.4	185.7	24.5	315.5	1.3	(s)	329.6	0.1	329.7
1999	0.0	10.9	0.8	70.2	36.5	0.1	3.4	188.0	18.0	317.0	1.1	0.1	328.0	0.2	328.2

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels. Transportation use of natural gas is gas consumed in the operation of pipelines, primarily in compressors, and, since 1990, is also gas consumed as vehicle fuel.

<sup>c</sup> Ethanol blended into motor gasoline, which is accounted for under motor gasoline, is shown separately here to display the use of renewable energy by the transportation sector and is included only once in the total.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1980 and 1981 due to the expanded coverage of renewable energy sources beginning in 1981.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 244. Estimates of Energy Input at Electric Utilities, Selected Years, 1960-1999, Oregon**

Year	Coal	Natural Gas <sup>a</sup>	Petroleum				Nuclear Electric Power	Hydroelectric Power <sup>e</sup>	Wood and Waste	Geothermal Energy	Other <sup>b,f</sup>	Total <sup>g</sup>
			Heavy Oil <sup>b,c</sup>	Light Oil <sup>b,d</sup>	Petroleum Coke <sup>b</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels				Million Kilowatthours					
1960	0	1	3	(s)	0	3	0	12,389	24	0	0	—
1965	0	(s)	1	(s)	0	1	0	16,447	26	0	0	—
1970	0	1	18	(s)	0	19	0	29,836	44	0	0	—
1975	0	(s)	0	29	0	29	2	34,522	(s)	0	0	—
1980	485	(s)	0	110	0	110	5,395	30,194	160	0	0	—
1985	418	0	0	3	0	3	6,911	45,848	0	0	0	—
1990	850	7	0	56	0	56	6,074	R 41,452	1	0	0	—
1991	1,831	11	0	23	0	23	R 41,727	(s)	0	0	0	—
1992	1,994	14	0	19	0	19	4,573	R 32,097	6	0	0	—
1993	1,981	16	0	56	0	56	-21	R 36,383	11	0	0	—
1994	2,333	26	0	11	0	11	0	R 31,677	0	0	0	—
1995	977	19	0	12	0	12	0	R 40,991	0	0	0	—
1996	1,044	14	0	10	0	10	0	R 46,460	0	0	0	—
1997	822	11	0	23	0	23	0	R 46,770	0	0	0	—
1998	2,037	29	0	59	0	59	0	39,968	0	0	0	—
1999	2,154	23	0	15	0	15	0	45,535	0	0	0	—

  

Trillion Btu												
1960	0.0	0.7	(s)	(s)	0.0	(s)	0.0	133.3	0.3	0.0	0.0	134.3
1965	0.0	0.1	(s)	(s)	0.0	(s)	0.0	171.9	0.3	0.0	0.0	172.3
1970	0.0	1.1	0.1	(s)	0.0	0.1	0.0	313.1	0.5	0.0	0.0	314.7
1975	0.0	(s)	0.0	0.2	0.0	0.2	(s)	359.2	(s)	0.0	0.0	359.4
1980	7.9	0.3	0.0	0.6	0.0	0.6	58.8	313.7	1.7	0.0	0.0	383.1
1985	6.9	0.0	0.0	(s)	0.0	(s)	74.7	479.0	0.0	0.0	0.0	560.7
1990	14.2	7.6	0.0	0.3	0.0	0.3	64.9	R 431.2	(s)	0.0	0.0	R 521.9
1991	30.9	11.0	0.0	0.1	0.0	0.1	15.7	R 435.5	(s)	0.0	0.0	R 497.8
1992	38.4	14.4	0.0	0.1	0.0	0.1	48.8	R 331.9	0.1	0.0	0.0	R 436.4
1993	34.9	16.3	0.0	0.3	0.0	0.3	-0.2	R 375.1	0.1	0.0	0.0	R 428.9
1994	41.7	26.4	0.0	0.1	0.0	0.1	0.0	R 326.8	0.0	0.0	0.0	R 398.1
1995	17.4	19.4	0.0	0.1	0.0	0.1	0.0	R 422.7	0.0	0.0	0.0	R 462.1
1996	18.3	14.1	0.0	0.1	0.0	0.1	0.0	R 480.4	0.0	0.0	0.0	R 521.5
1997	14.4	10.8	0.0	0.1	0.0	0.1	0.0	R 484.4	0.0	0.0	0.0	R 512.7
1998	35.4	29.2	0.0	0.3	0.0	0.3	0.0	413.5	0.0	0.0	0.0	479.8
1999	38.6	23.6	0.0	0.1	0.0	0.1	0.0	471.1	0.0	0.0	0.0	533.5

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> Prior to 1980, based on oil used in steam plants. Since 1980, heavy oil includes fuel oil nos. 4, 5, and 6 and residual fuel oils.

<sup>d</sup> Prior to 1980, based on oil used in internal combustion and gas turbine engine plants. Since 1980, light oil includes fuel oil nos. 1 and 2, kerosene, and jet fuel.

<sup>e</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>f</sup> "Other" is electricity generated for distribution from wind, photovoltaic, and solar thermal energy.

<sup>g</sup> If applicable, from 1989, includes net imports of electricity generated from nonrenewable energy sources not shown in other columns. See data in appendix Table A8.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 245. Energy Consumption Estimates by Source, Selected Years 1960-1999, Pennsylvania**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum											Nuclear Electric Power	Hydro-electric Power <sup>d</sup>	Wood and Waste	Other <sup>a,e</sup>	Net Inter-state Flow of Electricity/Losses <sup>f</sup>	Total <sup>g</sup>
			Asphalt & Road Oil <sup>a</sup>	Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	Kero-sene <sup>a</sup>	LPG <sup>a</sup>	Lubri-cants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Other <sup>a,c</sup>	Total						
			Thousand Barrels															Million kWh	
1960	60,624	522	4,731	1,994	46,257	1,036	3,508	2,334	2,775	80,104	42,958	R 11,310	R 197,008	230	1,826	—	—	-1,496	—
1965	68,907	629	6,201	1,922	54,459	3,406	3,851	3,030	3,540	85,723	43,238	R 14,319	R 219,689	313	1,329	—	—	4,970	—
1970	68,573	772	6,600	662	63,489	9,083	4,251	4,754	3,844	101,718	60,436	R 14,462	R 269,299	465	1,366	—	—	2,804	—
1975	67,043	654	5,663	426	68,017	8,548	3,398	6,077	3,349	108,765	41,631	R 15,988	R 261,861	15,869	1,576	—	—	-34,243	—
1980	65,911	776	5,148	337	68,602	10,148	2,763	7,255	4,069	107,925	35,099	R 19,800	R 261,145	12,091	734	—	—	-36,478	—
1985	56,703	626	4,913	208	53,862	10,126	3,557	7,577	3,703	101,979	17,799	R 16,976	R 220,700	26,232	972	—	—	-75,188	—
1990	57,319	644	7,466	145	53,913	12,042	1,654	6,313	4,166	107,467	17,687	R 20,494	R 231,348	57,787	R <sup>h</sup> 1,990	—	—	R -131,453	—
1991	54,931	639	6,192	116	52,993	11,355	1,781	7,585	3,727	107,081	15,965	R 19,061	R 225,856	57,476	R 957	—	—	R -117,748	—
1992	56,074	683	6,036	163	55,063	10,932	1,828	9,176	3,800	107,406	14,904	R 22,055	R 231,364	60,133	R 1,659	—	—	R -129,256	—
1993	56,158	691	6,087	150	61,246	11,787	2,056	5,759	3,869	109,970	18,266	R 19,735	R 238,926	59,331	R 1,492	—	—	R -125,090	—
1994	54,094	697	7,610	136	62,323	11,748	2,078	5,634	4,044	109,532	18,981	R 20,626	R 242,713	67,207	R 2,008	—	—	R -131,869	—
1995	55,326	721	7,808	125	61,821	12,313	2,760	5,509	3,975	112,282	12,787	R 21,340	R 240,721	66,462	R 806	—	—	R -121,415	—
1996	57,226	728	7,472	121	62,598	11,831	3,116	R 6,080	3,857	113,639	12,039	R 19,453	R 240,207	68,672	R 2,235	—	—	R -135,963	—
1997	58,591	694	6,962	107	61,271	14,813	3,015	R 5,283	4,075	114,779	10,573	R 22,536	R 243,415	67,655	R 1,690	—	—	R -137,278	—
1998	54,538	621	7,890	126	59,350	16,716	3,375	5,452	4,266	116,867	14,138	21,730	249,910	61,149	1,929	—	—	-133,550	—
1999	45,336	672	4,996	205	64,217	15,943	3,064	5,677	4,310	117,420	13,366	21,742	250,940	71,123	1,505	—	—	-109,941	—

  

Trillion Btu																			
1960	1,529.9	540.1	31.4	10.1	269.4	5.7	19.9	9.4	16.8	420.8	270.1	R 67.7	R 1,121.3	2.7	19.6	46.5	0.0	-5.1	R 3,255.0
1965	1,751.2	652.9	41.2	9.7	317.2	19.2	21.8	12.2	21.5	450.3	271.8	R 84.1	R 1,249.0	3.7	13.9	47.4	0.0	17.0	R 3,735.0
1970	1,699.0	797.9	43.8	3.3	369.8	51.4	24.1	18.0	23.3	534.3	380.0	R 84.9	R 1,532.9	5.1	14.3	53.2	0.0	9.6	R 4,112.0
1975	1,646.7	670.1	37.6	2.1	396.2	48.4	19.3	22.6	20.3	571.3	261.7	R 94.0	R 1,473.5	174.8	16.4	57.5	0.0	-116.8	R 3,922.1
1980	1,636.1	792.8	34.2	1.7	399.6	57.4	15.7	26.7	24.7	566.9	220.7	R 114.5	R 1,462.0	131.9	7.6	R 141.0	0.0	-124.5	R 4,046.8
1985	1,409.1	646.9	32.6	1.1	313.7	57.3	20.2	27.3	22.5	535.7	111.9	R 100.0	R 1,222.2	283.6	10.1	R 132.5	0.0	-256.5	R 3,447.9
1990	1,427.3	667.6	49.5	0.7	314.0	68.2	9.4	22.9	25.3	564.5	111.2	R 119.9	R 1,285.7	617.2	R <sup>h</sup> 20.7	R 63.7	R <sup>h</sup> 0.7	R -448.5	R <sup>h</sup> 3,634.3
1991	1,364.8	661.7	41.1	0.6	308.7	64.3	10.1	27.4	22.6	562.5	100.4	R 111.8	R 1,249.5	617.3	R 10.0	R 67.6	R 0.7	R -401.8	R 3,569.8
1992	1,407.7	707.1	40.1	0.8	320.7	61.9	10.4	33.3	23.0	564.2	93.7	R 128.5	R 1,276.6	642.1	17.2	R 78.8	0.7	R -441.0	R 3,689.1
1993	1,409.7	716.6	40.4	0.8	356.8	66.7	11.7	20.8	23.5	577.7	114.8	R 115.1	R 1,328.1	633.8	15.4	R 83.8	R 0.8	R -426.8	R 3,761.3
1994	1,357.8	722.3	50.5	0.7	363.0	66.5	11.8	20.5	24.5	R 572.9	119.3	R 120.3	R 1,350.0	717.5	R 20.7	R 87.2	R 0.8	R -449.9	R 3,806.8
1995	1,387.4	746.7	51.8	0.6	360.1	69.8	15.7	20.0	24.1	R 585.6	80.4	R 124.9	R 1,332.9	708.3	R 8.3	R 96.0	0.8	R -414.3	R 3,866.3
1996	1,432.3	752.7	49.6	0.6	364.6	67.1	17.7	R 22.0	23.4	R 592.7	75.7	R 113.3	R 1,326.6	729.5	R 23.1	R 123.4	0.9	R -463.9	R 3,925.3
1997	1,462.1	717.9	46.2	0.5	356.9	84.0	17.1	R 19.1	24.7	R 598.3	66.5	R 131.7	R 1,345.1	718.7	R 17.5	R 104.2	0.9	R -468.4	R 3,898.4
1998	1,356.7	643.8	52.4	0.6	345.7	94.8	19.1	19.7	25.9	609.1	88.9	127.1	1,383.3	649.6	20.0	67.0	1.0	-455.7	3,663.9
1999	1,142.7	696.2	33.2	1.0	374.1	90.4	17.4	20.5	26.1	611.9	84.0	126.7	1,385.3	755.5	15.6	94.5	1.0	-375.1	3,715.5

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products consumed in the industrial sector. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>e</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>f</sup> Net interstate flow of electricity is the difference between the amount of energy in the electricity sold within a State (including associated losses) and the energy input at the electric utilities within the State. A positive number

indicates that more electricity (including associated losses) came into the State than went out of the State during the year; conversely, a negative number indicates that more electricity (including associated losses) went out of the State than came into the State.

<sup>g</sup> From 1989, "Total" does not equal the sum of the columns. Net imports of electricity generated from nonrenewable energy sources (shown in appendix Table A8) is included in the total but not in any other columns.

<sup>h</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

kWh=kilowatt-hours. R=Revised data. — =Not applicable.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.



Table 246. Residential Energy Consumption Estimates, Selected Years 1960-1999, Pennsylvania

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum				Wood Thousand Cords	Geothermal	Solar <sup>c</sup>	Electricity <sup>a</sup> Million Kilowatthours	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Total						Million Kilowatthours	
			Thousand Barrels										
1960	5,014	232	25,101	2,763	1,125	28,989	1,307	—	—	11,094	—	27,594	—
1965	3,155	256	28,391	2,753	1,349	32,493	1,060	—	—	14,807	—	35,352	—
1970	1,999	297	31,242	3,368	1,890	36,500	1,024	—	—	23,007	—	55,754	—
1975	1,039	273	31,587	2,023	2,109	35,719	1,039	—	—	27,678	—	66,762	—
1980	825	288	27,838	2,362	1,589	31,789	R 3,244	—	—	31,767	—	77,247	—
1985	642	245	21,658	2,853	2,299	26,810	2,197	—	—	32,686	—	76,794	—
1990	702	240	17,007	1,377	2,533	20,917	1,039	—	—	38,164	—	R 83,488	—
1991	708	243	17,482	1,508	2,940	21,930	1,094	—	—	39,598	—	R 86,082	—
1992	787	267	17,640	1,585	3,109	22,333	1,151	—	—	39,245	—	R 83,701	—
1993	651	269	20,914	1,655	2,840	25,409	R 1,234	—	—	41,455	—	R 87,560	—
1994	630	268	19,796	1,490	2,890	24,176	R 1,210	—	—	42,239	—	R 88,149	—
1995	632	262	19,661	2,064	3,089	24,814	R 1,343	—	—	42,802	—	R 89,239	—
1996	566	279	21,001	2,411	R 3,362	R 26,774	R 1,341	—	—	43,645	—	R 90,956	—
1997	687	262	19,780	2,541	R 3,311	R 25,632	R 691	—	—	42,715	—	R 88,852	—
1998	487	218	16,550	2,906	3,486	22,942	609	—	—	41,358	—	85,437	—
1999	364	241	19,280	2,518	3,733	25,531	653	—	—	44,126	—	86,457	—

Trillion Btu

1960	124.0	240.2	146.2	15.7	4.5	166.4	26.1	0.0	0.0	37.9	594.5	94.1	688.7
1965	76.8	265.3	165.4	15.6	5.4	186.4	21.2	0.0	0.0	50.5	600.2	120.6	720.9
1970	47.0	306.8	182.0	19.1	7.1	208.2	20.5	0.0	0.0	78.5	661.1	190.2	851.3
1975	23.3	279.5	184.0	11.5	7.8	203.3	20.8	0.0	0.0	94.4	621.3	227.8	849.1
1980	19.0	294.7	162.2	13.4	5.8	181.4	R 64.9	0.0	0.0	108.4	R 668.3	263.6	R 931.9
1985	15.1	253.2	126.2	16.2	8.3	150.6	43.9	0.0	0.0	111.5	574.4	262.0	836.4
1990	17.7	248.9	99.1	7.8	9.2	116.1	20.8	e 0.2	R e 0.5	130.2	e 534.2	R 284.9	R e 819.1
1991	17.8	251.2	101.8	8.5	10.6	121.0	21.9	0.2	R 0.5	135.1	R 547.7	R 293.7	R 841.4
1992	19.5	276.1	102.8	9.0	11.3	123.0	23.0	0.2	R 0.5	133.9	R 576.3	R 285.6	R 861.9
1993	15.9	279.0	121.8	9.4	10.2	141.4	24.7	0.2	R 0.5	141.4	603.1	298.8	901.9
1994	15.8	278.1	115.3	8.4	10.5	134.3	24.2	0.2	R 0.5	144.1	R 597.2	R 300.8	897.9
1995	15.7	271.3	114.5	11.7	11.2	137.4	26.9	0.2	0.5	146.0	R 598.1	R 304.5	R 902.6
1996	14.0	288.1	122.3	13.7	R 12.1	R 148.1	26.8	0.2	0.5	148.9	R 626.7	R 310.3	R 937.1
1997	16.9	271.7	115.2	14.4	R 12.0	R 141.6	R 13.8	0.3	0.5	145.7	R 590.5	R 303.2	R 893.7
1998	11.9	225.8	96.4	16.5	12.6	125.5	12.2	0.3	0.5	141.1	517.3	291.5	808.8
1999	9.0	250.2	112.3	14.3	13.5	140.1	13.1	0.3	0.5	150.6	563.6	295.0	858.6

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Includes small amounts of solar thermal and photovoltaic energy consumed by the commercial sector that cannot be separately identified. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

R=Revised data.

—=Not applicable.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 247. Commercial Energy Consumption Estimates, Selected Years 1960-1999, Pennsylvania**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum						Wood	Geothermal	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>c</sup>	Total <sup>d</sup>
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels						Thousand Cords	Million Kilowatthours	Million Kilowatthours			
1960	3,861	56	4,363	241	198	2,084	5,514	12,401	25	—	7,125	—	17,723	—
1965	2,433	68	4,935	240	238	2,585	5,899	13,897	20	—	9,417	—	22,484	—
1970	1,623	99	5,431	294	334	2,455	5,254	13,767	19	—	13,435	—	32,557	—
1975	830	99	5,491	177	372	1,310	3,630	10,980	20	—	18,608	—	44,886	—
1980	743	118	5,858	193	280	313	1,521	8,165	78	—	21,746	—	52,880	—
1985	631	115	4,933	359	406	448	1,414	7,559	R 59	—	24,580	—	57,749	—
1990	606	126	5,588	150	447	701	805	7,692	R 66	—	30,198	—	R 66,062	—
1991	701	126	5,450	131	519	555	632	7,287	R 70	—	31,612	—	R 68,722	—
1992	839	134	5,409	102	549	334	885	7,279	R 75	—	31,813	—	R 67,850	—
1993	606	132	6,001	173	501	87	1,125	7,887	99	—	33,232	—	R 70,190	—
1994	526	138	6,916	334	510	87	1,385	9,232	101	—	34,361	—	R 71,708	—
1995	556	144	6,132	528	545	88	1,240	8,533	101	—	35,542	—	R 74,102	—
1996	428	155	6,240	556	R 593	87	1,326	R 8,802	110	—	36,373	—	R 75,803	—
1997	557	144	4,960	323	R 584	284	1,050	R 7,201	R 76	—	36,827	—	R 76,603	—
1998	354	131	4,687	284	615	929	636	7,151	76	—	37,030	—	76,497	—
1999	327	143	4,777	344	659	188	648	6,616	91	—	38,306	—	75,054	—

**Trillion Btu**

1960	95.5	58.1	25.4	1.4	0.8	10.9	34.7	73.2	0.5	0.0	24.3	251.6	60.5	312.1
1965	59.3	70.1	28.7	1.4	1.0	13.6	37.1	81.7	0.4	0.0	32.1	243.7	76.7	320.4
1970	38.3	102.6	31.6	1.7	1.3	12.9	33.0	80.5	0.4	0.0	45.8	267.6	111.1	378.7
1975	18.7	101.5	32.0	1.0	1.4	6.9	22.8	64.1	0.4	0.0	63.5	248.2	153.2	401.3
1980	17.3	121.1	34.1	1.1	1.0	1.6	9.6	47.5	1.6	0.0	74.2	261.6	180.4	442.0
1985	15.1	119.3	28.7	2.0	1.5	2.4	8.9	43.5	R 1.2	0.0	83.9	R 262.9	197.0	R 459.9
1990	15.2	130.3	32.6	0.9	1.6	3.7	5.1	43.8	R 1.3	e (s)	103.0	R e 293.7	225.4	R e 519.1
1991	17.6	129.9	31.7	0.7	1.9	2.9	4.0	41.3	R 1.4	(s)	107.9	R 298.1	R 234.5	R 532.6
1992	20.9	139.1	31.5	0.6	2.0	1.8	5.6	41.4	R 1.5	0.1	108.5	R 311.5	R 231.5	R 543.0
1993	14.9	136.7	35.0	1.0	1.8	0.5	7.1	45.3	2.0	0.1	113.4	312.3	R 239.5	551.8
1994	13.2	143.5	40.3	1.9	1.9	0.5	8.7	53.2	2.0	0.1	117.2	329.2	R 244.7	573.9
1995	13.8	148.8	35.7	3.0	2.0	0.5	7.8	48.9	2.0	0.1	121.3	335.0	R 252.8	R 587.8
1996	10.6	159.9	36.3	3.1	R 2.1	0.5	8.3	R 50.4	2.2	0.1	124.1	R 347.4	R 258.6	R 606.0
1997	13.8	149.1	28.9	1.8	R 2.1	1.5	6.6	40.9	R 1.5	0.2	125.7	R 331.2	R 261.4	R 592.5
1998	8.7	135.7	27.3	1.6	2.2	4.8	4.0	40.0	1.5	0.2	126.3	312.5	261.0	573.5
1999	8.1	148.4	27.8	2.0	2.4	1.0	4.1	37.2	1.8	0.2	130.7	326.5	256.1	582.6

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>d</sup> Small amounts of solar thermal and photovoltaic energy consumed in the commercial sector cannot be separately identified and are included in residential consumption.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

—=Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

Table 248. Industrial Energy Consumption Estimates, Selected Years 1960-1999, Pennsylvania

Year	Coal Thousand Short Tons	Natural Gas <sup>a</sup> Billion Cubic Feet	Petroleum									Hydro-electric Power <sup>b</sup> Million kWh	Wood and Waste	Other <sup>b,d</sup>	Electricity <sup>b</sup>		Electrical System Energy Losses <sup>e</sup> Million kWh	Total
			Asphalt and Road Oil <sup>b</sup>	Distillate Fuel <sup>b</sup>	Kero-sene <sup>b</sup>	LPG <sup>b</sup>	Lubri-cants <sup>b</sup>	Motor Gasoline	Residual Fuel <sup>b</sup>	Other <sup>b,c</sup>	Total				Million kWh	Net Energy		
			Thousand Barrels															
1960	33,140	213	4,731	8,645	503	992	1,432	1,456	29,692	R 11,310	R 58,762	16	—	—	20,693	—	51,470	—
1965	40,010	285	6,201	11,641	858	1,383	2,419	1,480	29,434	R 14,319	R 67,734	15	—	—	29,075	—	69,421	—
1970	35,753	340	6,600	10,196	589	2,396	2,518	1,181	27,132	R 14,462	R 65,074	12	—	—	38,993	—	94,494	—
1975	28,510	263	5,663	11,033	1,198	3,439	2,255	1,098	21,941	R 15,988	R 62,614	1	—	—	41,256	—	99,516	—
1980	21,877	337	5,148	11,128	208	5,238	2,756	586	11,555	R 19,484	R 56,104	1	—	—	46,045	—	111,966	—
1985	13,716	231	4,913	5,762	345	4,624	2,508	1,276	2,624	R 16,194	R 38,247	1	—	—	42,520	—	99,898	—
1990	14,546	241	7,466	6,303	127	3,177	2,822	1,180	5,814	R 19,489	R 46,379	R f 287	—	—	45,992	—	R 100,612	—
1991	12,860	235	6,192	5,354	143	3,938	2,525	1,254	4,467	R 18,074	R 41,947	R 302	—	—	44,728	—	R 97,236	—
1992	14,041	240	6,036	6,260	142	5,330	2,574	1,342	4,205	R 21,034	R 46,923	R 442	—	—	44,869	—	R 95,696	—
1993	14,644	246	6,087	6,101	227	2,222	2,621	959	4,302	R 18,803	R 41,323	R 368	—	—	44,949	—	R 94,940	—
1994	14,894	240	7,610	5,151	254	1,874	2,740	908	4,125	R 19,523	R 42,184	R 395	—	—	46,076	—	R 96,156	—
1995	14,885	253	7,808	4,253	169	1,687	2,693	934	2,933	R 20,030	R 40,506	R 347	—	—	47,528	—	R 99,093	—
1996	15,155	247	7,472	4,526	150	R 1,977	2,613	855	3,348	R 18,090	R 39,030	R 451	—	—	47,208	—	R 98,381	—
1997	14,744	240	6,962	4,313	151	R 1,272	2,761	887	2,273	R 21,218	R 39,836	R 470	—	—	47,957	—	R 99,755	—
1998	10,726	233	7,890	4,145	186	1,224	2,890	872	2,360	20,403	39,970	354	—	—	47,490	—	98,104	—
1999	10,088	241	4,996	5,061	201	1,188	2,920	741	2,285	21,023	38,416	342	—	—	46,059	—	90,244	—
Trillion Btu																		
1960	873.1	220.0	31.4	50.4	2.9	4.0	8.7	7.6	186.7	R 67.7	R 359.3	0.2	19.8	0.0	70.6	R 1,543.0	175.6	R 1,718.7
1965	1,053.3	296.1	41.2	67.8	4.9	5.5	14.7	7.8	185.0	R 84.1	R 411.0	0.2	25.8	0.0	99.2	R 1,885.5	236.9	R 2,122.4
1970	932.1	351.2	43.8	59.4	3.3	9.1	15.3	6.2	170.6	R 84.9	R 392.6	0.1	32.3	0.0	133.0	R 1,841.4	322.4	R 2,163.8
1975	743.1	269.8	37.6	64.3	6.8	12.8	13.7	5.8	137.9	R 94.0	R 372.8	(s)	36.3	0.0	140.8	R 1,562.8	339.5	R 1,902.4
1980	573.1	344.0	34.2	64.8	1.2	19.2	16.7	3.1	72.6	R 112.6	R 324.4	(s)	R 74.6	0.0	157.1	R 1,473.2	382.0	R 1,855.2
1985	359.2	238.7	32.6	33.6	2.0	16.7	15.2	6.7	16.5	R 95.3	R 218.5	(s)	R 87.4	0.0	145.1	R 1,048.9	340.9	R 1,389.7
1990	382.1	250.3	49.5	36.7	0.7	11.5	17.1	6.2	36.6	R 113.9	R 272.2	R f 3.0	R 41.6	f 0.0	156.9	R f 1,106.2	R 343.3	R f 1,449.5
1991	337.6	243.1	41.1	31.2	0.8	14.2	15.3	6.6	28.1	R 105.9	R 243.2	3.1	R 44.3	0.0	152.6	R 1,024.0	R 331.8	R 1,355.7
1992	369.2	248.7	40.1	36.5	0.8	19.3	15.6	7.1	26.4	R 122.4	R 268.1	4.6	R 54.3	0.0	153.1	R 1,097.9	R 326.5	R 1,424.4
1993	385.0	254.8	40.4	35.5	1.3	8.0	15.9	5.0	27.0	R 109.5	R 242.7	3.8	R 57.1	0.0	153.4	R 1,096.8	R 323.9	R 1,420.7
1994	392.4	248.3	50.5	30.0	1.4	6.8	16.6	R 4.7	25.9	R 113.7	R 249.7	4.1	R 61.0	0.0	157.2	R 1,112.7	328.1	R 1,440.8
1995	392.2	261.9	51.8	24.8	1.0	6.1	16.3	4.9	18.4	R 117.0	R 240.3	3.6	R 67.1	0.0	162.2	R 1,127.2	R 338.1	R 1,465.4
1996	398.4	255.2	49.6	26.4	0.8	R 7.1	15.8	4.5	21.0	R 105.1	R 230.4	4.7	R 94.4	0.0	161.1	R 1,144.1	R 335.7	R 1,479.8
1997	387.9	248.9	46.2	25.1	0.9	R 4.6	16.7	R 4.6	14.3	R 123.8	R 236.2	4.9	R 88.8	0.0	163.6	R 1,130.4	R 340.4	R 1,470.7
1998	280.6	241.5	52.4	24.1	1.1	4.4	17.5	4.5	14.8	119.1	238.0	3.7	53.3	0.0	162.0	979.1	334.7	1,313.8
1999	263.7	249.6	33.2	29.5	1.1	4.3	17.7	3.9	14.4	122.3	226.3	3.5	79.6	2.5	157.2	982.5	307.9	1,290.4

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>e</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>f</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

R=Revised data.

kWh=kilowatthours. — =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 249. Transportation Energy Consumption Estimates, Selected Years 1960-1999, Pennsylvania**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum								Ethanol <sup>c</sup>	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total <sup>c</sup>
			Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	LPG <sup>a</sup>	Lubricants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total				Million Kilowatthours	
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels								Thousand Barrels	Million Kilowatthours	Million Kilowatthours	Total <sup>c</sup>	
1960	547	15	1,994	7,662	1,036	20	1,343	76,565	5,005	93,625	0	306	—	760	—
1965	127	19	1,922	8,900	3,406	60	1,121	81,658	4,554	101,622	0	232	—	553	—
1970	56	27	662	12,662	9,083	134	1,327	98,082	5,548	127,497	0	184	—	447	—
1975	5	18	426	16,566	8,469	157	1,094	106,357	5,788	138,857	0	194	—	467	—
1980	0	29	337	21,539	10,148	147	1,312	107,026	4,796	145,306	0	186	—	451	—
1985	0	33	208	20,087	10,126	249	1,194	100,255	2,139	134,258	<sup>e</sup> 0	365	—	859	—
1990	0	34	145	23,830	12,042	157	1,344	105,586	5,662	148,765	<sup>R</sup> 0	396	—	867	—
1991	0	34	116	23,801	11,355	188	1,202	105,272	5,713	147,647	<sup>R</sup> 0	399	—	<sup>R</sup> 868	—
1992	0	39	163	25,036	10,932	189	1,226	105,729	6,994	150,269	<sup>R</sup> 0	360	—	<sup>R</sup> 768	—
1993	0	36	150	27,385	11,787	196	1,248	108,924	6,082	155,772	<sup>R</sup> 217	345	—	729	—
1994	0	38	136	29,058	11,748	360	1,304	108,538	5,994	157,139	<sup>R</sup> 556	370	—	772	—
1995	0	38	125	30,520	12,313	188	1,282	111,261	4,843	160,533	<sup>R</sup> 1,730	379	—	<sup>R</sup> 791	—
1996	0	41	121	29,413	11,831	<sup>R</sup> 148	1,244	112,697	3,383	<sup>R</sup> 158,836	<sup>R</sup> 1,298	397	—	<sup>R</sup> 828	—
1997	0	39	107	31,312	14,813	<sup>R</sup> 117	1,314	113,608	4,674	<sup>R</sup> 165,944	<sup>R</sup> 1,437	376	—	<sup>R</sup> 782	—
1998	0	33	126	32,544	16,716	127	1,376	115,066	5,828	171,782	330	381	—	786	—
1999	0	36	205	33,929	15,943	97	1,390	116,491	6,007	174,061	283	392	—	768	—
<b>Trillion Btu</b>															
1960	14.0	15.6	10.1	44.6	5.7	0.1	8.1	402.2	31.5	502.3	0.0	1.0	533.0	2.6	535.6
1965	3.2	20.1	9.7	51.8	19.2	0.2	6.8	429.0	28.6	545.4	0.0	0.8	569.4	1.9	571.3
1970	1.3	27.5	3.3	73.8	51.4	0.5	8.0	515.2	34.9	687.1	0.0	0.6	716.7	1.5	718.2
1975	0.1	18.1	2.1	96.5	47.9	0.6	6.6	558.7	36.4	748.9	0.0	0.7	767.8	1.6	769.4
1980	0.0	30.1	1.7	125.5	57.4	0.5	8.0	562.2	30.2	785.4	0.0	0.6	816.2	1.5	817.7
1985	0.0	34.1	1.1	117.0	57.3	0.9	7.2	526.6	13.4	723.5	<sup>e</sup> 0.0	1.2	<sup>e</sup> 758.9	2.9	<sup>e</sup> 761.9
1990	0.0	35.7	0.7	138.8	68.2	0.6	8.1	554.6	35.6	806.7	<sup>R</sup> 0.0	1.4	843.7	3.0	846.6
1991	0.0	35.3	0.6	138.6	64.3	0.7	7.3	553.0	35.9	800.4	<sup>R</sup> 0.0	1.4	837.1	3.0	840.0
1992	0.0	39.9	0.8	145.8	61.9	0.7	7.4	555.4	44.0	816.0	<sup>R</sup> 0.0	1.2	857.2	2.6	859.8
1993	0.0	37.6	0.8	159.5	66.7	0.7	7.6	572.2	38.2	845.6	<sup>R</sup> 0.8	1.2	884.5	2.5	887.0
1994	0.0	39.3	0.7	169.3	66.5	1.3	7.9	<sup>R</sup> 567.7	37.7	<sup>R</sup> 851.0	<sup>R</sup> 2.0	1.3	<sup>R</sup> 891.6	2.6	<sup>R</sup> 894.3
1995	0.0	39.2	0.6	177.8	69.8	0.7	7.8	<sup>R</sup> 580.2	30.5	<sup>R</sup> 867.4	<sup>R</sup> 6.1	1.3	<sup>R</sup> 907.9	2.7	<sup>R</sup> 910.6
1996	0.0	42.1	0.6	171.3	67.1	0.5	7.5	<sup>R</sup> 587.8	21.3	<sup>R</sup> 856.2	<sup>R</sup> 4.6	1.4	<sup>R</sup> 899.6	2.8	<sup>R</sup> 902.4
1997	0.0	40.6	0.5	182.4	84.0	<sup>R</sup> 0.4	8.0	<sup>R</sup> 592.2	29.4	<sup>R</sup> 896.9	<sup>R</sup> 5.1	1.3	<sup>R</sup> 938.8	2.7	<sup>R</sup> 941.5
1998	0.0	33.7	0.6	189.6	94.8	0.5	8.3	599.7	36.6	930.1	1.2	1.3	965.2	2.7	967.9
1999	0.0	37.3	1.0	197.6	90.4	0.3	8.4	607.0	37.8	942.6	1.0	1.3	981.3	2.6	983.9

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels. Transportation use of natural gas is gas consumed in the operation of pipelines, primarily in compressors, and, since 1990, is also gas consumed as vehicle fuel.

<sup>c</sup> Ethanol blended into motor gasoline, which is accounted for under motor gasoline, is shown separately here to display the use of renewable energy by the transportation sector and is included only once in the total.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1980 and 1981 due to the expanded coverage of renewable energy sources beginning in 1981.

R=Revised data.

— =Not applicable.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

Table 250. Estimates of Energy Input at Electric Utilities, Selected Years, 1960-1999, Pennsylvania

Year	Coal	Natural Gas <sup>a</sup>	Petroleum				Nuclear Electric Power	Hydroelectric Power <sup>e</sup>	Wood and Waste	Geothermal Energy	Other <sup>b,f</sup>	Total <sup>g</sup>
			Heavy Oil <sup>b,c</sup>	Light Oil <sup>b,d</sup>	Petroleum Coke <sup>b</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels				Million Kilowatthours					
1960	18,062	6	2,747	485	0	3,232	230	1,810	0	0	0	—
1965	23,182	1	3,351	591	0	3,943	313	1,313	0	0	0	—
1970	29,141	9	22,502	3,959	0	26,460	465	1,354	0	0	0	—
1975	36,659	1	10,273	3,419	0	13,691	15,869	1,575	0	0	0	—
1980	42,466	3	17,226	2,238	316	19,780	12,091	734	0	0	0	—
1985	41,713	2	11,622	1,423	782	13,827	26,232	971	0	0	0	—
1990	41,465	2	5,406	1,185	1,005	7,596	57,787	1,703	0	0	0	—
1991	40,662	2	5,153	907	986	7,046	57,476	656	0	0	0	—
1992	40,407	3	2,820	719	1,022	4,560	60,133	1,217	0	0	0	—
1993	40,257	8	6,758	845	932	8,535	59,331	1,124	0	0	0	—
1994	38,044	13	7,478	1,402	1,103	9,982	67,207	R 1,613	0	0	0	—
1995	39,252	25	3,770	1,256	1,310	6,336	66,462	R 459	0	0	0	—
1996	41,076	7	3,983	1,418	1,363	6,764	68,672	R 1,784	0	0	0	—
1997	42,602	7	2,576	907	1,318	4,801	67,655	R 1,220	0	0	0	—
1998	42,971	7	5,314	1,424	1,327	8,065	61,149	1,575	0	0	0	—
1999	34,558	10	4,426	1,171	719	6,316	70,885	1,163	0	0	0	—
Trillion Btu												
1960	423.3	6.2	17.3	2.8	0.0	20.1	2.7	19.5	0.0	0.0	0.0	471.7
1965	558.6	1.3	21.1	3.4	0.0	24.5	3.7	13.7	0.0	0.0	0.0	601.8
1970	680.2	9.7	141.5	23.1	0.0	164.5	5.1	14.2	0.0	0.0	0.0	873.7
1975	861.4	1.2	64.6	19.9	0.0	84.5	174.8	16.4	0.0	0.0	0.0	1,138.3
1980	1,026.7	2.9	108.3	13.0	1.9	123.2	131.9	7.6	0.0	0.0	0.0	1,292.3
1985	1,019.7	1.6	73.1	8.3	4.7	86.1	283.6	10.1	0.0	0.0	0.0	1,401.1
1990	1,012.3	2.4	34.0	6.9	6.1	46.9	617.2	17.7	0.0	0.0	0.0	1,696.6
1991	991.8	2.1	32.4	5.3	5.9	43.6	617.3	6.8	0.0	0.0	0.0	1,661.6
1992	998.1	3.2	17.7	4.2	6.2	28.1	642.1	12.6	0.0	0.0	0.0	1,684.0
1993	993.9	8.6	42.5	4.9	5.6	53.0	633.8	11.6	0.0	0.0	0.0	1,700.8
1994	936.4	13.1	47.0	8.2	6.6	61.8	717.5	R 16.6	0.0	0.0	0.0	R 1,745.9
1995	965.7	25.4	23.7	7.3	7.9	38.9	708.3	R 4.7	0.0	0.0	0.0	R 1,743.2
1996	1,009.4	7.4	25.0	8.3	8.2	41.5	729.5	R 18.4	0.0	0.0	0.0	R 1,806.8
1997	1,043.5	7.6	16.2	5.3	7.9	29.4	718.7	R 12.6	0.0	0.0	0.0	R 1,812.3
1998	1,055.5	7.1	33.4	8.3	8.0	49.7	649.6	16.3	0.0	0.0	0.0	1,776.4
1999	862.0	10.7	27.8	6.8	4.3	39.0	753.0	12.0	0.0	0.0	0.0	1,676.5

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> Prior to 1980, based on oil used in steam plants. Since 1980, heavy oil includes fuel oil nos. 4, 5, and 6 and residual fuel oils.

<sup>d</sup> Prior to 1980, based on oil used in internal combustion and gas turbine engine plants. Since 1980, light oil includes fuel oil nos. 1 and 2, kerosene, and jet fuel.

<sup>e</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>f</sup> "Other" is electricity generated for distribution from wind, photovoltaic, and solar thermal energy.

<sup>g</sup> If applicable, from 1989, includes net imports of electricity generated from nonrenewable energy sources not shown in other columns. See data in appendix Table A8.

R=Revised data.

— =Not applicable.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

Table 251. Energy Consumption Estimates by Source, Selected Years 1960-1999, Rhode Island

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum											Nuclear Electric Power	Hydro-electric Power <sup>d</sup>	Wood and Waste	Other <sup>a,e</sup>	Net Interstate Flow of Electricity/Losses <sup>f</sup>	Total <sup>g</sup>
			Asphalt & Road Oil <sup>a</sup>	Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	Kero-sene <sup>a</sup>	LPG <sup>a</sup>	Lubri-cants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Other <sup>a,c</sup>	Total						
			Thousand Barrels															Million kWh	
1960	598	12	735	19	8,106	38	886	207	155	5,975	9,827	221	26,170	0	9	—	—	467	—
1965	419	16	907	63	6,879	49	666	223	153	6,492	6,276	337	22,045	0	2	—	—	4,095	—
1970	10	25	937	148	8,631	137	432	375	125	8,009	9,727	313	28,833	0	3	—	—	7,135	—
1975	7	23	1,330	285	8,003	271	128	498	97	8,972	4,389	149	24,122	0	3	—	—	12,289	—
1980	7	28	1,041	269	5,032	348	84	293	132	8,416	2,525	539	18,680	0	1	—	—	14,042	—
1985	9	30	2,974	30	4,452	498	135	501	120	8,665	2,232	127	19,735	0	421	—	—	14,794	—
1990	5	36	1,634	42	4,636	776	54	501	135	8,765	1,439	58	18,040	0	R <sup>h</sup> 28	—	—	R <sup>h</sup> 18,031	—
1991	4	54	461	30	5,065	656	52	466	121	8,681	1,099	13	16,642	0	R <sup>h</sup> 364	—	—	R <sup>h</sup> 17,926	—
1992	5	78	1,502	30	5,307	556	51	456	123	8,756	1,204	14	17,999	0	R <sup>h</sup> 651	—	—	R <sup>h</sup> 16,824	—
1993	3	76	819	8	5,470	527	50	513	125	8,883	1,320	15	17,730	0	R <sup>h</sup> 856	—	—	R <sup>h</sup> 16,880	—
1994	3	71	1,256	10	5,930	529	50	501	131	8,630	1,180	15	18,233	0	R <sup>h</sup> 851	—	—	R <sup>h</sup> 16,408	—
1995	3	70	990	22	5,732	500	64	461	129	8,927	949	15	17,789	0	R <sup>h</sup> 897	—	—	R <sup>h</sup> 14,956	—
1996	3	83	337	37	6,051	540	35	R <sup>h</sup> 536	125	9,006	1,001	R <sup>h</sup> 39	R <sup>h</sup> 17,706	0	R <sup>h</sup> 939	—	—	R <sup>h</sup> 8,670	—
1997	3	83	274	11	6,878	828	93	R <sup>h</sup> 422	132	9,195	923	R <sup>h</sup> 36	R <sup>h</sup> 18,791	0	R <sup>h</sup> 1,076	—	—	R <sup>h</sup> 7,237	—
1998	2	86	282	9	5,689	919	122	481	138	9,391	726	45	17,803	0	931	—	—	12,080	—
1999	2	84	302	11	5,534	1,057	108	506	140	9,593	770	53	18,073	0	962	—	—	16,526	—
Trillion Btu																			
1960	16.8	12.3	4.9	0.1	47.2	0.2	5.0	0.8	0.9	31.4	61.8	1.3	153.7	0.0	0.1	2.9	0.0	1.6	187.2
1965	11.5	17.0	6.0	0.3	40.1	0.3	3.8	0.9	0.9	34.1	39.5	1.9	127.8	0.0	(s)	3.5	0.0	14.0	173.8
1970	0.2	25.6	6.2	0.7	50.3	0.8	2.4	1.4	0.8	42.1	61.2	1.8	167.6	0.0	(s)	5.2	0.0	24.3	223.1
1975	0.1	23.5	8.8	1.4	46.6	1.5	0.7	1.8	0.6	47.1	27.6	0.8	137.1	0.0	(s)	4.0	0.0	41.9	206.7
1980	0.2	28.2	6.9	1.4	29.3	2.0	0.5	1.1	0.8	44.2	15.9	3.0	104.9	0.0	(s)	R <sup>h</sup> 5.4	0.0	47.9	R <sup>h</sup> 186.6
1985	0.2	30.9	19.7	0.2	25.9	2.8	0.8	1.8	0.7	45.5	14.0	0.7	112.2	0.0	4.4	4.6	0.0	50.5	202.7
1990	0.1	36.8	10.8	0.2	27.0	4.4	0.3	1.8	0.8	46.0	9.0	0.3	100.8	0.0	R <sup>h</sup> 0.3	R <sup>h</sup> 4.2	h (s)	R <sup>h</sup> 61.5	R <sup>h</sup> 203.9
1991	0.1	55.8	3.1	0.2	29.5	3.7	0.3	1.7	0.7	45.6	6.9	0.1	91.7	0.0	R <sup>h</sup> 3.8	R <sup>h</sup> 4.3	(s)	R <sup>h</sup> 61.2	R <sup>h</sup> 218.8
1992	0.1	79.2	10.0	0.2	30.9	3.1	0.3	1.7	0.7	46.0	7.6	0.1	100.5	0.0	R <sup>h</sup> 6.7	R <sup>h</sup> 4.6	(s)	R <sup>h</sup> 57.4	R <sup>h</sup> 251.3
1993	0.1	77.8	5.4	(s)	31.9	3.0	0.3	1.9	0.8	46.7	8.3	0.1	98.2	0.0	R <sup>h</sup> 8.8	R <sup>h</sup> 4.9	(s)	57.6	R <sup>h</sup> 249.7
1994	0.1	73.3	8.3	0.1	34.5	3.0	0.3	1.8	0.8	R <sup>h</sup> 45.1	7.4	0.1	R <sup>h</sup> 101.5	0.0	R <sup>h</sup> 8.8	R <sup>h</sup> 4.7	(s)	R <sup>h</sup> 56.0	R <sup>h</sup> 247.9
1995	0.1	72.0	6.6	0.1	33.4	2.8	0.4	1.7	0.8	R <sup>h</sup> 46.6	6.0	0.1	R <sup>h</sup> 98.3	0.0	R <sup>h</sup> 9.2	R <sup>h</sup> 5.1	(s)	R <sup>h</sup> 51.0	R <sup>h</sup> 239.8
1996	0.1	87.7	2.2	0.2	35.2	3.1	0.2	1.9	0.8	R <sup>h</sup> 47.0	6.3	R <sup>h</sup> 0.2	R <sup>h</sup> 97.1	0.0	R <sup>h</sup> 9.7	R <sup>h</sup> 5.3	(s)	R <sup>h</sup> 29.6	R <sup>h</sup> 233.6
1997	0.1	84.9	1.8	0.1	40.1	4.7	0.5	R <sup>h</sup> 1.5	0.8	R <sup>h</sup> 47.9	5.8	R <sup>h</sup> 0.2	R <sup>h</sup> 103.4	0.0	R <sup>h</sup> 11.1	R <sup>h</sup> 3.8	(s)	R <sup>h</sup> 24.7	R <sup>h</sup> 234.6
1998	0.1	88.3	1.9	(s)	33.1	5.2	0.7	1.7	0.8	48.9	4.6	0.2	97.3	0.0	9.6	3.7	(s)	41.2	245.2
1999	(s)	86.1	2.0	0.1	32.2	6.0	0.6	1.8	0.8	50.0	4.8	0.3	98.7	0.0	10.0	4.1	(s)	56.4	261.1

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products consumed in the industrial sector. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>e</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>f</sup> Net interstate flow of electricity is the difference between the amount of energy in the electricity sold within a State (including associated losses) and the energy input at the electric utilities within the State. A positive number

indicates that more electricity (including associated losses) came into the State than went out of the State during the year; conversely, a negative number indicates that more electricity (including associated losses) went out of the State than came into the State.

<sup>g</sup> From 1989, "Total" does not equal the sum of the columns. Net imports of electricity generated from nonrenewable energy sources (shown in appendix Table A8) is included in the total but not in any other columns.

<sup>h</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

kWh=kilowatthours. R=Revised data. — =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 252. Residential Energy Consumption Estimates, Selected Years 1960-1999, Rhode Island**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum				Wood Thousand Cords	Geothermal	Solar <sup>c</sup>	Electricity <sup>a</sup> Million Kilowatthours	Net Energy	Electrical System Energy Losses <sup>d</sup> Million Kilowatthours	Total
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Total							
			Thousand Barrels										
1960	12	7	5,507	770	149	6,426	52	—	—	620	—	1,542	—
1965	8	9	4,828	534	134	5,496	46	—	—	871	—	2,080	—
1970	5	12	5,835	335	158	6,328	58	—	—	1,390	—	3,368	—
1975	3	13	5,395	87	148	5,629	64	—	—	1,684	—	4,063	—
1980	2	14	3,297	54	115	3,466	264	—	—	1,840	—	4,474	—
1985	3	15	3,419	131	279	3,828	223	—	—	1,971	—	4,630	—
1990	3	18	2,554	38	277	2,869	152	—	—	2,376	—	5,198	—
1991	2	17	2,688	35	280	3,003	160	—	—	2,369	—	R 5,150	—
1992	3	20	3,270	37	267	3,574	168	—	—	2,363	—	R 5,040	—
1993	2	20	3,280	40	319	3,639	173	—	—	2,412	—	R 5,094	—
1994	2	17	3,517	38	313	3,868	R 170	—	—	2,457	—	5,127	—
1995	2	17	3,355	27	283	3,665	188	—	—	2,472	—	R 5,153	—
1996	2	19	3,529	30	R 354	R 3,914	188	—	—	2,481	—	R 5,170	—
1997	2	18	3,722	34	R 318	R 4,075	R 122	—	—	2,486	—	R 5,172	—
1998	1	16	3,329	41	372	3,742	107	—	—	2,522	—	5,209	—
1999	1	17	3,179	49	261	3,488	115	—	—	2,667	—	5,226	—
<b>Trillion Btu</b>													
1960	0.3	6.9	32.1	4.4	0.6	37.0	1.0	0.0	0.0	2.1	47.5	5.3	52.7
1965	0.2	9.3	28.1	3.0	0.5	31.7	0.9	0.0	0.0	3.0	45.1	7.1	52.2
1970	0.1	12.2	34.0	1.9	0.6	36.5	1.2	0.0	0.0	4.7	54.7	11.5	66.2
1975	0.1	13.2	31.4	0.5	0.5	32.5	1.3	0.0	0.0	5.7	52.8	13.9	66.6
1980	(s)	14.3	19.2	0.3	0.4	19.9	5.3	0.0	0.0	6.3	45.8	15.3	61.0
1985	0.1	15.5	19.9	0.7	1.0	21.7	4.5	0.0	0.0	6.7	48.4	15.8	64.2
1990	0.1	18.2	14.9	0.2	1.0	16.1	3.0	e 0.0	e (s)	8.1	R 45.6	17.7	e 63.3
1991	0.1	17.9	15.7	0.2	1.0	16.9	3.2	0.0	(s)	8.1	46.1	17.6	63.7
1992	0.1	20.4	19.1	0.2	1.0	20.2	3.4	0.0	(s)	8.1	52.1	17.2	69.3
1993	(s)	20.3	19.1	0.2	1.2	20.5	3.5	0.0	(s)	8.2	52.5	17.4	69.9
1994	(s)	17.9	20.5	0.2	1.1	21.8	3.4	0.0	(s)	8.4	51.6	17.5	69.1
1995	(s)	17.8	19.5	0.2	1.0	20.7	3.8	0.0	(s)	8.4	50.8	17.6	68.4
1996	(s)	20.2	20.6	0.2	R 1.3	22.0	3.8	0.0	(s)	8.5	R 54.6	17.6	R 72.2
1997	(s)	18.6	21.7	0.2	R 1.1	R 23.0	R 2.4	0.0	(s)	8.5	R 52.6	17.6	R 70.2
1998	(s)	16.9	19.4	0.2	1.3	21.0	2.1	0.0	(s)	8.6	48.7	17.8	66.4
1999	(s)	17.0	18.5	0.3	0.9	19.7	2.3	(s)	(s)	9.1	48.2	17.8	66.0

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Includes small amounts of solar thermal and photovoltaic energy consumed by the commercial sector that cannot be separately identified. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 253. Commercial Energy Consumption Estimates, Selected Years 1960-1999, Rhode Island**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum						Wood	Geothermal	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>c</sup>	Total <sup>d</sup>
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels						Thousand Cords	Million Kilowatthours	Million Kilowatthours			
1960	8	2	1,381	17	26	26	1,237	2,688	1	—	376	—	935	—
1965	5	3	1,211	12	24	32	634	1,913	1	—	546	—	1,304	—
1970	3	5	1,464	7	28	36	971	2,506	1	—	1,285	—	3,114	—
1975	2	4	1,353	2	26	41	602	2,024	1	—	1,576	—	3,801	—
1980	1	7	617	0	20	49	180	866	6	—	1,892	—	4,601	—
1985	2	8	441	4	49	32	552	1,078	R 6	—	2,159	—	5,073	—
1990	2	8	673	2	49	39	605	1,367	R 10	—	2,688	—	R 5,881	—
1991	2	8	775	1	49	36	588	1,451	R 10	—	2,671	—	R 5,807	—
1992	2	9	603	3	47	32	523	1,208	R 11	—	2,670	—	R 5,695	—
1993	1	9	640	2	56	10	642	1,350	14	—	2,718	—	R 5,741	—
1994	1	12	809	5	55	10	633	1,512	14	—	2,737	—	5,711	—
1995	1	12	717	30	50	10	506	1,314	14	—	2,790	—	R 5,817	—
1996	1	12	820	2	R 63	10	679	R 1,572	15	—	2,773	—	R 5,778	—
1997	1	12	766	55	R 56	11	621	R 1,509	13	—	2,826	—	R 5,879	—
1998	1	11	632	67	66	10	412	1,187	13	—	2,908	—	6,007	—
1999	1	12	512	40	46	10	446	1,054	16	—	3,324	—	6,514	—

**Trillion Btu**

1960	0.2	1.8	8.0	0.1	0.1	0.1	7.8	16.2	(s)	0.0	1.3	19.4	3.2	22.6
1965	0.1	2.7	7.1	0.1	0.1	0.2	4.0	11.4	(s)	0.0	1.9	16.1	4.4	20.5
1970	0.1	5.2	8.5	(s)	0.1	0.2	6.1	15.0	(s)	0.0	4.4	24.6	10.6	35.2
1975	(s)	4.3	7.9	(s)	0.1	0.2	3.8	12.0	(s)	0.0	5.4	21.7	13.0	34.7
1980	(s)	6.9	3.6	0.0	0.1	0.3	1.1	5.1	0.1	0.0	6.5	18.6	15.7	34.3
1985	(s)	7.8	2.6	(s)	0.2	0.2	3.5	6.4	R 0.1	0.0	7.4	R 21.8	17.3	R 39.1
1990	0.1	8.3	3.9	(s)	0.2	0.2	3.8	8.1	R 0.2	e 0.0	9.2	R e 25.8	20.1	R e 45.9
1991	(s)	8.5	4.5	(s)	0.2	0.2	3.7	8.6	R 0.2	0.0	9.1	R 26.4	19.8	R 46.3
1992	(s)	9.2	3.5	(s)	0.2	0.2	3.3	7.2	R 0.2	0.0	9.1	R 25.8	R 19.4	R 45.2
1993	(s)	9.5	3.7	(s)	0.2	0.1	4.0	8.0	0.3	0.0	9.3	27.1	19.6	46.7
1994	(s)	12.4	4.7	(s)	0.2	0.1	4.0	9.0	0.3	0.0	9.3	31.0	19.5	50.5
1995	(s)	12.4	4.2	0.2	0.2	0.1	3.2	7.8	0.3	0.0	9.5	30.0	19.8	49.8
1996	(s)	13.2	4.8	(s)	0.2	0.1	4.3	9.3	0.3	0.0	9.5	32.3	19.7	R 52.1
1997	(s)	12.6	4.5	0.3	0.2	0.1	3.9	R 8.9	0.3	0.0	9.6	31.5	R 20.1	51.5
1998	(s)	11.8	3.7	0.4	0.2	0.1	2.6	6.9	0.3	0.0	9.9	28.9	20.5	49.4
1999	(s)	12.1	3.0	0.2	0.2	(s)	2.8	6.2	0.3	0.0	11.3	30.0	22.2	52.2

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>d</sup> Small amounts of solar thermal and photovoltaic energy consumed in the commercial sector cannot be separately identified and are included in residential consumption.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.



**Table 254. Industrial Energy Consumption Estimates, Selected Years 1960-1999, Rhode Island**

Year	Coal	Natural Gas <sup>a</sup>	Petroleum									Hydro-electric Power <sup>b</sup>	Wood and Waste	Other <sup>b,d</sup>	Electricity <sup>b</sup>	Net Energy	Electrical System Energy Losses <sup>e</sup>	Total
			Asphalt and Road Oil <sup>b</sup>	Distillate Fuel <sup>b</sup>	Kero-sene <sup>b</sup>	LPG <sup>b</sup>	Lubri-cants <sup>b</sup>	Motor Gasoline	Residual Fuel <sup>b</sup>	Other <sup>b,c</sup>	Total							
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels									Million kWh	Million kWh	Million kWh				
1960	4	3	735	367	99	31	52	6	4,051	221	5,561	1	—	—	916	—	2,277	—
1965	4	4	907	431	120	61	85	5	2,135	337	4,082	(s)	—	—	1,274	—	3,042	—
1970	2	6	937	672	89	162	49	3	3,246	313	5,470	0	—	—	1,253	—	3,036	—
1975	2	6	1,330	440	40	297	40	3	1,916	149	4,215	0	—	—	1,191	—	2,874	—
1980	4	5	1,041	415	30	149	62	2	654	539	2,892	0	—	—	1,399	—	3,402	—
1985	4	5	2,974	247	(s)	150	56	26	973	127	4,555	0	—	—	1,300	—	3,054	—
1990	(s)	4	1,634	235	14	156	63	35	459	58	2,654	R 7	—	—	1,354	—	2,962	—
1991	0	27	461	229	15	122	57	26	379	13	1,302	R 6	—	—	1,363	—	R 2,963	—
1992	0	48	1,502	282	11	128	58	26	460	14	2,480	R 6	—	—	1,359	—	R 2,899	—
1993	0	46	819	289	8	129	59	49	601	15	1,968	R 8	—	—	1,419	—	R 2,996	—
1994	0	41	1,256	306	7	118	61	49	471	15	2,283	R 9	—	—	1,378	—	R 2,877	—
1995	0	35	990	271	7	119	60	54	378	15	1,895	R 8	—	—	1,374	—	R 2,864	—
1996	0	26	337	298	3	R 112	59	47	320	R 39	R 1,214	R 9	—	—	1,351	—	R 2,815	—
1997	0	24	274	353	3	R 38	62	51	301	R 36	R 1,119	R 5	—	—	1,380	—	R 2,872	—
1998	0	42	282	254	13	43	65	45	313	45	1,059	9	—	—	1,439	—	2,972	—
1999	0	56	302	236	19	197	66	24	320	53	1,216	6	—	—	1,158	—	2,269	—

  

Trillion Btu																		
1960	0.1	3.0	4.9	2.1	0.6	0.1	0.3	(s)	25.5	1.3	34.8	(s)	1.8	0.0	3.1	42.8	7.8	50.6
1965	0.1	4.4	6.0	2.5	0.7	0.2	0.5	(s)	13.4	1.9	25.3	(s)	2.6	0.0	4.3	36.8	10.4	47.2
1970	(s)	5.9	6.2	3.9	0.5	0.6	0.3	(s)	20.4	1.8	33.7	0.0	4.0	0.0	4.3	47.9	10.4	58.3
1975	0.1	5.9	8.8	2.6	0.2	1.1	0.2	(s)	12.0	0.8	25.9	0.0	2.7	0.0	4.1	38.6	9.8	48.4
1980	0.1	5.2	6.9	2.4	0.2	0.5	0.4	(s)	4.1	3.0	17.5	0.0	R 0.0	0.0	4.8	R 27.6	11.6	R 39.2
1985	0.1	4.8	19.7	1.4	(s)	0.5	0.3	0.1	6.1	0.7	29.0	0.0	R 0.0	0.0	4.4	R 38.3	10.4	R 48.7
1990	(s)	4.5	10.8	1.4	0.1	0.6	0.4	0.2	2.9	0.3	16.6	R f 0.1	R 1.0	f 0.0	4.6	R f 26.8	10.1	R f 36.9
1991	0.0	27.6	3.1	1.3	0.1	0.4	0.3	0.1	2.4	0.1	7.9	R 0.1	R 0.9	0.0	4.7	R 41.1	10.1	R 51.2
1992	0.0	48.8	10.0	1.6	0.1	0.5	0.4	0.1	2.9	0.1	15.6	0.1	R 1.0	0.0	4.6	R 70.1	9.9	R 80.0
1993	0.0	47.4	5.4	1.7	(s)	0.5	0.4	0.3	3.8	0.1	12.1	0.1	R 1.1	0.0	4.8	R 65.5	10.2	R 75.7
1994	0.0	42.1	8.3	1.8	(s)	0.4	0.4	0.3	3.0	0.1	14.3	0.1	R 1.0	0.0	4.7	R 62.2	9.8	R 72.0
1995	0.0	36.0	6.6	1.6	(s)	0.4	0.4	0.3	2.4	0.1	11.7	0.1	R 1.0	0.0	4.7	R 53.6	9.8	R 63.3
1996	0.0	27.7	2.2	1.7	(s)	0.4	0.4	0.2	2.0	R 0.2	R 7.2	0.1	R 1.2	0.0	4.6	R 40.9	9.6	R 50.5
1997	0.0	25.0	1.8	2.1	(s)	R 0.1	0.4	0.3	1.9	R 0.2	R 6.8	0.1	R 1.1	0.0	4.7	R 37.7	9.8	R 47.5
1998	0.0	43.3	1.9	1.5	0.1	0.2	0.4	0.2	2.0	0.2	6.4	0.1	1.3	0.0	4.9	56.0	10.1	66.2
1999	0.0	56.8	2.0	1.4	0.1	0.7	0.4	0.1	2.0	0.3	7.0	0.1	1.5	0.0	4.0	69.3	7.7	77.0

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>e</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>f</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

R=Revised data.

kWh=kilowatthours. — =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 255. Transportation Energy Consumption Estimates, Selected Years 1960-1999, Rhode Island**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum								Ethanol <sup>c</sup>	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total <sup>c</sup>
			Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	LPG <sup>a</sup>	Lubricants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total					
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels								Thousand Barrels	Million Kilowatthours	Million Kilowatthours	Total <sup>c</sup>	
1960	0	(s)	19	838	38	1	103	5,943	3,826	10,768	0	0	—	0	—
1965	0	(s)	63	393	49	4	69	6,455	2,637	9,669	0	0	—	0	—
1970	0	(s)	148	604	137	28	77	7,970	2,519	11,482	0	0	—	0	—
1975	(s)	(s)	285	788	271	27	57	8,929	329	10,685	0	0	—	0	—
1980	0	(s)	269	675	348	9	70	8,365	58	9,794	0	0	—	0	—
1985	0	(s)	30	326	498	22	64	8,606	0	9,545	<sup>e</sup> 0	0	—	0	—
1990	0	(s)	42	1,156	776	19	72	8,692	35	10,791	0	0	—	0	—
1991	0	(s)	30	1,353	656	15	64	8,618	9	10,745	0	0	—	0	—
1992	0	(s)	30	1,136	556	14	65	8,697	59	10,558	0	0	—	0	—
1993	0	(s)	8	1,244	527	9	66	8,824	22	10,701	0	0	—	0	—
1994	0	(s)	10	1,282	529	16	69	8,572	10	10,489	0	0	—	0	—
1995	0	1	22	1,368	500	8	68	8,864	2	10,832	0	0	—	0	—
1996	0	1	37	1,329	540	7	66	8,950	2	<sup>R</sup> 10,931	0	0	—	0	—
1997	0	1	11	2,010	828	<sup>R</sup> 9	70	9,133	1	<sup>R</sup> 12,062	0	0	—	0	—
1998	0	(s)	9	1,455	919	1	73	9,337	1	11,795	0	0	—	0	—
1999	0	(s)	11	1,589	1,057	3	74	9,559	4	12,296	0	0	—	0	—

  

Trillion Btu															
1960	0.0	0.2	0.1	4.9	0.2	(s)	0.6	31.2	24.1	61.1	0.0	0.0	61.3	0.0	61.3
1965	0.0	0.1	0.3	2.3	0.3	(s)	0.4	33.9	16.6	53.8	0.0	0.0	53.9	0.0	53.9
1970	0.0	(s)	0.7	3.5	0.8	0.1	0.5	41.9	15.8	63.3	0.0	0.0	63.3	0.0	63.3
1975	(s)	(s)	1.4	4.6	1.5	0.1	0.3	46.9	2.1	57.0	0.0	0.0	57.0	0.0	57.0
1980	0.0	0.2	1.4	3.9	2.0	(s)	0.4	43.9	0.4	52.0	0.0	0.0	52.2	0.0	52.2
1985	0.0	0.1	0.2	1.9	2.8	0.1	0.4	45.2	0.0	50.5	<sup>e</sup> 0.0	0.0	<sup>e</sup> 50.7	0.0	<sup>e</sup> 50.7
1990	0.0	0.1	0.2	6.7	4.4	0.1	0.4	45.7	0.2	57.7	0.0	0.0	57.8	0.0	57.8
1991	0.0	0.2	0.2	7.9	3.7	0.1	0.4	45.3	0.1	57.5	0.0	0.0	57.7	0.0	57.7
1992	0.0	0.4	0.2	6.6	3.1	0.1	0.4	45.7	0.4	56.4	0.0	0.0	56.8	0.0	56.8
1993	0.0	0.2	(s)	7.2	3.0	(s)	0.4	46.4	0.1	57.2	0.0	0.0	57.4	0.0	57.4
1994	0.0	0.4	0.1	7.5	3.0	0.1	0.4	<sup>R</sup> 44.8	0.1	<sup>R</sup> 55.9	0.0	0.0	<sup>R</sup> 56.3	0.0	<sup>R</sup> 56.3
1995	0.0	0.6	0.1	8.0	2.8	(s)	0.4	<sup>R</sup> 46.2	(s)	<sup>R</sup> 57.6	0.0	0.0	<sup>R</sup> 58.2	0.0	<sup>R</sup> 58.2
1996	0.0	0.7	0.2	7.7	3.1	(s)	0.4	<sup>R</sup> 46.7	(s)	<sup>R</sup> 58.1	0.0	0.0	<sup>R</sup> 58.9	0.0	<sup>R</sup> 58.9
1997	0.0	0.9	0.1	11.7	4.7	(s)	0.4	<sup>R</sup> 47.6	(s)	<sup>R</sup> 64.5	0.0	0.0	<sup>R</sup> 65.4	0.0	<sup>R</sup> 65.4
1998	0.0	0.4	(s)	8.5	5.2	(s)	0.4	48.7	(s)	62.8	0.0	0.0	63.2	0.0	63.2
1999	0.0	0.3	0.1	9.3	6.0	(s)	0.4	49.8	(s)	65.6	0.0	0.0	65.9	0.0	65.9

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels. Transportation use of natural gas is gas consumed in the operation of pipelines, primarily in compressors, and, since 1990, is also gas consumed as vehicle fuel.

<sup>c</sup> Ethanol blended into motor gasoline, which is accounted for under motor gasoline, is shown separately here to display the use of renewable energy by the transportation sector and is included only once in the total.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1980 and 1981 due to the expanded coverage of renewable energy sources beginning in 1981.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 256. Estimates of Energy Input at Electric Utilities, Selected Years, 1960-1999, Rhode Island**

Year	Coal	Natural Gas <sup>a</sup>	Petroleum				Nuclear Electric Power	Hydroelectric Power <sup>e</sup>	Wood and Waste	Geothermal Energy	Other <sup>b,f</sup>	Total <sup>g</sup>
			Heavy Oil <sup>b,c</sup>	Light Oil <sup>b,d</sup>	Petroleum Coke <sup>b</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels				Million Kilowatthours					
1960	574	(s)	714	13	0	727	0	8	0	0	0	—
1965	403	(s)	870	16	0	886	0	1	0	0	0	—
1970	0	2	2,990	56	0	3,047	0	3	0	0	0	—
1975	0	(s)	1,542	26	0	1,568	0	3	0	0	0	—
1980	0	2	1,634	28	0	1,662	0	1	0	0	0	—
1985	0	3	708	20	0	728	0	421	0	0	0	—
1990	0	5	340	19	0	358	0	R 21	0	0	0	—
1991	0	2	123	19	0	142	0	R 359	0	0	0	—
1992	0	(s)	162	17	0	178	0	R 644	0	0	0	—
1993	0	(s)	55	18	0	72	0	R 847	0	0	0	—
1994	0	1	65	16	0	82	0	R 842	0	0	0	—
1995	0	5	63	20	0	83	0	R 888	0	0	0	—
1996	0	25	0	75	0	75	0	R 930	0	0	0	—
1997	0	27	0	27	0	27	0	R 1,071	0	0	0	—
1998	0	16	0	20	0	20	0	923	0	0	0	—
1999	0	0	0	19	0	19	0	956	0	0	0	—

  

Trillion Btu												
1960	16.1	0.4	4.5	0.1	0.0	4.6	0.0	0.1	0.0	0.0	0.0	21.2
1965	11.1	0.5	5.5	0.1	0.0	5.6	0.0	(s)	0.0	0.0	0.0	17.1
1970	0.0	2.4	18.8	0.3	0.0	19.1	0.0	(s)	0.0	0.0	0.0	21.5
1975	0.0	(s)	9.7	0.2	0.0	9.8	0.0	(s)	0.0	0.0	0.0	9.9
1980	0.0	1.7	10.3	0.2	0.0	10.4	0.0	(s)	0.0	0.0	0.0	12.2
1985	0.0	2.6	4.4	0.1	0.0	4.6	0.0	4.4	0.0	0.0	0.0	11.6
1990	0.0	5.7	2.1	0.1	0.0	2.2	0.0	R 0.2	0.0	0.0	0.0	R 8.3
1991	0.0	1.7	0.8	0.1	0.0	0.9	0.0	R 3.7	0.0	0.0	0.0	R 8.2
1992	0.0	0.5	1.0	0.1	0.0	1.1	0.0	R 6.7	0.0	0.0	0.0	R 10.9
1993	0.0	0.4	0.3	0.1	0.0	0.4	0.0	R 8.7	0.0	0.0	0.0	11.9
1994	0.0	0.6	0.4	0.1	0.0	0.5	0.0	R 8.7	0.0	0.0	0.0	R 13.2
1995	0.0	5.1	0.4	0.1	0.0	0.5	0.0	R 9.2	0.0	0.0	0.0	R 18.8
1996	0.0	25.8	0.0	0.4	0.0	0.4	0.0	R 9.6	0.0	0.0	0.0	R 39.9
1997	0.0	27.9	0.0	0.2	0.0	0.2	0.0	R 11.1	0.0	0.0	0.0	R 45.6
1998	0.0	16.0	0.0	0.1	0.0	0.1	0.0	9.5	0.0	0.0	0.0	30.6
1999	0.0	0.0	0.0	0.1	0.0	0.1	0.0	9.9	0.0	0.0	0.0	15.8

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> Prior to 1980, based on oil used in steam plants. Since 1980, heavy oil includes fuel oil nos. 4, 5, and 6 and residual fuel oils.

<sup>d</sup> Prior to 1980, based on oil used in internal combustion and gas turbine engine plants. Since 1980, light oil includes fuel oil nos. 1 and 2, kerosene, and jet fuel.

<sup>e</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>f</sup> "Other" is electricity generated for distribution from wind, photovoltaic, and solar thermal energy.

<sup>g</sup> If applicable, from 1989, includes net imports of electricity generated from nonrenewable energy sources not shown in other columns. See data in appendix Table A8.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 257. Energy Consumption Estimates by Source, Selected Years 1960-1999, South Carolina**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum											Nuclear Electric Power	Hydro-electric Power <sup>d</sup>	Wood and Waste	Other <sup>a,e</sup>	Net Inter-state Flow of Electricity/Losses <sup>f</sup>	Total <sup>g</sup>
			Asphalt & Road Oil <sup>a</sup>	Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	Kero-sene <sup>a</sup>	LPG <sup>a</sup>	Lubri-cants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Other <sup>a,c</sup>	Total						
			Thousand Barrels															Million kWh	
1960	3,718	59	1,636	215	5,234	3,131	4,488	1,376	375	18,094	4,732	380	39,661	0	3,611	—	—	9,266	—
1965	4,760	87	1,721	354	4,849	2,958	3,297	2,097	351	21,430	3,916	372	41,344	75	3,517	—	—	11,622	—
1970	5,817	160	2,220	228	9,423	3,170	2,377	2,927	386	28,756	5,335	512	55,335	7	2,293	—	—	22,290	—
1975	5,842	123	2,440	142	8,376	2,692	1,024	3,204	461	35,429	7,666	982	62,415	19,458	4,413	—	—	-18,555	—
1980	9,929	142	1,535	149	10,660	3,062	1,352	3,178	543	35,517	7,205	3,883	67,083	17,404	3,025	—	—	-974	—
1985	10,479	97	1,367	136	11,731	3,184	1,484	3,161	494	37,719	2,921	3,553	65,750	31,826	1,835	—	—	-9,917	—
1990	11,447	130	1,983	101	14,538	2,939	659	2,914	556	43,264	2,450	5,444	74,848	42,881	R 2,783	—	—	R -35,182	—
1991	11,451	134	1,941	180	15,289	3,442	851	3,606	498	42,561	2,433	7,028	77,830	43,108	R 2,541	—	—	R -34,143	—
1992	11,285	138	2,067	226	13,737	2,586	524	3,597	507	43,441	2,394	7,908	76,988	45,537	R 2,757	—	—	R -36,777	—
1993	12,914	142	2,358	169	13,652	2,024	760	3,660	517	45,081	3,812	7,262	79,292	46,189	R 2,714	—	—	R -40,132	—
1994	12,993	145	1,993	114	15,516	1,451	474	3,871	540	45,249	2,607	7,551	79,368	44,466	R 2,414	—	—	R -35,984	—
1995	12,279	152	2,641	123	14,902	1,027	574	3,826	531	46,973	2,689	7,355	80,641	49,173	R 2,798	—	—	R -39,456	—
1996	13,852	150	2,407	59	15,600	1,292	673	R 3,666	515	47,427	3,033	R 2,685	R 77,358	43,571	R 2,299	—	—	R -24,894	—
1997	14,111	154	3,729	64	16,354	1,328	694	R 6,150	544	49,468	2,643	R 2,540	R 83,514	44,916	R 2,086	—	—	R -27,717	—
1998	14,649	157	2,536	55	18,917	1,436	837	4,601	570	51,216	2,339	3,429	85,935	48,759	2,580	—	—	-35,534	—
1999	15,766	158	2,227	100	19,043	1,536	667	3,858	575	52,774	2,059	3,866	86,705	50,814	691	—	—	-48,811	—

  

Trillion Btu																			
1960	96.4	60.6	10.9	1.1	30.5	16.8	25.4	5.5	2.3	95.0	29.7	2.2	219.5	0.0	38.8	43.1	0.0	31.6	490.0
1965	121.5	90.5	11.4	1.8	28.2	15.8	18.7	8.4	2.1	112.6	24.6	2.1	225.8	0.9	36.8	40.6	0.0	39.7	555.7
1970	140.1	164.3	14.7	1.2	54.9	17.1	13.5	11.1	2.3	151.1	33.5	2.8	302.2	0.1	24.1	41.0	0.0	76.1	747.8
1975	140.2	125.9	16.2	0.7	48.8	14.5	5.8	11.9	2.8	186.1	48.2	5.5	340.5	214.3	45.9	41.9	0.0	-63.3	845.4
1980	245.8	146.9	10.2	0.8	62.1	16.6	7.7	11.7	3.3	186.6	45.3	21.6	365.8	189.8	31.4	R 36.2	0.0	-3.3	R 1,012.6
1985	262.7	100.2	9.1	0.7	68.3	17.2	8.4	11.4	3.0	198.1	18.4	19.8	354.4	344.1	19.2	R 45.8	0.0	-33.8	R 1,092.5
1990	289.3	134.1	13.2	0.5	84.7	16.0	3.7	10.6	3.4	227.3	15.4	30.7	405.5	458.0	R 29.0	R 83.3	h 0.1	R -120.0	R 1,279.2
1991	290.9	137.4	12.9	0.9	89.1	18.7	4.8	13.0	3.0	223.6	15.3	39.1	420.5	463.0	26.5	R 83.0	0.1	R -116.5	R 1,304.9
1992	288.3	141.8	13.7	1.1	80.0	14.1	3.0	13.0	3.1	228.2	15.1	44.1	415.4	486.2	R 28.5	R 84.8	0.1	R -125.5	R 1,319.7
1993	329.5	145.6	15.6	0.9	79.5	11.1	4.3	13.2	3.1	236.8	24.0	40.2	428.7	493.4	28.0	R 85.2	0.1	R -136.9	R 1,373.6
1994	330.7	149.0	13.2	0.6	90.4	8.1	2.7	14.1	3.3	R 236.7	16.4	41.8	R 427.2	474.7	24.9	R 86.3	0.1	-122.8	R 1,370.2
1995	314.5	156.0	17.5	0.6	86.8	5.8	3.3	13.9	3.2	R 245.0	16.9	40.8	R 433.7	524.1	28.9	R 82.3	0.1	R -134.6	R 1,405.0
1996	352.5	154.1	16.0	0.3	90.9	7.3	3.8	R 13.2	3.1	R 247.4	19.1	R 15.7	R 416.8	462.9	R 23.8	R 107.2	0.1	R -84.9	R 1,432.4
1997	361.6	158.7	24.7	0.3	95.3	7.5	3.9	R 22.2	3.3	R 257.9	16.6	R 14.8	R 446.7	477.1	R 21.6	R 107.9	0.1	R -94.6	R 1,479.1
1998	374.0	162.0	16.8	0.3	110.2	8.1	4.7	16.6	3.5	266.9	14.7	20.2	462.1	518.0	26.7	76.0	0.1	-121.2	1,497.6
1999	402.6	162.5	14.8	0.5	110.9	8.7	3.8	13.9	3.5	275.0	12.9	22.8	466.9	539.8	7.1	80.4	0.2	-166.5	1,493.0

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products consumed in the industrial sector. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>e</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>f</sup> Net interstate flow of electricity is the difference between the amount of energy in the electricity sold within a State (including associated losses) and the energy input at the electric utilities within the State. A positive number

indicates that more electricity (including associated losses) came into the State than went out of the State during the year; conversely, a negative number indicates that more electricity (including associated losses) went out of the State than came into the State.

<sup>g</sup> From 1989, "Total" does not equal the sum of the columns. Net imports of electricity generated from nonrenewable energy sources (shown in appendix Table A8) is included in the total but not in any other columns.

<sup>h</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

kWh=kilowatthours. R=Revised data. — =Not applicable.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 258. Residential Energy Consumption Estimates, Selected Years 1960-1999, South Carolina**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum				Wood Thousand Cords	Geothermal	Solar <sup>c</sup>	Electricity <sup>a</sup> Million Kilowatthours	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Total						Million Kilowatthours	
			Thousand Barrels									Million Kilowatthours	
1960	117	7	1,595	3,475	926	5,996	1,269	—	—	3,272	—	8,139	—
1965	80	12	1,178	2,606	1,419	5,203	852	—	—	4,371	—	10,437	—
1970	86	19	2,400	2,011	1,778	6,188	489	—	—	7,347	—	17,805	—
1975	84	18	1,695	858	1,750	4,304	492	—	—	9,837	—	23,728	—
1980	69	19	1,580	1,200	1,510	4,290	R 413	—	—	12,580	—	30,590	—
1985	23	16	1,153	1,211	1,859	4,223	647	—	—	14,661	—	34,445	—
1990	2	18	1,010	550	1,682	3,241	390	—	—	18,258	—	R 39,941	—
1991	8	20	998	731	1,970	3,698	411	—	—	18,707	—	R 40,667	—
1992	11	22	690	441	2,117	3,248	432	—	—	18,940	—	R 40,394	—
1993	41	24	833	645	2,141	3,619	R 470	—	—	20,687	—	R 43,694	—
1994	23	23	668	372	2,185	3,224	461	—	—	19,903	—	R 41,536	—
1995	7	25	670	470	2,106	3,246	R 511	—	—	21,392	—	R 44,602	—
1996	7	29	722	561	R 1,951	R 3,235	511	—	—	22,514	—	R 46,918	—
1997	(s)	26	552	610	R 1,988	R 3,151	R 363	—	—	21,611	—	R 44,954	—
1998	8	25	485	680	1,683	2,847	320	—	—	23,558	—	48,666	—
1999	83	26	506	553	1,980	3,038	343	—	—	23,699	—	46,433	—
<b>Trillion Btu</b>													
1960	2.9	7.1	9.3	19.7	3.7	32.7	25.4	0.0	0.0	11.2	79.2	27.8	107.0
1965	2.0	12.4	6.9	14.8	5.7	27.3	17.0	0.0	0.0	14.9	73.7	35.6	109.3
1970	2.0	19.5	14.0	11.4	6.7	32.1	9.8	0.0	0.0	25.1	88.5	60.7	149.2
1975	2.0	18.6	9.9	4.9	6.5	21.2	9.8	0.0	0.0	33.6	85.3	81.0	166.2
1980	1.7	19.5	9.2	6.8	5.5	21.6	R 8.3	0.0	0.0	42.9	93.9	104.4	198.3
1985	0.6	16.9	6.7	6.9	6.7	20.3	12.9	0.0	0.0	50.0	100.7	117.5	218.2
1990	0.1	18.9	5.9	3.1	6.1	15.1	7.8	e 0.1	e (s)	62.3	e 104.3	136.3	e 240.5
1991	0.2	20.1	5.8	4.1	7.1	17.1	8.2	0.1	(s)	63.8	109.6	R 138.8	R 248.3
1992	0.3	23.0	4.0	2.5	7.7	14.2	8.6	0.1	(s)	64.6	110.8	R 137.8	R 248.7
1993	1.0	25.1	4.9	3.7	7.7	16.2	9.4	0.1	(s)	70.6	122.4	149.1	271.5
1994	0.6	24.2	3.9	2.1	7.9	13.9	9.2	0.1	(s)	67.9	116.0	141.7	257.7
1995	0.2	25.8	3.9	2.7	7.6	14.2	10.2	0.1	(s)	73.0	R 123.5	R 152.2	R 275.7
1996	0.2	30.3	4.2	3.2	R 7.1	R 14.4	10.2	0.1	(s)	76.8	R 132.0	R 160.1	R 292.1
1997	(s)	26.5	3.2	3.5	R 7.2	R 13.9	R 7.3	0.1	(s)	73.7	R 121.6	R 153.4	R 274.9
1998	0.2	26.3	2.8	3.9	6.1	12.8	6.4	0.1	(s)	80.4	126.2	166.0	292.2
1999	2.0	26.5	2.9	3.1	7.2	13.2	6.9	0.1	(s)	80.9	129.6	158.4	288.1

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Includes small amounts of solar thermal and photovoltaic energy consumed by the commercial sector that cannot be separately identified. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 259. Commercial Energy Consumption Estimates, Selected Years 1960-1999, South Carolina**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum						Wood	Geothermal	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>c</sup>	Total <sup>d</sup>
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels						Thousand Cords	Million Kilowatthours	Million Kilowatthours			
1960	217	5	474	93	163	275	176	1,182	24	—	1,957	—	4,867	—
1965	148	7	350	70	250	301	121	1,092	16	—	2,531	—	6,043	—
1970	160	14	714	54	314	204	80	1,366	9	—	4,237	—	10,267	—
1975	157	17	504	23	309	225	160	1,221	9	—	7,121	—	17,177	—
1980	128	23	481	25	266	240	35	1,047	10	—	8,705	—	21,168	—
1985	42	15	841	48	328	230	80	1,527	R 17	—	9,778	—	22,973	—
1990	4	15	607	12	297	256	17	1,189	R 25	—	12,693	—	R 27,767	—
1991	14	16	523	12	348	119	25	1,026	R 26	—	13,002	—	R 28,265	—
1992	20	17	671	14	374	103	53	1,214	R 28	—	13,156	—	R 28,060	—
1993	68	17	849	20	378	31	28	1,306	38	—	13,979	—	R 29,526	—
1994	38	18	651	26	386	31	66	1,161	39	—	14,195	—	R 29,623	—
1995	10	19	970	26	372	32	39	1,438	39	—	14,863	—	R 30,989	—
1996	12	20	978	23	R 344	32	38	R 1,415	42	—	15,388	—	R 32,069	—
1997	1	20	1,083	16	R 351	31	10	R 1,491	R 40	—	15,645	—	R 32,544	—
1998	15	20	1,532	47	297	58	7	1,941	40	—	17,290	—	35,718	—
1999	154	21	1,049	30	349	34	12	1,474	48	—	17,488	—	34,264	—
<b>Trillion Btu</b>														
1960	5.4	4.8	2.8	0.5	0.7	1.4	1.1	6.5	0.5	0.0	6.7	23.9	16.6	40.5
1965	3.7	7.3	2.0	0.4	1.0	1.6	0.8	5.8	0.3	0.0	8.6	25.7	20.6	46.4
1970	3.8	14.2	4.2	0.3	1.2	1.1	0.5	7.2	0.2	0.0	14.5	39.9	35.0	74.9
1975	3.7	17.6	2.9	0.1	1.1	1.2	1.0	6.4	0.2	0.0	24.3	52.2	58.6	110.8
1980	3.1	23.6	2.8	0.1	1.0	1.3	0.2	5.4	0.2	0.0	29.7	62.1	72.2	134.3
1985	1.1	15.7	4.9	0.3	1.2	1.2	0.5	8.1	R 0.3	0.0	33.4	R 58.5	78.4	R 136.9
1990	0.1	15.8	3.5	0.1	1.1	1.3	0.1	6.1	R 0.5	e 0.0	43.3	R e 65.9	94.7	R e 160.6
1991	0.4	16.2	3.0	0.1	1.3	0.6	0.2	5.1	R 0.5	0.0	44.4	R 66.6	R 96.4	R 163.1
1992	0.5	17.1	3.9	0.1	1.4	0.5	0.3	6.2	R 0.6	0.0	44.9	R 69.3	R 95.7	R 165.0
1993	1.7	17.5	4.9	0.1	1.4	0.2	0.2	6.8	0.8	0.0	47.7	74.4	R 100.7	175.2
1994	0.9	18.4	3.8	0.1	1.4	0.2	0.4	5.9	0.8	0.0	48.4	74.5	101.1	175.6
1995	0.3	19.4	5.7	0.1	1.3	0.2	0.2	7.6	0.8	0.0	50.7	78.7	105.7	R 184.4
1996	0.3	20.9	5.7	0.1	1.2	0.2	0.2	R 7.5	0.8	0.0	52.5	R 82.1	R 109.4	R 191.5
1997	(s)	20.2	6.3	0.1	R 1.3	0.2	0.1	R 7.9	R 0.8	0.0	53.4	R 82.3	R 111.0	R 193.3
1998	0.4	20.5	8.9	0.3	1.1	0.3	(s)	10.6	0.8	0.0	59.0	91.3	121.9	213.1
1999	3.8	21.2	6.1	0.2	1.3	0.2	0.1	7.8	1.0	0.0	59.7	93.4	116.9	210.3

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>d</sup> Small amounts of solar thermal and photovoltaic energy consumed in the commercial sector cannot be separately identified and are included in residential consumption.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

Table 260. Industrial Energy Consumption Estimates, Selected Years 1960-1999, South Carolina

Year	Coal Thousand Short Tons	Natural Gas <sup>a</sup> Billion Cubic Feet	Petroleum									Hydro-electric Power <sup>b</sup> Million kWh	Wood and Waste	Other <sup>b,d</sup>	Electricity <sup>b</sup>		Electrical System Energy Losses <sup>e</sup> Million kWh	Total
			Asphalt and Road Oil <sup>b</sup>	Distillate Fuel <sup>b</sup>	Kerosene <sup>b</sup>	LPG <sup>b</sup>	Lubricants <sup>b</sup>	Motor Gasoline	Residual Fuel <sup>b</sup>	Other <sup>b,c</sup>	Total				Million kWh	Net Energy		
			Thousand Barrels															
1960	1,758	23	1,636	1,959	920	273	86	614	3,392	380	9,261	97	—	—	6,234	—	15,506	—
1965	1,835	47	1,721	1,748	621	415	108	517	2,438	372	7,941	79	—	—	7,450	—	17,789	—
1970	1,861	79	2,220	2,655	313	775	149	332	1,608	512	8,564	37	—	—	10,110	—	24,499	—
1975	1,200	70	2,440	2,040	143	1,066	248	209	2,687	982	9,813	48	—	—	12,766	—	30,793	—
1980	1,805	92	1,535	1,875	127	1,368	282	96	4,245	3,883	13,412	49	—	—	15,979	—	38,855	—
1985	2,525	63	1,367	1,699	225	834	257	702	2,233	3,553	10,870	49	—	—	21,829	—	51,286	—
1990	2,310	87	1,983	1,950	97	849	289	703	1,915	5,444	13,230	R <sup>f</sup> 54	—	—	24,701	—	R <sup>f</sup> 54,036	—
1991	2,212	86	1,941	2,102	109	1,194	259	672	1,606	7,028	14,910	R <sup>f</sup> 44	—	—	25,361	—	R <sup>f</sup> 55,133	—
1992	2,177	94	2,067	1,779	69	1,020	264	716	1,793	7,908	15,616	R <sup>f</sup> 47	—	—	26,305	—	R <sup>f</sup> 56,102	—
1993	2,395	96	2,358	1,564	94	1,058	269	387	3,089	7,262	16,081	R <sup>f</sup> 63	—	—	26,867	—	R <sup>f</sup> 56,747	—
1994	2,334	98	1,993	1,339	76	1,159	281	414	2,456	7,551	15,269	R <sup>f</sup> 67	—	—	27,760	—	R <sup>f</sup> 57,933	—
1995	2,188	98	2,641	1,843	77	1,272	276	426	2,143	7,355	16,033	R <sup>f</sup> 63	—	—	28,819	—	R <sup>f</sup> 60,085	—
1996	2,000	95	2,407	2,155	88	R <sup>f</sup> 1,326	268	452	2,284	R <sup>f</sup> 2,685	R <sup>f</sup> 11,665	R <sup>f</sup> 68	—	—	29,185	—	R <sup>f</sup> 60,821	—
1997	2,014	103	3,729	1,998	68	R <sup>f</sup> 3,748	283	478	2,015	R <sup>f</sup> 2,540	R <sup>f</sup> 14,860	R <sup>f</sup> 39	—	—	31,278	—	R <sup>f</sup> 65,061	—
1998	1,962	102	2,536	2,069	110	2,571	296	388	1,690	3,429	13,089	66	—	—	31,606	—	65,291	—
1999	1,863	103	2,227	2,202	84	1,502	299	346	1,345	3,866	11,871	41	—	—	32,117	—	62,927	—
Trillion Btu																		
1960	44.7	23.3	10.9	11.4	5.2	1.1	0.5	3.2	21.3	2.2	55.9	1.0	17.3	0.0	21.3	163.4	52.9	216.3
1965	46.2	48.7	11.4	10.2	3.5	1.7	0.7	2.7	15.3	2.1	47.6	0.8	23.2	0.0	25.4	192.0	60.7	252.7
1970	44.2	80.9	14.7	15.5	1.8	2.9	0.9	1.7	10.1	2.8	50.5	0.4	31.0	0.0	34.5	241.5	83.6	325.1
1975	28.2	72.0	16.2	11.9	0.8	4.0	1.5	1.1	16.9	5.5	57.8	0.5	31.9	0.0	43.6	233.8	105.1	338.9
1980	44.0	95.1	10.2	10.9	0.7	5.0	1.7	0.5	26.7	21.6	77.4	0.5	R <sup>f</sup> 27.7	0.0	54.5	R <sup>f</sup> 299.3	132.6	R <sup>f</sup> 431.9
1985	62.8	64.8	9.1	9.9	1.3	3.0	1.6	3.7	14.0	19.8	62.3	0.5	R <sup>f</sup> 32.5	0.0	74.5	R <sup>f</sup> 297.4	175.0	R <sup>f</sup> 472.4
1990	58.0	89.3	13.2	11.4	0.5	3.1	1.8	3.7	12.0	30.7	76.3	R <sup>f</sup> 0.6	R <sup>f</sup> 75.0	f <sup>f</sup> 0.0	84.3	R <sup>f</sup> 383.5	R <sup>f</sup> 184.4	R <sup>f</sup> 567.9
1991	55.8	88.1	12.9	12.2	0.6	4.3	1.6	3.5	10.1	39.1	84.4	R <sup>f</sup> 0.5	R <sup>f</sup> 74.2	0.0	86.5	R <sup>f</sup> 389.5	R <sup>f</sup> 188.1	R <sup>f</sup> 577.6
1992	54.8	96.9	13.7	10.4	0.4	3.7	1.6	3.8	11.3	44.1	88.9	R <sup>f</sup> 0.5	R <sup>f</sup> 75.6	0.0	89.8	R <sup>f</sup> 406.5	R <sup>f</sup> 191.4	R <sup>f</sup> 597.9
1993	60.3	98.3	15.6	9.1	0.5	3.8	1.6	2.0	19.4	40.2	92.4	0.6	R <sup>f</sup> 75.0	0.0	91.7	R <sup>f</sup> 418.3	R <sup>f</sup> 193.6	R <sup>f</sup> 612.0
1994	58.5	100.5	13.2	7.8	0.4	4.2	1.7	2.2	15.4	41.8	86.8	0.7	R <sup>f</sup> 76.3	0.0	94.7	R <sup>f</sup> 417.6	197.7	R <sup>f</sup> 615.2
1995	55.1	101.0	17.5	10.7	0.4	4.6	1.7	2.2	13.5	40.8	91.5	0.7	R <sup>f</sup> 71.3	0.0	98.3	R <sup>f</sup> 417.9	R <sup>f</sup> 205.0	R <sup>f</sup> 622.9
1996	50.1	98.4	16.0	12.6	0.5	R <sup>f</sup> 4.8	1.6	2.4	14.4	R <sup>f</sup> 15.7	R <sup>f</sup> 67.9	R <sup>f</sup> 0.7	R <sup>f</sup> 96.2	0.0	99.6	R <sup>f</sup> 412.8	R <sup>f</sup> 207.5	R <sup>f</sup> 620.3
1997	50.5	106.1	24.7	11.6	0.4	R <sup>f</sup> 13.6	1.7	2.5	12.7	R <sup>f</sup> 14.8	R <sup>f</sup> 82.0	R <sup>f</sup> 0.4	R <sup>f</sup> 99.8	0.0	106.7	R <sup>f</sup> 445.7	R <sup>f</sup> 222.0	R <sup>f</sup> 667.7
1998	49.1	105.8	16.8	12.1	0.6	9.3	1.8	2.0	10.6	20.2	73.4	0.7	68.8	0.0	107.8	405.7	222.8	628.4
1999	46.6	105.9	14.8	12.8	0.5	5.4	1.8	1.8	8.5	22.8	68.4	0.4	72.6	0.0	109.6	403.5	214.7	618.2

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>e</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for

electrical system energy losses.

<sup>f</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

R=Revised data.

kWh=kilowatt-hours. — =Not applicable.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 261. Transportation Energy Consumption Estimates, Selected Years 1960-1999, South Carolina**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum								Ethanol <sup>c</sup>	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total <sup>c</sup>
			Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	LPG <sup>a</sup>	Lubricants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total				Million Kilowatthours	
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels								Thousand Barrels	Million Kilowatthours	Million Kilowatthours	Total <sup>c</sup>	
1960	30	1	215	1,196	3,131	13	289	17,205	1,139	23,188	0	0	—	0	—
1965	6	2	354	1,556	2,958	12	243	20,612	1,313	27,048	0	0	—	0	—
1970	3	3	228	2,899	3,170	60	237	28,220	1,605	36,420	0	0	—	0	—
1975	(s)	3	142	4,019	2,692	79	213	34,995	419	42,560	0	0	—	0	—
1980	0	3	149	6,156	3,062	33	261	35,181	844	45,686	0	0	—	0	—
1985	0	2	136	7,855	3,184	140	237	36,787	606	48,945	R e 1	0	—	0	—
1990	0	3	101	10,855	2,939	87	267	42,305	509	57,063	R 148	0	—	0	—
1991	0	3	180	11,535	3,442	95	239	41,770	791	58,052	R (s)	0	—	0	—
1992	0	3	226	10,454	2,586	87	244	42,622	534	56,751	0	0	—	0	—
1993	0	3	169	10,266	2,024	83	248	44,663	634	58,087	0	0	—	0	—
1994	0	3	114	12,590	1,451	142	259	44,804	76	59,437	0	0	—	0	—
1995	0	3	123	11,219	1,027	77	255	46,515	439	59,655	0	0	—	0	—
1996	0	3	59	11,478	1,292	R 44	247	46,944	673	60,738	0	0	—	0	—
1997	0	3	64	12,320	1,328	R 62	261	48,959	561	R 63,555	0	0	—	0	—
1998	0	3	55	14,220	1,436	50	273	50,770	445	67,249	0	0	—	0	—
1999	0	4	100	14,729	1,536	26	276	52,393	453	69,514	0	0	—	0	—
<b>Trillion Btu</b>															
1960	0.8	1.3	1.1	7.0	16.8	0.1	1.8	90.4	7.2	124.2	0.0	0.0	126.2	0.0	126.2
1965	0.1	2.4	1.8	9.1	15.8	(s)	1.5	108.3	8.3	144.8	0.0	0.0	147.3	0.0	147.3
1970	0.1	3.4	1.2	16.9	17.1	0.2	1.4	148.2	10.1	195.2	0.0	0.0	198.6	0.0	198.6
1975	(s)	2.7	0.7	23.4	14.5	0.3	1.3	183.8	2.6	226.7	0.0	0.0	229.4	0.0	229.4
1980	0.0	3.1	0.8	35.9	16.6	0.1	1.6	184.8	5.3	245.0	0.0	0.0	248.1	0.0	248.1
1985	0.0	2.3	0.7	45.8	17.2	0.5	1.4	193.2	3.8	262.7	R e (s)	0.0	e 265.0	0.0	e 265.0
1990	0.0	2.9	0.5	63.2	16.0	0.3	1.6	222.2	3.2	307.2	R 0.5	0.0	310.1	0.0	310.1
1991	0.0	2.9	0.9	67.2	18.7	0.3	1.4	219.4	5.0	313.0	R (s)	0.0	315.9	0.0	315.9
1992	0.0	3.0	1.1	60.9	14.1	0.3	1.5	223.9	3.4	305.2	0.0	0.0	308.2	0.0	308.2
1993	0.0	2.8	0.9	59.8	11.1	0.3	1.5	234.6	4.0	312.1	0.0	0.0	315.0	0.0	315.0
1994	0.0	2.7	0.6	73.3	8.1	0.5	1.6	R 234.3	0.5	R 318.9	0.0	0.0	R 321.6	0.0	R 321.6
1995	0.0	3.0	0.6	65.4	5.8	0.3	1.5	R 242.6	2.8	R 318.9	0.0	0.0	R 322.0	0.0	R 322.0
1996	0.0	3.2	0.3	66.9	7.3	0.2	1.5	R 244.9	4.2	R 325.2	0.0	0.0	R 328.5	0.0	R 328.5
1997	0.0	3.0	0.3	71.8	7.5	R 0.2	1.6	R 255.2	3.5	R 340.2	0.0	0.0	R 343.2	0.0	R 343.2
1998	0.0	3.3	0.3	82.8	8.1	0.2	1.7	264.6	2.8	360.5	0.0	0.0	363.8	0.0	363.8
1999	0.0	3.7	0.5	85.8	8.7	0.1	1.7	273.0	2.8	372.7	0.0	0.0	376.4	0.0	376.4

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels. Transportation use of natural gas is gas consumed in the operation of pipelines, primarily in compressors, and, since 1990, is also gas consumed as vehicle fuel.

<sup>c</sup> Ethanol blended into motor gasoline, which is accounted for under motor gasoline, is shown separately here to display the use of renewable energy by the transportation sector and is included only once in the total.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1980 and 1981 due to the expanded coverage of renewable energy sources beginning in 1981.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.



Table 262. Estimates of Energy Input at Electric Utilities, Selected Years, 1960-1999, South Carolina

Year	Coal	Natural Gas <sup>a</sup>	Petroleum				Nuclear Electric Power	Hydroelectric Power <sup>e</sup>	Wood and Waste	Geothermal Energy	Other <sup>b,f</sup>	Total <sup>g</sup>
			Heavy Oil <sup>b,c</sup>	Light Oil <sup>b,d</sup>	Petroleum Coke <sup>b</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels				Million Kilowatthours					
1960	1,596	23	24	9	0	33	0	3,513	0	0	0	—
1965	2,690	19	44	16	0	60	75	3,438	0	0	0	—
1970	3,708	45	2,042	756	0	2,798	7	2,256	0	0	0	—
1975	4,401	15	4,400	118	0	4,517	19,458	4,366	0	0	0	—
1980	7,927	5	2,080	567	0	2,647	17,404	2,976	0	0	0	—
1985	7,888	(s)	1	183	0	184	31,826	1,786	0	0	0	—
1990	9,131	7	8	117	0	125	42,881	2,729	0	0	0	—
1991	9,218	10	11	132	0	144	43,108	2,497	0	0	0	—
1992	9,078	2	15	144	0	159	45,537	2,710	0	0	0	—
1993	10,410	2	60	139	0	199	46,189	2,651	0	0	0	—
1994	10,597	3	9	268	0	277	44,466	2,347	0	0	0	—
1995	10,074	7	68	200	0	268	49,173	2,734	0	0	0	—
1996	11,832	1	39	267	0	306	43,571	2,231	0	0	0	—
1997	12,096	3	56	401	0	457	44,916	2,047	0	0	0	—
1998	12,664	6	198	611	0	809	48,759	2,513	0	0	0	—
1999	13,666	5	250	558	0	807	50,814	650	0	0	0	—
<b>Trillion Btu</b>												
1960	42.7	24.1	0.2	0.1	0.0	0.2	0.0	37.8	0.0	0.0	0.0	104.8
1965	69.5	19.6	0.3	0.1	0.0	0.4	0.9	35.9	0.0	0.0	0.0	126.2
1970	90.0	46.3	12.8	4.4	0.0	17.2	0.1	23.7	0.0	0.0	0.0	177.3
1975	106.3	15.0	27.7	0.7	0.0	28.3	214.3	45.4	0.0	0.0	0.0	409.4
1980	196.9	5.6	13.1	3.3	0.0	16.4	189.8	30.9	0.0	0.0	0.0	439.6
1985	198.2	0.5	(s)	1.1	0.0	1.1	344.1	18.7	0.0	0.0	0.0	562.6
1990	231.1	7.1	(s)	0.7	0.0	0.7	458.0	28.4	0.0	0.0	0.0	725.3
1991	234.6	10.1	0.1	0.8	0.0	0.8	463.0	26.1	0.0	0.0	0.0	734.5
1992	232.7	1.8	0.1	0.8	0.0	0.9	486.2	28.0	0.0	0.0	0.0	749.7
1993	266.5	1.9	0.4	0.8	0.0	1.2	493.4	27.3	0.0	0.0	0.0	790.3
1994	270.7	3.1	0.1	1.6	0.0	1.6	474.7	24.2	0.0	0.0	0.0	774.3
1995	258.9	6.8	0.4	1.2	0.0	1.6	524.1	28.2	0.0	0.0	0.0	819.6
1996	301.9	1.2	0.2	1.6	0.0	1.8	462.9	23.1	0.0	0.0	0.0	790.9
1997	311.0	2.8	0.4	2.3	0.0	2.7	477.1	R 21.2	0.0	0.0	0.0	R 814.8
1998	324.3	6.0	1.2	3.6	0.0	4.8	518.0	26.0	0.0	0.0	0.0	879.1
1999	350.1	5.3	1.6	3.2	0.0	4.8	539.8	6.7	0.0	0.0	0.0	906.7

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> Prior to 1980, based on oil used in steam plants. Since 1980, heavy oil includes fuel oil nos. 4, 5, and 6 and residual fuel oils.

<sup>d</sup> Prior to 1980, based on oil used in internal combustion and gas turbine engine plants. Since 1980, light oil includes fuel oil nos. 1 and 2, kerosene, and jet fuel.

<sup>e</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>f</sup> "Other" is electricity generated for distribution from wind, photovoltaic, and solar thermal energy.

<sup>g</sup> If applicable, from 1989, includes net imports of electricity generated from nonrenewable energy sources not shown in other columns. See data in appendix Table A8.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 263. Energy Consumption Estimates by Source, Selected Years 1960-1999, South Dakota**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum											Nuclear Electric Power	Hydro-electric Power <sup>d</sup>	Wood and Waste	Other <sup>a,e</sup>	Net Inter-state Flow of Electricity/Losses <sup>f</sup>	Total <sup>g</sup>
			Asphalt & Road Oil <sup>a</sup>	Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	Kero-sene <sup>a</sup>	LPG <sup>a</sup>	Lubri-cants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Other <sup>a,c</sup>	Total						
			Thousand Barrels															Million kWh	
1960	374	25	724	106	2,941	1,145	975	1,370	193	8,561	102	0	16,118	0	1,156	—	—	-979	—
1965	310	27	588	128	3,766	1,111	563	1,541	158	8,955	71	0	16,881	0	3,872	—	—	-7,049	—
1970	338	36	894	99	4,375	1,173	16	2,712	166	9,903	328	0	19,666	0	6,579	—	—	-13,856	—
1975	1,888	33	862	77	3,841	1,056	5	2,930	160	10,636	218	0	19,784	0	7,927	—	—	-18,221	—
1980	2,827	24	638	97	4,801	1,311	15	2,530	160	9,688	122	0	19,362	0	5,818	—	—	-10,269	—
1985	2,703	25	841	87	5,003	1,019	41	1,241	145	9,279	36	0	17,693	0	5,333	—	—	-5,993	—
1990	2,571	25	790	93	5,525	1,097	8	3,691	163	8,986	61	0	20,414	0	R <sup>h</sup> 3,934	—	—	R <sup>h</sup> -309	—
1991	2,863	26	768	61	5,860	367	7	1,794	146	9,119	67	18	18,209	0	R <sup>h</sup> 3,828	—	—	R <sup>h</sup> 321	—
1992	2,670	27	887	62	5,595	1,272	8	1,930	149	9,345	144	19	19,412	0	R <sup>h</sup> 3,612	—	—	R <sup>h</sup> 852	—
1993	2,696	31	644	53	6,222	1,190	7	2,591	152	9,565	117	21	20,562	0	R <sup>h</sup> 2,591	—	—	R <sup>h</sup> 5,173	—
1994	3,036	31	629	48	6,994	1,305	5	2,298	159	9,839	89	21	21,386	0	R <sup>h</sup> 5,129	—	—	R <sup>h</sup> -2,605	—
1995	2,537	34	821	46	6,662	1,463	6	2,294	156	10,007	14	21	21,490	0	R <sup>h</sup> 6,010	—	—	R <sup>h</sup> -4,383	—
1996	1,852	37	1,136	53	6,694	1,014	9	R <sup>h</sup> 2,908	151	10,148	41	R <sup>h</sup> 12	R <sup>h</sup> 22,166	0	R <sup>h</sup> 7,978	—	—	R <sup>h</sup> -8,283	—
1997	2,442	R <sup>h</sup> 36	1,354	48	6,416	697	9	R <sup>h</sup> 2,627	160	10,165	65	R <sup>h</sup> 11	R <sup>h</sup> 21,552	0	R <sup>h</sup> 9,062	—	—	R <sup>h</sup> -14,418	—
1998	2,316	33	1,294	33	5,985	818	7	2,151	167	10,440	107	11	21,014	0	5,772	—	—	-3,881	—
1999	2,650	36	1,879	59	6,018	770	7	1,988	169	10,337	106	9	21,341	0	6,848	—	—	-9,257	—
<b>Trillion Btu</b>																			
1960	6.7	25.4	4.8	0.5	17.1	6.1	5.5	5.5	1.2	45.0	0.6	0.0	86.4	0.0	12.4	1.5	0.0	-3.3	129.1
1965	5.7	26.9	3.9	0.6	21.9	6.0	3.2	6.2	1.0	47.0	0.4	0.0	90.3	0.0	40.5	1.1	0.0	-24.1	140.3
1970	5.7	36.5	5.9	0.5	25.5	6.3	0.1	10.2	1.0	52.0	2.1	0.0	103.7	0.0	69.0	1.1	0.0	-47.3	168.7
1975	24.3	32.5	5.7	0.4	22.4	5.7	(s)	10.9	1.0	55.9	1.4	0.0	103.3	0.0	82.5	1.5	0.0	-62.2	181.9
1980	36.6	24.0	4.2	0.5	28.0	7.1	0.1	9.3	1.0	50.9	0.8	0.0	101.8	0.0	60.4	3.9	0.0	-35.0	191.6
1985	34.5	25.5	5.6	0.4	29.1	5.5	0.2	4.5	0.9	48.7	0.2	0.0	95.2	0.0	55.7	R <sup>h</sup> 3.8	0.0	-20.4	R <sup>h</sup> 194.3
1990	32.5	25.5	5.2	0.5	32.2	5.9	(s)	13.4	1.0	47.2	0.4	0.0	105.8	0.0	R <sup>h</sup> 40.9	R <sup>h</sup> 2.3	R <sup>h</sup> 0.2	-1.1	R <sup>h</sup> 206.1
1991	36.1	26.7	5.1	0.3	34.1	2.0	(s)	6.5	0.9	47.9	0.4	0.1	97.4	0.0	R <sup>h</sup> 40.0	R <sup>h</sup> 2.4	0.2	R <sup>h</sup> 1.1	R <sup>h</sup> 203.8
1992	33.6	27.0	5.9	0.3	32.6	6.9	(s)	7.0	0.9	49.1	0.9	0.1	103.7	0.0	R <sup>h</sup> 37.4	R <sup>h</sup> 2.4	0.2	R <sup>h</sup> 2.9	R <sup>h</sup> 207.3
1993	34.4	31.7	4.3	0.3	36.2	6.4	(s)	9.3	0.9	50.2	0.7	0.1	108.6	0.0	26.7	R <sup>h</sup> 2.1	0.2	R <sup>h</sup> 17.6	R <sup>h</sup> 221.4
1994	39.2	31.3	4.2	0.2	40.7	7.1	(s)	8.4	1.0	R <sup>h</sup> 51.5	0.6	0.1	R <sup>h</sup> 113.7	0.0	R <sup>h</sup> 52.9	R <sup>h</sup> 2.1	0.2	R <sup>h</sup> -8.9	R <sup>h</sup> 230.5
1995	36.7	34.8	5.4	0.2	38.8	7.9	(s)	8.3	0.9	R <sup>h</sup> 52.2	0.1	0.1	R <sup>h</sup> 114.1	0.0	62.0	R <sup>h</sup> 2.4	0.2	-15.0	R <sup>h</sup> 235.2
1996	33.2	37.4	7.5	0.3	39.0	5.7	(s)	R <sup>h</sup> 10.5	0.9	R <sup>h</sup> 52.9	0.3	0.1	R <sup>h</sup> 117.2	0.0	R <sup>h</sup> 82.5	R <sup>h</sup> 2.5	0.3	-28.3	R <sup>h</sup> 244.8
1997	42.4	R <sup>h</sup> 36.8	9.0	0.2	37.4	4.0	(s)	R <sup>h</sup> 9.5	1.0	R <sup>h</sup> 53.0	0.4	0.1	R <sup>h</sup> 114.5	0.0	R <sup>h</sup> 93.9	R <sup>h</sup> 2.0	0.3	R <sup>h</sup> -49.2	R <sup>h</sup> 241.0
1998	40.5	33.4	8.6	0.2	34.9	4.6	(s)	7.8	1.0	54.4	0.7	0.1	112.2	0.0	59.7	1.4	0.4	-13.2	233.8
1999	45.9	36.0	12.5	0.3	35.1	4.4	(s)	7.2	1.0	53.9	0.7	0.1	115.0	0.0	70.9	1.8	0.4	-31.6	239.0

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products consumed in the industrial sector. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>e</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>f</sup> Net interstate flow of electricity is the difference between the amount of energy in the electricity sold within a State (including associated losses) and the energy input at the electric utilities within the State. A positive number

indicates that more electricity (including associated losses) came into the State than went out of the State during the year; conversely, a negative number indicates that more electricity (including associated losses) went out of the State than came into the State.

<sup>g</sup> From 1989, "Total" does not equal the sum of the columns. Net imports of electricity generated from nonrenewable energy sources (shown in appendix Table A8) is included in the total but not in any other columns.

<sup>h</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

kWh=kilowatthours. R=Revised data. — =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 264. Residential Energy Consumption Estimates, Selected Years 1960-1999, South Dakota**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum				Wood Thousand Cords	Geothermal	Solar <sup>c</sup>	Electricity <sup>a</sup> Million Kilowatthours	Net Energy	Electrical System Energy Losses <sup>d</sup> Million Kilowatthours	Total
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Total							
			Thousand Barrels										
1960	43	8	567	903	1,067	2,537	61	—	—	847	—	2,107	—
1965	24	10	677	524	1,198	2,398	42	—	—	1,183	—	2,824	—
1970	11	14	763	14	2,010	2,787	33	—	—	1,586	—	3,843	—
1975	8	12	574	3	1,994	2,571	35	—	—	2,068	—	4,987	—
1980	6	11	762	10	1,165	1,937	153	—	—	2,623	—	6,378	—
1985	6	11	743	35	703	1,481	143	—	—	2,769	—	6,505	—
1990	1	10	805	4	1,731	2,540	89	—	—	2,866	—	R 6,270	—
1991	1	11	804	4	1,061	1,869	94	—	—	3,040	—	R 6,609	—
1992	(s)	11	474	4	1,006	1,484	99	—	—	2,843	—	R 6,062	—
1993	(s)	12	592	6	1,355	1,952	82	—	—	3,109	—	R 6,567	—
1994	5	12	536	4	1,278	1,818	81	—	—	3,147	—	R 6,568	—
1995	2	13	542	4	1,384	1,929	90	—	—	3,268	—	R 6,814	—
1996	1	14	632	5	R 1,857	R 2,494	90	—	—	3,426	—	R 7,140	—
1997	(s)	13	490	6	R 1,798	R 2,294	R 64	—	—	3,376	—	R 7,023	—
1998	(s)	12	377	5	1,450	1,832	57	—	—	3,303	—	6,824	—
1999	(s)	12	306	4	1,396	1,706	61	—	—	3,302	—	6,470	—
<b>Trillion Btu</b>													
1960	0.8	7.9	3.3	5.1	4.3	12.7	1.2	0.0	0.0	2.9	25.6	7.2	32.8
1965	0.5	10.1	3.9	3.0	4.8	11.7	0.8	0.0	0.0	4.0	27.1	9.6	36.8
1970	0.2	13.8	4.4	0.1	7.6	12.1	0.7	0.0	0.0	5.4	32.2	13.1	45.3
1975	0.1	12.0	3.3	(s)	7.4	10.8	0.7	0.0	0.0	7.1	30.6	17.0	47.7
1980	0.1	10.5	4.4	0.1	4.3	8.8	3.1	0.0	0.0	8.9	31.4	21.8	53.2
1985	0.1	11.5	4.3	0.2	2.5	7.1	2.9	0.0	0.0	9.4	31.0	22.2	53.2
1990	(s)	10.4	4.7	(s)	6.3	11.0	1.8	<sup>e</sup> (s)	<sup>e</sup> (s)	9.8	<sup>e</sup> 33.0	21.4	<sup>e</sup> 54.4
1991	(s)	11.4	4.7	(s)	3.8	8.5	1.9	(s)	(s)	10.4	32.3	R 22.5	R 54.8
1992	(s)	11.0	2.8	(s)	3.6	6.4	2.0	(s)	(s)	9.7	29.1	20.7	49.8
1993	(s)	12.6	3.4	(s)	4.9	8.4	1.6	(s)	(s)	10.6	33.3	22.4	55.7
1994	0.1	12.2	3.1	(s)	4.6	7.8	1.6	(s)	(s)	10.7	32.5	22.4	54.9
1995	(s)	12.8	3.2	(s)	5.0	8.2	1.8	(s)	(s)	11.2	34.0	23.2	R 57.3
1996	(s)	14.3	3.7	(s)	R 6.7	R 10.4	1.8	(s)	(s)	11.7	R 38.2	R 24.4	R 62.6
1997	(s)	13.4	2.9	(s)	R 6.5	R 9.4	1.3	0.1	(s)	11.5	R 35.7	R 24.0	R 59.7
1998	(s)	11.8	2.2	(s)	5.2	7.5	1.1	0.1	(s)	11.3	31.7	23.3	55.0
1999	(s)	11.8	1.8	(s)	5.0	6.9	1.2	0.1	(s)	11.3	31.3	22.1	53.3

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Includes small amounts of solar thermal and photovoltaic energy consumed by the commercial sector that cannot be separately identified. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 265. Commercial Energy Consumption Estimates, Selected Years 1960-1999, South Dakota**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum						Wood	Geothermal	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>c</sup>	Total <sup>d</sup>
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels						Thousand Cords	Million Kilowatthours	Million Kilowatthours			
1960	79	7	226	0	188	37	16	466	1	—	409	—	1,016	—
1965	44	9	269	0	211	46	8	534	1	—	645	—	1,540	—
1970	20	11	303	0	355	50	16	724	1	—	937	—	2,270	—
1975	16	11	228	0	352	58	20	658	1	—	995	—	2,400	—
1980	11	9	365	0	206	65	19	655	4	—	1,139	—	2,770	—
1985	11	10	278	1	124	98	19	519	R 4	—	1,863	—	4,377	—
1990	2	9	208	(s)	305	78	25	616	R 6	—	1,811	—	3,961	—
1991	3	9	192	(s)	187	54	35	468	R 6	—	1,919	—	R 4,172	—
1992	1	9	245	(s)	178	54	36	513	R 6	—	1,874	—	R 3,997	—
1993	1	11	248	1	239	11	1	499	7	—	1,948	—	R 4,115	—
1994	10	10	266	(s)	226	11	6	509	7	—	2,265	—	R 4,727	—
1995	5	11	325	1	244	11	2	584	7	—	2,424	—	R 5,053	—
1996	1	12	254	1	R 328	11	0	R 594	7	—	2,525	—	R 5,263	—
1997	1	10	278	1	R 317	11	9	R 616	R 7	—	2,555	—	R 5,316	—
1998	(s)	9	234	(s)	256	11	6	507	7	—	2,653	—	5,480	—
1999	1	10	184	1	246	11	9	451	9	—	2,671	—	5,234	—

  

Trillion Btu														
1960	1.5	7.5	1.3	0.0	0.8	0.2	0.1	2.4	(s)	0.0	1.4	12.8	3.5	16.3
1965	0.9	8.8	1.6	0.0	0.8	0.2	(s)	2.7	(s)	0.0	2.2	14.6	5.3	19.8
1970	0.4	11.4	1.8	0.0	1.3	0.3	0.1	3.5	(s)	0.0	3.2	18.5	7.7	26.2
1975	0.3	11.5	1.3	0.0	1.3	0.3	0.1	3.1	(s)	0.0	3.4	18.2	8.2	26.4
1980	0.2	8.5	2.1	0.0	0.8	0.3	0.1	3.3	0.1	0.0	3.9	16.0	9.5	25.4
1985	0.2	10.1	1.6	(s)	0.4	0.5	0.1	2.7	R 0.1	0.0	6.4	19.4	14.9	R 34.4
1990	(s)	8.7	1.2	(s)	1.1	0.4	0.2	2.9	R 0.1	e 0.1	6.2	R e 18.0	13.5	R e 31.5
1991	(s)	9.6	1.1	(s)	0.7	0.3	0.2	2.3	R 0.1	0.1	6.5	R 18.8	R 14.2	R 33.0
1992	(s)	9.3	1.4	(s)	0.6	0.3	0.2	2.6	R 0.1	0.1	6.4	R 18.5	R 13.6	R 32.2
1993	(s)	10.8	1.4	(s)	0.9	0.1	(s)	2.4	0.1	0.2	6.6	20.2	14.0	34.2
1994	0.2	10.4	1.5	(s)	0.8	0.1	(s)	2.5	0.1	0.2	7.7	21.1	16.1	37.2
1995	0.1	10.8	1.9	(s)	0.9	0.1	(s)	2.9	0.1	0.2	8.3	22.4	17.2	39.6
1996	(s)	11.8	1.5	(s)	R 1.2	0.1	0.0	R 2.7	0.1	0.2	8.6	R 23.5	R 18.0	R 41.5
1997	(s)	10.6	1.6	(s)	1.1	0.1	0.1	R 2.9	0.1	R 0.2	8.7	R 22.6	18.1	R 40.7
1998	(s)	9.4	1.4	(s)	0.9	0.1	(s)	2.4	0.1	0.3	9.1	21.3	18.7	40.0
1999	(s)	9.6	1.1	(s)	0.9	0.1	0.1	2.1	0.2	0.3	9.1	21.3	17.9	39.2

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>d</sup> Small amounts of solar thermal and photovoltaic energy consumed in the commercial sector cannot be separately identified and are included in residential consumption.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

Table 266. Industrial Energy Consumption Estimates, Selected Years 1960-1999, South Dakota

Year	Coal Thousand Short Tons	Natural Gas <sup>a</sup> Billion Cubic Feet	Petroleum									Hydro-electric Power <sup>b</sup> Million kWh	Wood and Waste	Other <sup>b,d</sup>	Electricity <sup>b</sup> Million kWh	Net Energy	Electrical System Energy Losses <sup>e</sup> Million kWh	Total
			Asphalt and Road Oil <sup>b</sup>	Distillate Fuel <sup>b</sup>	Kero-sene <sup>b</sup>	LPG <sup>b</sup>	Lubri-cants <sup>b</sup>	Motor Gasoline	Residual Fuel <sup>b</sup>	Other <sup>b,c</sup>	Total							
			Thousand Barrels															
1960	5	5	724	1,780	72	93	19	2,615	35	0	5,339	20	—	—	258	—	642	—
1965	4	5	588	2,177	39	108	15	2,455	15	0	5,397	38	—	—	246	—	588	—
1970	5	7	894	2,332	2	298	14	2,209	35	0	5,784	35	—	—	281	—	680	—
1975	59	6	862	1,635	2	527	20	1,626	52	0	4,725	36	—	—	994	—	2,397	—
1980	127	5	638	1,640	5	1,090	4	1,473	95	0	4,943	32	—	—	1,322	—	3,215	—
1985	279	4	841	1,670	5	389	3	694	16	0	3,619	32	—	—	1,019	—	2,393	—
1990	223	6	790	2,046	3	1,632	4	489	36	0	5,000	10	—	—	1,657	—	3,625	—
1991	289	5	768	2,340	3	532	3	484	32	18	4,180	0	—	—	1,726	—	3,753	—
1992	267	5	887	2,181	4	728	3	429	109	19	4,359	0	—	—	1,777	—	3,791	—
1993	335	5	644	2,522	1	972	3	539	116	21	4,818	0	—	—	1,847	—	3,902	—
1994	451	6	629	2,824	1	755	4	463	83	21	4,780	0	—	—	1,762	—	3,677	—
1995	393	7	821	2,380	2	652	4	534	11	21	4,424	0	—	—	1,722	—	3,590	—
1996	397	8	1,136	2,316	3	709	3	540	41	12	4,761	0	—	—	1,785	—	3,719	—
1997	436	R 8	1,354	2,177	2	503	4	566	56	11	4,674	0	—	—	1,841	—	3,829	—
1998	450	6	1,294	1,883	1	433	4	386	101	11	4,114	0	—	—	1,868	—	3,859	—
1999	490	6	1,879	1,854	2	341	4	446	96	9	4,631	0	—	—	1,949	—	3,819	—
Trillion Btu																		
1960	0.1	5.3	4.8	10.4	0.4	0.4	0.1	13.7	0.2	0.0	30.0	0.2	0.3	0.0	0.9	36.9	2.2	39.0
1965	0.1	4.7	3.9	12.7	0.2	0.4	0.1	12.9	0.1	0.0	30.3	0.4	0.3	0.0	0.8	36.6	2.0	38.6
1970	0.1	6.8	5.9	13.6	(s)	1.1	0.1	11.6	0.2	0.0	32.6	0.4	0.5	0.0	1.0	41.3	2.3	43.6
1975	1.1	5.8	5.7	9.5	(s)	2.0	0.1	8.5	0.3	0.0	26.2	0.4	0.8	0.0	3.4	37.7	8.2	45.8
1980	2.4	4.7	4.2	9.6	(s)	4.0	(s)	7.7	0.6	0.0	26.2	0.3	0.7	0.0	4.5	38.8	11.0	49.8
1985	4.8	3.6	5.6	9.7	(s)	1.4	(s)	3.6	0.1	0.0	20.5	0.3	0.9	0.0	3.5	33.6	8.2	41.8
1990	3.9	6.0	5.2	11.9	(s)	5.9	(s)	2.6	0.2	0.0	25.9	f 0.0	R 0.4	f (s)	5.7	R f 41.9	12.4	R f 54.3
1991	5.0	5.1	5.1	13.6	(s)	1.9	(s)	2.5	0.2	0.1	23.5	0.0	R 0.4	(s)	5.9	R 40.0	12.8	R 52.8
1992	4.6	5.0	5.9	12.7	(s)	2.6	(s)	2.3	0.7	0.1	24.3	0.0	R 0.3	(s)	6.1	R 40.4	R 12.9	R 53.3
1993	5.8	5.5	4.3	14.7	(s)	3.5	(s)	2.8	0.7	0.1	26.2	0.0	R 0.3	(s)	6.3	R 44.1	13.3	R 57.4
1994	7.8	6.0	4.2	16.5	(s)	2.7	(s)	2.4	0.5	0.1	26.5	0.0	R 0.3	(s)	6.0	R 46.6	12.5	R 59.2
1995	6.8	7.4	5.4	13.9	(s)	2.4	(s)	2.8	0.1	0.1	24.7	0.0	R 0.4	(s)	5.9	R 45.2	12.2	R 57.5
1996	6.9	7.7	7.5	13.5	(s)	R 2.6	(s)	2.8	0.3	0.1	26.8	0.0	R 0.6	(s)	6.1	R 48.0	12.7	R 60.7
1997	7.6	R 8.0	9.0	12.7	(s)	R 1.8	(s)	R 2.9	0.4	0.1	R 26.9	0.0	R 0.6	(s)	6.3	R 49.4	R 13.1	R 62.4
1998	7.9	6.5	8.6	11.0	(s)	1.6	(s)	2.0	0.6	0.1	23.9	0.0	0.1	(s)	6.4	44.8	13.2	57.9
1999	8.6	5.9	12.5	10.8	(s)	1.2	(s)	2.3	0.6	0.1	27.5	0.0	0.4	0.1	6.6	49.2	13.0	62.2

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>e</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>f</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

R=Revised data.

kWh=kilowatthours. — =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 267. Transportation Energy Consumption Estimates, Selected Years 1960-1999, South Dakota**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum								Ethanol <sup>c</sup>	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total <sup>c</sup>
			Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	LPG <sup>a</sup>	Lubricants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total				Million Kilowatthours	
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels								Thousand Barrels	Million Kilowatthours	Million Kilowatthours	Total <sup>c</sup>	
1960	(s)	(s)	106	362	1,145	22	174	5,909	11	7,729	0	0	—	0	—
1965	(s)	(s)	128	635	1,111	24	143	6,454	1	8,496	0	0	—	0	—
1970	(s)	(s)	99	929	1,173	50	151	7,645	6	10,052	0	0	—	0	—
1975	(s)	(s)	77	1,337	1,056	57	140	8,952	1	11,618	0	0	—	0	—
1980	0	(s)	97	1,977	1,311	69	156	8,150	0	11,760	0	0	—	0	—
1985	0	(s)	87	2,274	1,019	24	142	8,487	0	12,033	R e 98	0	—	0	—
1990	0	(s)	93	2,434	1,097	23	160	8,419	(s)	12,226	R 142	0	—	0	—
1991	0	(s)	61	2,490	367	14	143	8,581	0	11,656	R 325	0	—	0	—
1992	0	2	62	2,676	1,272	18	146	8,863	0	13,036	R 424	0	—	0	—
1993	0	3	53	2,829	1,190	26	148	9,015	0	13,261	R 471	0	—	0	—
1994	0	3	48	3,317	1,305	39	155	9,365	0	14,229	R 540	0	—	0	—
1995	0	3	46	3,368	1,463	15	152	9,462	0	14,506	R 506	0	—	0	—
1996	0	3	53	3,459	1,014	R 14	148	9,596	0	R 14,285	R 357	0	—	0	—
1997	0	3	48	3,447	697	R 9	156	9,588	0	R 13,946	R 399	0	—	0	—
1998	0	3	33	3,423	818	12	164	10,043	0	14,494	458	0	—	0	—
1999	0	6	59	3,615	770	5	165	9,880	0	14,495	509	0	—	0	—

**Trillion Btu**

1960	(s)	(s)	0.5	2.1	6.1	0.1	1.1	31.0	0.1	41.0	0.0	0.0	41.1	0.0	41.1
1965	(s)	(s)	0.6	3.7	6.0	0.1	0.9	33.9	(s)	45.2	0.0	0.0	45.2	0.0	45.2
1970	(s)	(s)	0.5	5.4	6.3	0.2	0.9	40.2	(s)	53.5	0.0	0.0	53.6	0.0	53.6
1975	(s)	(s)	0.4	7.8	5.7	0.2	0.8	47.0	(s)	62.0	0.0	0.0	62.0	0.0	62.0
1980	0.0	0.1	0.5	11.5	7.1	0.3	0.9	42.8	0.0	63.1	0.0	0.0	63.2	0.0	63.2
1985	0.0	0.2	0.4	13.2	5.5	0.1	0.9	44.6	0.0	64.7	R e 0.3	0.0	e 65.0	0.0	e 65.0
1990	0.0	0.1	0.5	14.2	5.9	0.1	1.0	44.2	(s)	65.9	R 0.5	0.0	66.0	0.0	66.0
1991	0.0	0.3	0.3	14.5	2.0	(s)	0.9	45.1	0.0	62.8	R 1.2	0.0	63.2	0.0	63.2
1992	0.0	1.8	0.3	15.6	6.9	0.1	0.9	46.6	0.0	70.3	R 1.5	0.0	72.0	0.0	72.0
1993	0.0	2.6	0.3	16.5	6.4	0.1	0.9	47.4	0.0	71.5	R 1.7	0.0	74.1	0.0	74.1
1994	0.0	2.6	0.2	19.3	7.1	0.1	0.9	R 49.0	0.0	R 76.7	R 1.9	0.0	R 79.3	0.0	R 79.3
1995	0.0	2.8	0.2	19.6	7.9	0.1	0.9	R 49.3	0.0	R 78.1	R 1.8	0.0	R 80.9	0.0	R 80.9
1996	0.0	2.9	0.3	20.2	5.7	R 0.1	0.9	R 50.1	0.0	R 77.1	R 1.3	0.0	R 80.1	0.0	R 80.1
1997	0.0	3.0	0.2	20.1	4.0	(s)	0.9	R 50.0	0.0	R 75.2	R 1.4	0.0	R 78.2	0.0	R 78.2
1998	0.0	2.8	0.2	19.9	4.6	(s)	1.0	52.3	0.0	78.1	1.6	0.0	81.0	0.0	81.0
1999	0.0	6.1	0.3	21.1	4.4	(s)	1.0	51.5	0.0	78.2	1.8	0.0	84.3	0.0	84.3

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels. Transportation use of natural gas is gas consumed in the operation of pipelines, primarily in compressors, and, since 1990, is also gas consumed as vehicle fuel.

<sup>c</sup> Ethanol blended into motor gasoline, which is accounted for under motor gasoline, is shown separately here to display the use of renewable energy by the transportation sector and is included only once in the total.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1980 and 1981 due to the expanded coverage of renewable energy sources beginning in 1981.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

Table 268. Estimates of Energy Input at Electric Utilities, Selected Years, 1960-1999, South Dakota

Year	Coal Thousand Short Tons	Natural Gas <sup>a</sup> Billion Cubic Feet	Petroleum				Nuclear Electric Power	Hydroelectric Power <sup>e</sup>	Wood and Waste	Geothermal Energy	Other <sup>b,f</sup>	Total <sup>g</sup>
			Heavy Oil <sup>b,c</sup>	Light Oil <sup>b,d</sup>	Petroleum Coke <sup>b</sup>	Total						
			Thousand Barrels									
1960	246	4	40	7	0	47	0	1,136	0	0	0	—
1965	237	3	47	8	0	55	0	3,835	0	0	0	—
1970	301	4	270	48	0	318	0	6,544	0	0	0	—
1975	1,804	3	145	67	0	212	0	7,890	0	0	0	—
1980	2,683	(s)	9	58	0	67	0	5,786	0	0	0	—
1985	2,407	(s)	1	39	0	40	0	5,301	0	0	0	—
1990	2,345	(s)	0	32	0	32	0	3,934	0	0	0	—
1991	2,570	(s)	0	35	0	35	0	R 3,828	0	0	0	—
1992	2,402	(s)	0	19	0	19	0	R 3,612	0	0	0	—
1993	2,360	(s)	0	32	0	32	0	2,591	0	0	0	—
1994	2,570	(s)	0	50	0	50	0	R 5,129	0	0	0	—
1995	2,137	1	0	48	0	48	0	6,010	0	0	0	—
1996	1,453	1	0	33	0	33	0	7,978	0	0	0	—
1997	2,005	2	0	23	0	23	0	R 9,062	0	0	0	—
1998	1,866	3	0	68	0	68	0	5,772	0	0	0	—
1999	2,159	3	0	59	0	59	0	6,848	0	0	0	—
Trillion Btu												
1960	4.2	4.6	0.3	(s)	0.0	0.3	0.0	12.2	0.0	0.0	0.0	21.4
1965	4.2	3.3	0.3	(s)	0.0	0.3	0.0	40.1	0.0	0.0	0.0	48.0
1970	5.0	4.4	1.7	0.3	0.0	2.0	0.0	68.7	0.0	0.0	0.0	80.0
1975	22.8	3.2	0.9	0.4	0.0	1.3	0.0	82.1	0.0	0.0	0.0	109.4
1980	33.8	0.3	0.1	0.3	0.0	0.4	0.0	60.1	0.0	0.0	0.0	94.6
1985	29.4	(s)	(s)	0.2	0.0	0.2	0.0	55.4	0.0	0.0	0.0	85.0
1990	28.6	0.2	0.0	0.2	0.0	0.2	0.0	40.9	0.0	0.0	0.0	69.9
1991	31.0	0.2	0.0	0.2	0.0	0.2	0.0	R 40.0	0.0	0.0	0.0	R 71.3
1992	29.0	(s)	0.0	0.1	0.0	0.1	0.0	R 37.4	0.0	0.0	0.0	R 66.5
1993	28.6	0.2	0.0	0.2	0.0	0.2	0.0	26.7	0.0	0.0	0.0	55.7
1994	31.1	0.2	0.0	0.3	0.0	0.3	0.0	R 52.9	0.0	0.0	0.0	R 84.4
1995	29.8	0.9	0.0	0.3	0.0	0.3	0.0	62.0	0.0	0.0	0.0	93.0
1996	26.3	0.7	0.0	0.2	0.0	0.2	0.0	R 82.5	0.0	0.0	0.0	R 109.7
1997	34.8	1.8	0.0	0.1	0.0	0.1	0.0	R 93.9	0.0	0.0	0.0	R 130.9
1998	32.6	2.9	0.0	0.4	0.0	0.4	0.0	59.7	0.0	0.0	0.0	95.1
1999	37.3	2.5	0.0	0.3	0.0	0.3	0.0	70.9	0.0	0.0	0.0	111.6

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> Prior to 1980, based on oil used in steam plants. Since 1980, heavy oil includes fuel oil nos. 4, 5, and 6 and residual fuel oils.

<sup>d</sup> Prior to 1980, based on oil used in internal combustion and gas turbine engine plants. Since 1980, light oil includes fuel oil nos. 1 and 2, kerosene, and jet fuel.

<sup>e</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>f</sup> "Other" is electricity generated for distribution from wind, photovoltaic, and solar thermal energy.

<sup>g</sup> If applicable, from 1989, includes net imports of electricity generated from nonrenewable energy sources not shown in other columns. See data in appendix Table A8.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 269. Energy Consumption Estimates by Source, Selected Years 1960-1999, Tennessee**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum											Nuclear Electric Power	Hydro-electric Power <sup>d</sup>	Wood and Waste	Other <sup>a,e</sup>	Net Inter-state Flow of Electricity/Losses <sup>f</sup>	Total <sup>g</sup>
			Asphalt & Road Oil <sup>a</sup>	Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	Kero-sene <sup>a</sup>	LPG <sup>a</sup>	Lubri-cants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Other <sup>a,c</sup>	Total						
			Thousand Barrels															Million kWh	
1960	15,436	147	1,785	1,040	5,291	570	2,624	1,311	760	27,268	188	R 1,413	R 42,250	0	8,676	—	—	20,917	—
1965	14,171	202	3,441	1,024	7,295	1,174	2,540	1,912	800	32,481	287	R 4,292	R 55,245	0	8,750	—	—	46,329	—
1970	17,726	256	3,628	116	10,952	3,335	4,135	3,182	825	41,869	597	R 6,209	R 74,849	0	8,067	—	—	50,754	—
1975	21,308	217	3,765	70	17,479	3,936	2,289	3,830	1,328	53,735	714	R 5,571	R 92,718	0	11,806	—	—	73,642	—
1980	24,687	230	3,378	290	19,176	4,154	1,534	2,787	1,241	54,948	1,499	R 8,213	R 97,218	519	8,764	—	—	74,740	—
1985	25,167	190	4,408	154	22,285	4,862	1,107	2,281	1,129	58,047	539	R 6,293	R 101,107	9,672	6,539	—	—	35,536	—
1990	24,878	220	5,798	174	23,872	4,181	438	2,906	1,270	58,001	311	R 10,730	R 107,681	14,003	R <sup>h</sup> 9,537	—	—	R 26,440	—
1991	23,107	227	5,349	145	22,618	3,413	342	3,208	1,136	56,162	406	R 11,331	R 104,111	16,587	R 10,497	—	—	R 26,893	—
1992	24,106	242	5,281	343	24,044	4,479	442	4,787	1,159	58,587	397	R 12,578	R 112,097	15,654	R 9,590	—	—	R 22,970	—
1993	27,854	254	4,922	395	23,976	6,569	410	3,566	1,180	61,213	528	R 12,043	R 114,802	3,305	R 8,394	—	—	R 40,415	—
1994	25,440	246	5,448	392	24,805	7,762	544	3,482	1,233	62,897	461	R 12,790	R 119,815	11,932	R 11,209	—	—	R 32,994	—
1995	27,399	257	5,434	397	27,388	8,096	490	3,416	1,212	64,822	368	R 12,420	R 124,042	15,708	R 8,951	—	—	R 10,926	—
1996	26,744	280	5,171	231	27,554	9,317	585	R 4,303	1,176	64,868	214	R 7,234	R 120,653	22,924	R 10,720	—	—	R 5,649	—
1997	28,203	282	4,917	312	28,108	9,433	580	R 4,028	1,242	66,148	160	R 7,188	R 122,117	24,648	R 9,871	—	—	R -8,704	—
1998	26,808	280	5,928	136	29,776	9,855	613	3,264	1,301	67,522	167	8,668	127,230	28,388	10,184	—	—	-281	—
1999	26,640	278	5,919	109	27,147	11,816	528	4,709	1,314	69,769	60	9,579	130,951	27,227	7,150	—	—	10,116	—

  

Trillion Btu																			
1960	374.4	151.7	11.8	5.2	30.8	3.1	14.9	5.3	4.6	143.2	1.2	R 8.3	R 228.5	0.0	93.4	45.4	0.0	71.4	R 964.7
1965	338.8	211.1	22.8	5.2	42.5	6.5	14.4	7.7	4.8	170.6	1.8	R 24.6	R 300.9	0.0	91.5	46.5	0.0	158.1	R 1,147.0
1970	403.7	261.8	24.1	0.6	63.8	18.8	23.4	12.0	5.0	219.9	3.8	R 35.3	R 406.7	0.0	84.7	53.8	0.0	173.2	R 1,383.8
1975	471.9	224.1	25.0	0.4	101.8	22.2	13.0	14.2	8.1	282.3	4.5	R 32.2	R 503.6	0.0	122.9	54.4	0.0	251.3	R 1,628.2
1980	576.9	233.3	22.4	1.5	111.7	23.4	8.7	10.2	7.5	288.6	9.4	R 46.1	R 529.7	5.7	91.0	R 62.1	0.0	255.0	R 1,753.7
1985	599.7	196.7	29.3	0.8	129.8	27.5	6.3	8.2	6.8	304.9	3.4	R 35.6	R 552.5	104.6	68.3	R 89.6	0.0	121.3	R 1,732.7
1990	600.3	227.5	38.5	0.9	139.1	23.6	2.5	10.5	7.7	304.7	2.0	R 60.1	R 589.5	149.5	h 99.2	R 54.9	h 0.1	R 90.2	R <sup>h</sup> 1,811.2
1991	565.5	234.6	35.5	0.7	131.8	19.3	1.9	11.6	6.9	295.0	2.6	R 63.5	R 568.7	178.1	109.5	R 56.9	0.1	R 91.8	R 1,805.3
1992	590.6	249.2	35.0	1.7	140.1	25.3	2.5	17.3	7.0	307.8	2.5	R 70.4	R 609.7	167.1	99.2	R 58.0	0.1	R 78.4	R 1,852.3
1993	685.9	263.1	32.7	2.0	139.7	37.2	2.3	12.9	7.2	321.6	3.3	R 67.2	R 625.9	35.3	86.5	R 52.0	0.1	R 137.9	R 1,886.8
1994	622.9	254.0	36.2	2.0	144.5	44.0	3.1	12.7	7.5	R 328.9	2.9	R 71.5	R 653.1	127.4	R 115.6	R 65.4	0.1	R 112.6	R 1,951.1
1995	668.2	264.8	36.1	2.0	159.5	45.9	2.8	12.4	7.4	R 338.0	2.3	R 69.4	R 675.8	167.4	R 92.3	R 62.9	0.1	R 37.3	R 1,968.7
1996	648.6	289.3	34.3	1.2	160.5	52.8	3.3	R 15.5	7.1	R 338.3	1.3	R 41.8	R 656.3	243.5	R 110.8	R 60.4	0.1	R 19.3	R 2,028.2
1997	673.5	291.1	32.6	1.6	163.7	53.5	3.3	R 14.6	7.5	R 344.8	1.0	R 41.5	R 664.1	261.8	R 102.2	R 49.8	0.1	R -29.7	R 2,013.0
1998	634.5	288.7	39.3	0.7	173.4	55.9	3.5	11.8	7.9	351.9	1.1	50.4	695.9	301.6	105.4	32.2	0.1	-1.0	2,057.3
1999	625.8	285.8	39.3	0.6	158.1	67.0	3.0	17.0	8.0	363.6	0.4	55.8	712.7	289.2	74.0	48.3	0.1	34.5	2,070.5

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products consumed in the industrial sector. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>e</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>f</sup> Net interstate flow of electricity is the difference between the amount of energy in the electricity sold within a State (including associated losses) and the energy input at the electric utilities within the State. A positive number

indicates that more electricity (including associated losses) came into the State than went out of the State during the year; conversely, a negative number indicates that more electricity (including associated losses) went out of the State than came into the State.

<sup>g</sup> From 1989, "Total" does not equal the sum of the columns. Net imports of electricity generated from nonrenewable energy sources (shown in appendix Table A8) is included in the total but not in any other columns.

<sup>h</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

kWh=kilowatthours. R=Revised data. — =Not applicable.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.



**Table 270. Residential Energy Consumption Estimates, Selected Years 1960-1999, Tennessee**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum				Wood Thousand Cords	Geothermal	Solar <sup>c</sup>	Electricity <sup>a</sup> Million Kilowatthours	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Total						Million Kilowatthours	
			Thousand Barrels										
1960	336	34	80	797	862	1,740	1,269	—	—	8,683	—	21,599	—
1965	233	37	100	881	1,136	2,117	949	—	—	12,134	—	28,971	—
1970	191	47	169	2,027	2,316	4,512	806	—	—	17,942	—	43,479	—
1975	114	44	237	1,316	2,767	4,320	840	—	—	23,034	—	55,561	—
1980	82	45	308	1,501	549	2,358	R 620	—	—	26,207	—	63,727	—
1985	59	39	259	737	1,209	2,205	1,543	—	—	25,546	—	60,018	—
1990	78	46	237	324	1,716	2,277	918	—	—	28,757	—	R 62,908	—
1991	63	49	268	268	1,936	2,472	967	—	—	29,605	—	R 64,360	—
1992	55	52	259	361	2,094	2,715	1,017	—	—	29,498	—	R 62,913	—
1993	39	59	205	311	2,201	2,716	R 777	—	—	30,199	—	R 63,786	—
1994	32	57	302	439	2,112	2,853	R 761	—	—	32,797	—	R 68,444	—
1995	51	60	281	372	2,129	2,782	R 845	—	—	30,967	—	R 64,564	—
1996	39	70	272	456	R 2,857	R 3,585	843	—	—	35,333	—	R 73,635	—
1997	46	64	251	437	R 2,582	R 3,269	R 407	—	—	33,367	—	R 69,407	—
1998	9	59	227	424	2,432	3,083	359	—	—	35,428	—	73,187	—
1999	34	59	210	423	3,047	3,680	385	—	—	35,425	—	69,408	—
<b>Trillion Btu</b>													
1960	8.3	35.1	0.5	4.5	3.5	8.4	25.4	0.0	0.0	29.6	106.8	73.7	180.5
1965	5.7	38.9	0.6	5.0	4.6	10.1	19.0	0.0	0.0	41.4	115.1	98.8	214.0
1970	4.5	47.6	1.0	11.5	8.8	21.2	16.1	0.0	0.0	61.2	150.7	148.3	299.0
1975	2.7	45.4	1.4	7.5	10.3	19.1	16.8	0.0	0.0	78.6	162.6	189.6	352.2
1980	2.0	45.6	1.8	3.1	5.5	10.4	12.4	0.0	0.0	89.4	159.8	217.4	R 377.3
1985	1.4	40.8	1.5	4.2	4.4	10.0	30.9	0.0	0.0	87.2	170.3	204.8	375.1
1990	1.9	48.0	1.4	1.8	6.2	9.4	18.4	e (s)	e 0.1	98.1	e 175.9	214.6	e 390.5
1991	1.6	51.0	1.6	1.5	7.0	10.1	19.3	(s)	0.1	101.0	183.1	R 219.6	R 402.7
1992	1.3	53.8	1.5	2.0	7.6	11.1	20.3	(s)	0.1	100.6	187.4	R 214.7	R 402.1
1993	1.0	61.0	1.2	1.8	7.9	10.9	15.5	(s)	0.1	103.0	191.5	R 217.6	409.2
1994	0.8	59.2	1.8	2.5	7.7	11.9	15.2	(s)	0.1	111.9	199.1	233.5	R 432.7
1995	1.3	61.9	1.6	2.1	7.7	11.5	16.9	(s)	0.1	105.7	R 197.3	R 220.3	R 417.5
1996	1.0	72.7	1.6	2.6	R 10.3	R 14.5	16.9	(s)	0.1	120.6	R 225.7	R 251.2	R 476.9
1997	1.1	66.1	1.5	2.5	R 9.3	R 13.3	R 8.1	(s)	0.1	113.8	R 202.6	R 236.8	R 439.4
1998	0.2	61.2	1.3	2.4	8.8	12.5	7.2	(s)	0.1	120.9	202.1	249.7	451.8
1999	0.8	60.6	1.2	2.4	11.0	14.6	7.7	(s)	0.1	120.9	204.7	236.8	441.5

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Includes small amounts of solar thermal and photovoltaic energy consumed by the commercial sector that cannot be separately identified. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 271. Commercial Energy Consumption Estimates, Selected Years 1960-1999, Tennessee**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum						Wood Thousand Cords	Geothermal	Electricity <sup>a</sup> Million Kilowatthours	Net Energy	Electrical System Energy Losses <sup>c</sup>	
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total					Million Kilowatthours	Total <sup>d</sup>
1960	618	24	200	157	152	173	(s)	682	24	—	2,796	—	6,956	—
1965	430	28	248	173	200	277	(s)	899	18	—	4,274	—	10,204	—
1970	352	43	422	399	409	392	1	1,622	15	—	6,352	—	15,393	—
1975	211	42	589	259	488	419	1	1,757	16	—	7,440	—	17,947	—
1980	152	44	1,015	104	265	465	48	1,897	15	—	14,216	—	34,568	—
1985	110	43	3,086	167	213	337	98	3,901	R 41	—	9,856	—	23,156	—
1990	140	44	636	69	303	464	33	1,504	R 58	—	13,075	—	R 28,603	—
1991	109	46	602	32	342	418	17	1,410	R 62	—	13,117	—	R 28,516	—
1992	102	47	1,042	69	370	346	57	1,883	R 66	—	7,391	—	R 15,763	—
1993	72	51	937	61	388	203	34	1,622	62	—	6,102	—	R 12,889	—
1994	58	51	1,006	73	373	49	33	1,533	64	—	6,121	—	R 12,775	—
1995	94	51	798	80	376	50	14	1,318	64	—	6,234	—	R 12,998	—
1996	72	58	918	89	R 504	49	28	R 1,589	69	—	6,543	—	R 13,636	—
1997	85	55	876	99	R 456	49	45	R 1,524	R 45	—	25,839	—	R 53,747	—
1998	16	52	935	123	429	49	2	1,537	45	—	25,859	—	53,419	—
1999	64	51	874	52	538	49	0	1,512	54	—	26,260	—	51,452	—
<b>Trillion Btu</b>														
1960	15.3	25.1	1.2	0.9	0.6	0.9	(s)	3.6	0.5	0.0	9.5	54.0	23.7	77.7
1965	10.6	29.6	1.4	1.0	0.8	1.5	(s)	4.7	0.4	0.0	14.6	59.8	34.8	94.6
1970	8.4	43.7	2.5	2.3	1.5	2.1	(s)	8.3	0.3	0.0	21.7	82.3	52.5	134.9
1975	5.0	43.8	3.4	1.5	1.8	2.2	(s)	8.9	0.3	0.0	25.4	83.4	61.2	144.6
1980	3.6	44.8	5.9	0.6	1.0	2.4	0.3	10.2	0.3	0.0	48.5	107.4	117.9	225.4
1985	2.7	44.9	18.0	0.9	0.8	1.8	0.6	22.1	R 0.8	0.0	33.6	R 104.1	79.0	R 183.1
1990	3.5	45.1	3.7	0.4	1.1	2.4	0.2	7.8	R 1.2	e 0.0	44.6	R e 102.1	97.6	R e 199.7
1991	2.7	47.5	3.5	0.2	1.2	2.2	0.1	7.2	R 1.2	0.0	44.8	R 103.4	R 97.3	R 200.7
1992	2.5	48.0	6.1	0.4	1.3	1.8	0.4	10.0	R 1.3	0.0	25.2	R 87.0	R 53.8	R 140.7
1993	1.8	52.5	5.5	0.3	1.4	1.1	0.2	8.5	1.2	0.0	20.8	84.9	44.0	128.9
1994	1.5	52.4	5.9	0.4	1.4	0.3	0.2	8.1	1.3	0.0	20.9	84.1	43.6	127.7
1995	2.4	52.8	4.6	0.5	1.4	0.3	0.1	6.8	1.3	0.0	21.3	84.6	R 44.4	128.9
1996	1.8	60.4	5.3	0.5	R 1.8	0.3	0.2	R 8.1	1.4	0.0	22.3	R 94.0	46.5	R 140.5
1997	2.1	56.8	5.1	0.6	1.6	0.3	0.3	7.8	R 0.9	0.0	88.2	R 155.9	R 183.4	339.2
1998	0.4	54.0	5.4	0.7	1.6	0.3	(s)	8.0	0.9	0.0	88.2	151.4	182.3	333.7
1999	1.6	52.8	5.1	0.3	1.9	0.3	0.0	7.6	1.1	0.0	89.6	152.6	175.6	328.1

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>d</sup> Small amounts of solar thermal and photovoltaic energy consumed in the commercial sector cannot be separately identified and are included in residential consumption.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to report.

Table 272. Industrial Energy Consumption Estimates, Selected Years 1960-1999, Tennessee

Year	Coal Thousand Short Tons	Natural Gas <sup>a</sup> Billion Cubic Feet	Petroleum									Hydro-electric Power <sup>b</sup> Million kWh	Wood and Waste	Other <sup>b,d</sup>	Electricity <sup>b</sup>		Electrical System Energy Losses <sup>e</sup> Million kWh	Total
			Asphalt and Road Oil <sup>b</sup>	Distillate Fuel <sup>b</sup>	Kerosene <sup>b</sup>	LPG <sup>b</sup>	Lubricants <sup>b</sup>	Motor Gasoline	Residual Fuel <sup>b</sup>	Other <sup>b,c</sup>	Total				Million kWh	Net Energy		
1960	2,307	76	1,785	2,096	1,670	275	256	627	180	R 1,413	R 8,301	0	—	—	27,514	—	68,438	—
1965	2,862	97	3,441	2,601	1,486	522	321	484	264	R 4,292	R 13,410	0	—	—	28,362	—	67,716	—
1970	2,452	123	3,628	3,172	1,709	363	334	235	593	R 6,209	R 16,245	0	—	—	27,776	—	67,310	—
1975	2,134	112	3,765	4,712	714	455	522	117	523	R 5,571	R 16,379	0	—	—	37,904	—	91,429	—
1980	2,774	123	3,378	4,252	881	960	565	36	1,445	R 8,213	R 19,730	0	—	—	32,968	—	80,167	—
1985	4,145	97	4,408	3,482	203	693	514	642	441	R 6,293	R 16,677	0	—	—	33,624	—	78,997	—
1990	3,846	110	5,798	2,925	46	761	578	583	273	R 10,730	R 21,694	f 0	—	—	35,313	—	R 77,250	—
1991	3,720	116	5,349	2,702	43	796	517	557	339	R 11,331	R 21,634	0	—	—	35,667	—	R 77,538	—
1992	3,686	126	5,281	3,659	12	2,204	527	575	295	R 12,578	R 25,131	0	—	—	41,695	—	R 88,925	—
1993	3,942	124	4,922	3,389	38	829	537	724	479	R 12,043	R 22,962	0	—	—	43,530	—	R 91,942	—
1994	4,097	119	5,448	3,746	32	758	561	785	426	R 12,790	R 24,547	R 810	—	—	43,614	—	R 91,019	—
1995	3,777	126	5,434	3,980	37	777	552	865	351	R 12,420	R 24,416	R 764	—	—	44,828	—	R 93,463	—
1996	3,670	127	5,171	3,784	41	810	535	890	184	R 7,234	R 18,649	R 819	—	—	45,781	—	R 95,409	—
1997	3,608	139	4,917	4,590	44	R 871	566	937	110	R 7,188	R 19,223	R 470	—	—	27,710	—	R 57,640	—
1998	3,463	146	5,928	3,917	66	400	592	630	166	8,668	20,367	799	—	—	30,461	—	62,927	—
1999	3,325	139	5,919	2,410	53	1,066	598	569	60	9,579	20,254	652	—	—	31,493	—	61,705	—

  

Trillion Btu																		
1960	58.1	78.6	11.8	12.2	9.5	1.1	1.5	3.3	1.1	R 8.3	R 48.9	0.0	19.5	0.0	93.9	R 299.0	233.5	R 532.5
1965	71.4	101.9	22.8	15.2	8.4	2.1	1.9	2.5	1.7	R 24.6	R 79.2	0.0	27.2	0.0	96.8	R 376.5	231.0	R 607.5
1970	58.0	125.9	24.1	18.5	9.7	1.4	2.0	1.2	3.7	R 35.3	R 95.9	0.0	37.3	0.0	94.8	R 411.9	229.7	R 641.5
1975	49.9	115.1	25.0	27.4	4.1	1.7	3.2	0.6	3.3	R 32.2	R 97.5	0.0	37.3	0.0	129.3	R 429.2	312.0	R 741.1
1980	67.2	125.1	22.4	24.8	5.0	3.5	3.4	0.2	9.1	R 46.1	R 114.5	0.0	R 49.4	0.0	112.5	R 468.7	273.5	R 742.2
1985	102.2	100.6	29.3	20.3	1.1	2.5	3.1	3.4	2.8	R 35.6	R 98.0	0.0	R 57.9	0.0	114.7	R 473.4	269.5	R 742.9
1990	96.8	113.6	38.5	17.0	0.3	2.8	3.5	3.1	1.7	R 60.1	R 126.9	f 0.0	R 35.4	f 0.0	120.5	R 493.2	R 263.6	R 756.7
1991	93.5	119.7	35.5	15.7	0.2	2.9	3.1	2.9	2.1	R 63.5	R 126.0	0.0	R 36.4	0.0	121.7	R 497.2	R 264.6	R 761.8
1992	93.1	130.2	35.0	21.3	0.1	8.0	3.2	3.0	1.9	R 70.4	R 142.9	0.0	R 36.4	0.0	142.3	R 544.8	R 303.4	R 848.2
1993	99.2	128.7	32.7	19.7	0.2	3.0	3.3	3.8	3.0	R 67.2	R 132.9	0.0	R 35.2	0.0	148.5	R 544.5	R 313.7	R 858.2
1994	102.7	122.7	36.2	21.8	0.2	2.8	3.4	4.1	2.7	R 71.5	R 142.6	R 8.4	R 48.9	0.0	148.8	R 574.0	R 310.6	R 884.6
1995	94.9	129.8	36.1	23.2	0.2	2.8	3.3	4.5	2.2	R 69.4	R 141.7	R 7.9	R 44.8	0.0	153.0	R 572.1	R 318.9	R 890.9
1996	91.8	130.6	34.3	22.0	0.2	2.9	3.2	R 4.6	1.2	R 41.8	R 110.3	R 8.5	R 42.2	0.0	156.2	R 539.6	R 325.5	R 865.1
1997	90.2	143.2	32.6	26.7	0.3	3.1	3.4	4.9	0.7	R 41.5	R 113.2	R 4.9	R 40.8	0.0	94.5	R 486.8	R 196.7	R 683.5
1998	86.6	150.2	39.3	22.8	0.4	1.4	3.6	3.3	1.0	50.4	122.3	8.3	24.1	0.0	103.9	495.4	214.7	710.1
1999	83.2	143.0	39.3	14.0	0.3	3.9	3.6	3.0	0.4	55.8	120.2	6.7	39.5	0.0	107.5	500.2	210.5	710.8

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>e</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for

electrical system energy losses.

<sup>f</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

R=Revised data.

kWh=kilowatt-hours. — =Not applicable.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 273. Transportation Energy Consumption Estimates, Selected Years 1960-1999, Tennessee**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum								Ethanol <sup>c</sup>	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total <sup>c</sup>
			Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	LPG <sup>a</sup>	Lubricants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total				Million Kilowatthours	
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels								Thousand Barrels	Million Kilowatthours	Million Kilowatthours	Total <sup>c</sup>	
1960	38	5	1,040	2,914	570	22	505	26,468	8	31,527	0	(s)	—	(s)	—
1965	9	23	1,024	4,346	1,174	54	479	31,721	22	38,819	0	(s)	—	(s)	—
1970	4	26	116	7,189	3,335	94	491	41,241	3	52,469	0	(s)	—	(s)	—
1975	(s)	19	70	10,631	3,936	120	807	53,199	191	68,953	0	(s)	—	(s)	—
1980	0	16	290	13,196	4,154	61	676	54,446	6	72,828	0	(s)	—	(s)	—
1985	0	10	154	15,221	4,862	166	615	57,068	0	78,087	R <sup>e</sup> 686	(s)	—	1	—
1990	0	20	174	19,842	4,181	126	692	56,954	5	81,974	R 583	(s)	—	1	—
1991	0	16	145	18,774	3,413	135	619	55,187	50	78,324	R 426	(s)	—	1	—
1992	0	16	343	18,860	4,479	120	631	57,667	44	82,144	R 516	(s)	—	1	—
1993	0	19	395	19,033	6,569	147	643	60,286	15	87,089	R 593	(s)	—	1	—
1994	0	18	392	19,231	7,762	240	672	62,062	3	90,362	R 841	1	—	2	—
1995	0	18	397	21,874	8,096	135	660	63,907	2	95,070	R 358	1	—	3	—
1996	0	24	231	22,119	9,317	R 133	641	63,928	2	R 96,370	R 7	1	—	3	—
1997	0	23	312	22,017	9,433	R 120	677	65,162	4	R 97,725	R 7	1	—	2	—
1998	0	16	136	23,250	9,855	3	709	66,842	0	100,794	8	2	—	4	—
1999	0	25	109	22,612	11,816	58	716	69,151	0	104,462	0	2	—	4	—
<b>Trillion Btu</b>															
1960	0.9	5.5	5.2	17.0	3.1	0.1	3.1	139.0	0.1	167.6	0.0	(s)	174.0	(s)	174.0
1965	0.2	23.7	5.2	25.3	6.5	0.2	2.9	166.6	0.1	206.9	0.0	(s)	230.9	(s)	230.9
1970	0.1	27.0	0.6	41.9	18.8	0.4	3.0	216.6	(s)	281.2	0.0	(s)	308.4	(s)	308.4
1975	(s)	19.7	0.4	61.9	22.2	0.4	4.9	279.5	1.2	370.5	0.0	(s)	390.2	(s)	390.2
1980	0.0	16.8	1.5	76.9	23.4	0.2	4.1	286.0	(s)	392.1	0.0	(s)	408.9	(s)	408.9
1985	0.0	10.5	0.8	88.7	27.5	0.6	3.7	299.8	0.0	421.0	R <sup>e</sup> 2.4	(s)	<sup>e</sup> 431.5	(s)	<sup>e</sup> 431.5
1990	0.0	20.3	0.9	115.6	23.6	0.5	4.2	299.2	(s)	443.9	R 2.1	(s)	464.2	(s)	464.2
1991	0.0	16.3	0.7	109.4	19.3	0.5	3.8	289.9	0.3	423.8	R 1.5	(s)	440.1	(s)	440.1
1992	0.0	16.9	1.7	109.9	25.3	0.4	3.8	302.9	0.3	444.4	R 1.8	(s)	461.3	(s)	461.3
1993	0.0	19.3	2.0	110.9	37.2	0.5	3.9	316.7	0.1	471.2	R 2.1	(s)	490.5	(s)	490.6
1994	0.0	18.7	2.0	112.0	44.0	0.9	4.1	R 324.6	(s)	R 487.5	R 3.0	(s)	R 506.2	(s)	R 506.2
1995	0.0	18.2	2.0	127.4	45.9	0.5	4.0	R 333.3	(s)	R 513.1	R 1.3	(s)	R 531.3	(s)	R 531.3
1996	0.0	25.0	1.2	128.8	52.8	R 0.5	3.9	R 333.4	(s)	R 520.7	(s)	(s)	R 545.7	(s)	R 545.7
1997	0.0	23.3	1.6	128.2	53.5	0.4	4.1	R 339.7	(s)	R 527.6	(s)	(s)	R 550.8	(s)	R 550.8
1998	0.0	16.9	0.7	135.4	55.9	(s)	4.3	348.4	0.0	544.7	(s)	(s)	561.6	(s)	561.6
1999	0.0	25.9	0.6	131.7	67.0	0.2	4.3	360.3	0.0	564.2	0.0	(s)	590.1	(s)	590.1

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels. Transportation use of natural gas is gas consumed in the operation of pipelines, primarily in compressors, and, since 1990, is also gas consumed as vehicle fuel.

<sup>c</sup> Ethanol blended into motor gasoline, which is accounted for under motor gasoline, is shown separately here to display the use of renewable energy by the transportation sector and is included only once in the total.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1980 and 1981 due to the expanded coverage of renewable energy sources beginning in 1981.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 274. Estimates of Energy Input at Electric Utilities, Selected Years, 1960-1999, Tennessee**

Year	Coal	Natural Gas <sup>a</sup>	Petroleum				Nuclear Electric Power	Hydroelectric Power <sup>e</sup>	Wood and Waste	Geothermal Energy	Other <sup>b,f</sup>	Total <sup>g</sup>
			Heavy Oil <sup>b,c</sup>	Light Oil <sup>b,d</sup>	Petroleum Coke <sup>b</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels				Million Kilowatthours					
1960	12,138	7	0	(s)	0	(s)	0	8,676	0	0	0	—
1965	10,637	16	0	0	0	0	0	8,750	0	0	0	—
1970	14,727	17	0	0	0	0	0	8,067	0	0	0	—
1975	18,848	0	0	1,310	0	1,310	0	11,806	0	0	0	—
1980	21,679	1	0	406	0	406	519	8,764	0	0	0	—
1985	20,853	0	0	237	0	237	9,672	6,539	0	0	0	—
1990	20,814	1	0	232	0	232	14,003	9,537	0	0	0	—
1991	19,216	(s)	0	272	0	272	16,587	10,497	0	0	0	—
1992	20,263	(s)	0	225	0	225	15,654	9,590	0	0	0	—
1993	23,801	2	0	413	0	413	3,305	8,394	0	0	0	—
1994	21,253	1	0	519	0	519	11,932	10,399	0	0	0	—
1995	23,477	2	0	455	0	455	15,708	8,186	0	0	0	—
1996	22,963	1	0	460	0	460	22,924	9,900	0	0	0	—
1997	24,464	2	0	375	0	375	24,648	9,401	0	0	0	—
1998	23,321	6	0	1,448	0	1,448	28,388	9,385	0	0	0	—
1999	23,216	3	0	1,042	0	1,042	27,227	6,499	0	0	0	—
<b>Trillion Btu</b>												
1960	291.8	7.5	0.0	(s)	0.0	(s)	0.0	93.4	0.0	0.0	0.0	392.6
1965	250.9	17.0	0.0	0.0	0.0	0.0	0.0	91.5	0.0	0.0	0.0	359.4
1970	332.7	17.6	0.0	0.0	0.0	0.0	0.0	84.7	0.0	0.0	0.0	435.0
1975	414.3	0.0	0.0	7.6	0.0	7.6	0.0	122.9	0.0	0.0	0.0	544.8
1980	504.1	1.1	0.0	2.4	0.0	2.4	5.7	91.0	0.0	0.0	0.0	604.3
1985	493.3	0.0	0.0	1.4	0.0	1.4	104.6	68.3	0.0	0.0	0.0	667.6
1990	498.1	0.6	0.0	1.4	0.0	1.4	149.5	99.2	0.0	0.0	0.0	748.8
1991	467.7	0.2	0.0	1.6	0.0	1.6	178.1	109.5	0.0	0.0	0.0	757.2
1992	493.7	0.3	0.0	1.3	0.0	1.3	167.1	99.2	0.0	0.0	0.0	761.6
1993	584.0	1.6	0.0	2.4	0.0	2.4	35.3	86.5	0.0	0.0	0.0	709.8
1994	518.0	1.1	0.0	3.0	0.0	3.0	127.4	107.3	0.0	0.0	0.0	756.7
1995	569.5	2.1	0.0	2.7	0.0	2.7	167.4	84.4	0.0	0.0	0.0	826.2
1996	554.0	0.6	0.0	2.7	0.0	2.7	243.5	<sup>R</sup> 102.4	0.0	0.0	0.0	903.1
1997	580.1	1.7	0.0	2.2	0.0	2.2	261.8	<sup>R</sup> 97.4	0.0	0.0	0.0	<sup>R</sup> 943.1
1998	547.2	6.4	0.0	8.4	0.0	8.4	301.6	97.1	0.0	0.0	0.0	960.7
1999	540.2	3.6	0.0	6.1	0.0	6.1	289.2	67.2	0.0	0.0	0.0	906.3

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> Prior to 1980, based on oil used in steam plants. Since 1980, heavy oil includes fuel oil nos. 4, 5, and 6 and residual fuel oils.

<sup>d</sup> Prior to 1980, based on oil used in internal combustion and gas turbine engine plants. Since 1980, light oil includes fuel oil nos. 1 and 2, kerosene, and jet fuel.

<sup>e</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>f</sup> "Other" is electricity generated for distribution from wind, photovoltaic, and solar thermal energy.

<sup>g</sup> If applicable, from 1989, includes net imports of electricity generated from nonrenewable energy sources not shown in other columns. See data in appendix Table A8.

<sup>R</sup> Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 275. Energy Consumption Estimates by Source, Selected Years 1960-1999, Texas**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum											Nuclear Electric Power	Hydro-electric Power <sup>d</sup>	Wood and Waste	Other <sup>a,e</sup>	Net Inter-state Flow of Electricity/Losses <sup>f</sup>	Total <sup>g</sup>
			Asphalt & Road Oil <sup>a</sup>	Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	Kero-sene <sup>a</sup>	LPG <sup>a</sup>	Lubri-cants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Other <sup>a,c</sup>	Total						
			Thousand Barrels															Million kWh	
1960	1,067	2,720	6,284	3,261	24,400	10,842	3,391	73,297	3,493	91,841	22,584	R 55,967	R 295,360	0	927	—	—	-1,996	—
1965	1,146	3,068	7,811	3,457	24,854	15,365	3,459	109,109	3,788	107,851	14,322	R 80,537	R 370,553	0	661	—	—	-2,853	—
1970	1,154	4,093	11,885	2,007	32,410	24,430	7,500	151,223	4,204	141,393	14,146	R 100,279	R 489,477	0	883	—	—	-4,903	—
1975	12,765	3,944	8,150	1,312	54,706	27,308	7,196	157,246	4,321	175,538	38,536	R 124,910	R 599,224	0	1,584	—	—	-5,489	—
1980	48,602	4,091	10,906	1,264	72,513	30,934	15,355	189,802	5,340	180,997	65,070	R 218,266	R 790,447	0	398	—	—	-20,069	—
1985	77,017	3,386	11,808	1,317	94,121	74,500	776	256,932	4,859	205,419	28,713	R 141,141	R 819,586	0	1,397	—	—	30,397	—
1990	91,415	3,602	14,013	838	82,338	95,903	200	293,043	5,468	205,402	27,843	R 177,136	R 902,184	15,859	R <sup>h</sup> 1,794	—	—	R 20,914	—
1991	92,064	3,560	9,371	655	84,708	90,674	93	320,936	4,891	198,780	28,600	R 176,427	R 915,137	19,800	R 2,225	—	—	R 17,969	—
1992	91,568	3,476	11,800	783	90,279	90,029	173	333,233	4,987	200,686	30,937	R 190,910	R 953,817	24,496	R 3,325	—	—	R 5,201	—
1993	96,809	3,741	12,734	693	91,759	86,961	152	322,305	5,078	207,441	22,859	R 187,535	R 937,518	12,407	R 1,786	—	—	R 18,124	—
1994	93,829	3,666	10,947	773	89,545	83,397	148	358,599	5,308	218,772	21,946	R 196,579	R 986,013	28,745	R 1,530	—	—	R 7,838	—
1995	92,612	3,802	11,794	645	82,610	83,002	196	370,395	5,216	213,428	22,894	R 188,355	R 978,535	36,151	R 1,703	—	—	R 1,804	—
1996	98,997	3,991	11,962	625	92,763	99,870	237	R 395,062	5,062	226,381	20,630	R 216,465	R 1,069,057	35,767	R 960	—	—	R 23,472	—
1997	101,296	3,951	10,509	R 658	86,741	105,610	364	R 449,056	5,348	224,997	22,550	R 229,580	R 1,135,414	37,358	R 2,711	—	—	R 25,705	—
1998	99,430	4,031	11,201	555	92,963	108,536	430	447,111	5,599	236,779	27,121	220,387	1,150,682	38,685	1,911	—	—	20,258	—
1999	102,476	3,859	8,438	796	106,313	104,896	222	445,191	5,657	242,992	21,747	221,517	1,157,769	36,760	1,249	—	—	-13,516	—

  

Trillion Btu																			
1960	25.0	2,815.5	41.7	16.5	142.1	58.6	19.2	294.0	21.2	482.4	142.0	R 334.3	R 1,552.0	0.0	10.0	38.3	0.0	-6.8	R 4,433.9
1965	29.2	3,181.5	51.8	17.5	144.8	84.3	19.6	437.6	23.0	566.5	90.0	R 473.8	R 1,909.0	0.0	6.9	41.2	0.0	-9.7	R 5,158.0
1970	30.8	4,203.9	78.9	10.1	188.8	135.9	42.5	571.5	25.5	742.7	88.9	R 584.2	R 2,469.1	0.0	9.3	52.2	0.0	16.7	R 6,781.9
1975	196.2	4,046.9	54.1	6.6	318.7	152.7	40.8	584.2	26.2	922.1	242.3	R 726.8	R 3,074.4	0.0	16.5	55.8	0.0	-18.7	R 7,371.1
1980	734.1	4,226.1	72.4	6.4	422.4	173.3	87.1	697.3	32.4	950.8	409.1	R 1,241.1	R 4,092.2	0.0	4.1	R 83.5	0.0	-68.5	R 9,071.6
1985	1,149.0	3,514.4	78.4	6.6	548.3	420.5	4.4	925.7	29.5	1,079.1	180.5	R 808.2	R 4,081.1	0.0	14.6	R 76.2	0.0	103.7	R 8,939.0
1990	1,333.9	3,745.9	93.0	4.2	479.6	542.1	1.1	1,062.3	33.2	1,079.0	175.1	R 1,007.3	R 4,476.9	169.4	R <sup>h</sup> 18.7	R 85.4	R <sup>h</sup> 0.6	R 71.4	R <sup>h</sup> 9,901.6
1991	1,333.1	3,691.8	62.2	3.3	493.4	512.8	0.5	1,159.9	29.7	1,044.2	179.8	R 1,001.7	R 4,487.5	212.7	23.2	R 88.0	R 0.7	R 61.3	R 9,893.6
1992	1,324.2	3,625.8	78.3	4.0	525.9	509.1	1.0	1,207.6	30.2	1,054.2	194.5	R 1,077.3	R 4,682.1	261.6	R 34.4	R 96.4	0.7	R 17.7	R 10,025.9
1993	1,413.2	3,846.0	84.5	3.5	534.5	492.0	0.9	1,162.2	30.8	1,089.7	143.7	R 1,060.2	R 4,602.1	132.5	18.4	R 95.5	R 0.8	R 61.8	R 10,162.2
1994	1,382.8	3,802.0	72.6	3.9	521.6	472.5	0.8	1,303.5	32.2	R 1,144.2	138.0	R 1,110.1	R 4,799.4	306.9	15.8	R 96.1	0.8	R 26.7	R 10,420.5
1995	1,361.7	3,943.2	78.3	3.3	481.2	470.5	1.1	1,341.9	31.6	R 1,113.0	143.9	R 1,063.2	R 4,728.1	385.3	17.6	R 89.5	R 0.9	R 6.2	R 10,522.8
1996	1,475.4	4,123.0	79.4	3.2	540.3	566.2	1.3	R 1,427.4	30.7	R 1,180.8	129.7	R 1,215.7	R 5,174.7	379.9	9.9	R 108.4	R 1.4	R 80.1	R 11,342.3
1997	1,507.1	4,061.2	69.7	3.3	505.3	598.8	2.1	R 1,623.8	32.4	R 1,172.9	141.8	R 1,292.3	R 5,442.4	396.9	R 28.1	R 108.5	1.8	R 87.7	R 11,624.2
1998	1,489.7	4,196.2	74.3	2.8	541.5	615.4	2.4	1,615.9	34.0	1,234.1	170.5	1,240.5	5,531.4	411.0	19.8	82.4	1.9	69.1	11,793.4
1999	1,534.7	3,982.4	56.0	4.0	619.3	594.8	1.3	1,609.8	34.3	1,266.2	136.7	1,242.9	5,565.3	390.5	12.9	67.8	4.5	-46.1	11,501.0

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products consumed in the industrial sector. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>e</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>f</sup> Net interstate flow of electricity is the difference between the amount of energy in the electricity sold within a State (including associated losses) and the energy input at the electric utilities within the State. A positive number

indicates that more electricity (including associated losses) came into the State than went out of the State during the year; conversely, a negative number indicates that more electricity (including associated losses) went out of the State than came into the State.

<sup>g</sup> From 1989, "Total" does not equal the sum of the columns. Net imports of electricity generated from nonrenewable energy sources (shown in appendix Table A8) is included in the total but not in any other columns.

<sup>h</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

kWh=kilowatthours. R=Revised data. — =Not applicable.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 276. Residential Energy Consumption Estimates, Selected Years 1960-1999, Texas**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum				Wood Thousand Cords	Geothermal	Solar <sup>c</sup>	Electricity <sup>a</sup> Million Kilowatthours	Net Energy	Electrical System Energy Losses <sup>d</sup> Million Kilowatthours	Total
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Total							
			Thousand Barrels										
1960	6	172	96	6	10,083	10,185	705	—	—	11,316	—	28,146	—
1965	2	183	71	7	13,052	13,131	469	—	—	18,745	—	44,755	—
1970	1	232	134	33	15,397	15,565	322	—	—	32,591	—	78,980	—
1975	0	232	270	39	11,419	11,728	378	—	—	40,892	—	98,636	—
1980	(s)	225	8	198	6,131	6,337	R 2,008	—	—	57,178	—	139,037	—
1985	2	213	39	112	7,262	7,414	1,188	—	—	71,740	—	168,547	—
1990	4	211	3	26	6,133	6,162	746	—	—	82,548	—	R 180,581	—
1991	4	222	3	34	4,040	4,078	786	—	—	84,088	—	R 182,802	—
1992	4	215	2	23	3,448	3,473	827	—	—	81,934	—	R 174,745	—
1993	2	232	3	30	3,674	3,707	725	—	—	87,686	—	R 185,205	—
1994	(s)	213	6	20	3,627	3,653	711	—	—	89,793	—	R 187,390	—
1995	0	206	5	22	3,319	3,346	789	—	—	92,831	—	R 193,547	—
1996	0	229	(s)	38	2,312	2,351	787	—	—	99,656	—	R 207,684	—
1997	(s)	235	(s)	45	R 3,503	R 3,548	R 543	—	—	101,094	—	R 210,286	—
1998	5	199	(s)	31	4,552	4,583	479	—	—	110,434	—	228,134	—
1999	3	176	2	31	9,091	9,125	513	—	—	108,591	—	212,764	—

  

Trillion Btu													
1960	0.1	177.7	0.6	(s)	40.4	41.0	14.1	0.0	0.0	38.6	271.5	96.0	367.6
1965	(s)	189.3	0.4	(s)	52.4	52.8	9.4	0.0	0.0	64.0	315.5	152.7	468.2
1970	(s)	238.5	0.8	0.2	58.2	59.2	6.4	0.0	0.0	111.2	415.3	269.5	684.7
1975	0.0	239.2	1.6	0.2	42.4	44.2	7.6	0.0	0.0	139.5	430.5	336.5	767.1
1980	(s)	231.7	(s)	1.1	22.5	23.7	R 40.2	0.0	0.0	195.1	R 490.7	474.4	R 965.1
1985	0.1	221.0	0.2	0.6	26.2	27.0	23.8	0.0	0.0	244.8	516.6	575.1	1,091.7
1990	0.1	219.5	(s)	0.1	22.2	22.4	14.9	e 0.2	R e 0.4	281.7	e 539.1	R 616.1	R e 1,155.3
1991	0.1	231.0	(s)	0.2	14.6	14.8	15.7	0.2	0.4	286.9	R 549.2	R 623.7	R 1,172.9
1992	0.1	225.3	(s)	0.1	12.5	12.6	16.5	0.2	0.4	279.6	R 534.8	R 596.2	R 1,131.0
1993	(s)	238.5	(s)	0.2	13.2	13.4	14.5	0.2	0.4	299.2	566.3	R 631.9	R 1,198.2
1994	(s)	222.5	(s)	0.1	13.2	13.3	14.2	0.2	R 0.5	306.4	557.1	R 639.4	R 1,196.5
1995	0.0	215.2	(s)	0.1	12.0	12.2	15.8	0.2	R 0.5	316.7	R 560.6	R 660.4	R 1,221.0
1996	0.0	237.7	(s)	0.2	8.4	8.6	15.7	0.3	0.5	340.0	602.8	R 708.6	R 1,311.4
1997	(s)	242.0	(s)	0.3	R 12.7	R 12.9	R 10.9	0.3	0.5	344.9	R 611.5	R 717.5	R 1,329.0
1998	0.1	209.1	(s)	0.2	16.5	16.6	9.6	0.3	0.6	376.8	613.1	778.4	1,391.5
1999	0.1	182.4	(s)	0.2	32.9	33.1	10.3	0.3	0.6	370.5	597.3	726.0	1,323.3

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Includes small amounts of solar thermal and photovoltaic energy consumed by the commercial sector that cannot be separately identified. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 277. Commercial Energy Consumption Estimates, Selected Years 1960-1999, Texas**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum						Wood	Geothermal	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>c</sup>	Total <sup>d</sup>
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels						Thousand Cords	Million Kilowatthours	Million Kilowatthours			
1960	11	60	595	656	1,779	663	191	3,884	13	—	9,801	—	24,378	—
1965	4	81	440	788	2,303	711	64	4,307	9	—	14,804	—	35,346	—
1970	1	146	830	3,603	2,717	692	78	7,920	6	—	22,869	—	55,420	—
1975	0	117	1,669	4,192	2,015	677	677	9,240	7	—	33,884	—	81,733	—
1980	1	169	2,842	3,251	1,082	3,299	2,569	13,043	48	—	44,062	—	107,144	—
1985	5	152	9,582	250	1,282	1,954	252	13,320	R 32	—	60,150	—	141,317	—
1990	7	172	3,274	25	1,082	2,294	72	6,746	R 47	—	70,781	—	R 154,840	—
1991	7	181	2,950	12	713	1,623	217	5,516	R 50	—	72,141	—	R 156,830	—
1992	6	185	3,104	68	609	1,446	16	5,242	R 54	—	72,076	—	R 153,722	—
1993	4	176	2,343	25	648	159	0	3,174	58	—	75,466	—	R 159,395	—
1994	(s)	180	2,524	29	640	160	1	3,355	60	—	78,058	—	R 162,900	—
1995	0	210	2,207	46	586	164	(s)	3,003	60	—	80,354	—	R 167,534	—
1996	0	179	2,352	38	408	163	0	2,961	65	—	83,477	—	R 173,968	—
1997	(s)	216	1,720	38	R 618	163	0	R 2,539	R 60	—	85,162	—	R 177,146	—
1998	9	170	2,110	52	803	163	0	3,129	60	—	91,548	—	189,120	—
1999	5	172	2,803	57	1,604	165	0	4,629	72	—	93,492	—	183,180	—

  

Trillion Btu														
1960	0.2	61.8	3.5	3.7	7.1	3.5	1.2	19.0	0.3	0.0	33.4	114.7	83.2	197.9
1965	0.1	83.6	2.6	4.5	9.2	3.7	0.4	20.4	0.2	0.0	50.5	154.8	120.6	275.4
1970	(s)	150.0	4.8	20.4	10.3	3.6	0.5	39.7	0.1	0.0	78.0	267.9	189.1	456.9
1975	0.0	120.2	9.7	23.8	7.5	3.6	4.3	48.8	0.1	0.0	115.6	284.8	278.9	563.7
1980	(s)	173.7	16.6	18.4	4.0	17.3	16.2	72.4	1.0	0.0	150.3	397.5	365.6	763.0
1985	0.1	157.7	55.8	1.4	4.6	10.3	1.6	73.7	R 0.6	0.0	205.2	R 437.4	482.2	R 919.6
1990	0.2	179.6	19.1	0.1	3.9	12.0	0.5	35.6	R 0.9	e (s)	241.5	R e 457.9	R 528.3	R e 986.2
1991	0.2	188.2	17.2	0.1	2.6	8.5	1.4	29.7	R 1.0	0.1	246.1	R 465.3	R 535.1	R 1,000.4
1992	0.1	193.8	18.1	0.4	2.2	7.6	0.1	28.4	R 1.1	0.1	245.9	R 469.4	R 524.5	R 993.9
1993	0.1	181.1	13.6	0.1	2.3	0.8	0.0	17.0	1.2	0.1	257.5	456.8	R 543.9	R 1,000.7
1994	(s)	187.9	14.7	0.2	2.3	0.8	(s)	18.0	1.2	0.1	266.3	473.6	555.8	1,029.4
1995	0.0	218.5	12.9	0.3	2.1	0.9	(s)	16.1	1.2	0.1	274.2	510.0	R 571.6	R 1,081.7
1996	0.0	185.1	13.7	0.2	1.5	0.9	0.0	16.2	1.3	0.2	284.8	487.6	R 593.6	R 1,081.2
1997	(s)	222.8	10.0	0.2	R 2.2	R 0.8	0.0	R 13.3	R 1.2	0.2	290.6	R 528.0	R 604.4	R 1,132.5
1998	0.2	177.8	12.3	0.3	2.9	0.9	0.0	16.3	1.2	0.2	312.4	508.2	645.3	1,153.5
1999	0.1	178.1	16.3	0.3	5.8	0.9	0.0	23.3	1.4	0.2	319.0	522.2	625.0	1,147.2

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>d</sup> Small amounts of solar thermal and photovoltaic energy consumed in the commercial sector cannot be separately identified and are included in residential consumption.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

—=Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.



**Table 278. Industrial Energy Consumption Estimates, Selected Years 1960-1999, Texas**

Year	Coal Thousand Short Tons	Natural Gas <sup>a</sup> Billion Cubic Feet	Petroleum									Hydro-electric Power <sup>b</sup> Million kWh	Wood and Waste	Other <sup>b,d</sup>	Electricity <sup>b</sup> Million kWh	Net Energy	Electrical System Energy Losses <sup>e</sup> Million kWh	Total
			Asphalt and Road Oil <sup>b</sup>	Distillate Fuel <sup>b</sup>	Kero-sene <sup>b</sup>	LPG <sup>b</sup>	Lubri-cants <sup>b</sup>	Motor Gasoline	Residual Fuel <sup>b</sup>	Other <sup>b,c</sup>	Total							
			Thousand Barrels															
1960	1,031	2,029	6,284	10,118	2,729	59,411	1,712	3,798	4,615	R 55,967	R 144,635	0	—	—	14,602	—	36,320	—
1965	1,136	2,098	7,811	8,519	2,663	89,166	1,974	2,563	1,879	R 80,537	R 195,111	0	—	—	23,685	—	56,550	—
1970	1,150	2,557	11,885	8,947	3,863	127,521	2,581	1,410	2,297	R 100,279	R 258,783	0	—	—	40,274	—	97,598	—
1975	3,720	2,160	8,150	15,301	2,965	138,844	2,583	997	11,070	R 124,910	R 304,819	5	—	—	54,712	—	131,973	—
1980	3,250	2,163	10,906	20,250	11,906	181,940	3,431	470	16,029	R 218,266	R 463,198	0	—	—	78,190	—	190,131	—
1985	5,192	1,732	11,808	27,327	414	247,779	3,122	4,704	5,969	R 141,141	R 442,262	0	—	—	81,235	—	190,854	—
1990	4,157	2,105	14,013	25,890	149	285,349	3,513	4,336	1,291	R 177,136	R 511,676	f 0	—	—	84,087	—	R 183,949	—
1991	4,198	2,070	9,371	23,134	47	315,838	3,142	4,618	1,101	R 176,427	R 533,677	0	—	—	84,122	—	R 182,876	—
1992	4,225	2,028	11,800	23,048	82	328,866	3,204	4,338	822	R 190,910	R 563,071	0	—	—	85,421	—	R 182,184	—
1993	4,667	2,179	12,734	22,326	97	317,635	3,262	3,438	2,444	R 187,216	R 549,153	0	—	—	86,933	—	R 183,615	—
1994	5,350	2,128	10,947	18,918	99	353,718	3,410	3,750	2,424	R 196,577	R 589,843	0	—	—	90,329	—	R 188,510	—
1995	4,255	2,257	11,794	16,503	128	366,168	3,351	3,944	2,497	R 188,355	R 592,740	0	—	—	90,093	—	R 187,839	—
1996	4,808	2,469	11,962	20,353	161	392,068	3,252	4,040	2,127	R 216,465	R 650,428	R 6	—	—	95,308	—	R 198,624	—
1997	4,759	2,361	10,509	15,620	282	444,688	3,436	4,236	1,886	R 229,580	R 710,237	R 598	—	—	100,429	—	R 208,902	—
1998	4,755	2,354	11,201	16,368	347	441,020	3,597	4,961	910	220,387	698,792	6	—	—	102,702	—	212,162	—
1999	4,723	2,234	8,438	20,967	134	434,130	3,634	2,501	762	221,517	692,084	3	—	—	99,741	—	195,424	—

  

Trillion Btu																		
1960	24.4	2,100.3	41.7	58.9	15.5	238.3	10.4	19.9	29.0	R 334.3	R 748.0	0.0	23.9	0.0	49.8	R 2,946.5	123.9	R 3,070.4
1965	29.0	2,175.3	51.8	49.6	15.1	357.6	12.0	13.5	11.8	R 473.8	R 985.2	0.0	30.7	0.0	80.8	R 3,301.1	192.9	R 3,494.0
1970	30.7	2,626.3	78.9	52.1	21.9	481.9	15.7	7.4	14.4	R 584.2	R 1,256.5	0.0	44.6	0.0	137.4	R 4,095.5	333.0	R 4,428.5
1975	77.7	2,224.0	54.1	89.1	16.8	515.8	15.7	5.2	69.6	R 726.8	R 1,493.1	0.1	47.2	0.0	186.7	R 4,028.6	450.3	R 4,478.9
1980	63.3	2,229.7	72.4	118.0	67.5	668.4	20.8	2.5	100.8	R 1,241.1	R 2,291.4	0.0	R 41.6	0.0	266.8	R 4,892.8	648.7	R 5,541.5
1985	85.4	1,799.3	78.4	159.2	2.3	892.7	18.9	24.7	37.5	R 808.2	R 2,021.9	0.0	R 48.7	0.0	277.2	R 4,232.6	651.2	R 4,883.8
1990	61.5	2,193.7	93.0	150.8	0.8	1,034.4	21.3	22.8	8.1	R 1,007.3	R 2,338.6	f 0.0	R 66.7	f 0.0	286.9	R f 4,947.3	R 627.6	R f 5,575.0
1991	63.2	2,152.2	62.2	134.8	0.3	1,141.4	19.1	24.3	6.9	R 1,001.7	R 2,390.6	0.0	R 68.4	0.0	287.0	R 4,961.4	R 624.0	R 5,585.4
1992	60.5	2,128.3	78.3	134.3	0.5	1,191.8	19.4	22.8	5.2	R 1,077.3	R 2,529.6	0.0	R 75.9	0.0	291.5	R 5,085.7	R 621.6	R 5,707.3
1993	70.9	2,241.5	84.5	130.1	0.6	1,145.4	19.8	18.1	15.4	R 1,058.3	R 2,472.0	0.0	R 76.8	0.0	296.6	R 5,157.8	R 626.5	R 5,784.3
1994	82.8	2,218.4	72.6	110.2	0.6	1,285.8	20.7	R 19.6	15.2	R 1,110.1	R 2,634.8	0.0	R 77.5	0.0	308.2	R 5,321.8	R 643.2	R 5,965.0
1995	63.7	2,352.8	78.3	96.1	0.7	1,326.6	20.3	R 20.6	15.7	R 1,063.2	R 2,621.5	0.0	R 72.5	0.0	307.4	R 5,418.0	R 640.9	R 6,058.9
1996	73.8	2,558.9	79.4	118.6	0.9	1,416.5	19.7	R 21.1	13.4	R 1,215.7	R 2,885.2	0.1	R 91.3	R 0.5	325.2	R 5,935.0	R 677.7	R 6,612.7
1997	74.0	2,431.0	69.7	91.0	1.6	1,608.0	20.8	R 22.1	11.9	R 1,292.3	R 3,117.4	R 6.2	R 96.4	R 0.9	342.7	R 6,068.5	R 712.8	R 6,781.3
1998	67.7	2,467.8	74.3	95.3	2.0	1,593.8	21.8	25.9	5.7	1,240.5	3,059.4	0.1	71.6	0.8	350.4	6,017.8	723.9	6,741.7
1999	67.2	2,316.3	56.0	122.1	0.8	1,569.8	22.0	13.0	4.8	1,242.9	3,031.5	(s)	56.1	3.3	340.3	5,814.7	666.8	6,481.5

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>e</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>f</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

R=Revised data.

kWh=kilowatthours. — =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 279. Transportation Energy Consumption Estimates, Selected Years 1960-1999, Texas**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum								Ethanol <sup>c</sup>	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total <sup>c</sup>
			Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	LPG <sup>a</sup>	Lubricants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total					
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels								Thousand Barrels	Million Kilowatthours	Million Kilowatthours	Total <sup>c</sup>	
1960	18	52	3,261	13,571	10,842	2,024	1,780	87,381	17,736	136,595	0	8	—	20	—
1965	4	68	3,457	15,810	15,365	4,588	1,814	104,577	12,346	157,957	0	4	—	10	—
1970	2	96	2,007	22,454	24,430	5,587	1,623	139,292	11,667	207,059	0	0	—	0	—
1975	1	82	1,312	37,391	27,308	4,969	1,738	173,854	25,049	271,622	0	0	—	0	—
1980	0	105	1,264	48,286	30,934	649	1,909	177,228	45,812	306,082	0	0	—	0	—
1985	0	92	1,317	56,398	74,500	609	1,738	198,761	21,610	354,933	R <sup>e</sup> 807	0	—	0	—
1990	0	106	838	52,471	95,903	479	1,955	198,773	26,227	376,646	R <sup>e</sup> 584	0	—	0	—
1991	0	82	655	58,273	90,674	345	1,749	192,539	27,179	371,414	R <sup>e</sup> 582	0	—	0	—
1992	0	81	783	63,829	90,029	310	1,783	194,901	29,922	381,557	R <sup>e</sup> 658	0	—	0	—
1993	0	82	693	66,848	86,961	348	1,816	203,844	20,088	380,598	R <sup>e</sup> 150	(s)	—	(s)	—
1994	0	96	773	67,876	83,397	614	1,898	214,861	19,178	388,597	R <sup>e</sup> 371	0	—	0	—
1995	0	82	645	63,563	83,002	322	1,865	209,319	20,335	379,053	R <sup>e</sup> 1,215	0	—	0	—
1996	0	76	625	69,386	99,870	R <sup>e</sup> 274	1,810	222,177	18,169	R <sup>e</sup> 412,311	R <sup>e</sup> 452	8	—	16	—
1997	0	82	R <sup>e</sup> 658	69,076	105,610	R <sup>e</sup> 246	1,912	220,599	20,640	R <sup>e</sup> 418,741	R <sup>e</sup> 1,069	19	—	39	—
1998	0	66	555	74,226	108,536	735	2,002	231,655	26,200	443,907	1,583	21	—	43	—
1999	0	70	796	82,263	104,896	365	2,023	240,326	20,976	451,645	1,364	19	—	38	—

  

Trillion Btu															
1960	0.3	54.1	16.5	79.1	58.6	8.1	10.8	459.0	111.5	743.5	0.0	(s)	798.0	0.1	798.0
1965	0.1	70.0	17.5	92.1	84.3	18.4	11.0	549.3	77.6	850.3	0.0	(s)	920.4	(s)	920.4
1970	(s)	98.8	10.1	130.8	135.9	21.1	9.8	731.7	73.3	1,112.9	0.0	0.0	1,211.7	0.0	1,211.7
1975	(s)	84.6	6.6	217.8	152.7	18.5	10.5	913.3	157.5	1,476.8	0.0	0.0	1,561.4	0.0	1,561.4
1980	0.0	108.1	6.4	281.3	173.3	2.4	11.6	931.0	288.0	1,693.9	0.0	0.0	1,801.9	0.0	1,801.9
1985	0.0	95.6	6.6	328.5	420.5	2.2	10.5	1,044.1	135.9	1,948.4	R <sup>e</sup> 2.9	0.0	<sup>e</sup> 2,044.0	0.0	<sup>e</sup> 2,044.0
1990	0.0	110.5	4.2	305.6	542.1	1.7	11.9	1,044.2	164.9	2,074.6	R <sup>e</sup> 2.1	0.0	2,185.2	0.0	2,185.2
1991	0.0	85.2	3.3	339.4	512.8	1.2	10.6	1,011.4	170.9	2,049.7	R <sup>e</sup> 2.1	0.0	2,134.9	0.0	2,134.9
1992	0.0	84.9	4.0	371.8	509.1	1.1	10.8	1,023.8	188.1	2,108.7	R <sup>e</sup> 2.3	0.0	2,193.6	0.0	2,193.6
1993	0.0	84.6	3.5	389.4	492.0	1.3	11.0	1,070.8	126.3	2,094.3	0.5	(s)	2,178.9	(s)	2,178.9
1994	0.0	99.8	3.9	395.4	472.5	2.2	11.5	R <sup>e</sup> 1,123.7	120.6	R <sup>e</sup> 2,129.8	R <sup>e</sup> 1.3	0.0	R <sup>e</sup> 2,229.6	0.0	R <sup>e</sup> 2,229.6
1995	0.0	85.4	3.3	370.3	470.5	1.2	11.3	R <sup>e</sup> 1,091.6	127.8	R <sup>e</sup> 2,075.9	R <sup>e</sup> 4.3	0.0	R <sup>e</sup> 2,161.3	0.0	R <sup>e</sup> 2,161.3
1996	0.0	78.4	3.2	404.2	566.2	1.0	11.0	R <sup>e</sup> 1,158.9	114.2	R <sup>e</sup> 2,258.6	R <sup>e</sup> 1.6	(s)	R <sup>e</sup> 2,337.0	0.1	R <sup>e</sup> 2,337.1
1997	0.0	84.6	3.3	402.4	598.8	R <sup>e</sup> 0.9	11.6	R <sup>e</sup> 1,150.0	129.8	R <sup>e</sup> 2,296.7	R <sup>e</sup> 3.8	0.1	R <sup>e</sup> 2,381.4	0.1	R <sup>e</sup> 2,381.5
1998	0.0	69.0	2.8	432.4	615.4	2.7	12.1	1,207.4	164.7	2,437.5	5.6	0.1	2,506.5	0.1	2,506.7
1999	0.0	73.0	4.0	479.2	594.8	1.3	12.3	1,252.3	131.9	2,475.8	4.8	0.1	2,548.8	0.1	2,549.0

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels. Transportation use of natural gas is gas consumed in the operation of pipelines, primarily in compressors, and, since 1990, is also gas consumed as vehicle fuel.

<sup>c</sup> Ethanol blended into motor gasoline, which is accounted for under motor gasoline, is shown separately here to display the use of renewable energy by the transportation sector and is included only once in the total.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1980 and 1981 due to the expanded coverage of renewable energy sources beginning in 1981.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 280. Estimates of Energy Input at Electric Utilities, Selected Years, 1960-1999, Texas**

Year	Coal	Natural Gas <sup>a</sup>	Petroleum				Nuclear Electric Power	Hydroelectric Power <sup>e</sup>	Wood and Waste	Geothermal Energy	Other <sup>b,f</sup>	Total <sup>g</sup>
			Heavy Oil <sup>b,c</sup>	Light Oil <sup>b,d</sup>	Petroleum Coke <sup>b</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels				Million Kilowatthours					
1960	0	407	43	18	0	61	0	927	0	0	0	—
1965	0	640	33	14	0	47	0	661	87	0	0	—
1970	0	1,062	104	45	0	149	0	883	97	0	0	—
1975	9,044	1,353	1,740	75	0	1,815	0	1,579	89	0	0	—
1980	45,351	1,430	660	1,126	0	1,786	0	398	79	0	0	—
1985	71,818	1,198	881	775	0	1,657	0	1,397	300	0	0	—
1990	87,248	1,007	254	701	0	954	15,859	1,794	279	0	(s)	—
1991	87,856	1,005	104	348	0	452	19,800	2,225	276	0	(s)	—
1992	87,333	968	177	296	0	473	24,496	R 3,325	281	0	(s)	—
1993	92,135	1,073	328	239	319	885	12,407	1,786	295	0	(s)	—
1994	88,479	1,049	343	220	2	565	28,745	1,530	303	0	(s)	—
1995	88,358	1,047	62	331	0	393	36,151	1,703	0	0	(s)	—
1996	94,190	1,039	335	672	0	1,006	35,767	954	0	0	(s)	—
1997	96,537	1,057	24	325	0	349	37,358	R 2,112	0	0	(s)	—
1998	94,661	1,243	11	259	0	271	38,685	1,905	0	0	(s)	—
1999	97,746	1,207	10	278	0	288	36,760	1,245	0	0	(s)	—
<b>Trillion Btu</b>												
1960	0.0	421.6	0.3	0.1	0.0	0.4	0.0	10.0	0.0	0.0	0.0	431.9
1965	0.0	663.2	0.2	0.1	0.0	0.3	0.0	6.9	0.9	0.0	0.0	671.3
1970	0.0	1,090.3	0.7	0.3	0.0	0.9	0.0	9.3	1.0	0.0	0.0	1,101.5
1975	118.5	1,379.0	10.9	0.4	0.0	11.4	0.0	16.4	0.9	0.0	0.0	1,526.3
1980	670.8	1,482.9	4.2	6.6	0.0	10.7	0.0	4.1	0.8	0.0	0.0	2,169.4
1985	1,063.4	1,240.7	5.5	4.5	0.0	10.1	0.0	14.6	3.1	0.0	0.0	2,331.9
1990	1,272.2	1,042.6	1.6	4.1	0.0	5.7	169.4	18.7	2.9	0.0	(s)	2,510.8
1991	1,269.6	1,035.2	0.7	2.0	0.0	2.7	212.7	23.2	2.9	0.0	(s)	2,541.6
1992	1,263.5	993.3	1.1	1.7	0.0	2.8	261.6	R 34.4	2.9	0.0	(s)	2,541.5
1993	1,342.2	1,100.4	2.1	1.4	1.9	5.4	132.5	18.4	3.0	0.0	(s)	2,593.7
1994	1,299.9	1,073.3	2.2	1.3	(s)	3.5	306.9	15.8	3.1	0.0	(s)	2,692.6
1995	1,298.1	1,071.4	0.4	1.9	0.0	2.3	385.3	17.6	0.0	0.0	(s)	2,765.1
1996	1,401.6	1,063.1	2.1	3.9	0.0	6.0	379.9	9.9	0.0	0.0	(s)	2,849.9
1997	1,433.1	1,080.9	0.2	1.9	0.0	2.0	396.9	R 21.9	0.0	0.0	(s)	R 2,925.3
1998	1,421.6	1,272.4	0.1	1.5	0.0	1.6	411.0	19.7	0.0	0.0	(s)	3,118.2
1999	1,467.3	1,232.6	0.1	1.6	0.0	1.7	390.5	12.9	0.0	0.0	(s)	3,093.9

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> Prior to 1980, based on oil used in steam plants. Since 1980, heavy oil includes fuel oil nos. 4, 5, and 6 and residual fuel oils.

<sup>d</sup> Prior to 1980, based on oil used in internal combustion and gas turbine engine plants. Since 1980, light oil includes fuel oil nos. 1 and 2, kerosene, and jet fuel.

<sup>e</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>f</sup> "Other" is electricity generated for distribution from wind, photovoltaic, and solar thermal energy.

<sup>g</sup> If applicable, from 1989, includes net imports of electricity generated from nonrenewable energy sources not shown in other columns. See data in appendix Table A8.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 281. Energy Consumption Estimates by Source, Selected Years 1960-1999, Utah**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum											Nuclear Electric Power	Hydro-electric Power <sup>d</sup>	Wood and Waste	Other <sup>a,e</sup>	Net Interstate Flow of Electricity/Losses <sup>f</sup>	Total <sup>g</sup>
			Asphalt & Road Oil <sup>a</sup>	Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	Kero-sene <sup>a</sup>	LPG <sup>a</sup>	Lubri-cants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Other <sup>a,c</sup>	Total						
			Thousand Barrels															Million kWh	
1960	3,451	70	813	595	3,775	1,003	36	452	214	7,813	5,715	R 1,926	R 22,341	0	304	—	—	2,036	—
1965	2,857	108	838	383	4,193	1,244	474	677	251	9,001	5,662	R 2,305	R 25,029	0	913	—	—	3,082	—
1970	3,025	122	1,576	178	5,107	1,808	250	939	256	12,308	4,656	R 2,372	R 29,450	0	741	—	—	8,216	—
1975	4,636	124	1,219	161	9,165	1,903	146	1,169	232	15,063	4,603	R 2,731	R 36,391	0	1,074	—	—	8,635	—
1980	7,106	115	1,477	139	8,401	2,637	102	1,301	299	15,534	3,495	R 2,598	R 35,983	0	821	—	—	-278	—
1985	8,303	115	1,576	94	5,941	3,808	31	1,486	272	16,240	431	R 2,155	R 32,035	0	1,019	—	—	-4,107	—
1990	15,738	117	1,378	106	7,339	5,281	13	1,074	307	16,724	372	R 2,670	R 35,264	0	R <sup>h</sup> 508	—	—	R -45,025	—
1991	14,834	133	2,870	118	7,789	5,917	17	747	274	17,395	201	R 2,357	R 37,685	0	R 627	—	—	R -40,516	—
1992	15,719	123	1,633	133	8,062	5,607	4	696	280	17,905	248	R 2,736	R 37,303	0	R 602	—	—	R -45,647	—
1993	15,848	138	1,730	114	8,000	5,518	9	779	285	18,837	288	R 2,444	R 38,004	0	R 860	—	—	R -47,192	—
1994	16,216	137	1,819	88	8,401	5,270	9	784	298	19,433	349	R 2,579	R 39,028	0	R 750	—	—	R -47,196	—
1995	15,307	157	2,179	64	9,164	5,658	6	1,531	292	20,771	299	R 2,453	R 42,417	0	R 969	—	—	R -39,713	—
1996	15,237	161	2,361	52	9,921	6,303	9	R 2,621	284	21,170	88	R 2,996	R 45,806	0	R 1,049	—	—	R -36,021	—
1997	15,923	165	1,992	R 61	11,260	6,277	12	R 750	300	22,024	152	R 2,985	R 45,813	0	R 1,483	—	—	R -38,380	—
1998	16,600	170	2,452	51	11,191	6,373	13	430	314	22,735	103	2,583	46,245	0	1,316	—	—	-40,603	—
1999	16,349	160	2,380	73	10,576	7,443	13	1,013	317	23,141	72	2,573	47,601	0	1,255	—	—	-41,439	—

  

Trillion Btu																			
1960	91.0	72.4	5.4	3.0	22.0	5.4	0.2	1.8	1.3	41.0	35.9	R 11.6	R 127.6	0.0	3.3	2.2	0.0	6.9	R 303.5
1965	75.5	99.8	5.6	1.9	24.4	6.8	2.7	2.7	1.5	47.3	35.6	R 13.9	R 142.4	0.0	9.5	2.0	0.0	10.5	R 339.6
1970	78.8	114.4	10.5	0.9	29.8	10.0	1.4	3.5	1.6	64.7	29.3	R 14.3	R 165.8	0.0	7.8	2.3	0.0	28.0	R 397.1
1975	115.7	118.0	8.1	0.8	53.4	10.6	0.8	4.3	1.4	79.1	28.9	R 16.4	R 203.9	0.0	11.2	2.9	0.0	29.5	R 481.1
1980	168.3	125.0	9.8	0.7	48.9	14.6	0.6	4.8	1.8	81.6	22.0	R 15.6	R 200.4	0.0	8.5	R 4.5	0.0	-0.9	R 505.7
1985	199.4	123.8	10.5	0.5	34.6	21.3	0.2	5.4	1.7	85.3	2.7	R 13.3	R 175.3	0.0	10.6	6.2	2.3	-14.0	R 503.6
1990	366.3	126.9	9.1	0.5	42.7	29.7	0.1	3.9	1.9	87.9	2.3	R 16.1	R 194.3	0.0	R <sup>h</sup> 5.3	R 3.4	R <sup>h</sup> 3.7	-153.6	R <sup>h</sup> 546.2
1991	345.0	142.5	19.0	0.6	45.4	33.2	0.1	2.7	1.7	91.4	1.3	R 14.3	R 209.7	0.0	R 6.5	R 3.5	4.4	R -138.2	R 573.4
1992	362.6	132.2	10.8	0.7	47.0	31.5	(s)	2.5	1.7	94.1	1.6	R 16.4	R 206.2	0.0	6.2	R 3.7	R 4.4	R -155.7	R 559.6
1993	368.4	149.1	11.5	0.6	46.6	31.1	0.1	2.8	1.7	98.9	1.8	R 14.8	R 209.9	0.0	8.9	R 3.6	3.6	-161.0	R 582.4
1994	376.5	146.3	12.1	0.4	48.9	29.7	(s)	2.8	1.8	R 101.6	2.2	R 15.5	R 215.2	0.0	7.7	R 3.5	4.6	-161.0	R 592.8
1995	357.2	166.7	14.5	0.3	53.4	31.8	(s)	5.5	1.8	R 108.3	1.9	R 14.8	R 232.4	0.0	10.0	R 3.9	3.5	R -135.5	R 638.1
1996	355.0	167.8	15.7	0.3	57.8	35.7	0.1	R 9.5	1.7	R 110.4	0.6	R 18.0	R 249.6	0.0	10.8	R 4.0	4.6	R -122.9	R 668.9
1997	365.5	172.1	13.2	0.3	65.6	35.6	0.1	R 2.7	1.8	R 114.8	1.0	R 17.9	R 253.0	0.0	R 15.4	R 4.3	4.1	R -131.0	R 683.5
1998	380.0	177.4	16.3	0.3	65.2	36.1	0.1	1.6	1.9	118.5	0.6	15.6	256.1	0.0	13.6	3.6	3.9	-138.5	696.1
1999	382.4	168.5	15.8	0.4	61.6	42.2	0.1	3.7	1.9	120.6	0.5	15.5	262.2	0.0	13.0	5.4	3.8	-141.4	693.9

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products consumed in the industrial sector. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>e</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>f</sup> Net interstate flow of electricity is the difference between the amount of energy in the electricity sold within a State (including associated losses) and the energy input at the electric utilities within the State. A positive number

indicates that more electricity (including associated losses) came into the State than went out of the State during the year; conversely, a negative number indicates that more electricity (including associated losses) went out of the State than came into the State.

<sup>g</sup> From 1989, "Total" does not equal the sum of the columns. Net imports of electricity generated from nonrenewable energy sources (shown in appendix Table A8) is included in the total but not in any other columns.

<sup>h</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

kWh=kilowatthours. R=Revised data. — =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 282. Residential Energy Consumption Estimates, Selected Years 1960-1999, Utah**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum				Wood Thousand Cords	Geothermal	Solar <sup>c</sup>	Electricity <sup>a</sup> Million Kilowatthours	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Total						Million Kilowatthours	
			Thousand Barrels									Thousand Barrels	
1960	87	23	100	1	249	349	92	—	—	1,012	—	2,518	—
1965	63	31	98	20	505	624	79	—	—	1,243	—	2,969	—
1970	38	45	143	6	694	844	87	—	—	1,688	—	4,091	—
1975	46	60	357	4	564	925	101	—	—	2,493	—	6,013	—
1980	83	58	112	0	349	460	189	—	—	3,116	—	7,577	—
1985	88	59	74	10	631	715	269	—	—	3,985	—	9,362	—
1990	93	43	137	5	424	566	148	—	—	4,246	—	R 9,289	—
1991	107	51	161	5	415	581	156	—	—	4,460	—	R 9,696	—
1992	78	45	115	2	334	452	164	—	—	4,505	—	R 9,609	—
1993	42	52	148	3	202	354	R 158	—	—	4,726	—	R 9,982	—
1994	37	49	113	5	162	280	R 155	—	—	5,009	—	R 10,453	—
1995	27	49	84	3	210	296	R 172	—	—	5,041	—	R 10,510	—
1996	33	54	100	4	251	355	R 171	—	—	5,481	—	R 11,423	—
1997	43	58	117	5	R 489	R 611	R 177	—	—	5,661	—	R 11,775	—
1998	40	57	80	4	148	232	156	—	—	5,756	—	11,890	—
1999	40	55	90	4	312	406	167	—	—	6,236	—	12,219	—
<b>Trillion Btu</b>													
1960	2.3	23.4	0.6	(s)	1.0	1.6	1.8	0.0	0.0	3.5	32.5	8.6	41.1
1965	1.6	28.4	0.6	0.1	2.0	2.7	1.6	0.0	0.0	4.2	38.5	10.1	48.7
1970	1.0	41.9	0.8	(s)	2.6	3.5	1.7	0.0	0.0	5.8	53.8	14.0	67.8
1975	1.1	56.8	2.1	(s)	2.1	4.2	2.0	0.0	0.0	8.5	72.6	20.5	93.1
1980	1.9	62.9	0.6	0.0	1.3	1.9	3.8	0.0	0.0	10.6	81.2	25.9	107.1
1985	2.1	63.1	0.4	0.1	2.3	2.8	5.4	0.0	0.0	13.6	86.9	31.9	118.9
1990	2.2	47.3	0.8	(s)	1.5	2.4	3.0	e 0.1	e (s)	14.5	e 69.3	31.7	e 101.0
1991	2.5	54.3	0.9	(s)	1.5	2.5	3.1	0.1	(s)	15.2	R 77.7	33.1	R 110.7
1992	1.8	48.2	0.7	(s)	1.2	1.9	3.3	0.1	(s)	15.4	70.6	32.8	R 103.4
1993	1.0	56.0	0.9	(s)	0.7	1.6	R 3.2	0.1	(s)	16.1	77.9	34.1	112.0
1994	0.9	52.3	0.7	(s)	0.6	1.3	3.1	0.1	R 0.1	17.1	74.7	35.7	R 110.4
1995	0.6	52.1	0.5	(s)	0.8	1.3	3.4	0.1	R 0.1	17.2	74.7	R 35.9	R 110.6
1996	0.8	56.7	0.6	(s)	0.9	1.5	3.4	0.1	R 0.1	18.7	R 81.2	R 39.0	120.1
1997	1.0	60.6	0.7	(s)	R 1.8	R 2.5	R 3.5	0.1	R 0.1	19.3	R 87.0	R 40.2	R 127.2
1998	0.9	59.5	0.5	(s)	0.5	1.0	3.1	0.1	0.1	19.6	84.3	40.6	124.8
1999	0.9	58.6	0.5	(s)	1.1	1.7	3.3	(s)	(s)	21.3	85.8	41.7	127.5

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Includes small amounts of solar thermal and photovoltaic energy consumed by the commercial sector that cannot be separately identified. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

Table 283. Commercial Energy Consumption Estimates, Selected Years 1960-1999, Utah

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum						Wood	Geothermal	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>c</sup>	Total <sup>d</sup>
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels						Thousand Cords	Million Kilowatthours	Million Kilowatthours			
1960	162	10	362	6	44	281	656	1,349	2	—	640	—	1,592	—
1965	118	16	356	148	89	234	1,072	1,899	1	—	1,128	—	2,693	—
1970	71	10	521	46	122	202	795	1,687	2	—	1,890	—	4,579	—
1975	85	6	1,300	28	99	210	1,098	2,736	2	—	2,479	—	5,981	—
1980	154	(s)	1,028	34	62	81	1,051	2,255	5	—	3,141	—	7,638	—
1985	164	9	541	19	111	88	45	804	R 7	—	4,596	—	10,797	—
1990	174	16	360	5	75	96	74	610	R 9	—	5,389	—	R 11,790	—
1991	198	19	469	8	73	82	23	656	R 10	—	5,571	—	R 12,112	—
1992	145	17	470	1	59	73	21	623	R 11	—	5,850	—	R 12,476	—
1993	79	23	366	3	36	20	55	480	13	—	5,920	—	R 12,504	—
1994	68	27	484	2	29	20	20	554	13	—	6,340	—	R 13,231	—
1995	50	27	443	1	37	21	13	515	13	—	6,462	—	R 13,473	—
1996	61	30	504	3	44	21	14	586	14	—	6,717	—	R 13,998	—
1997	80	31	539	4	R 86	21	11	R 661	R 19	—	7,285	—	R 15,153	—
1998	74	31	597	5	26	21	3	653	19	—	7,433	—	15,356	—
1999	74	30	674	4	55	21	12	765	23	—	8,074	—	15,819	—
Trillion Btu														
1960	4.2	10.5	2.1	(s)	0.2	1.5	4.1	7.9	(s)	0.0	2.2	24.8	5.4	30.2
1965	3.0	14.4	2.1	0.8	0.4	1.2	6.7	11.2	(s)	0.0	3.8	32.5	9.2	41.7
1970	1.8	9.5	3.0	0.3	0.5	1.1	5.0	9.8	(s)	0.0	6.4	27.6	15.6	43.2
1975	2.0	5.8	7.6	0.2	0.4	1.1	6.9	16.1	(s)	0.0	8.5	32.4	20.4	52.8
1980	3.6	0.4	6.0	0.2	0.2	0.4	6.6	13.4	0.1	0.0	10.7	28.2	26.1	54.2
1985	3.9	9.1	3.1	0.1	0.4	0.5	0.3	4.4	R 0.1	0.0	15.7	R 33.2	36.8	R 70.1
1990	4.0	17.7	2.1	(s)	0.3	0.5	0.5	3.4	R 0.2	e 0.1	18.4	R e 43.8	40.2	R e 84.0
1991	4.6	20.7	2.7	(s)	0.3	0.4	0.1	3.6	R 0.2	0.1	19.0	R 48.2	R 41.3	R 89.6
1992	3.3	17.9	2.7	(s)	0.2	0.4	0.1	3.5	R 0.2	0.1	20.0	R 45.0	42.6	R 87.6
1993	1.8	24.4	2.1	(s)	0.1	0.1	0.3	2.7	0.3	0.1	20.2	49.6	42.7	92.2
1994	1.6	28.3	2.8	(s)	0.1	0.1	0.1	3.2	0.3	0.1	21.6	55.1	45.1	100.2
1995	1.2	28.5	2.6	(s)	0.1	0.1	0.1	2.9	0.3	0.1	22.0	55.0	R 46.0	101.0
1996	1.4	30.8	2.9	(s)	0.2	0.1	0.1	3.3	0.3	0.1	22.9	58.9	R 47.8	106.6
1997	1.8	32.4	3.1	(s)	R 0.3	0.1	0.1	R 3.7	R 0.4	R 0.1	24.9	R 63.3	R 51.7	R 115.0
1998	1.7	32.4	3.5	(s)	0.1	0.1	(s)	3.7	0.4	0.2	25.4	63.8	52.4	116.1
1999	1.7	32.0	3.9	(s)	0.2	0.1	0.1	4.3	0.5	0.2	27.5	66.3	54.0	120.2

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>d</sup> Small amounts of solar thermal and photovoltaic energy consumed in the commercial sector cannot be separately identified and are included in residential consumption.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

Table 284. Industrial Energy Consumption Estimates, Selected Years 1960-1999, Utah

Year	Coal Thousand Short Tons	Natural Gas <sup>a</sup> Billion Cubic Feet	Petroleum									Hydro-electric Power <sup>b</sup> Million kWh	Wood and Waste	Other <sup>b,d</sup>	Electricity <sup>b</sup> Million kWh	Net Energy	Electrical System Energy Losses <sup>e</sup> Million kWh	Total
			Asphalt and Road Oil <sup>b</sup>	Distillate Fuel <sup>b</sup>	Kero-sene <sup>b</sup>	LPG <sup>b</sup>	Lubri-cants <sup>b</sup>	Motor Gasoline	Residual Fuel <sup>b</sup>	Other <sup>b,c</sup>	Total							
			Thousand Barrels															
1960	2,640	33	813	990	29	124	62	299	2,399	R 1,926	R 6,642	(s)	—	—	1,822	—	4,531	—
1965	2,306	57	838	1,163	305	70	101	233	2,895	R 2,305	R 7,910	3	—	—	1,404	—	3,353	—
1970	2,477	63	1,576	1,564	197	116	95	261	2,068	R 2,372	R 8,249	3	—	—	1,648	—	3,993	—
1975	2,478	55	1,219	3,356	114	495	73	266	3,285	R 2,731	R 11,541	0	—	—	2,968	—	7,159	—
1980	1,974	51	1,477	2,220	68	876	106	165	2,386	R 2,598	R 9,897	0	—	—	4,448	—	10,816	—
1985	1,726	46	1,576	1,104	3	668	96	220	360	R 2,155	R 6,183	0	—	—	4,458	—	10,473	—
1990	1,907	55	1,378	1,504	4	524	108	198	249	R 2,670	R 6,636	R f 23	—	—	5,766	—	R 12,614	—
1991	1,700	57	2,870	1,892	3	215	97	211	179	R 2,357	R 7,823	R 23	—	—	5,876	—	R 12,774	—
1992	1,639	53	1,633	1,947	1	263	99	206	227	R 2,736	R 7,112	R 23	—	—	6,212	—	R 13,248	—
1993	1,732	55	1,730	1,828	2	498	101	247	233	R 2,444	R 7,084	R 42	—	—	6,221	—	R 13,140	—
1994	1,842	50	1,819	1,787	2	536	105	316	329	R 2,579	R 7,473	R 34	—	—	6,498	—	R 13,561	—
1995	1,905	69	2,179	1,601	2	1,252	103	323	286	R 2,453	R 8,200	R 42	—	—	6,957	—	R 14,506	—
1996	1,558	69	2,361	1,833	2	R 2,301	100	331	74	R 2,996	R 9,998	R 30	—	—	7,660	—	R 15,963	—
1997	1,547	69	1,992	2,398	3	R 160	106	334	141	R 2,985	R 8,119	R 134	—	—	7,430	—	R 15,455	—
1998	1,823	73	2,452	2,496	4	254	111	248	100	2,583	8,247	16	—	—	7,511	—	15,517	—
1999	1,645	65	2,380	2,027	5	612	112	236	61	2,573	8,004	8	—	—	7,568	—	14,828	—

  

Trillion Btu																		
1960	70.5	34.7	5.4	5.8	0.2	0.5	0.4	1.6	15.1	R 11.6	R 40.4	(s)	0.3	0.0	6.2	R 152.1	15.5	R 167.6
1965	61.5	52.3	5.6	6.8	1.7	0.3	0.6	1.2	18.2	R 13.9	R 48.2	(s)	0.3	0.0	4.8	R 167.2	11.4	R 178.6
1970	65.2	59.2	10.5	9.1	1.1	0.4	0.6	1.4	13.0	R 14.3	R 50.3	(s)	0.5	0.0	5.6	R 180.9	13.6	R 194.5
1975	64.7	52.3	8.1	19.6	0.6	1.8	0.4	1.4	20.7	R 16.4	R 69.0	0.0	0.8	0.0	10.1	R 197.0	24.4	R 221.4
1980	50.7	55.8	9.8	12.9	0.4	3.2	0.6	0.9	15.0	R 15.6	R 58.4	0.0	R 0.6	0.0	15.2	R 180.7	36.9	R 217.6
1985	44.1	49.9	10.5	6.4	(s)	2.4	0.6	1.2	2.3	R 13.3	R 36.6	0.0	R 0.7	0.0	15.2	R 146.6	35.7	R 182.3
1990	48.7	60.1	9.1	8.8	(s)	1.9	0.7	1.0	1.6	R 16.1	R 39.2	R f 0.2	R 0.3	f 0.2	19.7	R f 168.4	43.0	R f 211.4
1991	43.7	61.0	19.0	11.0	(s)	0.8	0.6	1.1	1.1	R 14.3	R 48.0	R 0.2	R 0.2	0.2	20.0	R 173.4	43.6	R 217.0
1992	42.0	57.7	10.8	11.3	(s)	1.0	0.6	1.1	1.4	R 16.4	R 42.7	0.2	R 0.2	0.2	21.2	R 164.2	R 45.2	R 209.4
1993	44.0	59.3	11.5	10.6	(s)	1.8	0.6	1.3	1.5	R 14.8	R 42.1	0.4	R 0.2	0.2	21.2	R 167.5	44.8	R 212.3
1994	46.1	53.3	12.1	10.4	(s)	1.9	0.6	1.7	2.1	R 15.5	R 44.3	0.4	R 0.2	0.3	22.2	R 166.8	46.3	R 213.0
1995	47.6	73.8	14.5	9.3	(s)	4.5	0.6	1.7	1.8	R 14.8	R 47.3	0.4	R 0.2	0.3	23.7	R 193.3	49.5	R 242.8
1996	40.0	72.3	15.7	10.7	(s)	R 8.3	0.6	1.7	0.5	R 18.0	R 55.5	0.3	R 0.3	0.3	26.1	R 194.8	R 54.5	R 249.2
1997	39.7	71.7	13.2	14.0	(s)	R 0.6	0.6	R 1.7	0.9	R 17.9	R 49.0	R 1.4	R 0.4	0.3	25.4	R 187.8	R 52.7	R 240.5
1998	45.7	76.3	16.3	14.5	(s)	0.9	0.7	1.3	0.6	15.6	49.9	0.2	0.1	0.3	25.6	198.1	52.9	251.0
1999	40.7	68.3	15.8	11.8	(s)	2.2	0.7	1.2	0.4	15.5	47.6	0.1	1.6	0.3	25.8	184.5	50.6	235.1

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>e</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>f</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

R=Revised data.

kWh=kilowatthours. — =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

Table 285. Transportation Energy Consumption Estimates, Selected Years 1960-1999, Utah

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum								Ethanol <sup>c</sup>	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total <sup>c</sup>
			Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	LPG <sup>a</sup>	Lubricants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total					
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels								Thousand Barrels	Million Kilowatthours	Million Kilowatthours	Total <sup>c</sup>	
1960	46	(s)	595	2,312	1,003	35	152	7,232	370	11,698	0	0	—	0	—
1965	8	(s)	383	2,569	1,244	12	151	8,534	98	12,991	0	0	—	0	—
1970	4	(s)	178	2,870	1,808	6	161	11,845	25	16,893	0	0	—	0	—
1975	(s)	(s)	161	4,141	1,903	11	158	14,586	68	21,028	0	0	—	0	—
1980	0	1	139	4,974	2,637	14	194	15,288	0	23,245	0	0	—	0	—
1985	0	1	94	4,168	3,808	76	176	15,932	0	24,254	R <sup>e</sup> 12	0	—	0	—
1990	0	1	106	5,254	5,281	51	198	16,430	48	27,368	R <sup>e</sup> 1	0	—	0	—
1991	0	1	118	5,184	5,917	44	177	17,102	0	28,543	R <sup>e</sup> 1	0	—	0	—
1992	0	1	133	5,468	5,607	39	181	17,626	0	29,054	R <sup>e</sup> 7	0	—	0	—
1993	0	3	114	5,603	5,518	43	184	18,569	0	30,031	R <sup>e</sup> 19	0	—	0	—
1994	0	3	88	5,964	5,270	57	192	19,097	0	30,667	0	0	—	0	—
1995	0	3	64	6,975	5,658	32	189	20,428	0	33,345	0	0	—	0	—
1996	0	4	52	7,429	6,303	R <sup>e</sup> 25	184	20,818	0	R <sup>e</sup> 34,811	R <sup>e</sup> 22	0	—	0	—
1997	0	3	R <sup>e</sup> 61	8,154	6,277	R <sup>e</sup> 16	194	21,670	0	R <sup>e</sup> 36,370	0	0	—	0	—
1998	0	3	51	7,960	6,373	2	203	22,466	0	37,054	297	0	—	0	—
1999	0	3	73	7,734	7,443	34	205	22,884	0	38,374	253	1	—	1	—

  

Trillion Btu															
1960	1.2	0.1	3.0	13.5	5.4	0.1	0.9	38.0	2.3	63.2	0.0	0.0	64.5	0.0	64.5
1965	0.2	0.4	1.9	15.0	6.8	(s)	0.9	44.8	0.6	70.1	0.0	0.0	70.6	0.0	70.6
1970	0.1	0.5	0.9	16.7	10.0	(s)	1.0	62.2	0.2	91.0	0.0	0.0	91.5	0.0	91.5
1975	(s)	0.3	0.8	24.1	10.6	(s)	1.0	76.6	0.4	113.6	0.0	0.0	113.8	0.0	113.8
1980	0.0	0.9	0.7	29.0	14.6	0.1	1.2	80.3	0.0	125.8	0.0	0.0	126.8	0.0	126.8
1985	0.0	1.3	0.5	24.3	21.3	0.3	1.1	83.7	0.0	131.1	R <sup>e</sup> (s)	0.0	<sup>e</sup> 132.3	0.0	<sup>e</sup> 132.3
1990	0.0	1.0	0.5	30.6	29.7	0.2	1.2	86.3	0.3	148.9	R <sup>e</sup> (s)	0.0	149.8	0.0	149.8
1991	0.0	0.9	0.6	30.2	33.2	0.2	1.1	89.8	0.0	155.1	(s)	0.0	156.0	0.0	156.0
1992	0.0	1.4	0.7	31.8	31.5	0.1	1.1	92.6	0.0	157.8	R <sup>e</sup> (s)	0.0	159.2	0.0	159.2
1993	0.0	2.8	0.6	32.6	31.1	0.2	1.1	97.5	0.0	163.1	0.1	0.0	165.8	0.0	165.8
1994	0.0	3.1	0.4	34.7	29.7	0.2	1.2	R <sup>e</sup> 99.9	0.0	R <sup>e</sup> 166.1	0.0	0.0	R <sup>e</sup> 169.2	0.0	R <sup>e</sup> 169.2
1995	0.0	3.1	0.3	40.6	31.8	0.1	1.1	R <sup>e</sup> 106.5	0.0	R <sup>e</sup> 180.6	0.0	0.0	R <sup>e</sup> 183.7	0.0	R <sup>e</sup> 183.7
1996	0.0	3.9	0.3	43.3	35.7	0.1	1.1	R <sup>e</sup> 108.6	0.0	R <sup>e</sup> 189.0	0.1	0.0	R <sup>e</sup> 192.9	0.0	R <sup>e</sup> 192.9
1997	0.0	3.2	0.3	47.5	35.6	0.1	1.2	R <sup>e</sup> 113.0	0.0	R <sup>e</sup> 197.6	0.0	0.0	R <sup>e</sup> 200.8	0.0	R <sup>e</sup> 200.8
1998	0.0	3.1	0.3	46.4	36.1	(s)	1.2	117.1	0.0	201.1	1.1	0.0	204.1	0.0	204.1
1999	0.0	2.8	0.4	45.1	42.2	0.1	1.2	119.2	0.0	208.2	0.9	(s)	211.1	(s)	211.1

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels. Transportation use of natural gas is gas consumed in the operation of pipelines, primarily in compressors, and, since 1990, is also gas consumed as vehicle fuel.

<sup>c</sup> Ethanol blended into motor gasoline, which is accounted for under motor gasoline, is shown separately here to display the use of renewable energy by the transportation sector and is included only once in the total.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1980 and 1981 due to the expanded coverage of renewable energy sources beginning in 1981.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.



**Table 286. Estimates of Energy Input at Electric Utilities, Selected Years, 1960-1999, Utah**

Year	Coal	Natural Gas <sup>a</sup>	Petroleum				Nuclear Electric Power	Hydroelectric Power <sup>e</sup>	Wood and Waste	Geothermal Energy	Other <sup>b,f</sup>	Total <sup>g</sup>
			Heavy Oil <sup>b,c</sup>	Light Oil <sup>b,d</sup>	Petroleum Coke <sup>b</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels				Million Kilowatthours					
1960	515	4	2,291	12	0	2,302	0	304	0	0	0	—
1965	363	5	1,597	8	0	1,605	0	910	0	0	0	—
1970	435	4	1,768	9	0	1,777	0	738	0	0	0	—
1975	2,026	3	152	10	0	162	0	1,074	0	0	0	—
1980	4,895	5	58	67	0	126	0	821	0	0	0	—
1985	6,325	(s)	25	55	0	80	0	1,019	0	110	0	—
1990	13,563	1	0	84	0	84	0	486	0	152	0	—
1991	12,829	5	0	82	0	82	0	604	0	186	0	—
1992	13,857	7	0	62	0	62	0	580	0	186	0	—
1993	13,995	6	0	55	0	55	0	818	0	148	0	—
1994	14,269	9	0	53	0	53	0	716	0	195	0	—
1995	13,325	9	0	61	0	61	0	926	0	140	0	—
1996	13,585	4	0	55	0	55	0	1,019	0	192	0	—
1997	14,252	4	0	52	0	52	0	<sup>R</sup> 1,349	0	169	0	—
1998	14,664	6	0	58	0	58	0	1,300	0	160	0	—
1999	14,590	6	0	52	0	52	0	1,247	0	156	0	—
<b>Trillion Btu</b>												
1960	12.8	3.8	14.4	0.1	0.0	14.5	0.0	3.3	0.0	0.0	0.0	34.4
1965	9.1	4.4	10.0	(s)	0.0	10.1	0.0	9.5	0.0	0.0	0.0	33.1
1970	10.8	3.3	11.1	0.1	0.0	11.2	0.0	7.7	0.0	0.0	0.0	33.0
1975	47.9	2.9	1.0	0.1	0.0	1.0	0.0	11.2	0.0	0.0	0.0	63.0
1980	112.1	4.9	0.4	0.4	0.0	0.8	0.0	8.5	0.0	0.0	0.0	126.3
1985	149.3	0.3	0.2	0.3	0.0	0.5	0.0	10.6	0.0	2.3	0.0	163.0
1990	311.5	0.9	0.0	0.5	0.0	0.5	0.0	5.1	0.0	3.2	0.0	321.1
1991	294.3	5.5	0.0	0.5	0.0	0.5	0.0	6.3	0.0	3.9	0.0	310.5
1992	315.5	7.1	0.0	0.4	0.0	0.4	0.0	6.0	0.0	3.9	0.0	332.8
1993	321.6	6.7	0.0	0.3	0.0	0.3	0.0	8.4	0.0	3.1	0.0	340.1
1994	327.9	9.3	0.0	0.3	0.0	0.3	0.0	7.4	0.0	4.1	0.0	349.0
1995	307.8	9.2	0.0	0.4	0.0	0.4	0.0	9.6	0.0	2.9	0.0	329.8
1996	312.8	4.2	0.0	0.3	0.0	0.3	0.0	10.5	0.0	4.0	0.0	331.9
1997	323.0	4.2	0.0	0.3	0.0	0.3	0.0	<sup>R</sup> 14.0	0.0	3.5	0.0	<sup>R</sup> 345.1
1998	331.7	6.2	0.0	0.3	0.0	0.3	0.0	13.5	0.0	3.4	0.0	355.1
1999	339.1	6.8	0.0	0.3	0.0	0.3	0.0	12.9	0.0	3.3	0.0	362.3

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> Prior to 1980, based on oil used in steam plants. Since 1980, heavy oil includes fuel oil nos. 4, 5, and 6 and residual fuel oils.

<sup>d</sup> Prior to 1980, based on oil used in internal combustion and gas turbine engine plants. Since 1980, light oil includes fuel oil nos. 1 and 2, kerosene, and jet fuel.

<sup>e</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>f</sup> "Other" is electricity generated for distribution from wind, photovoltaic, and solar thermal energy.

<sup>g</sup> If applicable, from 1989, includes net imports of electricity generated from nonrenewable energy sources not shown in other columns. See data in appendix Table A8.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 287. Energy Consumption Estimates by Source, Selected Years 1960-1999, Vermont**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum											Nuclear Electric Power	Hydro-electric Power <sup>d</sup>	Wood and Waste	Other <sup>a,e</sup>	Net Inter-state Flow of Electricity/Losses <sup>f</sup>	Total <sup>g</sup>
			Asphalt & Road Oil <sup>a</sup>	Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	Kero-sene <sup>a</sup>	LPG <sup>a</sup>	Lubri-cants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Other <sup>a,c</sup>	Total						
			Thousand Barrels															Million kWh	
1960	137	0	224	19	2,958	82	819	404	70	3,332	478	46	8,431	0	938	—	—	128	—
1965	105	0	171	25	4,285	79	760	450	63	3,789	910	39	10,572	0	755	—	—	1,950	—
1970	87	3	271	14	5,741	121	502	542	66	5,077	905	45	13,285	0	835	—	—	5,662	—
1975	31	4	28	11	4,642	177	317	833	56	5,698	796	90	12,647	3,561	1,013	—	—	-4,571	—
1980	22	4	43	25	4,095	155	283	666	67	5,437	471	89	11,331	2,979	1,000	—	—	807	—
1985	80	5	330	22	4,193	201	577	791	61	5,813	122	75	12,183	2,999	1,243	—	—	-801	—
1990	8	7	27	15	4,045	180	223	1,401	69	6,696	241	86	12,982	3,616	R <sup>h</sup> 2,425	—	—	R <sup>h</sup> -5,702	—
1991	12	7	527	15	4,258	162	274	1,634	62	6,772	265	0	13,970	4,108	R <sup>h</sup> 2,433	—	—	R <sup>h</sup> -6,766	—
1992	20	8	335	15	4,993	116	230	1,912	63	6,879	280	0	14,823	3,735	R <sup>h</sup> 2,906	—	—	R <sup>h</sup> -5,454	—
1993	6	7	31	12	5,357	124	277	1,641	64	7,096	480	0	15,082	3,372	R <sup>h</sup> 3,593	—	—	R <sup>h</sup> -5,638	—
1994	5	7	230	11	5,064	138	213	1,663	67	7,154	286	0	14,827	4,316	R <sup>h</sup> 3,719	—	—	R <sup>h</sup> -10,075	—
1995	3	7	253	12	5,352	127	204	1,673	66	7,211	218	0	15,116	3,859	R <sup>h</sup> 4,208	—	—	R <sup>h</sup> -11,269	—
1996	2	7	290	10	5,859	99	239	R <sup>h</sup> 1,834	64	7,331	287	0	R <sup>h</sup> 16,013	3,799	R <sup>h</sup> 4,075	—	—	R <sup>h</sup> -10,003	—
1997	2	8	792	12	5,521	106	282	R <sup>h</sup> 1,540	67	7,606	330	0	R <sup>h</sup> 16,256	4,267	R <sup>h</sup> 3,669	—	—	R <sup>h</sup> -12,225	—
1998	109	8	162	10	5,362	121	509	1,777	70	7,510	292	0	15,814	3,358	3,525	—	—	-7,825	—
1999	82	8	174	12	5,570	143	355	1,617	71	7,699	264	0	15,905	4,059	5,872	—	—	-20,389	—
<b>Trillion Btu</b>																			
1960	3.5	0.0	1.5	0.1	17.2	0.4	4.6	1.6	0.4	17.5	3.0	0.3	46.7	0.0	10.1	7.9	0.0	0.4	68.7
1965	2.7	0.0	1.1	0.1	25.0	0.4	4.3	1.8	0.4	19.9	5.7	0.2	59.0	0.0	7.9	6.9	0.0	6.7	83.2
1970	2.1	2.7	1.8	0.1	33.4	0.7	2.8	2.0	0.4	26.7	5.7	0.3	73.9	0.0	8.8	6.5	0.0	19.3	113.2
1975	0.7	4.0	0.2	0.1	27.0	1.0	1.8	3.1	0.3	29.9	5.0	0.5	68.9	39.2	10.5	6.6	0.0	-15.6	114.4
1980	0.5	4.0	0.3	0.1	23.9	0.9	1.6	2.4	0.4	28.6	3.0	0.5	61.6	32.5	10.4	R <sup>h</sup> 13.3	0.0	2.8	R <sup>h</sup> 125.0
1985	2.0	5.0	2.2	0.1	24.4	1.1	3.3	2.8	0.4	30.5	0.8	0.4	66.0	32.4	13.0	R <sup>h</sup> 16.9	0.0	-2.7	R <sup>h</sup> 132.6
1990	0.2	6.7	0.2	0.1	23.6	1.0	1.3	5.1	0.4	35.2	1.5	0.5	68.7	38.6	R <sup>h</sup> 25.2	R <sup>h</sup> 6.5	h(s)	R <sup>h</sup> -19.5	R <sup>h</sup> 133.5
1991	0.3	7.0	3.5	0.1	24.8	0.9	1.6	5.9	0.4	35.6	1.7	0.0	74.3	44.1	R <sup>h</sup> 25.4	R <sup>h</sup> 7.1	(s)	R <sup>h</sup> -23.1	R <sup>h</sup> 138.8
1992	0.5	7.6	2.2	0.1	29.1	0.6	1.3	6.9	0.4	36.1	1.8	0.0	78.5	39.9	R <sup>h</sup> 30.1	R <sup>h</sup> 7.2	(s)	R <sup>h</sup> -18.6	R <sup>h</sup> 146.3
1993	0.1	7.2	0.2	0.1	31.2	0.7	1.6	5.9	0.4	37.3	3.0	0.0	80.3	36.0	R <sup>h</sup> 37.0	R <sup>h</sup> 8.8	(s)	R <sup>h</sup> -19.2	R <sup>h</sup> 151.9
1994	0.1	7.3	1.5	0.1	29.5	0.8	1.2	6.0	0.4	R <sup>h</sup> 37.4	1.8	0.0	R <sup>h</sup> 78.7	46.1	R <sup>h</sup> 38.4	R <sup>h</sup> 11.1	(s)	R <sup>h</sup> -34.4	R <sup>h</sup> 153.0
1995	0.1	7.2	1.7	0.1	31.2	0.7	1.2	6.1	0.4	R <sup>h</sup> 37.6	1.4	0.0	R <sup>h</sup> 80.2	41.1	R <sup>h</sup> 43.4	R <sup>h</sup> 12.4	(s)	R <sup>h</sup> -38.5	R <sup>h</sup> 155.3
1996	(s)	7.4	1.9	0.1	34.1	0.6	1.4	R <sup>h</sup> 6.6	0.4	R <sup>h</sup> 38.2	1.8	0.0	R <sup>h</sup> 85.1	40.4	R <sup>h</sup> 42.1	R <sup>h</sup> 10.6	(s)	R <sup>h</sup> -34.1	R <sup>h</sup> 160.3
1997	0.1	8.2	5.3	0.1	32.2	0.6	1.6	R <sup>h</sup> 5.6	0.4	R <sup>h</sup> 39.7	2.1	0.0	R <sup>h</sup> 87.4	45.3	R <sup>h</sup> 38.0	R <sup>h</sup> 10.4	(s)	R <sup>h</sup> -41.7	R <sup>h</sup> 162.1
1998	2.7	7.8	1.1	0.1	31.2	0.7	2.9	6.4	0.4	39.1	1.8	0.0	83.8	35.7	36.5	6.0	(s)	-26.7	157.4
1999	2.0	8.1	1.2	0.1	32.4	0.8	2.0	5.8	0.4	40.1	1.7	0.0	84.5	43.1	60.8	9.2	0.2	-69.6	165.0

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products consumed in the industrial sector. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>e</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>f</sup> Net interstate flow of electricity is the difference between the amount of energy in the electricity sold within a State (including associated losses) and the energy input at the electric utilities within the State. A positive number

indicates that more electricity (including associated losses) came into the State than went out of the State during the year; conversely, a negative number indicates that more electricity (including associated losses) went out of the State than came into the State.

<sup>g</sup> From 1989, "Total" does not equal the sum of the columns. Net imports of electricity generated from nonrenewable energy sources (shown in appendix Table A8) is included in the total but not in any other columns.

<sup>h</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

kWh=kilowatthours. R=Revised data. — =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 288. Residential Energy Consumption Estimates, Selected Years 1960-1999, Vermont**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum				Wood Thousand Cords	Geothermal	Solar <sup>c</sup>	Electricity <sup>a</sup> Million Kilowatthours	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total	
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Total						Million Kilowatthours		
	Thousand Barrels													
1960	46	0	2,044	701	258	3,003	173	—	—	451	—	1,121	—	
1965	29	0	3,110	649	316	4,075	137	—	—	678	—	1,619	—	
1970	17	1	3,873	436	356	4,665	105	—	—	1,216	—	2,947	—	
1975	9	1	3,101	235	555	3,891	123	—	—	1,427	—	3,443	—	
1980	7	1	2,171	230	356	2,757	160	—	—	1,781	—	4,331	—	
1985	19	1	2,222	514	601	3,338	139	—	—	1,538	—	3,613	—	
1990	4	2	1,930	193	1,109	3,232	99	—	—	1,809	—	R 3,957	—	
1991	3	2	2,036	248	1,188	3,472	104	—	—	1,783	—	R 3,877	—	
1992	4	3	2,191	210	1,424	3,825	110	—	—	1,927	—	R 4,110	—	
1993	4	3	2,372	235	1,204	3,810	R 114	—	—	1,971	—	R 4,163	—	
1994	2	2	2,168	183	1,227	3,578	R 112	—	—	2,009	—	R 4,194	—	
1995	2	2	2,247	180	1,223	3,650	R 124	—	—	1,973	—	R 4,114	—	
1996	1	3	2,402	203	R 1,378	R 3,984	R 124	—	—	2,006	—	R 4,181	—	
1997	1	3	2,382	238	R 1,229	R 3,850	R 82	—	—	1,992	—	R 4,144	—	
1998	1	2	2,047	326	1,388	3,761	72	—	—	1,951	—	4,031	—	
1999	1	3	2,027	262	1,356	3,645	77	—	—	1,999	—	3,916	—	
<b>Trillion Btu</b>														
1960	1.1	0.0	11.9	4.0	1.0	16.9	3.5	0.0	0.0	1.5	23.0	3.8	26.9	
1965	0.7	0.0	18.1	3.7	1.3	23.1	2.7	0.0	0.0	2.3	28.8	5.5	34.3	
1970	0.4	1.1	22.6	2.5	1.3	26.4	2.1	0.0	0.0	4.1	34.1	10.1	44.1	
1975	0.2	1.1	18.1	1.3	2.1	21.5	2.5	0.0	0.0	4.9	30.1	11.7	41.9	
1980	0.1	1.3	12.6	1.3	1.3	15.3	3.2	0.0	0.0	6.1	26.0	14.8	40.7	
1985	0.5	1.4	12.9	2.9	2.2	18.0	2.8	0.0	0.0	5.2	28.0	12.3	40.3	
1990	0.1	2.1	11.2	1.1	4.0	16.4	2.0	e 0.0	e (s)	6.2	e 26.7	13.5	e 40.2	
1991	0.1	2.2	11.9	1.4	4.3	17.6	2.1	0.0	(s)	6.1	28.0	13.2	41.2	
1992	0.1	2.5	12.8	1.2	5.2	19.1	2.2	0.0	(s)	6.6	30.5	14.0	44.5	
1993	0.1	2.5	13.8	1.3	4.3	19.5	2.3	0.0	(s)	6.7	31.1	14.2	45.3	
1994	(s)	2.4	12.6	1.0	4.5	18.1	R 2.2	0.0	(s)	6.9	29.7	14.3	44.0	
1995	(s)	2.3	13.1	1.0	4.4	18.5	2.5	0.0	(s)	6.7	30.1	14.0	R 44.1	
1996	(s)	2.6	14.0	1.2	R 5.0	R 20.1	2.5	0.0	(s)	6.8	R 32.1	R 14.3	R 46.3	
1997	(s)	2.7	13.9	1.4	R 4.4	R 19.7	R 1.6	0.0	(s)	6.8	R 30.8	14.1	R 45.0	
1998	(s)	2.5	11.9	1.8	5.0	18.8	1.4	0.0	(s)	6.7	29.4	13.8	43.2	
1999	(s)	2.6	11.8	1.5	4.9	18.2	1.5	(s)	(s)	6.8	29.2	13.4	42.6	

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Includes small amounts of solar thermal and photovoltaic energy consumed by the commercial sector that cannot be separately identified. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 289. Commercial Energy Consumption Estimates, Selected Years 1960-1999, Vermont**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum						Wood	Geothermal	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>c</sup>	Total <sup>d</sup>
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels						Thousand Cords	Million Kilowatthours	Million Kilowatthours			
1960	30	0	418	43	46	127	225	859	3	—	233	—	580	—
1965	19	0	636	40	56	24	422	1,177	3	—	303	—	723	—
1970	12	1	792	27	63	25	414	1,320	2	—	609	—	1,475	—
1975	6	1	634	15	98	30	373	1,149	2	—	709	—	1,710	—
1980	4	1	620	44	63	33	237	996	4	—	923	—	2,244	—
1985	27	2	530	36	106	40	24	735	R 4	—	959	—	2,253	—
1990	3	2	563	12	196	41	121	933	R 6	—	1,526	—	3,339	—
1991	2	2	700	15	210	27	131	1,084	R 7	—	1,531	—	R 3,329	—
1992	2	2	816	14	251	33	106	1,221	R 7	—	1,574	—	R 3,356	—
1993	2	2	746	34	212	6	174	1,173	9	—	1,614	—	R 3,408	—
1994	3	3	770	19	217	7	87	1,099	9	—	1,622	—	R 3,386	—
1995	1	3	670	14	216	7	72	978	9	—	1,647	—	R 3,433	—
1996	1	3	807	13	R 243	7	74	R 1,144	10	—	1,696	—	R 3,535	—
1997	1	3	877	21	R 217	7	113	R 1,234	9	—	1,759	—	R 3,660	—
1998	1	3	956	32	245	7	113	1,353	9	—	1,878	—	3,880	—
1999	1	2	951	35	239	7	86	1,318	11	—	1,941	—	3,804	—
<b>Trillion Btu</b>														
1960	0.8	0.0	2.4	0.2	0.2	0.7	1.4	4.9	0.1	0.0	0.8	6.6	2.0	8.5
1965	0.5	0.0	3.7	0.2	0.2	0.1	2.7	6.9	0.1	0.0	1.0	8.5	2.5	10.9
1970	0.3	0.6	4.6	0.2	0.2	0.1	2.6	7.7	(s)	0.0	2.1	10.7	5.0	15.7
1975	0.1	0.8	3.7	0.1	0.4	0.2	2.3	6.6	(s)	0.0	2.4	10.0	5.8	15.9
1980	0.1	0.8	3.6	0.2	0.2	0.2	1.5	5.7	0.1	0.0	3.1	9.9	7.7	17.6
1985	0.7	1.6	3.1	0.2	0.4	0.2	0.1	4.0	R 0.1	0.0	3.3	R 9.6	7.7	R 17.3
1990	0.1	2.0	3.3	0.1	0.7	0.2	0.8	5.0	R 0.1	e 0.0	5.2	R e 12.5	11.4	R e 23.9
1991	0.1	2.0	4.1	0.1	0.8	0.1	0.8	5.9	R 0.1	0.0	5.2	R 13.3	11.4	R 24.7
1992	0.1	2.3	4.8	0.1	0.9	0.2	0.7	6.6	R 0.1	0.0	5.4	R 14.5	11.5	R 25.9
1993	0.1	2.4	4.3	0.2	0.8	(s)	1.1	6.4	0.2	0.0	5.5	14.6	11.6	26.2
1994	0.1	2.7	4.5	0.1	0.8	(s)	0.5	6.0	0.2	0.0	5.5	14.4	11.6	26.0
1995	(s)	2.7	3.9	0.1	0.8	(s)	0.5	5.2	0.2	0.0	5.6	13.7	11.7	25.5
1996	(s)	2.9	4.7	0.1	R 0.9	(s)	0.5	R 6.2	0.2	0.0	5.8	15.0	R 12.1	R 27.1
1997	(s)	3.1	5.1	0.1	0.8	(s)	0.7	6.8	0.2	0.0	6.0	16.1	12.5	R 28.5
1998	(s)	3.0	5.6	0.2	0.9	(s)	0.7	7.4	0.2	0.0	6.4	17.0	13.2	30.2
1999	(s)	2.3	5.5	0.2	0.9	(s)	0.5	7.2	0.2	0.0	6.6	16.4	13.0	29.4

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>d</sup> Small amounts of solar thermal and photovoltaic energy consumed in the commercial sector cannot be separately identified and are included in residential consumption.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 290. Industrial Energy Consumption Estimates, Selected Years 1960-1999, Vermont**

Year	Coal	Natural Gas <sup>a</sup>	Petroleum									Hydro-electric Power <sup>b</sup>	Wood and Waste	Other <sup>b,d</sup>	Electricity <sup>b</sup>		Electrical System Energy Losses <sup>e</sup>	Total
			Asphalt and Road Oil <sup>b</sup>	Distillate Fuel <sup>b</sup>	Kero-sene <sup>b</sup>	LPG <sup>b</sup>	Lubri-cants <sup>b</sup>	Motor Gasoline	Residual Fuel <sup>b</sup>	Other <sup>b,c</sup>	Total				Million kWh	Net Energy		
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels									Million kWh			Million kWh			
1960	41	0	224	234	75	99	2	0	252	46	931	64	—	—	191	—	474	—
1965	14	0	171	316	71	77	19	100	484	39	1,278	53	—	—	352	—	841	—
1970	3	1	271	463	39	121	17	68	466	45	1,489	62	—	—	787	—	1,907	—
1975	2	2	28	364	68	179	10	77	421	90	1,237	67	—	—	858	—	2,071	—
1980	2	2	43	501	9	245	15	19	235	89	1,155	70	—	—	1,247	—	3,032	—
1985	6	2	330	448	26	70	14	117	98	75	1,178	70	—	—	1,518	—	3,567	—
1990	1	2	27	466	17	85	16	81	116	86	895	R <sup>f</sup> 171	—	—	1,381	—	3,021	—
1991	7	2	527	447	11	226	14	88	131	0	1,444	R <sup>f</sup> 136	—	—	1,390	—	R <sup>f</sup> 3,021	—
1992	14	2	335	508	6	226	14	90	169	0	1,349	R <sup>f</sup> 142	—	—	1,440	—	R <sup>f</sup> 3,072	—
1993	0	2	31	511	8	217	14	76	306	0	1,163	R <sup>f</sup> 313	—	—	1,431	—	R <sup>f</sup> 3,022	—
1994	0	2	230	347	12	199	15	84	199	0	1,085	R <sup>f</sup> 334	—	—	1,435	—	2,994	—
1995	0	2	253	317	10	220	15	89	146	0	1,050	R <sup>f</sup> 315	—	—	1,484	—	R <sup>f</sup> 3,094	—
1996	0	2	290	331	22	R <sup>f</sup> 196	14	90	213	0	R <sup>f</sup> 1,157	R <sup>f</sup> 338	—	—	1,537	—	R <sup>f</sup> 3,203	—
1997	0	2	792	356	23	R <sup>f</sup> 77	15	95	217	0	R <sup>f</sup> 1,575	R <sup>f</sup> 194	—	—	1,561	—	R <sup>f</sup> 3,246	—
1998	107	2	162	386	151	144	16	76	178	0	1,114	329	—	—	1,534	—	3,169	—
1999	80	3	174	412	58	19	16	82	179	0	940	775	—	—	1,587	—	3,110	—

  

Trillion Btu																		
1960	1.1	0.0	1.5	1.4	0.4	0.4	(s)	0.0	1.6	0.3	5.5	0.7	4.4	0.0	0.7	12.4	1.6	14.0
1965	0.4	0.0	1.1	1.8	0.4	0.3	0.1	0.5	3.0	0.2	7.6	0.6	4.1	0.0	1.2	13.9	2.9	16.7
1970	0.1	1.1	1.8	2.7	0.2	0.5	0.1	0.4	2.9	0.3	8.8	0.6	4.3	0.0	2.7	17.6	6.5	24.1
1975	0.1	1.5	0.2	2.1	0.4	0.7	0.1	0.4	2.6	0.5	7.0	0.7	4.1	0.0	2.9	16.3	7.1	23.4
1980	(s)	1.6	0.3	2.9	0.1	0.9	0.1	0.1	1.5	0.5	6.3	0.7	R <sup>f</sup> 9.5	0.0	4.3	R <sup>f</sup> 22.5	10.3	R <sup>f</sup> 32.8
1985	0.1	1.9	2.2	2.6	0.1	0.3	0.1	0.6	0.6	0.4	6.9	0.7	R <sup>f</sup> 11.2	0.0	5.2	R <sup>f</sup> 26.0	12.2	R <sup>f</sup> 38.2
1990	(s)	1.9	0.2	2.7	0.1	0.3	0.1	0.4	0.7	0.5	5.0	R <sup>f</sup> 1.8	R <sup>f</sup> 3.4	f <sup>f</sup> 0.0	4.7	R <sup>f</sup> 16.8	10.3	R <sup>f</sup> 27.1
1991	0.2	1.7	3.5	2.6	0.1	0.8	0.1	0.5	0.8	0.0	8.4	R <sup>f</sup> 1.4	R <sup>f</sup> 3.7	0.0	4.7	R <sup>f</sup> 20.1	10.3	R <sup>f</sup> 30.4
1992	0.4	1.9	2.2	3.0	(s)	0.8	0.1	0.5	1.1	0.0	7.7	R <sup>f</sup> 1.5	R <sup>f</sup> 3.9	0.0	4.9	R <sup>f</sup> 20.3	10.5	R <sup>f</sup> 30.7
1993	0.0	2.0	0.2	3.0	(s)	0.8	0.1	0.4	1.9	0.0	6.4	R <sup>f</sup> 3.2	R <sup>f</sup> 5.6	0.0	4.9	R <sup>f</sup> 22.2	10.3	R <sup>f</sup> 32.5
1994	0.0	2.0	1.5	2.0	0.1	0.7	0.1	0.4	1.2	0.0	6.1	R <sup>f</sup> 3.4	R <sup>f</sup> 7.9	0.0	4.9	24.4	10.2	R <sup>f</sup> 34.6
1995	0.0	2.2	1.7	1.8	0.1	0.8	0.1	0.5	0.9	0.0	5.9	R <sup>f</sup> 3.2	R <sup>f</sup> 8.4	0.0	5.1	24.7	R <sup>f</sup> 10.6	35.3
1996	0.0	2.0	1.9	1.9	0.1	R <sup>f</sup> 0.7	0.1	0.5	1.3	0.0	R <sup>f</sup> 6.6	R <sup>f</sup> 3.5	R <sup>f</sup> 6.5	0.0	5.2	R <sup>f</sup> 23.8	10.9	R <sup>f</sup> 34.8
1997	0.0	2.4	5.3	2.1	0.1	R <sup>f</sup> 0.3	0.1	0.5	1.4	0.0	R <sup>f</sup> 9.7	R <sup>f</sup> 2.0	R <sup>f</sup> 7.0	0.0	5.3	R <sup>f</sup> 26.4	11.1	R <sup>f</sup> 37.5
1998	2.6	2.1	1.1	2.2	0.9	0.5	0.1	0.4	1.1	0.0	6.3	3.4	2.8	0.0	5.2	22.5	10.8	33.4
1999	2.0	2.9	1.2	2.4	0.3	0.1	0.1	0.4	1.1	0.0	5.6	8.0	5.3	0.0	5.4	29.3	10.6	39.9

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>e</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>f</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

R=Revised data.

kWh=kilowatthours. — =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 291. Transportation Energy Consumption Estimates, Selected Years 1960-1999, Vermont**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum								Ethanol <sup>c</sup>	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total <sup>c</sup>
			Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	LPG <sup>a</sup>	Lubricants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total				Million Kilowatthours	
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels								Thousand Barrels	Million Kilowatthours	Net Energy	Million Kilowatthours	Total <sup>c</sup>
1960	1	0	19	254	82	(s)	68	3,205	0	3,629	0	0	—	0	—
1965	(s)	0	25	185	79	1	44	3,665	0	4,000	0	0	—	0	—
1970	(s)	0	14	346	121	3	49	4,985	2	5,519	0	0	—	0	—
1975	(s)	0	11	504	129	1	45	5,591	2	6,284	0	0	—	0	—
1980	0	0	25	757	137	2	52	5,386	0	6,359	0	0	—	0	—
1985	0	(s)	22	959	201	13	47	5,656	0	6,898	<sup>e</sup> 0	0	—	0	—
1990	0	(s)	15	1,079	180	11	53	6,574	3	7,915	0	0	—	0	—
1991	0	(s)	15	1,060	162	11	48	6,656	3	7,955	0	0	—	0	—
1992	0	(s)	15	1,470	116	11	49	6,756	4	8,420	0	0	—	0	—
1993	0	(s)	12	1,711	124	8	49	7,014	0	8,919	0	0	—	0	—
1994	0	(s)	11	1,756	138	21	52	7,064	0	9,042	0	0	—	0	—
1995	0	(s)	12	2,079	127	15	51	7,116	0	9,399	0	0	—	0	—
1996	0	(s)	10	2,303	99	16	49	7,234	0	9,712	0	0	—	0	—
1997	0	(s)	12	1,874	106	<sup>R</sup> 17	52	7,504	0	<sup>R</sup> 9,566	0	0	—	0	—
1998	0	(s)	10	1,865	121	(s)	55	7,428	0	9,479	0	(s)	—	(s)	—
1999	0	(s)	12	2,116	143	2	55	7,610	0	9,938	0	0	—	0	—

**Trillion Btu**

1960	(s)	0.0	0.1	1.5	0.4	(s)	0.4	16.8	0.0	19.3	0.0	0.0	19.3	0.0	19.3
1965	(s)	0.0	0.1	1.1	0.4	(s)	0.3	19.3	0.0	21.2	0.0	0.0	21.2	0.0	21.2
1970	(s)	0.0	0.1	2.0	0.7	(s)	0.3	26.2	(s)	29.3	0.0	0.0	29.3	0.0	29.3
1975	(s)	0.0	0.1	2.9	0.7	(s)	0.3	29.4	(s)	33.4	0.0	0.0	33.4	0.0	33.4
1980	0.0	0.0	0.1	4.4	0.8	(s)	0.3	28.3	0.0	33.9	0.0	0.0	33.9	0.0	33.9
1985	0.0	(s)	0.1	5.6	1.1	(s)	0.3	29.7	0.0	36.9	<sup>e</sup> 0.0	0.0	<sup>e</sup> 36.9	0.0	<sup>e</sup> 36.9
1990	0.0	(s)	0.1	6.3	1.0	(s)	0.3	34.5	(s)	42.3	0.0	0.0	42.3	0.0	42.3
1991	0.0	(s)	0.1	6.2	0.9	(s)	0.3	35.0	(s)	42.5	0.0	0.0	42.5	0.0	42.5
1992	0.0	(s)	0.1	8.6	0.6	(s)	0.3	35.5	(s)	45.1	0.0	0.0	45.1	0.0	45.1
1993	0.0	(s)	0.1	10.0	0.7	(s)	0.3	36.8	0.0	47.9	0.0	0.0	47.9	0.0	47.9
1994	0.0	(s)	0.1	10.2	0.8	0.1	0.3	<sup>R</sup> 36.9	0.0	<sup>R</sup> 48.4	0.0	0.0	<sup>R</sup> 48.4	0.0	<sup>R</sup> 48.4
1995	0.0	(s)	0.1	12.1	0.7	0.1	0.3	<sup>R</sup> 37.1	0.0	<sup>R</sup> 50.4	0.0	0.0	<sup>R</sup> 50.4	0.0	<sup>R</sup> 50.4
1996	0.0	(s)	0.1	13.4	0.6	0.1	0.3	<sup>R</sup> 37.7	0.0	<sup>R</sup> 52.1	0.0	0.0	<sup>R</sup> 52.1	0.0	<sup>R</sup> 52.1
1997	0.0	(s)	0.1	10.9	0.6	0.1	0.3	<sup>R</sup> 39.1	0.0	<sup>R</sup> 51.1	0.0	0.0	<sup>R</sup> 51.1	0.0	<sup>R</sup> 51.1
1998	0.0	(s)	0.1	10.9	0.7	(s)	0.3	38.7	0.0	50.6	0.0	(s)	50.7	(s)	50.7
1999	0.0	(s)	0.1	12.3	0.8	(s)	0.3	39.7	0.0	53.2	0.0	0.0	53.2	0.0	53.2

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels. Transportation use of natural gas is gas consumed in the operation of pipelines, primarily in compressors, and, since 1990, is also gas consumed as vehicle fuel.

<sup>c</sup> Ethanol blended into motor gasoline, which is accounted for under motor gasoline, is shown separately here to display the use of renewable energy by the transportation sector and is included only once in the total.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1980 and 1981 due to the expanded coverage of renewable energy sources beginning in 1981.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

Table 292. Estimates of Energy Input at Electric Utilities, Selected Years, 1960-1999, Vermont

Year	Coal Thousand Short Tons	Natural Gas <sup>a</sup> Billion Cubic Feet	Petroleum				Nuclear Electric Power	Hydroelectric Power <sup>e</sup>	Wood and Waste	Geothermal Energy	Other <sup>b,f</sup>	Total <sup>g</sup>
			Heavy Oil <sup>b,c</sup>	Light Oil <sup>b,d</sup>	Petroleum Coke <sup>b</sup>	Total						
			Thousand Barrels									
1960	19	0	1	8	0	9	0	873	0	0	0	—
1965	43	0	3	38	0	42	0	702	0	0	0	—
1970	55	0	23	268	0	291	0	773	0	0	0	—
1975	13	1	(s)	86	0	87	3,561	946	0	0	0	—
1980	9	(s)	0	63	0	63	2,979	930	49	0	0	—
1985	28	(s)	0	34	0	34	2,999	1,173	280	0	0	—
1990	0	1	0	8	0	8	3,616	R 2,254	94	0	0	—
1991	0	1	0	15	0	15	4,108	R 2,297	109	0	0	—
1992	0	1	0	8	0	8	3,735	R 2,763	92	0	0	—
1993	0	(s)	0	17	0	17	3,372	R 3,280	64	0	0	—
1994	0	(s)	0	23	0	23	4,316	R 3,385	72	0	0	—
1995	0	(s)	0	39	0	39	3,859	R 3,893	127	0	0	—
1996	0	(s)	0	16	0	16	3,799	R 3,737	135	0	0	—
1997	0	(s)	0	31	0	31	4,267	R 3,475	150	0	0	—
1998	0	(s)	0	107	0	107	3,358	3,195	145	0	0	—
1999	0	(s)	0	64	0	64	4,059	5,097	200	0	14	—
Trillion Btu												
1960	0.5	0.0	(s)	(s)	0.0	0.1	0.0	9.4	0.0	0.0	0.0	10.0
1965	1.2	0.0	(s)	0.2	0.0	0.2	0.0	7.3	0.0	0.0	0.0	8.8
1970	1.4	0.0	0.1	1.6	0.0	1.7	0.0	8.1	0.0	0.0	0.0	11.2
1975	0.3	0.6	(s)	0.5	0.0	0.5	39.2	9.8	0.0	0.0	0.0	50.5
1980	0.2	0.2	0.0	0.4	0.0	0.4	32.5	9.7	0.5	0.0	0.0	43.5
1985	0.7	0.1	0.0	0.2	0.0	0.2	32.4	12.3	2.9	0.0	0.0	48.6
1990	0.0	0.7	0.0	(s)	0.0	(s)	38.6	23.4	1.0	0.0	0.0	R 70.8
1991	0.0	1.1	0.0	0.1	0.0	0.1	44.1	R 24.0	1.1	0.0	0.0	R 74.0
1992	0.0	0.8	0.0	(s)	0.0	(s)	39.9	R 28.6	1.0	0.0	0.0	R 71.4
1993	0.0	0.3	0.0	0.1	0.0	0.1	36.0	R 33.8	0.7	0.0	0.0	R 72.5
1994	0.0	0.2	0.0	0.1	0.0	0.1	46.1	R 34.9	0.7	0.0	0.0	R 87.7
1995	0.0	0.1	0.0	0.2	0.0	0.2	41.1	R 40.1	1.3	0.0	0.0	R 92.2
1996	0.0	(s)	0.0	0.1	0.0	0.1	40.4	R 38.6	1.4	0.0	0.0	R 89.3
1997	0.0	(s)	0.0	0.2	0.0	0.2	45.3	R 36.0	1.6	0.0	0.0	R 97.5
1998	0.0	0.2	0.0	0.6	0.0	0.6	35.7	33.1	1.5	0.0	0.0	82.8
1999	0.0	0.3	0.0	0.4	0.0	0.4	43.1	52.7	2.1	0.0	0.1	125.4

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> Prior to 1980, based on oil used in steam plants. Since 1980, heavy oil includes fuel oil nos. 4, 5, and 6 and residual fuel oils.

<sup>d</sup> Prior to 1980, based on oil used in internal combustion and gas turbine engine plants. Since 1980, light oil includes fuel oil nos. 1 and 2, kerosene, and jet fuel.

<sup>e</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>f</sup> "Other" is electricity generated for distribution from wind, photovoltaic, and solar thermal energy.

<sup>g</sup> If applicable, from 1989, includes net imports of electricity generated from nonrenewable energy sources not shown in other columns. See data in appendix Table A8.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 293. Energy Consumption Estimates by Source, Selected Years 1960-1999, Virginia**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum											Nuclear Electric Power	Hydro-electric Power <sup>d</sup>	Wood and Waste	Other <sup>a,e</sup>	Net Inter-state Flow of Electricity/Losses <sup>f</sup>	Total <sup>g</sup>
			Asphalt & Road Oil <sup>a</sup>	Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	Kero-sene <sup>a</sup>	LPG <sup>a</sup>	Lubri-cants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Other <sup>a,c</sup>	Total						
			Thousand Barrels															Million kWh	
1960	12,142	66	1,753	382	14,146	4,441	5,038	1,146	633	31,077	17,825	R 1,705	R 78,148	0	1,267	—	—	-13,165	—
1965	14,904	96	2,681	721	18,609	6,504	5,544	1,658	664	36,104	16,780	R 2,647	R 91,912	0	883	—	—	-4,629	—
1970	11,294	137	2,250	356	24,640	11,093	5,029	2,412	720	48,684	33,373	R 3,876	R 132,434	0	691	—	—	16,309	—
1975	7,130	121	2,328	251	22,996	11,602	2,264	3,077	734	59,293	40,953	R 2,688	R 146,186	8,970	1,311	—	—	22,851	—
1980	9,291	158	2,618	218	24,599	12,279	1,716	3,131	952	59,035	24,651	R 10,233	R 139,431	11,466	892	—	—	56,966	—
1985	11,656	139	4,033	131	25,252	11,038	4,032	3,932	866	62,979	8,571	R 4,958	R 125,792	22,303	845	—	—	62,743	—
1990	13,105	181	4,701	70	27,940	15,806	1,374	4,088	975	70,333	7,896	R 3,979	R 137,160	23,820	R <sup>h</sup> 487	—	—	R 89,111	—
1991	13,980	175	3,734	116	26,819	11,824	1,562	4,643	872	70,526	9,195	R 4,998	R 134,290	23,886	R 22	—	—	R 90,578	—
1992	13,418	200	3,759	101	26,447	11,670	1,466	4,727	889	71,533	8,083	R 5,323	R 133,999	23,334	R 425	—	—	R 92,676	—
1993	13,584	218	3,697	105	28,181	11,915	1,735	4,829	905	73,827	8,503	R 5,245	R 138,942	22,689	R 539	—	—	R 97,564	—
1994	12,792	231	3,935	101	29,230	12,003	1,459	4,928	946	75,047	7,982	R 5,359	R 140,990	25,429	R 405	—	—	R 95,433	—
1995	13,378	247	3,639	85	30,552	10,589	1,618	4,783	930	78,828	5,543	R 5,231	R 141,798	25,135	R 227	—	—	R 104,053	—
1996	14,983	239	3,512	79	36,148	9,204	1,935	R 5,156	903	79,164	4,138	R 6,215	R 146,453	26,284	R 601	—	—	R 100,300	—
1997	15,276	241	3,474	50	36,869	9,402	2,046	R 5,216	953	81,440	5,285	R 6,616	R 151,353	27,084	R 202	—	—	R 93,189	—
1998	15,843	243	3,889	90	37,020	10,183	2,604	4,006	998	82,197	7,547	6,546	155,079	27,234	328	—	—	87,148	—
1999	15,805	265	4,770	106	37,079	9,314	1,922	4,587	1,009	84,814	8,115	6,704	158,419	28,301	-546	—	—	80,359	—

**Trillion Btu**

1960	316.4	68.4	11.6	1.9	82.4	24.0	28.6	4.6	3.8	163.2	112.1	R 10.1	R 442.5	0.0	13.6	56.1	0.0	-44.9	R 852.1
1965	386.3	98.6	17.8	3.6	108.4	35.8	31.4	6.6	4.0	189.7	105.5	R 15.4	R 518.2	0.0	9.2	54.2	0.0	-15.8	R 1,050.8
1970	275.3	140.1	14.9	1.8	143.5	61.9	28.5	9.1	4.4	255.7	209.8	R 22.5	R 752.2	0.0	7.3	55.5	0.0	55.6	R 1,285.9
1975	169.2	123.6	15.4	1.3	133.9	64.9	12.8	11.4	4.5	311.5	257.5	R 15.5	R 828.8	98.8	13.6	53.2	0.0	78.0	R 1,365.2
1980	231.8	161.0	17.4	1.1	143.3	68.8	9.7	11.5	5.8	310.1	155.0	R 56.8	R 779.4	125.1	9.3	R 70.0	0.0	194.4	R 1,571.0
1985	297.1	144.9	26.8	0.7	147.1	61.7	22.9	14.2	5.3	330.8	53.9	R 27.4	R 690.5	241.2	8.8	R 87.7	0.0	214.1	R 1,684.3
1990	333.0	188.7	31.2	0.4	162.7	88.5	7.8	14.8	5.9	369.5	49.6	R 22.2	R 752.7	254.4	R <sup>h</sup> 5.1	R 102.8	R <sup>h</sup> 0.3	304.0	R <sup>h</sup> 1,941.0
1991	356.6	182.0	24.8	0.6	156.2	66.7	8.9	16.8	5.3	370.5	57.8	R 27.9	R 735.4	256.5	0.2	R 103.3	0.3	R 309.1	R 1,943.4
1992	343.6	207.8	24.9	0.5	154.1	65.9	8.3	17.1	5.4	375.8	50.8	R 29.5	R 732.3	249.2	4.4	R 109.1	0.3	R 316.2	R 1,963.0
1993	347.6	227.5	24.5	0.5	164.2	67.3	9.8	17.4	5.5	387.8	53.5	R 29.1	R 759.6	242.4	5.6	R 109.9	0.3	R 332.9	R 2,025.7
1994	326.5	239.3	26.1	0.5	170.3	68.0	8.3	17.9	5.7	R 392.5	50.2	R 29.7	R 769.1	271.5	4.2	R 114.3	R 0.4	325.6	R 2,050.8
1995	341.1	254.9	24.1	0.4	178.0	60.0	9.2	17.3	5.6	R 411.1	34.8	R 29.0	R 769.7	267.9	2.3	R 124.6	0.4	R 355.0	R 2,115.8
1996	378.8	248.4	23.3	0.4	210.6	52.2	11.0	R 18.6	5.5	R 412.9	26.0	R 34.2	R 794.6	279.2	6.2	R 127.8	0.4	R 342.2	R 2,177.7
1997	384.8	252.0	23.1	0.3	214.8	53.3	11.6	R 18.9	5.8	R 424.5	33.2	R 36.5	R 821.9	287.7	2.1	R 119.7	0.4	R 318.0	R 2,186.7
1998	400.1	253.2	25.8	0.5	215.6	57.7	14.8	14.5	6.1	428.4	47.4	36.1	846.9	289.3	3.4	99.0	0.5	297.3	2,189.8
1999	401.6	275.2	31.7	0.5	216.0	52.8	10.9	16.6	6.1	442.0	51.0	36.8	864.3	300.6	-5.6	116.4	0.5	274.2	2,227.3

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products consumed in the industrial sector. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>e</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>f</sup> Net interstate flow of electricity is the difference between the amount of energy in the electricity sold within a State (including associated losses) and the energy input at the electric utilities within the State. A positive number

indicates that more electricity (including associated losses) came into the State than went out of the State during the year; conversely, a negative number indicates that more electricity (including associated losses) went out of the State than came into the State.

<sup>g</sup> From 1989, "Total" does not equal the sum of the columns. Net imports of electricity generated from nonrenewable energy sources (shown in appendix Table A8) is included in the total but not in any other columns.

<sup>h</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

kWh=kilowatthours. R=Revised data. — =Not applicable.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.



**Table 294. Residential Energy Consumption Estimates, Selected Years 1960-1999, Virginia**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum				Wood Thousand Cords	Geothermal	Solar <sup>c</sup>	Electricity <sup>a</sup> Million Kilowatthours	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Total						Million Kilowatthours	
			Thousand Barrels										
1960	458	27	6,520	4,655	734	11,909	1,499	—	—	4,099	—	10,196	—
1965	281	36	7,471	4,847	1,133	13,452	1,110	—	—	6,557	—	15,655	—
1970	166	50	9,734	4,544	1,430	15,708	882	—	—	11,546	—	27,979	—
1975	114	49	9,091	2,056	1,561	12,708	925	—	—	15,871	—	38,283	—
1980	68	55	7,380	1,403	1,506	10,289	721	—	—	19,731	—	47,979	—
1985	95	49	5,139	3,611	1,805	10,554	1,117	—	—	22,568	—	53,021	—
1990	83	51	5,108	1,160	2,124	8,392	684	—	—	28,130	—	R 61,536	—
1991	49	54	4,593	1,322	2,320	8,235	721	—	—	29,607	—	R 64,364	—
1992	68	62	4,781	1,283	2,429	8,494	758	—	—	29,780	—	R 63,515	—
1993	109	65	4,958	1,489	2,391	8,839	R 821	—	—	32,472	—	R 68,586	—
1994	111	65	4,914	1,256	2,440	8,610	R 805	—	—	32,343	—	R 67,497	—
1995	100	69	4,997	1,220	2,874	9,091	R 893	—	—	33,472	—	R 69,786	—
1996	139	76	5,853	1,544	R 3,188	R 10,585	R 892	—	—	34,651	—	R 72,212	—
1997	64	74	5,380	1,583	R 3,438	R 10,401	R 618	—	—	33,923	—	R 70,564	—
1998	60	63	5,119	2,053	2,624	9,796	545	—	—	34,703	—	71,690	—
1999	44	69	4,978	1,548	2,927	9,454	584	—	—	35,779	—	70,102	—
<b>Trillion Btu</b>													
1960	11.4	27.9	38.0	26.4	2.9	67.3	30.0	0.0	0.0	14.0	150.5	34.8	185.3
1965	6.9	37.4	43.5	27.5	4.5	75.5	22.2	0.0	0.0	22.4	164.5	53.4	217.9
1970	4.0	50.8	56.7	25.8	5.4	87.9	17.6	0.0	0.0	39.4	199.7	95.5	295.2
1975	2.7	49.7	53.0	11.7	5.8	70.4	18.5	0.0	0.0	54.2	195.4	130.6	326.1
1980	1.7	55.6	43.0	8.0	5.5	56.5	14.4	0.0	0.0	67.3	195.5	163.7	359.2
1985	2.4	50.7	29.9	20.5	6.5	56.9	22.3	0.0	0.0	77.0	209.3	180.9	390.2
1990	2.1	53.6	29.8	6.6	7.7	44.0	13.7	e 0.1	e 0.1	96.0	e 209.6	R 210.0	R e 419.6
1991	1.2	56.5	26.8	7.5	8.4	42.6	14.4	0.1	0.1	101.0	216.0	R 219.6	R 435.6
1992	1.7	64.8	27.9	7.3	8.8	43.9	15.2	0.1	0.1	101.6	227.5	R 216.7	R 444.2
1993	2.7	68.4	28.9	8.4	8.6	45.9	16.4	0.1	0.1	110.8	244.5	R 234.0	R 478.5
1994	2.8	67.7	28.6	7.1	8.9	44.6	16.1	0.1	0.1	110.4	241.7	230.3	472.0
1995	2.5	70.8	29.1	6.9	10.4	46.4	R 17.9	0.1	0.1	114.2	252.1	R 238.1	R 490.2
1996	3.5	79.1	34.1	8.8	R 11.5	R 54.4	17.8	0.1	0.1	118.2	R 273.3	R 246.4	R 519.7
1997	1.6	77.1	31.3	9.0	R 12.4	R 52.7	R 12.4	0.1	0.1	115.7	R 259.9	R 240.8	R 500.6
1998	1.5	65.9	29.8	11.6	9.5	50.9	10.9	0.1	0.1	118.4	247.9	244.6	492.5
1999	1.1	71.7	29.0	8.8	10.6	48.4	11.7	0.2	0.1	122.1	255.2	239.2	494.4

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Includes small amounts of solar thermal and photovoltaic energy consumed by the commercial sector that cannot be separately identified. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

R=Revised data.

—=Not applicable.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 295. Commercial Energy Consumption Estimates, Selected Years 1960-1999, Virginia**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum						Wood	Geothermal	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>c</sup>	Total <sup>d</sup>
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels						Thousand Cords	Million Kilowatthours	Million Kilowatthours			
1960	841	11	1,388	93	130	223	175	2,009	28	—	3,676	—	9,143	—
1965	515	15	1,591	97	200	275	211	2,373	21	—	6,192	—	14,784	—
1970	305	30	2,072	91	252	210	118	2,744	17	—	10,804	—	26,181	—
1975	209	32	1,935	41	275	310	245	2,807	18	—	14,014	—	33,802	—
1980	125	38	1,634	46	266	371	443	2,759	17	—	16,969	—	41,262	—
1985	176	34	2,460	214	319	456	443	3,892	R 30	—	21,491	—	50,492	—
1990	153	41	2,370	139	375	478	221	3,582	R 43	—	28,082	—	R 61,432	—
1991	90	44	2,132	148	409	341	115	3,146	R 46	—	29,387	—	R 63,885	—
1992	124	51	1,955	127	429	345	224	3,079	R 49	—	29,863	—	R 63,691	—
1993	201	53	2,422	159	422	121	182	3,307	66	—	31,419	—	R 66,361	—
1994	205	53	2,464	101	431	137	157	3,290	67	—	31,624	—	R 65,998	—
1995	185	57	2,572	275	507	132	208	3,694	67	—	33,051	—	R 68,909	—
1996	256	59	3,447	277	R 563	130	258	R 4,674	73	—	33,839	—	R 70,521	—
1997	118	62	3,068	372	R 607	137	130	R 4,314	R 68	—	34,165	—	R 71,066	—
1998	111	58	3,158	433	463	123	119	4,297	68	—	35,793	—	73,942	—
1999	80	62	2,880	317	517	166	218	4,097	82	—	36,893	—	72,285	—
<b>Trillion Btu</b>														
1960	20.8	11.7	8.1	0.5	0.5	1.2	1.1	11.4	0.6	0.0	12.5	57.1	31.2	88.3
1965	12.7	15.3	9.3	0.5	0.8	1.4	1.3	13.4	0.4	0.0	21.1	62.9	50.4	113.3
1970	7.3	30.9	12.1	0.5	1.0	1.1	0.7	15.4	0.3	0.0	36.9	90.7	89.3	180.0
1975	4.9	33.0	11.3	0.2	1.0	1.6	1.5	15.7	0.4	0.0	47.8	101.7	115.3	217.1
1980	3.1	39.0	9.5	0.3	1.0	1.9	2.8	15.5	0.3	0.0	57.9	115.8	140.8	256.6
1985	4.4	35.3	14.3	1.2	1.1	2.4	2.8	21.9	R 0.6	0.0	73.3	R 135.5	172.3	R 307.7
1990	3.8	42.8	13.8	0.8	1.4	2.5	1.4	19.8	R 0.9	e (s)	95.8	R e 163.2	209.6	R e 372.8
1991	2.3	45.9	12.4	0.8	1.5	1.8	0.7	17.3	R 0.9	(s)	100.3	R 166.7	R 218.0	R 384.6
1992	3.1	52.7	11.4	0.7	1.6	1.8	1.4	16.9	R 1.0	0.1	101.9	R 175.6	R 217.3	R 392.9
1993	5.0	55.2	14.1	0.9	1.5	0.6	1.1	18.3	1.3	0.1	107.2	187.2	R 226.4	R 413.6
1994	5.1	55.0	14.4	0.6	1.6	0.7	1.0	18.2	1.3	0.1	107.9	187.6	225.2	412.8
1995	4.6	58.7	15.0	1.6	1.8	0.7	1.3	20.4	1.3	0.1	112.8	197.9	R 235.1	R 433.1
1996	6.4	61.5	20.1	1.6	R 2.0	0.7	1.6	R 26.0	1.5	0.1	115.5	R 211.0	R 240.6	R 451.6
1997	2.9	64.6	17.9	2.1	R 2.2	0.7	0.8	R 23.7	R 1.4	0.2	116.6	R 209.3	R 242.5	R 451.8
1998	2.8	60.8	18.4	2.5	1.7	0.6	0.8	23.9	1.4	0.2	122.1	211.1	252.3	463.4
1999	2.0	63.7	16.8	1.8	1.9	0.9	1.4	22.7	1.6	0.2	125.9	216.1	246.6	462.8

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>d</sup> Small amounts of solar thermal and photovoltaic energy consumed in the commercial sector cannot be separately identified and are included in residential consumption.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 296. Industrial Energy Consumption Estimates, Selected Years 1960-1999, Virginia**

Year	Coal Thousand Short Tons	Natural Gas <sup>a</sup> Billion Cubic Feet	Petroleum									Hydro-electric Power <sup>b</sup> Million kWh	Wood and Waste	Other <sup>b,d</sup>	Electricity <sup>b</sup>		Electrical System Energy Losses <sup>e</sup> Million kWh	Total
			Asphalt and Road Oil <sup>b</sup>	Distillate Fuel <sup>b</sup>	Kerosene <sup>b</sup>	LPG <sup>b</sup>	Lubricants <sup>b</sup>	Motor Gasoline	Residual Fuel <sup>b</sup>	Other <sup>b,c</sup>	Total				Million kWh	Net Energy		
			Thousand Barrels															
1960	4,503	22	1,753	2,133	291	275	182	882	5,739	R 1,705	R 12,961	79	—	—	3,786	—	9,418	—
1965	5,824	36	2,681	2,977	600	301	236	838	6,754	R 2,647	R 17,033	87	—	—	5,834	—	13,929	—
1970	4,172	45	2,250	4,415	395	682	289	653	4,170	R 3,020	R 15,874	41	—	—	7,467	—	18,095	—
1975	2,816	37	2,328	3,128	167	1,184	307	460	7,611	R 2,688	R 17,872	38	—	—	9,437	—	22,764	—
1980	3,538	55	2,618	3,573	267	1,312	422	278	5,203	R 10,233	R 23,905	27	—	—	11,637	—	28,297	—
1985	4,219	51	4,033	3,035	207	1,707	384	686	3,408	R 4,958	R 18,418	27	—	—	13,561	—	31,861	—
1990	4,641	75	4,701	3,051	75	1,526	432	705	2,893	R 3,979	R 17,362	R <sup>f</sup> 59	—	—	16,399	—	R 35,873	—
1991	5,273	60	3,734	2,936	92	1,812	387	671	2,491	R 4,998	R 17,121	R 48	—	—	16,029	—	R 34,845	—
1992	4,564	69	3,759	2,527	56	1,767	394	668	2,945	R 5,323	R 17,440	R 72	—	—	16,714	—	R 35,647	—
1993	3,826	74	3,697	2,962	87	1,906	402	635	2,745	R 5,245	R 17,679	R 66	—	—	17,390	—	R 36,731	—
1994	3,807	87	3,935	2,476	101	1,876	420	666	2,499	R 5,359	R 17,333	R 76	—	—	18,154	—	R 37,885	—
1995	3,551	99	3,639	3,545	122	1,338	412	718	1,804	R 5,231	R 16,810	R 77	—	—	18,554	—	R 38,684	—
1996	3,594	86	3,512	4,429	114	R 1,349	406	766	1,820	R 6,223	R 18,605	R 91	—	—	19,021	—	R 39,639	—
1997	3,489	87	3,474	5,156	91	R 1,124	423	801	2,463	R 6,616	R 20,148	R 127	—	—	19,249	—	R 40,040	—
1998	3,371	94	3,889	4,518	118	884	443	794	2,139	6,546	19,330	72	—	—	20,024	—	41,366	—
1999	3,254	103	4,770	4,303	56	1,130	447	571	2,046	6,704	20,026	62	—	—	20,269	—	39,714	—

  

Trillion Btu																		
1960	114.9	23.3	11.6	12.4	1.6	1.1	1.1	4.6	36.1	R 10.1	R 78.8	0.8	25.5	0.0	12.9	R 256.2	32.1	R 288.4
1965	147.4	36.6	17.8	17.3	3.4	1.2	1.4	4.4	42.5	R 15.4	R 103.4	0.9	31.6	0.0	19.9	R 339.8	47.5	R 387.3
1970	99.3	46.0	14.9	25.7	2.2	2.6	1.8	3.4	26.2	R 17.3	R 94.2	0.4	37.5	0.0	25.5	R 302.8	61.7	R 364.6
1975	66.1	37.3	15.4	18.2	0.9	4.4	1.9	2.4	47.9	R 15.5	R 106.7	0.4	34.4	0.0	32.2	R 277.0	77.7	R 354.7
1980	88.1	55.4	17.4	20.8	1.5	4.8	2.6	1.5	32.7	R 56.8	R 138.0	0.3	R 55.3	0.0	39.7	R 376.8	96.6	R 473.3
1985	106.7	52.8	26.8	17.7	1.2	6.1	2.3	3.6	21.4	R 27.4	R 106.5	0.3	R 64.8	0.0	46.3	R 377.3	108.7	R 486.0
1990	117.9	78.3	31.2	17.8	0.4	5.5	2.6	3.7	18.2	R 22.2	R 101.7	R <sup>f</sup> 0.6	R 88.3	R <sup>f</sup> 0.0	56.0	R <sup>f</sup> 442.7	122.4	R <sup>f</sup> 565.1
1991	134.3	62.8	24.8	17.1	0.5	6.5	2.3	3.5	15.7	R 27.9	R 98.4	R 0.5	R 88.0	0.0	54.7	R 438.7	R 118.9	R 557.6
1992	116.6	72.1	24.9	14.7	0.3	6.4	2.4	3.5	18.5	R 29.5	R 100.3	R 0.7	R 93.0	0.0	57.0	R 439.7	R 121.6	R 561.4
1993	97.7	77.4	24.5	17.3	0.5	6.9	2.4	3.3	17.3	R 29.1	R 101.3	0.7	R 92.2	0.0	59.3	R 428.5	R 125.3	R 553.8
1994	97.1	90.2	26.1	14.4	0.6	6.8	2.5	3.5	15.7	R 29.7	R 99.4	0.8	R 96.8	0.0	61.9	R 446.1	129.3	R 575.4
1995	90.7	101.9	24.1	20.6	0.7	4.8	2.5	R 3.7	11.3	R 29.0	R 96.9	0.8	R 105.4	0.0	63.3	R 459.0	R 132.0	R 591.0
1996	91.9	88.8	23.3	25.8	0.6	R 4.9	2.4	4.0	11.4	R 34.2	R 106.7	R 0.9	R 108.5	0.0	64.9	R 461.7	R 135.2	R 596.9
1997	88.9	90.4	23.1	30.0	0.5	R 4.1	2.6	4.2	15.5	R 36.5	R 116.4	1.3	R 106.0	0.0	65.7	R 468.7	R 136.6	R 605.3
1998	85.8	98.0	25.8	26.3	0.7	3.2	2.7	4.1	13.4	36.1	112.3	0.7	86.8	0.0	68.3	452.0	141.1	593.1
1999	82.9	106.6	31.7	25.1	0.3	4.1	2.7	3.0	12.9	36.8	116.4	0.6	103.1	0.0	69.2	478.9	135.5	614.4

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>e</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for

electrical system energy losses.

<sup>f</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

R=Revised data.

kWh=kilowatt-hours. — =Not applicable.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 297. Transportation Energy Consumption Estimates, Selected Years 1960-1999, Virginia**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum								Ethanol <sup>c</sup>	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total <sup>c</sup>
			Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	LPG <sup>a</sup>	Lubricants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total					
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels								Thousand Barrels	Million Kilowatthours	Million Kilowatthours	Total <sup>c</sup>	
1960	79	4	382	4,099	4,441	7	451	29,972	11,780	51,134	0	0	—	0	—
1965	19	7	721	6,564	6,504	24	428	34,992	9,645	58,877	0	0	—	0	—
1970	7	8	356	7,698	11,093	47	430	47,821	12,000	79,446	0	0	—	0	—
1975	(s)	3	251	8,217	11,602	57	427	58,524	6,356	85,436	0	0	—	0	—
1980	0	8	218	11,219	12,279	47	530	58,386	4,419	87,098	0	32	—	78	—
1985	0	4	131	14,278	11,038	102	482	61,837	3,419	91,287	R <sup>e</sup> 658	60	—	141	—
1990	0	7	70	16,930	15,806	63	542	69,150	3,362	105,922	R <sup>e</sup> 381	86	—	189	—
1991	0	7	116	16,856	11,824	101	485	69,513	3,780	102,675	R <sup>e</sup> 365	88	—	192	—
1992	0	6	101	16,915	11,670	102	495	70,521	2,872	102,676	R <sup>e</sup> 275	91	—	195	—
1993	0	6	105	17,616	11,915	109	504	73,071	2,396	105,715	R <sup>e</sup> 51	91	—	192	—
1994	0	6	101	18,887	12,003	182	527	74,244	1,977	107,920	R <sup>e</sup> 277	89	—	186	—
1995	0	6	85	19,113	10,589	64	518	77,978	1,953	110,299	R <sup>e</sup> 1	86	—	179	—
1996	0	8	79	22,079	9,204	R <sup>e</sup> 56	502	78,268	1,238	R <sup>e</sup> 111,426	R <sup>e</sup> 954	85	—	R <sup>e</sup> 178	—
1997	0	7	50	23,065	9,402	R <sup>e</sup> 48	531	80,503	1,483	R <sup>e</sup> 115,081	R <sup>e</sup> 737	83	—	R <sup>e</sup> 173	—
1998	0	7	90	23,837	10,183	35	555	81,280	1,338	117,318	920	88	—	181	—
1999	0	8	106	24,432	9,314	14	561	84,077	1,464	119,969	787	91	—	179	—
<b>Trillion Btu</b>															
1960	2.0	4.1	1.9	23.9	24.0	(s)	2.7	157.4	74.1	284.1	0.0	0.0	290.2	0.0	290.2
1965	0.5	7.0	3.6	38.2	35.8	0.1	2.6	183.8	60.6	324.8	0.0	0.0	332.2	0.0	332.2
1970	0.2	8.0	1.8	44.8	61.9	0.2	2.6	251.2	75.4	438.0	0.0	0.0	446.1	0.0	446.1
1975	(s)	3.1	1.3	47.9	64.9	0.2	2.6	307.4	40.0	464.3	0.0	0.0	467.4	0.0	467.4
1980	0.0	8.4	1.1	65.3	68.8	0.2	3.2	306.7	27.8	473.1	0.0	0.1	481.6	0.3	481.8
1985	0.0	4.6	0.7	83.2	61.7	0.4	2.9	324.8	21.5	495.1	R <sup>e</sup> 2.3	0.2	<sup>e</sup> 499.9	0.5	<sup>e</sup> 500.4
1990	0.0	7.2	0.4	98.6	88.5	0.2	3.3	363.2	21.1	575.4	R <sup>e</sup> 1.3	0.3	582.9	0.6	583.6
1991	0.0	6.9	0.6	98.2	66.7	0.4	2.9	365.2	23.8	557.7	R <sup>e</sup> 1.3	0.3	564.9	0.7	565.6
1992	0.0	6.7	0.5	98.5	65.9	0.4	3.0	370.4	18.1	556.8	R <sup>e</sup> 1.0	0.3	563.8	0.7	564.5
1993	0.0	6.0	0.5	102.6	67.3	0.4	3.1	383.8	15.1	572.8	0.2	0.3	579.1	0.7	579.7
1994	0.0	6.6	0.5	110.0	68.0	0.7	3.2	R <sup>e</sup> 388.3	12.4	R <sup>e</sup> 583.1	R <sup>e</sup> 1.0	0.3	R <sup>e</sup> 590.0	0.6	R <sup>e</sup> 590.6
1995	0.0	6.5	0.4	111.3	60.0	0.2	3.1	R <sup>e</sup> 406.7	12.3	R <sup>e</sup> 594.1	(s)	0.3	R <sup>e</sup> 600.9	0.6	R <sup>e</sup> 601.5
1996	0.0	8.1	0.4	128.6	52.2	0.2	3.0	R <sup>e</sup> 408.2	7.8	R <sup>e</sup> 600.5	R <sup>e</sup> 3.4	0.3	R <sup>e</sup> 608.9	0.6	R <sup>e</sup> 609.5
1997	0.0	7.7	0.3	134.4	53.3	0.2	3.2	R <sup>e</sup> 419.7	9.3	R <sup>e</sup> 620.3	R <sup>e</sup> 2.6	0.3	R <sup>e</sup> 628.3	0.6	R <sup>e</sup> 628.9
1998	0.0	7.2	0.5	138.8	57.7	0.1	3.4	423.6	8.4	632.6	3.3	0.3	640.1	0.6	640.7
1999	0.0	8.3	0.5	142.3	52.8	(s)	3.4	438.1	9.2	646.5	2.8	0.3	655.1	0.6	655.7

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels. Transportation use of natural gas is gas consumed in the operation of pipelines, primarily in compressors, and, since 1990, is also gas consumed as vehicle fuel.

<sup>c</sup> Ethanol blended into motor gasoline, which is accounted for under motor gasoline, is shown separately here to display the use of renewable energy by the transportation sector and is included only once in the total.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1980 and 1981 due to the expanded coverage of renewable energy sources beginning in 1981.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 298. Estimates of Energy Input at Electric Utilities, Selected Years, 1960-1999, Virginia**

Year	Coal	Natural Gas <sup>a</sup>	Petroleum				Nuclear Electric Power	Hydroelectric Power <sup>e</sup>	Wood and Waste	Geothermal Energy	Other <sup>b,f</sup>	Total <sup>g</sup>
			Heavy Oil <sup>b,c</sup>	Light Oil <sup>b,d</sup>	Petroleum Coke <sup>b</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels				Million Kilowatthours					
1960	6,262	1	130	6	0	136	0	1,189	0	0	0	—
1965	8,265	2	170	7	0	178	0	797	0	0	0	—
1970	6,644	4	17,085	721	856	18,662	0	650	0	0	0	—
1975	3,991	(s)	26,741	624	0	27,364	8,970	1,273	0	0	0	—
1980	5,560	2	14,586	793	0	15,379	11,466	864	0	0	0	—
1985	7,166	2	1,301	340	0	1,641	22,303	818	0	0	0	—
1990	8,228	7	1,421	482	0	1,902	23,820	428	0	0	(s)	—
1991	8,568	9	2,810	302	0	3,112	23,886	-26	0	0	(s)	—
1992	8,661	11	2,041	269	0	2,310	23,334	353	0	0	(s)	—
1993	9,447	20	3,180	222	0	3,402	22,689	473	0	0	(s)	—
1994	8,670	19	3,348	489	0	3,837	25,429	329	0	0	(s)	—
1995	9,543	16	1,577	326	0	1,903	25,135	149	0	0	(s)	—
1996	10,994	10	822	341	0	1,163	26,286	510	0	0	0	—
1997	11,605	12	1,209	199	0	1,408	27,084	76	0	0	0	—
1998	12,300	20	3,950	388	0	4,338	27,234	256	0	0	0	—
1999	12,427	23	4,387	486	0	4,873	28,301	-608	0	0	0	—

  

Trillion Btu												
1960	167.4	1.5	0.8	(s)	0.0	0.9	0.0	12.8	0.0	0.0	0.0	182.5
1965	218.8	2.3	1.1	(s)	0.0	1.1	0.0	8.3	0.0	0.0	0.0	230.6
1970	164.6	4.4	107.4	4.2	5.2	116.8	0.0	6.8	0.0	0.0	0.0	292.6
1975	95.5	0.5	168.1	3.6	0.0	171.8	98.8	13.2	0.0	0.0	0.0	379.8
1980	139.1	2.5	91.7	4.6	0.0	96.3	125.1	9.0	0.0	0.0	0.0	372.0
1985	183.6	1.6	8.2	2.0	0.0	10.2	241.2	8.5	0.0	0.0	0.0	445.1
1990	209.2	6.8	8.9	2.8	0.0	11.7	254.4	4.4	0.0	0.0	(s)	486.6
1991	218.8	9.9	17.7	1.8	0.0	19.4	256.5	-0.3	0.0	0.0	(s)	504.4
1992	222.3	11.5	12.8	1.6	0.0	14.4	249.2	3.6	0.0	0.0	(s)	500.9
1993	242.2	20.5	20.0	1.3	0.0	21.3	242.4	4.9	0.0	0.0	(s)	531.2
1994	221.6	19.9	21.1	2.8	0.0	23.9	271.5	3.4	0.0	0.0	(s)	540.3
1995	243.2	16.9	9.9	1.9	0.0	11.8	267.9	1.5	0.0	0.0	(s)	541.4
1996	277.0	10.9	5.2	2.0	0.0	7.2	279.2	5.3	0.0	0.0	0.0	579.5
1997	291.4	12.1	7.6	1.2	0.0	8.8	287.7	0.8	0.0	0.0	0.0	600.8
1998	310.0	21.4	24.8	2.3	0.0	27.1	289.3	2.6	0.0	0.0	0.0	650.5
1999	315.7	24.7	27.6	2.8	0.0	30.4	300.6	-6.3	0.0	0.0	0.0	665.2

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> Prior to 1980, based on oil used in steam plants. Since 1980, heavy oil includes fuel oil nos. 4, 5, and 6 and residual fuel oils.

<sup>d</sup> Prior to 1980, based on oil used in internal combustion and gas turbine engine plants. Since 1980, light oil includes fuel oil nos. 1 and 2, kerosene, and jet fuel.

<sup>e</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>f</sup> "Other" is electricity generated for distribution from wind, photovoltaic, and solar thermal energy.

<sup>g</sup> If applicable, from 1989, includes net imports of electricity generated from nonrenewable energy sources not shown in other columns. See data in appendix Table A8.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 299. Energy Consumption Estimates by Source, Selected Years 1960-1999, Washington**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum											Nuclear Electric Power	Hydro-electric Power <sup>d</sup>	Wood and Waste	Other <sup>a,e</sup>	Net Inter-state Flow of Electricity/Losses <sup>f</sup>	Total <sup>g</sup>
			Asphalt & Road Oil <sup>a</sup>	Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	Kero-sene <sup>a</sup>	LPG <sup>a</sup>	Lubri-cants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Other <sup>a,c</sup>	Total						
			Thousand Barrels															Million kWh	
1960	608	65	1,309	2,161	18,123	4,502	105	548	571	23,076	9,300	R 3,562	R 63,257	0	34,299	—	—	-17,081	—
1965	488	108	1,683	434	17,116	6,919	34	1,227	597	26,906	9,140	R 7,881	R 71,937	0	48,814	—	—	-33,455	—
1970	245	150	2,335	351	18,201	10,637	239	1,659	666	36,068	10,384	R 9,620	R 90,161	2,614	70,142	—	—	-60,750	—
1975	4,492	164	2,910	274	16,970	14,037	346	763	620	41,007	8,459	R 12,236	R 97,622	3,308	85,438	—	—	-95,362	—
1980	5,443	129	2,050	356	18,471	12,036	120	1,487	703	42,653	17,277	R 10,218	R 105,370	2,041	83,971	—	—	-46,955	—
1985	5,616	135	2,039	202	20,360	15,417	1,212	2,466	640	44,020	11,406	R 11,021	R 108,784	8,038	77,956	—	—	-33,631	—
1990	5,147	163	2,481	313	21,787	22,343	75	2,292	720	53,464	16,500	R 20,587	R 140,561	5,742	R h 87,479	—	—	R -18,059	—
1991	5,461	173	2,967	268	19,958	21,306	70	2,596	644	54,238	17,398	R 20,277	R 139,722	4,230	R 90,938	—	—	R -24,295	—
1992	6,402	169	3,023	289	18,453	24,066	47	2,549	656	55,196	23,438	R 26,177	R 153,895	5,692	R 72,712	—	—	R 4,786	—
1993	5,934	198	2,941	198	15,469	22,226	63	2,582	668	57,385	15,928	R 22,449	R 139,909	7,135	R 67,648	—	—	R 24,980	—
1994	6,303	213	3,526	318	18,810	21,492	89	2,594	699	57,446	15,766	R 24,718	R 145,459	6,740	R 65,551	—	—	R 10,702	—
1995	4,158	220	3,558	229	18,846	23,039	121	2,913	687	58,836	17,575	R 24,956	R 150,760	6,942	R 81,467	—	—	R -16,187	—
1996	5,682	239	3,696	292	18,978	22,323	142	R 3,195	666	61,611	12,984	R 25,566	R 149,454	5,588	R 101,553	—	—	R -87,764	—
1997	4,949	231	4,048	202	21,630	22,454	167	R 5,116	704	61,213	13,193	R 24,107	R 152,833	6,244	R 105,156	—	—	R -97,515	—
1998	6,241	263	4,087	356	21,380	21,859	181	4,716	737	61,833	10,242	29,775	155,164	6,916	79,938	—	—	-25,381	—
1999	5,819	264	4,104	283	20,305	22,155	124	4,458	745	63,239	9,592	32,362	157,367	6,086	95,531	—	—	-54,329	—

  

Trillion Btu																			
1960	15.2	67.2	8.7	10.9	105.6	24.4	0.6	2.2	3.5	121.2	58.5	R 21.4	R 356.9	0.0	369.1	58.5	0.0	-58.3	R 808.7
1965	12.1	116.2	11.2	2.2	99.7	38.2	0.2	4.9	3.6	141.3	57.5	R 47.2	R 406.0	0.0	510.3	66.2	0.0	-114.1	R 996.7
1970	5.9	158.2	15.5	1.8	106.0	59.3	1.4	6.3	4.0	189.5	65.3	R 57.6	R 506.7	28.7	736.1	66.5	0.0	-207.3	R 1,294.8
1975	76.2	171.2	19.3	1.4	98.8	78.8	2.0	2.8	3.8	215.4	53.2	R 73.4	R 548.9	36.4	889.1	64.3	0.0	-325.4	R 1,460.8
1980	91.0	135.5	13.6	1.8	107.6	67.5	0.7	5.5	4.3	224.1	108.6	R 61.1	R 594.7	22.3	872.3	R 91.7	0.0	-160.2	R 1,647.2
1985	93.7	140.0	13.5	1.0	118.6	86.6	6.9	8.9	3.9	231.2	71.7	R 67.2	R 609.5	86.9	814.4	R 110.2	0.0	-114.8	R 1,740.0
1990	85.6	167.6	16.5	1.6	126.9	126.0	0.4	8.3	4.4	280.8	103.7	R 123.8	R 792.5	61.3	R h 910.0	R 92.8	h 0.4	R -61.6	R h 2,049.8
1991	89.2	178.4	19.7	1.4	116.3	120.2	0.4	9.4	3.9	284.9	109.4	R 121.6	R 787.1	45.4	R 949.0	R 91.5	R 0.5	R -82.9	R 2,067.2
1992	106.1	174.7	20.1	1.5	107.5	136.0	0.3	9.2	4.0	289.9	147.4	R 156.4	R 872.1	60.8	R 752.0	R 110.5	R 0.5	R 16.3	R 2,111.5
1993	97.8	205.7	19.5	1.0	90.1	125.6	0.4	9.3	4.1	301.4	100.1	R 134.4	R 785.9	76.2	R 697.4	R 104.3	0.5	R 85.2	R 2,057.0
1994	106.9	221.5	23.4	1.6	109.6	121.7	0.5	9.4	4.2	R 300.4	99.1	R 147.8	R 817.8	72.0	R 676.2	R 105.0	0.5	R 36.5	R 2,065.6
1995	69.8	229.2	23.6	1.2	109.8	130.4	0.7	10.6	4.2	R 306.8	110.5	R 149.4	R 847.0	74.0	R 840.1	R 90.6	R 0.6	R -55.2	R 2,098.8
1996	90.9	247.5	24.5	1.5	110.5	126.5	0.8	R 11.5	4.0	R 321.4	81.6	R 153.4	R 835.9	59.4	R 1,050.1	R 95.0	0.6	R -299.5	R 2,096.1
1997	80.5	241.9	26.9	1.0	126.0	127.3	0.9	R 18.5	4.3	R 319.1	82.9	R 144.6	R 851.6	66.3	R 1,089.1	R 97.4	0.6	R -332.7	R 2,122.2
1998	103.4	275.0	27.1	1.8	124.5	123.9	1.0	17.0	4.5	322.3	64.4	179.0	865.6	73.5	827.0	76.0	0.7	-86.6	2,158.9
1999	96.4	277.4	27.2	1.4	118.3	125.6	0.7	16.1	4.5	329.5	60.3	194.5	878.2	64.7	988.4	86.6	0.7	-185.4	2,240.8

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products consumed in the industrial sector. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> Through 1989, includes all net imports electricity, and, from 1990, includes only the portion of net imports of electricity that is derived from hydroelectric power.

<sup>e</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>f</sup> Net interstate flow of electricity is the difference between the amount of energy in the electricity sold within a State (including associated losses) and the energy input at the electric utilities within the State. A positive number

indicates that more electricity (including associated losses) came into the State than went out of the State during the year; conversely, a negative number indicates that more electricity (including associated losses) went out of the State than came into the State.

<sup>g</sup> From 1989, "Total" does not equal the sum of the columns. Net imports of electricity generated from nonrenewable energy sources (shown in appendix Table A8) is included in the total but not in any other columns.

<sup>h</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

kWh=kilowatthours. R=Revised data. — =Not applicable.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 300. Residential Energy Consumption Estimates, Selected Years 1960-1999, Washington**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum				Wood Thousand Cords	Geothermal	Solar <sup>c</sup>	Electricity <sup>a</sup> Million Kilowatthours	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Total						Million Kilowatthours	
			Thousand Barrels										
1960	63	8	7,303	0	347	7,650	888	—	—	8,755	—	21,776	—
1965	51	17	6,495	9	894	7,399	624	—	—	11,015	—	26,298	—
1970	12	32	7,035	115	1,145	8,296	479	—	—	15,355	—	37,209	—
1975	7	34	4,806	203	404	5,413	513	—	—	19,209	—	46,334	—
1980	56	30	3,422	65	626	4,113	R 653	—	—	24,445	—	59,442	—
1985	76	33	3,095	86	553	3,734	757	—	—	27,933	—	65,625	—
1990	23	40	2,998	49	657	3,704	949	—	—	28,809	—	R 63,022	—
1991	28	46	2,482	46	891	3,419	1,000	—	—	29,889	—	R 64,977	—
1992	32	43	1,827	29	880	2,737	1,052	—	—	28,436	—	R 60,647	—
1993	40	53	1,517	44	921	2,482	899	—	—	30,932	—	R 65,333	—
1994	30	53	1,523	66	944	2,532	R 882	—	—	29,673	—	R 61,925	—
1995	27	53	1,478	86	1,237	2,801	978	—	—	30,147	—	R 62,855	—
1996	8	63	1,499	110	1,258	2,867	R 977	—	—	32,012	—	R 66,714	—
1997	8	62	1,455	133	R 2,404	R 3,992	R 749	—	—	31,749	—	R 66,042	—
1998	5	62	1,620	123	2,182	3,926	661	—	—	31,362	—	64,788	—
1999	6	72	1,119	86	2,005	3,211	708	—	—	32,817	—	64,299	—

  

Trillion Btu													
1960	1.4	8.3	42.5	0.0	1.4	43.9	17.8	0.0	0.0	29.9	101.3	74.3	175.6
1965	1.2	18.7	37.8	0.1	3.6	41.5	12.5	0.0	0.0	37.6	111.4	89.7	201.1
1970	0.3	33.7	41.0	0.7	4.3	46.0	9.6	0.0	0.0	52.4	141.9	127.0	268.8
1975	0.1	35.8	28.0	1.1	1.5	30.6	10.3	0.0	0.0	65.5	142.4	158.1	300.5
1980	1.3	31.3	19.9	0.4	2.3	22.6	R 13.1	0.0	0.0	83.4	151.6	202.8	354.4
1985	1.8	34.3	18.0	0.5	2.0	20.5	15.1	0.0	0.0	95.3	167.1	223.9	391.0
1990	0.5	41.6	17.5	0.3	2.4	20.1	19.0	e (s)	R e 0.4	98.3	R e 179.9	215.0	R e 394.9
1991	0.6	47.7	14.5	0.3	3.2	17.9	20.0	(s)	R 0.4	102.0	R 188.6	R 221.7	R 410.3
1992	0.7	44.4	10.6	0.2	3.2	14.0	21.0	(s)	R 0.4	97.0	R 177.6	R 206.9	R 384.6
1993	0.9	55.2	8.8	0.2	3.3	12.4	18.0	(s)	R 0.4	105.5	192.4	R 222.9	415.4
1994	0.7	55.3	8.9	0.4	3.4	12.7	17.6	(s)	R 0.4	101.2	187.9	211.3	R 399.2
1995	0.6	54.9	8.6	0.5	4.5	13.6	19.6	(s)	R 0.4	102.9	R 191.9	R 214.5	R 406.3
1996	0.2	65.0	8.7	0.6	4.5	13.9	19.5	(s)	R 0.4	109.2	208.2	R 227.6	R 435.9
1997	0.2	64.7	8.5	0.8	R 8.7	R 17.9	R 15.0	(s)	0.4	108.3	R 206.5	R 225.3	R 431.8
1998	0.1	64.7	9.4	0.7	7.9	18.0	13.2	(s)	0.4	107.0	203.4	221.1	424.5
1999	0.1	75.4	6.5	0.5	7.3	14.3	14.2	(s)	0.3	112.0	216.3	219.4	435.7

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Includes small amounts of solar thermal and photovoltaic energy consumed by the commercial sector that cannot be separately identified. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 301. Commercial Energy Consumption Estimates, Selected Years 1960-1999, Washington**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum						Wood	Geothermal	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>c</sup>	Total <sup>d</sup>
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels						Thousand Cords	Million Kilowatthours	Million Kilowatthours			
1960	117	6	2,308	0	61	222	441	3,032	17	—	3,220	—	8,010	—
1965	95	11	2,053	1	158	255	412	2,880	12	—	4,380	—	10,457	—
1970	23	18	2,224	15	202	304	481	3,226	9	—	6,723	—	16,293	—
1975	13	32	1,519	26	71	374	355	2,345	10	—	10,377	—	25,030	—
1980	105	31	1,073	18	111	478	426	2,105	16	—	13,845	—	33,667	—
1985	140	35	4,272	206	98	357	748	5,681	R 20	—	18,965	—	44,557	—
1990	43	39	2,090	14	116	281	53	2,555	R 60	—	21,510	—	R 47,055	—
1991	52	42	1,611	17	157	189	101	2,075	R 64	—	21,967	—	R 47,754	—
1992	59	38	816	12	155	131	56	1,171	R 69	—	22,532	—	R 48,056	—
1993	74	44	675	13	163	48	60	959	72	—	22,959	—	R 48,493	—
1994	56	43	721	16	167	48	48	1,000	74	—	23,377	—	R 48,785	—
1995	51	43	932	14	218	59	111	1,335	74	—	23,912	—	R 49,854	—
1996	15	48	673	8	222	60	170	1,134	80	—	25,142	—	R 52,396	—
1997	14	47	854	13	R 424	60	46	R 1,398	R 82	—	25,191	—	R 52,400	—
1998	9	46	790	24	385	63	35	1,297	82	—	25,862	—	53,425	—
1999	11	51	562	12	354	321	34	1,283	99	—	26,695	—	52,303	—

  

Trillion Btu														
1960	2.7	6.7	13.4	0.0	0.2	1.2	2.8	17.6	0.3	0.0	11.0	38.3	27.3	65.7
1965	2.2	11.5	12.0	(s)	0.6	1.3	2.6	16.5	0.2	0.0	14.9	45.3	35.7	81.0
1970	0.5	19.5	13.0	0.1	0.8	1.6	3.0	18.4	0.2	0.0	22.9	61.5	55.6	117.1
1975	0.3	33.3	8.8	0.1	0.3	2.0	2.2	13.5	0.2	0.0	35.4	82.6	85.4	168.0
1980	2.4	32.4	6.2	0.1	0.4	2.5	2.7	11.9	0.3	0.0	47.2	94.2	114.9	209.1
1985	3.3	36.9	24.9	1.2	0.4	1.9	4.7	33.0	R 0.4	0.0	64.7	R 138.3	152.0	R 290.3
1990	0.9	39.8	12.2	0.1	0.4	1.5	0.3	14.5	R 1.2	e 0.1	73.4	R e 129.9	R 160.6	R e 290.5
1991	1.2	43.0	9.4	0.1	0.6	1.0	0.6	11.7	R 1.3	0.1	75.0	R 132.2	R 162.9	R 295.1
1992	1.3	39.0	4.8	0.1	0.6	0.7	0.4	6.4	R 1.4	0.1	76.9	R 125.1	R 164.0	R 289.1
1993	1.7	45.2	3.9	0.1	0.6	0.3	0.4	5.2	1.4	0.1	78.3	132.0	165.5	297.5
1994	1.3	44.7	4.2	0.1	0.6	0.3	0.3	5.5	1.5	0.1	79.8	132.8	R 166.5	299.3
1995	1.1	44.3	5.4	0.1	0.8	0.3	0.7	7.3	1.5	0.2	81.6	135.9	R 170.1	R 306.0
1996	0.4	49.9	3.9	(s)	0.8	0.3	1.1	6.2	1.6	0.2	85.8	144.0	R 178.8	R 322.8
1997	0.3	48.8	5.0	0.1	R 1.5	0.3	0.3	R 7.2	R 1.6	0.2	86.0	R 144.2	R 178.8	R 323.0
1998	0.2	47.6	4.6	0.1	1.4	0.3	0.2	6.7	1.6	0.3	88.2	144.6	182.3	326.9
1999	0.3	53.4	3.3	0.1	1.3	1.7	0.2	6.5	2.0	0.3	91.1	153.5	178.5	332.0

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>d</sup> Small amounts of solar thermal and photovoltaic energy consumed in the commercial sector cannot be separately identified and are included in residential consumption.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.



**Table 302. Industrial Energy Consumption Estimates, Selected Years 1960-1999, Washington**

Year	Coal Thousand Short Tons	Natural Gas <sup>a</sup> Billion Cubic Feet	Petroleum									Hydro-electric Power <sup>b</sup> Million kWh	Wood and Waste	Other <sup>b,d</sup>	Electricity <sup>b</sup> Million kWh	Net Energy	Electrical System Energy Losses <sup>e</sup> Million kWh	Total
			Asphalt and Road Oil <sup>b</sup>	Distillate Fuel <sup>b</sup>	Kero-sene <sup>b</sup>	LPG <sup>b</sup>	Lubri-cants <sup>b</sup>	Motor Gasoline	Residual Fuel <sup>b</sup>	Other <sup>b,c</sup>	Total							
	Thousand Barrels																	
1960	420	50	1,309	5,937	105	134	158	802	7,137	R 3,562	R 19,144	195	—	—	13,975	—	34,761	—
1965	341	79	1,683	5,546	23	155	216	765	7,281	R 7,881	R 23,551	190	—	—	18,703	—	44,656	—
1970	210	93	2,335	4,986	109	274	267	551	7,874	R 9,620	R 26,015	135	—	—	25,530	—	61,867	—
1975	463	92	2,910	4,025	118	250	192	438	5,924	R 12,236	R 26,094	181	—	—	27,416	—	66,132	—
1980	332	64	2,050	4,350	37	658	202	278	6,538	R 10,218	R 24,331	129	—	—	31,366	—	76,271	—
1985	208	63	2,039	2,766	920	1,487	184	692	5,167	R 11,021	R 24,276	129	—	—	29,431	—	69,146	—
1990	229	78	2,481	4,456	11	1,228	207	658	2,017	R 20,587	R 31,645	R f 332	—	—	40,712	—	R 89,062	—
1991	197	80	2,967	3,985	7	1,302	185	794	1,340	R 30,856	R 30,856	R 267	—	—	40,839	—	R 88,781	—
1992	163	80	3,023	3,404	6	1,307	188	806	996	R 26,177	R 35,909	R 288	—	—	38,332	—	R 81,753	—
1993	174	92	2,941	2,670	6	1,284	192	526	859	R 22,449	R 30,928	R 330	—	—	36,563	—	R 77,226	—
1994	201	108	3,526	2,870	8	1,172	200	532	907	R 24,718	R 33,934	R 376	—	—	34,065	—	R 71,091	—
1995	223	110	3,558	2,748	21	1,278	197	555	654	R 24,956	R 33,968	R 472	—	—	34,276	—	R 71,464	—
1996	152	114	3,696	2,519	24	R 1,568	191	565	328	R 25,566	R 34,457	R 439	—	—	30,241	—	R 63,023	—
1997	156	111	4,048	2,711	21	R 2,190	202	593	309	R 24,107	R 34,182	R 543	—	—	31,348	—	R 65,207	—
1998	117	133	4,087	3,965	33	2,049	211	491	271	29,775	40,881	405	—	—	33,807	—	69,839	—
1999	95	127	4,104	2,135	26	2,085	214	506	421	32,362	41,853	517	—	—	39,499	—	77,390	—

  

Trillion Btu																		
1960	10.9	51.8	8.7	34.6	0.6	0.5	1.0	4.2	44.9	R 21.4	R 115.8	2.1	40.4	0.0	47.7	R 268.7	118.6	R 387.3
1965	8.8	85.3	11.2	32.3	0.1	0.6	1.3	4.0	45.8	R 47.2	R 142.6	2.0	53.5	0.0	63.8	R 356.0	152.4	R 508.4
1970	5.1	98.3	15.5	29.0	0.6	1.0	1.6	2.9	49.5	R 57.6	R 157.8	1.4	56.8	0.0	87.1	R 406.5	211.1	R 617.6
1975	10.9	96.0	19.3	23.4	0.7	0.9	1.2	2.3	37.2	R 73.4	R 158.5	1.9	53.9	0.0	93.5	R 414.7	225.6	R 640.3
1980	7.1	67.0	13.6	25.3	0.2	2.4	1.2	1.5	41.1	R 61.1	R 146.5	1.3	R 78.3	0.0	107.0	R 407.2	260.2	R 667.5
1985	4.5	65.7	13.5	16.1	5.2	5.4	1.1	3.6	32.5	R 67.2	R 144.6	1.4	R 91.7	0.0	100.4	R 408.3	235.9	R 644.2
1990	5.2	80.8	16.5	26.0	0.1	4.5	1.3	3.5	12.7	R 123.8	R 188.2	R f 3.5	R 69.1	f 0.0	138.9	R f 485.6	R 303.9	R f 789.5
1991	4.3	82.2	19.7	23.2	(s)	4.7	1.1	4.2	8.4	R 121.6	R 182.9	R 2.8	R 67.4	0.0	139.3	R 478.9	R 302.9	R 781.9
1992	3.4	82.4	20.1	19.8	(s)	4.7	1.1	4.2	6.3	R 156.4	R 212.7	R 3.0	R 84.3	0.0	130.8	R 516.5	R 278.9	R 795.4
1993	3.5	95.7	19.5	15.6	(s)	4.6	1.2	2.8	5.4	R 134.4	R 183.4	3.4	R 80.8	0.0	124.8	R 491.5	R 263.5	R 755.0
1994	3.9	112.0	23.4	16.7	(s)	4.3	1.2	2.8	5.7	R 147.8	R 201.9	3.9	R 81.8	0.0	116.2	R 519.8	R 242.6	R 762.3
1995	4.2	114.4	23.6	16.0	0.1	4.6	1.2	2.9	4.1	R 149.4	R 201.9	4.9	R 66.9	0.0	117.0	R 509.2	R 243.8	R 753.0
1996	3.0	118.4	24.5	14.7	0.1	R 5.7	1.2	R 2.9	2.1	R 153.4	R 204.6	R 4.5	R 70.2	0.0	103.2	R 503.9	R 215.0	R 718.9
1997	3.2	116.3	26.9	15.8	0.1	R 7.9	1.2	3.1	1.9	R 144.6	R 201.6	R 5.6	R 77.1	0.0	107.0	R 510.7	R 222.5	R 733.2
1998	2.7	139.0	27.1	23.1	0.2	7.4	1.3	2.6	1.7	179.0	242.4	4.2	57.7	0.0	115.4	561.3	238.3	799.6
1999	2.2	133.4	27.2	12.4	0.1	7.5	1.3	2.6	2.6	194.5	248.4	5.3	67.7	0.0	134.8	591.8	264.1	855.9

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>e</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>f</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

R=Revised data.

kWh=kilowatthours. — =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 303. Transportation Energy Consumption Estimates, Selected Years 1960-1999, Washington**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum								Ethanol <sup>c</sup>	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total <sup>c</sup>
			Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	LPG <sup>a</sup>	Lubricants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total				Million Kilowatthours	
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels								Thousand Barrels	Million Kilowatthours	Million Kilowatthours	Total <sup>c</sup>	
1960	7	(s)	2,161	2,574	4,502	6	413	22,052	1,707	33,415	0	1	—	3	—
1965	1	1	434	3,022	6,919	21	381	25,886	1,443	38,104	0	2	—	4	—
1970	(s)	6	351	3,956	10,637	38	400	35,213	2,025	52,620	0	2	—	4	—
1975	(s)	6	274	6,616	14,036	37	428	40,196	2,109	63,696	0	2	—	4	—
1980	0	4	356	9,595	12,036	92	501	41,897	10,112	74,589	0	2	—	5	—
1985	0	3	202	10,210	15,417	329	456	42,971	5,492	75,076	R <sup>e</sup> 14	14	—	32	—
1990	0	5	313	12,213	22,343	291	513	52,525	14,428	102,626	R 205	16	—	34	—
1991	0	5	268	11,866	21,306	246	459	53,256	15,957	103,357	R 241	19	—	40	—
1992	0	3	289	12,394	24,066	207	468	54,259	22,385	114,067	R 1,123	20	—	42	—
1993	0	4	198	10,545	22,226	214	477	56,811	15,008	105,478	R 1,945	19	—	39	—
1994	0	7	318	13,685	21,492	312	498	56,866	14,810	107,981	R 2,245	19	—	39	—
1995	0	9	229	13,669	23,039	179	490	58,222	16,809	112,638	R 739	18	—	38	—
1996	0	7	292	14,269	22,323	R 148	475	60,986	12,485	R 110,979	R 328	17	—	36	—
1997	0	9	202	16,570	22,454	R 97	502	60,559	12,837	R 113,222	R 621	18	—	38	—
1998	0	9	356	14,921	21,859	100	525	61,279	9,936	108,977	835	18	—	37	—
1999	0	8	283	16,470	22,155	13	531	62,412	9,136	111,001	710	20	—	39	—

  

Trillion Btu															
1960	0.2	0.4	10.9	15.0	24.4	(s)	2.5	115.8	10.7	179.4	0.0	(s)	180.0	(s)	180.0
1965	(s)	0.7	2.2	17.6	38.2	0.1	2.3	136.0	9.1	205.4	0.0	(s)	206.2	(s)	206.2
1970	(s)	6.8	1.8	23.0	59.3	0.1	2.4	185.0	12.7	284.4	0.0	(s)	291.2	(s)	291.2
1975	(s)	6.1	1.4	38.5	78.7	0.1	2.6	211.1	13.3	345.8	0.0	(s)	351.9	(s)	351.9
1980	0.0	3.9	1.8	55.9	67.5	0.3	3.0	220.1	63.6	412.2	0.0	(s)	416.1	(s)	416.1
1985	0.0	3.0	1.0	59.5	86.6	1.2	2.8	225.7	34.5	411.3	R <sup>e</sup> 0.1	(s)	<sup>e</sup> 414.4	0.1	<sup>e</sup> 414.5
1990	0.0	5.3	1.6	71.1	126.0	1.1	3.1	275.9	90.7	569.5	R 0.7	0.1	574.8	0.1	575.0
1991	0.0	5.3	1.4	69.1	120.2	0.9	2.8	279.8	100.3	574.5	R 0.9	0.1	579.8	0.1	580.0
1992	0.0	3.3	1.5	72.2	136.0	0.7	2.8	285.0	140.7	639.0	R 4.0	0.1	642.3	0.1	642.4
1993	0.0	4.5	1.0	61.4	125.6	0.8	2.9	298.4	94.4	584.5	R 6.9	0.1	589.0	0.1	589.1
1994	0.0	6.9	1.6	79.7	121.7	1.1	3.0	R 297.4	93.1	R 597.7	R 7.9	0.1	R 604.6	0.1	R 604.7
1995	0.0	9.1	1.2	79.6	130.4	0.6	3.0	R 303.6	105.7	R 624.1	R 2.6	0.1	R 633.2	0.1	R 633.4
1996	0.0	7.2	1.5	83.1	126.5	R 0.5	2.9	R 318.1	78.5	R 611.1	R 1.2	0.1	R 618.4	0.1	R 618.6
1997	0.0	9.4	1.0	96.5	127.3	R 0.4	3.0	R 315.7	80.7	R 624.7	R 2.2	0.1	R 634.1	0.1	R 634.2
1998	0.0	9.6	1.8	86.9	123.9	0.4	3.2	319.4	62.5	598.1	3.0	0.1	607.7	0.1	607.9
1999	0.0	8.2	1.4	95.9	125.6	(s)	3.2	325.2	57.4	608.9	2.5	0.1	617.1	0.1	617.3

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels. Transportation use of natural gas is gas consumed in the operation of pipelines, primarily in compressors, and, since 1990, is also gas consumed as vehicle fuel.

<sup>c</sup> Ethanol blended into motor gasoline, which is accounted for under motor gasoline, is shown separately here to display the use of renewable energy by the transportation sector and is included only once in the total.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1980 and 1981 due to the expanded coverage of renewable energy sources beginning in 1981.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 304. Estimates of Energy Input at Electric Utilities, Selected Years, 1960-1999, Washington**

Year	Coal	Natural Gas <sup>a</sup>	Petroleum				Nuclear Electric Power	Hydroelectric Power <sup>e</sup>	Wood and Waste	Geothermal Energy	Other <sup>b,f</sup>	Total <sup>g</sup>
			Heavy Oil <sup>b,c</sup>	Light Oil <sup>b,d</sup>	Petroleum Coke <sup>b</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels				Million Kilowatthours					
1960	0	0	14	2	0	16	0	34,104	1	0	0	—
1965	0	0	3	(s)	0	3	0	48,624	0	0	0	—
1970	0	0	3	(s)	0	4	2,614	70,008	(s)	0	0	—
1975	4,009	0	71	4	0	75	3,308	85,257	0	0	0	—
1980	4,950	1	201	31	0	232	2,041	83,841	0	0	0	—
1985	5,192	(s)	0	17	0	17	8,038	77,827	282	0	0	—
1990	4,852	(s)	1	30	0	31	5,742	R 87,146	333	0	0	—
1991	5,184	(s)	1	15	0	16	4,230	R 90,670	274	0	0	—
1992	6,148	5	1	12	0	13	5,692	R 72,424	361	0	0	—
1993	5,646	5	1	62	0	62	7,135	R 67,318	395	0	0	—
1994	6,016	2	0	12	0	12	6,740	R 65,175	396	0	0	—
1995	3,857	6	0	18	0	18	6,942	R 80,995	261	0	0	—
1996	5,507	7	0	16	0	16	5,588	R 101,114	360	0	0	—
1997	4,771	3	0	39	0	39	6,244	R 104,613	353	0	0	—
1998	6,111	13	0	83	0	83	6,916	79,533	337	0	0	—
1999	5,707	7	0	19	0	19	6,086	95,014	270	0	0	—

  

Trillion Btu												
1960	0.0	0.0	0.1	(s)	0.0	0.1	0.0	367.0	(s)	0.0	0.0	367.1
1965	0.0	0.0	(s)	(s)	0.0	(s)	0.0	508.3	0.0	0.0	0.0	508.3
1970	0.0	0.0	(s)	(s)	0.0	(s)	28.7	734.7	(s)	0.0	0.0	763.4
1975	64.9	0.0	0.4	(s)	0.0	0.5	36.4	887.2	0.0	0.0	0.0	989.0
1980	80.2	1.0	1.3	0.2	0.0	1.4	22.3	870.9	0.0	0.0	0.0	975.8
1985	84.1	0.1	0.0	0.1	0.0	0.1	86.9	813.1	2.9	0.0	0.0	987.2
1990	78.9	0.2	(s)	0.2	0.0	0.2	61.3	R 906.5	3.5	0.0	0.0	R 1,051.8
1991	83.1	0.1	(s)	0.1	0.0	0.1	45.4	R 946.2	2.9	0.0	0.0	R 1,086.9
1992	100.7	5.7	(s)	0.1	0.0	0.1	60.8	R 749.0	3.7	0.0	0.0	R 938.4
1993	91.7	5.1	(s)	0.4	0.0	0.4	76.2	R 694.0	4.1	0.0	0.0	R 875.5
1994	101.1	2.6	0.0	0.1	0.0	0.1	72.0	R 672.3	4.1	0.0	0.0	R 881.2
1995	63.8	6.7	0.0	0.1	0.0	0.1	74.0	R 835.2	2.7	0.0	0.0	R 985.2
1996	87.4	6.9	0.0	0.1	0.0	0.1	59.4	R 1,045.5	3.7	0.0	0.0	R 1,219.3
1997	76.7	2.7	0.0	0.2	0.0	0.2	66.3	R 1,083.5	R 3.7	0.0	0.0	R 1,260.8
1998	100.4	14.1	0.0	0.5	0.0	0.5	73.5	822.9	3.5	0.0	0.0	1,039.0
1999	93.9	7.1	0.0	0.1	0.0	0.1	64.7	983.0	2.8	0.0	0.0	1,185.3

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> Prior to 1980, based on oil used in steam plants. Since 1980, heavy oil includes fuel oil nos. 4, 5, and 6 and residual fuel oils.

<sup>d</sup> Prior to 1980, based on oil used in internal combustion and gas turbine engine plants. Since 1980, light oil includes fuel oil nos. 1 and 2, kerosene, and jet fuel.

<sup>e</sup> Through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of net imports of electricity that is derived from hydroelectric power.

<sup>f</sup> "Other" is electricity generated for distribution from wind, photovoltaic, and solar thermal energy.

<sup>g</sup> If applicable, from 1989, includes net imports of electricity generated from nonrenewable energy sources not shown in other columns. See data in appendix Table A8.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 305. Energy Consumption Estimates by Source, Selected Years 1960-1999, West Virginia**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum											Nuclear Electric Power	Hydro-electric Power <sup>d</sup>	Wood and Waste	Other <sup>a,e</sup>	Net Interstate Flow of Electricity/Losses <sup>f</sup>	Total <sup>g</sup>
			Asphalt & Road Oil <sup>a</sup>	Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	Kero-sene <sup>a</sup>	LPG <sup>a</sup>	Lubri-cants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Other <sup>a,c</sup>	Total						
			Thousand Barrels															Million kWh	
1960	14,060	150	918	119	2,473	169	276	558	570	11,609	1,481	R 4,691	R 22,864	0	938	—	—	-12,238	—
1965	19,049	164	907	201	2,837	130	253	961	636	12,762	2,153	11,875	32,714	0	828	—	—	-16,716	—
1970	25,376	181	863	78	3,917	290	320	1,230	684	15,831	2,065	14,523	39,801	0	996	—	—	-52,336	—
1975	34,469	158	944	58	5,922	249	325	1,498	686	19,314	2,504	16,544	48,043	0	1,063	—	—	-120,635	—
1980	34,939	143	717	65	10,541	357	496	3,435	671	19,390	1,463	20,395	57,530	0	1,114	—	—	-133,702	—
1985	34,999	117	430	39	9,718	235	696	1,157	610	18,513	970	13,876	46,243	0	1,058	—	—	-160,204	—
1990	34,896	120	728	36	9,760	273	295	1,612	687	19,643	1,285	19,421	53,740	0	R h 1,223	—	—	R -146,290	—
1991	31,843	111	528	33	9,626	237	300	1,821	614	19,342	1,070	13,299	46,871	0	R 1,081	—	—	R -128,729	—
1992	32,019	129	550	0	9,455	271	337	1,692	626	19,860	581	14,304	47,676	0	R 939	—	—	R -133,126	—
1993	32,046	135	427	26	10,758	257	424	1,821	638	19,638	516	13,864	48,367	0	R 1,051	—	—	R -129,066	—
1994	34,767	145	692	26	11,075	225	412	1,972	666	19,960	501	14,508	50,037	0	R 1,098	—	—	R -146,985	—
1995	34,489	148	639	27	11,346	174	394	1,944	655	20,891	200	14,036	50,308	0	R 1,088	—	—	R -144,906	—
1996	36,139	155	944	32	9,385	170	490	R 2,199	636	18,899	358	R 3,560	R 36,673	0	R 1,389	—	—	R -159,397	—
1997	37,121	159	1,157	22	10,871	172	513	R 2,874	672	19,752	236	R 3,524	R 39,793	0	R 6,592	—	—	R -171,484	—
1998	38,649	143	1,227	30	12,779	175	583	2,157	703	19,724	77	4,363	41,817	0	1,086	—	—	-173,904	—
1999	39,369	140	762	22	12,230	184	633	1,076	710	19,491	111	4,821	40,040	0	930	—	—	-182,765	—

  

Trillion Btu																			
1960	354.5	155.6	6.1	0.6	14.4	0.9	1.6	2.2	3.5	61.0	9.3	27.3	R 126.8	0.0	10.1	13.4	0.0	-41.8	R 618.6
1965	477.4	176.1	6.0	1.0	16.5	0.7	1.4	3.9	3.9	67.0	13.5	67.0	181.0	0.0	8.7	11.9	0.0	-57.0	798.0
1970	612.4	186.5	5.7	0.4	22.8	1.6	1.8	4.6	4.2	83.2	13.0	80.4	217.7	0.0	10.4	10.7	0.0	-178.6	859.2
1975	817.4	164.3	6.3	0.3	34.5	1.4	1.8	5.6	4.2	101.5	15.7	92.8	264.0	0.0	11.1	11.7	0.0	-411.6	856.9
1980	857.8	147.6	4.8	0.3	61.4	2.0	2.8	12.6	4.1	101.9	9.2	112.5	311.5	0.0	11.6	R 9.6	0.0	-456.2	R 881.9
1985	871.7	125.0	2.9	0.2	56.6	1.3	3.9	4.2	3.7	97.2	6.1	75.8	251.9	0.0	11.1	R 13.0	0.0	-546.6	R 726.1
1990	872.7	129.0	4.8	0.2	56.9	1.5	1.7	5.8	4.2	103.2	8.1	106.7	293.0	0.0	R h 12.7	R 7.1	h (s)	R -499.1	R h 815.4
1991	799.7	118.8	3.5	0.2	56.1	1.3	1.7	6.6	3.7	101.6	6.7	73.3	254.7	0.0	R 11.3	R 7.0	(s)	R -439.2	R 752.4
1992	804.6	137.2	3.6	0.0	55.1	1.5	1.9	6.1	3.8	104.3	3.7	78.6	258.7	0.0	R 9.7	R 7.1	(s)	R -454.2	R 763.1
1993	803.5	144.0	2.8	0.1	62.7	1.4	2.4	6.6	3.9	103.2	3.2	76.0	262.3	0.0	R 10.8	R 7.4	(s)	R -440.4	R 787.7
1994	870.3	154.7	4.6	0.1	64.5	1.3	2.3	7.2	4.0	R 104.4	3.1	79.5	R 271.1	0.0	R 11.3	R 7.3	(s)	R -501.5	R 813.2
1995	860.4	157.4	4.2	0.1	66.1	1.0	2.2	7.0	4.0	R 108.9	1.3	76.9	R 271.8	0.0	R 11.2	R 8.4	(s)	R -494.4	R 814.8
1996	898.3	R 164.1	6.3	0.2	54.7	1.0	2.8	R 7.9	3.9	R 98.6	2.2	R 20.5	R 197.9	0.0	R 14.4	R 8.4	(s)	R -543.9	R 739.3
1997	922.5	169.9	7.7	0.1	63.3	1.0	2.9	R 10.4	4.1	R 103.0	1.5	R 20.2	R 214.1	0.0	R 68.3	R 6.7	(s)	R -585.1	R 796.4
1998	955.3	151.6	8.1	0.2	74.4	1.0	3.3	7.8	4.3	102.8	0.5	25.3	227.7	0.0	11.2	4.0	(s)	-593.4	756.5
1999	976.6	147.4	5.1	0.1	71.2	1.0	3.6	3.9	4.3	101.6	0.7	28.0	219.5	0.0	9.6	5.8	0.1	-623.6	735.4

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products consumed in the industrial sector. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>e</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>f</sup> Net interstate flow of electricity is the difference between the amount of energy in the electricity sold within a State (including associated losses) and the energy input at the electric utilities within the State. A positive number

indicates that more electricity (including associated losses) came into the State than went out of the State during the year; conversely, a negative number indicates that more electricity (including associated losses) went out of the State than came into the State.

<sup>g</sup> From 1989, "Total" does not equal the sum of the columns. Net imports of electricity generated from nonrenewable energy sources (shown in appendix Table A8) is included in the total but not in any other columns.

<sup>h</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

kWh=kilowatthours. R=Revised data. — =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 306. Residential Energy Consumption Estimates, Selected Years 1960-1999, West Virginia**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum				Wood Thousand Cords	Geothermal	Solar <sup>c</sup>	Electricity <sup>a</sup> Million Kilowatthours	Net Energy	Electrical System Energy Losses <sup>d</sup>		Total	
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Total						Thousand Barrels	Million Kilowatthours		Million Kilowatthours
1960	85	50	204	148	226	578	416	—	—	1,714	—	4,263	—		
1965	84	50	304	184	280	768	320	—	—	2,365	—	5,647	—		
1970	67	58	250	267	266	783	287	—	—	3,459	—	8,383	—		
1975	83	51	581	172	331	1,084	298	—	—	4,979	—	12,010	—		
1980	55	48	1,169	408	395	1,973	264	—	—	6,606	—	16,064	—		
1985	29	37	462	390	225	1,078	395	—	—	6,712	—	15,770	—		
1990	63	33	574	210	416	1,200	214	—	—	7,578	—	R 16,577	—		
1991	34	33	537	197	394	1,128	226	—	—	8,106	—	R 17,622	—		
1992	33	35	462	245	454	1,162	237	—	—	8,138	—	R 17,357	—		
1993	38	35	568	323	483	1,374	245	—	—	8,682	—	R 18,338	—		
1994	30	35	584	304	487	1,375	240	—	—	8,663	—	R 18,079	—		
1995	24	35	480	287	416	1,183	R 266	—	—	9,166	—	R 19,110	—		
1996	38	37	608	377	R 479	R 1,464	266	—	—	9,277	—	R 19,332	—		
1997	37	36	623	399	R 677	R 1,699	R 175	—	—	9,027	—	R 18,776	—		
1998	57	30	558	473	512	1,543	154	—	—	9,053	—	18,702	—		
1999	59	31	484	551	712	1,747	165	—	—	9,452	—	18,520	—		
<b>Trillion Btu</b>															
1960	2.1	51.4	1.2	0.8	0.9	2.9	8.3	0.0	0.0	5.8	70.7	14.5	85.2		
1965	2.1	53.2	1.8	1.0	1.1	3.9	6.4	0.0	0.0	8.1	73.7	19.3	92.9		
1970	1.6	59.7	1.5	1.5	1.0	4.0	5.7	0.0	0.0	11.8	82.8	28.6	111.4		
1975	2.0	53.2	3.4	1.0	1.2	5.6	6.0	0.0	0.0	17.0	83.8	41.0	124.7		
1980	1.3	49.8	6.8	2.3	1.5	10.6	5.3	0.0	0.0	22.5	89.5	54.8	144.3		
1985	0.7	39.2	2.7	2.2	0.8	5.7	7.9	0.0	0.0	22.9	76.5	53.8	130.3		
1990	1.6	34.9	3.3	1.2	1.5	6.0	4.3	e 0.0	e (s)	25.9	e 72.7	56.6	R e 129.3		
1991	0.8	35.0	3.1	1.1	1.4	5.7	4.5	0.0	(s)	27.7	73.7	R 60.1	R 133.8		
1992	0.8	37.6	2.7	1.4	1.6	5.7	4.7	0.0	(s)	27.8	76.7	R 59.2	R 135.9		
1993	0.9	37.5	3.3	1.8	1.7	6.9	4.9	0.0	(s)	29.6	79.9	62.6	R 142.4		
1994	0.8	37.5	3.4	1.7	1.8	6.9	4.8	0.0	(s)	29.6	79.5	61.7	141.2		
1995	0.6	37.5	2.8	1.6	1.5	5.9	5.3	0.0	(s)	31.3	80.7	65.2	145.9		
1996	0.9	39.7	3.5	2.1	1.7	R 7.4	5.3	0.0	(s)	31.7	85.0	R 66.0	R 151.0		
1997	0.9	38.4	3.6	2.3	R 2.4	R 8.3	R 3.5	0.0	(s)	30.8	R 82.0	R 64.1	R 146.1		
1998	1.4	31.5	3.2	2.7	1.8	7.8	3.1	0.0	(s)	30.9	74.7	63.8	138.6		
1999	1.4	33.1	2.8	3.1	2.6	8.5	3.3	(s)	(s)	32.3	78.7	63.2	141.9		

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Includes small amounts of solar thermal and photovoltaic energy consumed by the commercial sector that cannot be separately identified. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 307. Commercial Energy Consumption Estimates, Selected Years 1960-1999, West Virginia**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum						Wood	Geothermal	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>c</sup>	Total <sup>d</sup>
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels						Thousand Cords	Million Kilowatthours	Million Kilowatthours			
1960	158	15	75	8	40	65	8	195	8	—	1,134	—	2,821	—
1965	157	15	111	9	49	66	12	248	6	—	1,620	—	3,869	—
1970	124	22	92	14	47	56	9	218	5	—	2,238	—	5,423	—
1975	155	25	213	9	58	59	9	349	6	—	2,858	—	6,893	—
1980	101	22	262	37	70	110	5	484	6	—	3,658	—	8,895	—
1985	52	17	603	129	40	307	5	1,084	R 11	—	4,462	—	10,483	—
1990	116	21	443	46	73	330	66	958	R 14	—	5,085	—	R 11,124	—
1991	62	21	517	64	70	262	51	964	R 14	—	5,313	—	R 11,549	—
1992	54	24	322	32	80	219	56	708	R 15	—	5,323	—	R 11,353	—
1993	64	24	437	36	85	20	20	597	20	—	5,572	—	R 11,769	—
1994	56	25	408	38	86	20	5	557	20	—	5,631	—	R 11,752	—
1995	41	26	345	37	73	20	0	475	20	—	5,944	—	R 12,393	—
1996	71	28	267	37	R 85	20	0	R 408	22	—	6,030	—	R 12,566	—
1997	68	26	326	51	R 120	19	0	R 516	19	—	6,040	—	R 12,564	—
1998	105	25	378	57	90	19	0	544	19	—	6,297	—	13,009	—
1999	109	27	320	64	126	19	0	529	23	—	6,565	—	12,864	—

  

Trillion Btu														
1960	4.0	16.0	0.4	(s)	0.2	0.3	(s)	1.0	0.2	0.0	3.9	25.0	9.6	34.7
1965	3.9	15.6	0.6	0.1	0.2	0.3	0.1	1.3	0.1	0.0	5.5	26.4	13.2	39.6
1970	3.0	22.3	0.5	0.1	0.2	0.3	0.1	1.1	0.1	0.0	7.6	34.2	18.5	52.7
1975	3.7	25.7	1.2	0.1	0.2	0.3	0.1	1.9	0.1	0.0	9.8	41.1	23.5	64.7
1980	2.4	22.7	1.5	0.2	0.3	0.6	(s)	2.6	0.1	0.0	12.5	40.3	30.3	70.7
1985	1.3	18.4	3.5	0.7	0.1	1.6	(s)	6.0	R 0.2	0.0	15.2	R 41.1	35.8	R 76.9
1990	2.9	22.9	2.6	0.3	0.3	1.7	0.4	5.3	R 0.3	e 0.0	17.4	R e 48.7	R 38.0	R e 86.6
1991	1.6	22.6	3.0	0.4	0.3	1.4	0.3	5.3	R 0.3	0.0	18.1	R 47.9	R 39.4	R 87.3
1992	1.4	26.0	1.9	0.2	0.3	1.2	0.3	3.8	R 0.3	0.0	18.2	R 49.7	R 38.7	R 88.4
1993	1.6	26.0	2.5	0.2	0.3	0.1	0.1	3.3	0.4	0.0	19.0	50.2	40.2	90.4
1994	1.4	26.6	2.4	0.2	0.3	0.1	(s)	3.0	0.4	0.0	19.2	50.6	40.1	90.7
1995	1.0	27.5	2.0	0.2	0.3	0.1	0.0	2.6	0.4	0.0	20.3	51.7	42.3	94.0
1996	1.7	29.7	1.6	0.2	0.3	0.1	0.0	2.2	0.4	0.0	20.6	54.7	R 42.9	97.5
1997	1.7	27.7	1.9	0.3	R 0.4	0.1	0.0	R 2.7	0.4	0.0	20.6	R 53.1	R 42.9	R 95.9
1998	2.6	26.6	2.2	0.3	0.3	0.1	0.0	2.9	0.4	0.0	21.5	54.0	44.4	98.4
1999	2.7	28.8	1.9	0.4	0.5	0.1	0.0	2.8	0.5	(s)	22.4	57.1	43.9	101.0

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>d</sup> Small amounts of solar thermal and photovoltaic energy consumed in the commercial sector cannot be separately identified and are included in residential consumption.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

—=Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 308. Industrial Energy Consumption Estimates, Selected Years 1960-1999, West Virginia**

Year	Coal Thousand Short Tons	Natural Gas <sup>a</sup> Billion Cubic Feet	Petroleum									Hydro-electric Power <sup>b</sup> Million kWh	Wood and Waste	Other <sup>b,d</sup>	Electricity <sup>b</sup>		Electrical System Energy Losses <sup>e</sup> Million kWh	Total
			Asphalt and Road Oil <sup>b</sup>	Distillate Fuel <sup>b</sup>	Kerosene <sup>b</sup>	LPG <sup>b</sup>	Lubricants <sup>b</sup>	Motor Gasoline	Residual Fuel <sup>b</sup>	Other <sup>b,c</sup>	Total				Million kWh	Net Energy		
			Thousand Barrels															
1960	7,802	76	918	452	120	290	372	204	1,437	R 4,691	R 8,485	540	—	—	5,915	—	14,713	—
1965	10,747	81	907	890	60	627	438	155	2,080	11,875	17,033	493	—	—	7,984	—	19,063	—
1970	10,279	93	863	1,087	39	907	500	114	1,621	14,523	19,655	558	—	—	9,426	—	22,842	—
1975	8,424	68	944	1,533	144	1,095	447	78	1,787	16,544	22,571	595	—	—	9,102	—	21,955	—
1980	6,284	59	717	3,585	51	2,955	420	81	1,458	20,395	29,663	690	—	—	10,567	—	25,695	—
1985	3,551	45	430	1,897	177	871	383	229	964	13,876	18,827	690	—	—	9,673	—	22,726	—
1990	4,845	58	728	2,670	39	1,103	430	249	1,219	19,421	25,860	R f 788	—	—	10,469	—	R 22,903	—
1991	4,189	49	528	2,580	39	1,340	385	259	1,019	13,299	19,449	R 725	—	—	10,206	—	R 22,187	—
1992	3,882	52	550	2,192	60	1,136	393	250	526	14,304	19,409	R 516	—	—	10,370	—	R 22,117	—
1993	4,162	54	427	2,729	65	1,232	400	161	496	13,864	19,373	R 689	—	—	10,187	—	R 21,517	—
1994	4,363	55	692	2,962	70	1,373	418	181	496	14,508	20,701	R 735	—	—	10,482	—	R 21,874	—
1995	3,768	60	639	3,209	71	1,443	411	194	200	14,036	20,203	R 694	—	—	10,867	—	R 22,657	—
1996	3,256	57	944	3,187	77	R 1,625	399	189	354	R 3,560	R 10,334	R 893	—	—	10,820	—	R 22,550	—
1997	2,530	65	1,157	2,933	63	R 2,077	421	199	236	R 3,524	R 10,611	R 6,215	—	—	11,180	—	R 23,256	—
1998	3,354	57	1,227	3,107	53	1,555	441	226	77	4,363	11,049	725	—	—	11,161	—	23,057	—
1999	3,109	51	762	3,057	18	237	445	187	111	4,821	9,638	628	—	—	11,126	—	21,800	—

**Trillion Btu**

1960	204.4	78.4	6.1	2.6	0.7	1.2	2.3	1.1	9.0	27.3	R 50.2	5.8	4.9	0.0	20.2	R 363.8	50.2	R 414.0
1965	280.0	87.1	6.0	5.2	0.3	2.5	2.7	0.8	13.1	67.0	97.6	5.1	5.4	0.0	27.2	502.5	65.0	567.5
1970	260.2	95.7	5.7	6.3	0.2	3.4	3.0	0.6	10.2	80.4	109.9	5.9	4.9	0.0	32.2	508.8	77.9	586.7
1975	212.5	70.5	6.3	8.9	0.8	4.1	2.7	0.4	11.2	92.8	127.2	6.2	5.7	0.0	31.1	453.2	74.9	528.1
1980	162.4	61.4	4.8	20.9	0.3	10.9	2.5	0.4	9.2	112.5	161.4	7.2	R 4.2	0.0	36.1	R 432.5	87.7	R 520.2
1985	91.0	48.4	2.9	11.1	1.0	3.1	2.3	1.2	6.1	75.8	103.4	7.2	R 4.9	0.0	33.0	R 287.9	77.5	R 365.4
1990	124.3	61.7	4.8	15.6	0.2	4.0	2.6	1.3	7.7	106.7	142.9	R f 8.2	R 2.5	f 0.0	35.7	R f 375.3	78.1	R f 453.5
1991	108.1	52.2	3.5	15.0	0.2	4.8	2.3	1.4	6.4	73.3	107.0	R 7.6	R 2.2	0.0	34.8	R 311.9	R 75.7	R 387.6
1992	99.8	55.7	3.6	12.8	0.3	4.1	2.4	1.3	3.3	78.6	106.5	R 5.3	R 2.0	0.0	35.4	R 304.8	R 75.5	R 380.2
1993	107.0	57.8	2.8	15.9	0.4	4.4	2.4	0.8	3.1	76.0	105.9	R 7.1	R 2.1	0.0	34.8	R 314.7	73.4	R 388.1
1994	112.1	58.4	4.6	17.3	0.4	5.0	2.5	R 0.9	3.1	79.5	113.3	R 7.6	R 2.1	0.0	35.8	R 329.3	74.6	R 403.9
1995	97.4	64.0	4.2	18.7	0.4	5.2	2.5	1.0	1.3	76.9	110.2	R 7.2	R 2.7	0.0	37.1	R 318.4	R 77.3	R 395.7
1996	84.2	R 60.0	6.3	18.6	0.4	R 5.9	2.4	1.0	2.2	R 20.5	R 57.2	R 9.2	R 2.7	0.0	36.9	R 250.3	R 76.9	R 327.2
1997	64.8	69.0	7.7	17.1	0.4	R 7.5	2.6	1.0	1.5	R 20.2	R 57.9	R 64.4	R 2.9	0.0	38.1	R 297.0	R 79.3	R 376.4
1998	86.6	60.3	8.1	18.1	0.3	5.6	2.7	1.2	0.5	25.3	61.8	7.5	0.5	0.0	38.1	254.8	78.7	333.5
1999	80.2	53.6	5.1	17.8	0.1	0.9	2.7	1.0	0.7	28.0	56.2	6.5	2.1	0.0	38.0	236.5	74.4	310.8

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>e</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for

electrical system energy losses.

<sup>f</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

R=Revised data.

kWh=kilowatt-hours. — =Not applicable.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 309. Transportation Energy Consumption Estimates, Selected Years 1960-1999, West Virginia**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum								Ethanol <sup>c</sup>	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total <sup>c</sup>
			Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	LPG <sup>a</sup>	Lubricants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total					
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels								Thousand Barrels	Million Kilowatthours	Million Kilowatthours	Total <sup>c</sup>	
1960	137	8	119	1,742	169	2	199	11,340	3	13,573	0	0	—	0	—
1965	36	18	201	1,530	130	4	198	12,541	0	14,603	0	0	—	0	—
1970	17	8	78	2,485	290	10	185	15,660	5	18,713	0	0	—	0	—
1975	1	14	58	3,589	242	14	239	19,176	0	23,318	0	0	—	0	—
1980	0	13	65	4,846	353	14	250	19,199	0	24,728	0	0	—	0	—
1985	0	18	39	6,386	235	22	228	17,977	(s)	24,886	<sup>e</sup> 0	0	—	0	—
1990	0	9	36	5,706	273	19	256	19,063	0	25,354	<sup>R</sup> 0	0	—	0	—
1991	0	8	33	5,653	237	17	229	18,821	0	24,990	<sup>R</sup> 0	0	—	0	—
1992	0	17	0	6,172	271	21	234	19,392	0	26,090	<sup>R</sup> 111	0	—	0	—
1993	0	21	26	6,667	257	21	238	19,457	0	26,666	<sup>R</sup> 65	0	—	0	—
1994	0	30	26	6,697	225	26	249	19,759	0	26,982	<sup>R</sup> 48	0	—	0	—
1995	0	26	27	6,973	174	12	244	20,678	0	28,108	<sup>R</sup> 33	0	—	0	—
1996	0	32	32	4,970	170	10	237	18,691	4	24,114	<sup>R</sup> 5	0	—	0	—
1997	0	32	22	6,698	172	<sup>R</sup> (s)	250	19,533	0	<sup>R</sup> 26,676	<sup>R</sup> 5	0	—	0	—
1998	0	31	30	8,412	175	(s)	262	19,479	0	28,358	1	0	—	0	—
1999	0	30	22	8,049	184	1	265	19,284	0	27,806	<sup>R</sup> (s)	0	—	0	—

  

Trillion Btu															
1960	3.5	8.7	0.6	10.1	0.9	(s)	1.2	59.6	(s)	72.5	0.0	0.0	84.7	0.0	84.7
1965	0.9	19.3	1.0	8.9	0.7	(s)	1.2	65.9	0.0	77.7	0.0	0.0	97.9	0.0	97.9
1970	0.4	8.1	0.4	14.5	1.6	(s)	1.1	82.3	(s)	99.9	0.0	0.0	108.5	0.0	108.5
1975	(s)	14.6	0.3	20.9	1.3	0.1	1.5	100.7	0.0	124.8	0.0	0.0	139.4	0.0	139.4
1980	0.0	13.6	0.3	28.2	2.0	0.1	1.5	100.9	0.0	133.0	0.0	0.0	146.6	0.0	146.6
1985	0.0	19.0	0.2	37.2	1.3	0.1	1.4	94.4	(s)	134.6	<sup>e</sup> 0.0	0.0	<sup>e</sup> 153.5	0.0	<sup>e</sup> 153.5
1990	0.0	9.3	0.2	33.2	1.5	0.1	1.6	100.1	0.0	136.7	<sup>R</sup> 0.0	0.0	146.0	0.0	146.0
1991	0.0	8.9	0.2	32.9	1.3	0.1	1.4	98.9	0.0	134.7	<sup>R</sup> 0.0	0.0	143.6	0.0	143.6
1992	0.0	17.8	0.0	36.0	1.5	0.1	1.4	101.9	0.0	140.8	<sup>R</sup> 0.4	0.0	158.6	0.0	158.6
1993	0.0	22.6	0.1	38.8	1.4	0.1	1.4	102.2	0.0	144.1	0.2	0.0	166.7	0.0	166.7
1994	0.0	32.1	0.1	39.0	1.3	0.1	1.5	<sup>R</sup> 103.3	0.0	<sup>R</sup> 145.3	0.2	0.0	<sup>R</sup> 177.4	0.0	<sup>R</sup> 177.4
1995	0.0	28.0	0.1	40.6	1.0	(s)	1.5	<sup>R</sup> 107.8	0.0	<sup>R</sup> 151.1	0.1	0.0	<sup>R</sup> 179.1	0.0	<sup>R</sup> 179.1
1996	0.0	34.5	0.2	28.9	1.0	(s)	1.4	<sup>R</sup> 97.5	(s)	<sup>R</sup> 129.1	(s)	0.0	<sup>R</sup> 163.5	0.0	<sup>R</sup> 163.5
1997	0.0	34.5	0.1	39.0	1.0	(s)	1.5	<sup>R</sup> 101.8	0.0	<sup>R</sup> 143.4	(s)	0.0	<sup>R</sup> 178.0	0.0	<sup>R</sup> 178.0
1998	0.0	32.8	0.2	49.0	1.0	(s)	1.6	101.5	0.0	153.3	(s)	0.0	186.1	0.0	186.1
1999	0.0	31.5	0.1	46.9	1.0	(s)	1.6	100.5	0.0	150.1	(s)	0.0	181.6	0.0	181.6

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels. Transportation use of natural gas is gas consumed in the operation of pipelines, primarily in compressors, and, since 1990, is also gas consumed as vehicle fuel.

<sup>c</sup> Ethanol blended into motor gasoline, which is accounted for under motor gasoline, is shown separately here to display the use of renewable energy by the transportation sector and is included only once in the total.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1980 and 1981 due to the expanded coverage of renewable energy sources beginning in 1981.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.



**Table 310. Estimates of Energy Input at Electric Utilities, Selected Years, 1960-1999, West Virginia**

Year	Coal	Natural Gas <sup>a</sup>	Petroleum				Nuclear Electric Power	Hydroelectric Power <sup>e</sup>	Wood and Waste	Geothermal Energy	Other <sup>b,f</sup>	Total <sup>g</sup>
			Heavy Oil <sup>b,c</sup>	Light Oil <sup>b,d</sup>	Petroleum Coke <sup>b</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels				Million Kilowatthours					
1960	5,879	1	33	(s)	0	33	0	398	0	0	0	—
1965	8,025	1	61	(s)	0	62	0	336	0	0	0	—
1970	14,889	1	430	3	0	433	0	437	(s)	0	0	—
1975	25,805	(s)	708	14	0	722	0	467	0	0	0	—
1980	28,499	(s)	0	683	0	683	0	424	0	0	0	—
1985	31,367	(s)	0	369	0	369	0	368	0	0	0	—
1990	29,873	(s)	0	368	0	368	0	435	0	0	0	—
1991	27,557	(s)	0	340	0	340	0	356	0	0	0	—
1992	28,050	(s)	0	307	0	307	0	423	0	0	0	—
1993	27,782	(s)	0	357	0	357	0	362	0	0	0	—
1994	30,318	(s)	0	423	0	423	0	363	0	0	0	—
1995	30,657	(s)	0	338	0	338	0	394	0	0	0	—
1996	32,774	(s)	0	353	0	353	0	497	0	0	0	—
1997	34,487	(s)	0	292	0	292	0	377	0	0	0	—
1998	35,132	(s)	0	324	0	324	0	361	0	0	0	—
1999	36,093	(s)	0	321	0	321	0	303	0	0	0	—

  

Trillion Btu												
1960	140.6	1.0	0.2	(s)	0.0	0.2	0.0	4.3	0.0	0.0	0.0	146.0
1965	190.5	1.0	0.4	(s)	0.0	0.4	0.0	3.5	0.0	0.0	0.0	195.4
1970	347.2	0.7	2.7	(s)	0.0	2.7	0.0	4.6	(s)	0.0	0.0	355.2
1975	599.2	0.2	4.4	0.1	0.0	4.5	0.0	4.9	0.0	0.0	0.0	608.8
1980	691.7	0.1	0.0	4.0	0.0	4.0	0.0	4.4	0.0	0.0	0.0	700.1
1985	778.7	0.1	0.0	2.1	0.0	2.1	0.0	3.8	0.0	0.0	0.0	784.9
1990	743.9	0.1	0.0	2.1	0.0	2.1	0.0	4.5	0.0	0.0	0.0	750.7
1991	689.2	0.1	0.0	2.0	0.0	2.0	0.0	3.7	0.0	0.0	0.0	695.1
1992	702.6	0.2	0.0	1.8	0.0	1.8	0.0	4.4	0.0	0.0	0.0	709.0
1993	694.0	0.1	0.0	2.1	0.0	2.1	0.0	3.7	0.0	0.0	0.0	699.9
1994	756.0	0.2	0.0	2.5	0.0	2.5	0.0	3.7	0.0	0.0	0.0	762.5
1995	761.4	0.4	0.0	2.0	0.0	2.0	0.0	4.1	0.0	0.0	0.0	767.8
1996	811.4	0.2	0.0	2.1	0.0	2.1	0.0	5.1	0.0	0.0	0.0	818.8
1997	855.1	0.2	0.0	1.7	0.0	1.7	0.0	3.9	0.0	0.0	0.0	860.9
1998	864.6	0.4	0.0	1.9	0.0	1.9	0.0	3.7	0.0	0.0	0.0	870.7
1999	892.3	0.4	0.0	1.9	0.0	1.9	0.0	3.1	0.0	0.0	0.0	897.7

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> Prior to 1980, based on oil used in steam plants. Since 1980, heavy oil includes fuel oil nos. 4, 5, and 6 and residual fuel oils.

<sup>d</sup> Prior to 1980, based on oil used in internal combustion and gas turbine engine plants. Since 1980, light oil includes fuel oil nos. 1 and 2, kerosene, and jet fuel.

<sup>e</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>f</sup> "Other" is electricity generated for distribution from wind, photovoltaic, and solar thermal energy.

<sup>g</sup> If applicable, from 1989, includes net imports of electricity generated from nonrenewable energy sources not shown in other columns. See data in appendix Table A8.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 311. Energy Consumption Estimates by Source, Selected Years 1960-1999, Wisconsin**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum											Nuclear Electric Power	Hydro-electric Power <sup>d</sup>	Wood and Waste	Other <sup>a,e</sup>	Net Inter-state Flow of Electricity/Losses <sup>f</sup>	Total <sup>g</sup>
			Asphalt & Road Oil <sup>a</sup>	Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	Kero-sene <sup>a</sup>	LPG <sup>a</sup>	Lubri-cants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Other <sup>a,c</sup>	Total						
			Thousand Barrels															Million kWh	
1960	12,737	91	2,847	427	21,750	245	2,964	4,258	872	33,125	4,394	530	R 71,412	0	2,399	—	—	-185	—
1965	14,528	200	2,806	636	23,508	629	1,249	5,246	898	36,295	3,209	R 1,240	R 75,716	0	2,131	—	—	1,343	—
1970	16,899	338	4,671	332	25,841	1,603	3,002	7,679	992	45,483	2,936	R 1,539	R 94,078	157	1,904	—	—	-1,922	—
1975	12,733	365	3,019	173	26,561	2,206	974	8,448	923	51,548	2,106	R 1,979	R 97,936	10,293	2,037	—	—	-1,338	—
1980	15,644	352	3,016	124	22,495	2,397	222	6,036	1,019	49,606	1,772	R 2,051	R 88,738	9,911	2,115	—	—	4,498	—
1985	18,034	308	1,690	102	22,605	1,663	234	5,377	927	46,557	402	R 2,371	R 81,929	10,979	2,546	—	—	18,817	—
1990	20,097	309	3,685	122	23,051	1,424	48	6,664	1,044	48,989	1,125	R 2,099	R 88,249	11,226	R <sup>h</sup> 2,020	—	—	R 12,319	—
1991	20,659	332	3,332	105	23,013	1,352	49	8,471	934	49,898	851	R 2,828	R 90,832	10,991	R 2,524	—	—	R 12,804	—
1992	20,071	332	3,105	121	22,753	1,721	51	7,780	952	50,285	854	R 3,138	R 90,760	11,207	R 2,386	—	—	R 12,667	—
1993	20,897	348	3,253	119	24,475	1,912	76	8,626	969	51,634	1,264	R 3,173	R 95,502	11,465	R 2,471	—	—	R 14,979	—
1994	21,731	356	3,521	285	26,029	1,975	58	8,957	1,013	53,048	1,287	R 3,188	R 99,361	11,516	R 2,220	—	—	R 16,207	—
1995	23,066	380	4,154	374	24,949	2,044	59	8,753	996	55,053	842	R 3,017	R 100,240	10,970	R 2,371	—	—	R 18,989	—
1996	24,020	403	4,126	367	25,534	1,530	73	R 11,139	966	56,313	1,037	R 13,418	R 114,503	10,121	R 2,805	—	—	R 18,041	—
1997	25,491	401	5,155	486	26,131	1,949	67	R 9,935	1,021	55,696	1,087	R 14,518	R 116,045	9,916	R 3,032	—	—	R 27,550	—
1998	24,720	360	6,012	454	25,737	1,864	65	8,461	1,069	58,740	980	14,565	117,946	9,397	2,286	—	—	22,080	—
1999	25,262	374	6,192	134	28,290	3,407	117	11,009	1,080	58,976	1,212	14,755	125,170	11,495	2,238	—	—	14,370	—

  

Trillion Btu																			
1960	304.7	93.8	18.9	2.2	126.7	1.3	16.8	17.1	5.3	174.0	27.6	3.1	393.0	0.0	25.8	39.2	0.0	-0.6	855.8
1965	347.9	204.1	18.6	3.2	136.9	3.5	7.1	21.0	5.4	190.7	20.2	6.9	R 413.5	0.0	22.3	39.4	0.0	4.6	R 1,031.8
1970	381.6	344.2	31.0	1.7	150.5	9.0	17.0	29.0	6.0	238.9	18.5	8.8	510.5	1.7	20.0	38.3	0.0	-6.6	1,289.8
1975	272.0	372.1	20.0	0.9	154.7	12.5	5.5	31.4	5.6	270.8	13.2	R 11.2	525.8	113.4	21.2	44.9	0.0	-4.6	1,344.8
1980	327.3	354.7	20.0	0.6	131.0	13.5	1.3	22.2	6.2	260.6	11.1	R 11.5	R 478.0	108.1	22.0	R 163.8	0.0	15.3	R 1,469.2
1985	360.7	311.4	11.2	0.5	131.7	9.3	1.3	19.4	5.6	244.6	2.5	R 13.1	439.3	118.7	26.6	R 188.6	(s)	64.2	R 1,509.5
1990	397.1	310.9	24.5	0.6	134.3	8.0	0.3	24.2	6.3	257.3	7.1	11.7	474.2	119.9	R <sup>h</sup> 21.0	R 101.2	h 0.3	42.0	R <sup>h</sup> 1,466.6
1991	407.9	333.8	22.1	0.5	134.1	7.6	0.3	30.6	5.7	262.1	5.3	R 15.6	R 483.9	118.0	R 26.3	R 87.4	0.3	R 43.7	R 1,501.4
1992	399.2	334.6	20.6	0.6	132.5	9.7	0.3	28.2	5.8	264.1	5.4	17.3	R 484.5	119.7	R 24.7	R 88.0	0.3	R 43.2	R 1,494.2
1993	405.9	351.8	21.6	0.6	142.6	10.8	0.4	31.1	5.9	271.2	7.9	R 17.5	R 509.6	122.5	25.5	R 81.8	0.3	R 51.1	R 1,548.5
1994	426.0	359.9	23.4	1.4	151.6	11.1	0.3	32.6	6.1	R 277.4	8.1	R 17.6	R 529.8	122.9	R 22.9	R 86.3	0.3	R 55.3	R 1,603.4
1995	443.0	384.7	27.6	1.9	145.3	11.6	0.3	31.7	6.0	R 287.1	5.3	R 16.7	R 533.5	116.9	R 24.4	R 96.1	0.3	R 64.8	R 1,663.8
1996	452.8	408.0	27.4	1.9	148.7	8.7	0.4	R 40.2	5.9	R 293.7	6.5	R 72.4	R 605.8	107.5	R 29.0	R 102.9	0.3	R 61.6	R 1,768.5
1997	488.4	405.0	34.2	2.5	152.2	11.1	0.4	R 35.9	6.2	R 290.3	6.8	R 78.8	R 618.4	41.6	R 31.4	R 113.5	0.3	R 94.0	R 1,796.1
1998	470.2	363.9	39.9	2.3	149.9	10.6	0.4	30.6	6.5	306.2	6.2	79.1	631.5	99.8	23.6	65.2	0.4	75.3	1,732.5
1999	471.6	378.5	41.1	0.7	164.8	19.3	0.7	39.8	6.5	307.3	7.6	79.7	667.5	122.1	23.2	96.8	0.4	49.0	1,810.5

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products consumed in the industrial sector. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>e</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>f</sup> Net interstate flow of electricity is the difference between the amount of energy in the electricity sold within a State (including associated losses) and the energy input at the electric utilities within the State. A positive number

indicates that more electricity (including associated losses) came into the State than went out of the State during the year; conversely, a negative number indicates that more electricity (including associated losses) went out of the State than came into the State.

<sup>g</sup> From 1989, "Total" does not equal the sum of the columns. Net imports of electricity generated from nonrenewable energy sources (shown in appendix Table A8) is included in the total but not in any other columns.

<sup>h</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

kWh=kilowatthours. R=Revised data. — =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 312. Residential Energy Consumption Estimates, Selected Years 1960-1999, Wisconsin**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum				Wood Thousand Cords	Geothermal	Solar <sup>c</sup>	Electricity <sup>a</sup> Million Kilowatthours	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Total						Million Kilowatthours	
			Thousand Barrels										
1960	964	47	11,206	1,227	2,675	15,107	974	—	—	5,298	—	13,178	—
1965	709	79	11,790	660	3,692	16,142	744	—	—	6,963	—	16,624	—
1970	453	105	11,721	1,608	5,606	18,935	595	—	—	9,825	—	23,810	—
1975	202	120	11,019	530	5,405	16,953	587	—	—	11,782	—	28,420	—
1980	18	123	8,155	124	2,983	11,261	R 1,029	—	—	13,597	—	33,063	—
1985	9	116	6,423	195	3,045	9,663	1,033	—	—	16,307	—	38,312	—
1990	2	114	4,634	29	4,187	8,851	734	—	—	16,385	—	R 35,844	—
1991	4	124	5,128	30	5,241	10,399	773	—	—	17,349	—	R 37,717	—
1992	2	123	4,753	29	4,950	9,732	813	—	—	16,615	—	R 35,435	—
1993	13	130	5,132	47	5,575	10,754	R 421	—	—	17,373	—	R 36,695	—
1994	18	128	4,799	34	5,479	10,311	R 413	—	—	17,660	—	R 36,855	—
1995	45	136	3,955	34	5,560	9,549	R 458	—	—	18,635	—	R 38,853	—
1996	37	148	3,922	41	R 7,463	R 11,426	R 457	—	—	18,685	—	R 38,939	—
1997	57	136	3,431	44	R 6,596	R 10,071	R 275	—	—	18,510	—	R 38,504	—
1998	45	116	2,759	39	5,926	8,725	243	—	—	19,087	—	39,431	—
1999	55	128	2,951	61	6,995	10,006	260	—	—	19,502	—	38,210	—
<b>Trillion Btu</b>													
1960	21.1	49.1	65.3	7.0	10.7	83.0	19.5	0.0	0.0	18.1	190.7	45.0	235.7
1965	15.5	80.9	68.7	3.7	14.8	87.2	14.9	0.0	0.0	23.8	222.2	56.7	278.9
1970	9.5	107.2	68.3	9.1	21.2	98.6	11.9	0.0	0.0	33.5	260.8	81.2	342.0
1975	3.8	122.4	64.2	3.0	20.1	87.3	11.7	0.0	0.0	40.2	265.5	97.0	362.4
1980	0.4	124.2	47.5	0.7	11.0	59.2	R 20.6	0.0	0.0	46.4	250.8	112.8	363.6
1985	0.2	117.4	37.4	1.1	11.0	49.5	20.7	0.0	0.0	55.6	243.4	130.7	374.1
1990	0.1	114.7	27.0	0.2	15.2	42.3	14.7	e 0.1	e 0.2	55.9	e 228.0	122.3	R e 350.3
1991	0.1	124.9	29.9	0.2	18.9	49.0	15.5	0.1	0.2	59.2	R 249.0	R 128.7	R 377.7
1992	(s)	124.5	27.7	0.2	17.9	45.8	16.3	0.1	0.2	56.7	243.6	R 120.9	R 364.5
1993	0.3	131.6	29.9	0.3	20.1	50.3	8.4	0.1	0.2	59.3	R 250.2	125.2	375.4
1994	0.5	129.7	28.0	0.2	19.9	48.1	R 8.3	0.1	0.2	60.3	R 247.1	R 125.8	R 372.8
1995	1.1	137.5	23.0	0.2	20.1	43.4	R 9.2	0.1	0.2	63.6	R 255.1	R 132.6	R 387.7
1996	0.9	149.8	22.8	0.2	R 27.0	R 50.0	9.1	0.1	0.2	63.8	R 274.0	R 132.9	R 406.9
1997	1.4	137.3	20.0	0.3	R 23.8	R 44.1	R 5.5	0.1	0.2	63.2	R 251.8	R 131.4	R 383.2
1998	1.1	117.2	16.1	0.2	21.4	37.7	4.9	0.1	0.2	65.1	226.4	134.5	360.9
1999	1.4	129.1	17.2	0.3	25.3	42.8	5.2	0.1	0.2	66.5	245.4	130.4	375.8

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Includes small amounts of solar thermal and photovoltaic energy consumed by the commercial sector that cannot be separately identified. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 313. Commercial Energy Consumption Estimates, Selected Years 1960-1999, Wisconsin**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum						Wood	Geothermal	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>c</sup>	Total <sup>d</sup>
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels						Thousand Cords	Million Kilowatthours	Million Kilowatthours			
1960	1,785	11	1,817	101	472	295	556	3,239	18	—	3,059	—	7,608	—
1965	1,314	24	1,911	54	652	309	407	3,332	14	—	4,160	—	9,933	—
1970	840	55	1,900	132	989	56	244	3,321	11	—	6,180	—	14,975	—
1975	375	67	1,786	43	954	52	168	3,004	11	—	8,342	—	20,121	—
1980	33	77	1,682	57	526	76	30	2,371	25	—	10,019	—	24,363	—
1985	17	73	3,172	18	537	283	106	4,117	R 28	—	12,087	—	28,398	—
1990	3	66	1,832	9	739	320	220	3,118	R 47	—	13,408	—	R 29,331	—
1991	6	72	1,960	9	925	247	179	3,319	R 49	—	13,997	—	R 30,429	—
1992	3	71	1,551	10	873	212	231	2,878	R 53	—	13,929	—	R 29,707	—
1993	24	77	1,547	11	984	50	197	2,789	34	—	14,373	—	R 30,357	—
1994	33	79	1,306	8	967	89	167	2,536	35	—	15,037	—	R 31,382	—
1995	84	85	1,062	10	981	51	110	2,214	35	—	15,642	—	R 32,612	—
1996	68	94	991	12	R 1,317	80	133	R 2,533	R 37	—	16,188	—	R 33,736	—
1997	105	89	1,332	7	R 1,164	51	135	R 2,688	R 30	—	16,480	—	R 34,280	—
1998	83	81	1,364	10	1,046	52	249	2,721	30	—	16,934	—	34,982	—
1999	102	82	1,318	7	1,234	85	201	2,845	36	—	18,381	—	36,014	—
<b>Trillion Btu</b>														
1960	39.1	11.3	10.6	0.6	1.9	1.5	3.5	18.1	0.4	0.0	10.4	79.3	26.0	105.2
1965	28.6	24.0	11.1	0.3	2.6	1.6	2.6	18.2	0.3	0.0	14.2	85.3	33.9	119.2
1970	17.7	55.6	11.1	0.7	3.7	0.3	1.5	17.4	0.2	0.0	21.1	112.0	51.1	163.1
1975	7.1	68.9	10.4	0.2	3.5	0.3	1.1	15.5	0.2	0.0	28.5	120.2	68.7	188.8
1980	0.8	77.7	9.8	0.3	1.9	0.4	0.2	12.6	0.5	0.0	34.2	125.8	83.1	209.0
1985	0.4	73.5	18.5	0.1	1.9	1.5	0.7	22.7	R 0.6	0.0	41.2	R 138.4	96.9	R 235.3
1990	0.1	66.7	10.7	(s)	2.7	1.7	1.4	16.5	R 0.9	e 0.0	45.7	R e 129.9	100.1	R e 230.0
1991	0.2	72.0	11.4	(s)	3.3	1.3	1.1	17.2	R 1.0	0.0	47.8	R 138.1	R 103.8	R 242.0
1992	0.1	72.0	9.0	0.1	3.2	1.1	1.5	14.8	R 1.1	0.0	47.5	R 135.4	R 101.4	R 236.8
1993	0.6	77.9	9.0	0.1	3.5	0.3	1.2	14.1	0.7	0.0	49.0	142.4	103.6	R 245.9
1994	0.8	79.6	7.6	(s)	3.5	0.5	1.0	12.7	0.7	0.0	51.3	145.1	107.1	252.1
1995	2.1	85.8	6.2	0.1	3.6	0.3	0.7	10.8	0.7	0.0	53.4	152.7	R 111.3	R 264.0
1996	1.7	95.0	5.8	0.1	R 4.8	0.4	0.8	R 11.9	R 0.7	0.0	55.2	R 164.6	R 115.1	R 279.7
1997	2.6	89.7	7.8	(s)	4.2	0.3	0.8	13.1	0.6	0.0	56.2	R 162.3	R 117.0	R 279.3
1998	2.1	82.2	7.9	0.1	3.8	0.3	1.6	13.6	0.6	0.0	57.8	156.3	119.4	275.6
1999	2.5	82.7	7.7	(s)	4.5	0.4	1.3	13.9	0.7	0.0	62.7	162.6	122.9	285.4

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>d</sup> Small amounts of solar thermal and photovoltaic energy consumed in the commercial sector cannot be separately identified and are included in residential consumption.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 314. Industrial Energy Consumption Estimates, Selected Years 1960-1999, Wisconsin**

Year	Coal Thousand Short Tons	Natural Gas <sup>a</sup> Billion Cubic Feet	Petroleum									Hydro-electric Power <sup>b</sup> Million kWh	Wood and Waste	Other <sup>b,d</sup>	Electricity <sup>b</sup>		Electrical System Energy Losses <sup>e</sup> Million kWh	Total
			Asphalt and Road Oil <sup>b</sup>	Distillate Fuel <sup>b</sup>	Kerosene <sup>b</sup>	LPG <sup>b</sup>	Lubricants <sup>b</sup>	Motor Gasoline	Residual Fuel <sup>b</sup>	Other <sup>b,c</sup>	Total				Million kWh	Net Energy		
			Thousand Barrels															
1960	4,710	30	2,847	6,950	1,636	1,088	345	2,774	3,416	530	R 19,585	338	—	—	4,230	—	10,520	—
1965	5,789	82	2,806	7,654	535	866	405	2,541	2,371	R 1,240	R 18,419	306	—	—	6,153	—	14,691	—
1970	5,147	141	4,671	7,917	1,262	1,009	440	2,471	1,554	R 1,299	R 20,623	306	—	—	8,570	—	20,767	—
1975	2,439	152	3,019	7,150	401	1,996	426	2,027	1,105	R 1,942	R 18,065	318	—	—	10,823	—	26,106	—
1980	2,364	130	3,016	3,589	41	2,444	497	1,633	1,439	R 2,043	R 14,701	258	—	—	13,290	—	32,317	—
1985	2,132	115	1,690	3,074	21	1,611	452	1,137	158	R 2,348	R 10,492	258	—	—	17,195	—	40,398	—
1990	1,960	122	3,685	3,596	11	1,619	508	780	903	R 2,099	R 13,201	R f 229	—	—	19,405	—	R 42,450	—
1991	1,878	129	3,332	4,103	10	2,166	455	997	672	R 2,828	R 14,562	R 254	—	—	19,686	—	R 42,795	—
1992	1,835	130	3,105	4,181	12	1,836	464	816	614	R 3,096	R 14,124	R 263	—	—	20,382	—	R 43,469	—
1993	1,811	134	3,253	4,779	19	1,916	472	825	1,056	R 3,063	R 15,383	R 280	—	—	21,410	—	R 45,222	—
1994	1,984	135	3,521	5,040	16	2,217	494	914	1,109	R 3,027	R 16,337	R 306	—	—	22,714	—	R 47,403	—
1995	1,949	146	4,154	4,443	15	2,089	485	934	710	R 2,873	R 15,703	R 274	—	—	23,690	—	R 49,392	—
1996	1,678	150	4,126	4,787	20	R 2,253	471	921	872	R 13,285	R 26,734	R 289	—	—	23,871	—	R 49,747	—
1997	1,761	156	5,155	4,888	15	R 2,077	497	914	940	R 14,340	R 28,827	R 297	—	—	25,103	—	R 52,218	—
1998	1,689	142	6,012	4,521	16	1,312	521	669	717	14,383	28,151	214	—	—	26,040	—	53,794	—
1999	1,655	146	6,192	6,339	49	2,727	526	753	1,003	14,554	32,144	251	—	—	25,665	—	50,285	—

  

Trillion Btu																		
1960	116.6	30.8	18.9	40.5	9.3	4.4	2.1	14.6	21.5	3.1	114.2	3.6	19.3	0.0	14.4	299.0	35.9	334.9
1965	142.4	83.0	18.6	44.6	3.0	3.5	2.5	13.3	14.9	6.9	R 107.3	3.2	24.2	0.0	21.0	R 381.1	50.1	431.3
1970	119.6	143.6	31.0	46.1	7.2	3.8	2.7	13.0	9.8	R 7.3	R 120.8	3.2	26.1	0.0	29.2	442.6	70.9	R 513.4
1975	54.7	155.5	20.0	41.6	2.3	7.4	2.6	10.6	6.9	R 11.0	102.5	3.3	32.9	0.0	36.9	385.9	89.1	475.0
1980	54.6	130.6	20.0	20.9	0.2	9.0	3.0	8.6	9.0	R 11.4	R 82.2	2.7	R 142.1	0.0	45.3	R 457.4	110.3	R 567.7
1985	49.7	116.4	11.2	17.9	0.1	5.8	2.7	6.0	1.0	R 12.9	R 57.7	2.7	R 166.5	0.0	58.7	R 451.7	137.8	R 589.5
1990	47.3	122.6	24.5	20.9	0.1	5.9	3.1	4.1	5.7	11.7	75.9	R f 2.4	R 83.8	f 0.0	66.2	R f 398.2	144.8	R f 543.0
1991	45.6	129.7	22.1	23.9	0.1	7.8	2.8	5.2	4.2	R 15.6	81.8	R 2.7	R 69.3	0.0	67.2	R 396.2	R 146.0	R 542.3
1992	44.5	131.4	20.6	24.4	0.1	6.7	2.8	4.3	3.9	R 17.0	79.7	2.7	R 69.2	0.0	69.5	R 397.1	R 148.3	R 545.4
1993	43.4	135.5	21.6	27.8	0.1	6.9	2.9	4.3	6.6	16.9	R 87.1	2.9	R 70.4	0.0	73.1	R 412.5	154.3	R 566.8
1994	47.9	136.7	23.4	29.4	0.1	8.1	3.0	4.8	7.0	16.7	R 92.3	3.2	R 74.6	0.0	77.5	R 432.2	161.7	R 594.0
1995	47.2	147.7	27.6	25.9	0.1	7.6	2.9	4.9	4.5	R 15.8	R 89.2	R 2.8	R 83.3	0.0	80.8	R 451.0	R 168.5	R 619.6
1996	40.1	151.5	27.4	27.9	0.1	8.1	2.9	4.8	5.5	R 71.6	R 148.2	3.0	R 89.7	0.0	81.4	R 513.9	R 169.7	R 683.6
1997	42.5	157.4	34.2	28.5	0.1	R 7.5	3.0	4.8	5.9	R 77.7	R 161.7	3.1	R 103.5	0.0	85.7	R 553.9	R 178.2	R 732.0
1998	41.0	143.5	39.9	26.3	0.1	4.7	3.2	3.5	4.5	78.0	160.2	2.2	55.2	0.0	88.8	491.0	183.5	674.5
1999	40.2	148.2	41.1	36.9	0.3	9.9	3.2	3.9	6.3	78.4	180.0	2.6	87.3	0.0	87.6	545.9	171.6	717.4

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>e</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for

electrical system energy losses.

<sup>f</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

R=Revised data.

kWh=kilowatthours. — =Not applicable.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 315. Transportation Energy Consumption Estimates, Selected Years 1960-1999, Wisconsin**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum								Ethanol <sup>c</sup>	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total <sup>c</sup>
			Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	LPG <sup>a</sup>	Lubricants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total				Million Kilowatthours	
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels								Thousand Barrels	Million Kilowatthours	Million Kilowatthours	Total <sup>c</sup>	
1960	83	1	427	1,773	245	23	527	30,056	378	33,430	0	0	—	0	—
1965	19	2	636	2,148	629	36	493	33,446	378	37,765	0	0	—	0	—
1970	8	7	332	4,179	1,603	74	552	42,956	6	49,703	0	0	—	0	—
1975	(s)	5	173	6,064	2,169	93	497	49,469	285	58,751	0	0	—	0	—
1980	0	8	124	8,570	2,397	84	523	47,897	235	59,829	0	0	—	0	—
1985	0	3	102	9,685	1,663	184	476	45,136	138	57,383	R e 28	0	—	0	—
1990	0	4	122	12,875	1,424	118	535	47,890	2	62,965	R 196	0	—	0	—
1991	0	4	105	11,676	1,352	139	479	48,655	(s)	62,406	R 489	0	—	0	—
1992	0	4	121	12,186	1,721	120	488	49,257	8	63,901	R 425	0	—	0	—
1993	0	4	119	12,895	1,912	151	497	50,759	11	66,344	R 356	0	—	0	—
1994	0	10	285	14,666	1,975	294	519	52,045	11	69,795	R 392	(s)	—	(s)	—
1995	0	4	374	15,296	2,044	123	511	54,068	22	72,438	R 861	(s)	—	(s)	—
1996	0	4	367	15,673	1,530	R 106	495	55,313	32	R 73,516	R 1,362	(s)	—	(s)	—
1997	0	5	486	16,216	1,949	R 99	523	54,731	12	R 74,017	R 1,594	(s)	—	(s)	—
1998	0	4	454	16,781	1,864	176	548	58,019	15	77,856	824	(s)	—	(s)	—
1999	0	4	134	17,342	3,407	52	554	58,138	8	79,633	697	(s)	—	(s)	—
<b>Trillion Btu</b>															
1960	2.0	0.6	2.2	10.3	1.3	0.1	3.2	157.9	2.4	177.4	0.0	0.0	180.0	0.0	180.0
1965	0.5	1.6	3.2	12.5	3.5	0.1	3.0	175.7	2.4	200.4	0.0	0.0	202.5	0.0	202.5
1970	0.2	6.7	1.7	24.3	9.0	0.3	3.3	225.7	(s)	264.4	0.0	0.0	271.3	0.0	271.3
1975	(s)	5.1	0.9	35.3	12.3	0.3	3.0	259.9	1.8	313.5	0.0	0.0	318.5	0.0	318.5
1980	0.0	8.3	0.6	49.9	13.5	0.3	3.2	251.6	1.5	320.6	0.0	0.0	328.9	0.0	328.9
1985	0.0	2.8	0.5	56.4	9.3	0.7	2.9	237.1	0.9	307.8	R e 0.1	0.0	e 310.6	0.0	e 310.6
1990	0.0	4.4	0.6	75.0	8.0	0.4	3.2	251.6	(s)	338.9	R 0.7	0.0	343.3	0.0	343.3
1991	0.0	4.5	0.5	68.0	7.6	0.5	2.9	255.6	(s)	335.1	R 1.7	0.0	339.6	0.0	339.6
1992	0.0	4.0	0.6	71.0	9.7	0.4	3.0	258.7	0.1	343.5	R 1.5	0.0	347.5	0.0	347.5
1993	0.0	3.7	0.6	75.1	10.8	0.5	3.0	266.6	0.1	356.7	R 1.3	0.0	360.4	0.0	360.4
1994	0.0	10.0	1.4	85.4	11.1	1.1	3.2	R 272.2	0.1	R 374.5	R 1.4	(s)	R 384.5	(s)	R 384.5
1995	0.0	4.3	1.9	89.1	11.6	0.4	3.1	R 282.0	0.1	R 388.2	R 3.0	(s)	R 392.5	(s)	R 392.5
1996	0.0	4.3	1.9	91.3	8.7	0.4	3.0	R 288.5	0.2	R 393.9	R 4.8	(s)	R 398.2	(s)	R 398.2
1997	0.0	4.7	2.5	94.5	11.1	R 0.4	3.2	R 285.3	0.1	R 396.9	R 5.6	(s)	R 401.5	(s)	R 401.5
1998	0.0	4.4	2.3	97.7	10.6	0.6	3.3	302.4	0.1	417.1	2.9	(s)	421.4	(s)	421.4
1999	0.0	4.2	0.7	101.0	19.3	0.2	3.4	303.0	(s)	427.6	2.5	(s)	431.8	(s)	431.8

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels. Transportation use of natural gas is gas consumed in the operation of pipelines, primarily in compressors, and, since 1990, is also gas consumed as vehicle fuel.

<sup>c</sup> Ethanol blended into motor gasoline, which is accounted for under motor gasoline, is shown separately here to display the use of renewable energy by the transportation sector and is included only once in the total.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1980 and 1981 due to the expanded coverage of renewable energy sources beginning in 1981.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 316. Estimates of Energy Input at Electric Utilities, Selected Years, 1960-1999, Wisconsin**

Year	Coal	Natural Gas <sup>a</sup>	Petroleum				Nuclear Electric Power	Hydroelectric Power <sup>e</sup>	Wood and Waste	Geothermal Energy	Other <sup>b,f</sup>	Total <sup>g</sup>
			Heavy Oil <sup>b,c</sup>	Light Oil <sup>b,d</sup>	Petroleum Coke <sup>b</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels				Million Kilowatthours					
1960	5,195	2	45	5	0	50	0	2,061	0	0	0	—
1965	6,697	14	53	6	0	59	0	1,825	2	0	0	—
1970	10,450	31	1,132	124	240	1,497	157	1,597	8	0	0	—
1975	9,716	20	548	578	37	1,163	10,293	1,719	0	0	0	—
1980	13,229	14	68	499	9	576	9,911	1,857	62	0	0	—
1985	15,876	1	0	251	24	274	10,979	2,288	88	0	(s)	—
1990	18,133	2	0	113	0	113	11,226	1,791	173	0	(s)	—
1991	18,771	3	0	147	0	147	10,991	R 2,270	157	0	(s)	—
1992	18,231	3	0	82	43	125	11,207	R 2,123	150	0	0	—
1993	19,049	3	0	123	110	233	11,465	2,191	220	0	0	—
1994	19,696	4	0	220	161	380	11,516	R 1,914	265	0	0	—
1995	20,987	9	0	194	144	337	10,970	R 2,097	285	0	0	—
1996	22,236	7	0	161	133	293	10,121	R 2,517	319	0	0	—
1997	23,568	16	0	263	178	441	3,916	R 2,736	372	0	0	—
1998	22,903	16	0	312	181	493	9,397	2,071	441	0	0	—
1999	23,450	14	0	341	201	542	11,495	1,988	343	0	0	—

  

Trillion Btu												
1960	125.8	2.1	0.3	(s)	0.0	0.3	0.0	22.2	0.0	0.0	0.0	150.4
1965	161.0	14.7	0.3	(s)	0.0	0.4	0.0	19.1	(s)	0.0	0.0	195.1
1970	234.6	31.2	7.1	0.7	1.4	9.3	1.7	16.8	0.1	0.0	0.0	293.6
1975	206.3	20.3	3.4	3.4	0.2	7.0	113.4	17.9	0.0	0.0	0.0	364.8
1980	271.5	13.8	0.4	2.9	0.1	3.4	108.1	19.3	0.6	0.0	0.0	416.8
1985	310.3	1.3	0.0	1.5	0.1	1.6	118.7	23.9	0.9	0.0	(s)	456.8
1990	349.7	2.4	0.0	0.7	0.0	0.7	119.9	18.6	1.8	0.0	(s)	493.0
1991	362.0	2.7	0.0	0.9	0.0	0.9	118.0	R 23.7	1.6	0.0	(s)	R 509.0
1992	354.6	2.6	0.0	0.5	0.3	0.7	119.7	R 22.0	1.5	0.0	0.0	R 501.1
1993	361.5	3.1	0.0	0.7	0.7	1.4	122.5	22.6	2.3	0.0	0.0	513.3
1994	376.8	3.9	0.0	1.3	1.0	2.2	122.9	R 19.7	2.7	0.0	0.0	R 528.3
1995	392.5	9.4	0.0	1.1	0.9	2.0	116.9	R 21.6	2.9	0.0	0.0	R 545.4
1996	410.1	7.4	0.0	0.9	0.8	1.7	107.5	R 26.0	3.3	0.0	0.0	R 556.6
1997	441.9	15.9	0.0	1.5	1.1	2.6	41.6	R 28.3	R 3.9	0.0	0.0	R 537.5
1998	426.0	16.6	0.0	1.8	1.1	2.9	99.8	21.4	4.6	0.0	0.0	573.9
1999	427.5	14.2	0.0	2.0	1.2	3.2	122.1	20.6	3.5	0.0	0.0	592.6

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> Prior to 1980, based on oil used in steam plants. Since 1980, heavy oil includes fuel oil nos. 4, 5, and 6 and residual fuel oils.

<sup>d</sup> Prior to 1980, based on oil used in internal combustion and gas turbine engine plants. Since 1980, light oil includes fuel oil nos. 1 and 2, kerosene, and jet fuel.

<sup>e</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>f</sup> "Other" is electricity generated for distribution from wind, photovoltaic, and solar thermal energy.

<sup>g</sup> If applicable, from 1989, includes net imports of electricity generated from nonrenewable energy sources not shown in other columns. See data in appendix Table A8.

R=Revised data.

—=Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 317. Energy Consumption Estimates by Source, Selected Years 1960-1999, Wyoming**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum											Nuclear Electric Power	Hydro-electric Power <sup>d</sup>	Wood and Waste	Other <sup>a,e</sup>	Net Inter-state Flow of Electricity/Losses <sup>f</sup>	Total <sup>g</sup>
			Asphalt & Road Oil <sup>a</sup>	Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	Kero-sene <sup>a</sup>	LPG <sup>a</sup>	Lubri-cants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Other <sup>a,c</sup>	Total						
			Thousand Barrels															Million kWh	
1960	993	51	734	132	3,278	56	91	1,114	93	4,431	1,749	R 1,824	R 13,502	0	609	—	—	-3,186	—
1965	2,109	59	743	217	3,696	74	206	1,171	84	4,739	2,171	R 2,301	R 15,401	0	884	—	—	-4,049	—
1970	3,802	110	1,099	256	5,059	128	341	1,848	114	5,900	1,487	R 2,327	R 18,558	0	1,006	—	—	-10,347	—
1975	7,628	87	606	218	7,656	124	172	1,815	154	7,354	2,076	R 3,147	R 23,321	0	1,120	—	—	-21,926	—
1980	15,208	69	1,160	108	13,247	162	62	2,030	208	8,501	2,171	R 3,309	R 30,959	0	1,108	—	—	-48,625	—
1985	23,155	82	1,676	51	7,669	154	21	1,942	189	7,671	211	R 2,150	R 21,734	0	1,068	—	—	-77,560	—
1990	25,514	92	955	35	9,603	143	4	1,263	213	7,105	40	R 2,961	R 22,321	0	R <sup>h</sup> 645	—	—	R -86,141	—
1991	25,150	97	1,016	28	8,813	119	9	1,228	191	7,212	40	R 2,006	R 20,663	0	R 736	—	—	R -83,802	—
1992	27,339	124	772	25	9,286	153	7	1,184	194	7,429	10	R 2,342	R 21,403	0	R 636	—	—	R -95,603	—
1993	26,171	105	756	20	10,072	140	21	1,752	198	7,572	72	R 2,162	R 22,765	0	R 787	—	—	R -89,663	—
1994	27,459	106	902	33	10,007	152	23	1,580	207	7,683	41	R 2,314	R 22,940	0	R 897	—	—	R -97,048	—
1995	25,933	98	665	179	11,312	160	24	1,979	203	7,936	21	R 2,203	R 24,681	0	R 799	—	—	R -90,278	—
1996	26,647	101	835	213	12,467	151	27	R 1,651	197	7,905	6	R 2,692	R 26,145	0	R 1,232	—	—	R -93,380	—
1997	26,096	101	972	151	13,252	121	25	R 308	208	7,603	4	R 2,698	R 25,343	0	R 1,381	—	—	R -91,690	—
1998	28,763	109	857	151	12,092	116	10	253	218	7,888	7	2,409	24,000	0	1,342	—	—	-106,107	—
1999	27,672	97	1,227	234	14,900	174	6	480	220	7,879	10	2,398	27,528	0	1,170	—	—	-100,888	—

  

Trillion Btu																			
1960	15.8	52.8	4.9	0.7	19.1	0.3	0.5	4.5	0.6	23.3	11.0	R 11.0	R 75.7	0.0	6.6	1.6	0.0	-10.9	R 141.6
1965	34.5	54.8	4.9	1.1	21.5	0.4	1.2	4.7	0.5	24.9	13.6	R 13.8	R 86.7	0.0	9.2	1.6	0.0	-13.8	R 172.9
1970	63.5	112.5	7.3	1.3	29.5	0.7	1.9	7.0	0.7	31.0	9.3	R 14.0	R 102.7	0.0	10.6	1.6	0.0	-35.3	R 255.5
1975	128.0	81.4	4.0	1.1	44.6	0.7	1.0	6.7	0.9	38.6	13.1	R 18.9	R 129.6	0.0	11.7	1.6	0.0	-74.8	R 277.5
1980	268.1	73.1	7.7	0.5	77.2	0.9	0.4	7.5	1.3	44.7	13.6	R 19.9	R 173.6	0.0	11.5	2.7	0.0	-165.9	R 363.1
1985	405.5	86.4	11.1	0.3	44.7	0.9	0.1	7.0	1.1	40.3	1.3	R 13.3	R 120.1	0.0	11.2	R 3.6	(s)	-264.6	R 362.1
1990	458.3	101.3	6.3	0.2	55.9	0.8	(s)	4.6	1.3	37.3	0.3	R 17.8	R 124.5	0.0	<sup>h</sup> 6.7	R 2.3	<sup>h</sup> 0.7	-293.9	R <sup>h</sup> 399.9
1991	449.8	103.1	6.7	0.1	51.3	0.7	0.1	4.4	1.2	37.9	0.3	R 12.2	R 114.9	0.0	7.7	R 2.3	0.7	R -285.9	R 392.5
1992	490.8	130.7	5.1	0.1	54.1	0.9	(s)	4.3	1.2	39.0	0.1	R 14.1	R 118.9	0.0	6.6	R 1.7	0.7	R -326.2	R 423.0
1993	466.7	110.5	5.0	0.1	58.7	0.8	0.1	6.3	1.2	39.8	0.5	R 13.1	R 125.5	0.0	8.1	R 1.5	0.7	-305.9	R 407.1
1994	489.5	112.3	6.0	0.2	58.3	0.8	0.1	5.7	1.3	R 40.2	0.3	R 14.0	R 126.8	0.0	9.3	R 2.1	0.7	-331.1	R 409.4
1995	461.9	103.9	4.4	0.9	65.9	0.9	0.1	7.2	1.2	R 41.4	0.1	R 13.3	R 135.5	0.0	8.2	R 1.7	0.7	R -308.0	R 403.9
1996	473.0	107.6	5.5	1.1	72.6	0.9	0.2	R 6.0	1.2	R 41.2	(s)	R 16.1	R 144.8	0.0	12.7	R 1.2	0.7	R -318.6	R 421.4
1997	466.5	107.9	6.4	0.8	77.2	0.7	0.1	R 1.1	1.3	R 39.6	(s)	R 16.1	R 143.4	0.0	R 14.3	R 1.2	0.7	R -312.8	R 421.1
1998	514.3	116.5	5.7	0.8	70.4	0.7	0.1	0.9	1.3	41.1	(s)	14.5	135.5	0.0	13.9	1.0	0.7	-362.0	419.9
1999	494.6	101.7	8.1	1.2	86.8	1.0	(s)	1.7	1.3	41.1	0.1	14.4	155.7	0.0	12.1	1.1	0.8	-344.2	421.8

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products consumed in the industrial sector. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>e</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>f</sup> Net interstate flow of electricity is the difference between the amount of energy in the electricity sold within a State (including associated losses) and the energy input at the electric utilities within the State. A positive number

indicates that more electricity (including associated losses) came into the State than went out of the State during the year; conversely, a negative number indicates that more electricity (including associated losses) went out of the State than came into the State.

<sup>g</sup> From 1989, "Total" does not equal the sum of the columns. Net imports of electricity generated from nonrenewable energy sources (shown in appendix Table A8) is included in the total but not in any other columns.

<sup>h</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

kWh=kilowatthours. R=Revised data. — =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.



**Table 318. Residential Energy Consumption Estimates, Selected Years 1960-1999, Wyoming**

Year	Coal <sup>a</sup> Thousand Short Tons	Natural Gas <sup>b</sup> Billion Cubic Feet	Petroleum				Wood Thousand Cords	Geothermal	Solar <sup>c</sup>	Electricity <sup>a</sup> Million Kilowatthours	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total	
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Total						Million Kilowatthours		
	Thousand Barrels													
1960	20	9	4	8	561	573	61	—	—	275	—	684	—	
1965	15	11	7	32	532	570	51	—	—	442	—	1,055	—	
1970	7	18	12	39	1,001	1,053	49	—	—	604	—	1,463	—	
1975	17	12	26	11	960	997	55	—	—	891	—	2,149	—	
1980	37	10	23	0	644	667	73	—	—	1,410	—	3,429	—	
1985	37	14	50	8	496	555	103	—	—	1,815	—	4,263	—	
1990	46	11	24	1	487	512	50	—	—	1,720	—	R 3,763	—	
1991	48	12	87	3	595	685	53	—	—	1,819	—	R 3,955	—	
1992	35	11	58	1	506	566	56	—	—	1,763	—	R 3,759	—	
1993	65	13	51	2	452	505	51	—	—	1,906	—	R 4,026	—	
1994	85	12	68	1	420	489	50	—	—	1,865	—	3,892	—	
1995	51	12	55	1	592	648	55	—	—	1,939	—	R 4,043	—	
1996	134	14	37	1	458	496	55	—	—	2,022	—	R 4,214	—	
1997	49	13	60	2	R 119	R 180	R 53	—	—	2,007	—	R 4,175	—	
1998	56	13	29	2	64	94	46	—	—	2,013	—	4,158	—	
1999	36	12	32	1	239	272	50	—	—	2,025	—	3,968	—	

  

Trillion Btu													
1960	0.4	9.1	(s)	(s)	2.3	2.3	1.2	0.0	0.0	0.9	14.0	2.3	16.3
1965	0.3	9.9	(s)	0.2	2.1	2.4	1.0	0.0	0.0	1.5	15.1	3.6	18.7
1970	0.1	18.4	0.1	0.2	3.8	4.1	1.0	0.0	0.0	2.1	25.7	5.0	30.7
1975	0.3	11.3	0.2	0.1	3.6	3.8	1.1	0.0	0.0	3.0	19.6	7.3	26.9
1980	0.7	10.3	0.1	0.0	2.4	2.5	1.5	0.0	0.0	4.8	19.8	11.7	31.5
1985	0.6	15.1	0.3	(s)	1.8	2.1	2.1	0.0	0.0	6.2	26.1	14.5	40.7
1990	0.9	12.6	0.1	(s)	1.8	1.9	1.0	e 0.0	e (s)	5.9	e 22.3	12.8	e 35.2
1991	1.1	12.7	0.5	(s)	2.2	2.7	1.1	0.0	(s)	6.2	23.8	13.5	37.3
1992	0.7	11.5	0.3	(s)	1.8	2.2	1.1	0.0	(s)	6.0	21.5	12.8	34.3
1993	1.2	13.4	0.3	(s)	1.6	1.9	1.0	0.0	(s)	6.5	24.0	13.7	37.8
1994	1.6	12.2	0.4	(s)	1.5	1.9	1.0	0.0	(s)	6.4	23.1	13.3	36.3
1995	0.9	12.9	0.3	(s)	2.1	2.5	1.1	0.0	(s)	6.6	24.0	13.8	37.8
1996	2.4	14.4	0.2	(s)	1.7	1.9	1.1	0.0	(s)	6.9	26.7	14.4	41.0
1997	0.9	13.9	0.3	(s)	R 0.4	R 0.8	R 1.1	0.0	(s)	6.8	R 23.5	14.2	R 37.7
1998	1.0	13.6	0.2	(s)	0.2	0.4	0.9	0.0	(s)	6.9	22.8	14.2	36.9
1999	0.7	12.7	0.2	(s)	0.9	1.1	1.0	(s)	(s)	6.9	22.3	13.5	35.9

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Includes small amounts of solar thermal and photovoltaic energy consumed by the commercial sector that cannot be separately identified. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 319. Commercial Energy Consumption Estimates, Selected Years 1960-1999, Wyoming**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum						Wood	Geothermal	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>c</sup>	Total <sup>d</sup>
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels						Thousand Cords	Million Kilowatthours	Million Kilowatthours			
1960	37	5	9	29	99	73	37	246	1	—	174	—	432	—
1965	28	8	16	119	94	73	40	341	1	—	594	—	1,419	—
1970	14	14	30	147	177	85	48	487	1	—	657	—	1,591	—
1975	32	10	63	43	169	72	83	431	1	—	775	—	1,870	—
1980	68	5	428	23	114	103	27	694	2	—	1,138	—	2,767	—
1985	70	9	440	6	88	67	69	670	R 3	—	2,321	—	5,454	—
1990	85	8	216	1	86	74	1	378	R 3	—	2,319	—	R 5,074	—
1991	90	9	240	3	105	87	1	436	R 3	—	2,439	—	R 5,303	—
1992	65	8	222	(s)	89	78	0	390	R 4	—	2,496	—	R 5,322	—
1993	122	10	214	(s)	80	7	0	301	4	—	2,616	—	R 5,525	—
1994	157	9	233	(s)	74	7	1	315	4	—	2,572	—	5,367	—
1995	95	10	307	2	104	8	(s)	421	4	—	2,443	—	R 5,093	—
1996	248	10	356	1	81	36	(s)	474	5	—	2,562	—	R 5,340	—
1997	91	11	292	1	R 21	8	(s)	R 322	R 6	—	2,568	—	R 5,342	—
1998	103	10	168	2	11	8	(s)	189	6	—	2,678	—	5,532	—
1999	68	10	414	(s)	42	8	0	464	7	—	2,693	—	5,276	—

  

Trillion Btu														
1960	0.8	5.1	0.1	0.2	0.4	0.4	0.2	1.2	(s)	0.0	0.6	7.7	1.5	9.2
1965	0.6	7.4	0.1	0.7	0.4	0.4	0.2	1.8	(s)	0.0	2.0	11.8	4.8	16.7
1970	0.3	14.3	0.2	0.8	0.7	0.4	0.3	2.4	(s)	0.0	2.2	19.3	5.4	24.7
1975	0.6	9.6	0.4	0.2	0.6	0.4	0.5	2.1	(s)	0.0	2.6	15.0	6.4	21.4
1980	1.2	5.3	2.5	0.1	0.4	0.5	0.2	3.7	(s)	0.0	3.9	14.2	9.4	23.6
1985	1.2	9.6	2.6	(s)	0.3	0.4	0.4	3.7	R 0.1	0.0	7.9	R 22.5	18.6	R 41.1
1990	1.7	9.3	1.3	(s)	0.3	0.4	(s)	2.0	R 0.1	e 0.6	7.9	e 21.5	17.3	e 38.8
1991	2.1	9.6	1.4	(s)	0.4	0.5	(s)	2.3	R 0.1	0.6	8.3	R 23.0	18.1	R 41.1
1992	1.2	8.5	1.3	(s)	0.3	0.4	0.0	2.0	R 0.1	0.6	8.5	20.9	18.2	R 39.1
1993	2.3	10.8	1.2	(s)	0.3	(s)	0.0	1.6	0.1	0.6	8.9	24.3	R 18.8	R 43.1
1994	2.9	9.7	1.4	(s)	0.3	(s)	(s)	1.7	0.1	0.6	8.8	23.8	18.3	42.1
1995	1.7	10.5	1.8	(s)	0.4	(s)	(s)	2.2	0.1	0.6	8.3	23.4	17.4	40.8
1996	4.5	10.3	2.1	(s)	0.3	0.2	(s)	2.6	0.1	0.6	8.7	26.8	18.2	R 45.1
1997	1.6	11.5	1.7	(s)	R 0.1	(s)	(s)	R 1.8	0.1	0.6	8.8	R 24.5	18.2	R 42.7
1998	1.9	11.1	1.0	(s)	(s)	(s)	(s)	1.1	0.1	0.6	9.1	23.9	18.9	42.8
1999	1.2	10.3	2.4	(s)	0.2	(s)	0.0	2.6	0.1	0.6	9.2	24.1	18.0	42.1

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>d</sup> Small amounts of solar thermal and photovoltaic energy consumed in the commercial sector cannot be separately identified and are included in residential consumption.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

renewable energy sources beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

Table 320. Industrial Energy Consumption Estimates, Selected Years 1960-1999, Wyoming

Year	Coal Thousand Short Tons	Natural Gas <sup>a</sup> Billion Cubic Feet	Petroleum									Hydro-electric Power <sup>b</sup> Million kWh	Wood and Waste	Other <sup>b,d</sup>	Electricity <sup>b</sup>		Electrical System Energy Losses <sup>e</sup> Million kWh	Total
			Asphalt and Road Oil <sup>b</sup>	Distillate Fuel <sup>b</sup>	Kero-sene <sup>b</sup>	LPG <sup>b</sup>	Lubri-cants <sup>b</sup>	Motor Gasoline	Residual Fuel <sup>b</sup>	Other <sup>b,c</sup>	Total				Net Energy	Million kWh		
			Thousand Barrels												Million kWh	Net Energy		
1960	119	35	734	1,458	55	384	2	320	756	R 1,824	R 5,534	0	—	—	270	—	671	—
1965	124	38	743	1,790	55	496	3	510	942	R 2,301	R 6,841	0	—	—	1,285	—	3,067	—
1970	210	70	1,099	1,931	155	578	30	552	960	R 2,327	R 7,631	0	—	—	1,896	—	4,595	—
1975	640	59	606	3,596	117	569	45	591	1,881	R 3,147	R 10,552	0	—	—	2,918	—	7,038	—
1980	1,605	48	1,160	6,255	39	1,199	57	365	2,144	R 3,309	R 14,529	0	—	—	4,621	—	11,237	—
1985	1,875	54	1,676	2,750	7	1,312	52	530	142	R 2,150	R 8,619	0	—	—	6,212	—	14,596	—
1990	1,857	67	955	2,271	2	663	59	417	39	R 2,961	R 7,367	f 0	—	—	7,729	—	R 16,909	—
1991	1,896	68	1,016	2,659	4	479	53	502	39	R 2,006	R 6,757	0	—	—	7,498	—	R 16,300	—
1992	2,126	97	772	2,717	6	561	54	490	10	R 2,342	R 6,951	0	—	—	7,442	—	R 15,872	—
1993	1,873	75	756	2,739	19	1,192	55	387	72	R 2,162	R 7,380	0	—	—	7,363	—	R 15,553	—
1994	1,867	79	902	2,764	22	1,047	57	416	40	R 2,314	R 7,562	0	—	—	7,260	—	R 15,150	—
1995	1,937	68	665	2,198	22	1,265	56	443	20	R 2,203	R 6,872	0	—	—	6,817	—	R 14,212	—
1996	1,835	70	835	3,072	25	R 1,095	54	451	6	R 2,692	R 8,231	0	—	—	6,891	—	R 14,361	—
1997	1,959	67	972	3,738	22	R 160	57	470	4	R 2,698	R 8,121	0	—	—	7,211	—	R 14,999	—
1998	1,929	74	857	3,238	7	154	60	249	7	2,409	6,980	0	—	—	6,950	—	14,358	—
1999	1,929	61	1,227	3,660	5	195	61	237	10	2,398	7,792	0	—	—	7,065	—	13,842	—

  

Trillion Btu																		
1960	2.4	36.1	4.9	8.5	0.3	1.5	(s)	1.7	4.8	R 11.0	R 32.6	0.0	0.4	0.0	0.9	R 72.5	2.3	R 74.8
1965	2.5	35.2	4.9	10.4	0.3	2.0	(s)	2.7	5.9	R 13.8	R 40.1	0.0	0.5	0.0	4.4	R 82.7	10.5	R 93.2
1970	4.0	71.3	7.3	11.2	0.9	2.2	0.2	2.9	6.0	R 14.0	R 44.7	0.0	0.6	0.0	6.5	R 127.1	15.7	R 142.7
1975	11.8	55.2	4.0	20.9	0.7	2.1	0.3	3.1	11.8	R 18.9	R 61.8	0.0	0.4	0.0	10.0	R 139.2	24.0	R 163.2
1980	28.8	51.1	7.7	36.4	0.2	4.4	0.3	1.9	13.5	R 19.9	R 84.4	0.0	1.2	0.0	15.8	R 181.3	38.3	R 219.6
1985	32.9	56.3	11.1	16.0	(s)	4.7	0.3	2.8	0.9	R 13.3	R 49.2	0.0	1.5	0.0	21.2	R 161.1	49.8	R 210.9
1990	41.2	73.8	6.3	13.2	(s)	2.4	0.4	2.2	0.2	R 17.8	R 42.6	f 0.0	R 1.2	f (s)	26.4	R 185.2	57.7	R 242.9
1991	41.8	72.4	6.7	15.5	(s)	1.7	0.3	2.6	0.2	R 12.2	R 39.4	0.0	R 1.1	(s)	25.6	R 180.4	R 55.6	R 236.0
1992	44.9	102.3	5.1	15.8	(s)	2.0	0.3	2.6	0.1	R 14.1	R 40.0	0.0	R 0.5	(s)	25.4	R 213.1	54.2	R 267.2
1993	39.9	79.0	5.0	16.0	0.1	4.3	0.3	2.0	0.5	R 13.1	R 41.3	0.0	R 0.4	(s)	25.1	R 185.8	53.1	R 238.8
1994	40.6	83.6	6.0	16.1	0.1	3.8	0.3	2.2	0.3	R 14.0	R 42.7	0.0	R 1.0	(s)	24.8	R 192.8	51.7	R 244.4
1995	42.5	72.6	4.4	12.8	0.1	4.6	0.3	2.3	0.1	R 13.3	R 38.0	0.0	R 0.5	(s)	23.3	R 177.0	48.5	R 225.5
1996	40.2	74.2	5.5	17.9	0.1	R 4.0	0.3	2.4	(s)	R 16.1	R 46.4	0.0	R 0.0	(s)	23.5	R 184.3	R 49.0	R 233.3
1997	42.3	71.2	6.4	21.8	0.1	R 0.6	0.3	2.5	(s)	R 16.1	R 47.9	0.0	R 0.0	(s)	24.6	R 186.0	R 51.2	R 237.2
1998	42.3	79.2	5.7	18.9	(s)	0.6	0.4	1.3	(s)	14.5	41.3	0.0	0.0	(s)	23.7	186.6	49.0	235.6
1999	42.3	64.0	8.1	21.3	(s)	0.7	0.4	1.2	0.1	14.4	46.2	0.0	0.0	0.1	24.1	176.8	47.2	224.0

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>e</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>f</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

R=Revised data.

kWh=kilowatthours. — =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 321. Transportation Energy Consumption Estimates, Selected Years 1960-1999, Wyoming**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum								Ethanol <sup>c</sup>	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total <sup>c</sup>
			Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	LPG <sup>a</sup>	Lubricants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total				Million Kilowatthours	
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels								Thousand Barrels	Million Kilowatthours	Million Kilowatthours	Total <sup>c</sup>	
1960	2	2	132	1,801	56	70	91	4,038	951	7,138	0	0	—	0	—
1965	(s)	2	217	1,864	74	49	81	4,157	1,173	7,615	0	0	—	0	—
1970	(s)	6	256	3,072	128	91	85	5,262	469	9,363	0	0	—	0	—
1975	(s)	5	218	3,965	124	116	108	6,691	0	11,223	0	0	—	0	—
1980	0	6	108	6,419	162	73	151	8,034	0	14,946	0	0	—	0	—
1985	0	5	51	4,287	154	45	137	7,073	(s)	11,747	R e 1	0	—	0	—
1990	0	5	35	6,993	143	27	154	6,613	0	13,965	R 22	0	—	0	—
1991	0	8	28	5,705	119	49	138	6,623	0	12,662	R 82	0	—	0	—
1992	0	8	25	6,189	153	27	141	6,861	0	13,396	R 137	0	—	0	—
1993	0	7	20	6,965	140	29	143	7,178	0	14,475	R 156	0	—	0	—
1994	0	6	33	6,856	152	38	150	7,259	0	14,488	R 177	0	—	0	—
1995	0	7	179	8,624	160	17	147	7,486	0	16,612	R 135	0	—	0	—
1996	0	8	213	8,892	151	R 16	143	7,418	0	R 16,832	R 49	0	—	0	—
1997	0	10	151	9,058	121	R 8	151	7,125	0	R 16,615	R 3	0	—	0	—
1998	0	12	151	8,577	116	25	158	7,631	0	16,657	0	0	—	0	—
1999	0	14	234	10,708	174	4	160	7,634	0	18,915	0	0	—	0	—

  

Trillion Btu															
1960	(s)	1.8	0.7	10.5	0.3	0.3	0.5	21.2	6.0	39.5	0.0	0.0	41.3	0.0	41.3
1965	(s)	2.0	1.1	10.9	0.4	0.2	0.5	21.8	7.4	42.3	0.0	0.0	44.3	0.0	44.3
1970	(s)	6.0	1.3	17.9	0.7	0.3	0.5	27.6	2.9	51.3	0.0	0.0	57.4	0.0	57.4
1975	(s)	4.9	1.1	23.1	0.7	0.4	0.7	35.2	0.0	61.1	0.0	0.0	66.1	0.0	66.1
1980	0.0	6.2	0.5	37.4	0.9	0.3	0.9	42.2	0.0	82.2	0.0	0.0	88.4	0.0	88.4
1985	0.0	5.2	0.3	25.0	0.9	0.2	0.8	37.2	(s)	64.2	R e (s)	0.0	e 69.5	0.0	e 69.5
1990	0.0	5.6	0.2	40.7	0.8	0.1	0.9	34.7	0.0	77.5	R 0.1	0.0	83.0	0.0	83.0
1991	0.0	8.3	0.1	33.2	0.7	0.2	0.8	34.8	0.0	69.8	R 0.3	0.0	78.1	0.0	78.1
1992	0.0	8.4	0.1	36.1	0.9	0.1	0.9	36.0	0.0	74.0	R 0.5	0.0	82.4	0.0	82.4
1993	0.0	7.2	0.1	40.6	0.8	0.1	0.9	37.7	0.0	80.1	R 0.6	0.0	87.3	0.0	87.3
1994	0.0	6.6	0.2	39.9	0.8	0.1	0.9	R 38.0	0.0	R 80.0	0.6	0.0	R 86.5	0.0	R 86.5
1995	0.0	7.7	0.9	50.2	0.9	0.1	0.9	R 39.0	0.0	R 92.0	R 0.5	0.0	R 99.7	0.0	R 99.7
1996	0.0	8.7	1.1	51.8	0.9	0.1	0.9	R 38.7	0.0	R 93.3	0.2	0.0	R 102.0	0.0	R 102.0
1997	0.0	11.2	0.8	52.8	0.7	R (s)	0.9	R 37.1	0.0	R 92.3	(s)	0.0	R 103.5	0.0	R 103.5
1998	0.0	12.3	0.8	50.0	0.7	0.1	1.0	39.8	0.0	92.2	0.0	0.0	104.5	0.0	104.5
1999	0.0	14.5	1.2	62.4	1.0	(s)	1.0	39.8	0.0	105.3	0.0	0.0	119.8	0.0	119.8

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels. Transportation use of natural gas is gas consumed in the operation of pipelines, primarily in compressors, and, since 1990, is also gas consumed as vehicle fuel.

<sup>c</sup> Ethanol blended into motor gasoline, which is accounted for under motor gasoline, is shown separately here to display the use of renewable energy by the transportation sector and is included only once in the total.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1980 and 1981 due to the expanded coverage of renewable energy sources beginning in 1981.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

Table 322. Estimates of Energy Input at Electric Utilities, Selected Years, 1960-1999, Wyoming

Year	Coal	Natural Gas <sup>a</sup>	Petroleum				Nuclear Electric Power	Hydroelectric Power <sup>e</sup>	Wood and Waste	Geothermal Energy	Other <sup>b,f</sup>	Total <sup>g</sup>
			Heavy Oil <sup>b,c</sup>	Light Oil <sup>b,d</sup>	Petroleum Coke <sup>b</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels				Million Kilowatthours					
1960	815	1	5	6	0	12	0	609	0	0	0	—
1965	1,941	(s)	15	19	0	34	0	884	0	0	0	—
1970	3,571	2	11	13	0	25	0	1,006	0	0	0	—
1975	6,938	1	112	6	0	118	0	1,120	0	0	0	—
1980	13,498	(s)	0	123	0	123	0	1,108	0	0	0	—
1985	21,173	(s)	0	143	0	143	0	1,068	0	0	3	—
1990	23,526	(s)	0	99	0	99	0	645	0	0	0	—
1991	23,115	(s)	0	122	0	122	0	736	0	0	0	—
1992	25,114	(s)	0	100	0	100	0	636	0	0	0	—
1993	24,111	(s)	0	104	0	104	0	787	0	0	0	—
1994	25,350	(s)	0	86	0	86	0	897	0	0	0	—
1995	23,850	(s)	0	128	0	128	0	799	0	0	0	—
1996	24,430	(s)	0	110	0	110	0	1,232	0	0	0	—
1997	23,996	(s)	0	105	0	105	0	1,381	0	0	0	—
1998	26,674	(s)	0	80	0	80	0	1,342	0	0	0	—
1999	25,639	(s)	0	85	0	85	0	1,170	0	0	0	—
<b>Trillion Btu</b>												
1960	12.1	0.7	(s)	(s)	0.0	0.1	0.0	6.6	0.0	0.0	0.0	19.4
1965	31.0	0.2	0.1	0.1	0.0	0.2	0.0	9.2	0.0	0.0	0.0	40.6
1970	59.0	2.4	0.1	0.1	0.0	0.1	0.0	10.6	0.0	0.0	0.0	72.2
1975	115.4	0.4	0.7	(s)	0.0	0.7	0.0	11.7	0.0	0.0	0.0	128.2
1980	237.4	0.2	0.0	0.7	0.0	0.7	0.0	11.5	0.0	0.0	0.0	249.8
1985	370.7	0.1	0.0	0.8	0.0	0.8	0.0	11.2	0.0	0.0	(s)	382.9
1990	414.6	0.1	0.0	0.6	0.0	0.6	0.0	6.7	0.0	0.0	0.0	421.9
1991	404.8	0.1	0.0	0.7	0.0	0.7	0.0	7.7	0.0	0.0	0.0	413.3
1992	444.0	0.1	0.0	0.6	0.0	0.6	0.0	6.6	0.0	0.0	0.0	451.3
1993	423.3	0.1	0.0	0.6	0.0	0.6	0.0	8.1	0.0	0.0	0.0	432.1
1994	444.4	0.1	0.0	0.5	0.0	0.5	0.0	9.3	0.0	0.0	0.0	454.3
1995	416.8	0.1	0.0	0.7	0.0	0.7	0.0	8.2	0.0	0.0	0.0	425.9
1996	425.9	0.1	0.0	0.6	0.0	0.6	0.0	12.7	0.0	0.0	0.0	439.4
1997	421.7	0.1	0.0	0.6	0.0	0.6	0.0	<sup>R</sup> 14.3	0.0	0.0	0.0	<sup>R</sup> 436.7
1998	469.2	0.3	0.0	0.5	0.0	0.5	0.0	13.9	0.0	0.0	0.0	483.8
1999	450.4	0.2	0.0	0.5	0.0	0.5	0.0	12.1	0.0	0.0	0.0	463.2

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> Prior to 1980, based on oil used in steam plants. Since 1980, heavy oil includes fuel oil nos. 4, 5, and 6 and residual fuel oils.

<sup>d</sup> Prior to 1980, based on oil used in internal combustion and gas turbine engine plants. Since 1980, light oil includes fuel oil nos. 1 and 2, kerosene, and jet fuel.

<sup>e</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>f</sup> "Other" is electricity generated for distribution from wind, photovoltaic, and solar thermal energy.

<sup>g</sup> If applicable, from 1989, includes net imports of electricity generated from nonrenewable energy sources not shown in other columns. See data in appendix Table A8.

<sup>R</sup> Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

## Appendix A

# Documentation

## Section 1. Documentation Guide

Appendix A of the *State Energy Data Report* describes how the estimates in the report were derived by the Combined State Energy Data System (CSEDS). The following five sections, one for each energy source, provide: descriptions of all the data series that are entered into CSEDS; the formulas applied in CSEDS for creating additional data series; and notes on special circumstances for any series.

Appendix B is an alphabetical listing of the variable names and formulas used in the system; Appendix C lists the conversion factors used in CSEDS to convert physical units into British thermal units and gives the sources for those factors; Appendix D provides the U.S. Department of Commerce, Bureau of the Census, resident population data used in per capita calculations; Appendix E presents metric and other physical conversion factors for information, although they are not currently used in CSEDS; Appendix F lists carbon dioxide emission factors for coal consumed by State for information, although they are not used in CSEDS; Appendix G is a summary of the changes made in CSEDS since the last report, which was released in December 1997; and Appendix H is a list of other Energy Information Administration reports containing State-level data.

There are 475 variables used in CSEDS to create the estimates in this report. All of the variables are identified by seven-letter names, such as MGTCPAL. In the following example, MGTCPAL is the identifying code for data on motor gasoline total consumption in physical units in Alabama

<b>Characters:</b>	<b>MG</b>	<b>TC</b>	<b>P</b>	<b>AL</b>
<b>Positions:</b>	1 and 2	3 and 4	5	6 and 7
<b>Identity:</b>	Type of Energy	Energy activity or consumption end-use sector	Type of data	Geographic

The type of energy categories in CSEDS, which are represented by the first two letters of the variable name, are:

- AB = aviation gasoline blending components
- AC = anthracite
- AI = aluminum ingot
- AR = asphalt and road oil
- AS = asphalt
- AV = aviation gasoline
- BC = bituminous coal and lignite
- BM = biomass
- CC = coal coke
- CG = corrugated and solid fiber boxes
- CL = coal
- CO = crude oil, including lease condensate
- CT = catalytic cracking
- DF = distillate fuel
- DK = distillate fuel, including kerosene-type jet fuel

EL = electricity  
 EN = ethanol  
 ER = electricity generated from renewable energy  
 ES = electricity sales  
 EX = electricity generated from non-renewable energy  
 FF = fossil fuels  
 FN = petrochemical feedstocks, naphtha less than 401° F  
 FO = petrochemical feedstocks, other oils equal to or greater than 401° F  
 FS = petrochemical feedstocks, still gas  
 GE = geothermal energy  
 GO = geothermal, wind, photovoltaic, and solar thermal energy  
 HP = hydroelectric power from pumped storage  
 HV = conventional hydroelectric power  
 HY = hydroelectric power, all types  
 JF = jet fuel  
 JK = jet fuel, kerosene-type  
 JN = jet fuel, naphtha-type  
 KS = kerosene  
 LG = liquefied petroleum gases  
 LO = electrical system energy losses  
 LU = lubricants  
 MB = motor gasoline blending components  
 MG = motor gasoline  
 MS = miscellaneous petroleum products  
 NA = natural gasoline (including isopentane)  
 NG = natural gas  
 NU = nuclear electric power  
 OC = organic chemicals  
 PA = all petroleum products  
 PC = petroleum coke  
 PI = paints and allied products  
 PL = plant condensate  
 PO = other petroleum products  
 PP = pentanes plus  
 RD = road oil  
 RE = renewable energy  
 RF = residual fuel  
 SG = still gas  
 SN = special naphtha  
 SO = photovoltaic and solar thermal energy

TE = total energy  
 TN = total net energy  
 TP = resident population  
 UO = unfinished oils  
 US = unfractionated stream  
 WD = wood  
 WN = wind, photovoltaic, and solar thermal energy  
 WS = waste  
 WW = wood and waste  
 WX = waxes  
 WY = wind

The consumption end-use sectors, identified by characters three and four of each variable name, such as:

AC = transportation sector consumption  
 CC = commercial sector consumption  
 EU = electric utility sector consumption  
 IC = industrial sector consumption  
 RC = residential sector consumption  
 TC = total consumption of all sectors

Many other characters occur in the third and fourth positions of the variable names for the sales, deliveries, and distribution data series used in the intermediate calculations in CSEDS to derive the end-use consumption estimates. Examples of these codes are:

AG = sales for use in agriculture  
 BK = sales for use in vessel bunkering  
 IN = deliveries to the industrial sector  
 OD = distribution to other industrial users

Combining the first two components (the first four letters) produces variable names, such as:

MGAG = motor gasoline sold for use in agriculture  
 MGAC = motor gasoline consumed by the transportation sector  
 NGIN = natural gas delivered to the industrial sector  
 NGIC = natural gas consumed by the industrial sector

The fifth character of the variable names in CSEDS identifies the type of data by using one of the following letters:

- B = data in British thermal units (Btu)  
 K = factor for converting data from physical units to Btu  
 M = data in alternative physical units  
 P = data in standardized physical units  
 S = share or ratio expressed as a fraction  
 V = value added in manufacture

Data entered into CSEDS are in physical units, represented by a “P” in the fifth character; for example, coal data are in thousand short tons, petroleum data are in thousand barrels, and natural gas data are in million cubic feet. In a few cases, data are obtained from the source documents in different units, such as thousand gallons instead of thousand barrels, and are represented by an “M” until converted in CSEDS to the unit that is consistent with other variables. Conversion factors, represented by a “K” in the fifth character, are applied to the physical unit data to convert the data to British thermal units, a common unit for all forms of energy. The derived data series in thousand British thermal units are represented by “B” in the fifth character. In a few cases, consumption estimates are derived by calculating shares of aggregated consumption data. The fractions used to calculate the consumption shares are identified by an “S” in the fifth character. The consumption estimates for some petroleum products are based on the value added in the manufacturing process by related industries in each State. The data series for those industry activities are in dollars, and the variable names contain “V” in the fifth character.

The last two characters of each variable name are for geographic identification. Geographic areas used in CSEDS are the 50 States and the District of Columbia (represented by the U.S. Postal Service State abbreviations) and the United States as a whole. Some estimates of electricity sales and losses are derived by using only the contiguous 48 States and the District of Columbia, and the variables used in those calculations are identified by “48” in the last two characters of the names. The geographic area codes used in CSEDS are shown in Table A1.

Throughout this report, the term “State” includes the District of Columbia. Throughout this documentation, “ZZ” is used as a geographic identifier to

**Table A1. Geographic Area Codes Used in the State Energy Data System**

Code	State	Code	State
AK	Alaska	NC	North Carolina
AL	Alabama	ND	North Dakota
AR	Arkansas	NE	Nebraska
AZ	Arizona	NH	New Hampshire
CA	California	NJ	New Jersey
CO	Colorado	NM	New Mexico
CT	Connecticut	NV	Nevada
DC	District of Columbia	NY	New York
DE	Delaware	OH	Ohio
FL	Florida	OK	Oklahoma
GA	Georgia	OR	Oregon
HI	Hawaii	PA	Pennsylvania
IA	Iowa	RI	Rhode Island
ID	Idaho	SC	South Carolina
IL	Illinois	SD	South Dakota
IN	Indiana	TN	Tennessee
KS	Kansas	TX	Texas
KY	Kentucky	UT	Utah
LA	Louisiana	VA	Virginia
MA	Massachusetts	VT	Vermont
MD	Maryland	WA	Washington
ME	Maine	WI	Wisconsin
MI	Michigan	WV	West Virginia
MN	Minnesota	WY	Wyoming
MO	Missouri	US	United States
MS	Mississippi	48	The contiguous 48 States and the District of Columbia
MT	Montana		

represent the different State abbreviations that would be interchanged in that position of the variable name.





## Section 2. Coal

Two forms of coal—anthracite (AC) and bituminous coal and lignite (BC)—are added to provide coal totals (CL).

### Anthracite

#### Physical Units

There are seven input data series used to estimate the State end-use consumption of anthracite, and all are in units of thousand short tons. “ZZ” in the variable names is used to represent the two-letter State code that differs for each State:

- ACEUPZZ = anthracite consumed by the electric utilities in each State;
- ACHCPUS = anthracite consumed by the residential and commercial sectors in the United States;
- ACHDPZZ = anthracite distributed to the residential and commercial sectors in each State;
- ACKCPUS = anthracite consumed by coke plants in the United States;
- ACKDPZZ = anthracite distributed to coke plants in each State;
- ACOCPUS = anthracite consumed by other industrial users in the United States; and
- ACODPZZ = anthracite distributed to other industrial users in each State.

The U.S. totals for the four State-level series, ACEUPZZ, ACHDPZZ, ACKDPZZ, and ACODPZZ, are calculated by summing the State data.

Estimates of anthracite consumed by the residential and commercial sectors combined are made by assuming that anthracite is consumed in proportion to the amount of anthracite distributed to the residential and commercial sectors in each State:

$$\text{ACHCPZZ} = (\text{ACHDPZZ}/\text{ACHDPUS}) * \text{ACHCPUS}$$

Little information is available regarding disaggregating the combined residential and commercial estimates. An estimate of 60 percent to the residential sector and 40 percent to the commercial sector is made for all States and years. Therefore, the residential sector consumption of anthracite, ACRCPZZ, is estimated:

$$\text{ACRCPZZ} = \text{ACHCPZZ} * 0.60$$

and the commercial sector consumption, ACCCPZZ, is estimated:

$$\text{ACCCPZZ} = \text{ACHCPZZ} * 0.40$$

To gain a perspective on these estimates: all anthracite consumed in the United States in 1999 accounted for 0.2 percent of total coal consumption, and the residential and commercial use of anthracite was less than half of all anthracite consumed.

The industrial sector consumption is estimated by State. An assumption is made that anthracite is consumed by coke plants in proportion to the amount of anthracite distributed to coke plants in each State. It is also assumed that the consumption of anthracite by industrial users other than coke plants is in proportion to the amount of anthracite delivered to the other industrial users in each State. The industrial sector consumption is the sum of anthracite consumed by coke plants and by other industrial users for each State:

$$\begin{aligned} \text{ACKCPZZ} &= (\text{ACKDPZZ}/\text{ACKDPUS}) * \text{ACKCPUS} \\ \text{ACOCPZZ} &= (\text{ACODPZZ}/\text{ACODPUS}) * \text{ACOCPUS} \\ \text{ACICPZZ} &= \text{ACKCPZZ} + \text{ACOCPZZ} \end{aligned}$$

Total anthracite consumption in each State is the sum of the sectors' consumption:

$$\text{ACTCPZZ} = \text{ACRCPZZ} + \text{ACCCPZZ} + \text{ACICPZZ} + \text{ACEUPZZ}$$

The U.S. anthracite consumption estimates for each of the sectors and the total are calculated as the sum of the States' values.

### **British Thermal Units (Btu)**

Two factors are used for converting anthracite consumption from physical units to Btu. The factors, in million Btu per short ton, are:

ACEUKUS = the factor for converting anthracite consumed in the electric utility sector from short tons to Btu; and

ACNUKUS = the factor for converting anthracite consumed by all sectors other than electric utilities from short tons to Btu.

The industrial sector Btu consumption is estimated in three steps in order to maintain separate series for anthracite used as coking coal (ACKCB) and anthracite consumed by other industrial users (ACOCB):

$$\text{ACKCBZZ} = \text{ACKCPZZ} * \text{ACNUKUS}$$

$$\text{ACOCBZZ} = \text{ACOCPZZ} * \text{ACNUKUS}$$

$$\text{ACICBZZ} = \text{ACKCBZZ} + \text{ACOCBZZ}$$

The remaining end-use sectors are calculated for all States:

$$\text{ACEUBZZ} = \text{ACEUPZZ} * \text{ACEUKUS}$$

$$\text{ACRCBZZ} = \text{ACRCPZZ} * \text{ACNUKUS}$$

$$\text{ACCCBZZ} = \text{ACCCPZZ} * \text{ACNUKUS}$$

$$\text{ACTCBZZ} = \text{ACRCBZZ} + \text{ACCCBZZ} + \text{ACICBZZ} + \text{ACEUBZZ}$$

Total U.S. end-use consumption estimates are calculated as the sum of the States' data.

### **Additional Notes on Anthracite**

Anthracite consumption at the national level for the residential and commercial sectors (ACHCPUS), coke plants (ACKCPUS), and industries other than coke plants (ACOCBUS) are continuous data series. However,

the total coal distribution and anthracite distribution data series used to develop State-level estimates are not continuous.

For 1960 through 1979, State-level anthracite data are not available and the 1980 State data are used to apportion the U.S. totals to the States. From 1980 forward, the data in the distribution series variables—ACKDPZZ, ACODPZZ, and ACHDPZZ—are estimates of actual anthracite consumption rather than the distribution.

For 1980 forward, State-level total coal consumption data are available, but consumption by sector within many States is withheld. Estimates of the withheld sector consumption of total coal are derived by using the distribution series for the residential and commercial sectors to fill in withheld residential and commercial consumption. In most States, this leaves only one sector withheld and it can be derived by subtracting known sectors from the State total. This gives total coal consumption estimates for the end-use sectors that are compatible with State coal consumption data published in other EIA reports. Anthracite consumption is then derived by using anthracite distribution data to estimate consumption within each sector and State. These estimates equal U.S. totals for anthracite consumption by sector contained in other EIA databases.

### **Data Sources for Anthracite**

ACEUKUS — Factor for converting anthracite consumed by the electric utilities from physical units to Btu.

- 1960 through 1972: Energy Information Administration (EIA) assumed that all anthracite consumed at electric utilities was recovered from culm banks and river dredging and was estimated to have an average heat content of 17,500 million Btu per short ton.
- 1973 through 1997: Calculated annually by EIA by dividing the heat content of anthracite receipts at electric utilities by the quantity of anthracite received at electric utilities. These data are reported on the Federal Energy Regulatory Commission (FERC) Form 423, "Monthly Report of Cost and Quality of Fuels for Electric Plants," and predecessor forms.
- 1998 and 1999: No data available. The 1997 value is repeated.

ACEUPZZ — Anthracite consumed by the electric utilities by State.

- EIA, Form EIA-759, "Monthly Power Plant Report," and predecessor forms.

ACHCPUS — Anthracite consumed by the residential and commercial sectors in the United States.

- 1960 through 1972: U.S. Department of the Interior, Bureau of Mines, *Minerals Yearbook*, "Coal-Pennsylvania Anthracite Annual."
- 1973 through 1984: EIA, *Weekly Coal Production*, August 9, 1986, Table 9.
- 1985 through 1987: EIA, *Weekly Coal Production*, July 16, 1988, Table 8.
- 1988 forward: EIA, Unpublished data from Form EIA-6.

ACHDPZZ — Anthracite distributed to the residential and commercial sectors.

- 1960 through 1979: No data available. The 1980 State data are used for years 1960 through 1979.
- 1980 forward: Consumption estimates are used for this distribution series. Consumption of all types of coal by State is published in EIA, *Quarterly Coal Report, October-December* for each year. Data are from the report of the following year, i.e., 1982 final data are published in the *Quarterly Coal Report, October-December 1983*. The specific tables are:
  - 1980: Unpublished data.
  - 1981 through 1983: Table 27.
  - 1984 through 1990: Table 29.
  - 1991 through 1994: Table 51.
  - 1995: Table 43.
  - 1996 forward: Table 44.

Withheld State values for consumption of all types of coal are estimated by using distribution data. When U.S. residential and commercial coal distribution does not equal U.S. residential and commercial coal consumption, the State distribution values are adjusted proportionally until the sum of State distribution values equals the U.S. consumption value published in the *Quarterly Coal Report*. The distribution data are published in:

- 1980 through 1984: EIA, *Coal Distribution, January-December 1984*, Table 21.
- 1985 through 1989: EIA, *Coal Distribution, January-December 1989*, Table 15.

- 1990 and 1991: EIA, *Coal Distribution, January-December* for each year, Table 16.
- 1992 through 1994: EIA, *Quarterly Coal Report, October-December* for the following year, Table 10.
- 1995 through 1997: Unpublished data from Form EIA-6.
- 1998 forward: EIA, *Coal Industry Annual*, Table 64.

Anthracite consumption is estimated by using distribution data published in EIA, *Coal Distribution, January-December* for each year. The specific tables are:

- ("District 24" represents all anthracite.)
- 1980 through 1983: Tables 8 and 9.
  - 1984: Tables 6 and 8.
  - 1985 through 1989: Tables 6 and 3.
- ("Origin: Pennsylvania, Anthracite" represents all anthracite.)
- 1990 and 1991: Table 33.
  - 1992 through 1997: Unpublished data from Form EIA-6.
  - 1998 forward: EIA *Coal Industry Annual*, Table 63.

State distribution data are increased or decreased proportionally until the sum of the States' distribution values equals the U.S. consumption (ACHCPUS).

ACKCPUS — Anthracite carbonized by coke plants in the United States.

- 1960 through 1972: U.S. Department of the Interior, Bureau of Mines, *Minerals Yearbook*, "Coal-Pennsylvania Anthracite Annual."
- 1973 through 1984: EIA, *Weekly Coal Production*, August 9, 1986, Table 9.
- 1985 through 1987: EIA, *Weekly Coal Production*, July 16, 1988, Table 8.
- 1988 forward: EIA, Unpublished data from Form EIA-5.

ACKDPZZ — Anthracite distributed to coke plants by State.

- 1960 through 1979: No data available. The 1980 State data are used for years 1960 through 1979.
- 1980 forward: Consumption estimates are used for this distribution series. Consumption of all types of coal by State is published in EIA, *Quarterly Coal Report, October-December* for each year. Data are from the report of the following year, i.e., 1982 final data are published in the *Quarterly Coal Report, October-December 1983*. The specific tables are:
  - 1980: Unpublished data.
  - 1981 through 1983: Table 25.

- 1984, 1985, and 1987: Table 27.
- 1986, 1988, and 1989: Unpublished State revisions that are components of the U.S. revisions published in the *Quarterly Coal Report, October-December 1991*, Table 45.
- 1990: Table 27.
- 1991 through 1994: Table 48.
- 1995: Table 40.
- 1996 forward: Table 41.

Withheld State values for consumption of all types of coal are estimated by using distribution data. After withheld residential and commercial coal consumption values have been estimated, withheld coke plant consumption is the difference between the sum of the published and estimated end-use sectors' consumption and the published State total consumption. For States where both coke plant and other industrial coal use are withheld, it is assumed that a State not listed in the EIA *Coal Industry Annual 1998*, Table 73 has no coke plant consumption.

Anthracite consumption is estimated by using distribution data published in EIA, *Coal Distribution, January-December* for each year. The specific tables are:

("District 24" represents all anthracite.)

- 1980 through 1983: Tables 8 and 9.
- 1984: Tables 6 and 8.
- 1985 through 1989: Tables 6 and 33.

("Origin: Pennsylvania, Anthracite" represents all anthracite.)

- 1990 and 1991: Table 33.
- 1992 through 1997: Unpublished data from Form EIA-6.
- 1998 forward: EIA *Coal Industry Annual*, Table 63.

State distribution data are increased or decreased proportionally until the sum of the States' distribution values equals the U.S. consumption (ACKCPUS).

ACNUKUS — Factor for converting anthracite consumed by all sectors other than the electric utility sector from physical units to Btu.

- 1960 through 1997: Calculated annually by EIA by dividing the heat content of anthracite produced less the heat content of the anthracite consumed at electric utilities, net exports, and shipments to U.S. Armed Forces overseas by the quantity of anthracite consumption by all sectors other than the electric utility sector less the quantity of anthracite stock changes, losses, and "unaccounted for."
- 1998 and 1999: No data available. The 1997 value is repeated.

ACOCBUS — Anthracite consumed by industrial users other than coke plants in the United States.

- 1960 through 1972: U.S. Department of the Interior, Bureau of Mines, *Minerals Yearbook*, "Coal-Pennsylvania Anthracite, Annual."
- 1973 through 1984: EIA, *Weekly Coal Production*, August 9, 1986, Table 9.
- 1985 through 1987: EIA, *Weekly Coal Production*, July 16, 1988, Table 8.
- 1988 forward: EIA, Unpublished data from Forms EIA-3 and EIA-6.

ACODPZZ — Anthracite distributed to industrial plants (other than coke plants) by State.

- 1960 through 1979: No data available. The 1980 State data are used for years 1960 through 1979.
- 1980 forward: Consumption estimates are used for this distribution series. Consumption of all types of coal by State is published in EIA, *Quarterly Coal Report, October-December* for each year. Data are from the report of the following year, i.e., 1982 final data are published in the *Quarterly Coal Report, October-December 1983*. The specific tables are:

- 1980: Unpublished data.
- 1981 through 1983: Table 26.
- 1984 through 1990: Table 28.
- 1991 through 1994: Table 49.
- 1995: Table 41.
- 1996 forward: Table 42.

Withheld State values for consumption of all types of coal are estimated by using distribution data. After withheld residential and commercial coal consumption values have been estimated, withheld consumption by other industrial users is the difference between the sum of the published and estimated end-use sectors' consumption and the published State total consumption.

Anthracite consumption is estimated by using distribution data published in EIA, *Coal Distribution, January-December* for each year. The specific tables are:

("District 24" represents all anthracite.)

- 1980 through 1983: Tables 8 and 9.
- 1984: Tables 6 and 8.
- 1985 through 1989: Tables 6 and 33.

("Origin: Pennsylvania, Anthracite" represents all anthracite.)

- 1990 and 1991: Table 33.

- 1992 through 1997: Unpublished data from Form EIA-6.
  - 1998 forward: EIA *Coal Industry Annual*, Table 63.
- State distribution data are increased or decreased proportionally until the sum of the States' distribution values equals total U.S. consumption (ACOCPUS).

## Bituminous Coal and Lignite

### *Physical Units*

Eight data series are used to estimate bituminous coal and lignite consumption. They are consumption and distribution data, and they are all in units of thousand short tons:

- BCACPUS = bituminous coal and lignite consumed by the transportation sector in the United States;
- BCEUPZZ = bituminous coal and lignite consumed by the electric utilities in each State;
- BCHCPUS = bituminous coal and lignite consumed by the residential and commercial sectors in the United States;
- BCHDPZZ = bituminous coal and lignite distributed to the residential and commercial sectors in each State.
- BCKCPUS = bituminous coal and lignite consumed by coke plants in the United States;
- BCKDPZZ = bituminous coal and lignite distributed to coke plants in each State;
- BCOCPUS = bituminous coal and lignite consumed by other industrial users in the United States; and
- BCODPZZ = bituminous coal and lignite distributed to other industrial users in each State.

The U.S. totals for the four State-level series, BCEUPZZ, BCHDPZZ, BCKDPZZ, and BCODPZZ, are calculated by summing the State data.

An assumption is made that bituminous coal and lignite are consumed by the residential and commercial sectors combined in proportion to the

amount of bituminous coal and lignite distributed to the residential and commercial sectors in each State:

$$\text{BCHCPZZ} = (\text{BCHDPZZ} / \text{BCHDPUS}) * \text{BCHCPUS}$$

Little information exists for disaggregating the combined residential and commercial estimates. An estimate of 35 percent to the residential sector and 65 percent to the commercial sector is made for all States and years. That is, the residential sector consumption, BCRCPZZ, is estimated:

$$\text{BCRCPZZ} = \text{BCHCPZZ} * 0.35$$

and the commercial sector consumption, BCCCPZZ, is estimated:

$$\text{BCCCPZZ} = \text{BCHCPZZ} * 0.65$$

To gain a perspective on these estimates: bituminous coal and lignite consumed by residential and commercial users in 1999 accounted for only 0.4 percent of all bituminous coal and lignite consumed—that is, 4 million short tons out of the 991 million short tons consumed in 1999.

Consumption in the industrial sector is estimated by State. An assumption is made that bituminous coal and lignite is consumed by coke plants in proportion to the amount of bituminous coal and lignite distributed to coke plants in each State. It is also assumed that the consumption of bituminous coal and lignite by industrial users other than coke plants is in proportion to the amount delivered to other industrial users in each State. The industrial sector consumption is the sum of bituminous coal and lignite consumed by coke plants and by other industrial users for each State:

$$\begin{aligned} \text{BCKCPZZ} &= (\text{BCKDPZZ} / \text{BCKDPUS}) * \text{BCKCPUS} \\ \text{BCOCPZZ} &= (\text{BCODPZZ} / \text{BCODPUS}) * \text{BCOCPUS} \\ \text{BCICPZZ} &= \text{BCKCPZZ} + \text{BCOCPZZ} \end{aligned}$$

There are no data available for estimating the transportation sector's consumption of bituminous coal and lignite by State. The quantity would be very small. The transportation sector accounted for only 1 percent of the national total consumption in 1960 and none since 1978. An assumption is made that when transportation sector consumption exists, the consumption by State, BCACPZZ, is in proportion to the share of the U.S. industrial sector attributed to each State:

$$BCACPZZ = (BCICPZZ / BCICPUS) * BCACPUS$$

Total consumption in each State, BCTCPZZ, is the sum of the sectors' consumption:

$$BCTCPZZ = BCRCPZZ + BCCCPZZ + BCICPZZ + BCACPZZ + BCEUPZZ$$

The U.S. bituminous coal and lignite consumption estimates for each of the sectors and the total are calculated as the sum of the States' values.

**British Thermal Units (Btu)**

Three factors are used for converting bituminous coal and lignite from physical units to Btu. The three factors, State-specific for each year, in units of million Btu per short ton, are:

BCEUKZZ = the factor for converting bituminous coal and lignite consumed by the electric utility sector in each State from short tons to Btu;

BCHCKZZ = the factor for converting bituminous coal and lignite consumed by the residential and commercial sectors in each State from short tons to Btu; and

BCOCKZZ = the factor for converting bituminous coal and lignite consumed by other industrial users in each State from short tons to Btu.

The electric utility factor for each State is applied to estimate bituminous coal and lignite consumed by electric utilities in Btu:

$$BCEUBZZ = BCEUPZZ * BCEUKZZ$$

The residential and commercial sectors' State factor is applied to estimate bituminous coal and lignite consumed by the two sectors in Btu:

$$BCRCBZZ = BCRCPZZ * BCHCKZZ$$

$$BCCCBZZ = BCCCPZZ * BCHCKZZ$$

The industrial sector Btu consumption is estimated in three steps. A constant conversion factor of 26.80 million Btu per short ton is used for coking

coal consumption for all years. The conversion factor for industrial users other than coke plants in each State is applied to other industrial users sector consumption. The industrial sector Btu consumption is then estimated by adding coking coal Btu consumption and other industrial users Btu consumption:

$$BCKCBZZ = BCKCPZZ * 26.80$$

$$BCOCBZZ = BCOCPPZZ * BCOCKZZ$$

$$BCICBZZ = BCKCBZZ + BCOCBZZ$$

The transportation sector Btu consumption is estimated by applying the other industrial users' State factor to the transportation consumption:

$$BCACBZZ = BCACPZZ * BCOCKZZ$$

Total consumption for each State is the sum of the sectors' consumption:

$$BCTCBZZ = BCRCBZZ + BCCCBZZ + BCICBZZ + BCACBZZ + BCEUBZZ$$

The U.S. consumption estimates in Btu are calculated by summing the State values for each of the data series.

**Additional Notes for Bituminous Coal and Lignite**

1. Bituminous coal and lignite consumption at the national level for the residential and commercial sectors (BCHCPUS), coke plants (BCKCPUS), and industries other than coke plants (BCOCPUS) are continuous data series. However, the distribution data series used to develop State-level estimates by end-use sector are not continuous.

For 1960 through 1979, State-level bituminous coal and lignite distribution data are used to apportion the U.S. consumption data to the States. From 1980 forward, the data in the distribution series variables—BCKDPZZ, BCODPZZ, and BCHDPZZ—are estimates of actual bituminous coal and lignite consumption rather than the distribution data used for the previous years.

For 1980 forward, State-level total coal consumption data are available, but data for consumption by sector within many States are withheld. Estimates of the withheld sector consumption of total coal are

derived by using the distribution series for the residential and commercial sectors to fill in withheld residential and commercial consumption. In most States, this leaves only one sector withheld and it can be derived by subtracting known sectors from the State total. This gives total coal consumption estimates for the end-use sectors that are compatible with State coal consumption data published in other EIA reports. Anthracite consumption is derived by using anthracite distribution data to estimate consumption within each sector and State that sum to the U.S. totals for anthracite consumption by sector contained in other EIA databases. Bituminous coal and lignite consumption for each sector and State is, then, the difference between the total coal consumption estimates and anthracite consumption estimates.

2. Prior to 1974, data for distribution of bituminous coal and lignite by State included several groupings of States for which separate State data were unavailable. These groupings were: (1) Maine, New Hampshire, Vermont, and Rhode Island; (2) North Dakota and South Dakota; (3) Delaware and Maryland; (4) Georgia and Florida; (5) Alabama and Mississippi; (6) Arkansas, Louisiana, Oklahoma, and Texas; (7) Montana and Idaho; (8) Arizona and Nevada; and (9) Washington and Oregon. Beginning with 1974, individual State distribution data became available. To estimate the 1960 through 1973 State distribution data, the combined States were disaggregated in proportion to the individual States' shares of each similar State grouping in 1974.
3. Total coal consumption by State for 1980 through 1989 published in the EIA *Quarterly Coal Report* do not sum to the U.S. totals due to a quantity called "Unknown" in the source tables. This unknown coal consumption is assumed to be bituminous coal and lignite and is added to the residential, commercial, and "other industrial" sectors of Alabama, Illinois, Kentucky, Pennsylvania, Tennessee, and West Virginia.

### Data Sources for Bituminous Coal and Lignite

BCACPUS — Bituminous coal and lignite consumed by the transportation sector in the United States.

- 1960 through 1975: U.S. Department of the Interior, Bureau of Mines, *Minerals Yearbook*, "Coal-Bituminous and Lignite."

- 1976 and 1977: EIA, *Energy Data Reports*, "Coal-Bituminous and Lignite by Consumer and Retail Deliveries."
- 1978 forward: Small amounts of bituminous coal and lignite consumed by the transportation sector are included in the other industrial category (see BCOCBUS). Zero is entered for this variable.

BCEUKZZ — Factor for converting bituminous coal and lignite consumed by the electric utilities from physical units to Btu by State.

- 1960 through 1972: EIA adopted the average thermal conversion factor of the Bureau of Mines, which used the National Coal Association (NCA) average thermal conversion factor for electric utilities calculated from the Federal Power Commission's (FPC) Form 1 and published in *Steam Electric Plant Factors*, an NCA annual report. The specific tables are:
  - 1960 and 1961: Table 1.
  - 1962 through 1972: Table 2.
- 1973 through 1982: The average heat content of coal received at steam electric plants 25 megawatts or greater from the Federal Energy Regulatory Commission (FERC) Form 423 and published in Btu per pound in EIA, *Cost and Quality of Fuels for Electric Utility Plants*, tables titled "Destination and Origin of Coal 'Delivered to' (1973–1979) 'Receipts to' (1980) 'Received at' (1981–1982) Steam-Electric Plants 25-MW or Greater."
- 1983 forward: The average heat content of coal received at steam electric plants 50 megawatts capacity or larger from FERC Form 423 and published in Btu per pound in the EIA, *Cost and Quality of Fuels for Electric Utility Plants*. This report is available only via the Internet at <http://www.eia.doe.gov>. In the box titled "Search EIA by Google" type "Cost and Quality of Fuels for Electric" and click on the "Go" button. Select the report from the list. The specific tables are:
  - 1983 and 1984: Table 58.
  - 1985 through 1989: Table 48.
  - 1990 and 1991: Table 35.
  - 1992: Table 22.
  - 1993 forward: Table 4 and Table 22.

Notes: The State conversion factors for 1960 through 1972 were derived from actual consumption data, while the conversion factors for 1973 to the present were based on receipts of coal. The factors for 1960 through 1972 may also have included some quantities of anthracite. These breaks in the series create some data discrepancies. Alaska and Hawaii were excluded



from the NCA report, FPC Form 423, and FERC Form 423. However, Alaska reported consumption of bituminous coal and lignite at electric utilities for all years. An FPC heat rate for coal at electric utilities in Alaska was used for 1960 through 1978 as published in EIA, *Federal Energy Data System (FEDS) Technical Documentation*, June 1978, Table 21. The 1972 conversion factor (the last year for which a conversion factor was reported for Alaska) was used for 1972 through 1978. According to industry sources, new mines were opened in 1978 and a more representative factor was used for 1979 and following years. In instances where a State had no receipts for a particular year but did report consumption, it was assumed that the coal received in one year was consumed during the following year and the Btu value of the previous year's receipts was used.

**BCEUPZZ** — Bituminous coal and lignite consumed by the electric utilities by State.

- EIA, Form EIA-759, "Monthly Power Plant Report," and predecessor forms.

**BCHCKZZ** — State factor for converting bituminous coal and lignite consumed by the residential and commercial sectors from physical units to Btu.

- 1960 through 1973: Estimated by EIA by adjusting the 1974 average heat value of bituminous coal and lignite consumed in the residential and commercial sector by the ratios of 1960 through 1973 national averages for the sector to its 1974 average.
- 1974 through 1998: Calculated by EIA by assuming that the bituminous coal and lignite consumed in the residential and commercial sector in each State contained heating values equal to those of bituminous coal and lignite received at electric utilities in each State from identified coal-producing districts as reported on the Federal Energy Regulatory Commission (FERC) Form 423, "Monthly Report of Cost and Quality of Fuels for Electric Plants." The average Btu content of coal delivered from each coal-producing district was applied to deliveries to the residential and commercial sector in each State and the sum total of the heat content was divided by total tonnages, yielding a weighted average. The coal distribution data by coal-producing district are reported on Form EIA-6, "Coal Distribution Report," and predecessor Bureau of Mines Form 6-1419-Q.
- 1999: No data available. The 1998 value is repeated.

**BCHCPUS** — Bituminous coal and lignite consumed by the residential and commercial sectors in the United States.

- 1960 through 1972: U.S. Department of the Interior, Bureau of Mines, *Minerals Yearbook*, "Coal-Bituminous and Lignite," column titled "Retail dealers" or "Retail sales."
- 1973 through 1984: EIA, *Weekly Coal Production*, August 9, 1986, Table 8.
- 1985 through 1987: EIA, *Weekly Coal Production*, July 16, 1988, Table 7.
- 1988 forward: EIA, Unpublished data from Form EIA-6.

**BCHDPZZ** — Bituminous coal and lignite distributed to the residential and commercial sectors by State.

- 1960 through 1976: U.S. Department of the Interior, Bureau of Mines, *Minerals Yearbook*, "Coal-Bituminous and Lignite," column titled "Retail dealers."
- 1977 through 1979: EIA, *Energy Data Reports*, "Coal-Bituminous and Lignite." The specific tables are:
  - 1977: "Comparative Summary of Distribution of Bituminous Coal and Lignite Produced in the United States During the First Nine Months of 1977" and "Distribution of Bituminous Coal and Lignite Produced in the United States During October-December 1977, by Geographic Division and State Destination," columns titled "Retail dealers."
  - 1978: "Distribution of Bituminous Coal and Lignite Produced in the United States," column titled "Retail sales."
  - 1979: "Overall Summary of Distribution of Bituminous, Sub-bituminous, and Lignite Coal Produced in the United States," column titled "Retail sales."
- 1980 forward: Consumption estimates are used for this distribution series. Bituminous coal and lignite consumption is the remainder when estimated anthracite consumption is subtracted from all coal consumption in each State. (See ACHDPZZ for data sources and estimation procedures.) Consumption shown as "Unknown" is assumed to be bituminous coal and lignite and is allocated to six States (Alabama, Illinois, Kentucky, Pennsylvania, Tennessee, and West Virginia) in proportion to their total distribution of all coal.

**BCKCPUS** — Bituminous coal and lignite carbonized at coke plants in the United States.

- 1960 through 1972: U.S. Department of the Interior, Bureau of Mines, *Minerals Yearbook*, “Coal-Bituminous and Lignite,” sum of columns “Beehive coke plants” and “Oven coke plants.”
- 1973 through 1984: EIA, *Weekly Coal Production*, August 9, 1986, Table 8.
- 1985 through 1987: EIA, *Weekly Coal Production*, July 16, 1988, Table 7.
- 1988 forward: EIA, Unpublished data from Form EIA-5.

BCKDPZZ — Bituminous coal and lignite distributed to coke plants, a portion of the industrial sector by State.

- 1960 through 1976: U.S. Department of the Interior, Bureau of Mines, *Minerals Yearbook*, “Coal-Bituminous and Lignite.”
- 1977 through 1979: EIA, *Energy Data Reports*, “Coal-Bituminous and Lignite.” The specific tables are:
  - 1977: “Comparative Summary of Distribution of Bituminous Coal and Lignite Produced in the United States During the First Nine Months of 1977” and “Distribution of Bituminous Coal and Lignite Produced in the United States During October-December 1977, by Geographic Division and State Destination.”
  - 1978: “Distribution of Bituminous Coal and Lignite Produced in the United States.”
  - 1979: “Overall Summary of Distribution of Bituminous, Sub-bituminous, and Lignite Coal Produced in the United States.”
- 1980 forward: Consumption estimates are used for this distribution series. Bituminous coal and lignite consumption is the remainder when estimated anthracite consumption is subtracted from all coal consumption in each State. See ACKDPZZ for data sources and estimation procedures.

BCOCKZZ — State factor for converting bituminous coal and lignite consumed by other industrial users from physical units to Btu.

- 1960 through 1973: Estimated by EIA by adjusting the 1974 average heat value of bituminous coal and lignite consumed by industrial users other than coke plants by the ratios of 1960 through 1973 national averages for the other industrial users to its 1974 average.
- 1974 through 1998: Calculated by EIA by assuming that the bituminous coal and lignite consumed by industrial users other than coke plants in each State contained heating values equal to those of

bituminous coal and lignite received at electric utilities in each State from identified coal-producing districts as reported on Federal Energy Regulatory Commission (FERC) Form 423, “Monthly Report of Cost and Quality of Fuels for Electric Plants.” The average Btu content of coal delivered from each coal-producing district was applied to deliveries to other industrial users in each State and the sum total of the heat content was divided by total tonnages, yielding a weighted average. The coal distribution data by coal-producing district are reported on Form EIA-6, “Coal Distribution Report,” and predecessor Bureau of Mines Form 6-1419-Q.

- 1999: No data are available. The 1998 value is repeated.

BCOCPUS — Bituminous coal and lignite consumed by industrial users other than coke plants in the United States.

- 1960 through 1972: U.S. Department of the Interior, Bureau of Mines, *Minerals Yearbook*, “Coal-Bituminous and Lignite,” table titled “Consumption of bituminous coal and lignite, by consumer class, and retail deliveries in the United States.” Sum of columns titled “Steel and rolling mills,” “Cement mills,” and “Other manufacturing and mining industries.”
- 1973 through 1984: EIA, *Weekly Coal Production*, August 9, 1986, Table 8.
- 1985 through 1987: EIA, *Weekly Coal Production*, July 16, 1988, Table 7.
- 1988 forward: EIA, Unpublished data from Forms EIA-3 and EIA-6.

BCODPZZ — Bituminous coal and lignite distributed to industrial plants (other than coke plants) by State.

- 1960 through 1976: U.S. Department of the Interior, Bureau of Mines, *Minerals Yearbook*, “Coal-Bituminous and Lignite.”
- 1977 through 1979: EIA, *Energy Data Reports*, “Coal-Bituminous and Lignite.” The specific tables are:
  - 1977: “Comparative Summary of Distribution of Bituminous Coal and Lignite Produced in the United States During the First Nine Months of 1977” and “Distribution of Bituminous Coal and Lignite Produced in the United States During October-December 1977, by Geographic Division and State Destination.”
  - 1978: “Distribution of Bituminous Coal and Lignite Produced in the United States.”

- 1979: “Overall Summary of Distribution of Bituminous, Sub-bituminous, and Lignite Coal Produced in the United States.”
- 1980 forward: Consumption estimates are used for this distribution series. Bituminous coal and lignite consumption is the remainder when estimated anthracite consumption is subtracted from all coal consumption in each State. (See ACODPZZ for data sources and estimation procedures.) Consumption shown as “Unknown” is assumed to be bituminous coal and lignite and is allocated to six States (Alabama, Illinois, Kentucky, Pennsylvania, Tennessee, and West Virginia) in proportion to their total distribution of all coal.

## Coal

### Physical Units

All coal totals are the sum of the anthracite and bituminous coal and lignite estimates for the residential and commercial sectors and electric utilities. The industrial sector includes total coal by nonutility power producers. It is assumed that no anthracite is consumed by the transportation sector. The calculations for each State and the U.S. total are:

$$\begin{aligned} \text{CLRCP} &= \text{ACRCP} + \text{BCRCP} \\ \text{CLCCP} &= \text{ACCCP} + \text{BCCCP} \\ \text{CLICP} &= \text{ACICP} + \text{BCICP} \\ \text{CLACP} &= \text{BCACP} \\ \text{CLEUP} &= \text{ACEUP} + \text{BCEUP} \\ \text{CLTCP} &= \text{ACTCP} + \text{BCTCP} \end{aligned}$$

### British Thermal Units (Btu)

Estimates of total coal consumption in Btu for each State and the U.S. are calculated:

$$\begin{aligned} \text{CLRCB} &= \text{ACRCB} + \text{BCRCB} \\ \text{CLCCB} &= \text{ACCCB} + \text{BCCCB} \\ \text{CLICB} &= \text{ACICB} + \text{BCICB} \\ \text{CLACB} &= \text{BCACB} \end{aligned}$$

$$\text{CLEUB} = \text{ACEUB} + \text{BCEUB}$$

$$\text{CLTCB} = \text{ACTCB} + \text{BCTCB}$$

### Additional Calculations

Additional calculations are performed in the Combined State Energy Data System (CSEDS) to provide coal consumption estimates for the price and expenditure calculations published in the *State Energy Price and Expenditure Report*. Total coal used at coke plants (CLKCB) and total coal consumed by all other industrial users (CLOCP and CLOCB) are calculated at the State and U.S. levels:

$$\text{CLKCB} = \text{ACKCB} + \text{BCKCB}$$

$$\text{CLOCP} = \text{ACOCP} + \text{BCOCP}$$

$$\text{CLOCB} = \text{ACOCB} + \text{BCOCB}$$

## Net Imports of Coal Coke

### Physical Units

Net imports of coal coke is a component of total U.S. energy consumption. There is no attempt to estimate State allocations of this energy source. All of it is considered to be used by the industrial sector. In the *State Energy Data Report*, net imports of coal coke is included in the U.S. data but not in the State-level data in all tables of total energy consumption and industrial sector energy consumption. Variables for net imports of coal coke into the United States are:

CCIMPUS = coal coke imported into the United States, in thousand short tons; and

CCEXPUS = coal coke exported from the United States, in thousand short tons.

Net imports is calculated:

$$\text{CCNIPUS} = \text{CCIMPUS} - \text{CCEXPUS}$$

**British Thermal Units (Btu)**

The factor for converting coal coke from short tons to Btu is 24.80 million Btu per short ton:

CCIMBUS = CCIMPUS \* 24.80

CCEXBUS = CCEXPUS \* 24.80

CCNIBUS = CCIMBUS - CCEXBUS

**Data Sources for Net Imports of Coal**

CCEXPUS — Coal coke exported from the United States.

- 1960 through 1975: U.S. Department of the Interior, Bureau of Mines, *Minerals Yearbook*, “Coke and Coal Chemicals Annual.”
- 1976 through 1979: EIA, *Energy Data Reports*, “Coke and Coal Chemicals Monthly.”
- 1980 through 1990: EIA, *Quarterly Coal Report* (January-March of the following year). The specific tables are:
  - 1980: Table 7.
  - 1981 through 1984: Table A10.
  - 1985 through 1990: Table A9.
- 1991 and 1992: Unpublished revisions in short tons from the EIA, Office of Energy Markets and End Use, Integrated Modeling Data System.

- 1993 through 1997: Unpublished revisions in short tons from the EIA, Office of Energy Markets and End Use, Integrated Modeling Data System, as published in thousand short tons in the EIA, *Quarterly Coal Report October-December 1999*, Table 2.
- 1998 and 1999: EIA, *Quarterly Coal Report October-December 1999*, Table 15.

CCIMPUS — Coal coke imported into the United States.

- 1960 through 1975: U.S. Department of the Interior, Bureau of Mines, *Minerals Yearbook*, “Coke and Coal Chemicals Annual.”
- 1976 through 1979: EIA, *Energy Data Reports*, “Coke and Coal Chemicals Monthly.”
- 1980 through 1990: EIA, *Quarterly Coal Report* (October-December of the following year). The specific tables are:
  - 1980: Table 8.
  - 1981 through 1984: Table A12.
  - 1985 through 1987: Table A11.
  - 1988 through 1990: Table A10.
- 1991 and 1992: Unpublished revisions in short tons from the EIA, Office of Energy Markets and End Use, Integrated Modeling Data System.
- 1993 through 1997: Unpublished revisions in short tons from the EIA, Office of Energy Markets and End Use, Integrated Modeling Data System, as published in thousand short tons in the EIA, *Quarterly Coal Report October-December 1999*, Table 2.
- 1998 and 1999: EIA, *Quarterly Coal Report October-December 1999*, Table 19.



## Section 3. Natural Gas

### Physical Units

Six natural gas data series are used to derive the natural gas consumption estimates in the Combined State Energy Data System (CSEDS). Three of these data series are deliveries of natural gas to the end user by State and are used as consumption because actual consumption data at these levels are not available. The sources for the natural gas data are the reports in the *Natural Gas Annual* series published by the Energy Information Administration (EIA) and its predecessors. These series, in million cubic feet, for each State are as follows (the two-letter State code is represented by "ZZ" in the following variable names):

- NGCCPZZ = natural gas delivered to the commercial sector (includes gas used by nonmanufacturing organizations, such as hotels, restaurants, retail stores, laundries, and other service enterprises, and) plus natural gas delivered to other consumers (includes deliveries to municipalities and public authorities for institutional heating and street lighting). Prior to 1996, includes gas used in agriculture, forestry, and fisheries;
- NGEUPZZ = natural gas consumed by electric utilities;
- NGINPZZ = a portion of the natural gas delivered to the industrial sector (includes gas used as fuel and feedstock in chemical plants and to produce carbon black). Beginning in 1996, includes gas used in agriculture, forestry, and fisheries;
- NGLEPZZ = natural gas consumed as lease fuel;
- NGPLPZZ = natural gas consumed as plant fuel;
- NGPZPZZ = natural gas consumed as pipeline fuel;
- NGRCPZZ = natural gas delivered to the residential sector; and
- NGVHPZZ = natural gas delivered for use as vehicle fuel.

The U.S. totals of these independent variables are calculated as the sum of the States' values.

The data are combined into the four major end-use sectors used in CSEDS as closely as possible. However, natural gas data are collected by using different aggregations of users. The industrial sector in CSEDS is intended to contain energy used in agriculture, forestry, and fisheries. For natural gas, these categories were reported with commercial use of natural gas through 1995 and in the industrial sector for 1996 forward. These data cannot be separately identified and no adjustment for this end-use inconsistency could be made in CSEDS.

The residential sector's consumption of natural gas is represented by the variable for deliveries to the residential sector, NGRCPZZ.

The commercial sector's consumption of natural gas is represented by the variable for deliveries to the commercial sector, NGCCPZZ.

The industrial sector's consumption of natural gas in CSEDS, NGICPZZ, is estimated to be the sum of natural gas delivered to the industrial sector, NGINPZZ, natural gas consumed as lease fuel, NGLEPZZ, and natural gas consumed as plant fuel, NGPLPZZ. The source document reports lease and plant fuel combined for 1960 through 1992; the combined data series is stored as NGLEPZZ in CSEDS.

$$\text{NGICPZZ} = \text{NGINPZZ} + \text{NGLEPZZ} + \text{NGPLPZZ}$$

The transportation sector's consumption of natural gas, NGACPZZ, is the sum of natural gas consumed in pipeline operations, primarily in compressors, NGPZPZZ, and natural gas delivered for use as vehicle fuel, NGVHPZZ. Prior to 1990, the small amounts of natural gas consumed as vehicle fuel are included in the commercial sector consumption and cannot be identified separately; therefore, NGVHPZZ is zero prior to 1990.

$$\text{NGACPZZ} = \text{NGPZPZZ} + \text{NGVHPZZ}$$

Electric utilities' consumption of natural gas is represented by the data series NGEUPZZ.

The total consumption of natural gas, estimated for each State, is the sum of the consumption by the end-use sectors and electric utilities:

$$\text{NGTCPZZ} = \text{NGRCPZZ} + \text{NGCCPZZ} + \text{NGICPZZ} + \text{NGACPZZ} + \text{NGEUPZZ}$$

The U.S. consumption estimates for each of the sectors and the U.S. total are calculated as the sum of the States' values.

### **British Thermal Units (Btu)**

Three factors for each State are used for converting the consumption of natural gas from its physical units of million cubic feet into thousand Btu per cubic foot. Two of these State-level factors are:

NGEUKZZ = The factor for converting natural gas consumed by electric utilities from physical units to Btu; and

NGTCKZZ = The factor for converting natural gas consumed by all sectors from physical units to Btu.

These two factors are used to derive a third factor, NGNUKZZ, for converting natural gas used by all sectors other than electric utilities from physical units to Btu:

$$\begin{aligned} \text{NGTCBZZ} &= \text{NGTCPZZ} * \text{NGTCKZZ} \\ \text{NGEUBZZ} &= \text{NGEUPZZ} * \text{NGEUKZZ} \\ \text{NGNUKZZ} &= (\text{NGTCBZZ} - \text{NGEUBZZ}) / (\text{NGTCPZZ} - \text{NGEUPZZ}) \end{aligned}$$

Natural gas consumption in Btu for the residential, commercial, industrial, and transportation sectors in each State is calculated by multiplying the physical unit data by the factor NGNUKZZ, such as:

$$\begin{aligned} \text{NGACBZZ} &= \text{NGACPZZ} * \text{NGNUKZZ} \\ \text{NGCCBZZ} &= \text{NGCCPZZ} * \text{NGNUKZZ} \end{aligned}$$

The U.S. consumption estimates in Btu for each of the sectors and the U.S. total are calculated as the sum of the States' Btu values:

$$\begin{aligned} \text{NGTCBUS} &= \Sigma \text{NGTCBZZ} \\ \text{NGEUBUS} &= \Sigma \text{NGEUBZZ} \\ \text{NGACBUS} &= \Sigma \text{NGACBZZ} \\ \text{NGCCBUS} &= \Sigma \text{NGCCBZZ} \end{aligned}$$

Prior to 1972, conversion factors for natural gas consumed by electric utilities were not collected; therefore, the factor for all natural gas consumed (NGTCKZZ) is used for electric utilities (NGEUKZZ) and for the other sectors (NGNUKZZ) for 1963 through 1971. Prior to 1963, State-level conversion factors for natural gas consumption were not collected and a standard factor of 1.035 thousand Btu per cubic foot is used for all sectors in all States for 1960 through 1962.

### **Additional Calculations**

Although CSEDS does not use U.S.-level conversion factors for calculating natural gas consumption, these factors are calculated by CSEDS for reference and are shown in the natural gas tables in Appendix C:

$$\begin{aligned} \text{NGEUKUS} &= \text{NGEUBUS} / \text{NGEUPUS} \\ \text{NGTCKUS} &= \text{NGTCBUS} / \text{NGTCPUS} \\ \text{NGNUKUS} &= (\text{NGTCBUS} - \text{NGEUBUS}) / (\text{NGTCPUS} - \text{NGEUPUS}) \end{aligned}$$

To produce price and expenditure data for the *State Energy Price and Expenditure Report (SEPER)*, CSEDS differentiates between natural gas used in the transportation sector as pipeline fuel, which is not sold and has no price, and natural gas purchased and consumed as vehicle fuel. CSEDS also differentiates between natural gas used as lease and plant fuel by the natural gas industry, which is not costed, and natural gas purchased by industrial consumers. Btu values are calculated in CSEDS for use in *SEPER*:

$$\begin{aligned} \text{NGPZBZZ} &= \text{NGPZPZZ} * \text{NGNUKZZ} \\ \text{NGVHBZZ} &= \text{NGVHPZZ} * \text{NGNUKZZ} \\ \text{NGLPPZZ} &= \text{NGLEPZZ} + \text{NGPLPZZ} \\ \text{NGLPBZZ} &= \text{NGLPPZZ} * \text{NGNUKZZ} \end{aligned}$$

The U.S. totals for each series are calculated as the sum of the States' values.

**Data Sources**

NGCCPZZ — Natural gas delivered to the commercial sector and to other consumers (municipalities and public authorities for institutional heating and street lighting), including natural gas consumed as vehicle fuel through 1989 and natural gas used in agriculture, forestry, and fisheries through 1995, by State.

- 1960 through 1966: U.S. Department of the Interior, Bureau of Mines, *Mineral Industry Surveys*, “Natural Gas Production and Consumption,” table titled “Number of consumers and volume of natural gas consumed by principal users in the United States,” column “Commercial.”
- 1967 forward: EIA, *Historical Natural Gas Annual 1930 Through 1999*, Table 16. This report is available only via the Internet at <http://www.eia.doe.gov>. In the box titled “Search EIA by Google” type “Historical Natural Gas Annual 1930” and click the “Go” button. Select the report from the list.

NGEUKZZ — Factor for converting natural gas consumed by the electric utilities from physical units to Btu.

- 1960 through 1971: Assumed by the EIA to be equal to the thermal conversion factor for the consumption of natural gas by all users (NGTCKZZ).
- 1972 through 1982: Calculated annually by EIA by dividing the total heat content of natural gas received at steam electric plants 25 megawatts or greater by the total quantity received at those electric plants. The heat contents and quantities received are from the Federal Energy Regulatory Commission (FERC) Form 423, “Monthly Report of Cost and Quality of Fuels for Electric Plants.”
- 1983 forward: The average heat content of natural gas received at steam electric plants 50 megawatts capacity or larger from FERC Form 423 and published from 1993 forward in Btu per cubic foot in the EIA, *Cost and Quality of Fuels for Electric Utility Plants*, Table 14. This report is available only via the Internet at <http://www.eia.doe.gov>. In the box titled “Search EIA by Google” type “Cost and Quality of Fuels for Electric” and click on the “Go” button. Select the report from the list.

Note: For States that reported consumption on EIA-759 but were not large enough to report on FERC Form 423, factors were estimated by

using previous years’ factors or the factor for total natural gas consumption in the State.

NGEUPZZ — Natural gas consumed by the electric utilities by State.

- 1960 through 1975: Federal Power Commission, News Release, “Power Production, Fuel Consumption, and Installed Capacity Data,” table titled “Consumption of Fuel by Electric Utilities for Production of Electric Energy by State, Kind of Fuel, and Type of Prime Mover,” sum of columns, “steam and gas turbine” and “internal combustion” under column heading “gas.”
- 1976 through 1981: EIA, *Electric Power Annual* (1981), Table 67.
- 1982 through 1986: Unrounded data as published in rounded form in EIA, *Electric Power Annual*, 1986, Table 14.
- 1987 forward: Unrounded data as published in rounded form in EIA, *Electric Power Annual*. Data are from the report of the following year, i.e., 1987 final data are published in the *Electric Power Annual*, 1988: The specific tables are:
  - 1987: Table 13.
  - 1988 and 1989: Table 19.
  - 1990 through 1993: Table 18.
  - 1994 through 1996: Volume I, Table 15.
  - 1997: Volume I, Table A5.
  - 1998 and 1999: Volume I, Table A16.

NGINPZZ — A portion of the natural gas delivered to the industrial sector, including natural gas used in agriculture, forestry, and fisheries beginning in 1996, by State.

- 1960 through 1966: U.S. Department of the Interior, Bureau of Mines, *Mineral Industry Surveys*, “Natural Gas Production and Consumption,” table titled “Number of consumers and volume of natural gas consumed by principal users in the United States.” Sum of data in columns “Carbon black,” “Refinery fuel,” and “Other industrial fuel” (which includes electric utility fuel) minus data in column “Fuel used at electric utility plants.”
- 1967 forward: EIA, *Historical Natural Gas Annual 1930 Through 1999*, Table 16. This report is available only via the Internet at <http://www.eia.doe.gov>. In the box titled “Search EIA by Google” type “Historical Natural Gas Annual 1930” and click the “Go” button. Select the report from the list.



NGLEPZZ — Natural gas consumed as lease fuel by State (includes natural gas consumed as plant fuel in 1960 through 1992).

- 1960 through 1966: U.S. Department of the Interior, Bureau of Mines, *Minerals Yearbook*, Natural Gas chapter. State data are not available from 1960 through 1966, although U.S. totals are available. State estimates were calculated by apportioning the U.S. totals to the States on the basis of each State's share of the U.S. total in 1967.
- 1967 through 1992: EIA, *Natural Gas Annual 1994 Volume II*, Table 14.
- 1993 forward: EIA, *Historical Natural Gas Annual 1930 Through 1999*, Table 15. This report is available only via the Internet at <http://www.eia.doe.gov>. In the box titled "Search EIA by Google" type "Historical Natural Gas Annual 1930" and click the "Go" button. Select the report from the list.

NGPLPZZ — Natural gas consumed as plant fuel by State.

- 1960 through 1992: Included with natural gas consumed as lease fuel (see NGLEPZZ).
- 1993 forward: EIA, *Historical Natural Gas Annual 1930 Through 1999*, Table 15. This report is available only via the Internet at <http://www.eia.doe.gov>. In the box titled "Search EIA by Google" type "Historical Natural Gas Annual 1930" and click the "Go" button. Select the report from the list.

NGPZPZZ — Natural gas consumed as pipeline fuel by State.

- 1960 through 1966: U.S. Department of the Interior, Bureau of Mines, *Mineral Industry Surveys*, "Natural Gas Production and Consumption," table titled "Number of consumers and volume of natural gas consumed by principal users in the United States," column "Used as pipeline fuel."
- 1967 through 1992: EIA, *Natural Gas Annual 1994 Volume II*, Table 14.
- 1993 forward: EIA, *Historical Natural Gas Annual 1930 Through 1999*, Table 15. This report is available only via the Internet at <http://www.eia.doe.gov>. In the box titled "Search EIA by Google"

type "Historical Natural Gas Annual 1930" and click the "Go" button. Select the report from the list.

NGRCPZZ — Natural gas delivered to the residential sector, used as consumption, by State.

- 1960 through 1966: U.S. Department of the Interior, Bureau of Mines, *Mineral Industry Surveys*, "Natural Gas Production and Consumption," table titled "Number of consumers and volume of natural gas consumed by principal users in the United States," column "Residential."
- 1967 forward: EIA, *Historical Natural Gas Annual 1930 Through 1999*, Table 16. This report is available only via the Internet at <http://www.eia.doe.gov>. In the box titled "Search EIA by Google" type "Historical Natural Gas Annual 1930" and click the "Go" button. Select the report from the list.

NGVHPZZ — Natural gas delivered for use as vehicle fuel by State.

- 1960 through 1989: Included in natural gas consumed by the commercial sector (See NGCCPZZ).
- 1990 forward: EIA, *Historical Natural Gas Annual 1930 Through 1999*, Table 16. This report is available only via the Internet at <http://www.eia.doe.gov>. In the box titled "Search EIA by Google" type "Historical Natural Gas Annual 1930" and click the "Go" button. Select the report from the list.

NGTCKZZ — Factor for converting natural gas consumed by all users from physical units to Btu.

- 1960 through 1962: EIA adopted the thermal conversion factor of 1,035 Btu per cubic foot as estimated by the Bureau of Mines and first published in the *Petroleum Statement, Annual, 1956*.
- 1963 through 1979: EIA adopted the thermal conversion factors calculated annually by the American Gas Association (AGA) and published in *Gas Facts*, an AGA annual.
- 1980 forward: EIA, *Historical Natural Gas Annual 1930 Through 1999*, Table 16. This report is available only via the Internet at <http://www.eia.doe.gov>. In the box titled "Search EIA by Google" type "Historical Natural Gas Annual 1930" and click the "Go" button. Select the report from the list.

## Section 4. Petroleum

### Petroleum Overview

The 27 petroleum products included in the Combined State Energy Data System (CSEDS) are explained in this section. For 12 of these products, the means of estimating their individual consumption by State is described in individual sections. The 12 petroleum products are:

- asphalt (AS)
- aviation gasoline (AV)
- distillate fuel (DF)
- jet fuel, kerosene-type (JK)
- jet fuel, naphtha-type (JN)
- kerosene (KS)
- liquefied petroleum gases (LG)
- lubricants (LU)
- motor gasoline (MG)
- petroleum coke (PC)
- residual fuel (RF)
- road oil (RD)

The remaining 15 products are described in the section “Other Petroleum Products” and include the following:

- crude oil, including lease condensate (CO)
- miscellaneous petroleum products (MS)
- natural gasoline (NA) (including isopentane)
- petroleum feedstocks, naphtha less than 401° F (FN)
- petroleum feedstocks, other oils equal to or greater than 401° F (FO)
- petroleum feedstocks, still gas (FS)
- plant condensate (PL)
- pentanes plus (PP)

- special naphthas (SN)
- still gas (SG)
- unfractionated stream (US)
- waxes (WX)
- unfinished oils (UO)
- motor gasoline blending components (MB)
- aviation gasoline blending components (AB)

The last petroleum documentation section, “Petroleum Summaries,” describes how the 27 petroleum products are combined for each major end-use sector’s estimated consumption.

Table A2 summarizes the petroleum products’ end-use assignments in CSEDS. Shown in this table are the first four letters of the seven-letter variable names used to identify all energy sources. The first two letters identify the petroleum product and the next two letters identify the end-use sector. For example, the table shows that the aviation gasoline estimated to be consumed by the transportation sector is all aviation gasoline consumed, and that there is some estimated consumption of lubricants in the industrial and transportation sectors, while distillate fuel is consumed in every sector.

### Asphalt and Road Oil

#### *Physical Units*

There are no State-level consumption data for asphalt and road oil available. Therefore, the State-level sales data are used to apportion the national consumption numbers to the States.

**Table A2. Summary of Petroleum Products in the State Energy Data System**

Petroleum Products	Residential Sector Estimated Consumption (RC)		Commercial Sector Estimated Consumption (CC)		Industrial Sector Estimated Consumption (IC)		Transportation Sector Estimated Consumption (AC)		Electric Utility Sector Estimated Consumption (EU)		Total Estimated Consumption (TC)
Asphalt and Road Oil (AR)					ARIC				=	ARTC	
Aviation Gasoline (AV)					+		AVAC		=	AVTC	
Distillate Fuel (DF)	DFRC	+	DFCC	+	DFIC	+	DFAC	+	DFEU	=	DFTC
Jet Fuel, Kerosene (JK)	+		+		+		JKAC		JKEU	=	JKTC
Jet Fuel, Naphtha (JN)							JNAC			=	JNTC
Kerosene (KS)	KSRC	+	KSCC	+	KSIC					=	KSTC
Liquefied Petroleum Gases (LG)	LGRC	+	LGCC	+	LGIC	+	LGAC			=	LGTC
Lubricants (LU)							LUAC			=	LUTC
Motor Gasoline (MG)							MGAC			=	MGTC
Residual Fuel (RF)							RFAC	+	RFEU	=	RFTC
Other Petroleum Products (PO)							POIC <sup>1</sup>		PCEU <sup>2</sup>	=	POTC
<b>Total Petroleum (PA)</b>	<b>PARC</b>	<b>+</b>	<b>PACC</b>	<b>+</b>	<b>PAIC</b>	<b>+</b>	<b>PAAC</b>	<b>+</b>	<b>PAEU</b>	<b>=</b>	<b>PATC</b>

<sup>1</sup> The category "Other petroleum products" consumed by the industrial sector comprises crude oil, including lease condensate; unfinished oils; plant condensate; aviation gasoline and motor gasoline blending components; natural gasoline; petroleum feedstocks (naphtha less than 401° F, other oils equal to or

greater than 401° F, and still gas); pentanes plus; special naphthas; still gas; unfractionated stream; waxes; miscellaneous petroleum products; and petroleum coke for industrial use.

<sup>2</sup> Petroleum coke consumed at electric utilities.

The asphalt and road oil sales data are in short tons, while the consumption data are in thousand barrels. Because the sales data are used only for apportioning the U.S. consumption data to the States, they do not need to be converted into thousand barrels.

The four data series that are used to estimate consumption of asphalt and road oil are ("ZZ" in the variable name represents the two-letter State code that differs for each State):

- ASINPZZ = asphalt sold for use in the industrial sector of each State, in short tons;
- ASTCPUS = asphalt total consumed in the United States, in thousand barrels;
- RDINPZZ = road oil sold for use in the industrial sector of each State, in short tons; and
- RDTCPUS = road oil total consumed in the United States, in thousand barrels.

All asphalt and road oil consumption are assigned to the industrial sector because they are used in construction activity. ASTCPUS represents total U.S. consumption of asphalt, and RDTCPUS represents total U.S. consumption of road oil. Both are the "product supplied" data series in the publication *Petroleum Supply Annual*, published by the Energy Information Administration (EIA). Beginning in 1983, asphalt product supplied includes road oil, and RDTCPUS is entered as zero in CSEDS.

ASINPZZ represents all asphalt sold as paving products, as roofing products, and for all other uses. RDINPZZ represents all sales of road oil. The source of these variables is the report "Sales of Asphalt" for 1960 through 1980, published by EIA. These sales series was discontinued by EIA and after 1980 the data are collected and published by the Asphalt Institute. Values for RDINPZZ for 1981 and 1982 are estimated as described under "Additional Notes" in this section. Beginning with 1983 data, when road oil is included in asphalt product supplied data in the source publication, RDINPZZ is entered as zero in CSEDS.

To calculate State consumption estimates of asphalt, total sales of asphalt and road oil in the United States to the industrial sector are first calculated as the sum of the State data:

$$\begin{aligned} \text{ASINPUS} &= \Sigma \text{ASINPZZ} \\ \text{RDINPUS} &= \Sigma \text{RDINPZZ} \end{aligned}$$

Each State's consumption of asphalt in the industrial sector (ASICPZZ) is calculated to be in proportion to each State's sales:

$$\begin{aligned} \text{ASICPZZ} &= (\text{ASINPZZ} / \text{ASINPUS}) * \text{ASTCPUS} \\ \text{ASICPUS} &= \Sigma \text{ASICPZZ} \end{aligned}$$

$$\begin{aligned} \text{RDICPZZ} &= (\text{RDINPZZ} / \text{RDINPUS}) * \text{RDTCPUS} \\ \text{RDICPUS} &= \Sigma \text{RDICPZZ} \end{aligned}$$

Since all consumption of asphalt and road oil are assumed to be in the industrial sector, their total consumption in each State equals the industrial sector consumption:

$$\begin{aligned} \text{ASTCPZZ} &= \text{ASICPZZ} \\ \text{RDTCPZZ} &= \text{RDICPZZ} \end{aligned}$$

Asphalt and road oil consumption are added together:

$$\begin{aligned} \text{ARICPZZ} &= \text{ASICPZZ} + \text{RDICPZZ} \\ \text{ARICPUS} &= \Sigma \text{ARICPZZ} \\ \text{ARTCPZZ} &= \text{ASTCPZZ} + \text{RDTCPZZ} \\ \text{ARTCPUS} &= \Sigma \text{ARTCPZZ} \end{aligned}$$

**British Thermal Units (Btu)**

Asphalt and road oil have a heat content value of approximately 6.636 million Btu per barrel. This factor is applied to convert asphalt and road oil estimated consumption from physical units to Btu:

$$\begin{aligned} \text{ARICBZZ} &= \text{ARICPZZ} * 6.636 \\ \text{ARICBUS} &= \Sigma \text{ARICBZZ} \end{aligned}$$

Because all asphalt and road oil are assumed to be used by the industrial sector, total asphalt and road oil consumption in each State and in the United States is assumed to equal the industrial sector consumption:

$$\begin{aligned} \text{ARTCBZZ} &= \text{ARICBZZ} \\ \text{ARTCBUS} &= \text{ARICBUS} \end{aligned}$$

**Additional Notes on Asphalt and Road Oil**

The Federal Government stopped collecting asphalt and road oil sales data in 1980 and the source for these numbers in recent years has been reports published by the Asphalt Institute. There is an inherent problem in the methodology of using sales to estimate consumption because asphalt and road oil sold by a producer in one State may be easily transported across State lines and consumed in a neighboring State. The Asphalt Institute acknowledges this problem and estimates that, in any one year, about 15 States may have consumption estimates as much as 20 percent too high or too low.

Asphalt and road oil data for Maryland and the District of Columbia are published combined to avoid disclosure of proprietary data. Prior to being entered into CSEDS, the combined data are allocated to each State based on their reported sales in 1974 (99.4 percent to Maryland and 0.6 percent to the District of Columbia) and the assumption that their relative proportions do not change significantly over time

The EIA report series “Sales of Asphalt,” and predecessor reports, which are the source for road oil sales by State (RDINPZZ) in CSEDS for 1960 through 1980, was discontinued after the 1980 report. For 1981 and 1982, State estimates of road oil sales were created by first converting the annual total U.S. road oil product supplied data into short tons (one short ton contains 5.5 barrels of road oil). Then, the U.S. total road oil product supplied, in short tons, was disaggregated to each State in proportion to the State’s share of total U.S. asphalt sales as reported in the Asphalt Institute’s *Report on Sales of Asphalt in the U.S.*

**Data Sources for Asphalt and Road Oil**

ASINPZZ — Asphalt sold to the industrial sector by State.

- 1960 through 1977: U.S. Department of the Interior, Bureau of Mines, *Mineral Industry Surveys*, “Sales of Asphalt,” the specific tables are:
  - 1960 through 1962: Table 6.
  - 1963 through 1977: Table 5.
- 1978 through 1980: EIA, *Energy Data Reports*, “Sales of Asphalt,” Table 2.

- 1981 through 1986: The Asphalt Institute, *Asphalt Usage 1987 United States and Canada*, Table B.
- 1987 and 1988: The Asphalt Institute, *Asphalt Usage 1988 United States and Canada*, Tables A and B for State data. *Asphalt Usage 1989 United States and Canada*, page 2 for revised U.S. totals. The Asphalt Institute did not publish corresponding revised State data but did advise EIA on an estimation procedure to adjust 19 State values to sum to the revised U.S. totals.
- 1989 through 1995: The Asphalt Institute, *Asphalt Usage United States and Canada*, table titled “U.S. Asphalt Usage.”
- 1996 and 1997: The Asphalt Institute, *Asphalt Usage United States and Canada*, table titled “1997 vs. 1996 U.S. Asphalt Usage.”
- 1998 and 1999: The Asphalt Institute, *Asphalt Usage United States and Canada*, table titled “1998 vs. 1999 U.S. Asphalt Usage.” 1998 data for Delaware, New Hampshire, Rhode Island, and Vermont are repeated for 1999 because nonresponse to the survey caused those States data for 1999 to be more than 75 percent lower than their 1998 values.

ASTCPUS — Asphalt total consumed in the United States.

- 1960 through 1975: U.S. Department of the Interior, Bureau of Mines, *Mineral Industry Surveys*, “Petroleum Statement, Annual,” Table 1.
- 1976 through 1980: EIA, *Energy Data Reports*, “Petroleum Statement, Annual,” Table 1.
- 1981 forward: EIA, *Petroleum Supply Annual*, Table 2. (Beginning in 1983, this variable includes road oil.)

RDINPZZ — Road oil sold to the industrial sector by State.

- 1960 through 1977: U.S. Department of the Interior, Bureau of Mines, *Mineral Industry Surveys*, “Sales of Asphalt.” The specific tables are:
  - 1960 through 1962: Table 6.
  - 1963 through 1977: Table 5.
- 1978 through 1980: EIA, *Energy Data Reports*, “Sales of Asphalt,” Table 2.
- 1981 and 1982: EIA estimates. (See explanation in “Additional Notes” on page 358.)
- 1983 forward: Road oil is included in asphalt data (see ASINPZZ).

RDTCPUS — Road oil total consumed in the United States.

- 1960 through 1975: U.S. Department of the Interior, Bureau of Mines, *Mineral Industry Surveys*, “Petroleum Statement, Annual,” Table 1.
- 1976 through 1980: EIA, *Energy Data Reports*, “Petroleum Statement, Annual,” Table 1.
- 1981 and 1982: EIA, *Petroleum Supply Annual*, Table 2.
- 1983 forward: EIA, *Petroleum Supply Annual*, Table 2, included in “Asphalt and Road Oil.”

## Aviation Gasoline

### Physical Units

The three data series used to estimate consumption of aviation gasoline are:

AVMIPZZ = aviation gasoline issued to the military in each State, in thousand barrels;

AVNMMZZ = aviation gasoline sold to nonmilitary users in each State, in thousand gallons; and

AVTCPUS = aviation gasoline total consumed in the United States, in thousand barrels.

The U.S. Department of Transportation, Federal Highway Administration publishes the nonmilitary aviation gasoline sales data by State (AVNMMZZ) in *Highway Statistics*.

AVMIPZZ is the issues of aviation gasoline to the military in each State and is obtained from the U.S. Department of Defense, Defense Logistics Agency, Defense Fuel Supply Center.

Total U.S. consumption of aviation gasoline (AVTCPUS) is the product supplied data series in the publication *Petroleum Supply Annual*, published by the Energy Information Administration (EIA).

The State-level data series are summed to provide totals for the United States:

$$\text{AVMIPUS} = \Sigma \text{AVMIPZZ}$$

$$\text{AVNMMUS} = \Sigma \text{AVNMMZZ}$$

The State sales of nonmilitary aviation gasoline data are converted from thousand gallons to thousand barrels (42 gallons = 1 barrel):

$$\text{AVNMPZZ} = \text{AVNMMZZ} / 42$$

The U.S. nonmilitary sales is the sum of the States’ sales:

$$\text{AVNMPUS} = \Sigma \text{AVNMPZZ}$$

The total sales of aviation gasoline is estimated as the sum of nonmilitary sales and military issues:

$$\text{AVTTPZZ} = \text{AVNMPZZ} + \text{AVMIPZZ}$$

$$\text{AVTTPUS} = \Sigma \text{AVTTPZZ}$$

All aviation gasoline is assumed to be used by the transportation sector. An estimate of aviation gasoline consumption by the transportation sector by State (AVACPZZ) is calculated by assuming that each State consumes aviation gasoline in proportion to the amount sold to that State:

$$\text{AVACPZZ} = (\text{AVTTPZZ} / \text{AVTTPUS}) * \text{AVTCPUS}$$

$$\text{AVACPUS} = \Sigma \text{AVACPZZ}$$

Total aviation gasoline consumption in each State, AVTCPZZ, equals the transportation sector consumption in each State:

$$\text{AVTCPZZ} = \text{AVACPZZ}$$

### British Thermal Units (Btu)

Aviation gasoline has a heat content value of approximately 5.048 million Btu per barrel. This factor is applied to convert aviation gasoline estimated consumption from physical units to Btu:

$$\text{AVACBZZ} = \text{AVACPZZ} * 5.048$$

$$\text{AVACBUS} = \Sigma \text{AVACBZZ}$$

Because all aviation gasoline is assumed to be used for transportation, aviation gasoline total consumption in each State and in the United States equals the transportation sector consumption:

AVTCBZZ = AVACBZZ  
AVTCBUS = AVACBUS

### **Additional Notes on Aviation Gasoline**

Aviation gasoline issues to the military for each State (AVMIPZZ) are obtained from the U.S. Department of Defense, Defense Logistics Agency, Defense Fuel Supply Center. There are no data available for 1960 through 1974, and the data available for 1975 and 1976 are not consistent; therefore, the 1977 values are used for 1960 through 1976 in CSEDS. The data are reported by fiscal year for 1977 through 1988 and are taken from the Defense Energy Information System. For 1989 and 1990, fiscal-year data from two databases, Defense Fuel Automated Management System and the Into-Plane Database, are summed. For 1991 forward, data from the same two databases, reported by calendar year, are used.

### **Data Sources for Aviation Gasoline**

AVMIPZZ — Aviation fuel issued to the military in the United States by State.

- 1960 through 1974: No data are available. The 1977 data are used for each year.
- 1975 and 1976: No consistent data series are available. The 1977 data are used for both years.
- 1977 through 1988: U.S. Department of Defense, Defense Logistics Agency, Defense Fuel Supply Center, Defense Energy Information System, military retail issues based on fiscal year data. The District of Columbia issues are assumed to be zero; therefore, values reported for the District of Columbia are added to Maryland.
- 1989 and 1990: U.S. Department of Defense, Defense Logistics Agency, Defense Fuel Supply Center. State data for the fiscal year from two databases are summed: Defense Fuel Automated Management System (military wholesale issues) and Into-Plane Database (military purchases from commercial airports). Into-plane values reported for the District of Columbia are added to Virginia.

- 1991 forward: U.S. Department of Defense, Defense Logistics Agency, Defense Energy Supply Center. State data for the calendar year from two databases are summed: Defense Fuel Automated Management System (military wholesale issues) and Into-Plane Database (military purchases from commercial airports). Into-plane values reported for the District of Columbia are added to Virginia.

AVNMMZZ — Aviation gasoline sold to nonmilitary users by State.

- 1960 through 1964: U.S. Department of Commerce, Bureau of Public Roads, *Highway Statistics*, Table G-24.
- 1965 forward: U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics*, Table G-24 in 1965 and Table MF-24 in 1966 forward.

AVTCPUS — Aviation gasoline total consumed in the United States.

- 1960 through 1975: U.S. Department of the Interior, Bureau of Mines, *Mineral Industry Surveys*, "Petroleum Statement, Annual," Table 1.
- 1976 through 1980: EIA, *Energy Data Reports*, "Petroleum Statement, Annual," Table 1.
- 1981 forward: EIA, *Petroleum Supply Annual*, Table 2.

## Distillate Fuel

### **Physical Units**

Since State-level and end-use consumption data for distillate fuel (except for that consumed by electric utilities) are not available, sales of distillate fuel into or within each State, in thousand barrels, published by the Energy Information Administration (EIA) are used to estimate distillate fuel consumption. The sales data are adjusted to sum to the Petroleum Administration for Defense District subtotals of the EIA distillate fuel product supplied data series. Both the sales data and the adjusted sales series are published in the EIA *Fuel Oil and Kerosene Sales Report*. The following variable names have been assigned to the adjusted sales series ("ZZ" in the variable names represents the two-letter State code that differs for each State):

- DFBKPZZ = distillate fuel adjusted sales for vessel bunkering use (i.e., the fueling of commercial or private boats, such as pleasure craft, fishing boats, tugboats, and ocean-going vessels, including vessels operated by oil companies, and fueling for other marine purposes), excluding that sold to the Armed Forces;
- DFCMPZZ = distillate fuel adjusted sales to commercial establishments for space heating, water heating, and cooking;
- DFIBPZZ = distillate fuel adjusted sales to industrial establishments for space heating and for other industrial use (i.e., for all uses to mines, smelters, plants engaged in producing manufactured products, in processing goods, and in assembling), including farm use;
- DFMIPZZ = distillate fuel adjusted sales to the Armed Forces, regardless of use;
- DFOCPZZ = distillate fuel adjusted sales for oil company use, including all fuel oil, crude oil, or acid sludge used as fuel at refineries, by pipelines, or in field operations;
- DFOFPZZ = distillate fuel adjusted sales as diesel fuel for off-highway use in construction (i.e., earthmoving equipment, cranes, stationary generators, air compressors, etc.) and for off-highway uses other than construction (i.e., logging);
- DFONPZZ = distillate fuel adjusted sales as diesel fuel for on-highway use (i.e., as engine fuel for trucks, buses, and automobiles);
- DFOTPZZ = distillate fuel adjusted sales for all other uses not identified in other adjusted sales categories;
- DFRRPZZ = distillate fuel adjusted sales to the railroads for use in fueling trains, operating railroad equipment, space heating of buildings, and other operations; and
- DFRSPZZ = distillate fuel adjusted sales to the residential sector for space heating, water heating, and cooking, excluding farm houses.

Three series are used in CSEDS for consumption data:

- DKEUPZZ = distillate fuel consumed by electric utilities, in thousand barrels;
- JKEUPZZ = kerosene-type jet fuel consumed by electric utilities, in thousand barrels; and

DFTCPUS = distillate fuel total consumed in the United States, in thousand barrels.

Distillate fuel consumed by electric utilities (DKEUPZZ) is collected by EIA on Form EIA-759, "Monthly Power Plant Report," and predecessor forms. (See Note 4 at the end of this distillate fuel section for further information on changes in this series' data definitions.) The series DKEUPZZ includes kerosene-type jet fuel consumed at electric utilities that is identified as JKEUPZZ. The kerosene-type jet fuel is subtracted from the distillate fuel data and accounted for in the jet fuel data described in a following section of this documentation.

Total consumption of distillate fuel in the United States, DFTCPUS, is the product supplied series in the EIA publication *Petroleum Supply Annual*.

To begin calculating distillate fuel State and end-use consumption, all of the State-level data series are summed to provide totals for the United States.

Next, the variables are combined as closely as possible into the major end-use sectors used in CSEDS. The residential sector adjusted sales and the commercial sector adjusted sales contain only DFRSPZZ and DFCMPZZ, respectively.

The adjusted sales of distillate fuel to the industrial sector for each State, DFINPZZ, is the sum of the distillate fuel adjusted sales for industrial use, including industrial space heating and farm use (DFIBPZZ), for oil company use (DFOCPZZ), for off-highway use (DFOFPZZ), and for all other uses (DFOTPZZ):

$$\begin{aligned} \text{DFINPZZ} &= \text{DFIBPZZ} + \text{DFOCPZZ} + \text{DFOFPZZ} + \text{DFOTPZZ} \\ \text{DFINPUS} &= \Sigma \text{DFINPZZ} \end{aligned}$$

The adjusted sales of distillate fuel to the transportation sector for each State, DFTRPZZ, is the sum of the distillate fuel adjusted sales for vessel bunkering, military use, railroad use, and the diesel fuel used on-highway:

$$\begin{aligned} \text{DFTRPZZ} &= \text{DFBKPZZ} + \text{DFMIPZZ} + \text{DFRRPZZ} + \text{DFONPZZ} \\ \text{DFTRPUS} &= \Sigma \text{DFTRPZZ} \end{aligned}$$



Adjusted sales of distillate fuel oil to the residential, commercial, industrial, and transportation sectors are added to create a subtotal of adjusted sales to all sectors other than the electric utility sector, DFNDPZZ:

$$\begin{aligned} \text{DFNDPZZ} &= \text{DFRSPZZ} + \text{DFCMPZZ} + \text{DFINPZZ} + \text{DFTRPZZ} \\ \text{DFNDPUS} &= \Sigma \text{DFNDPZZ} \end{aligned}$$

Consumption of distillate fuel by electric utilities (DFEUPZZ) is calculated by subtracting the kerosene-type jet fuel consumed by electric utilities from the input series DKEUPZZ:

$$\begin{aligned} \text{DFEUPZZ} &= \text{DKEUPZZ} - \text{JKEUPZZ} \\ \text{DFEUPUS} &= \Sigma \text{DFEUPZZ} \end{aligned}$$

The estimated U.S. distillate fuel consumption by all sectors other than the electric utility sector, DFNCPUS, is calculated by subtracting the distillate fuel consumption at electric utilities from the total U.S. distillate fuel consumption:

$$\text{DFNCPUS} = \text{DFTCPUS} - \text{DFEUPUS}$$

This U.S. subtotal of distillate fuel consumption by the four end-use sectors, DFNCPUS, is apportioned to the States by use of the end-use sectors' State-level adjusted sales data. The assumption is made that each State consumes distillate fuel in proportion to the amount of adjusted sales to that State:

$$\text{DFNCPZZ} = (\text{DFNDPZZ} / \text{DFNDPUS}) * \text{DFNCPUS}$$

The end-use sectors' subtotal for each State, DFNCPZZ, is further divided into estimates for the four end-use sectors in proportion to each sector's adjusted sales. The estimated residential sector consumption in each State, DFRCPZZ, is calculated:

$$\begin{aligned} \text{DFRCPZZ} &= (\text{DFRSPZZ} / \text{DFNDPZZ}) * \text{DFNCPZZ} \\ \text{DFRCPUS} &= \Sigma \text{DFRCPZZ} \end{aligned}$$

The commercial sector's estimated consumption in each State, DFCCPZZ, is calculated:

$$\begin{aligned} \text{DFCCPZZ} &= (\text{DFCMPZZ} / \text{DFNDPZZ}) * \text{DFNCPZZ} \\ \text{DFCCPUS} &= \Sigma \text{DFCCPZZ} \end{aligned}$$

The industrial sector's estimated consumption in each State, DFICPZZ, is calculated:

$$\begin{aligned} \text{DFICPZZ} &= (\text{DFINPZZ} / \text{DFNDPZZ}) * \text{DFNCPZZ} \\ \text{DFICPUS} &= \Sigma \text{DFICPZZ} \end{aligned}$$

The transportation sector's estimated consumption in each State, DFACPZZ, is calculated:

$$\begin{aligned} \text{DFACPZZ} &= (\text{DFTRPZZ} / \text{DFNDPZZ}) * \text{DFNCPZZ} \\ \text{DFACPUS} &= \Sigma \text{DFACPZZ} \end{aligned}$$

Total State distillate fuel consumption is the sum of the end-use sectors' consumption subtotal and the electric utilities consumption:

$$\text{DFTCPZZ} = \text{DFNCPZZ} + \text{DFEUPZZ}$$

### **British Thermal Units (Btu)**

Distillate fuel has a heat content value of approximately 5.825 million Btu per barrel. This factor is applied to convert distillate fuel estimated consumption for the five consuming sectors from physical units to Btu as shown in the following examples:

$$\begin{aligned} \text{DFRCBZZ} &= \text{DFRCPZZ} * 5.825 \\ \text{DFCCBZZ} &= \text{DFCCPZZ} * 5.825 \\ \text{DFTCBZZ} &= \text{DFRCBZZ} + \text{DFCCBZZ} + \text{DFICBZZ} + \text{DFACBZZ} + \text{DFEUBZZ} \end{aligned}$$

The U.S. Btu consumption estimates are calculated as the sum of all the States' data.

In the *State Energy Data Report* tables, "Estimates of Energy Input at Electric Utilities," the data used in the column headed "Light Oil" is the variable DKEUP (distillate fuel plus jet kerosene) in physical units. The Btu variable, DKEUB, is calculated:

DKEUBZZ = DFEUBZZ + JKEUBZZ

DKEUBUS = ΣDKEUBZZ

### **Additional Notes on Distillate Fuel**

1. “Deliveries” data are actually called “shipments” in the source document for 1960 and 1961; “consumption” for 1962 through 1966; “shipments” for 1967; “sales” from 1968 through 1978; “deliveries” for 1979 through 1987; and “adjusted sales” for 1988 forward.
2. State data for the variables DFONPZZ (on-highway use), DFOFPZZ (off-highway use), and DFOTPZZ (other) for 1967 are unavailable from published sources. These three variables compose the miscellaneous use category for distillate fuel, which is known for all years by State. State estimates of DFONPZZ and DFOFPZZ for 1967 were developed by dividing the 1966 values for DFONPZZ and DFOFPZZ by the 1966 total miscellaneous use for each State and applying these percentages to the 1967 total miscellaneous use for each State. The 1967 State estimates for DFOTPZZ are the remainder of the 1967 miscellaneous category after DFONPZZ and DFOFPZZ have been subtracted.
3. In 1979, EIA implemented a new survey form, EIA-172, to obtain deliveries of fuel oil and kerosene data and updated the list of respondents. (A detailed explanation is published in the *Energy Data Report*, “Deliveries of Fuel Oil and Kerosene in 1979.”) In the new survey form, certain end-use categories were redefined—in many cases to collect more disaggregated data. The reclassifications resulted in some end-use categories that were no longer comparable with those in previous surveys. Where discontinuities occurred, estimates for the pre-1979 years have been made in the Combined State Energy Data System (CSEDS) to conform with the 1979 fuel oil deliveries classifications. The pre-1979 deliveries estimates are not published in this report, but are used in CSEDS to disaggregate the known U.S. total product supplied (consumption) into State and major end-use sector consumption estimates.

For distillate fuel deliveries in 1979, the end-use categories called “residential,” “commercial,” “industrial,” and “farm” are available. The pre-1979 deliveries categories are called “heating” and “industrial” (which included farm use). While the pre-1979 categories

individually are not continuous with the 1979 categories, their subtotals are related. That is, a general comparison can be made between the sum of residential, commercial, industrial, and farm deliveries in 1979 and the sum of heating and industrial deliveries in the pre-1979 years. Therefore, the following method was applied to present a comparable series for distillate fuel delivered to the residential, commercial, and industrial sectors:

- For each of the pre-1979 years, a subtotal was created for each State by adding each State’s heating and industrial deliveries categories. A comparable 1979 subtotal was created by adding each State’s residential, commercial, industrial, and farm deliveries categories.
- Residential, commercial, and industrial (including farm) shares of the subtotal in 1979 were calculated for each State.
- These 1979 end-use shares were then applied to each pre-1979 subtotal of distillate fuel deliveries in each State to create State estimates of end-use deliveries for 1960 through 1978.

The 1980 through 1982 distillate fuel deliveries data are based on the same survey as that used for 1979; therefore, the 1980 through 1982 data are directly comparable to 1979 data.

In 1984, EIA again updated the list of respondents for this survey, and the Form EIA-172 became the Form EIA-821, “Annual Fuel Oil and Kerosene Sales Report.” EIA did not conduct a fuel oil and kerosene deliveries survey for 1983. The 1983 estimates in CSEDS are based on 1984 data obtained from the Form EIA-821. Statistical procedures and methodologies used for the Form EIA-821 differ from those used in previous years. Therefore, the 1983 and forward sales data may not be directly comparable to the pre-1983 data. (In the source document, the deliveries data for 1983 forward are reported in thousand gallons. These data are first converted to thousand barrels before being entered into CSEDS.)

Some of the No. 2 diesel fuel reported as sold to the commercial and industrial sectors, DFCMPZZ and DFINPZZ, on the EIA forms may also be included in the on-highway data, DFONPZZ, obtained from the Federal Highway Administration. Included in the commercial sector is some diesel fuel consumed by government vehicles and

school buses, and included in the industrial sector is some diesel fuel consumed by fleets of trucks. Because the specific quantities involved are unknown, CSEDS reflects the diesel fuel consumption as reported in the EIA *Petroleum Marketing Monthly* and no attempt has been made to adjust the end-use reporting.

4. The data on fuel oil consumed at electric utilities for all years and States are actual fuel oil consumption numbers collected from electric utilities on the EIA Form EIA-759, "Monthly Power Plant Report," and predecessor forms. Due to changes in fuel oil reporting classifications on the Form EIA-759 over the years, it is not possible to develop a thoroughly consistent series for all years. However, over time, data more accurately disaggregating fuel oil into distillate fuel and residual fuel have become available. For 1960 through 1969, only data on total fuel oil consumed at electric utilities by State are available. For 1970 through 1979, fuel oil consumed by plant type (internal combustion and gas turbine plants combined and steam plants) by State are available. For 1980 forward, data on consumption of light oil at all plant types combined and consumption of heavy oil at all plant types combined are available by State. In CSEDS, the following assumptions have been made:
- 1960 through 1969 — State estimates of fuel oil consumption by plant type have been created for each year by applying the shares of steam plants (primarily residual fuel) and internal combustion and gas turbine plants (primarily distillate fuel plus small amounts of jet kerosene) by State in 1970 to each year's total fuel oil consumption at electric utilities for 1960 through 1969.
  - 1970 through 1979 — fuel oil consumed by steam plants is assumed to equal residual fuel consumption, and fuel oil consumed by internal combustion and gas turbine plants is assumed to equal distillate fuel plus jet kerosene consumption.
  - 1980 and forward — total heavy oil consumption at all plant types is assumed to equal residual fuel consumption, and total light oil consumption at all plant types is assumed to equal distillate fuel plus jet kerosene consumption.

The data series thus derived for CSEDS for residual fuel and distillate fuel plus jet kerosene consumption at electric utilities is considered to be actual consumption at electric utilities for each State and each year.

#### **Data Sources for Distillate Fuel**

DFBKPZZ — Distillate fuel adjusted sales for vessel bunkering use by State, excluding that sold to the Armed Forces.

- 1960 through 1975: U.S. Department of the Interior, Bureau of Mines, *Mineral Industry Surveys*, "Shipments of Fuel Oil and Kerosene." The specific tables are:
  - 1960 and 1961: Table 17.
  - 1962 and 1963: Table 16.
  - 1964 and 1965: Table 15.
  - 1966 through 1975: Table 11.
- 1976 through 1978: EIA, *Energy Data Reports*, "Sales of Fuel Oil and Kerosene," Table 11.
- 1979 and 1980: EIA, *Energy Data Reports*, "Deliveries of Fuel Oil and Kerosene," Table 1.
- 1981 and 1982: EIA, *Petroleum Supply Annual*, Table 4.

Note: Data for 1983 forward were published in thousand gallons. They were converted to thousand barrels by dividing by 42 before being entered into CSEDS.

- 1983 through 1987: EIA, *Petroleum Marketing Monthly*. The specific tables are:
  - 1983 and 1984: July 1985 issue, Table A12.
  - 1985 and 1986: July 1987 issue, Table A16.
  - 1987: June 1988 issue, Table A16.
- 1988 forward: EIA, *Fuel Oil and Kerosene Sales*, Table 16.

DFCMPZZ — Distillate fuel adjusted sales to the commercial sector for space heating, water heating, and cooking.

- 1960 through 1978: EIA estimates based on statistics of commercial sector deliveries of distillate fuel from the EIA, *Energy Data Report*, "Deliveries of Fuel Oil and Kerosene in 1979," Table 1. State ratios based on 1979 commercial sector deliveries were applied to each State's sum of heating plus industrial (including farm use) deliveries categories from the fuel oil deliveries reports for each year 1960 through 1978. (See explanation in Note 3, on page 363.)

- 1979 and 1980: EIA, *Energy Data Reports*, “Deliveries of Fuel Oil and Kerosene,” Table 1.
- 1981 and 1982: EIA, *Petroleum Supply Annual*, Table 4.

Note: Data for 1983 forward were published in thousand gallons. They were converted to thousand barrels by dividing by 42 before being entered into CSEDS.

- 1983 through 1987: EIA, *Petroleum Marketing Monthly*. The specific tables are:
  - 1983 and 1984: July 1985 issue, Table A12.
  - 1985 and 1986: July 1987 issue, Table A16.
  - 1987: June 1988 issue, Table A16.
- 1988 forward: EIA, *Fuel Oil and Kerosene Sales*, Table 16.

DFIBPZZ — Distillate fuel adjusted sales to industrial establishments for space heating and for other industrial use, including farm use.

- 1960 through 1978: EIA estimates based on statistics of industrial sector deliveries of distillate fuel from the EIA, *Energy Data Report*, “Deliveries of Fuel Oil and Kerosene in 1979,” Table 1. State ratios based on 1979 industrial sector deliveries were applied to each State’s sum of heating plus industrial (including farm use) deliveries categories from the fuel oil deliveries reports for each year 1960 through 1978. (See explanation in Note 3, on page 363.)
- 1979 and 1980: EIA, *Energy Data Reports*, “Deliveries of Fuel Oil and Kerosene,” Table 1.
- 1981 and 1982: EIA, *Petroleum Supply Annual*, Table 4.

Note: Data for 1983 forward were published in thousand gallons. They were converted to thousand barrels by dividing by 42 before being entered into CSEDS.

- 1983 through 1987: EIA, *Petroleum Marketing Monthly*. The specific tables are:
  - 1983 and 1984: July 1985 issue, Table A12.
  - 1985 and 1986: July 1987 issue, Table A16.
  - 1987: June 1988 issue, Table A16.
- 1988 forward: EIA, *Fuel Oil and Kerosene Sales*, Table 16.

DFMIPZZ — Distillate fuel adjusted sales for military use (including imports for the military) by State.

- 1960 through 1975: U.S. Department of the Interior, Bureau of Mines, *Mineral Industry Surveys*, “Shipments of Fuel Oil and Kerosene.” The specific tables are:

- 1960 and 1961: Table 18.
- 1962 and 1963: Table 17.
- 1964 and 1965: Table 16.
- 1966 through 1975: Table 12.

- 1976 through 1978: EIA, *Energy Data Reports*, “Sales of Fuel Oil and Kerosene,” Table 12.
- 1979 and 1980: EIA, *Energy Data Reports*, “Deliveries of Fuel Oil and Kerosene,” Table 1.
- 1981 and 1982: EIA, *Petroleum Supply Annual*, Table 4.

Note: Data for 1983 forward were published in thousand gallons. They were converted to thousand barrels by dividing by 42 before being entered into CSEDS.

- 1983 through 1987: EIA, *Petroleum Marketing Monthly*. The specific tables are:
  - 1983 and 1984: July 1985 issue, Table A12.
  - 1985 and 1986: July 1987 issue, Table A16.
  - 1987: June 1988 issue, Table A16.
- 1988 forward: EIA, *Fuel Oil and Kerosene Sales*, Table 16.

DFOCPZZ — Distillate fuel adjusted sales for use by oil companies by State.

- 1960 through 1975: U.S. Department of the Interior, Bureau of Mines, *Mineral Industry Surveys*, “Shipments of Fuel Oil and Kerosene.” The specific tables are:
  - 1960 and 1961: Table 14.
  - 1962 and 1963: Table 13.
  - 1964 and 1965: Table 12.
  - 1966 through 1975: Table 9.
- 1976 through 1978: EIA, *Energy Data Reports*, “Sales of Fuel Oil and Kerosene,” Table 9.
- 1979 and 1980: EIA, *Energy Data Reports*, “Deliveries of Fuel Oil and Kerosene,” Table 1.
- 1981 and 1982: EIA, *Petroleum Supply Annual*, Table 4.

Note: Data for 1983 forward were published in thousand gallons. They were converted to thousand barrels by dividing by 42 before being entered into CSEDS.

- 1983 through 1987: EIA, *Petroleum Marketing Monthly*. The specific tables are:
  - 1983 and 1984: July 1985 issue, Table A12.
  - 1985 and 1986: July 1987 issue, Table A16.
  - 1987: June 1988 issue, Table A16.

- 1988 forward: EIA, *Fuel Oil and Kerosene Sales*, Table 16.

DFOFPZZ — Distillate fuel adjusted sales as diesel fuel for off-highway use by State.

- 1960 through 1975: U.S. Department of the Interior, Bureau of Mines, *Mineral Industry Surveys*, “Shipments of Fuel Oil and Kerosene.” The specific tables are:
  - 1960 through 1962: Table 19.
  - 1963 and 1964: Table 18.
  - 1965 through 1967: Table 17.
  - 1968 through 1975: Table 14.
- 1976 through 1978: EIA, *Energy Data Reports*, “Sales of Fuel Oil and Kerosene,” Table 14.
- 1979 and 1980: EIA, *Energy Data Reports*, “Deliveries of Fuel Oil and Kerosene,” Table 1.
- 1981 and 1982: EIA, *Petroleum Supply Annual*, Table 4.

Note: Data for 1983 forward were published in thousand gallons. They were converted to thousand barrels by dividing by 42 before being entered into CSEDS.

- 1983 through 1987: EIA, *Petroleum Marketing Monthly*. The specific tables are:
  - 1983 and 1984: July 1985 issue, Table A12.
  - 1985 and 1986: July 1987 issue, Table A16.
  - 1987: June 1988 issue, Table A16.
- 1988 forward: EIA, *Fuel Oil and Kerosene Sales*, Table 16.

DFONPZZ — Distillate fuel adjusted sales as diesel fuel for on-highway use by State.

- 1960 through 1975: U.S. Department of the Interior, Bureau of Mines, *Mineral Industry Surveys*, “Shipments of Fuel Oil and Kerosene.” The specific tables are:
  - 1960 through 1962: Table 19.
  - 1963 and 1964: Table 18.
  - 1965 through 1967: Table 17.
  - 1968 through 1975: Table 14.
- 1976 through 1978: EIA, *Energy Data Reports*, “Sales of Fuel Oil and Kerosene,” Table 14.
- 1979 and 1980: EIA, *Energy Data Reports*, “Deliveries of Fuel Oil and Kerosene,” Table 1.
- 1981 and 1982: EIA, *Petroleum Supply Annual*, Table 4.

Note: Data for 1983 forward were published in thousand gallons. They were converted to thousand barrels by dividing by 42 before being entered into CSEDS.

- 1983 through 1987: EIA, *Petroleum Marketing Monthly*. The specific tables are:
  - 1983 and 1984: July 1985 issue, Table A12.
  - 1985 and 1986: July 1987 issue, Table A16.
  - 1987: June 1988 issue, Table A16.
- 1988 forward: EIA, *Fuel Oil and Kerosene Sales*, Table 16.

DFOTPZZ — Distillate fuel adjusted sales for all other uses not identified in other adjusted sales categories.

- 1960 through 1975: U.S. Department of the Interior, Bureau of Mines, *Mineral Industry Surveys*, “Shipments of Fuel Oil and Kerosene.” The specific tables are:
  - 1960 through 1962: Table 19.
  - 1963 and 1964: Table 18.
  - 1965 through 1967: Table 17.
  - 1968 through 1975: Table 14.
- 1976 through 1978: EIA, *Energy Data Reports*, “Sales of Fuel Oil and Kerosene,” Table 14.
- 1979 and 1980: EIA, *Energy Data Reports*, “Deliveries of Fuel Oil and Kerosene,” Table 1.
- 1981 and 1982: EIA, *Petroleum Supply Annual*, Table 4.

Note: Data for 1983 forward were published in thousand gallons. They were converted to thousand barrels by dividing by 42 before being entered into CSEDS.

- 1983 through 1987: EIA, *Petroleum Marketing Monthly*. The specific tables are:
  - 1983 and 1984: July 1985 issue, Table A12.
  - 1985 and 1986: July 1987 issue, Table A16.
  - 1987: June 1988 issue, Table A16.
- 1988 forward: EIA, *Fuel Oil and Kerosene Sales*, Table 16.

DFRRPZZ — Distillate fuel adjusted sales for use by railroads by State.

- 1960 through 1975: U.S. Department of the Interior, Bureau of Mines, *Mineral Industry Surveys*, “Shipments of Fuel Oil and Kerosene.” The specific tables are:
  - 1960 and 1961: Table 16.
  - 1962 and 1963: Table 15.
  - 1964 and 1965: Table 14.

— 1966 through 1975: Table 10.

- 1976 through 1978: EIA, *Energy Data Reports*, “Sales of Fuel Oil and Kerosene,” Table 10.
- 1979 and 1980: EIA, *Energy Data Reports*, “Deliveries of Fuel Oil and Kerosene,” Table 1.
- 1981 and 1982: EIA, *Petroleum Supply Annual*, Table 4.

Note: Data for 1983 forward were published in thousand gallons. They were converted to thousand barrels by dividing by 42 before being entered into CSEDS.

- 1983 through 1987: EIA, *Petroleum Marketing Monthly*. The specific tables are:
  - 1983 and 1984: July 1985 issue, Table A12.
  - 1985 and 1986: July 1987 issue, Table A16.
  - 1987: June 1988 issue, Table A16.
- 1988 forward: EIA, *Fuel Oil and Kerosene Sales*, Table 16.

DFRSPZZ — Distillate fuel adjusted sales to the residential sector for space heating, water heating, and cooking.

- 1960 through 1978: EIA estimates based on statistics of residential sector deliveries of distillate fuel from the EIA, *Energy Data Report*, “Deliveries of Fuel Oil and Kerosene in 1979,” Table 1. State ratios based on 1979 residential sector deliveries were applied to each State’s sum of heating plus industrial (including farm use) deliveries categories from the fuel oil deliveries reports for each year 1960 through 1978. (See explanation in Note 3, on page 363.)
- 1979 and 1980: EIA, *Energy Data Reports*, “Deliveries of Fuel Oil and Kerosene,” Table 1.
- 1981 and 1982: EIA, *Petroleum Supply Annual*, Table 4.

Note: Data for 1983 forward were published in thousand gallons. They were converted to thousand barrels by dividing by 42 before being entered into CSEDS.

- 1983 through 1987: EIA, *Petroleum Marketing Monthly*. The specific tables are:
  - 1983 and 1984: July 1985 issue, Table A12.
  - 1985 and 1986: July 1987 issue, Table A16.
  - 1987: June 1988 issue, Table A16.
- 1988 forward: EIA, *Fuel Oil and Kerosene Sales*, Table 16.

DFTCPUS — Distillate fuel total consumed in the United States.

- 1960 through 1975: U.S. Department of the Interior, Bureau of Mines, *Mineral Industry Surveys*, “Petroleum Statement Annual,” Table 1.
- 1976 through 1980: EIA, *Energy Data Reports*, “Petroleum Statement, Annual,” Table 1.
- 1981 forward: EIA, *Petroleum Supply Annual*, Table 2.

DKEUPZZ — Distillate fuel consumed by the electric utilities, including kerosene-type jet fuel.

- EIA, Form EIA-759, “Monthly Power Plant Report,” and predecessor forms. The following assumptions have been made:
  - 1960 through 1969: Only total fuel oil consumed at electric utilities by State is available. State estimates of distillate fuel consumption were created for each year by applying the shares of internal combustion and gas turbine plants (primarily distillate fuel plus small amounts of jet kerosene) by State from 1970 to each year’s total fuel oil consumption at electric utilities for 1960 through 1969.
  - 1970 through 1979: Fuel oil consumed by plant type by State is available. Fuel oil consumed by internal combustion and gas turbine plants combined is assumed to equal distillate and jet kerosene consumption.
  - 1980 forward: Consumption of light and heavy oil at all plant types by State is available. Total light oil consumption at all plant types is assumed to equal distillate and jet kerosene consumption.

## Jet Fuel

There are two types of jet fuel with different heat contents, kerosene-type jet fuel (JK) and naphtha-type jet fuel (JN), which are added in the Combined State Energy Data System (CSEDS) to give total jet fuel (JF). Jet fuel is used primarily for transportation, although, for 1972 through 1982, small amounts of the kerosene-type jet fuel were reported as used in the electric utility sector.

## Kerosene-Type Jet Fuel

### Physical Units

Data series used to calculate kerosene-type jet fuel consumption estimates are ("ZZ" in the variable name represents the two-letter State code that differs for each State):

JKTCPUS = kerosene-type jet fuel total consumed, in thousand barrels;  
 JKEUPZZ = the electric utility sector consumption of kerosene-type jet fuel in each State, in thousand barrels; and  
 JKTPZZ = kerosene-type jet fuel total sold, in thousand gallons.

Total U.S. consumption of kerosene-type jet fuel, JKTCPUS, is the product supplied data series in the publication *Petroleum Supply Annual*, published by the Energy Information Administration (EIA).

Kerosene-type jet fuel consumed by electric utilities, JKEUPZZ, is published by EIA in the *Cost and Quality of Fuels for Electric Utility Plants*. These data are available for 1972 through 1982 only. Consumption in all other years is assumed to be zero.

Kerosene-type jet fuel total sold, JKTPZZ, was collected by the Ethyl Corporation, Petroleum Chemicals Division, for 1960 through 1983 and by EIA for 1984 forward. The Ethyl Corporation data are sales to commercial users and are used to represent total sales based on the assumption that there is little military use of kerosene-type jet fuel during 1960 through 1983. (See Note 1 in the "Additional Notes" section for the source reference for this assumption.) The EIA data for 1984 forward include commercial and military sales.

U.S. totals for the two State series are calculated as the sum of the State data.

Most kerosene-type jet fuel is used by the transportation sector. The transportation sector consumption for the United States (JKACPUS) is estimated as the difference between the total kerosene-type jet fuel consumed and the electric utility consumption:

$$JKACPUS = JKTCPUS - JKEUPUS$$

It is assumed that kerosene-type jet fuel consumption in each State is in proportion to the amount sold in each State:

$$JKACPZZ = (JKTPZZ / JKTPUS) * JKACPUS$$

Total kerosene-type jet fuel by State is estimated as:

$$JKTCPZZ = JKACPZZ + JKEUPZZ$$

### British Thermal Units (Btu)

Kerosene-type jet fuel has a heat content value of approximately 5.670 million Btu per barrel. This factor is applied to convert kerosene-type jet fuel from physical units to Btu:

$$\begin{aligned} JKACBZZ &= JKACPZZ * 5.670 \\ JKACBUS &= \sum JKACBZZ \\ JKEUBZZ &= JKEUPZZ * 5.670 \\ JKEUBUS &= \sum JKEUBZZ \\ JKTCBZZ &= JKTCPZZ * 5.670 \\ JKTCBUS &= \sum JKTCBZZ \end{aligned}$$

### Additional Notes on Kerosene-Type Jet Fuel

1. An assumption is made that kerosene-type jet fuel use by the military in 1960 through 1983 is negligible. This assumption is based on product definitions from the American Petroleum Institute's *Standard Definitions for Petroleum Statistics*, Technical Report No. 1, Third Edition (1981), page 13, which states that kerosene-type jet fuel is used primarily by commercial aircraft engines.
2. Ethyl Corporation jet fuel sales to commercial users by State include some sales data that were improperly allocated between the States of Illinois and Indiana for 1960 through 1973. To adjust for this error, the average relative proportions of Illinois and Indiana sales from 1974 through 1978 were applied to the sum of the Illinois and Indiana sales in 1960 through 1973. From 1974 through 1983, sales data were correctly allocated.

3. Jet fuel sales in Illinois decreased sharply from 1984 forward, while sales in Indiana increased by about the same amount. It is possible that jet fuel for use at Chicago, Illinois, airports may have been purchased in Indiana. The same anomaly may have happened between New York and New Jersey beginning in 1981, when jet fuel for consumption at New York City airports may have been purchased in New Jersey. This is an inherent problem when using sales data as an indication of consumption, and no attempt has been made to adjust the numbers.
4. Prior to 1964, kerosene-type jet fuel was included in the total kerosene product supplied data in the source, the U.S. Department of the Interior, Bureau of Mines, *Mineral Industry Surveys*, "Petroleum Statement, Annual," Table 2, "Salient Statistics of the Major Refined Petroleum Products in the United States." Table A3 summarizes the derivation of kerosene and jet fuel consumption estimates (columns 4 and 5) from data published in the source (columns 1, 2, and 3) for 1960 through 1963. For 1964 and years following, kerosene and kerosene-type jet fuel are reported separately in the source documents.
5. Kerosene-type jet fuel consumed by electric utilities, JKEUPZZ, is published in the EIA *Cost and Quality of Fuels for Electric Utility Plants*. These data are available for 1972 through 1982 only. Consumption in all other years is assumed to be zero. State-level data for 1972 through 1974 are not available. The percentage of each State's

consumption of the total U.S. consumption in 1975 was used to apportion the 1972 through 1974 national data to the States.

#### Data Sources for Kerosene-type Jet Fuel

JKEUPZZ — Kerosene-type jet fuel consumed by electric utilities by State.

- 1960 through 1971: No data available. Values are assumed to be zero.
- 1972 through 1974: U.S. Department of the Interior, Bureau of Mines, *Mineral Industry Surveys*, "Sales of Fuel Oil and Kerosene," Table 15 footnote for U.S. value. These data were apportioned to the States by using the 1975 State proportions of the 1975 U.S. total from the source below.
- 1975 through 1979: Office of Electric Power Regulation, Federal Energy Regulatory Commission, *Annual Summary of Cost and Quality of Electric Utility Plant Fuels*, "Fuel Oil Deliveries for Combustion Turbine and Internal Combustion Units."
- 1980 through 1982: EIA, *Cost and Quality of Fuel for Electric Utility Plants*, Table 30.
- 1983 forward: Series discontinued; no data available. Values are assumed to be zero.

**Table A3. Estimate of U.S. Consumption of Kerosene and Jet Fuel for 1960 through 1963**  
(Thousand barrels)

Year	(1) Kerosene Demand, Including Commercial Jet Fuel	(2) Jet Fuel Demand, Military Use Only	(3) Sales of Kerosene for Commercial Jet Fuel Use	(4) Estimated Kerosene Consumption (1) – (3)	(5) Estimated Total Jet Fuel Consumption (2) + (3)
1960	132,499	102,803	33,159	99,340	135,962
1961	144,435	104,436	47,187	97,248	151,623
1962	164,167	112,401	66,134	98,033	178,535
1963	172,212	115,237	75,236	96,976	190,473



JKTTPZZ — Kerosene-type jet fuel total sold by State.

- 1960 through 1983: Ethyl Corporation, Petroleum Chemicals Division, *Yearly Report of Gasoline Sales by States*, “Aviation Turbine Fuel Sales.”
- 1984 and 1985: EIA, *Petroleum Marketing Annual 1985*, Volume 2. — 1984: Table A6. — 1985: Table 34.
- 1986 through 1988: EIA, *Petroleum Marketing Annual*, Table 46.
- 1989 through 1993: EIA, *Petroleum Marketing Annual*, Table 48.
- 1994 forward: Unpublished data in thousand gallons from Form EIA-782C, “Monthly Report of Prime Supplier Sales of Petroleum Products Sold for Local Consumption.” Data published in thousand gallons per day in EIA, *Petroleum Marketing Annual*, Table 49 and on the EIA, *Energy InfoDisc* in the Oil and Gas Information System database. Withheld data were estimated by using averages of published months to fill in withheld months; subtracting published States from published PAD District totals; and assigning values based on previous years’ quantities.

JKTCPUS — Kerosene-type jet fuel total consumed in the United States.

- 1960 through 1975: U.S. Department of the Interior, Bureau of Mines, *Mineral Industry Surveys*, “Petroleum Statement, Annual,” Table 1.
- 1976 through 1980: EIA, *Energy Data Reports*, “Petroleum Statement, Annual,” Table 1.
- 1981 forward: EIA, *Petroleum Supply Annual*, Table 2.

## Naphtha-Type Jet Fuel

### Physical Units

Two data series are used to estimate naphtha-type jet fuel consumption:

- JNTCPUS = naphtha-type jet fuel total consumed, in thousand barrels;  
and  
JNMIPZZ = naphtha-type jet fuel issued to the military in each State,  
in thousand barrels.

Total U.S. consumption of naphtha-type jet fuel, JNTCPUS, is the product supplied data series in the publication *Petroleum Supply Annual*, published by the Energy Information Administration (EIA).

It is assumed that all naphtha-type jet fuel is used in military aircraft engines. (See the Additional Notes at the end of this section for the source reference for this assumption.) Data on naphtha-type jet fuel issued to the military in each State, JNMIPZZ, are from the U.S. Department of Defense, Defense Logistics Agency, Defense Fuel Supply Center.

The total U.S. military issues is the sum of the State data:

$$JNMIPUS = \sum JNMIPZZ$$

An estimate of naphtha-type jet fuel consumption by State, JNTCPZZ, is calculated by assuming that each State consumes naphtha-type jet fuel in proportion to the amount issued to the military in that State:

$$JNTCPZZ = (JNMIPZZ / JNMIPUS) * JNTCPUS$$

All naphtha-type jet fuel is assumed to be used for transportation purposes so the transportation consumption equals the estimated total consumption for each State and for the United States:

$$\begin{aligned} JNACPZZ &= JNTCPZZ \\ JNACPUS &= JNTCPUS \end{aligned}$$

### British Thermal Units (Btu)

Naphtha-type jet fuel has a heat content value of approximately 5.355 million Btu per barrel. This factor is applied to convert naphtha-type jet fuel from physical units to Btu:

$$\begin{aligned} JNTCBZZ &= JNTCPZZ * 5.355 \\ JNTCBUS &= \sum JNTCBZZ \\ JNACBZZ &= JNTCBZZ \\ JNACBUS &= JNTCBUS \end{aligned}$$

### Additional Notes on Naphtha-Type Jet Fuel

1. An assumption was made that the naphtha-type jet fuel is for military use only. This assumption was based on product definitions from the American Petroleum Institute's *Standard Definitions for Petroleum Statistics*, Technical Report No. 1, Third Edition (1981), page 13, which states that naphtha-type jet fuel is used primarily by military aircraft engines.
2. Data on naphtha-type jet fuel issued to the military for each State (JNMIPZZ) are obtained from the U.S. Department of Defense, Defense Logistics Agency, Defense Fuel Supply Center. There are no data available for 1960 through 1974, and the data available for 1975 and 1976 are not consistent; therefore, the 1977 values are used for 1960 through 1976 in CSEDS. The data are reported by fiscal year for 1977 through 1988 and are taken from the Defense Energy Information System. For 1989 and 1990, fiscal-year data from two databases, Defense Fuel Automated Management System and the Into-Plane Database, are summed. For 1991 and 1992, data from the same two databases, reported by calendar year, are used.

### Data Sources for Naphtha-type Jet Fuel

JNMIPZZ — Naphtha-type jet fuel issued to the military in the United States.

- 1960 through 1974: No data are available. The 1977 data are used for each year.
- 1975 and 1976: No consistent data series are available. The 1977 data are used for both years.
- 1977 through 1987: The U.S. Department of Defense, Defense Logistics Agency, Defense Fuel Supply Center, Defense Energy Information System, military retail issues based on fiscal year data. The District of Columbia issues are assumed to be zero; therefore, values reported for the District of Columbia are added to Maryland.
- 1988: U.S. Department of Defense, Defense Logistics Agency, Defense Fuel Supply Center, average of 1987 data (see source above) and 1989 data (see source below).
- 1989 and 1990: U.S. Department of Defense, Defense Logistics Agency, Defense Fuel Supply Center, Defense Fuel Automated

Management System, military wholesale issues based on fiscal year data.

- 1991 forward: U.S. Department of Defense, Defense Logistics Agency, Defense Energy Supply Center. State data for the calendar year from two databases are summed: Defense Fuel Automated Management System (military wholesale issues) and Into-Plane Database (military purchases from commercial airports). Into-plane values reported for the District of Columbia are added to Virginia.
- JNTCPUS — Naphtha-type jet fuel total consumed in the United States.
- 1960 through 1975: U.S. Department of the Interior, Bureau of Mines, *Mineral Industry Surveys*, "Petroleum Statement, Annual," Table 1.
  - 1976 through 1980: EIA, *Energy Data Reports*, "Petroleum Statement, Annual," Table 1.
  - 1981 forward: EIA, *Petroleum Supply Annual*, Table 2.

### Jet Fuel Totals

#### Physical Unit

The following calculations are used to provide total jet fuel consumption estimates by end use in physical units:

$$\begin{aligned} \text{JFACPZZ} &= \text{JKACPZZ} + \text{JNACPZZ} \\ \text{JFACPUS} &= \Sigma \text{JFACPZZ} \\ \text{JFEUPZZ} &= \text{JKEUPZZ} \\ \text{JFEUPUS} &= \text{JKEUPUS} \\ \text{JFTCPZZ} &= \text{JFACPZZ} + \text{JFEUPZZ} \\ \text{JFTCPUS} &= \Sigma \text{JFTCPZZ} \end{aligned}$$

#### British Thermal Units (Btu)

The following calculations are used to provide total jet fuel consumption estimates by end use in Btu:

$$\begin{aligned} \text{JFACBZZ} &= \text{JKACBZZ} + \text{JNACBZZ} \\ \text{JFACBUS} &= \Sigma \text{JFACBZZ} \\ \text{JFEUBZZ} &= \text{JKEUBZZ} \end{aligned}$$

JFEUBUS = JKEUBUS  
 JFTCBZZ = JFACBZZ + JFEUBZZ  
 JFTCBUS =  $\Sigma$ JFTCBZZ

## Kerosene

### Physical Units

Because State-level and end-use consumption data for kerosene are not available, four data series published by EIA representing sales of kerosene into or within each State are used to estimate kerosene consumption. The fifth data series, the U.S. total consumption, is the product supplied series from the EIA *Petroleum Supply Annual*. The sales series are used to apportion the known U.S. total consumption into State-level estimates of end-use consumption. The following variable names have been assigned to the five data series ("ZZ" in the variable names represents the two-letter State code that differs for each State):

KSCMPZZ = kerosene sold to the commercial sector for heating, in thousand barrels;  
 KSIHPZZ = kerosene sold to the industrial sector for heating, in thousand barrels;  
 KSOTPZZ = kerosene sold for all other uses, including farm use, in thousand barrels;  
 KSRSPZZ = kerosene sold to the residential sector for heating, in thousand barrels; and  
 KSTCPUS = kerosene total consumed in the United States, in thousand barrels.

U.S. sales totals for each of the four State-level series are created by summing the State values.

The variables are combined as closely as possible into the major end-use sectors used in CSEDS. The residential and commercial sectors contain only KSRSPZZ and KSCMPZZ, respectively.

The sales of kerosene to the industrial sector, KSINPZZ, for each State is the sum of kerosene sold for industrial space heating (KSIHPZZ) and

kerosene sold for all other uses (KSOTPZZ), including farm use. Sales of kerosene to the industrial sector are calculated:

KSINPZZ = KSOTPZZ + KSIHPZZ  
 KSINPUS =  $\Sigma$ KSINPZZ

Total sales of kerosene in each State is the sum of these three sectors' sales:

KSTTPZZ = KSRSPZZ + KSCMPZZ + KSINPZZ  
 KSTTPUS =  $\Sigma$ KSTTPZZ

An estimate of each State's total consumption of kerosene is made by disaggregating the U.S. total consumption to the States in proportion to each State's sales share of the U.S. total sales:

KSTCPZZ = (KSTTPZZ / KSTTPUS) \* KSTCPUS

Each State's residential sector sales percentage of total sales is applied to the State's estimated total consumption to create estimated residential sector consumption for the State, KSRCPZZ:

KSRCPZZ = (KSRSPZZ / KSTTPZZ) \* KSTCPZZ

The commercial sector's estimated consumption in each State, KSCCPZZ, is calculated:

KSCCPZZ = (KSCMPZZ / KSTTPZZ) \* KSTCPZZ

The industrial sector's estimated consumption in each State, KSICPZZ, is calculated:

KSICPZZ = (KSINPZZ / KSTTPZZ) \* KSTCPZZ

U.S. totals for the three sectors' consumption estimates are the sums of the States' estimated consumption.

### British Thermal Units (Btu)

Kerosene has a heat content value of approximately 5.670 million Btu per barrel. This factor is applied to convert kerosene estimated consumption from physical units to Btu:

$$\begin{aligned} \text{KSRCBZZ} &= \text{KSRCPZZ} * 5.670 \\ \text{KSCCBZZ} &= \text{KSCCPZZ} * 5.670 \\ \text{KSICBZZ} &= \text{KSICPZZ} * 5.670 \\ \text{KSTCBZZ} &= \text{KSRCBZZ} + \text{KSCCBZZ} + \text{KSICBZZ} \end{aligned}$$

The U.S. Btu consumption estimates for the three consuming sectors and the U.S. total are calculated as the sum of the State-level data.

### **Additional Notes on Kerosene**

1. See Note 4 at the end of the “Kerosene-Type Jet Fuel” section on page 369 for comments concerning the inclusion of kerosene-type jet fuel with the kerosene total product supplied prior to 1964 in the source documents.
2. “Sales” data are actually called “shipments” in the source documents for 1960 and 1961; “consumption” for 1962 through 1966; “shipments” for 1967; “sales” from 1968 through 1978; “deliveries” for 1979 through 1983; and “sales” for 1984 forward.
3. In 1979, the Energy Information Administration (EIA) implemented a new survey form, EIA-172, to obtain deliveries of fuel oil and kerosene data and updated the list of respondents. (A detailed explanation is published in the *Energy Data Report* “Deliveries of Fuel Oil and Kerosene in 1979.”) In the new survey form, certain end-use categories were redefined—in many cases, to collect more disaggregated data. The reclassifications resulted in some end-use categories that were no longer comparable with those in previous surveys. Where discontinuities occurred, estimates for the pre-1979 years have been made in CSEDS to conform with the 1979 kerosene deliveries classifications. The pre-1979 deliveries estimates are not published in this report but are used in CSEDS to disaggregate the known U.S. total product supplied (consumption) into State and major end-use sector consumption estimates.

For kerosene deliveries in 1979, the end-use categories called “residential,” “commercial,” and “industrial” are available. The pre-1979 deliveries category called “heating” is related to the sum of “residential,” “commercial,” and “industrial” in 1979. Therefore, the following method was applied to present a comparable series for kerosene delivered to the residential, commercial, and industrial sectors:

- A 1979 subtotal for heating was created by summing each State’s residential, commercial, and industrial deliveries categories, thereby creating a comparable deliveries subtotal for all years.
- Residential, commercial, and industrial shares of the heating subtotal in 1979 were calculated for each State.
- These 1979 end-use shares were then applied to each pre-1979 heating subtotal in each State to create State estimates of end-use deliveries for 1960 through 1978.

The 1980 through 1982 kerosene deliveries data are based on the same survey as that used for 1979; therefore, the 1980 through 1982 data are directly comparable to 1979 data.

In 1984, EIA again updated the list of respondents for this survey, and the Form EIA-172 became the Form EIA-821, “Annual Fuel Oil and Kerosene Sales Report.” EIA did not conduct a fuel oil and kerosene sales survey for 1983. The 1983 estimates in CSEDS are based on 1984 data obtained from the Form EIA-821. Statistical procedures and methodologies used for the Form EIA-821 differ from those used in previous years. Therefore, the 1983 and forward sales data may not be directly comparable to the pre-1983 data. (In the source document, the sales data for 1983 forward are reported in thousand gallons. These data were first converted to thousand barrels before being entered into CSEDS.)

4. In 1975 through 1977, the industrial sector consumption of kerosene includes small quantities of kerosene-type jet fuel that were produced as jet fuel and sold as kerosene.

### **Data Sources for Kerosene**

KSCMPZZ — Kerosene sold to the commercial sector for heating.

- 1960 through 1978: EIA estimates based on statistics of commercial sector deliveries of kerosene from the EIA, *Energy Data Report*, “Deliveries of Fuel Oil and Kerosene, in 1979,” Table 3. State ratios based on 1979 commercial sector deliveries were applied to each State’s heating deliveries category from the fuel oil deliveries reports

for each year 1960 through 1978. (See explanation in Note 3, on page 373.)

- 1979 and 1980: EIA, *Energy Data Report*, “Deliveries of Fuel Oil and Kerosene,” Table 3.
- 1981 and 1982: EIA, *Petroleum Supply Annual*, Table 6.

Note: Data for 1983 forward were published in thousand gallons. They were converted to thousand barrels by dividing by 42 before being entered into CSEDS.

- 1983 through 1987: EIA, *Petroleum Marketing Monthly*. The specific tables are:
  - 1983: July 1985 issue, Table A14.
  - 1984: July 1986 issue, Table A4.
  - 1985 and 1986: July 1987 issue, Table A6.
  - 1987: June 1988 issue, Table A6.
- 1988 forward: EIA, *Fuel Oil and Kerosene Sales*, Table 6.

KSHPZZ — Kerosene sold to the industrial sector for heating.

- 1960 through 1978: EIA estimates based on statistics of industrial sector deliveries of kerosene from the EIA, *Energy Data Report*, “Deliveries of Fuel Oil and Kerosene in 1979,” Table 3. State ratios based on 1979 industrial sector deliveries were applied to each State’s heating deliveries category from the fuel oil deliveries reports for each year 1960 through 1978. (See explanation in Note 3, on page 373.)
- 1979 and 1980: EIA, *Energy Data Reports*, “Deliveries of Fuel Oil and Kerosene,” Table 3.
- 1981 and 1982: EIA, *Petroleum Supply Annual*, Table 6.

Note: Data for 1983 forward were published in thousand gallons. They were converted to thousand barrels by dividing by 42 before being entered into CSEDS.

- 1983 through 1987: EIA, *Petroleum Marketing Monthly*. The specific tables are:
  - 1983: July 1985 issue, Table A14.
  - 1984: July 1986 issue, Table A4.
  - 1985 and 1986: July 1987 issue, Table A6.
  - 1987: June 1988 issue, Table A6.
- 1988 forward: EIA, *Fuel Oil and Kerosene Sales*, Table 6.

KSOTPZZ — Kerosene sold for all other uses, including farm use.

- 1960 through 1975: U.S. Department of the Interior, Bureau of Mines, *Mineral Industry Surveys*, “Shipments of Fuel Oil and Kerosene.” The specific tables are:
  - 1960 and 1961: Table 10.
  - 1962 and 1963: Table 9.
  - 1964 and 1965: Table 8.
  - 1966 through 1975: Table 5.
- 1976 through 1978: EIA, *Energy Data Reports*, “Sales of Fuel Oil and Kerosene,” Table 5.
- 1979 and 1980: EIA, *Energy Data Reports*, “Deliveries of Fuel Oil and Kerosene.” Calculated as the sum of kerosene delivered for farm and other use from Table 3.
- 1981 and 1982: EIA, *Petroleum Supply Annual*, Table 6.

Note: Data for 1983 forward were published in thousand gallons. They were converted to thousand barrels by dividing by 42 before being entered into CSEDS.

- 1983 through 1987: EIA, *Petroleum Marketing Monthly*. The specific tables are:
  - 1983: July 1985 issue, Table A14.
  - 1984: July 1986 issue, Table A4.
  - 1985 and 1986: July 1987 issue, Table A6.
  - 1987: June 1988 issue, Table A6.
- 1988 forward: EIA, *Fuel Oil and Kerosene Sales*, Table 6.

KSRSPZZ — Kerosene sold to the residential sector for heating.

- 1960 through 1978: EIA, *Energy Data Report* “Deliveries of Fuel Oil and Kerosene in 1979,” Table 3. State ratios based on 1979 residential sector deliveries were applied to each State’s heating deliveries category from the fuel oil deliveries reports for each year 1960 through 1978. (See explanation in Note 3, on page 373.)
- 1979 and 1980: EIA, *Energy Data Report*, “Deliveries of Fuel Oil and Kerosene,” Table 3.
- 1981 and 1982: EIA, *Petroleum Supply Annual*, Table 6.

Note: Data for 1983 forward were published in thousand gallons. They were converted to thousand barrels by dividing by 42 before being entered into CSEDS.

- 1983 through 1987: EIA, *Petroleum Marketing Monthly*. The specific tables are:
  - 1983: July 1985 issue, Table A14.
  - 1984: July 1986 issue, Table A4.
  - 1985 and 1986: July 1987 issue, Table A6.

— 1987: June 1988 issue, Table A6.

- 1988 forward: EIA, *Fuel Oil and Kerosene Sales*, Table 6.

KSTCPUS — Kerosene total consumed in the United States.

- 1960 through 1975: U.S. Department of the Interior, Bureau of Mines, *Mineral Industry Surveys*. “Petroleum Statement, Annual,” Table 1.
- 1976 through 1980: EIA, *Energy Data Reports*, “Petroleum Statement, Annual,” Table 1.
- 1981 forward: EIA, *Petroleum Supply Annual*, Table 2.

## Liquefied Petroleum Gases

Liquefied petroleum gases (LPG) in CSEDS include: ethane (including ethylene), propane (including propylene), normal butane (including butylene), butane-propane mixtures, ethane-propane mixtures, and isobutane.

### Physical Units

The following data series used in CSEDS to estimate LPG consumption represent sales or estimated sales by State in thousand gallons.

LGCBMZZ = LPG sold for internal combustion engine fuel use. Included are sales for use in all kinds of highway vehicles, forklifts, industrial tractors, and for use in oil field drilling and production;

LGHCMZZ = LPG sold for residential and commercial use. Included are sales for nonfarm private households for space heating, cooking, water heating, and other household uses, such as clothes drying and incineration. Also included are sales to nonmanufacturing organizations, such as motels, restaurants, retail stores, laundries, and other service enterprises, primarily for use in space heating, water heating, and cooking; and

LGTPZZ = LPG total sales for all uses.

The U.S. totals for each of these State-level LPG sales data series are calculated as the sum of the State values.

Total U.S. consumption of LPG is the product supplied data series in the publication *Petroleum Supply Annual*, published by the Energy Information Administration (EIA):

LGTCBUS = LPG total consumed in the United States, in thousand barrels.

Another variable is used in CSEDS to estimate LPG consumption by the transportation sector. It is described in detail in Note 2 on page 376.

LGTRSUS = the transportation sector share of LPG internal combustion engine sales.

Since the LPG sales data are in gallons, they must be converted to barrels (42 U.S. gallons per U.S. barrel) to be comparable to total consumption estimates. The formulas for calculating State sales data are:

LGCBPZZ = LGCBMZZ / 42

LGCBPUS =  $\Sigma$ LGCBPZZ

LGHCPZZ = LGHCMZZ / 42

LGHCBUS =  $\Sigma$ LGHCPZZ

An assumption is made that 85 percent of the LPG sold for residential and commercial use (LGHCPZZ) is sold to the residential sector (LGRCPZZ), and 15 percent is sold to the commercial sector (LGCCPZZ) for all States and years. (See Note 3 on page 376.) It is also assumed that LPG sales to the residential and commercial sectors are equal to the consumption in those sectors. The formulas used are:

LGRCPZZ = LGHCPZZ \* 0.85

LGCCPZZ = LGHCPZZ \* 0.15

The LPG consumption by the transportation sector is estimated to be the transportation share of the sales for internal combustion engine fuel:

LGACPZZ = LGCBPZZ \* LGTRSUS

An estimate of each State's total LPG consumption (LGTCPPZZ) is made by allocating the U.S. total consumption to the States in proportion to each State's sales share of the U.S. total sales:

$$\text{LGTCPPZZ} = (\text{LGTTPZZ} / \text{LGTTPUS}) * \text{LGTCPPUS}$$

The industrial (LGICPPZZ) sector consumption of each State is the difference between the State's total LPG consumption and the sum of its residential, commercial, and transportation sectors' consumption:

$$\text{LGICPPZZ} = \text{LGTCPPZZ} - (\text{LGRCPZZ} + \text{LGCCPPZZ} + \text{LGACPPZZ})$$

U.S. totals for the four end-use sector consumption estimates are calculated as the sums of the State estimates.

### **British Thermal Units (Btu)**

The factor for converting LPG from physical unit values to British thermal units, LGTCKUS, is calculated annually for 1967 forward by EIA as a consumption-weighted average of the heat contents of the component products (ethane, propane, butane, butane-propane, ethane-propane, and isobutane) as shown in Appendix C. LGTCKUS is shown in Table C1 on page 469 and the individual product heat contents are listed beginning on page 482. For 1960 through 1966, EIA adopted the Bureau of Mines thermal conversion factor of 4.011 million Btu per barrel.

This factor is used to estimate consumption in Btu for all States and end uses:

$$\text{LGRCPZZ} = \text{LGRCPZZ} * \text{LGTCKUS}$$

$$\text{LGCCPZZ} = \text{LGCCPZZ} * \text{LGTCKUS}$$

$$\text{LGICPZZ} = \text{LGICPZZ} * \text{LGTCKUS}$$

$$\text{LGACPZZ} = \text{LGACPZZ} * \text{LGTCKUS}$$

Total estimated consumption of LPG in Btu is the sum of the end-use consumption estimates:

$$\text{LGTCBZZ} = \text{LGRCPZZ} + \text{LGCCPZZ} + \text{LGICPZZ} + \text{LGACPZZ}$$

The U.S. Btu consumption estimates for the four sectors and total LPG are calculated as the sum of the State data.

### **Additional Notes on Liquefied Petroleum Gases**

1. Sales data for Maryland and the District of Columbia are combined in the source documents. Sales data are published in six categories. The percentages shown in Table A4 are applied to disaggregate the combined State data in each of the sectors for all years.
2. The sales of LPG for internal combustion engine fuel use are divided between the transportation sector and the industrial sector by using LGTRSUS, the transportation sector's share of internal combustion engine use. LGTRSUS is estimated from data on "special fuels used on highways," a category that includes only LPG and diesel fuel. The special fuels data are published by the U.S. Department of Transportation, Federal Highway Administration (see MGSFPZZ on page 384). The quantity of LPG included in special fuels is estimated each year (the LPG portion ranges from 8.4 percent in 1960 to 0.5 percent in 1999). LGTRSUS is then derived by dividing the quantity of LPG included in special fuels used on highways by the quantity of LPG sold for internal combustion engine use. This U.S. factor is applied to each of the States. LGTRSUS values are shown in Table A5.
3. Little information exists for allocating the residential and commercial use of LPG to the individual sectors. CSEDS applies an 85 percent residential and 15 percent commercial split for all States and years

**Table A4. Percentages Used to Disaggregate Maryland and D.C. Combined LPG Sales Data**

Sales Category	Maryland	D.C.
Residential and Commercial	99.9%	0.1%
Internal combustion engine fuel	98.9	1.1
Industrial	99.4	0.6
Chemical	100.0	0.0
Utility gas	100.0	0.0
Miscellaneous	100.0	0.0

**Table A5. Transportation Sector Share of LPG Internal Combustion Engine Use, 1960 Forward**

Year	LGTRSUS	Year	LGTRSUS	Year	LGTRSUS
1960	0.229	1974	0.381	1988	0.437
1961	0.258	1975	0.406	1989	0.428
1962	0.266	1976	0.440	1990	0.471
1963	0.273	1977	0.478	1991	0.426
1964	0.259	1978	0.594	1992	0.425
1965	0.290	1979	0.536	1993	0.443
1966	0.325	1980	0.380	1994	0.734
1967	0.368	1981	0.671	1995	0.416
1968	0.389	1982	0.579	1996	0.337
1969	0.341	1983	0.578	1997	0.278
1970	0.363	1984	0.631	1998	0.592
1971	0.423	1985	0.440	1999	0.364
1972	0.392	1986	0.456		
1973	0.384	1987	0.375		

based on figures published in the Federal Energy Administration Project Independence Blueprint Task Force Report, "Residential and Commercial Energy Use Patterns, 1970-1990," November 1974, Table 1.A.1.

4. LPG sales data by State and end-use categories for 1960 through 1982 are from EIA's "Sales of Liquefied Petroleum Gases and Ethane." In 1979, EIA modified the LPG sales survey, Form EIA-174, and changed the list of respondents. Because of the updated sampling frame, the 1979 through 1982 sales data may not be directly comparable to the pre-1979 sales when a different estimation procedure was used. Explanation of the discontinuities caused by the change in the 1979 sampling frame are provided in EIA's *Energy Data Report*, "Sales of Liquefied Petroleum Gases and Ethane in 1979."

Because of the change in survey techniques used for measuring LPG sales, many States' data were withheld from publication in the 1979

through 1982 LPG sales reports to avoid disclosure of company-level data. The consumption estimates in CSEDS use all data published in the 1979 through 1982 LPG sales reports and estimates prepared by EIA's Office of Oil and Gas for data that were withheld from publication. (See Note 5 below for estimation procedures.)

Some end-use categories changed in 1979 due to redefinition of the classifications. One of these changes, for example, occurred with LPG sold to farms for household heating and cooking. Prior to 1979 these sales were reported as part of the residential and commercial category, while in 1979 they were counted in the farm use category that goes into the industrial sector in CSEDS. No attempt has been made to adjust for this type of inconsistency.

The Form EIA-174 was cancelled after collection of 1982 data. The 1983 LPG consumption estimates are based on the assumption that LPG end-use sector demand in 1983 occurred in the same proportion as 1982 sector demand within each State; i.e., the 1983 LPG product supplied figure was allocated to the States by using the distribution of volumes consumed for 1982.

5. The following procedures were used to estimate the State end-use sales that were withheld from publication in the 1979-1982 LPG sales reports:
- For each year, missing State total sales were estimated by allocating the sum of the missing State sales within each Petroleum Administration for Defense (PAD) District to the individual States, in proportion to the sum of the known end-use sales for those States.
  - Missing PAD District end-use totals for 1979 and 1980 were obtained by using the 1980 and 1981 sales reports. Missing PAD District chemical sales were estimated by allocating the total missing volume of chemical sales to the PAD District in proportion to the number of chemical plants in each PAD District. The remaining PAD District end-use totals were obtained by subtraction. For 1981 and 1982, no PAD District estimations were necessary because all PAD District end-use totals are known.



- The published data and the estimated State and PAD District end-use totals were used to estimate missing State end-use sales volumes within a PAD District: missing State end-use sector values were estimated by allocating the missing volume for the State approximately proportional to the PAD District end-use sector totals.
6. Prior to 1979, State data for chemical use of LPG were withheld from publication, although they were included in the U.S. total in the tables in EIA's "Sales of Liquefied Petroleum Gases and Ethane" reports. Beginning in 1979, State-level chemical use data were published in the LPG sales reports, but data for several States were withheld. Estimates for the withheld data for chemical use sales for 1979 and 1980 were created by using the estimation procedure described in Note 5 above. Then the published and the estimated State data for 1979 were used to create State shares of the total U.S. chemical use sales. These percentage shares (shown in Table A6) were applied to the total U.S. LPG chemical use sales in 1960 through 1978 to create State chemical use estimates. The chemical use estimates were added to the States' total LPG sales series, LGTTPZZ.
7. Beginning in 1984, the American Petroleum Institute (API), the Gas Processors Association, and the National LP-Gas Association jointly sponsored an LPG sales survey. The results are published in the API's report *Sales of Natural Gas Liquids and Liquefied Refinery Gases*. These data include sales of pentanes plus; the pentanes plus data were removed prior to use in CSEDS.
- Beginning in 1997, API incorporated additional imports and exports data in their estimates. Those trade data are removed prior to use in CSEDS.

The API report publishes total LPG sales for Alaska and Hawaii, but disaggregated data for those States are withheld. EIA estimates the withheld data for the "Residential and Commercial" and the "Internal Combustion Fuel" columns as follows:

- Alaska and Hawaii are the only States of the seven States in PAD District V for which data are withheld. Therefore, subtracting the available data for the other five States from the

**Table A6. State Shares of the Total U.S. LPG Sold for Chemical Use, 1960 Through 1978**

State	Percent	State	Percent
Alabama	0.000	Montana	0.000
Alaska	0.589	Nebraska	0.000
Arizona	0.000	Nevada	0.000
Arkansas	0.000	New Hampshire	0.000
California	2.667	New Jersey	2.040
Colorado	0.232	New Mexico	0.603
Connecticut	0.053	New York	0.000
Delaware	0.811	North Carolina	0.327
District of Columbia	0.000	North Dakota	0.000
Florida	0.000	Ohio	1.103
Georgia	0.699	Oklahoma	0.309
Hawaii	0.000	Oregon	0.000
Idaho	0.000	Pennsylvania	0.354
Illinois	7.066	Rhode Island	0.000
Indiana	0.243	South Carolina	0.021
Iowa	0.900	South Dakota	0.000
Kansas	0.451	Tennessee	0.000
Kentucky	2.548	Texas	57.425
Louisiana	20.566	Utah	0.000
Maine	0.012	Vermont	0.000
Maryland	0.050	Virginia	0.025
Massachusetts	0.009	Washington	0.000
Michigan	0.151	West Virginia	0.286
Minnesota	0.000	Wisconsin	0.000
Mississippi	0.315	Wyoming	0.091
Missouri	0.054	United States	100.000

PAD District V total gives the withheld data for Alaska and Hawaii combined.

- The withheld data are assigned to Alaska and Hawaii in proportion to each State's share of their combined published total sales.

### Data Sources for Liquefied Petroleum Gases

LGCBMZZ — LPG sold for internal combustion engine use by State.

Note: Data for Maryland and the District of Columbia were combined for all years. The method for disaggregating the data is explained in Note 1, on page 376.

- 1960 through 1967: U.S. Department of the Interior, Bureau of Mines, *Mineral Industry Surveys*, “Shipments of Liquefied Petroleum Gases and Ethane.” The specific tables are:
  - 1960 and 1961: Table 5 (data called “Shipments”).
  - 1962 through 1966: Table 2 (data called “Consumption”).
  - 1967: Table 2 (data called “Shipments”).
- 1968 through 1975: U.S. Department of the Interior, Bureau of Mines, *Mineral Industry Surveys*, “Sales of Liquefied Petroleum Gases and Ethane,” Table 2.
- 1976 through 1980: EIA, *Energy Data Reports*, “Sales of Liquefied Petroleum Gases and Ethane,” Table 2.
- 1981 and 1982: EIA, *Petroleum Supply Annual*, “Sales of Liquefied Petroleum Gases and Ethane,” Table 3.
- 1983: EIA estimates.

Note: For 1984 forward, some data are adjusted and estimated by EIA. (See explanation in Note 7, on page 378.)

- 1984 through 1988: American Petroleum Institute, *1990 Sales of Natural Gas Liquids and Liquefied Refinery Gases*, pages 24 through 33.
- 1989 through 1991: American Petroleum Institute, *1992 Sales of Natural Gas Liquids and Liquefied Refinery Gases*, pages 4, 5, 18, and 19.
- 1992 forward: American Petroleum Institute, *Sales of Natural Gas Liquids and Liquefied Refinery Gases*, Table 3. Final data for each year is published in the report for the next year.

LGHCMZZ — LPG sold for residential and commercial use by State.

Note: Data for Maryland and the District of Columbia were combined for all years. The method for disaggregating the data is explained in Note 1, on page 376.

- 1960 through 1967: U.S. Department of the Interior, Bureau of Mines, *Mineral Industry Surveys*, “Shipments of Liquefied Petroleum Gases and Ethane.” The specific tables are:
  - 1960 and 1961: Table 5 (data called “Shipments”).
  - 1962 through 1966: Table 2 (data called “Consumption”).
  - 1967: Table 2 (data called “Shipments”).

- 1968 through 1975: U.S. Department of the Interior, Bureau of Mines, *Mineral Industry Surveys*, “Sales of Liquefied Petroleum Gases and Ethane,” Table 2.
- 1976 through 1980: EIA, *Energy Data Reports*, “Sales of Liquefied Petroleum Gases and Ethane,” Table 2.
- 1981 and 1982: EIA, *Petroleum Supply Annual*, “Sales of Liquefied Petroleum Gases and Ethane,” Table 3.
- 1983: EIA estimates.

Note: For 1984 forward, some data are adjusted and estimated by EIA. (See explanation in Note 7, on page 378.)

- 1984 through 1988: American Petroleum Institute, *1990 Sales of Natural Gas Liquids and Liquefied Refinery Gases*, pages 24 through 33.
- 1989 through 1991: American Petroleum Institute, *1992 Sales of Natural Gas Liquids and Liquefied Refinery Gases*, pages 4, 5, 18, and 19.
- 1992 forward: American Petroleum Institute, *Sales of Natural Gas Liquids and Liquefied Refinery Gases*, Table 3. Final data for each year is published in the report for the next year.

LGTCBUS — Factor for converting LPG from physical units to Btu.

- 1960 through 1966: U.S. Department of the Interior, Bureau of Mines, *Mineral Industry Surveys*, “Crude Petroleum and Petroleum Products, 1956,” Table 4 footnote, constant value of 4.011 million Btu per barrel.
- 1967 forward: Calculated annually by EIA as a weighted average by multiplying the quantity consumed of each of the component products by each product’s conversion factor and dividing the sum of those heat contents by the sum of the quantities consumed. The component products are ethane (including ethylene), propane (including propylene), normal butane (including butylene), butane-propane mixtures, ethane-propane mixtures, and isobutane. Their heat content conversion factors are listed in Appendix C beginning on page 482. Quantities consumed are from:
  - 1967 through 1980: EIA, *Energy Data Reports*, “Petroleum Statement, Annual,” Table 1.
  - 1981 forward: EIA, *Petroleum Supply Annual*, Table 2.

LGTCBUS — LPG total consumed in the United States.

- 1960 through 1975: U.S. Department of the Interior, Bureau of Mines, *Mineral Industry Surveys*. “Petroleum Statement, Annual,” Table 1.

- 1976 through 1980: EIA, *Energy Data Reports*, “Petroleum Statement, Annual,” Table 1.
- 1981 forward: EIA, *Petroleum Supply Annual*, Table 2.

LGTRSUS — The transportation sector share of LPG internal combustion engine sales.

- EIA estimates based on the LPG portion of the special fuels used on highways published by the U.S. Department of Transportation, Federal Highway Administration (variable MGSFPUS in CSEDS), as a percentage of the LPG sold for internal combustion engine use published by the American Petroleum Institute (variable LGCBMUS in CSEDS). For an explanation of the estimation method, see Note 2, on page 376.

LGTTTPZZ — LPG total sales for all uses by State.

Note: Data for Maryland and the District of Columbia were combined for all years. The method for disaggregating the data is explained in Note 1, on page 376.

- 1960 through 1967: U.S. Department of the Interior, Bureau of Mines, *Mineral Industry Surveys*, “Shipments of Liquefied Petroleum Gases and Ethane.” The specific tables are:
  - 1960 and 1961: Table 5 (data called “Shipments”).
  - 1962 through 1966: Table 2 (data called “Consumption”).
  - 1967: Table 2 (data called “Shipments”).
- 1968 through 1975: U.S. Department of the Interior, Bureau of Mines, *Mineral Industry Surveys*, “Sales of Liquefied Petroleum Gases and Ethane,” Table 2.
- 1976 through 1980: EIA, *Energy Data Reports*, “Sales of Liquefied Petroleum Gases and Ethane,” Table 2.
- 1981 and 1982: EIA, *Petroleum Supply Annual*, “Sales of Liquefied Petroleum Gases and Ethane,” Table 3.
- 1983: EIA estimates.

Note: For 1984 forward, some data are adjusted and estimated by EIA. (See explanation in Note 7, on page 378.)

- 1984 through 1988: American Petroleum Institute, *1990 Sales of Natural Gas Liquids and Liquefied Refinery Gases*, pages 24 through 33.
- 1989 through 1991: American Petroleum Institute, *1992 Sales of Natural Gas Liquids and Liquefied Refinery Gases*, pages 4, 5, 18, and 19.

- 1992 forward: American Petroleum Institute, *Sales of Natural Gas Liquids and Liquefied Refinery Gases*, Table 3. Final data for each year are published in the report for the next year.

## Lubricants

### Physical Units

Three data series are used to estimate State consumption of lubricants. The two State-level sales data series are used to apportion the U.S. total consumption data to the States and the end-use sectors within the States. “ZZ” in the variable names represents the two-letter State code that differs for each State:

- LUINPZZ = lubricants sold to the industrial sector, in thousand barrels;
- LUTRPZZ = lubricants sold to the transportation sector, in thousand barrels; and
- LUTCPUS = lubricants total consumed in the United States, in thousand barrels.

Data for the first two variables are developed from the Bureau of the Census reports “Sales of Lubricating and Industrial Oils and Greases” in the *Current Industrial Reports* series. These series were discontinued in 1977 and the method of estimation for 1978 forward is explained in Note 1 at the end of this “Lubricants” section. The third variable for lubricants is the product supplied data series in the publication *Petroleum Supply Annual*, published by the Energy Information Administration (EIA). The first two variables are used for apportioning the third into State total consumption and State end-use consumption estimates by using the following calculations.

Total sales of lubricants for each State, LUTTPZZ, is created by adding the industrial and transportation sales:

$$\text{LUTTPZZ} = \text{LUINPZZ} + \text{LUTRPZZ}$$

U.S. sales totals are calculated by summing the State sales data.

Each State's proportion of total U.S. sales is used to calculate each State's estimated consumption of lubricants:

$$\text{LUTCPZZ} = (\text{LUTTPZZ} / \text{LUTTPUS}) * \text{LUTCPUS}$$

Each State's estimated total consumption of lubricants is further divided into end-use estimates in proportion to that State's sales by sector as a portion of total sales in the State. Lubricants consumed by State for industrial use, LUICPZZ, and for transportation use, LUACPZZ, are calculated:

$$\begin{aligned} \text{LUICPZZ} &= (\text{LUINPZZ} / \text{LUTTPZZ}) * \text{LUTCPZZ} \\ \text{LUACPZZ} &= (\text{LUTRPZZ} / \text{LUTTPZZ}) * \text{LUTCPZZ} \end{aligned}$$

The consumption of lubricants in the United States by these two end-use sectors is created by summing the State estimates.

### **British Thermal Units (Btu)**

Lubricants have a heat content value of approximately 6.065 million Btu per barrel. This factor is applied to convert lubricants estimated consumption from physical units to Btu:

$$\begin{aligned} \text{LUICBZZ} &= \text{LUICPZZ} * 6.065 \\ \text{LUACBZZ} &= \text{LUACPZZ} * 6.065 \end{aligned}$$

The State total consumption in Btu is the sum of the two sectors' consumption in Btu:

$$\text{LUTCBZZ} = \text{LUICBZZ} + \text{LUACBZZ}$$

The U.S. sector and total consumption estimates in Btu are calculated as the sum of the State data.

### **Additional Notes on Lubricants**

1. The lubricants sales data (LUINPZZ and LUTRPZZ) were published approximately every other year by the Bureau of the Census until the discontinuation of the series after 1977. Each year's sales data have been used to calculate that year's and at least one other year's

**Table A7. Lubricants Sales Data Used in Consumption Estimates**

Year of Sales Data	Year of Consumption Estimates
1960	1960 and 1961
1962	1962, 1963, and 1964
1965	1965 and 1966
1967	1967 and 1968
1969	1969 and 1970
1971	1971 and 1972
1973	1973 and 1974
1975	1975 and 1976
1977	1977 forward

consumption estimates. Table A7 specifies which years of consumption estimates depend on which years of the sales data.

2. The sales data from the source document for LUINPZZ and LUTRPZZ are available in incompatible units. The industrial series, LUINPZZ, is oils and greases sold for industrial lubricating and other uses measured in thousand gallons. The transportation series, LUTRPZZ, is oils and greases sold for automotive and aviation uses measured in thousand pounds. Prior to use in CSEDS, these were converted to thousand barrels by dividing the oil data by 42 gallons per barrel and dividing the greases data by 300 pounds per barrel. In the source document, some State data are not published to avoid disclosing figures for individual companies. The undisclosed data were entered as zero in CSEDS.

### **Data Sources for Lubricants**

LUINPZZ — Lubricants sold to the industrial sector by State. Calculated from:

- U.S. Department of Commerce, Bureau of the Census, *Current Industrial Reports*, "Sales of Lubricating and Industrial Oils and Greases," for 1960, 1962, 1965, 1967, 1969, 1971, 1973, 1975, and 1977. (See explanation in Notes 1 and 2 above.)

LUTCPUS — Lubricants total consumed in the United States.

- 1960 through 1975: U.S. Department of the Interior, Bureau of Mines, *Mineral Industry Surveys*, “Petroleum Statement, Annual,” Table 1.
- 1976 through 1980: EIA, *Energy Data Reports*, “Petroleum Statement, Annual,” Table 1.
- 1981 forward: EIA, *Petroleum Supply Annual*, Table 2.

LUTRPZZ — Lubricants sold to the transportation sector by State. Calculated from:

- U.S. Department of Commerce, Bureau of the Census, *Current Industrial Reports*, “Sales of Lubricating and Industrial Oils and Greases,” for 1960, 1962, 1965, 1967, 1969, 1971, 1973, 1975, and 1977. (See explanation in Notes 1 and 2 on page 381.)

## Motor Gasoline

### Physical Units

Nine data series are used to estimate the State end-use consumption of motor gasoline. Eight of the series are from the U.S. Department of Transportation, Federal Highway Administration publication, *Highway Statistics*, and represent sales of motor gasoline. The sales data are categorized as sales for highway and nonhighway use:

- **Highway Use** sales data (MGMFP) are from the *Highway Statistics* Table MF-21; however, they are reduced by the amount of highway “special fuels” (MGSFP) used in each State each year as reported on Table MF-25 (prior to 1994) and Table MF-21 (1994 forward). Special fuels are primarily diesel fuels, not motor gasoline, and are included in the transportation sector of distillate fuel.
- **Nonhighway Use** sales are further subdivided into sales for: (1) public use by States, counties, and municipalities (MGPNP) from Table MF-21, and (2) private and commercial use as reported on MF-24. The private and commercial nonhighway use of motor gasoline has the following components: agricultural use (MGAGP), industrial and commercial use (MGIYP), construction use (MGCUP), marine use

(MGMRP), and miscellaneous and unclassified uses (MGMSPP). Another component of the private and commercial nonhighway series is aviation gasoline (AVNMM), which is discussed under the “Aviation Gasoline” section of this documentation.

The ninth motor gasoline data series (MGTCBUS) is the total U.S. consumption of motor gasoline published in the product supplied series in the EIA publication *Petroleum Supply Annual*.

The nine motor gasoline data series are (“ZZ” in the variable names represent the two-letter State code that differs for each State):

- MGAGPZZ = motor gasoline sold for agricultural use in each State, in thousand gallons;
- MGCUPZZ = motor gasoline sold for construction use in each State, in thousand gallons;
- MGIYPZZ = motor gasoline sold for industrial and commercial use in each State, in thousand gallons;
- MGMFPZZ = motor fuel sold for highway use in each State, in thousand gallons;
- MGMRPZZ = motor gasoline sold for marine use in each State, in thousand gallons;
- MGMSPPZZ = motor gasoline sold for miscellaneous and unclassified uses in each State, in thousand gallons;
- MGPNPZZ = motor fuel sold for public nonhighway use in each State, in thousand gallons;
- MGSFPZZ = special fuels (primarily diesel fuel with small amounts of liquefied petroleum gases) sold in each State, in thousand gallons; and
- MGTCBUS = motor gasoline total consumed in the United States, in thousand barrels.

U.S. totals for the eight State series named above are calculated as the sum of the State data.

The transportation sector accounts for most of the motor gasoline sales. Sales to the transportation sector is estimated to be the sum of motor fuel sales for marine use and for highway use (minus the sales of special fuels, which are primarily diesel fuels and are accounted for in the transportation sector of distillate fuel). Sales of motor gasoline to the transportation sector in each State (MGTRPZZ) is calculated:

$$\text{MGTRPZZ} = \text{MGMFPZZ} + \text{MGMRPZZ} - \text{MGSFPZZ}$$

Two sales data series are added to estimate motor gasoline sales to the commercial sector: miscellaneous (including unclassified) and public nonhighway sales. Sales of motor gasoline to the commercial sector in each State (MGCMPZZ) is calculated:

$$\text{MGCMPZZ} = \text{MGMSPPZZ} + \text{MGPNPZZ}$$

Sales of motor gasoline for use in the industrial sector in each State (MGINPZZ) is calculated as the sum of the sales for agricultural use, for construction use, and for industrial and commercial use:

$$\text{MGINPZZ} = \text{MGAGPZZ} + \text{MGCUPZZ} + \text{MGIYPZZ}$$

Total sales of motor gasoline in each State (MGTPPZZ) is calculated as the sum of the sales to the major sectors:

$$\text{MGTPPZZ} = \text{MGCMPZZ} + \text{MGINPZZ} + \text{MGTRPZZ}$$

U.S. totals for the three end-use sectors' sales and for total sales are calculated as the sum of the States' sales.

The motor gasoline sales data for the three end-use sectors in each State are used to apportion the U.S. total consumption of motor gasoline to the States and to the major end-use sectors within each State.

The estimated consumption of motor gasoline in each State is calculated according to each State's share of the total sales. Estimated consumption of motor gasoline in each State (MGTCPZZ) is calculated:

$$\text{MGTCPZZ} = (\text{MGTPPZZ} / \text{MGTPPUS}) * \text{MGTCPUS}$$

The commercial sector estimated consumption of motor gasoline (MGCCPZZ) is calculated:

$$\text{MGCCPZZ} = (\text{MGCMPZZ} / \text{MGTPPZZ}) * \text{MGTCPZZ}$$

The industrial sector estimated consumption (MGICPZZ) is calculated:

$$\text{MGICPZZ} = (\text{MGINPZZ} / \text{MGTPPZZ}) * \text{MGTCPZZ}$$

The transportation sector estimated consumption (MGACPZZ) is calculated:

$$\text{MGACPZZ} = (\text{MGTRPZZ} / \text{MGTPPZZ}) * \text{MGTCPZZ}$$

The consumption of motor gasoline by major end-use sector in the United States is estimated by summing the States' estimated consumption.

### **British Thermal Units (Btu)**

A national factor, MGTCCKUS, is used to convert motor gasoline consumption from physical units to British thermal units for each State. A constant heat content of 5.253 million Btu per barrel is used for 1960 through 1993. Beginning in 1994, an annual quantity-weighted average factor for conventional, reformulated, and oxygenated motor gasoline is calculated by EIA. The factors, listed in Table C1 on page 469, are used for each State:

$$\text{MGCCBZZ} = \text{MGCCPZZ} * \text{MGTCCKUS}$$

$$\text{MGICBZZ} = \text{MGICPZZ} * \text{MGTCCKUS}$$

$$\text{MGACBZZ} = \text{MGACPZZ} * \text{MGTCCKUS}$$

$$\text{MGTCBZZ} = \text{MGCCBZZ} + \text{MGICBZZ} + \text{MGACBZZ}$$

The U.S. level Btu consumption estimates are calculated by summing the State data.

### **Data Sources for Motor Gasoline**

MGAGPZZ — Motor gasoline sold for agricultural use by State.

- 1960 through 1964: U.S. Department of Commerce, Bureau of Public Roads, *Highway Statistics*, Table G-24.
- 1965 forward: U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics*, Table G-24 in 1965 and Table MF-24 in 1966 forward.

MGCUPZZ — Motor gasoline sold for construction use by State.

- 1960 through 1964: U.S. Department of Commerce, Bureau of Public Roads, *Highway Statistics*, Table G-24.

- 1965 forward: U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics*, Table G-24 in 1965 and Table MF-24 in 1966 forward.

MGIYPZZ — Motor gasoline sold for industrial and commercial use by State.

- 1960 through 1964: U.S. Department of Commerce, Bureau of Public Roads, *Highway Statistics*, Table G-24.
- 1965 forward: U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics*, Table G-24 in 1965 and Table MF-24 in 1966 forward.

MGMFPZZ — Motor fuel sold for highway use by State.

- 1960 through 1995: U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics Summary to 1995*, Table MF-221 gives revised U.S. totals. State revisions can be calculated by adding data from Tables MF-225 and MF-226.
- 1996 forward: U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics*, Table MF-21.

MGMRPZZ — Motor gasoline sold for marine use by State.

- 1960 through 1964: U.S. Department of Commerce, Bureau of Public Roads, *Highway Statistics*, Table G-24.
- 1965 forward: U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics*, Table G-24 in 1965 and Table MF-24 in 1966 forward.

MGMSPZZ — Motor gasoline sold for miscellaneous uses by State.

- 1960 through 1964: U.S. Department of Commerce, Bureau of Public Roads, *Highway Statistics*, Table G-24. Sum of the “Miscellaneous” column plus the “Unclassified” column minus the “Total Classified” column.
- 1965: U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics*, Table G-24. Sum of the “Miscellaneous” column plus the “Unclassified” column minus the “Total Classified” column.
- 1966 forward: U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics*, Table MF-24. The specific columns are:

- 1966 through 1981: Sum of the “Miscellaneous” and “Unclassified” columns.
- 1982 forward: The “Miscellaneous” column.

MGPNPZZ — Motor fuel sold for public nonhighway use by State.

- 1960 through 1964: U.S. Department of Commerce, Bureau of Public Roads, *Highway Statistics*, Table G-21.
- 1985, 1987, and 1992: Unpublished revised State data comparable to the U.S. values published in *Highway Statistics Summary to 1995*, Table 221.
- 1965 through 1984, 1986, 1988 through 1991, and 1993 forward: U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics*, Table G-21 in 1965 and Table MF-21 in 1966 forward.

MGSFPZZ — Motor gasoline special fuels sales by State (primarily diesel fuel with small amounts of liquefied petroleum gases).

- 1960 through 1995: U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics, Summary to 1995*, Table MF-225.
- 1996 forward: U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics*, Table MF-21.

MGTCKUS — Factor for converting motor gasoline from physical units to Btu.

- 1960 through 1993: EIA adopted the Bureau of Mines thermal conversion factor of 5.253 million Btu per barrel for “Gasoline, Motor Fuel” as published by the Texas Eastern Transmission Corporation in Appendix V of *Competition and Growth in American Energy Markets 1947-1985*, a 1968 release of historical and projected statistics.
- 1994 forward: EIA calculated national annual quantity-weighted average conversion factors for conventional, reformulated, and oxygenated motor gasolines (shown in Appendix C Table C1 on page 469). The factor for conventional motor gasoline is 5.253 million Btu per barrel, as used for previous years. The factors for reformulated and oxygenated gasolines, both currently 5.150 million Btu per barrel, are based on data published in the Environmental Protection Agency, Office of Mobile Sources, National Vehicle and Fuel Emissions Laboratory report EPA 420-F-95-003, *Fuel Economy Impact Analysis of Reformulated Gasoline*.

MGTCPUS — Motor gasoline total consumed in the United States.

- 1960 through 1975: U.S. Department of the Interior, Bureau of Mines, *Mineral Industry Surveys*. “Petroleum Statement, Annual,” Table 1.  
For 1960 through 1963, motor gasoline was combined with aviation gasoline and published as “gasoline” in the source table. Table 19 in the “Petroleum Statement, Annual” titled “Salient Statistics of Aviation Gasoline” provided separate data for aviation gasoline for those years. The aviation gasoline data from the second table were subtracted from the gasoline data in the first table to derive the motor gasoline consumption series used in CSEDS.
- 1976 through 1980: EIA, *Energy Data Reports*. “Petroleum Statement, Annual,” Table 1.
- 1981 forward: EIA, *Petroleum Supply Annual*, Table 2.

## Petroleum Coke

### Physical Units

Five data series are used to estimate the consumption of petroleum coke. Three are measures of petroleum coke consumption and two are indicators of industrial activity used to apportion U.S. consumption to the States. “ZZ” in the variable name represents the two-letter State code that differs for each State:

- PCTCPUS = petroleum coke total consumed in the United States (electric utility and industrial sectors), in thousand barrels;
- PCEUMZZ = petroleum coke consumed by electric utilities in each State, in thousand short tons;
- PCRFPUS = petroleum coke used at refineries as both catalytic and marketable coke in the United States, in thousand barrels;
- PCRFPZZ = petroleum coke used at refineries as both catalytic and marketable coke in each State, or group of States, or PAD district, in thousand barrels;
- CTCAPZZ = catalytic cracking charge capacity of petroleum refineries in each State, in barrels per calendar day (1960 through 1979) and barrels per stream day (1980 forward); and

AICAPZZ = aluminum ingot production capacity in each State, in short tons.

The total consumption of petroleum coke in the United States (PCTCPUS) is the product supplied series from the EIA publication *Petroleum Supply Annual*.

Petroleum coke consumed at electric utilities, PCEUMZZ, is available from 1970 forward from the Energy Information Administration (EIA), Form EIA-759, “Monthly Power Plant Report,” and predecessor forms. Prior to 1970, no data are available for this series and zero is used. These data are in thousand short tons and are converted into thousand barrels in CSEDS by applying a conversion factor of 5 barrels per short ton, and the U.S. value is the sum of the State data:

$$\begin{aligned} \text{PCEUPZZ} &= \text{PCEUMZZ} * 5 \\ \text{PCEUPUS} &= \sum \text{PCEUPZZ} \end{aligned}$$

Other than the petroleum coke consumed by electric utilities, all remaining petroleum coke consumption is accredited to the industrial sector in CSEDS. Industrial petroleum coke is used as catalyst coke at refineries in a process for increasing the yield of gasoline from crude oil (catalytic cracking) or for other industrial uses (mainly for conversion into electrodes that are consumed in the production of aluminum). To estimate industrial consumption of petroleum coke, electric utility consumption is subtracted from the total U.S. petroleum coke product supplied:

$$\text{PCICPUS} = \text{PCTCPUS} - \text{PCEUPUS}$$

The petroleum coke used at refineries in the United States as catalytic coke (PCRFPUS) is subtracted from the U.S. industrial sector consumption to derive consumption of petroleum coke for all other industrial uses, mainly aluminum production:

$$\text{PCOCPUS} = \text{PCICPUS} - \text{PCRFPUS}$$

State-level estimates of the petroleum coke consumed by the other industrial users are assumed to be in proportion to each State’s aluminum ingot production capacity (AICAPZZ). Although AICAPZZ is measured in short tons, it is not converted to thousand barrels because it is used only as a State-level allocator. The U.S. total is calculated as the sum of the State



data and other industrial use of petroleum coke is allocated to the States as follows:

$$\begin{aligned} \text{AICAPUS} &= \Sigma \text{AICAPZZ} \\ \text{PCOCPZZ} &= (\text{AICAPZZ} / \text{AICAPUS}) * \text{PCOCPUS} \end{aligned}$$

The source for petroleum coke used at refineries, PCRFPUS and PCRFPZGZ, is the EIA *Petroleum Supply Annual* and predecessor reports. For 1960 through 1980, the data are provided in thousand short tons. For consistency with later years' data, the 1960 through 1980 data are first converted into thousand barrels before being used in CSEDS. For 1960 through 1967, the data are published for Texas and New Mexico and for groups of other States. For 1968 through 1980, the data are given for 19 individual States with the remaining States are combined into 7 groups. For 1981 forward, the data are published by Petroleum Administration for Defense (PAD) districts only. The data for 1960 through 1967 are disaggregated into the 19 States and 7 groups used for the later years, prior to being entered into CSEDS, by using the proportions of the 1968 data, which was published in both formats.

State-level estimates of the refinery consumption of petroleum coke are calculated by assuming that each State consumes petroleum coke in proportion to the catalytic cracking charge capacity (CTCAPZZ) of the refineries in the State. The U.S. total for the State-level data allocating series is calculated by summing the State data.

$$\text{CTCAPUS} = \Sigma \text{CTCAPZZ}$$

The estimates of petroleum coke consumed by refineries for 1960 through 1980 use available State data directly and allocate the group sums (G1 through G7 indicated by GZ in the following formulas) to the States within each group in proportion to each State's portion of the group's catalytic cracking charge capacity. For 1981 forward, PAD district data (P1 through P5 indicated by PZ in the following formulas) are allocated in the same way to the States within each district:

$$\begin{aligned} \text{PCRFPZZ} &= \text{PCRFPZZ}, \text{ or} \\ \text{PCRFPZZ} &= (\text{CTCAPZZ} / \text{CTCAPGZ}) * \text{PCRFPZGZ} \text{ (I through 7), or} \\ \text{PCRFPZZ} &= (\text{CTCAPZZ} / \text{CTCAPPZ}) * \text{PCRFPZZ} \text{ (I through V)} \end{aligned}$$

The State totals for the industrial sector use of petroleum coke are added:

$$\text{PCICPZZ} = \text{PCRFPZZ} + \text{PCOCPZZ}$$

Total petroleum coke consumption by State is industrial use plus electric utility use:

$$\text{PCTCPZZ} = \text{PCICPZZ} + \text{PCEUPZZ}$$

### **British Thermal Units (Btu)**

Petroleum coke has a heat content value of approximately 6.024 million Btu per barrel. This factor is applied to convert petroleum coke estimated consumption from physical units to Btu by State and at the U.S. level:

$$\begin{aligned} \text{PCICBZZ} &= \text{PCICPZZ} * 6.024 \\ \text{PCICBUS} &= \Sigma \text{PCICBZZ} \\ \text{PCEUBZZ} &= \text{PCEUPZZ} * 6.024 \\ \text{PCEUBUS} &= \Sigma \text{PCEUBZZ} \\ \text{PCTCBZZ} &= \text{PCICBZZ} + \text{PCEUBZZ} \\ \text{PCTCBUS} &= \Sigma \text{PCTCBZZ} \end{aligned}$$

### **Additional Calculations**

Additional calculations are performed in the Combined State Energy Data System (CSEDS) to provide petroleum coke consumption estimates for the price and expenditure calculations published in the *State Energy Price and Expenditure Report*. The Btu equivalents of petroleum coke used at refineries (PCRFB) and petroleum coke consumed by all other industrial users (PCOCB) are calculated at the State and U.S. levels:

$$\begin{aligned} \text{PCOCBZZ} &= \text{PCOCPZZ} * 6.024 \\ \text{PCOCBUS} &= \Sigma \text{PCOCBZZ} \\ \text{PCRFBZZ} &= \text{PCRFPZZ} * 6.024 \\ \text{PCRFBUS} &= \Sigma \text{PCRFBZZ} \end{aligned}$$

### **Data Sources for Petroleum Coke**

AICAPZZ — Aluminum ingot production capacity in each State.

- 1960 through 1973: American Bureau of Metal Statistics, *Year Book*.
- 1974 through 1994: American Bureau of Metal Statistics, *Non-Ferrous Metal Data*, table titled "Aluminum Ingot Production Capacity."  
Note: Capacities for individual plants owned by one company have been withheld since 1986. The company's total capacity has been apportioned to the individual plants on the basis of their proportional capacities in 1985.
- 1995 forward: Data series is discontinued. 1994 data are used for all years.

CTCAPZZ — Catalytic cracking charge capacity of petroleum refineries by State.

- 1960: Data are unavailable from published reports. The 1961 values are used for 1960.
- 1961 through 1963: U.S. Department of the Interior, Bureau of Mines, *Mineral Industry Surveys*, "Petroleum Refineries in the United States." The specific tables are:
  - 1961 and 1962: Table 7, under "Cracking Capacity" column heading "Charge."
  - 1963: Table 6, under "Catalytic-Cracking Capacity" column heading "Charge."
- 1964 through 1976: U.S. Department of the Interior, Bureau of Mines, *Mineral Industry Surveys*, "Petroleum Refineries in the United States and Puerto Rico," Table 2, all entries next to "Cat. Ck." summed by State.
- 1977: EIA, *Energy Data Reports*, "Petroleum Refineries in the United States and Puerto Rico," Table 2, all entries next to "Cat. Ck." summed by State.
- 1978: EIA, *Energy Data Reports*, "Petroleum Refineries in the United States and U.S. Territories," Table 2, all entries next to "Cat. Ck." summed by State.
- 1979 and 1980: EIA, *Energy Data Reports*, "Petroleum Refineries in the United States and U.S Territories." The specific tables are:
  - 1979: Table 2, sum of "Catalytic Cracking" columns, "Fresh" and "Recycle."
  - 1980: Table 1, sum of "Catalytic Cracking (fresh)" and "Catalytic Cracking (recycle)" columns.
- 1981 forward: EIA, *Petroleum Supply Annual*, sum of "Catalytic Cracking (Fresh)" and "Catalytic Cracking (Recycled)" columns in the following tables:

- 1981 through 1983: Table 1.
- 1984: Table 30.
- 1985 through 1989: Table 29.
- 1989 through 1994: Table 36.
- 1995: Data series became biannual. 1994 data used for 1995.
- 1996: Table 36.
- 1997: 1996 data used for 1997.
- 1998 and 1999: Table 36.

PCEUMZZ — Petroleum coke consumed by the electric utilities by State.

- 1960 through 1969: No data available. Values are assumed to be zero.
- 1970 forward: EIA, Form EIA-759, "Monthly Power Plant Report," and predecessor forms.

PCRFPUZ and PCRFPPZ, PCRFPGZ, or PCRFPPZ — Petroleum coke consumed at refineries (both catalyst and marketable) in the United States, total and by State or groups of States.

- 1960: No data available. The 1961 value is used for 1960.
- 1961 through 1975: U.S. Department of the Interior, Bureau of Mines, *Mineral Industry Surveys*, "Petroleum Statement, Annual." The specific tables are:
  - 1961 and 1962: Table 18.
  - 1962 through 1966: Table 19.
  - 1967: Table 18.
  - 1968: Table 19.
  - 1969 through 1972: Table 18.
  - 1973 and 1974: Table 21.
  - 1975: Table 22.
- 1976 through 1980: EIA, *Energy Data Reports*, "Petroleum Statement, Annual." The specific tables are:
  - 1976: Table 22.
  - 1977: Table 21.
  - 1978 through 1980: Table 20.
- 1981 forward: EIA, *Petroleum Supply Annual*. The specific tables are:
  - 1981 and 1982: Table 17.
  - 1983: Table 15.
  - 1984: Table 44.
  - 1985: Table 43.
  - 1986 through 1988: Table 38.
  - 1989 through 1992: Table 45.

- 1993 and 1994: Table 47.
- 1995: Table 36.
- 1996: Table 47.
- 1997: Table 36.
- 1998 forward: Table 47.

PCTCPUS — Petroleum coke total consumed in the United States.

- 1960 through 1975: U.S. Department of the Interior, Bureau of Mines, *Mineral Industry Surveys*. “Petroleum Statement, Annual,” Table 1.
- 1976 through 1980: EIA, *Energy Data Report*, “Petroleum Statement, Annual,” Table 1.
- 1981 forward: EIA, *Petroleum Supply Annual*, Table 2.

## Residual Fuel

### Physical Units

Since State-level end-use consumption data for residual fuel (with the exception of electric utilities data) are not available, sales of residual fuel into or within each State, in thousand barrels, published by the Energy Information Administration (EIA), are used to estimate residual fuel consumption. “ZZ” in the following variable names represents the two-letter State code that differs for each State:

- RFBKPZZ = residual fuel sold for vessel bunkering use (i.e., the fueling of commercial or private boats, such as pleasure craft, fishing boats, tugboats, and ocean-going vessels, including vessels operated by oil companies, and fueling for other marine purposes), excluding sales to the Armed Forces;
- RFCMPZZ = residual fuel sold to the commercial sector for heating;
- RFIBPZZ = residual fuel sold to industrial establishments for space heating and for other industrial use (i.e., for all uses to mines, smelters, plants engaged in producing manufactured products, in processing goods, and in assembling);
- RFMIPZZ = residual fuel sold to the Armed Forces, regardless of use;
- RFMSPZZ = residual fuel sold for all other uses not identified in other sales categories;

- RFOCPZZ = residual fuel sold for oil company use, including all fuel oil, crude oil, or acid sludge used as fuel at refineries, by pipelines, or in field operations; and
- RFRRPZZ = residual fuel sold to the railroads for use in fueling trains, operating railroad equipment, space heating of buildings, and other operations.

Two other data series that represent consumption of residual fuel are:

- RFEUPZZ = residual fuel consumed by electric utilities in each State, in thousand barrels.
- RFTCPUS = residual fuel total supplied in the United States, in thousand barrels.

Residual fuel oil consumed by electric utilities, RFEUPZZ, is collected by EIA on Form EIA-759, “Monthly Power Plant Report,” and predecessor forms. (See Note 3 at the end of this residual fuel section for further information on changes in this series’ data definitions.)

Total U.S. consumption of residual fuel, RFTCPUS, is the product supplied series in EIA’s publication *Petroleum Supply Annual*.

To begin calculating residual fuel State and end-use consumption estimates, all State-level data series are summed to provide totals for the United States.

Then the data series are combined as closely as possible into the major end-use sectors used in CSEDS. No residual fuel is sold to the residential sector. Residual fuel sales to the commercial sector is the RFCMPZZ series.

The sales of residual fuel to the industrial sector in each State, RFINPZZ, is the sum of the residual fuel sold for industrial use, including industrial space heating (RFIBPZZ), for oil company use (RFOCPZZ), and for all other uses (RFMSPZZ):

$$\begin{aligned} \text{RFINPZZ} &= \text{RFIBPZZ} + \text{RFOCPZZ} + \text{RFMSPZZ} \\ \text{RFINPUS} &= \Sigma \text{RFINPZZ} \end{aligned}$$

The sales of residual fuel to the transportation sector in each State, RFTRPZZ, is the sum of the residual fuel sales for vessel bunkering (RFBKPZZ), military use (RFMIPZZ), and railroad use (RFRRPZZ):

$$\begin{aligned} \text{RFTRPZZ} &= \text{RFBKPZZ} + \text{RFMIPZZ} + \text{RFRRPZZ} \\ \text{RFTRPUS} &= \Sigma \text{RFTRPZZ} \end{aligned}$$

Sales of residual fuel oil to the commercial, industrial, and transportation sectors are added to create a subtotal of sales to all sectors other than the electric utility sector (RFNDPZZ):

$$\begin{aligned} \text{RFNDPZZ} &= \text{RFCMPZZ} + \text{RFINPZZ} + \text{RFTRPZZ} \\ \text{RFNDPUS} &= \Sigma \text{RFNDPZZ} \end{aligned}$$

The estimated residual fuel consumption for the United States by all sectors other than the electric utility sector (RFNCPUS) is calculated by subtracting the total residual fuel consumption at electric utilities from the total U.S. residual fuel consumption:

$$\text{RFNCPUS} = \text{RFTCPUS} - \text{RFEUPUS}$$

This U.S. subtotal of residual fuel consumption by the end-use sectors combined (RFNCPUS) is apportioned to the States by using the States' end-use sector sales data. The assumption is made that each State consumes residual fuel in proportion to the amount sold in that State:

$$\text{RFNCPZZ} = (\text{RFNDPZZ} / \text{RFNDPUS}) * \text{RFNCPUS}$$

The end-use sectors' subtotal for each State is further divided into estimates for each sector in proportion to each sector's sales. The estimated commercial sector consumption in each State, RFCCPZZ, is calculated:

$$\text{RFCCPZZ} = (\text{RFCMPZZ} / \text{RFNDPZZ}) * \text{RFNCPZZ}$$

The industrial sector's estimated consumption in each State, RFICPZZ, is calculated:

$$\text{RFICPZZ} = (\text{RFINPZZ} / \text{RFNDPZZ}) * \text{RFNCPZZ}$$

The transportation sector's estimated consumption in each State, RFACPZZ, is calculated:

$$\text{RFACPZZ} = (\text{RFTRPZZ} / \text{RFNDPZZ}) * \text{RFNCPZZ}$$

The consumption of residual fuel in the United States by the major end-use sectors is estimated by adding the States' estimated consumption.

Total State residual fuel consumption is the sum of the end-use sectors' consumption subtotal and the electric utilities consumption:

$$\text{RFTCPZZ} = \text{RFNCPZZ} + \text{RFEUPZZ}$$

### **British Thermal Units (Btu)**

Residual fuel has a heat content value of approximately 6.287 million Btu per barrel. This factor is applied to convert residual fuel estimated consumption from physical units to Btu as shown in the following examples:

$$\begin{aligned} \text{RFCCBZZ} &= \text{RFCCPZZ} * 6.287 \\ \text{RFICBZZ} &= \text{RFICPZZ} * 6.287 \\ \text{RFTCBZZ} &= \text{RFCCBZZ} + \text{RFICBZZ} + \text{RFACBZZ} + \text{RFEUBZZ} \end{aligned}$$

The U.S. level Btu consumption estimates are calculated as the sum of the States' Btu consumption.

### **Additional Notes on Residual Fuel**

1. "Sales" data are actually called "shipments" in the source documents for 1960 and 1961; "consumption" for 1962 through 1966; "shipments" for 1967; "sales" from 1968 through 1978; "deliveries" for 1979 through 1983; and "sales" for 1984 forward.
2. In 1979, the Energy Information Administration implemented a new survey form, EIA-172, to obtain deliveries of fuel oil and kerosene data and updated the list of respondents. (A detailed explanation is published in the *Energy Data Report*, "Deliveries of Fuel Oil and Kerosene in 1979.") In the new survey form, certain end-use categories were redefined—in many cases, to collect more disaggregated data. The reclassifications resulted in some end-use categories that were no

longer comparable with those in previous surveys. Where discontinuities occurred, estimates for the pre-1979 years have been made in CSEDS to conform with the 1979 fuel oil deliveries classifications. The pre-1979 deliveries estimates are not published in this report but are used in CSEDS to disaggregate the known U.S. total product supplied (consumption) into State and major end-use sector consumption estimates.

For residual fuel deliveries in 1979, the end-use categories “commercial” and “industrial” are available. The pre-1979 deliveries categories are called “heating” and “industrial.” While the pre-1979 categories individually are not continuous with the 1979 categories, their subtotals are related. That is, a general comparison can be made between the sum of commercial and industrial deliveries in 1979 and the sum of heating and industrial deliveries in the pre-1979 years. Therefore, the following method was applied to present a comparable series for residual fuel delivered to the commercial and industrial sectors:

- For each of the pre-1979 years, a subtotal was created for each State by adding each State’s heating and industrial deliveries categories. A comparable 1979 subtotal was created by adding each State’s commercial and industrial deliveries categories.
- Commercial and industrial shares of the subtotal in 1979 were calculated for each State.
- These 1979 end-use shares were then applied to each pre-1979 subtotal of residual fuel deliveries in each State to create State estimates of end-use deliveries for 1960 through 1978.

The 1980 through 1982 residual fuel deliveries data are based on the same survey as that used for 1979; therefore, the 1980 through 1982 data are directly comparable to 1979 data.

In 1984, EIA again updated the list of respondents for this survey, and the Form EIA-172 became the Form EIA-821, “Annual Fuel Oil and Kerosene Sales Report.” EIA did not conduct a fuel oil and kerosene sales survey for 1983. The 1983 estimates in CSEDS are based on 1984 data obtained from the Form EIA-821. Statistical

procedures and methodologies used for the Form EIA-821 differ from those used in previous years. Therefore, the 1983 and forward sales data may not be directly comparable to the pre-1983 data. (In the source document, the sales data for 1983 forward are reported in thousand gallons. These data were first converted to thousand barrels before being entered into CSEDS.)

3. The fuel oil at electric utilities data for all years and States are actual fuel oil consumption numbers collected from electric utilities by EIA on Form EIA-759, “Monthly Power Plant Report,” and predecessor forms. Due to changes in fuel oil reporting classifications on the Form EIA-759 over the years, it is not possible to develop a thoroughly consistent series for all years. However, over time, data more accurately disaggregating fuel oil into distillate fuel and residual fuel have become available. For 1960 through 1969, only total fuel oil consumed at electric utilities by State is available. For 1970 through 1979, fuel oil consumed by plant type (internal combustion and gas turbine plants combined and steam plants) by State are available. For 1980 forward, consumption of light oil at all plant types combined and consumption of heavy oil at all plant types combined are available by State. In CSEDS, the following assumptions have been made:
  - 1960 through 1969 — State estimates of fuel oil consumption by plant type have been created for each year by applying the shares of steam plants (primarily residual fuel) and internal combustion and gas turbine plants (primarily distillate fuel plus small amounts of jet kerosene) by State in 1970 to each year’s total fuel oil consumption at electric utilities for 1960 through 1969.
  - 1970 through 1979 — fuel oil consumed by steam plants is assumed to equal residual fuel consumption, and fuel oil consumed by internal combustion and gas turbine plants is assumed to equal distillate fuel plus jet kerosene consumption.
  - 1980 and forward — total heavy oil consumption at all plant types is assumed to equal residual fuel consumption, and total light oil consumption at all plant types is assumed to equal distillate fuel plus jet kerosene consumption.

The data series thus derived for CSEDS for residual fuel and distillate fuel plus jet kerosene consumption at electric utilities is considered to be actual consumption at electric utilities for each State and each year.

### Data Sources for Residual Fuel

RFBKPZZ — Residual fuel sold for vessel bunkering use by State.

- 1960 through 1975: U.S. Department of the Interior, Bureau of Mines, *Mineral Industry Surveys*, “Shipments of Fuel Oil and Kerosene.” The specific tables are:
  - 1960 and 1961: Table 17.
  - 1962 and 1963: Table 16.
  - 1964 and 1965: Table 15.
  - 1966 through 1975: Table 11.
- 1976 through 1978: EIA, *Energy Data Reports*, “Sales of Fuel Oil and Kerosene,” Table 11.
- 1979 and 1980: EIA, *Energy Data Reports*, “Deliveries of Fuel Oil and Kerosene,” Table 2.
- 1981 and 1982: EIA, *Petroleum Supply Annual*, Table 5.

Note: Data for 1983 forward were published in thousand gallons. They were converted to thousand barrels by dividing by 42 before being entered into CSEDS.

- 1983 through 1987: EIA, *Petroleum Marketing Monthly*. The specific tables are:
  - 1983: July 1985 issue, Table A13.
  - 1984 and 1985: July 1986 issue, Table A3.
  - 1986 and 1987: June 1988 issue, Table A5.
- 1988 forward: EIA, *Fuel Oil and Kerosene Sales*, Table 5.

RFCMPZZ — Residual fuel sold to the commercial sector for heating.

- 1960 through 1978: EIA estimates based on statistics of commercial sector deliveries of residual fuel from the EIA, *Energy Data Report*, “Deliveries of Fuel Oil and Kerosene in 1979,” Table 2. State ratios based on 1979 commercial sector deliveries were applied to each State’s sum of heating plus industrial deliveries categories from the fuel oil deliveries reports for each year 1960 through 1978. (See explanation in Note 2, on page 389.)
- 1979 and 1980: EIA, *Energy Data Report*, “Deliveries of Fuel Oil and Kerosene,” Table 2.

- 1981 and 1982: EIA, *Petroleum Supply Annual*, Table 5.

Notes: Data for 1983 forward were published in thousand gallons. They were converted to thousand barrels by dividing by 42 before being entered into CSEDS. Data for Hawaii in 1986 through 1990 reflect unpublished revisions from an EIA internal memorandum from the Office of Oil and Gas to the Office of Energy Markets and End Use, “Revising Historical Petroleum Data,” February 26, 1993.

- 1983 through 1987: EIA, *Petroleum Marketing Monthly*. The specific tables are:
  - 1983: July 1985 issue, Table A13.
  - 1984 and 1985: July 1986 issue, Table A3.
  - 1986 and 1987: June 1988 issue, Table A5.
- 1988 forward: EIA, *Fuel Oil and Kerosene Sales*, Table 5.

RFEUPZZ — Residual fuel consumed at electric utilities.

- EIA, Form EIA-759, “Monthly Power Plant Report,” and predecessor forms. The following assumptions have been made:
  - 1960 through 1969: Only total fuel oil consumed at electric utilities by State is available. State estimates of residual fuel consumption were created for each year by applying the shares of steam plants (primarily residual fuel) by State from 1970 to each year’s total fuel oil consumption at electric utilities for 1960 through 1969.
  - 1970 through 1979: Fuel oil consumed by plant type by State is available. Fuel oil consumed by steam plants is assumed to equal residual fuel consumption.
  - 1980 forward: Consumption of light and heavy oil at all plant types by State is available. Total heavy oil consumption at all plant types is assumed to equal residual fuel consumption.

RFIBPZZ — Residual fuel sold to industrial establishments for heating and for other industrial use.

- 1960 through 1978: EIA, estimates based on statistics of industrial sector deliveries of residual fuel from the EIA, *Energy Data Report*, “Deliveries of Fuel Oil and Kerosene in 1979,” Table 2. State ratios based on 1979 industrial sector deliveries were applied to each State’s sum of heating plus industrial deliveries categories from the fuel oil deliveries reports for each year 1960 through 1978. (See explanation in Note 2, on page 389.)
- 1979 and 1980: EIA, *Energy Data Report*, “Deliveries of Fuel Oil and Kerosene,” Table 2.

- 1981 and 1982: EIA, *Petroleum Supply Annual*, Table 5.

Note: Data for 1983 forward were published in thousand gallons. They were converted to thousand barrels by dividing by 42 before being entered into CSEDS.

- 1983 through 1987: EIA, *Petroleum Marketing Monthly*. The specific tables are:
  - 1983: July 1985 issue, Table A13.
  - 1984 and 1985: July 1986 issue, Table A3.
  - 1986 and 1987: June 1988 issue, Table A5.
- 1988 forward: EIA, *Fuel Oil and Kerosene Sales*, Table 5.

RFMIPZZ — Residual fuel sold to the Armed Forces regardless of use by State.

- 1960 through 1975: U.S. Department of the Interior, Bureau of Mines, *Mineral Industry Surveys*, “Shipments of Fuel Oil and Kerosene.” The specific tables are:
  - 1960 and 1961: Table 18.
  - 1962 and 1963: Table 17.
  - 1964 and 1965: Table 16.
  - 1966 through 1975: Table 12.
- 1976 through 1978: EIA, *Energy Data Reports*, “Sales of Fuel Oil and Kerosene,” Table 12.
- 1979 and 1980: EIA, *Energy Data Reports*, “Deliveries of Fuel Oil and Kerosene,” Table 2.
- 1981 and 1982: EIA, *Petroleum Supply Annual*, Table 5.

Note: Data for 1983 forward were published in thousand gallons. They were converted to thousand barrels by dividing by 42 before being entered into CSEDS.

- 1983 through 1987: EIA, *Petroleum Marketing Monthly*. The specific tables are:
  - 1983: July 1985 issue, Table A13.
  - 1984 and 1985: July 1986 issue, Table A3.
  - 1986 and 1987: June 1988 issue, Table A5.
- 1988 forward: EIA, *Fuel Oil and Kerosene Sales*, Table 5.

RFMSPZZ — Residual fuel sold for miscellaneous uses by State.

- 1960 through 1975: U.S. Department of the Interior, Bureau of Mines, *Mineral Industry Surveys*, “Shipments of Fuel Oil and Kerosene.” The specific tables are:
  - 1960 through 1962: Table 19.

- 1963 and 1964: Table 18.
- 1965 through 1967: Table 17.
- 1968 through 1975: Table 14.

- 1976 through 1978: EIA, *Energy Data Reports*, “Sales of Fuel Oil and Kerosene,” Table 14.
- 1979 and 1980: EIA, *Energy Data Reports*, “Deliveries of Fuel Oil and Kerosene,” Table 2, column “Other.”
- 1981 and 1982: EIA, *Petroleum Supply Annual*, Table 5, column “All Other.”

Note: Data for 1983 forward were published in thousand gallons. They were converted to thousand barrels by dividing by 42 before being entered into CSEDS. The data series is titled “All Other.”

- 1983 through 1987: EIA, *Petroleum Marketing Monthly*. The specific tables are:
  - 1983: July 1985 issue, Table A13.
  - 1984 and 1985: July 1986 issue, Table A3.
  - 1986 and 1987: June 1988 issue, Table A5.
- 1988 forward: EIA, *Fuel Oil and Kerosene Sales*, Table 5.

RFOCPZZ — Residual fuel sold for use by oil companies by State.

- 1960 through 1975: U.S. Department of the Interior, Bureau of Mines, *Mineral Industry Surveys*, “Shipments of Fuel Oil and Kerosene.” The specific tables are:
  - 1960 and 1961: Table 14.
  - 1962 and 1963: Table 13.
  - 1964 and 1965: Table 12.
  - 1966 through 1975: Table 9.
- 1976 through 1978: EIA, *Energy Data Reports*, “Sales of Fuel Oil and Kerosene,” Table 9.
- 1979 and 1980: EIA, *Energy Data Reports*, “Deliveries of Fuel Oil and Kerosene,” Table 2.
- 1981 and 1982: EIA, *Petroleum Supply Annual*, Table 5.

Note: Data for 1983 forward were published in thousand gallons. They were converted to thousand barrels by dividing by 42 before being entered into CSEDS.

- 1983 through 1987: EIA, *Petroleum Marketing Monthly*. The specific tables are:
  - 1983: July 1985 issue, Table A13.
  - 1984 and 1985: July 1986 issue, Table A3.
  - 1986 and 1987: June 1988 issue, Table A5.

- 1988 forward: EIA, *Fuel Oil and Kerosene Sales*, Table 5.

RFRRPZZ — Residual fuel sold for use by railroads by State.

- 1960 through 1975: U.S. Department of the Interior, Bureau of Mines, *Mineral Industry Surveys*, “Shipments of Fuel Oil and Kerosene.” The specific tables are:
  - 1960 and 1961: Table 16.
  - 1962 and 1963: Table 15.
  - 1964 and 1965: Table 14.
  - 1966 through 1975: Table 10.
- 1976 through 1978: EIA, *Energy Data Reports*, “Sales of Fuel Oil and Kerosene,” Table 10.
- 1979 and 1980: EIA, *Energy Data Reports*, “Deliveries of Fuel Oil and Kerosene,” Table 2.
- 1981 and 1982: EIA, *Petroleum Supply Annual*, Table 5.

Note: Data for 1983 forward were published in thousand gallons. They were converted to thousand barrels by dividing by 42 before being entered into CSEDS.

- 1983 through 1987: EIA, *Petroleum Marketing Monthly*. The specific tables are:
  - 1983: July 1985 issue, Table A13.
  - 1984 and 1985: July 1986 issue, Table A3.
  - 1986 and 1987: June 1988 issue, Table A5.
- 1988 and 1989: EIA, *Fuel Oil and Kerosene Sales 1989*, Table 5.
- 1990 forward: EIA, *Fuel Oil and Kerosene Sales*, Table 5, included in the “All Other” data (RFMSPZZ in CSEDS).

RFTCPUS — Residual fuel total consumed in the United States.

- 1960 through 1975: U.S. Department of the Interior, Bureau of Mines, *Mineral Industry Surveys*, “Petroleum Statement, Annual,” Table 1.
- 1976 through 1980: EIA, *Energy Data Reports*, “Petroleum Statement, Annual,” Table 1.
- 1981 forward: EIA, *Petroleum Supply Annual*, Table 2.

## Other Petroleum Products

There are 16 petroleum products that are summed and called “other petroleum products” in CSEDS. These products, in thousand barrels, are:

ABTCPUS	= aviation gasoline blending components total consumed in the United States;
COTCPZZ	= crude oil (including lease condensate) total consumed in each State;
FNTCPUS	= petroleum feedstocks, naphtha less than 401° F, total consumed in the United States;
FOTCPUS	= petroleum feedstocks, other oils equal to or greater than 401° F, total consumed in the United States;
FSTCPUS	= petroleum feedstocks, still gas, total consumed in the United States;
MBTCPUS	= motor gasoline blending components total consumed in the United States;
MSTCPUS	= miscellaneous petroleum products total consumed in the United States;
NATCPUS	= natural gasoline (including isopentane) total consumed in the United States;
PCTCPUS	= petroleum coke total consumed in the United States;
PLTCPUS	= plant condensate total consumed in the United States;
PPTCPUS	= pentanes plus total consumed in the United States;
SGTCPUS	= still gas total consumed in the United States;
SNTCPUS	= special naphthas total consumed in the United States;
UOTCPUS	= unfinished oils total consumed in the United States;
USTCPUS	= unfractionated stream total consumed in the United States; and
WXTCPUS	= waxes total consumed in the United States.

The methods used to create State estimates for each of these products (except petroleum coke, which was described earlier in the petroleum coke documentation) are explained in the following sections. It is assumed that all of these products are used by the industrial sector, except for the small portion of petroleum coke consumed at electric utilities. State estimates are created for other petroleum products by using the following four variables to allocate the products to the States:

COCAPZZ	= crude oil operating capacity at refineries in each State, in barrels per calendar day;
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- OCVAVZZ = value added in the manufacture of industrial organic chemicals in each State, in million dollars;
- PIVAVZZ = value added in the manufacture of paints and allied products in each State, in million dollars; and
- CGVAVZZ = value added in the manufacture of corrugated and solid fiber boxes, in million dollars.

Value added by manufacture is a measure of manufacturing activity that is derived by subtracting the cost of materials (which covers materials, supplies, containers, fuel, purchased electricity, and contract work) from the value of shipments. This difference is then adjusted by the net change in finished goods and work-in-process between the beginning and end-of-year inventories. Value added is considered to be the best value measure available for comparing the relative economic importance of manufacturing among industries and geographic areas. The value added data are from the Department of Commerce *Economic Census* (previously, *Census of Manufactures*) reports.

## Crude Oil

### Physical Units

State estimates for crude oil consumed in petroleum industry operations are the data series COTCPZZ. The U.S. total for this data series is summed:

$$\text{COTCPUS} = \Sigma \text{COTCPZZ}$$

Industrial consumption equals total consumption of crude oil:

$$\begin{aligned} \text{COICPZZ} &= \text{COTCPZZ} \\ \text{COICPUS} &= \text{COTCPUS} \end{aligned}$$

### British Thermal Units (Btu)

Crude oil has a heat content value of approximately 5.800 million Btu per barrel. The calculations performed to estimate total Btu consumption and industrial use Btu consumption by State and for the United States are:

$$\begin{aligned} \text{COTCBZZ} &= \text{COTCPZZ} * 5.800 \\ \text{COTCBUS} &= \Sigma \text{COTCBZZ} \\ \text{COICBZZ} &= \text{COTCBZZ} \\ \text{COICBUS} &= \text{COTCBUS} \end{aligned}$$

### Data Source

COTCPZZ — Crude oil consumed in petroleum industry operations by State.

- 1960 through 1982: Crude oil used directly was included in distillate and residual fuel product supplied when reported to EIA. Zeros are entered for all years.
- 1983 forward: Data are available for Petroleum Administration for Defense (PAD) Districts, not by State. State estimates are calculated by allocating all crude oil consumption to the six States (Alaska, California, Colorado, Louisiana, Texas, and Utah) that reported distillate and residual fuels consumed by pipeline and leases in 1982. (Data on pipeline and lease consumption of fuels are not available after 1982.) Each State's 1982 ratio of distillate and residual fuels consumed by pipeline and leases to its respective 1982 PAD District total consumption of those fuels is calculated. This ratio is then applied to the 1983 forward PAD District totals of crude oil product supplied. The 1982 ratios are taken from the Form EIA-90, "Crude Oil Stocks Report," and the crude oil product supplied data are taken from the EIA *Petroleum Supply Annual*. The specific tables are:
  - 1983 through 1988: Tables 2 and 4 through 8.
  - 1989 forward: Tables 2, 4, 6, 8, 10, and 12.

## Aviation Gasoline Blending Components; Petroleum Feedstocks, Still Gas; Motor Gasoline Blending Components; Still Gas; and Unfinished Oils

### Physical Units

The five petroleum products in this category are consumed as refinery fuels. Beginning in 1986, still gas for petrochemical feedstocks and still gas for other uses are reported together in the source document. State consumption estimates of these products are created in proportion to each

State's crude oil operating capacity at refineries (COCAPZZ). The U.S. total for this variable is summed:

$$\text{COCAPUS} = \Sigma \text{COCAPZZ}$$

Aviation gasoline blending components State and U.S. consumption are estimated:

$$\begin{aligned} \text{ABTCPZZ} &= (\text{COCAPZZ} / \text{COCAPUS}) * \text{ABTCPUS} \\ \text{ABICPZZ} &= \text{ABTCPZZ} \\ \text{ABICPUS} &= \text{ABTCPUS} \end{aligned}$$

Petroleum feedstocks, still gas, State and U.S. consumption are estimated:

$$\begin{aligned} \text{FSTCPZZ} &= (\text{COCAPZZ} / \text{COCAPUS}) * \text{FSTCPUS} \\ \text{FSICPZZ} &= \text{FSTCPZZ} \\ \text{FSICPUS} &= \text{FSTCPUS} \end{aligned}$$

Motor gasoline blending components State and U.S. consumption are estimated:

$$\begin{aligned} \text{MBTCPZZ} &= (\text{COCAPZZ} / \text{COCAPUS}) * \text{MBTCPUS} \\ \text{MBICPZZ} &= \text{MBTCPZZ} \\ \text{MBICPUS} &= \text{MBTCPUS} \end{aligned}$$

Still gas State and U.S. consumption are estimated:

$$\begin{aligned} \text{SGTCPZZ} &= (\text{COCAPZZ} / \text{COCAPUS}) * \text{SGTCPUS} \\ \text{SGICPZZ} &= \text{SGTCPZZ} \\ \text{SGICPUS} &= \text{SGTCPUS} \end{aligned}$$

Unfinished oils State and U.S. consumption are estimated:

$$\begin{aligned} \text{UOTCPZZ} &= (\text{COCAPZZ} / \text{COCAPUS}) * \text{UOTCPUS} \\ \text{UOICPZZ} &= \text{UOTCPZZ} \\ \text{UOICPUS} &= \text{UOTCPUS} \end{aligned}$$

### British Thermal Units (Btu)

Btu estimates for the five products in this group are developed by multiplying the estimated consumption of each individual product in physical units by its respective heat content conversion factor. The calculations performed to estimate total Btu consumption and industrial use Btu consumption by State and for the United States are:

$$\begin{aligned} \text{ABTCBZZ} &= \text{ABTCPZZ} * 5.048 \\ \text{ABTCBUS} &= \Sigma \text{ABTCBZZ} \\ \text{ABICBZZ} &= \text{ABTCBZZ} \\ \text{ABICBUS} &= \text{ABTCBUS} \end{aligned}$$

$$\begin{aligned} \text{FSTCBZZ} &= \text{FSTCPZZ} * 6.000 \\ \text{FSTCBUS} &= \Sigma \text{FSTCBZZ} \\ \text{FSICBZZ} &= \text{FSTCBZZ} \\ \text{FSICBUS} &= \text{FSTCBUS} \end{aligned}$$

$$\begin{aligned} \text{MBTCBZZ} &= \text{MBTCPZZ} * 5.253 \\ \text{MBTCBUS} &= \Sigma \text{MBTCBZZ} \\ \text{MBICBZZ} &= \text{MBTCBZZ} \\ \text{MBICBUS} &= \text{MBTCBUS} \end{aligned}$$

$$\begin{aligned} \text{SGTCBZZ} &= \text{SGTCPZZ} * 6.000 \\ \text{SGTCBUS} &= \Sigma \text{SGTCBZZ} \\ \text{SGICBZZ} &= \text{SGTCBZZ} \\ \text{SGICBUS} &= \text{SGTCBUS} \end{aligned}$$

$$\begin{aligned} \text{UOTCBZZ} &= \text{UOTCPZZ} * 5.825 \\ \text{UOTCBUS} &= \Sigma \text{UOTCBZZ} \\ \text{UOICBZZ} &= \text{UOTCBZZ} \\ \text{UOICBUS} &= \text{UOTCBUS} \end{aligned}$$

### Data Sources

ABTCPUS — Aviation gasoline blending components total consumed in the United States.

- 1960 through 1980: No data available. Values are assumed to be zero.
- 1981 forward: EIA, *Petroleum Supply Annual*, Table 2

COCAPZZ — Crude oil operating capacity at refineries by State.

- 1960: U.S. Department of the Interior, Bureau of Mines, *Petroleum Refineries, Including Cracking Plants, in the United States*, Table 3.
- 1961 through 1963: U.S. Department of the Interior, Bureau of Mines, *Mineral Industry Surveys*, "Petroleum Refineries in the United States." The specific tables are:
  - 1961 and 1962: Table 3.
  - 1963: Table 1.
- 1964 through 1976: U.S. Department of the Interior, Bureau of Mines, *Mineral Industry Surveys*, "Petroleum Refineries in the United States and Puerto Rico," Table 1.
- 1977: EIA, *Energy Data Reports*, "Petroleum Refineries in the United States and Puerto Rico," Table 1.
- 1978 through 1980: EIA, *Energy Data Reports*, "Petroleum Refineries in the United States and U.S. Territories," Table 1.
- 1981 forward: EIA, *Petroleum Supply Annual*. The specific tables are:
  - 1981 through 1983: Table 1.
  - 1984: Table 30.
  - 1985 through 1988: Table 29.
  - 1989 through 1994: Table 36.
  - 1995: Unpublished data based on Form EIA-810.
  - 1996 forward: Table 36.

FSTCPUS — Petrochemical feedstocks, still gas, total consumed in the United States.

- 1960 through 1975: U.S. Department of the Interior, Bureau of Mines, *Mineral Industry Surveys*, "Petroleum Statement, Annual," Table 1.
- 1976 through 1980: EIA, *Energy Data Reports*, Petroleum Statement, Annual," Table 1.
- 1981 and 1982: EIA, *Petroleum Supply Annual*, Table 14.
- 1983 through 1985: EIA, *Petroleum Supply Annual*, Table 12.
- 1986 forward: EIA, *Petroleum Supply Annual*, Table 2, included in "Still Gas."

MBTCPUS — Motor gasoline blending components total consumed in the United States.

- 1960 through 1980: No data available. Values are assumed to be zero.

- 1981 forward: EIA, *Petroleum Supply Annual*, Table 2.

SGTCPUS — Still gas total consumed in the United States.

- 1960 through 1975: U.S. Department of the Interior, Bureau of Mines, *Mineral Industry Surveys*, "Petroleum Statement, Annual," Table 1.
- 1976 through 1980: EIA, *Energy Data Reports*, "Petroleum Statement, Annual," Table 1.
- 1981 and 1982: EIA, *Petroleum Supply Annual*, Table 14.
- 1983 through 1985: EIA, *Petroleum Supply Annual*, Table 12.
- 1986 forward: EIA, *Petroleum Supply Annual*, Table 2.

UOTCPUS — Unfinished oils total consumed in the United States.

- 1960 through 1980: No data available. Values assumed to be zero.
- 1981 forward: EIA, *Petroleum Supply Annual*, Table 2.

**Petroleum Feedstocks, Naphtha Less Than 401° F; Petroleum Feedstocks, Other Oils Equal to or Greater Than 401° F; Miscellaneous Petroleum Products; Natural Gasoline (Including Isopentane); Plant Condensate; Pentanes Plus; and Unfractionated Stream.**

**Physical Units**

The seven petroleum products in this category are allocated to the States in proportion to the value added in the manufacture of industrial organic chemicals in each State (OCVAVZZ).

The two petroleum feedstocks are consumed by the chemical industry in producing petrochemical "building blocks" that, in turn, are converted to such products as synthetic fibers, synthetic rubber, and plastics.

Miscellaneous products include such products as petrolatum, synthetic natural gas feedstocks, and specialty oils (e.g., hydraulic oils, insulating oils, medicinal oils, rust preventatives, and spray oils). Finished petrochemicals usually constitute the largest volume of miscellaneous product, and it is assumed that the chief consuming industry for this product line is the chemical industry.

Natural gasoline (including isopentane), plant condensate, pentanes plus, and unfractionated stream are included in this group because the chemical industry is the only one that could readily utilize these lighter liquid hydrocarbons (as petrochemical feedstocks). Beginning in 1984, in the source document, natural gasoline (including isopentane) and plant condensate are reported together as a new product, pentanes plus. At the same time, unfractionated stream was dropped because its components were reported separately as liquefied petroleum gases.

The U.S. total for the data series used to apportion these products to the States is summed:

$$\text{OCVAVUS} = \Sigma \text{OCVAVZZ}$$

Total petroleum feedstocks, naphtha less than 401° F, State and U.S. consumption are estimated:

$$\begin{aligned} \text{FNTCPZZ} &= (\text{OCVAVZZ} / \text{OCVAVUS}) * \text{FNTCPUS} \\ \text{FNICPZZ} &= \text{FNTCPZZ} \\ \text{FNICPUS} &= \text{FNTCPUS} \end{aligned}$$

Petroleum feedstocks, other oils equal to or greater than 401° F, State and U.S. consumption are estimated:

$$\begin{aligned} \text{FOTCPZZ} &= (\text{OCVAVZZ} / \text{OCVAVUS}) * \text{FOTCPUS} \\ \text{FOICPZZ} &= \text{FOTCPZZ} \\ \text{FOICPUS} &= \text{FOTCPUS} \end{aligned}$$

Miscellaneous petroleum products State and U.S. consumption are estimated:

$$\begin{aligned} \text{MSTCPZZ} &= (\text{OCVAVZZ} / \text{OCVAVUS}) * \text{MSTCPUS} \\ \text{MSICPZZ} &= \text{MSTCPZZ} \\ \text{MSICPUS} &= \text{MSTCPUS} \end{aligned}$$

Natural gasoline (including isopentane) State and U.S. consumption are estimated:

$$\begin{aligned} \text{NATCPZZ} &= (\text{OCVAVZZ} / \text{OCVAVUS}) * \text{NATCPUS} \\ \text{NAICPZZ} &= \text{NATCPZZ} \\ \text{NAICPUS} &= \text{NATCPUS} \end{aligned}$$

Plant condensate State and U.S. consumption are estimated:

$$\begin{aligned} \text{PLTCPZZ} &= (\text{OCVAVZZ} / \text{OCVAVUS}) * \text{PLTCPUS} \\ \text{PLICPZZ} &= \text{PLTCPZZ} \\ \text{PLICPUS} &= \text{PLTCPUS} \end{aligned}$$

Pentane plus State and U.S. consumption are estimated:

$$\begin{aligned} \text{PPTCPZZ} &= (\text{OCVAVZZ} / \text{OCVAVUS}) * \text{PPTCPUS} \\ \text{PPICPZZ} &= \text{PPTCPZZ} \\ \text{PPICPUS} &= \text{PPTCPUS} \end{aligned}$$

Unfractionated stream State and U.S. consumption are estimated:

$$\begin{aligned} \text{USTCPZZ} &= (\text{OCVAVZZ} / \text{OCVAVUS}) * \text{USTCPUS} \\ \text{USICPZZ} &= \text{USTCPZZ} \\ \text{USICPUS} &= \text{USTCPUS} \end{aligned}$$

### **British Thermal Units (Btu)**

Btu estimates for the seven petroleum products in this group are developed by multiplying each individual product's estimated consumption in physical units by its respective approximate heat content conversion factor. The calculations performed to estimate total Btu consumption and industrial use Btu consumption by State and for the United States are:

$$\begin{aligned} \text{FNTCBZZ} &= \text{FNTCPZZ} * 5.248 \\ \text{FNTCBUS} &= \Sigma \text{FNTCBZZ} \\ \text{FNICBZZ} &= \text{FNTCBZZ} \\ \text{FNICBUS} &= \text{FNTCBUS} \\ \text{FOTCBZZ} &= \text{FOTCPZZ} * 5.825 \\ \text{FOTCBUS} &= \Sigma \text{FOTCBZZ} \\ \text{FOICBZZ} &= \text{FOTCBZZ} \\ \text{FOICBUS} &= \text{FOTCBUS} \end{aligned}$$

MSTCBZZ	=	MSTCPZZ * 5.796
MSTCBUS	=	ΣMSTCBZZ
MSICBZZ	=	MSTCBZZ
MSICBUS	=	MSTCBUS
NATCBZZ	=	NATCPZZ * 4.620
NATCBUS	=	ΣNATCBZZ
NAICBZZ	=	NATCBZZ
NAICBUS	=	NATCBUS
PLTCBZZ	=	PLTCPZZ * 5.418
PLTCBUS	=	ΣPLTCBZZ
PLICBZZ	=	PLTCBZZ
PLICBUS	=	PLTCBUS
PPTCBZZ	=	PPTCPZZ * 4.620
PPTCBUS	=	ΣPPTCBZZ
PPICBZZ	=	PPTCBZZ
PPICBUS	=	PPTCBUS
USTCBZZ	=	USTCPZZ * 5.418
USTCBUS	=	ΣUSTCBZZ
USICBZZ	=	USTCBZZ
USICBUS	=	USTCBUS

#### Data Sources

FNTCPUS — Petrochemical feedstocks, naphtha, less than 401° F, total consumed in the United States.

- 1960 through 1975: U.S. Department of the Interior, Bureau of Mines, *Mineral Industry Surveys*, “Petroleum Statement, Annual,” Table 1.
- 1976 through 1980: EIA, *Energy Data Reports*, “Petroleum Statement, Annual,” Table 1.
- 1981 forward: EIA, *Petroleum Supply Annual*, Table 2.

FOTCPUS — Petrochemical feedstocks, other oils, equal to or greater than 401° F, total consumed in the United States.

- 1960 through 1975: U.S. Department of the Interior, Bureau of Mines, *Mineral Industry Surveys*, “Petroleum Statement, Annual,” Table 1.

- 1976 through 1980: EIA, *Energy Data Reports*, “Petroleum Statement, Annual,” Table 1.
- 1981 forward: EIA, *Petroleum Supply Annual*, Table 2.

MSTCPUS — Miscellaneous petroleum products consumed in the United States.

- 1960 through 1975: U.S. Department of the Interior, Bureau of Mines, *Mineral Industry Surveys*, “Petroleum Statement, Annual,” Table 1.
- 1976 through 1980: EIA, *Energy Data Reports*. “Petroleum Statement, Annual,” Table 1.
- 1981 forward: EIA, *Petroleum Supply Annual*, Table 2.

NATCPUS — Natural gasoline total consumed in the United States.

- 1960 through 1975: U.S. Department of the Interior, Bureau of Mines, *Mineral Industry Surveys*. “Petroleum Statement, Annual,” Table 1.
- 1976 through 1980: EIA, *Energy Data Reports*. “Petroleum Statement, Annual,” Table 1.
- 1981 through 1983: EIA, *Petroleum Supply Annual*, Table 2.
- 1984 forward: EIA, *Petroleum Supply Annual*, Table 2, included in “Pentanes Plus.”

OCVAVZZ — Value added by the manufacture of industrial organic chemicals by State.

- 1960 through 1970: U.S. Department of Commerce, *1967 Census of Manufactures*, Volume II, Part 2, SIC 2818. The 1963 State data are used for the years 1960 through 1965, and the 1967 State data are used for 1966 through 1970.
- 1971 through 1980: U.S. Department of Commerce, *1977 Census of Manufactures*, Industry Series, SIC 2869. The 1972 State data are used for 1971 through 1975, and the 1977 State data are used for 1976 through 1980.
- 1981 through 1985: U.S. Department of Commerce, *1987 Census of Manufactures* (Final Report), Industry Series, SIC 2869. The 1982 State data are used for 1981 through 1985.
- 1986 through 1995: U.S. Department of Commerce, *1992 Census of Manufactures* (Final Report), Industry Series, SIC 2869. The 1987 State data are used for 1986 through 1990, and the 1992 State data are used for 1991 through 1995.

- 1996 forward: U.S. Department of Commerce, *1997 Economic Census, Manufacturing, Industry Series*, EC97M-3251A for NAICS 325110 “Petrochemical Manufacturing” and EC97M-3251G for NAICS 325119 “All Other Basic Inorganic Chemical Manufacturing.” The value added by manufacture for both categories are summed to create a data series generally comparable to the SIC 2869 used previously.

PLTCPUS — Plant condensate total consumed in the United States.

- 1960 through 1975: U.S. Department of the Interior, Bureau of Mines, *Mineral Industry Surveys*. “Petroleum Statement, Annual,” Table 1.
- 1976 through 1980: EIA, *Energy Data Reports*, “Petroleum Statement, Annual,” Table 1.
- 1981 through 1983: EIA, *Petroleum Supply Annual*, Table 2.
- 1984 forward: EIA, *Petroleum Supply Annual*, Table 2, included in “Pentanes Plus.”

PPTCPUS — Pentanes plus total consumed in the United States.

- 1960 through 1983: Data were reported separately as natural gasoline, isopentane, and plant condensate.
- 1984 forward: EIA, *Petroleum Supply Annual*, Table 2.

USTCPUS — Unfractionated stream total consumed in the United States.

- 1960 through 1978: EIA, *Energy Data Reports*, “Petroleum Statement, Annual,” Table 1, included in “Plant Condensate.”
- 1979 and 1980: EIA, *Energy Data Reports*, “Petroleum Statement, Annual,” Table 1.
- 1981 through 1983: EIA, *Petroleum Supply Annual*, Table 2.
- 1984 forward: EIA, *Petroleum Supply Annual*, Table 2, individual components are reported separately.

## Special Naphthas

### Physical Units

Special naphthas are used as paint and varnish thinners and dry cleaning liquids or solvents. This petroleum product is allocated to the States in

proportion to the value added in the manufacture of paints and allied products in each State (PIVAVZZ).

The U.S. total for the apportioning data series is calculated:

$$\text{PIVAVUS} = \Sigma \text{PIVAVZZ}$$

Special naphthas State and U.S. consumption are estimated:

$$\text{SNTCPZZ} = (\text{PIVAVZZ} / \text{PIVAVUS}) * \text{SNTCPUS}$$

$$\text{SNICPZZ} = \text{SNTCPZZ}$$

$$\text{SNICPUS} = \text{SNTCPUS}$$

### British Thermal Units (Btu)

Special naphthas have a heat content value of approximately 5.248 million Btu per barrel. This factor is applied to convert special naphthas estimated consumption from physical units to Btu by State and for the United States:

$$\text{SNTCBZZ} = \text{SNTCPZZ} * 5.248$$

$$\text{SNTCBUS} = \Sigma \text{SNTCBZZ}$$

$$\text{SNICBZZ} = \text{SNTCBZZ}$$

$$\text{SNICBUS} = \text{SNTCBUS}$$

### Data Sources

PIVAVZZ — Value added by the manufacture of paints and allied products by State.

- 1960 through 1970: U.S. Department of Commerce, *1967 Census of Manufactures*, Volume II, Part 2, SIC 2851. The 1963 State data are used for the years 1960 through 1965, and the 1967 State data are used for 1966 through 1970.
- 1971 through 1980: U.S. Department of Commerce, *1977 Census of Manufactures*, Industry Series, SIC 2851. The 1972 State data are used for 1971 through 1975, and the 1977 State data are used for 1976 through 1980.
- 1981 through 1985: U.S. Department of Commerce, *1987 Census of Manufactures* (Final Report), Industry Series, SIC 2851. The 1982 State data are used for the years 1981 through 1985.

- 1986 through 1995: U.S. Department of Commerce, *1992 Census of Manufactures* (Final Report), Industry Series, SIC 2851. The 1987 State data are used for the years 1986 through 1990, and the 1992 State data are used for 1991 through 1995.
- 1996 forward: U.S. Department of Commerce, *1997 Economic Census, Manufacturing, Industry Series*, EC97M-3255A for NAICS 325510 "Paint and Coating Manufacturing".

SNTCPUS — Special naphthas total consumed in the United States.

- 1960 through 1963: Data included in motor gasoline.
- 1964 through 1975: U.S. Department of the Interior, Bureau of Mines, *Mineral Industry Surveys*, "Petroleum Statement, Annual," Table 1.
- 1976 through 1980: EIA, *Energy Data Reports*, "Petroleum Statement, Annual," Table 1.
- 1981 forward: EIA, *Petroleum Supply Annual*, Table 2.

## Waxes

### Physical Units

Because petroleum waxes are very cost-effective moisture and gas barriers, food packaging is the largest market for petroleum waxes in the United States, accounting for more than 50 percent of petroleum wax consumption. Therefore, waxes are allocated to the States in proportion to the value added in the manufacture of corrugated and solid fiber boxes (CGVAVZZ).

The U.S. total for this variable is summed:

$$CGVAVUS = \Sigma CGVAVZZ$$

State and U.S. consumption are estimated:

$$\begin{aligned} WXTCPZZ &= (CGVAVZZ / CGVAVUS) * WXTCPUS \\ WXICPZZ &= WXTCPZZ \\ WXICPUS &= WXTCPUS \end{aligned}$$

### British Thermal Units (Btu)

Waxes have a heat content value of approximately 5.537 million Btu per barrel. This factor is applied to convert the estimated consumption of waxes from physical units to Btu by State and at the U.S. level:

$$\begin{aligned} WXTCBZZ &= WXTCPZZ * 5.537 \\ WXTCBUS &= \Sigma WXTCBZZ \\ WXICBZZ &= WXTCBZZ \\ WXICBUS &= WXTCBUS \end{aligned}$$

### Data Sources

CGVAVZZ — Value added by the manufacture of sanitary food containers by State. Beginning with 1992 data, this series became value added by the manufacture of corrugated and solid fiber boards by State.

- 1960 through 1965: U.S. Department of Commerce, *1963 Census of Manufactures*, Volume II, Part 1, SIC 2654. The 1963 State data are used for the years 1960 through 1965.
- 1966 through 1970: U.S. Department of Commerce, *1967 Census of Manufactures*, Volume II, Part 2, SIC 2654. The 1967 State data are used for 1966 through 1970.
- 1971 through 1980: U.S. Department of Commerce, *1977 Census of Manufactures*, Industry Series, SIC 2654. The 1972 State data are used for 1971 through 1975, and the 1977 State data are used for 1976 through 1980.
- 1981 through 1990: U.S. Department of Commerce, *1982 Census of Manufactures* (Final Report), Industry Series, SIC 2654. The 1982 State data are used for 1981 through 1990.
- 1991 through 1995: U.S. Department of Commerce, *1992 Census of Manufactures* (Final Report), Industry Series, SIC 2653. The 1992 State data are used for 1991 through 1995.
- 1996 forward: U.S. Department of Commerce, *1997 Economic Census, Manufacturing, Industry Series*, EC97M-3222A for NAICS 322211 "Corrugated and Solid Fiber Box Manufacturing".

WXTCPUS — Waxes total consumed in the United States.

- 1960 through 1975: U.S. Department of the Interior, Bureau of Mines, *Mineral Industry Surveys*, "Petroleum Statement, Annual," Table 1.

- 1976 through 1980: EIA, *Energy Data Reports*, “Petroleum Statement, Annual,” Table 1.
- 1981 forward: EIA, *Petroleum Supply Annual*, Table 2.

## Total Other Petroleum Products

### Physical Units

Total other petroleum products is the sum of the 16 “other petroleum products.” All of these products are consumed by the industrial sector except for some petroleum coke consumed by electric utilities (PCEUP), which is calculated in CSEDS with electric utility fuel consumption. State and U.S. industrial use of these other petroleum products are calculated:

$$\begin{aligned} \text{POICPZZ} &= \text{ABICPZZ} + \text{COICPZZ} + \text{FNICPZZ} + \text{FOICPZZ} + \\ &\quad \text{FSICPZZ} + \text{MBICPZZ} + \text{MSICPZZ} + \text{NAICPZZ} + \\ &\quad \text{PCICPZZ} + \text{PLICPZZ} + \text{PPICPZZ} + \text{SGICPZZ} + \\ &\quad \text{SNICPZZ} + \text{UOICPZZ} + \text{USICPZZ} + \text{WXICPZZ} \\ \text{POICPUS} &= \Sigma \text{POICPZZ} \end{aligned}$$

Total consumption of these products (including petroleum coke consumption by electric utilities) is calculated:

$$\begin{aligned} \text{POTCPZZ} &= \text{ABTCPZZ} + \text{COTCPZZ} + \text{FNTCPZZ} + \text{FOTCPZZ} + \\ &\quad \text{FSTCPZZ} + \text{MBTCPZZ} + \text{MSTCPZZ} + \text{NATCPZZ} + \\ &\quad \text{PCTCPZZ} + \text{PLTCPZZ} + \text{PPTCPZZ} + \text{SGTCPZZ} + \\ &\quad \text{SNTCPZZ} + \text{UOTCPZZ} + \text{USTCPZZ} + \text{WXTCPZZ} \\ \text{POTCPUS} &= \Sigma \text{POTCPZZ} \end{aligned}$$

### British Thermal Units (Btu)

Estimated consumption of all 16 “other petroleum products” in Btu is the sum of the Btu consumption of each product by the industrial sector. The State and U.S. totals are calculated:

$$\begin{aligned} \text{POICBZZ} &= \text{ABICBZZ} + \text{COICBZZ} + \text{FNICBZZ} + \text{FOICBZZ} + \\ &\quad \text{FSICBZZ} + \text{MBICBZZ} + \text{MSICBZZ} + \text{NAICBZZ} + \\ &\quad \text{PCICBZZ} + \text{PLICBZZ} + \text{PPICBZZ} + \text{SGICBZZ} + \\ &\quad \text{SNICBZZ} + \text{UOICBZZ} + \text{USICBZZ} + \text{WXICBZZ} \end{aligned}$$

$$\text{POICBUS} = \Sigma \text{POICBZZ}$$

State and U.S. total consumption of these products, which includes electric utility consumption of petroleum coke, is calculated:

$$\begin{aligned} \text{POTCBZZ} &= \text{ABTCBZZ} + \text{COTCBZZ} + \text{FNTCBZZ} + \text{FOTCBZZ} + \\ &\quad \text{FSTCBZZ} + \text{MBTCBZZ} + \text{MSTCBZZ} + \text{NATCBZZ} + \\ &\quad \text{PCTCBZZ} + \text{PLTCBZZ} + \text{PPTCBZZ} + \text{SGTCBZZ} + \\ &\quad \text{SNTCBZZ} + \text{UOTCBZZ} + \text{USTCBZZ} + \text{WXTCBZZ} \\ \text{POTCBUS} &= \Sigma \text{POTCBZZ} \end{aligned}$$

### Additional Notes on Other Petroleum Products

1. In the “Energy Consumption Estimates by Source” tables in this report, a petroleum column called “Other” comprises the other products, including petroleum coke consumed by electric utilities (POTCB and POTCP). In the “Industrial Energy Consumption Estimates” tables, the petroleum “Other” column is the other petroleum products consumption total for industrial use (POICB and POICP).
2. The data for “value added by manufacture” that are used to allocate many of the other petroleum products are from the Department of Commerce, *Census of Manufactures* reports. For all years, several States’ data were withheld from publication to avoid disclosing operations of individual companies. The total withheld data was apportioned to the withheld States on the basis of those States’ proportional values in the previous census.

In 1982, all respondents to the Census of Manufactures survey were requested to report their inventories at cost or market prior to accounting adjustments for “last in, first out” cost. This is a change from prior years in which respondents were permitted to value their inventories by using any generally accepted accounting valuation method. Consequently, data for value added by manufacture after 1982 are not comparable to the prior years’ data.



## Petroleum Summaries

This section describes the method of estimating consumption by the major end-use sectors within the States for all petroleum data series. Table A2 on page 356 of this section indicates which petroleum products are consumed in each of the five major end-use sectors. In the preceding portions of this section, end-use consumption estimates have been derived for each petroleum product. These petroleum product subtotals are now summed, in physical units of thousand barrels and in Btu, to create estimated end-use consumption for all petroleum products.

### Residential Sector

Petroleum products consumed by the residential sector are: distillate fuel (DF), kerosene (KS), and liquefied petroleum gas (LG). For the residential sector, the State and U.S. totals in physical units are:

$$\begin{aligned} \text{PARCPZZ} &= \text{DFRCPZZ} + \text{KSRCPZZ} + \text{LGRCPZZ} \\ \text{PARCPUS} &= \Sigma \text{PARCPZZ} \end{aligned}$$

State and U.S. totals in Btu are:

$$\begin{aligned} \text{PARCBZZ} &= \text{DFRCBZZ} + \text{KSRCBZZ} + \text{LGRCBZZ} \\ \text{PARCBUS} &= \Sigma \text{PARCBZZ} \end{aligned}$$

### Commercial Sector

The commercial sector's use of petroleum products includes: distillate fuel (DF), kerosene (KS), liquefied petroleum gases (LG), motor gasoline (MG), and residual fuel (RF). In physical units, the State and the U.S. totals for the commercial sector are calculated:

$$\begin{aligned} \text{PACCPZZ} &= \text{DFCCPZZ} + \text{KSCCPZZ} + \text{LGCCPZZ} + \text{MGCCPZZ} + \\ &\quad \text{RFCCPZZ} \\ \text{PACCPUS} &= \Sigma \text{PACCPZZ} \end{aligned}$$

State and U.S. totals in Btu are:

$$\begin{aligned} \text{PACCBZZ} &= \text{DFCCBZZ} + \text{KSCCBZZ} + \text{LGCCBZZ} + \text{MGCCBZZ} + \\ &\quad \text{RFCCBZZ} \\ \text{PACCBUS} &= \Sigma \text{PACCBZZ} \end{aligned}$$

### Industrial Sector

Petroleum used in the industrial sector includes: asphalt and road oil (AR); distillate fuel (DF); kerosene (KS); liquefied petroleum gases (LG); lubricants (LU); motor gasoline (MG); residual fuel (RF); and the 16 products that are already summed in the "other petroleum products" (PO) subtotal. The State and U.S. total estimates in physical units are:

$$\begin{aligned} \text{PAICPZZ} &= \text{ARICPZZ} + \text{DFICPZZ} + \text{KSICPZZ} + \text{LGICPZZ} + \\ &\quad \text{LUICPZZ} + \text{MGICPZZ} + \text{RFICPZZ} + \text{POICPZZ} \\ \text{PAICPUS} &= \Sigma \text{PAICPZZ} \end{aligned}$$

State and U.S. totals in Btu are:

$$\begin{aligned} \text{PAICBZZ} &= \text{ARICBZZ} + \text{DFICBZZ} + \text{KSICBZZ} + \text{LGICBZZ} + \\ &\quad \text{LUICBZZ} + \text{MGICBZZ} + \text{RFICBZZ} + \text{POICBZZ} \\ \text{PAICBUS} &= \Sigma \text{PAICBZZ} \end{aligned}$$

### Transportation Sector

Petroleum products used in the transportation sector are: aviation gasoline (AV), distillate fuel (DF), kerosene-type jet fuel (JK), naphtha-type jet fuel (JN), liquefied petroleum gases (LG), lubricants (LU), motor gasoline (MG), and residual fuel (RF). The State and U.S. totals in physical units are:

$$\begin{aligned} \text{PAACPZZ} &= \text{AVACPZZ} + \text{DFACPZZ} + \text{JKACPZZ} + \text{JNACPZZ} + \\ &\quad \text{LGACPZZ} + \text{LUACPZZ} + \text{MGACPZZ} + \text{RFACPZZ} \\ \text{PAACPUS} &= \Sigma \text{PAACPZZ} \end{aligned}$$

State and U.S. totals in Btu are:

$$\begin{aligned} \text{PAACBZZ} &= \text{AVACBZZ} + \text{DFACBZZ} + \text{JKACBZZ} + \text{JNACBZZ} + \\ &\quad \text{LGACBZZ} + \text{LUACBZZ} + \text{MGACBZZ} + \text{RFACBZZ} \end{aligned}$$

$$PAACBUS = \Sigma PAACBZZ$$

### Electric Utility Sector

Petroleum products consumed by the electric utility sector are: distillate fuel (DF), kerosene-type jet fuel (JK), petroleum coke (PC), and residual fuel (RF). In physical units, the State and U.S. totals are:

$$\begin{aligned} PAEUPZZ &= DFEUPZZ + JKEUPZZ + PCEUPZZ + RFEUPZZ \\ PAEUPUS &= \Sigma PAEUPZZ \end{aligned}$$

State and U.S. totals in Btu are:

$$\begin{aligned} PAEUBZZ &= DFEUBZZ + JKEUBZZ + PCEUBZZ + RFEUBZZ \\ PAEUBUS &= \Sigma PAEUBZZ \end{aligned}$$

### Total Consumption of Petroleum Products

Total consumption of all petroleum products is the sum of all of the individual product totals. The State and U.S. physical unit totals are:

$$\begin{aligned} PATCPZZ &= ARTCPZZ + AVTCPZZ + DFTCPZZ + JKTCPZZ + \\ &\quad JNTCPZZ + KSTCPZZ + LGTCPZZ + LUTCPZZ + \\ &\quad MGTCPZZ + RFTCPZZ + POTCPZZ \\ PATCPUS &= \Sigma PATCPZZ \end{aligned}$$

State and U.S. totals in Btu are:

$$\begin{aligned} PATCBZZ &= ARTCBZZ + AVTCBZZ + DFTCBZZ + JKTCBZZ + \\ &\quad JNTCBZZ + KSTCBZZ + LGTCBZZ + LUTCBZZ + \\ &\quad MGTCBZZ + RFTCBZZ + POTCBZZ \\ PATCBUS &= \Sigma PATCBZZ \end{aligned}$$

### Additional Calculations

Additional calculations are performed by CSEDS to provide data that are used in EIA's *Annual Energy Review* and published in the conversion factor

section of EIA's *Monthly Energy Review*. Conversion factors for all petroleum products consumed by each sector, as well as data for the residential and commercial sectors combined, are calculated by CSEDS.

The conversion factor for all petroleum products consumed by the residential sector is calculated:

$$PARCKUS = PARCBUS / PARCPUS$$

The conversion factor for all petroleum products consumed by the commercial sector is calculated:

$$PACCKUS = PACCBUS / PACCPUS$$

Consumption of all petroleum products by the residential and commercial sectors combined, in physical units, in Btu, and the average conversion factor are calculated:

$$\begin{aligned} PAHCPUS &= PARCPUS + PACCPUS \\ PAHCBUS &= PARCBUS + PACCBUS \\ PAHCKUS &= PAHCBUS / PAHCPUS \end{aligned}$$

The conversion factor for all petroleum products consumed by the industrial sector is calculated:

$$PAICKUS = PAICBUS / PAICPUS$$

The conversion factor for all petroleum products consumed by the transportation sector is calculated:

$$PAACKUS = PAACBUS / PAACPUS$$

The conversion factor for all petroleum products consumed by electric utilities is calculated:

$$PAEUKUS = PAEUBUS / PAEUPUS$$

The conversion factor for all petroleum products consumed by all sectors is calculated:

$$PATCKUS = PATCBUS / PATCPUS$$



## Section 5. Renewable Energy

Renewable energy sources included in the Combined State Energy Data System (CSEDS) comprise wood, waste, hydroelectric, geothermal, wind, photovoltaic, solar thermal energy and ethanol. Renewable energy consumption estimates for all sectors are available for 1960 forward.

### Ethanol

The transportation sector uses ethanol as an additive to motor gasoline. Ethanol can be derived from sugar cane, sugar beets, corn, sweet sorghum, wheat, and other grains. The U.S. total in CSEDS is a series developed by EIA from monthly reports of field production of oxygenated gasoline and refinery input of ethanol. The State data series, used to allocate the U.S. total to the States is based on the U.S. Department of Transportation, Federal Highway Administration data series published in *Highway Statistics*, which represents ethanol consumed in gasohol for 1993 forward and total gasohol sales in earlier years. Ethanol estimates are kept separately in CSEDS and shown in the *SEDR* tables to illustrate renewable energy use, but ethanol consumption is already accounted for within the motor gasoline data series. The ethanol data series are identified in CSEDS by the following names (“ZZ” in the variable name represents the two-letter State code that differs for each State):

ENTRPZZ = ethanol blended into motor gasoline (1993 forward) or total gasohol sales (1982 through 1992) by State, in thousand gallons; and

ENACPUS = ethanol consumed in the transportation sector in the United States, in thousand barrels.

The U.S. value, ENACPUS, is allocated to the States in proportion the *Highway Statistics* State estimates, ENTRPZZ:

$$\text{ENTRPUS} = \Sigma \text{ENTRPZZ}$$

$$\text{ENACPZZ} = (\text{ENTRPZZ} / \text{ENTRPUS}) * \text{ENACPUS}$$

Ethanol is converted to equivalent British thermal units (Btu) by using a conversion factor of 3.539 Btu per barrel.

$$\text{ENACBZZ} = \text{ENACPZZ} * 3.539$$

$$\text{ENACBUS} = \Sigma \text{ENACBZZ}$$

#### Data Sources

ENACPUS — Ethanol consumed by the transportation sector in the United States.

- 1960 through 1980: No data are available. Values are assumed to be zero.
- 1981 through 1992:
  - 1981, 1984, 1987, and 1989: EIA, *Estimates of U.S. Biofuels Consumption 1990*, Table 10.
  - 1982 and 1983: EIA, CNEAF, estimates.
  - 1985, 1986, 1988, and 1991: Values interpolated.
  - 1990 and 1992; EIA, *Estimates of U.S. Biomass Energy Consumption 1992*, Table D1.
- 1993 forward: EIA estimates based on data in the EIA *Petroleum Supply Monthly*, Tables 2 and 28.

ENTRPZZ — Ethanol blended into motor gasoline by State.

- 1960 through 1980: Values are set to be zero.
- 1981 through 1992: U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics, Summary to 1995*, Table MF-233GLA.

- 1993 through 1995: U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics, Summary to 1995*, Table MF-233E, column titled “Total Ethanol Used in Gasohol.”
- 1996 forward: U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics*, Table MF-33E, column titled “Total Ethanol Used in Gasohol.”

## Geothermal

Geothermal energy used as direct heat or from heat pumps in the residential, commercial, and industrial sectors is included in the Combined State Energy Data System (CSEDS) for 1989 forward. Geothermal energy used to generate electricity by nonutility power producers is also included in CSEDS industrial sector from 1989 forward. CSEDS data on energy input at electric utilities includes geothermal energy for all years, 1960 forward, and includes imports of electricity from Mexico that are generated from geothermal energy for 1989 forward. These data series are identified in CSEDS by the following names (“ZZ” in the variable name represents the two-letter State code that differs for each State):

- GECCBZZ = direct use of geothermal energy and heat pumps in the commercial sector by State, in billion Btu;
- GEEOPZZ = electricity produced from geothermal energy at electric utilities by State, in million kilowatthours;
- GEIMPZZ = electricity produced from geothermal energy and imported into the United States by State, in million kilowatthours;
- GEINBZZ = direct use of geothermal energy and heat pumps in the industrial sector by State, in billion Btu;
- GENGPZZ = electricity produced from geothermal energy by nonutility power producers by State, in million kilowatthours; and
- GERCBZZ = direct use of geothermal energy and heat pumps in the residential sector by State, in billion Btu.

The U.S. totals for the State-level series are calculated by summing the State data:

- GECCBUS =  $\Sigma$ GECCBZZ
- GEEOPUS =  $\Sigma$ GEEOPZZ
- GEIMPUS =  $\Sigma$ GEIMPZZ
- GEINBUS =  $\Sigma$ GEINBZZ
- GENGPUS =  $\Sigma$ GENGPZZ
- GERCBUS =  $\Sigma$ GERCBZZ

Electricity imports produced from geothermal energy are added to the electricity produced from geothermal energy at electric utilities to be shown in the “Geothermal Energy” column of the *State Energy Data Report (SEDR)* tables titled “Energy Input at Electric Utilities.”

- GEENPZZ = GEEOPZZ + GEIMPZZ
- GEENPUS =  $\Sigma$ GEENPZZ

To convert electricity produced from geothermal energy from kilowatthours into comparable British thermal units, a U.S. average factor that varies by year is used. The values for the factor, GEEOKUS, are shown in Appendix C, Table C1.

- GEEOKUS = factor for converting electricity produced from geothermal energy from kilowatthours to Btu.

The values for each sector within each State are converted to Btu:

- GEEOBZZ = GEEOPZZ \* GEEOKUS
- GEEOBUS =  $\Sigma$ GEEOBZZ
- GEIMBZZ = GEIMPZZ \* GEEOKUS
- GEIMBUS =  $\Sigma$ GEIMBZZ
- GEENBZZ = GEEOBZZ + GEIMBZZ
- GEENBUS =  $\Sigma$ GEENBZZ
- GENGBZZ = GENGPZZ \* GEEOKUS
- GENGBUS =  $\Sigma$ GENGBZZ

Industrial sector use of geothermal energy is the sum of direct use and heat pumps and electricity produced by nonutility power producers:

- GEICBZZ = GEINBZZ + GENGBZZ
- GEICBUS =  $\Sigma$ GEICBZZ

The State totals for geothermal energy are the sum of the residential, commercial, and industrial sectors’ use and the electric utilities’ geothermal-based generation (including imports). The U.S. total is the sum of the State data.

GETCBZZ = GERCBZZ + GECCBZZ + GEICBZZ + GEENBZZ

GETCBUS =  $\Sigma$ GETCBZZ

### **Additional Note**

Geothermal energy from direct use and heat pumps in the residential, commercial, and industrial sectors are from the Oregon Institute of Technology Geoheat Center. State data for 1989, 1994, 1998 and 1999 are from surveys. U.S. totals for intervening years are estimates. The State data for 1989, 1994, and 1998 are used to estimate the State values for intervening years by using the following methodology. States with the same value in two survey years are assigned that value for each intervening year. For States with increases or decreases in the survey data, the difference is allocated evenly over the intervening years. If a State went from zero to a value or from a value to zero, it was given zero in the intervening years. The State data for each intervening year are summed and States with increasing or decreasing values are adjusted until the U.S. total equals the U.S. total estimated by the Oregon Institute of Technology Geoheat Center.

### **Data Sources**

GECCBZZ — Direct use and heat pump geothermal energy in the commercial sector.

- 1960 through 1988: No data available. Values assumed to be zero.
- 1989: Lund, John W., Oregon Institute of Technology Geoheat Center, unpublished tables, (Klamath Falls, Oregon: April 1999), based on a survey.
- 1990 through 1993: U.S. totals are estimates from the Oregon Institute of Technology Geoheat Center, unpublished tables. State data for 1989 and 1994 are used to estimate State values for the intervening years. For an the explanation of the estimation methodology, see the “Additional Note” on page 407.
- 1994: Lund, John W., Oregon Institute of Technology Geoheat Center, unpublished tables, (Klamath Falls, Oregon: April 1999), based on a survey.
- 1995 through 1997: U.S. totals are from the Oregon Institute of Technology Geoheat Center, unpublished tables. State data for 1994 and 1998 are used to estimate State values for the intervening years.

For an the explanation of the estimation methodology, see the “Additional Note” on page 407.

- 1998 and 1999: Lund, John W., Oregon Institute of Technology Geoheat Center, unpublished tables, (Klamath Falls, Oregon: April 1999 and September 2000), based on a survey and estimations.

GEEOKUS — Factor for converting electricity produced from geothermal energy from physical units to Btu.

- 1960 through 1981: Calculated by EIA by weighting the annual average heat rates of operating geothermal units by the installed nameplate capacities as reported on Federal Power Commission Form 12.
- 1982 forward: Estimated annually by the EIA on the basis of an informal survey of relevant plants.

GEEOPZZ — Electricity produced from geothermal energy at electric utilities by State.

- EIA, Form EIA-759, “Monthly Power Plant Report,” and predecessor forms.

GEIMPZZ — Electricity produced from geothermal energy and imported into the United States by State.

- 1960 through 1988: No data available. Values assumed to be zero.
- 1989 forward: EIA estimates based on data from U.S. Department of Energy, Fossil Energy, Form FE-781R, “Annual Report of International Electricity Export/Import Data.”

GEINBZZ — Direct use and heat pump geothermal energy in the industrial sector.

- 1960 through 1988: No data available. Values assumed to be zero.
- 1989: Lund, John W., Oregon Institute of Technology Geoheat Center, unpublished tables, (Klamath Falls, Oregon: April 1999), based on a survey.
- 1990 through 1993: U.S. totals are estimates from the Oregon Institute of Technology Geoheat Center, unpublished tables. State data for 1989 and 1994 are used to estimate State values for the intervening years. For an the explanation of the estimation methodology, see the “Additional Note” on page 407.

- 1994: Lund, John W., Oregon Institute of Technology Geoheat Center, unpublished tables, (Klamath Falls, Oregon: April 1999), based on a survey.
- 1995 through 1997: U.S. totals are from the Oregon Institute of Technology Geoheat Center, unpublished tables. State data for 1994 and 1998 are used to estimate State values for the intervening years. For an the explanation of the estimation methodology, see the “Additional Note” on page 407.
- 1998 and 1999: Lund, John W., Oregon Institute of Technology Geoheat Center, unpublished tables, (Klamath Falls, Oregon: April 1999 and September 2000), based on a survey and estimations.

GENGPZZ — Electricity produced from geothermal energy by nonutility power producers by State.

- 1960 through 1988: No data available. Values assumed to be zero.
- 1989 forward: EIA estimates based on data collected on Form EIA-867, “Annual Nonutility Power Producers Report” and the Form EIA-860B, “Annual Electric Generator Report–Nonutility.”

GERCBZZ — Direct use and heat pump geothermal energy in the residential sector.

- 1960 through 1988: No data available. Values assumed to be zero.
- 1989: Lund, John W., Oregon Institute of Technology Geoheat Center, unpublished tables, (Klamath Falls, Oregon: April 1999), based on a survey.
- 1990 through 1993: U.S. totals are estimates from the Oregon Institute of Technology Geoheat Center, unpublished tables. State data for 1989 and 1994 are used to estimate State values for the intervening years. For an the explanation of the estimation methodology, see the “Additional Note” on page 407.
- 1994: Lund, John W., Oregon Institute of Technology Geoheat Center, unpublished tables, (Klamath Falls, Oregon: April 1999), based on a survey.
- 1995 through 1997: U.S. totals are from the Oregon Institute of Technology Geoheat Center, unpublished tables. State data for 1994 and 1998 are used to estimate State values for the intervening years. For an the explanation of the estimation methodology, see the “Additional Note” on page 407.

- 1998 and 1999: Lund, John W., Oregon Institute of Technology Geoheat Center, unpublished tables, (Klamath Falls, Oregon: April 1999 and September 2000), based on a survey and estimations.

## Hydroelectric Power

Electricity produced from hydropower in the industrial sector and by electric utilities is included in CSEDS for all years. From 1990 forward, data are available separately for the two types of hydropower—conventional and pumped storage. Conventional hydroelectric power uses falling water to drive turbines to produce electricity. With pumped storage hydroelectricity, energy is used to pump water into higher storage areas during non-peak hours so that it can be released to drive turbines during times of peak electricity demand. Because pumped storage hydroelectricity uses energy, it is not considered a renewable energy source; however, it is discussed in this chapter with other hydropower. The industrial sector includes estimates of hydroelectricity generation by industries for their own use for all years, as well as generation by nonutility power producers for sale in 1989 forward as collected on the Form EIA-867, “Annual Nonutility Power Producers Report” and the Form EIA-860B, “Annual Electric Generator Report–Nonutility.” Data on electric utilities’ use of hydropower are collected on the Form EIA-759, “Monthly Power Plant Report.” CSEDS hydroelectricity data also include electricity imports and exports traded with Canada that are generated from hydropower.

The hydroelectric data series included in CSEDS are identified by the following names (“ZZ” in the name represents the two-letter State code that differs for each State):

- HVEOPZZ = electricity produced by conventional hydroelectric power at electric utilities, in million kilowatthours;
- HPEOPZZ = electricity produced by pumped storage hydroelectric power at electric utilities, in million kilowatthours;
- HVATPZZ = electricity produced by conventional hydroelectric power at nonutility power producers by State, in million kilowatthours;
- HPATPZZ = electricity produced by pumped storage hydroelectric power at nonutility power producers, by State, in million kilowatthours;

HYIMPZZ = electricity produced from hydroelectric power and imported into the United States, by State, in million kilowatthours; and  
 HYEXPZZ = electricity produced from hydroelectric power and exported from the United States, by State, in million kilowatthours.

The U.S. value for each of the series is the sum of the State data.

Total electricity produced from hydropower at electric utilities and at nonutility power producers is calculated as the sum of conventional and pumped storage hydroelectric power.

HYEOPZZ = HVEOPZZ + HPEOPZZ  
 HYATPZZ = HVATPZZ + HPATPZZ  
 HYEOPUS =  $\Sigma$ HYEOPZZ  
 HYATPUS =  $\Sigma$ HYATPZZ

Hydroelectric-based electricity that is imported and exported across U.S. borders is added to the electric utility hydroelectric generation and shown in the "Hydroelectric Power" column of the *State Energy Data Report (SEDR)* tables titled "Energy Input at Electric Utilities."

HYENPZZ = HYEOPZZ + HYIMPZZ – HYEXPZZ  
 HYENPUS =  $\Sigma$ HYENPZZ

Additional calculations are made to estimate the renewable portion of hydroelectric power at electric utilities, i.e., excluding hydroelectricity produced from pumped storage:

HVENPZZ = HVEOPZZ + HYIMPZZ – HYEXPZZ  
 HVENPUS =  $\Sigma$ HVENPZZ

Electricity produced from hydroelectric power is converted from kilowatthours into Btu by using a conversion factor that is the U.S. average heat content of fossil fuels consumed at steam-electric power plants, FFEOKUS. The annual values for this factor are shown in Appendix C, Table C1.

HVATBZZ = HVATPZZ \* FFEOKUS

HPATBZZ = HPATPZZ \* FFEOKUS  
 HYATBZZ = HVATBZZ + HPATBZZ

HPEOBZZ = HPEOPZZ \* FFEOKUS  
 HVEOBZZ = HVEOPZZ \* FFEOKUS  
 HYEOBZZ = HPEOBZZ + HVEOBZZ

HYIMBZZ = HYIMPZZ \* FFEOKUS  
 HYEXBZZ = HYEXPZZ \* FFEOKUS  
 HYENBZZ = HYEOBZZ + HYIMBZZ – HYEXBZZ  
 HVENBZZ = HVEOBZZ + HYIMBZZ – HYEXBZZ

The U.S. value for each of the series is the sum of the State data.

Total hydroelectricity consumption for each State is the sum of the electric utilities generation (plus imports and minus exports) and the nonutility power producers generation:

HYTCPZZ = HYENPZZ + HYATPZZ  
 HYTCPUS =  $\Sigma$ HYTCPZZ

HYTCBZZ = HYENBZZ + HYATBZZ  
 HYTCBUS =  $\Sigma$ HYTCBZZ

**Data Sources**

FFEOKUS — Fossil fuel steam-electric power plant conversion factor.

- 1960 through 1988: Estimated by EIA as the weighted annual average heat rate for fossil-fueled steam-electric plants in the United States as published in the EIA, *Electric Plant Cost and Power Production Expenses 1991*, Table 9.
- 1989 forward: Calculated annually by EIA on the basis of data from Form EIA-767 "Steam-Electric Plant Operation and Design Report."

HPATPZZ — Electricity produced from pumped storage hydropower at industrial facilities by State.

- 1960 through 1988: No data available. Assumed to be zero.
- 1989 forward: EIA estimates based on data collected on Form EIA-867, "Annual Nonutility Power Producers Report" and the Form EIA-860B, "Annual Electric Generator Report–Nonutility."



HPEOPZZ — Electricity produced from pumped storage hydropower at electric utilities by State.

- 1960 through 1989: Included in conventional hydroelectric power.
- 1990 forward: EIA, Form EIA-759, “Monthly Power Plant Report.”

HVATPZZ — Electricity produced from conventional hydropower at industrial facilities by State

- 1960 through 1978: Federal Power Commission, Form 4, “Monthly Power Plant Report.”
- 1979 and 1980: EIA estimates based on previous years’ data.
- 1981 through 1988: No data available. The 1980 data are repeated for each year.
- 1989 forward: EIA estimates based on data collected on Form EIA-867, “Annual Nonutility Power Producers Report” and the Form EIA-860B, “Annual Electric Generator Report–Nonutility.”

HVEOPZZ — Electricity produced from conventional hydropower at electric utilities (includes pumped storage hydroelectric power through 1989) by State.

- 1960 through 1977: Federal Power Commission, News Release, “Power Production, Fuel Consumption, and Installed Capacity Data.”
- 1978 through 1980: EIA, *Energy Data Reports*, “Power Production, Fuel Consumption and Installed Capacity Data.”
- 1981 through 1989: EIA, Form EIA-759, “Monthly Power Plant Report,” and predecessor forms. Published data rounded to gigawatthours in the following reports:
  - 1981 through 1985: EIA, *Electric Power Annual 1985*, Table 6.
  - 1986 and 1987: EIA, *Electric Power Annual 1987*, Table 18.
  - 1988 and 1989: EIA, *Electric Power Annual 1989*, Table 14.
- 1990 forward: EIA, Form EIA-759, “Monthly Power Plant Report.”

HYEXPZZ — Electricity produced from hydroelectric power and exported from the United States by State.

- 1960 through 1988: Assumed to be equal to total electricity exports (ELEXPZZ).
- 1989 forward: EIA estimates based on data from Natural Resources Canada and the National Energy Board of Canada.

HYIMPZZ — Electricity produced from hydroelectric power and imported into the United States by State.

- 1960 through 1988: Assumed to be equal to total electricity imports (ELIMPZZ).
- 1989 forward: EIA estimates based on data from Natural Resources Canada and the National Energy Board of Canada.

## Solar

Estimates of solar energy use for the residential and commercial sectors combined and the industrial sector are included in the Combined State Energy Data System (CSEDS) for 1989 forward. Generation of electricity by electric utilities from solar energy sources is included in CSEDS for 1984 forward.

### Residential/Commercial Sector

Solar thermal energy use in the residential and commercial sectors combined in the United States is estimated by EIA in billion Btu and published in the EIA *Annual Energy Review* for 1989 forward. A State-level series for allocating the U.S. total to the States is developed by EIA from accumulated data on shipments of solar thermal collectors to States, measured in square feet, as collected on the EIA Form CE-63A, “Annual Solar Thermal Collector Manufacturers Survey,” and predecessor surveys. The data are published for recent years in the EIA *Renewable Energy Annual*. The assumption is made that the retirement/replacement period for solar thermal collectors is 20 years. The data series are identified in CSEDS by the following names (“ZZ” in the variable name represents the two-letter State code that differs for each State):

- SOTTPZZ = shipments of solar thermal energy collectors, in square feet, and
- SOHCBUS = energy produced by solar thermal and photovoltaic energy collectors in the residential and commercial sectors combined, in billion Btu.

The U.S. total of the allocating series is calculated as the sum of the State data and the U.S. total residential/commercial solar energy is allocated to the States as follows:

$$\begin{aligned} \text{SOTTPUS} &= \Sigma \text{SOTTPZZ} \\ \text{SOHCBZZ} &= (\text{SOTTPZZ} / \text{SOTTPUS}) * \text{SOHCBUS} \end{aligned}$$

### Industrial Sector and Electric Utilities

Estimates of electricity produced from photovoltaic and solar thermal energy sources by nonutility power producers are included in the CSEDS industrial sector for 1989 forward from data collected on the Form EIA-867, "Annual Nonutility Power Producers Report." and the Form EIA-860B, "Annual Electric Generator Report-Nonutility." Electric utilities' generation from solar sources are included for 1984 forward as collected on the Form EIA-759, "Monthly Power Plant Report." The data series are identified in CSEDS by the following names ("ZZ" in the variable name represents the two-letter State code that differs for each State):

$$\begin{aligned} \text{SOEOPZZ} &= \text{electricity produced from photovoltaic and solar thermal energy sources at electric utilities, by State, in million kilowatthours; and} \\ \text{SOICPZZ} &= \text{electricity produced from photovoltaic and solar thermal energy sources by nonutility power producers, by State, in million kilowatthours.} \end{aligned}$$

U.S. totals for these series are calculated as the sum of the State data:

$$\begin{aligned} \text{SOEOPUS} &= \Sigma \text{SOEOPZZ} \\ \text{SOICPUS} &= \Sigma \text{SOICPZZ} \end{aligned}$$

Electricity produced from photovoltaic and solar thermal energy at electric utilities is converted from kilowatthours to Btu by using a conversion factor that is the U.S. average heat content of fossil fuels consumed at steam-electric power plants, FFEOKUS. The annual values for this factor are shown in Appendix C, Table C1.

$$\begin{aligned} \text{SOEOBZZ} &= \text{SOEOPZZ} * \text{FFEOKUS} \\ \text{SOEOBUS} &= \Sigma \text{SOEOBZZ} \end{aligned}$$

$$\begin{aligned} \text{SOICBZZ} &= \text{SOICPZZ} * \text{FFEOKUS} \\ \text{SOICBUS} &= \Sigma \text{SOICBZZ} \end{aligned}$$

### Totals

Each State's total use of photovoltaic and solar thermal energy sources is the sum of the sectors' values, and the U.S. total is the sum of the States' totals:

$$\begin{aligned} \text{SOTCBZZ} &= \text{SOHCBZZ} + \text{SOICBZZ} + \text{SOEOBZZ} \\ \text{SOTCBUS} &= \Sigma \text{SOTCBZZ} \end{aligned}$$

### Data Sources

FFEOKUS — Fossil fuel steam-electric power plant conversion factor.

- 1960 through 1988: Estimated by EIA as the weighted annual average heat rate for fossil-fueled steam-electric plants in the United States as published in the EIA, *Electric Plant Cost and Power Production Expenses 1991*, Table 9.
- 1989 forward: Calculated annually by EIA on the basis of data from Form EIA-767 "Steam-Electric Plant Operation and Design Report."

SOEOPZZ — Electricity produced from solar thermal energy sources at electric utilities by State.

- 1960 through 1983: No data available. Values are assumed to be zero.
- 1984 forward: EIA, Form EIA-759, "Monthly Power Plant Report."

SOHCBUS — Electricity produced from solar thermal energy sources in the residential and commercial sectors in the United States.

- 1960 through 1988: No data available. Values are zero.
- 1989 forward: EIA, *Annual Energy Review 1999*, Table 10.2.

SOICPZZ — Electricity produced from solar thermal energy sources in the industrial sector by State.

- 1960 through 1988: No data available. Values are assumed to be zero.

- 1989 forward: EIA estimates based on data collected on Form EIA-867, "Annual Nonutility Power Producers Report" and the Form EIA-860B, "Annual Electric Generator Report-Nonutility."

SOTTPZZ — Electricity produced from solar thermal energy sources in the residential and commercial sectors combined by State.

- 1960 through 1988: Values are assumed to be zero for consistency with other EIA reports.
- 1989 forward: Shipments of solar thermal collectors in the United States, in thousand square feet, for 1974 forward that are collected on the EIA Form CE-63A, "Annual Solar Thermal Collector Manufacturers Survey," are accumulated each year on the basis of the assumption that the replacement/retirement period for solar thermal collectors is 20 years. Data for 1974 through 1985 are available for the U.S. total only. U.S. values are allocated to the States by using an allocating series that is the simple average of each State's 1986 and 1987 data. The U.S. data are adjusted to remove Puerto Rico and the Virgin Islands. California data for 1986 forward are reduced by the number of high-temperature solar thermal collectors (used at an electric utility in California).
  - State data for 1986 through 1992 used in the accumulated data series are published in the EIA, *Solar Collector Manufacturing Activity* for each year. The table numbers are:
    - 1986 through 1988: Table 5.
    - 1989: Table 4.
    - 1990 through 1992: Table 13.
 California data for 1986 through 1992 are reduced by the number of high-temperature solar thermal collectors shown in the EIA, *Renewable Energy Annual 1995*, Table 13.
  - 1993 and 1994: EIA, *Renewable Energy Annual 1995*, Tables 13 and H3.
  - 1995: EIA, *Renewable Energy Annual 1996*, Tables F9 and F10.
  - 1996: EIA, *Renewable Energy Annual 1997*, Tables 16 and 17.
  - 1997: EIA, *Renewable Energy Annual 1998*, Tables 15 and 19.
  - 1998: EIA, *Renewable Energy Annual 1999*, Tables 12 and 16.
  - 1999: Data not available. 1998 values used for 1999.

## Wind

Wind energy used to produce electricity by nonutility power producers is included in the CSEDS industrial sector for 1989 forward from data collected on the Form EIA-867, "Annual Nonutility Power Producers Report" and the Form EIA-860B, "Annual Electric Generator Report-Nonutility." Electricity generation from wind energy by electric utilities is included for 1983 forward as collected on the Form EIA-759, "Monthly Power Plant Report." The data are identified in CSEDS by the following names ("ZZ" in the variable name represents the two-letter State code that differs for each State):

- WYEOPZZ = electricity produced from wind energy at electric utilities, by State, in million kilowatthours; and
- WYICPZZ = electricity produced from wind energy in the industrial sector, by State, in million kilowatthours.

The U.S. totals are calculated as the sum of the State data:

$$\begin{aligned} \text{WYEOPUS} &= \sum \text{WYEOPZZ} \\ \text{WYICPUS} &= \sum \text{WYICPZZ} \end{aligned}$$

Electricity produced from wind energy at electric utilities is converted from kilowatthours to Btu by using a conversion factor that is the U.S. average heat content of fossil fuels consumed at steam-electric power plants, FFEOKUS. The annual values for this factor are shown in Appendix C, Table C1.

$$\begin{aligned} \text{WYEOBZZ} &= \text{WYEOPZZ} * \text{FFEOKUS} \\ \text{WYEOBUS} &= \sum \text{WYEOBZZ} \\ \text{WYICBZZ} &= \text{WYICPZZ} * \text{FFEOKUS} \\ \text{WYICBUS} &= \sum \text{WYICBZZ} \end{aligned}$$

The State and U.S. totals for wind energy are calculated:

$$\begin{aligned} \text{WYTCBZZ} &= \text{WYEOBZZ} + \text{WYICBZZ} \\ \text{WYTCBUS} &= \sum \text{WYTCBZZ} \end{aligned}$$

## Data Sources

FFEOKUS — Fossil fuel steam-electric power plant conversion factor.

- 1960 through 1988: Estimated by EIA as the weighted annual average heat rate for fossil-fueled steam-electric plants in the United States as published in the EIA, *Electric Plant Cost and Power Production Expenses 1991*, Table 9.
- 1989 forward: Calculated annually by EIA on the basis of data from Form EIA-767 “Steam-Electric Plant Operation and Design Report.”

WYEOPZZ — Electricity produced from wind at electric utilities by State.

- 1960 through 1982: No data available. Values are assumed to be zero.
- 1983 forward: EIA, Form EIA-759, “Monthly Power Plant Report.”

WYICPZZ — Electricity produced from wind in the industrial sector by State.

- 1960 through 1988: No data available. Values are assumed to be zero.
- 1989 forward: EIA estimates based on data collected on Form EIA-867, “Annual Nonutility Power Producers Report” and the Form EIA-860B, “Annual Electric Generator Report–Nonutility.”

## Wood and Waste

Different forms of wood and waste are used by each consuming sector. The residential and commercial sectors burn wood for space heating. The industrial sector uses combustible industrial by-products and wood chips for electricity generation and process steam. Electric utilities use wood, industrial wood waste and waste gas, and municipal waste as cofiring or primary fuels to produce electricity. Consumption of wood and waste in all sectors is included in CSEDS for 1960 forward.

## Residential Sector

### Physical Units

Estimates of wood consumed in the residential sector by State for 1960 through 1979 are from the EIA, *Estimates of U.S. Wood Energy Consumption from 1949 to 1981*. For 1980 forward, State estimates are developed from U.S. totals published in the EIA *Annual Energy Review*, from Census division data collected on the EIA triennial survey, *Residential Energy Consumption Survey (RECS)* for 1981, 1984, 1987, 1990, 1993, and 1997, and from U.S. Department of Commerce, Bureau of the Census, annual estimates of number of housing units per State. The 1981 *RECS* provides wood consumption data for the national total and Census Regions. For all other years, *RECS* provides data for the national total and Census Divisions. In addition, the survey sample size of the 1993 *RECS* was large enough to provide data for California, Florida, New York, and Texas and the 1997 *RECS* provides data for California, New York, and Texas. Estimates for the other States in 1993 and 1997, and for all States in the other years are developed by allocating the U.S. total from the *AER* to the Census Divisions or Regions in proportion to *RECS* data. The regional values are then allocated to the States within the regions in proportion to the Census Bureau housing units per State. Estimates for the years intervening the *RECS* surveys are based on the annual U.S. totals from the *AER* and the State proportions of the preceding available *RECS*, i.e., 1982 and 1983 estimates are based on the State proportions of the 1981 data. On the basis of *RECS* data, the assumption is made that no wood is consumed in the residential sector in Hawaii.

The State data derived above are used in CSEDS as wood consumption in the residential sector, identified in the system as WDRCPZZ. “ZZ” in the following variable name represents the two-letter State code that differs for each State.

WDRCPZZ = wood consumed in the residential sector of each State, in thousand cords.

The State-level data are summed to a U.S. total:

WDRCPUS =  $\sum$ WDRCPZZ

### British Thermal Units (Btu)

The residential sector data in cords are converted to Btu by using the conversion factor of 20 million Btu per cord:

$$\text{WDRCBZZ} = \text{WDRCPZZ} * 20$$

$$\text{WDRCBUS} = \Sigma \text{WDRCBZZ}$$

### Data Sources

WDRCPZZ — Wood energy consumed by the residential sector by State.

- 1960 through 1979: EIA, *Estimates of U.S. Wood Consumption from 1949 to 1981*, Table A4. Data published in thousand short tons are converted to thousand cords by using the factors of one short ton equals 17.2 million Btu (as published in the footnote of Table A4) and 20 million Btu equal one cord of wood, (as published in EIA, *Household Energy Consumption and Expenditures 1993*, page 314.
- 1980 forward: U.S. totals published in the EIA *Annual Energy Review 1999*, Table 10.4 are converted from trillion Btu to thousand cords (by using the factor of 20 million Btu per cord) and allocated to the States as described below. Hawaii residential wood consumption is assumed to be zero for all years.
  - 1980 through 1983: U.S. Census Region wood consumption in thousand cords from Form EIA-457, “1981 Residential Energy Consumption Survey” is allocated to the States within each Region in proportion to the U.S. Department of Commerce, Bureau of the Census, *American Housing Survey*, “Total Housing Units for States, July 1, 1981.” This derived 1981 State series is used to allocate the *AER* annual U.S. residential wood consumption to the States for 1980 through 1983.
  - 1984 through 1986: U.S. Census Division wood consumption in thousand cords from Form EIA-457, “1984 Residential Energy Consumption Survey” is allocated to the States within each Division in proportion to the U.S. Department of Commerce, Bureau of the Census, *American Housing Survey*, “Total Housing Units for States, July 1, 1984.” This derived 1984 State series is used to allocate the *AER* annual U.S. residential wood consumption to the States for 1984 through 1986.
  - 1987 through 1989: U.S. Census Division wood consumption in thousand cords from Form EIA-457, “1987 Residential Energy

Consumption Survey” is allocated to the States within each Division in proportion to the U.S. Department of Commerce, Bureau of the Census, *American Housing Survey*, “Total Housing Units for States, July 1, 1987.” This derived 1987 series is used to allocate the *AER* annual U.S. residential wood consumption to the States for 1987 through 1989.

- 1990 through 1992: U.S. Census Division wood consumption in thousand cords are from Form EIA-457, “1990 Residential Energy Consumption Survey.” State-level estimates are available for 1993 for California, Florida, New York, and Texas from the Form EIA-457, “1993 Residential Energy Consumption Survey.” Those four States’ percentages of their respective Division totals in the 1993 survey are applied to the 1990 Census Division data to derive their 1990 values. Wood consumption by the other States in each Division is estimated by allocating the remaining Division data to the States in proportion to the U.S. Department of Commerce, Bureau of the Census, Internet file (ST-98-51) “Estimates of Housing Units,...Annual Time Series,...(includes revised April 1, 1990 census housing...)” column titled “4/1/90 Census” at <http://www.census.gov/population/estimates/housing/sthuhh6.txt>. This derived 1990 State series is used to allocate the *AER* annual U.S. residential wood consumption to the States for 1990 through 1992.
- 1993 through 1996: Residential wood consumption data for U.S. Census Divisions and for California, Florida, New York, and Texas are from Form EIA-457, “1993 Residential Energy Consumption Survey.” Data for the other States in each Division are estimated by allocating the remaining Division data to the States in proportion to the U.S. Department of Commerce, Bureau of the Census, Internet file (ST-98-51) “Estimates of Housing Units,...Annual Time Series, July 1, 1991 to July 1, 1998...,” column titled “7/1/93” at <http://www.census.gov/population/estimates/housing/sthuhh6.txt>. This derived 1993 State series is used to allocate the *AER* annual U.S. residential wood consumption to the States for 1993 through 1996.
- 1997 forward: Residential wood consumption data for U.S. Census Divisions and for California, Florida, New York, and Texas are from Form EIA-457, “1997 Residential Energy Consumption Survey.” Data for the other States in each Division are estimated by allocating the remaining Division data to the States in proportion to the U.S. Department of Commerce, Bureau of the

Census, Internet file (ST-98-51) "Estimates of Housing Units,...Annual Time Series, July 1, 1991 to July 1, 1998..." column titled "7/1/97" at <http://www.census.gov/population/estimates/housing/sthuhh6.txt>. This derived 1997 State series is used to allocate the *AER* annual U.S. residential wood consumption to the States for 1997 forward.

## Commercial Sector

### Physical Units

Estimates of wood consumed in the commercial sector by State for 1960 through 1979 are from the EIA, *Estimates of U.S. Wood Energy Consumption from 1949 to 1981*. The data published in thousand short tons are converted to billion Btu by using the conversion factor of one short ton equals 17.2 million Btu. The assumption was made in that report that wood is consumed in the commercial sector in proportion to consumption in the residential sector each year. For 1980 forward national level commercial wood consumption estimates in trillion Btu are from the EIA, *Annual Energy Review*. Using the same methodology as for previous years, the national data are allocated to the States in proportion to residential sector wood use each year.

The data series derived above are used in CSEDS as estimated wood consumption in the commercial sector, WDCCBZZ. "ZZ" in the variable names represents the two-letter State code that differs for each State.

WDCCBUS = wood consumed by the commercial sector in the United States, in billion Btu; and

WDRCPZZ = wood consumed in the residential sector of each State, in thousand cords.

The national wood value is allocated to the States in proportion to residential wood series:

$$WDCCBZZ = (WDRCPZZ / WDRCPUS) * WDCCBUS$$

### British Thermal Units (Btu)

The commercial wood consumption estimates are converted from Btu to cords by using the conversion factor of 20 million Btu per cord:

$$\begin{aligned} WDCCPZZ &= WDCCBZZ / 20 \\ WDCCPUS &= \Sigma WDCCPZZ \end{aligned}$$

### Data Sources

WDCCBUS — Wood consumed by the commercial sector in the United States.

- 1960 through 1979: EIA, *Estimates of U.S. Wood Energy Consumption from 1949 to 1981*, Table A7. Data published in thousand short tons are converted to Btu using the factor of one short ton equals 17.2 million Btu (as stated in the footnote of Table A7).
- 1980 forward: EIA, data in billion Btu shown in trillion Btu in the *Annual Energy Review 1999*, Table 10.4.

WDRCPZZ — Wood energy consumed by the residential sector by State. See sources on page 414.

## Industrial Sector

Industrial sector wood and waste consumption estimates by State for 1960 through 1979 are from the EIA, *Estimates of U.S. Wood Energy Consumption from 1949 to 1981*. The data, published in thousand short tons, are converted to billion Btu using the factor 1 short ton equals 17.2 million Btu.

Estimates for 1980 through 1995 are based on a national-level data series published for 1989 forward in the EIA, *Annual Energy Review (AER)*. National wood and waste consumption by type is collected by Standard Industrial Code (SIC) on the EIA triennial survey Form EIA-846, "Manufacturing Energy Consumption Survey" (MECS) for 1985, 1988, 1991, and 1994. The assumption is made that wood and waste use in the manufacturing sector occurs primarily in the industries included in SIC series 2421 (sawmills and planing mills), 2511 (wood household furniture), 2621 (paper mills), 2046 (wet corn milling), and 2061 (raw cane sugar). The amount of wood and waste consumed by each of the SIC groups of

industries is estimated from the MECS data, and the MECS proportions are used to allocate the U.S. totals from the *AER* to SIC groups for each year. The SIC annual subtotals are allocated to the States using State-level data on the value added in manufacturing processes for each of the SIC series published in the U.S. Department of Commerce, Bureau of the Census, *Census of Manufactures, Industry Series*, for 1982, 1987, and 1992.

Estimates for 1996 forward use the same methodology described in the previous paragraph with the exception that the Bureau of the Census *1997 Economic Census* uses North American Industry Classification System (NAICS) instead of Standard Industrial Codes. Some categories used in CSEDS estimations are directly comparable (NAICS 311221 to SIC 2046, NAICS 311311 to SIC 2061, and NAICS 322130 to SIC 2631), some are closely (over 97 percent) comparable (NAICS 337122 to SIC 2511 and the sum of NAICS 321113 and 321912 to SIC 2421), and one is roughly (74 percent) comparable (NAICS 322121 to SIC 2621). The discontinuity in these State allocating series is not significant in light of the broad assumptions of the estimation methodology.

For 1989 forward, State-level data on wood and waste consumption by nonutility power producers are available from the Form EIA-867, "Annual Nonutility Power Producer Report" and the Form EIA-860B, "Annual Electric Generator Report–Nonutility." These data are used with the manufacturing data to estimate total industrial sector wood and waste consumption for each State.

Industrial wood and waste data series are identified in CSEDS by the following names ("ZZ" in the variable name represents the two-letter State code that differs for each State):

WWATBZZ = electricity produced from wood and waste by nonutility power producers in each State, in billion Btu; and  
 WWINBZZ = wood and waste consumed by the manufacturing portion of the industrial sector of each State, in billion Btu.

The U.S. total of the State series is calculated as the sum of the State data:

WWATBUS =  $\Sigma$ WWATBZZ  
 WWINBUS =  $\Sigma$ WWINBZZ

The total industrial sector is calculated as the sum of consumption by non-utilities and the manufacturing sector:

WWICBZZ = WWINBZZ + WWATBZZ  
 WWICBUS =  $\Sigma$ WWICBZZ

There are no comparable physical units because industrial wood and waste consumption is measured in a variety of units (e.g., tons, cubic feet, and kilowatthours).

**Data Sources**

WWATBZZ — Wood and waste consumed by nonutility power producers by State.

- 1960 through 1988: No data available. Values are assumed to be zero.

1989 forward: EIA estimates based on data collected on Form EIA-867, "Annual Nonutility Power Producers Report" and the Form EIA-860B, "Annual Electric Generator Report–Nonutility."

WWINBZZ — Wood and waste consumed by the manufacturing sector by State.

- 1960 through 1979: EIA, *Estimates of U.S. Wood Energy Consumption from 1949 to 1981*, Table A10. Data published in thousand short tons are converted to Btu by using the factor of one short ton equals 17.2 million Btu (as published in the footnote of Table A10).
- 1980 forward: EIA estimates developed by using three data sources. U.S. totals for each year are as published for selected years in the EIA, *Annual Energy Review 1998 (AER)*, Table 10.3.
  - 1980 through 1985: U.S. totals from the *AER* are allocated to Standard Industrial Code (SIC) groups 20, 24, 25, and 26 based on data from the EIA "Manufacturing Energy Consumption Survey 1985 (MECS)," Table 3. These SIC subtotals are allocated to the States using State-level series from the U.S. Department of Commerce, Bureau of the Census, *1982 Census of Manufactures*, Table 2, column titled "Value Added by Manufacture," from the publications for Industry 2061 Raw Cane Sugar, Industry 2046 Wet Corn Milling, Industry 2421 Sawmills and Planing Mills, Industry 2511 Wood Household Furniture, Industry 2621 Paper

Mills, and Industry 2631 Paperboard Mills. The State values for each of the four SIC groups are summed to derive State total wood and waste industrial consumption estimates.

- 1986 through 1989: U.S. totals from the *AER* are allocated to Standard Industrial Code (SIC) groups 20, 24, 25, and 26 based on data from the EIA “Manufacturing Energy Consumption Survey 1988 (MECS),” Tables 2 and 18. These SIC subtotals are allocated to the States using State-level series from the U.S. Department of Commerce, Bureau of the Census, *1987 Census of Manufactures*, Table 2, column titled “Value Added by Manufacture,” from the publications for Industry 2061 Raw Cane Sugar, Industry 2046 Wet Corn Milling, Industry 2421 Sawmills and Planing Mills, Industry 2511 Wood Household Furniture, Industry 2621 Paper Mills, and Industry 2631 Paperboard Mills. The State values for each of the four SIC groups are summed to derive State total wood and waste industrial consumption estimates.

For 1989 only, State-level data on wood and waste consumption by nonutility power producers are available from the Form EIA-867, “Annual Nonutility Power Producer Report” in billion Btu. These nonutility State data are summed and subtracted from the *AER* U.S. total. The remaining value is assumed to be the manufacturing sector and is allocated to the States using the method above. The State values for each of the four SIC groups and the nonutilities are summed to derive State total wood and waste industrial consumption estimates.

- 1990 through 1993: State-level data on wood and waste consumption by nonutility power producers from the Form EIA-867, “Annual Nonutility Power Producer Report” in billion Btu are summed and subtracted from the *AER* U.S. total. The remaining national value is allocated to Standard Industrial Code (SIC) groups 20, 24, 25, and 26 based on unpublished data from the EIA “Manufacturing Energy Consumption Survey 1991 (MECS).” SIC groups 20 and 26 are grouped as “Other” in MECS 1991. The proportions of those two groups in the 1988 and 1994 MECS are averaged and used to estimate the breakout for 1991. These SIC subtotals are allocated to the States using State-level series from the U.S. Department of Commerce, Bureau of the Census, *1992 Census of Manufactures*, Table 2, column titled “Value Added by Manufacture,” from the publications for Industry 2061 Raw Cane Sugar, Industry 2046 Wet Corn

Milling, Industry 2421 Sawmills and Planing Mills, Industry 2541 Wood Partitions and Fixtures, and Industry 2621 Paper Mills. The State values for each of the four SIC groups and the nonutilities are summed to derive State total wood and waste industrial consumption estimates.

- 1994 and 1995: State-level data on wood and waste consumption by nonutility power producers from the Form EIA-867, “Annual Nonutility Power Producer Report” in billion Btu are summed and subtracted from the *AER* U.S. total. The remaining national value is allocated to Standard Industrial Code (SIC) groups 20, 24, 25, and 26 based on data from the EIA “1994 Manufacturing Energy Consumption Survey (MECS), Table A7.” These SIC subtotals are allocated to the States using State-level series from the U.S. Department of Commerce, Bureau of the Census, *1992 Census of Manufactures*, Table 2, column titled “Value Added by Manufacture,” from the publications for Industry 2061 Raw Cane Sugar, Industry 2046 Wet Corn Milling, Industry 2421 Sawmills and Planing Mills, Industry 2511 Wood Household Furniture, Industry 2621 Paper Mills, and Industry 2631 Paperboard Mills. The State values for each of the four SIC groups and the nonutilities are summed to derive State total wood and waste industrial consumption estimates.
- 1994 forward: State-level data on wood and waste consumption by nonutility power producers from the Form EIA-867, “Annual Nonutility Power Producer Report” or Form EIA-860B, “Annual Electric Generator Report–Nonutility” in billion Btu are summed and subtracted from the *AER* U.S. total. The remaining national value is allocated to Standard Industrial Code (SIC) groups 20, 24, 25, and 26 based on data from the EIA “1994 Manufacturing Energy Consumption Survey (MECS), Table A7.” These SIC subtotals are allocated to the States using State-level series from the U.S. Department of Commerce, Bureau of the Census, *1997 Economic Census*. In the *Economic Census* the SIC groupings for the State data are replaced by North American Industry Classification System (NAICS) industry groups. The two industry classification systems are not identical, but NAICS groups are chosen that compare with SIC categories as closely as possible. The State series are from Table 2, column titled “Value Added by Manufacture,” from the publications for NAICS Industry 311311 Sugar Cane Mills, Industry 311221 Wet Corn Milling, Industry 321113 Sawmills, Industry 321912 Cut



Stock, Resawing Lumber, and Planing, Industry 337122 Nonupholstered Wood Household Furniture Manufacturing, Industry 322121 Paper Mills, and Industry 322130 Paperboard Mills. The State values for each of the four NAICS group subtotals and the nonutilities are summed to derive State total wood and waste industrial consumption estimates.

## Electric Utilities

Electric utilities' generation of electricity from wood and waste energy, by State, are available combined from 1960 through 1981 and separately from 1982 forward from the Form EIA-759, "Monthly Power Plant Report." The data series are identified in CSEDS by the following names ("ZZ" in the variable name represents the two-letter State code that differs for each State):

WDEOPZZ = electricity produced from wood energy sources at electric utilities in each State (included in waste energy for 1960 through 1981), in million kilowatthours; and

WSEOPZZ = electricity produced from waste energy sources at electric utilities in each State (includes wood energy for 1960 through 1981), in million kilowatthours.

The U.S. totals are calculated as the sum of the State data, and wood and waste are summed to provide a total (WW) value:

WDEOPUS =  $\Sigma$ WDEOPZZ

WSEOPUS =  $\Sigma$ WSEOPZZ

WWEOPZZ = WDEOPZZ + WSEOPZZ

WWEOPUS =  $\Sigma$ WWEOPZZ

Electricity produced from wood and waste sources is converted into Btu by use of a conversion factor that is the U.S. average heat content of fossil fuels burned at steam-electric power plants, FFEOKUS. The annual values for this factor are shown in Appendix C, Table C1.

WDEOBZZ = WDEOPZZ \* FFEOKUS

WDEOBUS =  $\Sigma$ WDEOBZZ

WSEOBZZ = WSEOPZZ \* FFEOKUS

WSEOBUS =  $\Sigma$ WSEOBZZ

WWEOBZZ = WDEOBZZ + WSEOBZZ

WWEOBUS =  $\Sigma$ WWEOBZZ

## Data Sources

WDEOPZZ — Electricity produced from wood energy sources at electric utilities by State.

- 1960 through 1981: Data included in waste energy sources, see WSEOPZZ.
- 1982 forward: EIA, Form EIA-759, "Monthly Power Plant Report."

WSEOPZZ — Electricity produced from waste energy sources at electric utilities by State.

- 1960 forward: EIA, Form EIA-759, "Monthly Power Plant Report" (includes wood energy sources from 1960 through 1981).

FFEOKUS — Fossil fuel steam-electric power plant conversion factor.

- 1960 through 1988: Estimated by EIA as the weighted annual average heat rate for fossil-fueled steam-electric plants in the United States as published in the EIA, *Electric Plant Cost and Power Production Expenses 1991*, Table 9.
- 1989 forward: Calculated annually by EIA on the basis of data from Form EIA-767 "Steam-Electric Plant Operation and Design Report."

## Totals

State total consumption of wood and waste is calculated as the sum of the consumption in the residential, commercial, and industrial sectors as well as consumption at electric utilities. The U.S. total is the sum of the State data:

WWTCBZZ = WDRCBZZ + WDCCBZZ + WWICBZZ + WWEOBZZ

WWTCBUS =  $\Sigma$ WWTCBZZ

## Additional Calculations

Additional calculations are made in CSEDS to aggregate some data series to be shown in the tables of this report. Geothermal, wind, photovoltaic, and solar thermal energy sources are combined to be shown in the "Other" column in tables titled "Energy Consumption Estimates by Source." Those renewable sources and nuclear-electric power are combined to be shown in the "Other" column in tables titled "Industrial Energy Consumption Estimates." The variables are calculated for each State and the United States in billion Btu as follows:

$$\begin{aligned} \text{GOTCBZZ} &= \text{GETCBZZ} + \text{SOTCBZZ} + \text{WYTCBZZ} \\ \text{GOTCBUS} &= \Sigma \text{GOTCBZZ} \end{aligned}$$

$$\begin{aligned} \text{GOICBZZ} &= \text{GEICBZZ} + \text{SOICBZZ} + \text{WYICBZZ} + \text{NUATBZZ} \\ \text{GOICBUS} &= \Sigma \text{GOICBZZ} \end{aligned}$$

Wind, photovoltaic, and solar thermal energy sources are combined to be shown in the "Other" column in tables titled "Estimates of Energy Input at Electric Utilities." The variables are calculated for each State and the United States in million kilowatthours and billion Btu as follows:

$$\begin{aligned} \text{WNEOPZZ} &= \text{WYEOPZZ} + \text{SOEOPZZ} \\ \text{WNEOPUS} &= \Sigma \text{WNEOPZZ} \end{aligned}$$

$$\begin{aligned} \text{WNEOBZZ} &= \text{WYEOBZZ} + \text{SOEOBZZ} \\ \text{WNEOBUS} &= \Sigma \text{WNEOBZZ} \end{aligned}$$

## Renewable Energy Total

Renewable energy subtotals for each consuming sector in thousand Btu can be calculated for 1989 forward by using the same formulas for each State and the U.S. totals. Renewable energy subtotals can also be calculated in physical units for the transportation sector (thousand barrels) and electric utilities (million kilowatthours).

$$\text{RERCB} = \text{WDRCB} + \text{GERCB} + \text{SOHCB}$$

$$\text{RECCB} = \text{WDCCB} + \text{GECCB}$$

$$\text{REICB} = \text{GEICB} + \text{HVATB} + \text{SOICB} + \text{WWICB} + \text{WYICB}$$

$$\text{REACP} = \text{ENACP}$$

$$\text{REACB} = \text{ENACB}$$

$$\text{REEOP} = \text{HVENP} + \text{GEENP} + \text{WWEOP} + \text{WNEOP}$$

$$\text{REEOB} = \text{HVENB} + \text{GEENB} + \text{WWEOB} + \text{WNEOB}$$

$$\text{RETCB} = \text{RERCB} + \text{RECCB} + \text{REICB} + \text{REACB} + \text{REEOB}$$



## Section 6. Electricity

This section describes electrical energy sources; electricity consumed by end users (i.e., electricity sold to end users); estimates of the electrical system energy losses incurred in the generation, transmission, and distribution of electricity; and estimates of net interstate sales of electricity.

### Electrical Energy Sources

#### Physical Units

Electricity is produced from a number of energy sources. In the Combined State Energy Data System (CSEDS), coal, natural gas, and petroleum are measured in physical units of thousand short tons, million cubic feet, and thousand barrels, respectively, as they are consumed by the electric utilities. Because comparable measures in physical units for nuclear power, hydroelectric, wood, waste, geothermal, wind, photovoltaic, and solar thermal energy sources are not available, energy output in the form of electricity produced from these energy sources, in million kilowatthours, is used instead. The variable names for these data are as follows ("ZZ" in the variable name represents the two-letter State code that differs for each State):

CLEUPZZ	= coal consumed by electric utilities (described in Section 2 of this report), in thousand short tons;	GEEOPZZ	= electricity produced from geothermal energy at electric utilities (described in Section 5), in million kilowatthours;
ELEXPZZ	= electricity exported from the United States (assumed to be produced from hydroelectric power through 1988), in million kilowatthours;	GEIMPZZ	= electricity produced from geothermal energy and imported into the United States (described in Section 5), in million kilowatthours;
ELIMPZZ	= electricity imported into the United States (assumed to be produced from hydroelectric power through 1988), in million kilowatthours;	HPEOPZZ	= electricity produced from pumped storage hydroelectric power at electric utilities (described in Section 5), in million kilowatthours;
		HVEOPZZ	= electricity produced from conventional hydroelectric power at electric utilities (described in Section 5), in million kilowatthours;
		HYEXPZZ	= electricity produced from hydroelectric power and exported from the United States (described in Section 5), in million kilowatthours;
		HYIMPZZ	= electricity produced from hydroelectric power and imported into the United States (described in Section 5), in million kilowatthours;
		NGEUPZZ	= natural gas consumed by electric utilities (described in Section 3), in million cubic feet;
		NUATPZZ	= electricity produced from nuclear power by nonutility power producers, in million kilowatthours;
		NUEOPZZ	= electricity produced from nuclear power at electric utilities, in million kilowatthours;
		PAEUPZZ	= petroleum consumed by electric utilities (described in Section 4), in thousand barrels;
		SOEOPZZ	= electricity produced from photovoltaic and solar thermal energy sources at electric utilities (described in Section 5), in million kilowatthours;
		WDEOPZZ	= electricity produced from wood energy sources at electric utilities (described in Section 5), in million kilowatthours;
		WSEOPZZ	= electricity produced from waste energy sources at electric utilities (described in Section 5), in million kilowatthours; and

WYEPZZ = electricity produced from wind energy at electric utilities (described in Section 5), in million kilowatthours.

The U.S. totals for these series are calculated as the sum of the State data, with the exception of coal, which is the sum of the U.S. totals for each rank of coal as described in Section 2.

### **British Thermal Units (Btu)**

In order to total all the energy that is used to produce electricity, the energy sources are converted to the common unit of Btu. The methods for calculating the Btu content of coal, natural gas, petroleum, and renewable energy sources consumed by utilities are explained in their respective sections of this documentation. Nuclear electric power is described in the following section.

A total of all energy input at electric utilities, including imports and exports of electricity across U.S. borders, is calculated by the following formulas for each State and for the United States:

$$\begin{aligned} \text{TEEUBZZ} &= \text{PAEUBZZ} + \text{NGEUBZZ} + \text{CLEUBZZ} + \text{HYENBZZ} + \\ &\quad \text{NUEOBZZ} + \text{GEENBZZ} + \text{WWEUBZZ} + \text{WNEOBZZ} \\ &\quad + \text{EXNIBZZ} \\ \text{TEEUBUS} &= \Sigma \text{TEEUBZZ} \end{aligned}$$

## Nuclear Electric Power

CSEDS contains estimates of electricity generated from nuclear power at electric utilities and by nonutility power producers. Electric utilities nuclear electricity is shown in the “Nuclear Electric Power” column of tables titled, “Estimates of Energy Input at Electric Utilities.” The nonutilities nuclear electricity generation is a component of the “Other” column in the tables titled, “Industrial Energy Consumption Estimates.” Total electricity generated from nuclear power is the sum of nuclear-electric power generated at electric utilities and by nonutility power producers:

$$\text{NUETPZZ} = \text{NUEOPZZ} + \text{NUATPZZ}$$

$$\text{NUETPUS} = \Sigma \text{NUETPZZ}$$

The factor for converting electricity produced from nuclear energy (NUEOKUS) is developed from data collected from nuclear steam-electric power plants. These U.S. average factors, which vary from year to year, can be found in Appendix C, Table C1.

NUEOKUS = factor for converting nuclear electricity from kilowatthours to Btu.

The formulas for applying the nuclear factor are:

$$\begin{aligned} \text{NUEOBZZ} &= \text{NUEOPZZ} * \text{NUEOKUS} \\ \text{NUEOBUS} &= \Sigma \text{NUEOBZZ} \end{aligned}$$

$$\begin{aligned} \text{NUATBZZ} &= \text{NUATPZZ} * \text{NUEOKUS} \\ \text{NUATBUS} &= \Sigma \text{NUATBZZ} \end{aligned}$$

$$\begin{aligned} \text{NUETBZZ} &= \text{NUEOBZZ} + \text{NUATBZZ} \\ \text{NUETBUS} &= \Sigma \text{NUETBZZ} \end{aligned}$$

### **Data Sources**

NUATPZZ — Electricity generated from nuclear energy by nonutility power producers.

- 1960 through 1988: No data available. Values assumed to be zero.
- 1989 forward: EIA, data from the Form EIA-860B, “Annual Electric Generator Report – Nonutility,” database as published for 1998 and 1999 in the EIA *Electric Power Annual, Volume I*, Table A11.

NUEOKUS — Factor for converting electricity produced from nuclear power from physical units to Btu.

- 1960 through 1991: Calculated annually by EIA by dividing the total heat content consumed in reactors at nuclear plants by the total (net) electricity generated by nuclear plants. The heat content and electricity generation are reported on FERC Form 1, “Annual Report of Major Electric Utilities, Licensees, and Others;” Form EIA-412, “Annual Report of Public Electric Utilities;” and predecessor forms. The factors for 1982 through 1991 are published in the following:

- 1982: EIA, *Historical Plant Cost and Annual Production Expenses for Selected Electric Plants 1982*, page 215.
- 1983 through 1991: EIA, *Electric Plant Cost and Power Production Expenses 1991*, Table 13.
- 1992 forward: Calculated annually by EIA by dividing the total heat content of the steam leaving nuclear generating units to generate electricity by the total (net) electricity generated by nuclear generating units. The heat content and electricity generation data are reported in the Nuclear Regulatory Commission, *Licensed Operating Reactors—Status Summary Report*.

NUEOPZZ — Electricity produced from nuclear power at electric utilities by State.

- 1960 through 1977: Federal Power Commission, News Release, “Power Production, Fuel Consumption, and Installed Capacity Data,” table titled “Net Generation of Electric Utilities by State and Source.”
- 1978 through 1980: EIA, *Energy Data Reports*, “Power Production, Fuel Consumption and Installed Capacity Data;” 1978: table titled “Net Generation of Electric Utilities by State and Source;” 1979 and 1980: Table 36.
- 1981 through 1985: EIA, Form EIA-759, “Monthly Power Plant Report,” and predecessor forms. Data are published in the EIA, *Electric Power Annual 1985*, Table 6.
- 1986 forward: EIA, Form EIA-759, “Monthly Power Plant Report,” and predecessor forms. Data are published in the EIA *Electric Power Annual*. Data are from the report of the following year., i.e., 1986 final data are published in the *Electric Power Annual, 1987*. The specific tables are:
  - 1986: Table 19.
  - 1987: Table 10.
  - 1988 and 1989: Table 14.
  - 1990 through 1993: Table 13.
  - 1994 forward: *Volume I*, Table 10.
  - 1997: *Volume I*, Table A2.
  - 1998 and 1999: *Volume I*, Table A11.

## Electricity Imports and Exports

Imports and exports of electricity across U.S. borders prior to 1989 are assumed to be based on hydroelectric power. Beginning with 1989, traded electricity is identified in CSEDS as derived from hydroelectric power, geothermal energy, or nonrenewable energy sources. Electricity imports and exports based on renewable energy sources are discussed in more detail in the Renewables section of this documentation on pages 406 and 408. Renewable-based electricity imports and exports are summed in million kilowatthours and billion Btu and identified with “ER” as the source code in the variable name:

EREXPZZ = HYEXPZZ  
 EREXPUS =  $\Sigma$ EREXPZZ  
 ERIMPZZ = HYIMPZZ + GEIMPZZ  
 ERIMPUS =  $\Sigma$ ERIMPZZ

EREXBZZ = HYEXBZZ  
 EREXBUS =  $\Sigma$ EREXBZZ  
 ERIMBZZ = HYIMBZZ + GEIMBZZ  
 ERIMBUS =  $\Sigma$ ERIMBZZ

Imports and exports of electricity produced from nonrenewable energy sources (“EX”), in million kilowatthours, are calculated by subtracting renewable-based imports and exports from total electricity imports and exports :

EXIMPZZ = ELIMPZZ – ERIMPZZ  
 EXIMPUS =  $\Sigma$ EXIMPZZ  
 EXEXPZZ = ELEXPZZ – EREXPZZ  
 EXEXPUS =  $\Sigma$ EXEXPZZ

Nonrenewable-based electricity imports and exports are converted from million kilowatthours to billion Btu by using a conversion factor that is the U.S. average heat content of fossil fuels consumed at steam-electric power plants (FFEOKUS). The annual values for this factor are shown in Appendix C, Table C1.

EXIMBZZ = EXIMPZZ \* FFEOKUS  
 EXIMBUS =  $\Sigma$ EXIMBZZ

**Table A8. Net Imports of Electricity Produced from Nonrenewable Energy Sources, 1989–1999**  
(Trillion Btu)

State	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Alabama	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Alaska	0.000	0.004	0.002	0.002	0.003	0.004	0.003	0.004	0.006	0.004	0.005
Arizona	0.000	-0.022	1.110	-0.022	-0.023	-0.026	3.464	-0.027	0.125	-0.019	0.000
Arkansas	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
California	20.792	23.353	15.498	11.676	11.077	8.041	8.472	4.141	2.698	4.205	5.874
Colorado	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.165	0.004	0.009
Connecticut	0.494	0.162	1.864	2.668	2.354	3.478	4.000	4.086	6.512	4.943	5.805
Delaware	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dist. of Col.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Florida	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Georgia	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Hawaii	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Idaho	0.062	0.470	0.501	0.778	0.000	0.199	0.009	0.525	0.650	0.523	0.098
Illinois	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Indiana	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Iowa	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.633	-0.046	-0.158
Kansas	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.013	-0.077
Kentucky	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Louisiana	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Maine	5.642	9.146	3.995	2.253	3.079	8.917	14.213	13.022	13.106	20.119	18.916
Maryland	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Massachusetts	4.468	8.497	7.912	4.907	4.025	4.522	5.611	4.905	7.139	4.943	5.805
Michigan	0.029	-113.809	-5.405	-3.009	4.998	20.366	17.757	4.288	-7.792	-29.687	-8.064
Minnesota	4.363	-2.847	8.024	15.704	9.738	22.002	25.392	25.391	37.113	21.073	15.753
Mississippi	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Missouri	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.004	-0.001	0.012
Montana	0.039	0.206	0.086	0.048	0.003	-0.002	-0.004	0.115	0.021	0.052	-0.294
Nebraska	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	-0.701	-0.605
Nevada	0.156	0.009	0.028	0.007	0.002	0.020	0.000	0.000	0.000	0.000	0.000
New Hampshire	0.401	0.162	1.864	2.668	2.354	3.478	4.000	4.086	6.512	4.943	5.805
New Jersey	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
New Mexico	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
New York	13.554	-15.329	9.200	5.503	10.334	36.296	27.150	18.376	-3.817	-8.491	-10.558
North Carolina	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
North Dakota	0.541	-1.285	-0.064	1.942	0.448	1.952	1.901	2.242	-0.539	-3.597	-2.838
Ohio	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Oklahoma	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Oregon	4.623	3.770	4.590	2.574	2.366	3.145	2.594	8.551	2.960	1.316	0.093
Pennsylvania	0.000	0.000	0.000	0.000	0.000	0.417	(s)	0.558	0.431	-1.770	-0.257
Rhode Island	0.207	0.162	1.864	2.668	2.354	3.478	4.000	4.086	6.512	4.943	5.805
South Carolina	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
South Dakota	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.297	-0.462	0.581
Tennessee	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Texas	0.014	-0.660	-4.663	-17.061	-8.258	-9.952	-9.542	-10.589	-9.372	-8.013	-11.149
Utah	(s)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.109	0.005	0.000
Vermont	4.971	6.971	3.628	1.179	1.629	5.709	9.236	8.752	14.445	11.752	26.682
Virginia	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Washington	6.706	1.238	9.080	18.464	3.941	29.121	2.769	16.247	27.586	24.243	33.798
West Virginia	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Wisconsin	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.504	3.366	2.618	1.507
Wyoming	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
United States	67.063	-79.799	59.113	52.945	50.424	141.163	121.024	109.261	108.874	52.911	92.552

(s)=Number less than 0.0005.  
Source: Combined State Energy Data System 1999.

EXEXBZZ = EXEXPZZ \* FFEOKUS  
EXEXBUS = ΣEXEXBZZ

Net imports of electricity produced from nonrenewable energy sources is calculated by subtracting exports from imports:

EXNIPZZ = EXIMPZZ - EXEXPZZ  
EXNIPUS = ΣEXNIPZZ  
EXNIBZZ = EXIMBZZ - EXEXBZZ  
EXNIBUS = ΣEXNIBZZ

Net imports of nonrenewable-based electricity are included in the "Total" column of *SEDR* tables titled "Energy Consumption Estimates by Source" and "Estimates of Energy Input at Electric Utilities" but are not shown separately in the tables' columns. Table A8 provides the data by State and year.

Total imports and exports of electricity are calculated in billion Btu by summing the renewable and nonrenewable components:

ELIMBZZ = HYIMBZZ + GEIMBZZ + EXIMBZZ  
ELIMBUS = ΣELIMBZZ  
ELEXBZZ = HYEXBZZ + EXEXBZZ  
ELEXBUS = ΣELEXBZZ

**Data Sources**

ELEXPZZ — Electricity exported from the United States (assumed to be produced by hydroelectric power through 1988) by State.

- 1960 through 1981: Economic Regulatory Administration, *Staff Reports*, "Report on Electric Energy Exchanges with Canada and Mexico." Source data are arranged by the Regional Reliability Council Areas and then by the electric utility. State data were tabulated by aggregating the data of all electric utilities within each State.

- 1982 and 1983: EIA State estimates are based on data from Economic Regulatory Administration Form ERA-781R, “Annual Report of Electrical Export/Import Data.” State estimates are consistent with national and regional totals published in the ERA, *Electricity Exchanges Across International Borders*.
- 1984 through 1987: EIA State estimates are based on data from Economic Regulatory Administration Form ERA-781R, “Annual Report of Electrical Export/Import Data,” the Federal Energy Regulatory Commission Form 1, and the Bonneville Power Administration Annual Report. State estimates are consistent with national and regional totals published in the ERA, *Electricity Transactions Across International Borders*.
- 1988 forward: EIA State estimates are based on data from DOE, Fossil Fuels, Fuels Programs, Office of Coal and Electricity, Form FE-781R, “Annual Report of International Electrical Export/Import Data,” and predecessor forms, and the Canada National Energy Board report, “Electricity Exports and Imports, Monthly Statistics for December....”

ELIMPZZ — Electricity imported into the United States (assumed to be produced by hydroelectric power through 1988) by State.

- 1960 through 1981: Economic Regulatory Administration, *Staff Reports*, “Report on Electric Energy Exchanges with Canada and Mexico.” Source data are arranged by the Regional Reliability Council Areas and then by the electric utility. State data were tabulated by aggregating the data of all electric utilities within each State.
- 1982 and 1983: EIA State estimates are based on data from Economic Regulatory Administration Form ERA-781R, “Annual Report of Electrical Export/Import Data.” State estimates are consistent with national and regional totals published in the ERA, *Electricity Exchanges Across International Borders*.
- 1984 through 1987: EIA State estimates are based on data from Economic Regulatory Administration Form ERA-781R, “Annual Report of Electrical Export/Import Data,” the Federal Energy Regulatory Commission Form 1, and the Bonneville Power Administration Annual Report. State estimates are consistent with national and regional totals published in the ERA, *Electricity Transactions Across International Borders*.

- 1988 forward: EIA State estimates are based on data from DOE, Fossil Fuels, Fuels Programs, Office of Coal and Electricity, Form FE-781R, “Annual Report of International Electrical Export/Import Data,” and predecessor forms, and the Canada National Energy Board report, “Electricity Exports and Imports, Monthly Statistics for December....”

FFEOKUS — Fossil fuel steam-electric power plant conversion factor.

- 1960 through 1988: Estimated by EIA as the weighted annual average heat rate for fossil-fueled steam-electric plants in the United States as published in the EIA, *Electric Plant Cost and Power Production Expenses 1991*, Table 9.
- 1989 forward: Calculated annually by EIA on the basis of data from Form EIA-767 “Steam-Electric Plant Operation and Design Report.”

## Electricity Consumed by the End User

### Physical Units

The amount of electricity sold to end users is considered to be the amount of electricity consumed by the end-use sectors. Five electricity sales data series, in physical units of million kilowatthours, are used to estimate consumption of electricity by end-use sector:

- ESRCPZZ = electricity sold to the residential sector of each State;
- ESCMPZZ = a portion of the electricity sold to the commercial sector of each State;
- ESICPZZ = electricity sold to the industrial sector of each State;
- ESOTPZZ = electricity sold to “Other” users (i.e., public street and highway lighting, other public authorities, railroads and railways, and interdepartmental sales) in each State; and
- ESTRPZZ = electricity consumed by transit systems, in each State.

U.S. totals for the five State-level series are calculated as the sum of the State data.

The sales of electricity to the residential and industrial sectors are used directly as consumption of electricity by these sectors.



Electricity consumed by transit systems in each State is assumed to be the total electricity used for transportation:

$$\begin{aligned} \text{ESACPZZ} &= \text{ESTRPZZ} \\ \text{ESACPUS} &= \Sigma \text{ESACPZZ} \end{aligned}$$

The commercial sector consumption of electricity, represented by ESCCPZZ, is estimated as the sum of sales to the commercial sector and the portion of sales to the "Other" sector that is not used for transportation:

$$\begin{aligned} \text{ESCCPZZ} &= \text{ESCMPZZ} + \text{ESOTPZZ} - \text{ESACPZZ} \\ \text{ESCCPUS} &= \Sigma \text{ESCCPZZ} \end{aligned}$$

Total electricity consumed by the major end-use sectors is represented by ESTCPZZ and is calculated by adding the four major sector estimates:

$$\begin{aligned} \text{ESTCPZZ} &= \text{ESRCPZZ} + \text{ESCCPZZ} + \text{ESICPZZ} + \text{ESACPZZ} \\ \text{ESTCPUS} &= \Sigma \text{ESTCPZZ} \end{aligned}$$

**British Thermal Units (Btu)**

Electricity consumption estimates are converted into Btu by applying a constant factor of 3.412 thousand Btu per kilowatthour as illustrated in the formulas:

$$\begin{aligned} \text{ESRCBZZ} &= \text{ESRCPZZ} * 3.412 \\ \text{ESTCBZZ} &= \text{ESTCPZZ} * 3.412 \end{aligned}$$

And U.S. totals in Btu are calculated by summing the States' Btu values.

**Additional Calculations**

Additional calculations are performed in CSEDS to provide data for the EIA *Monthly Energy Review* and *Annual Energy Review*. The share of electricity sold to the "Other" category of consumers that is used for transportation is calculated:

$$\text{ESTRSUS} = \text{ESACPUS} / \text{ESOTPUS}$$

**Data Sources**

ESCMPZZ — A portion of the electricity sold to the commercial sector by State.

Note: Data for Maryland and the District of Columbia were combined for 1960 through 1983. The method for disaggregating the data is explained in Note 3 on page 430.

- 1960 through 1975: Federal Power Commission, *Electric Power Statistics*, "Sales of Electric Energy to Ultimate Consumers."
- 1976 through 1980: EIA, *Electric Power Annual* (November 1982), Table 125.
- 1981 through 1983: EIA, Form EIA-826, "Electric Utility Company Monthly Statement," and predecessor forms. Published data rounded to gigawatthours in EIA, *Electric Power Annual 1983*, Table 51.
- 1984 through 1986: EIA, Form EIA-861, "Annual Electric Utility Report." Unpublished data.
- 1987: EIA, Form EIA-861, "Annual Electric Utility Report." Published in the EIA, *Electric Power Annual 1988*, Table 19.
- 1988 forward: EIA, Form EIA-861, "Annual Electric Utility Report." Published in the following reports:
  - 1988 through 1990: EIA, *Electric Power Annual*, Table 27.
  - 1991 through 1998: EIA, *Electric Sales and Revenue*, Table 15.
  - 1999: EIA, *Electric Sales and Revenue*, Sum of sales by electric utilities shown in Table 15, and sales in deregulated markets shown in Table C2.

ESICPZZ — Electricity consumed by the industrial sector by State.

Note: Data for Maryland and the District of Columbia were combined for 1960 through 1983. The method for disaggregating the data is explained in Appendix A, Note 3, on page 430.

- 1960 through 1975: Federal Power Commission, *Electric Power Statistics*, "Sales of Electric Energy to Ultimate Consumers."
- 1976 through 1980: EIA, *Electric Power Annual* (November 1982), Table 126.
- 1981 through 1983: EIA, Form EIA-826, "Electric Utility Company Monthly Statement," and predecessor forms. Published data rounded to gigawatthours in EIA, *Electric Power Annual 1983*, Table 51.
- 1984 through 1986: EIA, Form EIA-861, "Annual Electric Utility Report." Unpublished data.
- 1987: EIA, Form EIA-861, "Annual Electric Utility Report." Published in the EIA, *Electric Power Annual 1988*, Table 19.

- 1988 forward: EIA, Form EIA-861, “Annual Electric Utility Report.” Published in the following reports:
  - 1988 through 1990: EIA, *Electric Power Annual*, Table 27.
  - 1991 through 1998: EIA, *Electric Sales and Revenue*, Table 16.
  - 1999: EIA, *Electric Sales and Revenue*, Sum of sales by electric utilities shown in Table 16, and sales in deregulated markets shown in Table C2.

ESOTPZZ — Electricity sold to the “Other” sector (i.e., public street and highway lighting, sales to other public authorities, railroads and railways, and interdepartmental sales) by State.

Note: Data for Maryland and the District of Columbia were combined for 1960 through 1983. The method for disaggregating the data is explained in Appendix A, Note 3, on page 430.

- 1960 through 1975: Federal Power Commission, *Electric Power Statistics*, “Sales of Electric Energy to Ultimate Consumers.”
- 1976 through 1980: EIA, *Electric Power Annual* (November 1982), Table 127.
- 1981 through 1983: EIA, Form EIA-826, “Electric Utility Company Monthly Statement,” and predecessor forms. Published data rounded to gigawatthours in EIA, *Electric Power Annual 1983*, Table 51.
- 1984 through 1986: EIA, Form EIA-861, “Annual Electric Utility Report.” Unpublished data.
- 1987: EIA, Form EIA-861, “Annual Electric Utility Report.” Published in the EIA, *Electric Power Annual 1988*, Table 19.
- 1988 forward: EIA, Form EIA-861, “Annual Electric Utility Report.” Published in the following reports:
  - 1988 through 1990: EIA, *Electric Power Annual*, Table 27.
  - 1991 forward: EIA, *Electric Sales and Revenue*, Table 6.
  - 1999: EIA, *Electric Sales and Revenue*, Sum of sales by electric utilities shown in Table 6, and sales in deregulated markets from the Form EIA-861 database.

ESRCPZZ — Electricity consumed by the residential sector by State.

Note: Data for Maryland and the District of Columbia were combined for 1960 through 1983. The method for disaggregating the data is explained in Appendix A, Note 3, on page 430.

- 1960 through 1975: Federal Power Commission, *Electric Power Statistics*, “Sales of Electric Energy to Ultimate Consumers.”

- 1976 through 1980: EIA, *Electric Power Annual* (November 1982), Table 124.
- 1981 through 1983: EIA, Form EIA-826, “Electric Utility Company Monthly Statement,” and predecessor forms. Published data rounded to gigawatthours in EIA, *Electric Power Annual 1983*, Table 51.
- 1984 through 1986: EIA, Form EIA-861, “Annual Electric Utility Report.” Unpublished data.
- 1987: EIA, Form EIA-861, “Annual Electric Utility Report.” Published in the EIA, *Electric Power Annual 1988*, Table 19.
- 1988 forward: EIA, Form EIA-861, “Annual Electric Utility Report.” Published in the following reports:
  - 1988 through 1990: *Electric Power Annual*, Table 27.
  - 1991 through 1998: EIA, *Electric Sales and Revenue*, Table 14.
  - 1999: EIA, *Electric Sales and Revenue*, Sum of sales by electric utilities shown in Table 14, and sales in deregulated markets shown in Table C2.

ESTRPZZ — Electricity consumed by transit systems by State.

Notes: The transit system data include electricity used to operate commuter rail, rapid rail, streetcars or light rail, cable cars, trolley-buses, motorbuses, automated guideways, inclined plane railways, and aerial tramways. These data do not include electricity used by Amtrak. These data are available on a fiscal year basis (July 1 through June 30) for 1979 through 1982 and for calendar years 1983 forward. Some data for 1979 through 1983 were adjusted by EIA on the basis of an analysis of historical trends. Electricity consumption for the District of Columbia for 1976 forward is partially apportioned to Maryland and Virginia on the basis of electricity consumption data from the Washington Metropolitan Area Transit Authority.

- 1960 through 1978: EIA estimates are based on data from:
  - The American Public Transit Association (formerly the American Transit Association) annual operating reports.
  - Pushkarev, Boris S. and others, *Urban Rail in America*. (Bloomington, IN: Indiana University Press, 1982.)
  - U.S. Department of Transportation, *A Directory of Regularly Scheduled, Fixed Route, Local Public Transportation Service in Urbanized Areas Over 50,000 Population*, 1980 and 1981.
- 1979 through 1989: U.S. Department of Transportation, Urban Mass Transportation Administration, *National Urban Mass Transportation Statistics, Section 15 Annual Report*, table titled “Energy Consumption: Details by Transit System.”

- 1979 and 1980: Table 2.13.1.
- 1981 and 1982: Table 3.13.1.
- 1983 through 1989: Table 3.12.
- 1990 forward: U.S. Department of Transportation, Federal Transit Administration, *Data Tables for the Section 15 Report Year*.
  - 1990: Table 2.12.
  - 1991: Table 13.
  - 1992 through 1997: Table 15.
  - 1998: Table 16
  - 1999: Table 17
- Data for 1996 forward are also available via the Internet at <http://www.ntdprogram.com>. Click on “Publications/Data” and then “Data Tables.”

## Estimates of Electrical System Energy Losses

### *British Thermal Units (Btu)*

Electrical system energy losses, identified by “LO,” include all losses incurred in the generation, transmission, and distribution of electricity, including plant use and unaccounted for quantities. Total losses for the United States, LOTCBUS, is assumed to be the difference between the total of all energy input at electric utilities (TEEUBUS) and the total electricity sold to end users (ESTCBUS). Total losses for the United States is calculated in billion Btu as follows:

$$\text{LOTCBUS} = \text{TEEUBUS} - \text{ESTCBUS}$$

Because Alaska and Hawaii have no exchanges of electricity with other States, their electrical system energy losses are estimated as the difference between the sum of all energy input at the State’s electric utilities and the electricity sold within the State:

$$\begin{aligned} \text{LOTGBAK} &= \text{TEEUBAK} - \text{ESTGBAK} \\ \text{LOTGBHI} &= \text{TEEUBHI} - \text{ESTGBHI} \end{aligned}$$

Individual State electrical system energy losses for the remaining States are estimated by a different method. The difference between each of the contiguous 48 States’ (including the District of Columbia) TEEUB series and ESTCB is not only the losses but also any net interstate flow of electricity that may occur between States. In some cases these net interstate flows are substantial. Therefore, an effort is made to estimate separately each State’s losses and net interstate flow. The methodology is to calculate the contiguous-48-State subtotal of losses and subtotal of sales; to create annual losses-to-sales ratios for the aggregate of the 48 States; and to apply the annual losses-to-sales ratios from the total 48 States to the individual 48 States’ sales to estimate their losses.

The following steps are performed to complete the losses estimates. A subtotal of losses in the contiguous 48 States, LOTCB48, is created by subtracting the Alaska and Hawaii losses from the total United States’ losses:

$$\text{LOTCB48} = \text{LOTCBUS} - (\text{LOTGBAK} + \text{LOTGBHI})$$

A similar subtotal of electricity sales in the 48 States only, ESTCB48, is calculated:

$$\text{ESTCB48} = \text{ESTCBUS} - (\text{ESTGBAK} + \text{ESTGBHI})$$

The losses-to-sales ratio for the contiguous 48 States only, ELLSS48, is calculated:

$$\text{ELLSS48} = \text{LOTCB48} / \text{ESTCB48}$$

Over the 40-year period now covered in CSEDS, the ratio is fairly constant, with a slight downward trend. For 1960, the ratio is 2.5; for 1961 through 1983 the ratio is 2.4; for 1984 through 1988 the ratio is 2.3; for 1989 through 1991 it is 2.2; and for 1992 forward the losses-to-sales ratio is 2.1. The decline in the ratio in recent years is attributed partially to the fact that electricity produced by nonutility power producers is included in the electricity sales data, while the resources consumed to produce the nonutility electricity are not included in the energy input. When the electricity purchased by utilities from nonutilities is subtracted from the electricity sales, the ratio is 2.3 for 1989 through 1993, and 2.2 for 1994 forward.

The U.S. ratios are applied to each State's sales to the major end-use sectors and total sales (temporarily including Alaska, Hawaii, and the 48-State subtotal for processing convenience):

$$\begin{aligned} \text{LORCBZZ} &= \text{ESRCBZZ} * \text{ELLSS48} \\ \text{LOCCBZZ} &= \text{ESCCBZZ} * \text{ELLSS48} \\ \text{LOICBZZ} &= \text{ESICBZZ} * \text{ELLSS48} \\ \text{LOACBZZ} &= \text{ESACBZZ} * \text{ELLSS48} \\ \text{LOT CBZZ} &= \text{ESTCBZZ} * \text{ELLSS48} \end{aligned}$$

Alaska, Hawaii, and the contiguous 48-State subtotal are recalculated to their original estimates. The end-use losses for Alaska and Hawaii are created in proportion to each sector's share of the State's total electricity sales:

$$\begin{aligned} \text{LOT CBAK} &= \text{TEEUBAK} - \text{ESTCBAK} \\ \text{LOT CBHI} &= \text{TEEUBHI} - \text{ESTCBHI} \\ \text{LOT CB48} &= \text{LOT CBUS} - (\text{LOT CBAK} + \text{LOT CBHI}) \end{aligned}$$

$$\begin{aligned} \text{LOR CBAK(HI)} &= (\text{ESRCBAK(HI)} / \text{ESTCBAK(HI)}) * \text{LOT CBAK(HI)} \\ \text{LOCCBAK(HI)} &= (\text{ESCCBAK(HI)} / \text{ESTCBAK(HI)}) * \text{LOT CBAK(HI)} \\ \text{LOICBAK(HI)} &= (\text{ESICBAK(HI)} / \text{ESTCBAK(HI)}) * \text{LOT CBAK(HI)} \\ \text{LOACBAK(HI)} &= (\text{ESACBAK(HI)} / \text{ESTCBAK(HI)}) * \text{LOT CBAK(HI)} \end{aligned}$$

Losses for the United States, including Alaska and Hawaii, are the sums of all the States' losses.

### Physical Units

Estimates of losses in physical units of million kilowatthours are made by dividing the Btu estimate by the constant 3.412 thousand Btu per kilowatt-hour as illustrated in the following formulas:

$$\begin{aligned} \text{LORCPZZ} &= \text{LORCBZZ}/3.412 & \text{LORCPUS} &= \text{LORCBUS}/3.412 \\ \text{LOTCPZZ} &= \text{LOT CBZZ}/3.412 & \text{LOTCPUS} &= \text{LOT CBUS}/3.412 \end{aligned}$$

## Net Interstate Flow of Electricity

### British Thermal Units (Btu)

An estimate of the net interstate flow of electricity is calculated as the difference between the total electricity sales and attributed losses and the total energy input to the electric utilities within each State. The estimated net interstate flow of electricity (ELISB) for each State and the United States is calculated:

$$\begin{aligned} \text{ELISBZZ} &= (\text{ESTCBZZ} + \text{LOT CBZZ}) - \text{TEEUBZZ} \\ \text{ELISBUS} &= \Sigma \text{ELISBZZ} \end{aligned}$$

### Physical Units

Estimates of net interstate flow of electricity in physical units of million kilowatthours are calculated by dividing the Btu value by the constant 3.412 thousand Btu per kilowatt-hour:

$$\begin{aligned} \text{ELISPZZ} &= \text{ELISBZZ} / 3.412 \\ \text{ELISPUS} &= \Sigma \text{ELISPZZ} \end{aligned}$$

Positive net interstate flow for a State means that the amount consumed within the State (including attributed losses) is greater than the amount of energy input at electric utilities in the State. That is, the State is using more electricity than it generates and, therefore, is a net buyer from other States.

A negative number indicates that the State's input into its electric utilities is greater than the requirements for electricity within its own borders, and, therefore, it is a net seller of electricity to other States.

## Additional Notes on Electricity

1. The source for the electricity sales data for 1960 through 1983 is the Energy Information Administration (EIA) Form EIA-826, "Electric Utility Company Monthly Statement," and predecessor forms. Electricity sales data for 1984 forward are from Form EIA-861, "Annual

Electric Utility Report.” At the national level, data from both forms correspond closely (within 3 percent) for all end-use sectors. However, differences in the number of survey respondents and the reporting of commercial and industrial sales caused inconsistencies between 1983 and 1984 data in those end-use sectors for some States. See the EIA’s, *Electric Power Annual, 1991*, DOE/EIA-0348(91), p. 130, and *An Assessment of the Quality of Selected EIA Data Series, Electric Power Data*, DOE/EIA-0292(87), pp. 17–28, for detailed discussions of the reporting differences.

2. The source for the electricity sales data for 1960 through 1983 is the EIA Form EIA-826, “Electric Utility Company Monthly Statement,” and predecessor forms. Electricity sales data for the District of Columbia and Maryland are combined on those forms. Estimates of

separate sales for the District of Columbia and Maryland were created by using electricity sales data by end-use sector by communities from the FERC Form 1, “Annual Report of Major Electric Utilities, Licensees, and Others,” filed by the Potomac Electric Power Company (PEPCO). PEPCO sales to the District of Columbia were assumed to be total electricity sales in the District of Columbia. Electricity sales to the District of Columbia reported by PEPCO on the FERC Form 1 were subtracted from the EIA-826 District of Columbia and Maryland aggregate figures to obtain estimates of Maryland electricity sales by sector. Beginning with 1981 data, electric utilities were no longer required to report sales to specific communities. Therefore, sales data for the District of Columbia for 1981 through 1983 were obtained directly from PEPCO’s accounting department.

## Section 7. Total Energy

### Total Energy Consumed

The preceding sections of this documentation describe how State end-use consumption estimates are made by individual energy source. This section describes how all energy sources are added in Btu to create end-use sector and total energy consumption estimates.

Energy consumption estimates for the residential sector include solar energy consumed in the commercial sector that cannot be identified separately. The code "RC" in the data identifier indicates residential sector and "HC" indicates residential and commercial sectors combined in the following calculation used for each State and the United States:

$$\text{TERCB} = \text{CLRCB} + \text{NGRCB} + \text{PARCB} + \text{WDRCB} + \text{GERCB} + \text{SOHCB} + \text{ESRCB} + \text{LORCB}$$

The commercial sector calculations for each State and the U.S. total are:

$$\text{TECCB} = \text{CLCCB} + \text{NGCCB} + \text{PACCB} + \text{WDCCB} + \text{GECCB} + \text{ESCCB} + \text{LOCCB}$$

For the industrial sector, the State calculations are slightly different from the U.S. calculation ("ZZ" in the variable name represents the two-letter State code that differs for each State). The industrial sector includes net imports of coal coke (CCNIBUS) in the U.S. total but not in the individual State estimates because no reliable means of allocating the U.S. amount to the States has been developed.

$$\text{TEICBZZ} = \text{CLICBZZ} + \text{NGICBZZ} + \text{PAICBZZ} + \text{HYATBZZ} + \text{WWICBZZ} + \text{GOICBZZ} + \text{ESICBZZ} + \text{LOICBZZ}$$

$$\text{TEICBUS} = \text{CLICBUS} + \text{CCNIBUS} + \text{NGICBUS} + \text{PAICBUS} + \text{HYATBUS} + \text{WWICBUS} + \text{GOICBUS} + \text{ESICBUS} + \text{LOICBUS}$$

For the transportation sector, the calculations are:

$$\text{TEACB} = \text{CLACB} + \text{NGACB} + \text{PAACB} + \text{ESACB} + \text{LOACB}$$

Total energy consumed is calculated as the sum of all energy sources. It includes net imports of electricity generated from nonrenewable energy sources. The US and State calculations differ slightly. The States' calculations include net interstate flow of electricity and associated electricity system losses, and the U.S. calculation includes net imports of coal coke:

$$\text{TETCBZZ} = \text{CLTCBZZ} + \text{NGTCBZZ} + \text{PATCBZZ} + \text{NUETBZZ} + \text{HYTCBZZ} + \text{WWTCBZZ} + \text{GOTCBZZ} + \text{EXNIBZZ} + \text{ELISBZZ}$$

$$\text{TETCBUS} = \text{CLTCBUS} + \text{CCNIBUS} + \text{NGTCBUS} + \text{PATCBUS} + \text{NUETBUS} + \text{HYTCBUS} + \text{WWTCBUS} + \text{GOTCBUS} + \text{EXNIBUS}$$

As a cross-check that is not used in the report tables, total energy consumed is also calculated in CSEDS as the sum of the consumption by the four end-use sectors for each State and US total:

$$\text{TESSB} = \text{TERCB} + \text{TECCB} + \text{TEICB} + \text{TEACB}$$

## Total Net Energy Consumed

A set of totals is calculated to estimate consumption in the four major end use sectors excluding each sector's share of all electrical system energy losses that are incurred in the generation, transmission, and distribution of electricity. This series is total net energy consumed and is represented by "TN."

Total net energy consumed by the residential, commercial, industrial, and transportation sectors are calculated:

$$\begin{array}{ll} \text{TNRCB} = \text{TERCB} - \text{LORCB} & \text{TNICB} = \text{TEICB} - \text{LOICB} \\ \text{TNCCB} = \text{TECCB} - \text{LOCCB} & \text{TNACB} = \text{TEACB} - \text{LOACB} \end{array}$$

## Total Energy Consumed per Capita

The energy consumed per person residing in each State and in the United States is estimated by dividing the total energy series ("TE") by the resident population as published by the U.S. Department of Commerce, Bureau of the Census. The U.S. total population published by the Bureau of the Census is based on unrounded numbers that are not available by State so that the sum of the States' population does not equal the U.S. total. Therefore, the U.S. total population is input to CSEDS instead of being calculated as the sum of the States' values. The Bureau of the Census series are estimated, in thousands of people, as of July 1 of each year, except in 1960, 1970, 1980, and 1990, when the April 1 census data were used. The variable names for the series are:

TPOPPZZ = The resident population of each State; and  
TPOPPUS = The resident population of the United States.

Estimated energy consumption per capita for each State and the United States, in million Btu, is represented by "TETP" and is calculated:

$$\text{TETPB} = \text{TETCB} / \text{TPOPP}$$

The residential, commercial, industrial, and transportation sectors' energy consumption per capita are estimated:

$$\begin{array}{l} \text{TERPB} = \text{TERCB} / \text{TPOPP} \\ \text{TECPB} = \text{TECCB} / \text{TPOPP} \\ \text{TEIPB} = \text{TEICB} / \text{TPOPP} \\ \text{TEAPB} = \text{TEACB} / \text{TPOPP} \end{array}$$

### Data Sources

TPOPPUS — Resident population of the United States. April 1 census for 1960, 1970, 1980, and 1990, and July 1 estimates for all other years.

- 1960 through 1989: U.S. Department of Commerce, Bureau of the Census, *Current Population Reports*, "Population Estimates and Projections," Series P-25. Specific publication and table numbers:
  - 1960 through 1969: Number 990, Table 4.
  - 1970 through 1979: Number 957, Table 4.
  - 1980 through 1989: Number 1058, Table 3.
- 1990: U.S. Department of Commerce, Bureau of the Census, Internet Release "Table 4. Resident Population of the 50 States, the District of Columbia, and Puerto Rico:...(1990 Census)," December 28, 2000. <http://www.census.gov/population/www/cen2000/respop.html>.
- 1991 forward: U.S. Department of Commerce, Bureau of the Census, Internet Release ST-99-3, December 29, 1999. <http://www.census.gov/population/www/estimates/statepop.html>, select "Annual Time Series."

TPOPPZZ — Resident population by State. April 1 census for 1960, 1970, 1980, and 1990, and July 1 estimates for all other years.

- 1960 through 1989: U.S. Department of Commerce, Bureau of the Census, *Current Population Reports*, "Population Estimates and Projections," Series P-25. Specific publication and table numbers:
  - 1960 through 1969: Number 460, Table 1.
  - 1970 through 1979: Number 957, Table 4.
  - 1980 through 1989: Number 1058, Table 3.
- 1990: U.S. Department of Commerce, Bureau of the Census, Internet Release "Table 4. Resident Population of the 50 States, the District of Columbia, and Puerto Rico:...(1990 Census)," December 28, 2000. <http://www.census.gov/population/www/cen2000/respop.html>.
- 1991 forward: U.S. Department of Commerce, Bureau of the Census, Internet Release ST-99-3, December 29, 1999. <http://www.census.gov/population/www/estimates/statepop.html>, select "Annual Time Series."

## Appendix B

# Combined State Energy Data System Variables

This is an alphabetical listing of all the variable names used in the Combined State Energy Data System (CSEDS). Provided for each variable on the system are: a brief description of the variable; units of the variable as found in CSEDS; and the formulas used in CSEDS to create the variable. If a variable is not one created by CSEDS but is entered into the system, it is described as an independent variable. Formulas are provided for the State calculations ("ZZ" in the variable name would be replaced by the two-letter code for each State) and for the U.S. calculation (wherever appropriate).

Variables in the CSEDS have seven-letter names that consist of the following components:

<b>Character Positions:</b>	<b>1 and 2</b>	<b>3 and 4</b>	<b>5</b>	<b>6 and 7</b>
<b>Identify:</b>	Type of energy	Energy activity or consumption end-use sector	Type of data	Geographic area

Characters 1 through 4 are explained in the description of each variable.

Character 5 is always one of the following:

- B = Data in British thermal units (Btu)
- K = Factor for converting data from physical units to Btu
- M = Data in alternative physical units
- P = Data in standardized physical units
- S = Share or ratio expressed as a fraction
- V = Value added in manufacture.

Characters 6 and 7 are two-letter U.S. Postal Service codes for the 50 States and the District of Columbia (represented by "ZZ" in the following variable names) and the United States ("US"). In this system, the United States means the 50 States and the District of Columbia. Some estimates of electricity sales and losses are derived by using only the contiguous 48 States and the District of Columbia. The variables used in those calculations are identified by "48" as characters 6 and 7 in the variable names.



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ABICB	Aviation gasoline blending components total consumed by the industrial sector.	Billion Btu	ABICBZZ = ABTCBZZ ABICBUS = ABTCBUS
ABICP	Aviation gasoline blending components total consumed by the industrial sector.	Thousand barrels	ABICPZZ = ABTCPZZ ABICPUS = ABTCPUS
ABTCB	Aviation gasoline blending components total consumed.	Billion Btu	ABTCBZZ = ABTCPZZ * 5.048 ABTCBUS = ΣABTCBZZ
ABTCP	Aviation gasoline blending components total consumed.	Thousand barrels	ABTCPZZ = (COCAPZZ / COCAPUS) * ABTCPUS ABTCPUS is independent.
ACCCB	Anthracite consumed by the commercial sector.	Billion Btu	ACCCBZZ = ACCCPZZ * ACNUKUS ACCCBUS = ΣACCCBZZ
ACCCP	Anthracite consumed by the commercial sector.	Thousand short tons	ACCCPZZ = ACHCPZZ * 0.40 ACCCPUS = ΣACCCPZZ
ACEUB	Anthracite consumed by the electric utilities.	Billion Btu	ACEUBZZ = ACEUPZZ * ACEUKUS ACEUBUS = ΣACEUBZZ
ACEUKUS	Factor for converting anthracite consumed by the electric utilities from physical units to Btu.	Million Btu per short ton	ACEUKUS is independent.
ACEUP	Anthracite consumed by the electric utilities.	Thousand short tons	ACEUPZZ is independent. ACEUPUS = ΣACEUPZZ
ACHCP	Anthracite consumed by the residential and commercial sectors.	Thousand short tons	ACHCPZZ = (ACHDPZZ / ACHDPUS) * ACHCPUS ACHCPUS is independent.
ACHDP	Anthracite distributed to the residential and commercial sectors.	Thousand short tons	ACHDPZZ is independent. ACHDPUS = ΣACHDPZZ
ACICB	Anthracite consumed by the industrial sector.	Billion Btu	ACICBZZ = ACKCBZZ + ACOCBZZ ACICBUS = ΣACICBZZ
ACICP	Anthracite consumed by the industrial sector.	Thousand short tons	ACICPZZ = ACKCPZZ + ACOCPPZZ ACICPUS = ΣACICPZZ
ACKCB	Anthracite consumed at coke plants.	Billion Btu	ACKCBZZ = ACKCPZZ * ACNUKUS ACKCBUS = ΣACKCBZZ
ACKCP	Anthracite consumed at coke plants.	Thousand short tons	ACKCPZZ = (ACKDPZZ / ACKDPUS) * ACKCPUS ACKCPUS is independent.

ACKDP	Anthracite distributed to coke plants.	Thousand short tons	ACKDPZZ is independent. ACKDPUS = $\Sigma$ ACKDPZZ
ACNUKUS	Factor for converting anthracite consumed by all sectors other than the electric utility sector from physical units to Btu.	Million Btu per short ton	ACNUKUS is independent.
ACOCB	Anthracite consumed by other industrial users.	Billion Btu	ACOCBZZ = ACOCPPZZ * ACNUKUS ACOCBUS = $\Sigma$ ACOCBZZ
ACOCP	Anthracite consumed by other industrial users.	Thousand short tons	ACOCPZZ = (ACODPZZ / ACODPUS) * ACOCPUS ACOCPUS is independent.
ACODP	Anthracite distributed to other industrial users.	Thousand short tons	ACODPZZ is independent. ACODPUS = $\Sigma$ ACODPZZ
ACRCB	Anthracite consumed by the residential sector.	Billion Btu	ACRCBZZ = ACRCPPZZ * ACNUKUS ACRCBUS = $\Sigma$ ACRCBZZ
ACRCP	Anthracite consumed by the residential sector.	Thousand short tons	ACRCPZZ = ACHCPZZ * 0.60 ACRCPUS = $\Sigma$ ACRCPZZ
ACTCB	Anthracite total consumed.	Billion Btu	ACTCBZZ = ACRCBZZ + ACCCBZZ + ACICBZZ + ACEUBZZ ACTCBUS = $\Sigma$ ACTCBZZ
ACTCP	Anthracite total consumed.	Thousand short tons	ACTCPZZ = ACRCPZZ + ACCCPZZ + ACICPZZ + ACEUPZZ ACTCPUS = $\Sigma$ ACTCPZZ
AICAP	Aluminum ingot production capacity.	Short tons	AICAPZZ is independent. AICAPUS = $\Sigma$ AICAPZZ
ARICB	Asphalt and road oil consumed by the industrial sector.	Billion Btu	ARICBZZ = ARICPPZZ * 6.636 ARICBUS = $\Sigma$ ARICBZZ
ARICP	Asphalt and road oil consumed by the industrial sector.	Thousand barrels	ARICPZZ = ASICPZZ + RDICPZZ ARICPUS = $\Sigma$ ARICPZZ
ARTCB	Asphalt and road oil total consumed.	Billion Btu	ARTCBZZ = ARICBZZ ARTCBUS = ARICBUS
ARTCP	Asphalt and road oil total consumed.	Thousand barrels	ARTCPZZ = ASTCPZZ + RDTCPZZ ARTCPUS = $\Sigma$ ARTCPZZ

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ASICP	Asphalt consumed by the industrial sector.	Thousand barrels	ASICPZZ = (ASINPZZ / ASINPUS) * ASTCPUS ASICPUS = ΣASICPZZ
ASINP	Asphalt sold to the industrial sector.	Short tons	ASINPZZ is independent. ASINPUS = ΣASINPZZ
ASTCP	Asphalt total consumed.	Thousand barrels	ASTCPZZ = ASICPZZ ASTCPUS is independent.
AVACB	Aviation gasoline consumed by the transportation sector.	Billion Btu	AVACBZZ = AVACPZZ * 5.048 AVACBUS = ΣAVACBZZ
AVACP	Aviation gasoline consumed by the transportation sector.	Thousand barrels	AVACPZZ = (AVTTPZZ / AVTTPUS) * AVTCPUS AVACPUS = ΣAVACPZZ
AVMIP	Aviation gasoline issued to the military.	Thousand barrels	AVMIPZZ is independent. AVMIPUS = ΣAVMIPZZ
AVNMM	Aviation gasoline sold to nonmilitary users.	Thousand gallons	AVNMMZZ is independent. AVNMMUS = ΣAVNMMZZ
AVNMP	Aviation gasoline sold to nonmilitary users.	Thousand barrels	AVNMPZZ = AVNMMZZ / 42 AVNMPUS = ΣAVNMPZZ
AVTCB	Aviation gasoline total consumed.	Billion Btu	AVTCBZZ = AVACBZZ AVTCBUS = AVACBUS
AVTCP	Aviation gasoline total consumed.	Thousand barrels	AVTCPZZ = AVACPZZ AVTCPUS is independent.
AVTTP	Aviation gasoline total sales to the transportation sector.	Thousand barrels	AVTTPZZ = AVNMPZZ + AVMIPZZ AVTTPUS = ΣAVTTPZZ
BCACB	Bituminous coal and lignite consumed by the transportation sector.	Billion Btu	BCACBZZ = BCACPZZ * BCOCKZZ BCACBUS = ΣBCACBZZ
BCACP	Bituminous coal and lignite consumed by the transportation sector.	Thousand short tons	BCACPZZ = (BCICPZZ / BCICPUS) * BCACPUS BCACPUS is independent.
BCCCB	Bituminous coal and lignite consumed by the commercial sector.	Billion Btu	BCCCBZZ = BCCCPZZ * BCHCKZZ BCCCBUS = ΣBCCCBZZ
BCCCP	Bituminous coal and lignite consumed by the commercial sector.	Thousand short tons	BCCCPZZ = BCHCPZZ * 0.65 BCCCPUS = ΣBCCCPZZ

BCEUB	Bituminous coal and lignite consumed by the electric utilities.	Billion Btu	BCEUBZZ = BCEUPZZ * BCEUKZZ BCEUBUS = ΣBCEUBZZ
BCEUKZZ	Factor for converting bituminous coal and lignite consumed by the electric utilities from physical units to Btu.	Million Btu per short ton	BCEUKZZ is independent.
BCEUP	Bituminous coal and lignite consumed by the electric utilities.	Thousand short tons	BCEUPZZ is independent. BCEUPUS = ΣBCEUPZZ
BCHCKZZ	The factor for converting bituminous coal and lignite consumed by the residential and commercial sectors from physical units to Btu.	Million Btu per short ton	BCHCKZZ is independent.
BCHCP	Bituminous coal and lignite consumed by the residential and commercial sectors.	Thousand short tons	BCHCPZZ = (BCHDPZZ / BCHDPUS) * BCHCPUS BCHCPUS is independent.
BCHDP	Bituminous coal and lignite distributed to the residential and commercial sectors.	Thousand short tons	BCHDPZZ is independent. BCHDPUS = ΣBCHDPZZ
BCICB	Bituminous coal and lignite consumed by the industrial sector.	Billion Btu	BCICBZZ = BCKCBZZ + BCOCBZZ BCICBUS = ΣBCICBZZ
BCICP	Bituminous coal and lignite consumed by the industrial sector.	Thousand short tons	BCICPZZ = BCKCPZZ + BCOCPPZZ BCICPUS = ΣBCICPZZ
BCKCB	Bituminous coal and lignite consumed by coke plants.	Billion Btu	BCKCBZZ = BCKCPZZ * 26.80 BCKCBUS = ΣBCKCBZZ
BCKCP	Bituminous coal and lignite consumed by coke plants.	Thousand short tons	BCKCPZZ = (BCKDPZZ / BCKDPUS) * BCKCPUS BCKCPUS is independent.
BCKDP	Bituminous coal and lignite distributed to coke plants.	Thousand short tons	BCKDPZZ is independent. BCKDPUS = ΣBCKDPZZ
BCOCB	Bituminous coal and lignite consumed by other industrial users.	Billion Btu	BCOCBZZ = BCOCPPZZ * BCOCKZZ BCOCBUS = ΣBCOCBZZ
BCOCKZZ	The factor for converting bituminous coal and lignite consumed by other industrial users from physical units to Btu.	Million Btu per short ton	BCOCKZZ is independent.
BCOCP	Bituminous coal and lignite consumed by other industrial users.	Thousand short tons	BCOCPZZ = (BCODPZZ / BCODPUS) * BCOCPUS BCOCPUS is independent.

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BCODP	Bituminous coal and lignite distributed to other industrial users.	Thousand short tons	BCODPZZ is independent. BCODPUS = $\Sigma$ BCODPZZ
BCRCB	Bituminous coal and lignite consumed by the residential sector.	Billion Btu	BCRCBZZ = BCRCPZZ * BCHCKZZ BCRCBUS = $\Sigma$ BCRCBZZ
BCRCP	Bituminous coal and lignite consumed by the residential sector.	Thousand short tons	BCRCPZZ = BCHCPZZ * 0.35 BCRCPUS = $\Sigma$ BCRCPZZ
BCTCB	Bituminous coal and lignite total consumed.	Billion Btu	BCTCBZZ = BCRCBZZ + BCCCBZZ + BCICBZZ + BCACBZZ + BCEUBZZ BCTCBUS = $\Sigma$ BCTCBZZ
BCTCP	Bituminous coal and lignite total consumed.	Thousand short tons	BCTCPZZ = BCRCPZZ + BCCCPZZ + BCICPZZ + BCACPZZ + BCEUPZZ BCTCPUS = $\Sigma$ BCTCPZZ
CCEXBUS	Coal coke exported from the United States.	Billion Btu	CCEXBUS = CCEXPUS * 24.80
CCEXPUS	Coal coke exported from the United States.	Thousand short tons	CCEXPUS is independent.
CCIMBUS	Coal coke imported into the United States.	Billion Btu	CCIMBUS = CCIMPUS * 24.80
CCIMPUS	Coal coke imported into the United States.	Thousand short tons	CCIMPUS is independent.
CCNIBUS	Coal coke net imports into the United States.	Billion Btu	CCNIBUS = CCIMBUS - CCEXBUS
CCNIPUS	Coal coke net imports into the United States.	Thousand short tons	CCNIPUS = CCIMPUS - CCEXPUS
CGVAV	Value added in the manufacture of corrugated and solid fiber boxes.	Million dollars	CGVAVZZ is independent. CGVAVUS = $\Sigma$ CGVAVZZ
CLACB	Coal consumed by the transportation sector.	Billion Btu	CLACBZZ = BCACBZZ CLACBUS = BCACBUS
CLACP	Coal consumed by the transportation sector.	Thousand short tons	CLACPZZ = BCACPZZ CLACPUS = BCACPUS
CLCCB	Coal consumed by the commercial sector.	Billion Btu	CLCCBZZ = ACCCBZZ + BCCCBZZ CLCCBUS = ACCCBUS + BCCCBUS
CLCCP	Coal consumed by the commercial sector.	Thousand short tons	CLCCPZZ = ACCCPZZ + BCCCPZZ CLCCPUS = ACCCPUS + BCCCPUS
CLEUB	Coal consumed by the electric utilities.	Billion Btu	CLEUBZZ = ACEUBZZ + BCEUBZZ CLEUBUS = ACEUBUS + BCEUBUS

CLEUP	Coal consumed by the electric utilities.	Thousand short tons	CLEUPZZ = ACEUPZZ + BCEUPZZ CLEUPUS = ACEUPUS + BCEUPUS
CLICB	Coal consumed by the industrial sector.	Billion Btu	CLICBZZ = ACICBZZ + BCICBZZ CLICBUS = ACICBUS + BCICBUS
CLICP	Coal consumed by the industrial sector.	Thousand short tons	CLICPZZ = ACICPZZ + BCICPZZ CLICPUS = ACICPUS + BCICPUS
CLKCB	Coal consumed at coke plants (coking coal).	Billion Btu	CLKCBZZ = ACKCBZZ + BCKCBZZ CLKCBUS = ACKCBUS + BCKCBUS
CLOCB	Coal consumed by other industrial users.	Billion Btu	CLOCBZZ = ACOCBZZ + BCOCBZZ CLOCBUS = ACOCBUS + BCOCBUS
CLOCP	Coal consumed by other industrial users.	Thousand short tons	CLOCPZZ = ACOCPPZZ + BCOCPPZZ CLOCPUS = ACOCPPUS + BCOCPPUS
CLRCB	Coal consumed by the residential sector.	Billion Btu	CLRCBZZ = ACLRCBZZ + BCLRCBZZ CLRCBUS = ACLRCBUS + BCLRCBUS
CLRCP	Coal consumed by the residential sector.	Thousand short tons	CLRCPZZ = ACLRCPZZ + BCLRCPZZ CLRCPUS = ACLRCPUS + BCLRCPUS
CLSCB	Coal consumed other than at coke plants (steam coal).	Billion Btu	CLSCBZZ = CLTCBZZ - CLKCBZZ CLSCBUS = CLTCBUS - CLKCBUS
CLTCB	Coal total consumed.	Billion Btu	CLTCBZZ = ACTCBZZ + BCTCBZZ CLTCBUS = ACTCBUS + BCTCBUS
CLTCP	Coal total consumed.	Thousand short tons	CLTCPZZ = ACTCPZZ + BCTCPZZ CLTCPUS = ACTCPUS + BCTCPUS
COCAP	Crude oil operating capacity at refineries.	Barrels per calendar day	COCAPZZ is independent. COCAPUS = ΣCOCAPZZ
COICB	Crude oil consumed by the industrial sector.	Billion Btu	COICBZZ = COTCBZZ COICBUS = COTCBUS
COICP	Crude oil consumed by the industrial sector.	Thousand barrels	COICPZZ = COTCPZZ COICPUS = COTCPUS
COTCB	Crude oil consumed in petroleum industry operations.	Billion Btu	COTCBZZ = COTCPZZ * 5.800 COTCBUS = ΣCOTCBZZ

**A  
P  
P  
E  
N  
D  
I  
X  
  
B**

COTCP	Crude oil consumed in petroleum industry operations.	Thousand barrels	COTCPZZ is independent. COTCPUS = $\Sigma$ COTCPZZ
CTCAP	Catalytic cracking charge capacity of petroleum refineries.	1960 through 1979: Barrels per calendar day 1980 forward: Barrels per stream day	CTCAPZZ is independent. CTCAPUS = $\Sigma$ CTCAPZZ
DFACB	Distillate fuel consumed by the transportation sector.	Billion Btu	DFACBZZ = DFACPZZ * 5.825 DFACBUS = $\Sigma$ DFACBZZ
DFACP	Distillate fuel consumed by the transportation sector.	Thousand barrels	DFACPZZ = (DFTRPZZ / DFNDPZZ) * DFNCPZZ DFACPUS = $\Sigma$ DFACPZZ
DFBKP	Distillate fuel adjusted sales for vessel bunkering use, excluding that sold to the Armed Forces.	Thousand barrels	DFBKPZZ is independent. DFBKPUS = $\Sigma$ DFBKPZZ
DFCCB	Distillate fuel consumed by the commercial sector.	Billion Btu	DFCCBZZ = DFCCPZZ * 5.825 DFCCBUS = $\Sigma$ DFCCBZZ
DFCCP	Distillate fuel consumed by the commercial sector.	Thousand barrels	DFCCPZZ = (DFCMPZZ / DFNDPZZ) * DFNCPZZ DFCCPUS = $\Sigma$ DFCCPZZ
DFCMP	Distillate fuel adjusted sales to the commercial sector.	Thousand barrels	DFCMPZZ is independent. DFCMPUS = $\Sigma$ DFCMPZZ
DFEUB	Distillate fuel consumed by the electric utilities.	Billion Btu	DFEUBZZ = DFEUPZZ * 5.825 DFEUBUS = $\Sigma$ DFEUBZZ
DFEUP	Distillate fuel (excluding kerosene-type jet fuel) consumed by the electric utilities.	Thousand barrels	DFEUPZZ = DKEUPZZ - JKEUPZZ DFEUPUS = $\Sigma$ DFEUPZZ
DFIBP	Distillate fuel adjusted sales for industrial space heating and other industrial use, including farm use.	Thousand barrels	DFIBPZZ is independent. DFIBPUS = $\Sigma$ DFIBPZZ
DFICB	Distillate fuel consumed by the industrial sector.	Billion Btu	DFICBZZ = DFICPZZ * 5.825 DFICBUS = $\Sigma$ DFICBZZ
DFICP	Distillate fuel consumed by the industrial sector.	Thousand barrels	DFICPZZ = (DFINPZZ / DFNDPZZ) * DFNCPZZ DFICPUS = $\Sigma$ DFICPZZ
DFINP	Distillate fuel adjusted sales to the industrial sector.	Thousand barrels	DFINPZZ = DFIBPZZ + DFOCPZZ + DFOFPZZ + DFOTPZZ DFINPUS = $\Sigma$ DFINPZZ

DFMIP	Distillate fuel adjusted sales to the Armed Forces, regardless of use.	Thousand barrels	DFMIPZZ is independent. DFMIPUS = $\Sigma$ DFMIPZZ
DFNCP	Distillate fuel consumption by all sectors other than the electric utility sector.	Thousand barrels	DFNCPZZ = (DFNDPZZ / DFNDPUS) * DFNCPPUS DFNCPUS = DFTCPUS - DFEUPUS
DFNDP	Distillate fuel adjusted sales to all sectors other than the electric utility sector.	Thousand barrels	DFNDPZZ = DFRSPZZ + DFCMPZZ + DFINPZZ + DFTRPZZ DFNDPUS = $\Sigma$ DFNDPZZ
DFOCP	Distillate fuel adjusted sales for use by oil companies.	Thousand barrels	DFOCPZZ is independent. DFOCPUS = $\Sigma$ DFOCPZZ
DFOFP	Distillate fuel adjusted sales as diesel fuel for off-highway use.	Thousand barrels	DFOFPZZ is independent. DFOFPUS = $\Sigma$ DFOFPZZ
DFONP	Distillate fuel adjusted sales as diesel fuel for on-highway use.	Thousand barrels	DFONPZZ is independent. DFONPUS = $\Sigma$ DFONPZZ
DFOTP	Distillate fuel adjusted sales for all other uses not identified in other adjusted sales categories.	Thousand barrels	DFOTPZZ is independent. DFOTPUS = $\Sigma$ DFOTPZZ
DFRCB	Distillate fuel consumed by the residential sector.	Billion Btu	DFRCBZZ = DFRCPZZ * 5.825 DFRCBUS = $\Sigma$ DFRCBZZ
DFRCP	Distillate fuel consumed by the residential sector.	Thousand barrels	DFRCPZZ = (DFRSPZZ / DFNDPZZ) * DFNCPPZZ DFRCPUS = $\Sigma$ DFRCPZZ
DFRRP	Distillate fuel adjusted sales for use by railroads.	Thousand barrels	DFRRPZZ is independent. DFRRPUS = $\Sigma$ DFRRPZZ
DFRSP	Distillate fuel adjusted sales to the residential sector.	Thousand barrels	DFRSPZZ is independent. DFRSPUS = $\Sigma$ DFRSPZZ
DFTCB	Distillate fuel total consumed.	Billion Btu	DFTCBZZ = DFRCBZZ + DFCCBZZ + DFICBZZ + DFACBZZ + DFEUBZZ DFTCBUS = $\Sigma$ DFTCBZZ
DFTCP	Distillate fuel total consumed.	Thousand barrels	DFTCPZZ = DFNCPPZZ + DFEUPZZ DFTCPUS is independent.
DFTRP	Distillate fuel adjusted sales to the transportation sector.	Thousand barrels	DFTRPZZ = DFBKPZZ + DFMIPZZ + DFRRPZZ + DFONPZZ DFTRPUS = $\Sigma$ DFTRPZZ



**A  
P  
P  
E  
N  
D  
I  
X  
B**

DKEUB	Distillate fuel and kerosene-type jet fuel consumed by the electric utilities.	Billion Btu	DKEUBZZ = DFEUBZZ + JKEUBZZ DKEUBUS = $\Sigma$ DKEUBZZ
DKEUP	Distillate fuel and kerosene-type jet fuel consumed by the electric utilities.	Thousand barrels	DKEUPZZ is independent. DKEUPUS = $\Sigma$ DKEUPZZ
ELEXB	Electricity exported from the United States (assumed to be produced from hydroelectric power through 1988).	Billion Btu	ELEXBZZ = HYEXBZZ + EXEXBZZ ELEXBUS = $\Sigma$ ELEXBZZ
ELEXP	Electricity exported from the United States (assumed to be produced from hydroelectric power through 1988).	Million kilowatthours	ELEXPZZ is independent. ELEXPUS = $\Sigma$ ELEXPZZ
ELIMB	Electricity imported into the United States (assumed to be produced from hydroelectric power through 1988).	Billion Btu	ELIMBZZ = HYIMBZZ + GEIMBZZ + EXIMBZZ ELIMBUS = $\Sigma$ ELIMBZZ
ELIMP	Electricity imported into the United States (assumed to be produced from hydroelectric power through 1988).	Million kilowatthours	ELIMPZZ is independent. ELIMPUS = $\Sigma$ ELIMPZZ
ELISB	Net interstate flow of electricity. (Negative indicates flow out of State; positive indicates flow into State.)	Billion Btu	ELISBZZ = (ESTCBZZ + LOTCBZZ) - TEEUBZZ ELISBUS = $\Sigma$ ELISBZZ
ELISP	Net interstate flow of electricity. (Negative indicates flow out of State; positive indicates flow into State.)	Million kilowatthours	ELISPZZ = ELISBZZ / 3.412 ELISPUS = $\Sigma$ ELISPZZ
ELLSS48	The ratio of electrical system energy losses to electricity sold in the contiguous 48 States and the District of Columbia.	Fraction	ELLSS48 = LOTCB48 / ESTCB48
ENACB	Ethanol consumed by the transportation sector.	Billion Btu	ENACBZZ = ENACPZZ * 3.539 ENACBUS = $\Sigma$ ENACBZZ
ENACP	Ethanol consumed by the transportation sector.	Thousand barrels	ENACPZZ = (ENTRPZZ / ENTRPUS) * ENACPUS ENACPUS is independent.
ENTRP	Ethanol blended into motor gasoline.	Thousand gallons	ENTRPZZ is independent. ENTRPUS = $\Sigma$ ENTRPZZ
EREXB	Electricity produced from renewable energy sources and exported from the United States.	Billion Btu	EREXBZZ = HYEXBZZ EREXBUS = $\Sigma$ EREXBZZ

EREXP	Electricity produced from renewable energy sources and exported from the United States.	Million kilowatthours	EREXPZZ = HYEXPZZ EREXPUS = ΣEREXPZZ
ERIMB	Electricity produced from renewable energy sources and imported into the United States.	Billion Btu	ERIMBZZ = HYIMBZZ + GEIMBZZ ERIMBUS = ΣERIMBZZ
ERIMP	Electricity produced from renewable energy sources and imported into the United States.	Million kilowatthours	ERIMPZZ = HYIMPZZ + GEIMPZZ ERIMPUS = ΣERIMPZZ
ESACB	Electricity consumed by (i.e., sold to) the transportation sector.	Billion Btu	ESACBZZ = ESACPZZ * 3.412 ESACBUS = ΣESACBZZ
ESACP	Electricity consumed by (i.e., sold to) the transportation sector.	Million kilowatthours	ESACPZZ = (ESTRPZZ / ESTRPUS) * ESACPUS ESACPUS = ESOTPUS * ESTRSUS
ESCCB	Electricity consumed by (i.e., sold to) the commercial sector.	Billion Btu	ESCCBZZ = ESCCPZZ * 3.412 ESCCBUS = ΣESCCBZZ
ESCCP	Electricity consumed by (i.e., sold to) the commercial sector.	Million kilowatthours	ESCCPZZ = ESCMPZZ + ESOTPZZ - ESACPZZ ESCCPUS = ΣESCCPZZ
ESCMP	Electricity sold to a portion of the commercial sector.	Million kilowatthours	ESCMPZZ is independent. ESCMPUS = ΣESCMPZZ
ESICB	Electricity consumed by (i.e., sold to) the industrial sector.	Billion Btu	ESICBZZ = ESICPZZ * 3.412 ESICBUS = ΣESICBZZ
ESICP	Electricity consumed by (i.e., sold to) the industrial sector.	Million kilowatthours	ESICPZZ is independent. ESICPUS = ΣESICPZZ
ESOTP	Electricity sold to the "Other" sector (i.e., public street and highway lighting, sales to other public authorities, railroads and railways, and interdepartmental sales).	Million kilowatthours	ESOTPZZ is independent. ESOTPUS = ΣESOTPZZ
ESRCB	Electricity consumed by (i.e., sold to) the residential sector.	Billion Btu	ESRCBZZ = ESRCPZZ * 3.412 ESRCBUS = ΣESRCBZZ
ESRCP	Electricity consumed by (i.e., sold to) the residential sector.	Million kilowatthours	ESRCPZZ is independent. ESRCPUS = ΣESRCPZZ
ESTCB	Electricity total consumed (i.e., sold).	Billion Btu	ESTCBZZ = ESTCPZZ * 3.412 ESTCBUS = ΣESTCBZZ ESTCB48 = ESTCBUS - (ESTCBAK + ESTCBHI)

ESTCP	Electricity total consumed (i.e., sold).	Million kilowatthours	$\text{ESTCPZZ} = \text{ESRCPZZ} + \text{ESCCPZZ} + \text{ESICPZZ} + \text{ESACPZZ}$ $\text{ESTCPUS} = \Sigma \text{ESTCPZZ}$
ESTRP	Electricity consumed by transit systems.	Million kilowatthours	$\text{ESTRPZZ}$ is independent. $\text{ESTRPUS} = \Sigma \text{ESTRPZZ}$
ESTRSUS	The share of electricity sold to the "Other" sector (ESOTP) that is used for transportation.	Fraction	ESTRSUS is independent.
EXEXB	Electricity produced from nonrenewable energy sources and exported from the United States.	Billion Btu	$\text{EXEXBZZ} = \text{EXEXPZZ} * \text{FFEOKUS}$ $\text{EXEXBUS} = \Sigma \text{EXEXBZZ}$
EXEXP	Electricity produced from nonrenewable energy sources and exported from the United States.	Million kilowatthours	$\text{EXEXPZZ} = \text{ELEXPZZ} - \text{EREXPZZ}$ $\text{EXEXPUS} = \Sigma \text{EXEXPZZ}$
EXIMB	Electricity produced from nonrenewable energy sources and imported into the United States.	Billion Btu	$\text{EXIMBZZ} = \text{EXIMPZZ} * \text{FFEOKUS}$ $\text{EXIMBUS} = \Sigma \text{EXIMBZZ}$
EXIMP	Electricity produced from nonrenewable energy sources and imported into the United States.	Million kilowatthours	$\text{EXIMPZZ} = \text{ELIMPZZ} - \text{ERIMPZZ}$ $\text{EXIMPUS} = \Sigma \text{EXIMPZZ}$
EXNIB	Net imports of electricity into the United States produced from nonrenewable energy sources.	Billion Btu	$\text{EXNIBZZ} = \text{EXIMBZZ} - \text{EXEXBZZ}$ $\text{EXNIBUS} = \Sigma \text{EXNIBZZ}$
EXNIP	Net imports of electricity into the United States produced from nonrenewable energy sources.	Million kilowatthours	$\text{EXNIPZZ} = \text{EXIMPZZ} - \text{EXEXPZZ}$ $\text{EXNIPUS} = \Sigma \text{EXNIPZZ}$
FFEOKUS	Fossil fuel steam-electric power plant conversion factor.	Thousand Btu per kilowatthour	FFEOKUS is independent.
FNICB	Petrochemical feedstocks, naphtha less than 401° F, consumed by the industrial sector.	Billion Btu	$\text{FNICBZZ} = \text{FNTCBZZ}$ $\text{FNICBUS} = \text{FNTCBUS}$
FNICP	Petrochemical feedstocks, naphtha less than 401° F, consumed by the industrial sector.	Thousand barrels	$\text{FNICPZZ} = \text{FNTCPZZ}$ $\text{FNICPUS} = \text{FNTCPUS}$
FNTCB	Petrochemical feedstocks, naphtha less than 401° F, total consumed.	Billion Btu	$\text{FNTCBZZ} = \text{FNTCPZZ} * 5.248$ $\text{FNTCBUS} = \Sigma \text{FNTCBZZ}$
FNTCP	Petrochemical feedstocks, naphtha less than 401° F, total consumed.	Thousand barrels	$\text{FNTCPZZ} = (\text{OCVAVZZ} / \text{OCVAVUS}) * \text{FNTCPUS}$ $\text{FNTCPUS}$ is independent.
FOICB	Petrochemical feedstocks, other oils equal to or greater than 401° F, consumed by the industrial sector.	Billion Btu	$\text{FOICBZZ} = \text{FOTCBZZ}$ $\text{FOICBUS} = \text{FOTCBUS}$

FOICP	Petrochemical feedstocks, other oils equal to or greater than 401° F, consumed by the industrial sector.	Thousand barrels	FOICPZZ = FOTCPZZ FOICPUS = FOTCPUS
FOTCB	Petrochemical feedstocks, other oils equal to or greater than 401° F, total consumed.	Billion Btu	FOTCBZZ = FOTCPZZ * 5.825 FOTCBUS = ΣFOTCBZZ
FOTCP	Petrochemical feedstocks, other oils equal to or greater than 401° F, total consumed.	Thousand barrels	FOTCPZZ = (OCVAVZZ / OCVAVUS) * FOTCPUS FOTCPUS is independent.
FSICB	Petrochemical feedstocks, still gas, consumed by the industrial sector.	Billion Btu	FSICBZZ = FSTCBZZ FSICBUS = FSTCBUS
FSICP	Petrochemical feedstocks, still gas, consumed by the industrial sector.	Thousand barrels	FSICPZZ = FSTCPZZ FSICPUS = FSTCPUS
FSTCB	Petrochemical feedstocks, still gas, total consumed.	Billion Btu	FSTCBZZ = FSTCPZZ * 6.000 FSTCBUS = ΣFSTCBZZ
FSTCP	Petrochemical feedstocks, still gas, total consumed.	Thousand barrels	FSTCPZZ = (COCAPZZ / COCAPUS) * FSTCPUS FSTCPUS is independent.
GECCB	Direct use of geothermal energy and heat pumps in the commercial sector.	Billion Btu	GECCBZZ is independent. GECCBUS = ΣGECCBZZ
GEENB	Geothermal subtotal: electricity produced from geothermal energy at electric utilities plus imports of electricity into the United States.	Billion Btu	GEENBZZ = GEEOBZZ + GEIMBZZ GEENBUS = ΣGEENBZZ
GEENP	Geothermal subtotal: electricity produced from geothermal energy at electric utilities plus imports of electricity into the United States.	Million kilowatthours	GEENPZZ = GEEOPZZ + GEIMPZZ GEENPUS = ΣGEENPZZ
GEEOB	Electricity produced from geothermal energy at electric utilities.	Billion Btu	GEEOBZZ = GEEOPZZ * GEEOKUS GEEOBUS = ΣGEEOBZZ
GEEOKUS	Factor for converting electricity produced from geothermal energy from physical units to Btu.	Thousand Btu per kilowatthour	GEEOKUS is independent.
GEEOP	Electricity produced from geothermal energy at electric utilities.	Million kilowatthours	GEEOPZZ is independent. GEEOPUS = ΣGEEOPZZ
GEICB	Geothermal energy used in the industrial sector.	Billion Btu	GEICBZZ = GEINBZZ + GENGBZZ GEICBUS = ΣGEICBZZ

**A  
P  
P  
E  
N  
D  
I  
X  
  
B**

GEIMB	Electricity produced from geothermal energy and imported into the United States.	Billion Btu	GEIMBZZ = GEIMPZZ * GEEOKUS GEIMBUS = ΣGEIMBZZ
GEIMP	Electricity produced from geothermal energy and imported into the United States.	Million kilowatthours	GEIMPZZ is independent. GEIMPUS = ΣGEIMPZZ
GEINB	Direct use of geothermal energy and heat pumps in the industrial sector.	Billion Btu	GEINBZZ is independent. GEINBUS = ΣGEINBZZ
GENGB	Electricity produced from geothermal energy by nonutility power producers.	Billion Btu	GENGBZZ = GENGPZZ * GEEOKUS GENGBUS = ΣGENGBZZ
GENGP	Electricity produced from geothermal energy by nonutility power producers.	Million kilowatthours	GENGPZZ is independent. GENGPUS = ΣGENGPZZ
GERCB	Direct use of geothermal energy and heat pumps in the residential sector.	Billion Btu	GERCBZZ is independent. GERCBUS = ΣGERCBZZ
GETCB	Geothermal total energy consumed (including imports of geothermal-based electricity).	Billion Btu	GETCBZZ = GERCBZZ + GECCBZZ + GEICBZZ + GEENBZZ GETCBUS = ΣGETCBZZ
GOICB	Electricity produced from geothermal, wind, nuclear, photovoltaic, and solar thermal energy sources in the industrial sector.	Billion Btu	GOICBZZ = GEICBZZ + SOICBZZ + WYICBZZ + NUATBZZ GOICBUS = ΣGOICBZZ
GOTCB	Electricity produced from geothermal, wind, photovoltaic, and solar thermal energy sources; total produced.	Billion Btu	GOTCBZZ = GETCBZZ + SOTCBZZ + WYTCBZZ GOTCBUS = ΣGOTCBZZ
HPATB	Electricity produced from pumped storage hydroelectric power by nonutility power producers.	Billion Btu	HPATBZZ = HPATPZZ * FFEOKUS. HPATBUS = ΣHPATBZZ
HPATP	Electricity produced from pumped storage hydroelectric power by nonutility power producers.	Million kilowatthours	HPATPZZ is independent. HPATPUS = ΣHPATPZZ
HPEOB	Electricity produced from pumped storage hydroelectric power at electric utilities.	Billion Btu	HPEOBZZ = HPEOPZZ * FFEOKUS HPEOBUS = ΣHPEOBZZ
HPEOP	Electricity produced from pumped storage hydroelectric power at electric utilities.	Million kilowatthours	HPEOPZZ is independent. HPEOPUS = ΣHPEOPZZ
HVATB	Electricity produced from conventional hydropower by nonutility power producers.	Billion Btu	HVATBZZ = HVATPZZ * FFEOKUS HVATBUS = ΣHVATBZZ

HVATP	Electricity produced from conventional hydropower by nonutility power producers.	Million kilowatthours	HVATPZZ is independent. HVATPUS = $\Sigma$ HVATPZZ
HVENB	Renewable hydroelectric subtotal: electricity produced from conventional hydropower at electric utilities plus net imports of electricity into the United States.	Billion Btu	HVENBZZ = HVEOBZZ + HYIMBZZ – HYEXBZZ HVENBUS = $\Sigma$ HVENBZZ
HVENP	Renewable hydroelectric subtotal: electricity produced from conventional hydropower at electric utilities plus net imports of electricity into the United States.	Million kilowatthours	HVENPZZ = HVEOPZZ + HYIMPZZ – HYEXPZZ HVENPUS = $\Sigma$ HVENPZZ
HVEOB	Electricity produced from conventional hydropower at electric utilities.	Billion Btu	HVEOBZZ = HVEOPZZ * FFEOKUS HVEOBUS = $\Sigma$ HVEOBZZ
HVEOP	Electricity produced from conventional hydropower at electric utilities.	Million kilowatthours	HVEOPZZ is independent. HVEOPUS = $\Sigma$ HVEOPZZ
HYATB	Electricity produced from all types of hydropower by nonutility power producers.	Billion Btu	HYATBZZ = HPATBZZ + HVATBZZ HYATBUS = $\Sigma$ HYATBZZ
HYATP	Electricity produced from all types of hydropower by nonutility power producers.	Million kilowatthours	HYATPZZ = HPATPZZ + HVATPZZ HYATPUS = $\Sigma$ HYATPZZ
HYENB	Electricity produced from all types of hydropower at electric utilities plus net imports of electricity into the United States.	Billion Btu	HYENBZZ = HYEOBZZ + HYIMBZZ – HYEXBZZ HYENBUS = $\Sigma$ HYENBZZ
HYENP	Electricity produced from all types of hydropower at electric utilities plus net imports of electricity into the United States.	Million kilowatthours	HYENPZZ = HYEOPZZ + HYIMPZZ – HYEXPZZ HYENPUS = $\Sigma$ HYENPZZ
HYEOB	Electricity produced from all types of hydropower at electric utilities.	Billion Btu	HYEOBZZ = HPEOBZZ + HVEOBZZ HYEOBUS = $\Sigma$ HYEOBZZ
HYEOP	Electricity produced from all types of hydropower at electric utilities.	Million kilowatthours	HYEOPZZ = HPEOPZZ + HVEOPZZ HYEOPUS = $\Sigma$ HYEOPZZ
HYEXB	Electricity produced from hydroelectric power and exported from the United States.	Billion Btu	HYEXBZZ = HYEXPZZ * FFEOKUS HYEXBUS = $\Sigma$ HYEXBZZ
HYEXP	Electricity produced from hydroelectric power and exported from the United States.	Million kilowatthours	HYEXPZZ is independent. HYEXPUS = $\Sigma$ HYEXPZZ

**A  
P  
P  
E  
N  
D  
I  
X  
B**

HYIMB	Electricity produced from hydroelectric power and imported into the United States.	Billion Btu	HYIMBZZ = HYIMPZZ * FFEOKUS HYIMBUS = ΣHYIMBZZ
HYIMP	Electricity produced from hydroelectric power and imported into the United States.	Million kilowatthours	HYIMPZZ is independent. HYIMPUS = ΣHYIMPZZ
HYTCB	Electricity produced from hydropower at electric utilities (including net imports of electricity) and by nonutility power producers.	Billion Btu	HYTCBZZ = HYENBZZ + HYATBZZ HYTCBUS = ΣHYTCBZZ
HYTCP	Electricity produced from hydropower at electric utilities (including net imports of electricity) and by nonutility power producers.	Million kilowatthours	HYTCPZZ = HYENPZZ + HYATPZZ HYTCPUS = ΣHYTCPZZ
JFACB	Jet fuel consumed by the transportation sector.	Billion Btu	JFACBZZ = JKACBZZ + JNACBZZ JFACBUS = ΣJFACBZZ
JFACP	Jet fuel consumed by the transportation sector.	Thousand barrels	JFACPZZ = JKACPZZ + JNACPZZ JFACPUS = ΣJFACPZZ
JFEUB	Jet fuel consumed by electric utilities.	Billion Btu	JFEUBZZ = JKEUBZZ JFEUBUS = JKEUBUS
JFEUP	Jet fuel consumed by electric utilities.	Thousand barrels	JFEUPZZ = JKEUPZZ JFEUPUS = JKEUPUS
JFTCB	Jet fuel total consumed.	Billion Btu	JFTCBZZ = JFACBZZ + JFEUBZZ JFTCBUS = ΣJFTCBZZ
JFTCP	Jet fuel total consumed.	Thousand barrels	JFTCPZZ = JFACPZZ + JFEUPZZ JFTCPUS = ΣJFTCPZZ
JKACB	Kerosene-type jet fuel consumed by the transportation sector.	Billion Btu	JKACBZZ = JKACPZZ * 5.670 JKACBUS = ΣJKACBZZ
JKACP	Kerosene-type jet fuel consumed by the transportation sector.	Thousand barrels	JKACPZZ = (JKTTPZZ / JKTTPUS) * JKACPUS JKACPUS = JKTCPUS - JKEUPUS
JKEUB	Kerosene-type jet fuel consumed by electric utilities.	Billion Btu	JKEUBZZ = JKEUPZZ * 5.670 JKEUBUS = ΣJKEUBZZ
JKEUP	Kerosene-type jet fuel consumed by electric utilities.	Thousand barrels	JKEUPZZ is independent. JKEUPUS = ΣJKEUPZZ
JKTCB	Kerosene-type jet fuel total consumed.	Billion Btu	JKTCBZZ = JKTCPZZ * 5.670 JKTCBUS = ΣJKTCBZZ

JKTCP	Kerosene-type jet fuel total consumed.	Thousand barrels	JKTCPZZ = JKACPZZ + JKEUPZZ JKTCPUS is independent.
JKTTP	Kerosene-type jet fuel total sold.	Thousand gallons	JKTTPZZ is independent. JKTTPUS = $\Sigma$ JKTTPZZ
JNACB	Naphtha-type jet fuel consumed by the transportation sector.	Billion Btu	JNACBZZ = JNTCBZZ JNACBUS = JNTCBUS
JNACP	Naphtha-type jet fuel consumed by the transportation sector.	Thousand barrels	JNACPZZ = JNTCPZZ JNACPUS = JNTCPUS
JNMIP	Naphtha-type jet fuel issued to the military.	Thousand barrels	JNMIPZZ is independent. JNMIPUS = $\Sigma$ JNMIPZZ
JNTCB	Naphtha-type jet fuel total consumed.	Billion Btu	JNTCBZZ = JNTCPZZ * 5.355 JNTCBUS = $\Sigma$ JNTCBZZ
JNTCP	Naphtha-type jet fuel total consumed.	Thousand barrels	JNTCPZZ = (JNMIPZZ / JNMIPUS) * JNTCPUS JNTCPUS is independent.
KSCCB	Kerosene consumed by the commercial sector.	Billion Btu	KSCCBZZ = KSCCPZZ * 5.670 KSCCBUS = $\Sigma$ KSCCBZZ
KSCCP	Kerosene consumed by the commercial sector.	Thousand barrels	KSCCPZZ = (KSCMPZZ / KSTTPZZ) * KSTCPZZ KSCCPUS = $\Sigma$ KSCCPZZ
KSCMP	Kerosene sold to the commercial sector.	Thousand barrels	KSCMPZZ is independent. KSCMPUS = $\Sigma$ KSCMPZZ
KSICB	Kerosene consumed by the industrial sector.	Billion Btu	KSICBZZ = KSICPZZ * 5.670 KSICBUS = $\Sigma$ KSICBZZ
KSICP	Kerosene consumed by the industrial sector.	Thousand barrels	KSICPZZ = (KSINPZZ / KSTTPZZ) * KSTCPZZ KSICPUS = $\Sigma$ KSICPZZ
KSIHP	Kerosene sold for industrial heating.	Thousand barrels	KSIHPZZ is independent. KSIHPUS = $\Sigma$ KSIHPZZ
KSINP	Kerosene sold to the industrial sector.	Thousand barrels	KSINPZZ = KSOTPZZ + KSIHPZZ KSINPUS = $\Sigma$ KSINPZZ
KSOTP	Kerosene sold for all other uses, including farm use.	Thousand barrels	KSOTPZZ is independent. KSOTPUS = $\Sigma$ KSOTPZZ



**A  
P  
P  
E  
N  
D  
I  
X**

**B**

KSRCB	Kerosene consumed by the residential sector.	Billion Btu	KSRCBZZ = KSRCPZZ * 5.670 KSRCBUS = ΣKSRCBZZ
KSRCP	Kerosene consumed by the residential sector.	Thousand barrels	KSRCPZZ = (KSRSPZZ / KSTTPZZ) * KSTCPZZ KSRCBUS = ΣKSRCPZZ
KSRSP	Kerosene sold to the residential sector.	Thousand barrels	KSRSPZZ is independent. KSRSPUS = ΣKSRSPZZ
KSTCB	Kerosene total consumed.	Billion Btu	KSTCBZZ = KSRCBZZ + KSICBZZ + KSCCBZZ KSTCBUS = ΣKSTCBZZ
KSTCP	Kerosene total consumed.	Thousand barrels	KSTCPZZ = (KSTTPZZ / KSTTPUS) * KSTCPUS KSTCPUS is independent.
KSTTP	Kerosene total sold.	Thousand barrels	KSTTPZZ = KSRSPZZ + KSCMPZZ + KSINPZZ KSTTPUS = ΣKSTTPZZ
LGACB	LPG consumed by the transportation sector.	Billion Btu	LGACBZZ = LGACPZZ * LGTCKUS LGACBUS = ΣLGACBZZ
LGACP	LPG consumed by the transportation sector.	Thousand barrels	LGACPZZ = LGCBPZZ * LGTRSUS LGACPUS = ΣLGACPZZ
LGCBM	LPG sales for internal combustion engine use.	Thousand gallons	LGCBMZZ is independent. LGCBMUS = ΣLGCBMZZ
LGCBP	LPG consumed for internal combustion engine use.	Thousand barrels	LGCBPZZ = LGCBMZZ / 42 LGCBPUS = ΣLGCBPZZ
LGCCB	LPG consumed by the commercial sector.	Billion Btu	LGCCBZZ = LGCCPZZ * LGTCKUS LGCCBUS = ΣLGCCBZZ
LGCCP	LPG consumed by the commercial sector.	Thousand barrels	LGCCPZZ = LGHCPZZ * 0.15 LGCCPUS = ΣLGCCPZZ
LGHCM	LPG sold for residential and commercial use.	Thousand gallons	LGHCMZZ is independent. LGHCMUS = ΣLGHCMZZ
LGHCP	LPG consumed by the residential and commercial sectors.	Thousand barrels	LGHCPZZ = LGHCMZZ / 42 LGHCPUS = ΣLGHCPZZ
LGICB	LPG consumed by the industrial sector.	Billion Btu	LGICBZZ = LGICPZZ * LGTCKUS LGICBUS = ΣLGICBZZ

LGICP	LPG consumed by the industrial sector.	Thousand barrels	$\text{LGICPZZ} = \text{LGTCPPZZ} - (\text{LGRCPZZ} + \text{LGCCPZZ} + \text{LGACPZZ})$ $\text{LGICPUS} = \Sigma \text{LGICPZZ}$
LGRCB	LPG consumed by the residential sector.	Billion Btu	$\text{LGRCBZZ} = \text{LGRCPZZ} * \text{LGTCKUS}$ $\text{LGRCBUS} = \Sigma \text{LGRCBZZ}$
LGRCP	LPG consumed by the residential sector.	Thousand barrels	$\text{LGRCPZZ} = \text{LGHCPZZ} * 0.85$ $\text{LGRCPUS} = \Sigma \text{LGRCPZZ}$
LGTCB	LPG total consumed.	Billion Btu	$\text{LGTCBZZ} = \text{LGRCBZZ} + \text{LGCCBZZ} + \text{LGICBZZ} + \text{LGACBZZ}$ $\text{LGTCBUS} = \Sigma \text{LGTCBZZ}$
LGTCKUS	Factor for converting LPG from physical units to Btu.	Million Btu per barrel	LGTCKUS is independent.
LGTCP	LPG total consumed.	Thousand barrels	$\text{LGTCPZZ} = (\text{LGTTPZZ} / \text{LGTTPUS}) * \text{LGTCPUS}$ LGTCPUS is independent.
LGTRSUS	The transportation sector's share of LPG internal combustion engine sales.	Fraction	LGTRSUS is independent.
LGTTTP	LPG total sold.	Thousand gallons	LGTTTPZZ is independent. $\text{LGTTTPUS} = \Sigma \text{LGTTTPZZ}$
LOACB	The transportation sector's share of electrical system energy losses.	Billion Btu	$\text{LOACBZZ} = \text{ESACBZZ} * \text{ELLSS48}$ Exceptions: $\text{LOACBAK} = (\text{ESACBAK} / \text{ESTCBAK}) * \text{LOT CBAK}$ $\text{LOACBHI} = (\text{ESACBHI} / \text{ESTCBHI}) * \text{LOT CBHI}$ $\text{LOACBUS} = \Sigma \text{LOACBZZ}$
LOACP	The transportation sector's share of electrical system energy losses.	Million kilowatthours	$\text{LOACPZZ} = \text{LOACBZZ} / 3.412$ $\text{LOACPUS} = \text{LOACBUS} / 3.412$
LOCCB	The commercial sector's share of electrical system energy losses.	Billion Btu	$\text{LOCCBZZ} = \text{ESCCBZZ} * \text{ELLSS48}$ Exceptions: $\text{LOCCBAK} = (\text{ESCCBAK} / \text{ESTCBAK}) * \text{LOT CBAK}$ $\text{LOCCBHI} = (\text{ESCCBHI} / \text{ESTCBHI}) * \text{LOT CBHI}$ $\text{LOCCBUS} = \Sigma \text{LOCCBZZ}$
LOCCP	The commercial sector's share of electrical system energy losses.	Million kilowatthours	$\text{LOCCPZZ} = \text{LOCCBZZ} / 3.412$ $\text{LOCCPUS} = \text{LOCCBUS} / 3.412$
LOICB	The industrial sector's share of electrical system energy losses.	Billion Btu	$\text{LOICBZZ} = \text{ESICBZZ} * \text{ELLSS48}$ Exceptions:

$$\begin{aligned} \text{LOICBAK} &= (\text{ESICBAK} / \text{ESTCBAK}) * \text{LOT CBAK} \\ \text{LOICBHI} &= (\text{ESICBHI} / \text{ESTCBHI}) * \text{LOT CBHI} \\ \text{LOICBUS} &= \Sigma \text{LOICBZZ} \end{aligned}$$

$$\begin{aligned} \text{LOICPZZ} &= \text{LOICBZZ} / 3.412 \\ \text{LOICPUS} &= \text{LOICBUS} / 3.412 \end{aligned}$$

$$\begin{aligned} \text{LORCBZZ} &= \text{ESRCBZZ} * \text{ELLSS48} \\ \text{Exceptions:} & \\ \text{LORCBAK} &= (\text{ESRCBAK} / \text{ESTCBAK}) * \text{LOT CBAK} \\ \text{LORCBHI} &= (\text{ESRCBHI} / \text{ESTCBHI}) * \text{LOT CBHI} \\ \text{LORCBUS} &= \Sigma \text{LORCBZZ} \end{aligned}$$

$$\begin{aligned} \text{LORCPZZ} &= \text{LORCBZZ} / 3.412 \\ \text{LORCPUS} &= \text{LORCBUS} / 3.412 \end{aligned}$$

$$\begin{aligned} \text{LOT CBZZ} &= \text{ESTCBZZ} * \text{ELLSS48} \\ \text{Exceptions:} & \\ \text{LOT CBAK} &= \text{TEEUBAK} - \text{ESTCBAK} \\ \text{LOT CBHI} &= \text{TEEUBHI} - \text{ESTCBHI} \\ \text{LOT CBUS} &= \text{TEEUBUS} - \text{ESTCBUS} \\ \text{LOT CB48} &= \text{LOT CBUS} - (\text{LOT CBAK} + \text{LOT CBHI}) \end{aligned}$$

$$\begin{aligned} \text{LOT CPZZ} &= \text{LOT CBZZ} / 3.412 \\ \text{LOT CPUS} &= \text{LOT CBUS} / 3.412 \end{aligned}$$

$$\begin{aligned} \text{LUACBZZ} &= \text{LUACPZZ} * 6.065 \\ \text{LUACBUS} &= \Sigma \text{LUACBZZ} \end{aligned}$$

$$\begin{aligned} \text{LUACPZZ} &= (\text{LUTRPZZ} / \text{LUTTPZZ}) * \text{LUTCPZZ} \\ \text{LUACPUS} &= \Sigma \text{LUACPZZ} \end{aligned}$$

$$\begin{aligned} \text{LUICBZZ} &= \text{LUICPZZ} * 6.065 \\ \text{LUICBUS} &= \Sigma \text{LUICBZZ} \end{aligned}$$

$$\begin{aligned} \text{LUICPZZ} &= (\text{LUINPZZ} / \text{LUTTPZZ}) * \text{LUTCPZZ} \\ \text{LUICPUS} &= \Sigma \text{LUICPZZ} \end{aligned}$$

$$\begin{aligned} \text{LUINPZZ} &\text{ is independent.} \\ \text{LUINPUS} &= \Sigma \text{LUINPZZ} \end{aligned}$$

$$\begin{aligned} \text{LUTCBZZ} &= \text{LUICBZZ} + \text{LUACBZZ} \\ \text{LUTCBUS} &= \Sigma \text{LUTCBZZ} \end{aligned}$$

$$\begin{aligned} \text{LUTCPZZ} &= (\text{LUTTPZZ} / \text{LUTTPUS}) * \text{LUTCPUS} \\ \text{LUTCPUS} &\text{ is independent.} \end{aligned}$$

LOICP	The industrial sector's share of electrical system energy losses.	Million kilowatthours
LORCB	The residential sector's share of electrical system energy losses.	Billion Btu
LORCP	The residential sector's share of electrical system energy losses.	Million kilowatthours
LOT CB	Total electrical system energy losses.	Billion Btu
LOT CP	Total electrical system energy losses.	Million kilowatthours
LUACB	Lubricants consumed by the transportation sector.	Billion Btu
LUACP	Lubricants consumed by the transportation sector.	Thousand barrels
LUICB	Lubricants consumed by the industrial sector.	Billion Btu
LUICP	Lubricants consumed by the industrial sector.	Thousand barrels
LUINP	Lubricants sold to the industrial sector.	Thousand barrels
LUTCB	Lubricants total consumed.	Billion Btu
LUTCP	Lubricants total consumed.	Thousand barrels

LUTRP	Lubricants sold to the transportation sector.	Thousand barrels	LUTRPZZ is independent. LUTRPUS = $\Sigma$ LUTRPZZ
LUTTP	Lubricants total sold.	Thousand barrels	LUTTPZZ = LUINPZZ + LUTRPZZ LUTTPUS = $\Sigma$ LUTTPZZ
MBICB	Motor gasoline blending components consumed by the industrial sector.	Billion Btu	MBICBZZ = MBTCBZZ MBICBUS = MBTCBUS
MBICP	Motor gasoline blending components consumed by the industrial sector.	Thousand barrels	MBICPZZ = MBTCPZZ MBICPUS = MBTCPUS
MBTCB	Motor gasoline blending components total consumed.	Billion Btu	MBTCBZZ = MBTCPZZ * 5.253 MBTCBUS = $\Sigma$ MBTCBZZ
MBTCP	Motor gasoline blending components total consumed.	Thousand barrels	MBTCPZZ = (COCAPZZ / COCAPUS) * MBTCPUS MBTCPUS is independent.
MGACB	Motor gasoline consumed by the transportation sector.	Billion Btu	MGACBZZ = MGACPZZ * 5.253 MGACBUS = $\Sigma$ MGACBZZ
MGACP	Motor gasoline consumed by the transportation sector.	Thousand barrels	MGACPZZ = (MGTRPZZ / MGTTPZZ) * MGTCPZZ MGACPUS = $\Sigma$ MGACPZZ
MGAGP	Motor gasoline sold for agricultural use.	Thousand gallons	MGAGPZZ is independent. MGAGPUS = $\Sigma$ MGAGPZZ
MGCCB	Motor gasoline consumed by the commercial sector.	Billion Btu	MGCCBZZ = MGCCPZZ * 5.253 MGCCBUS = $\Sigma$ MGCCBZZ
MGCCP	Motor gasoline consumed by the commercial sector.	Thousand barrels	MGCCPZZ = (MGCMPZZ / MGTTPZZ) * MGTCPZZ MGCCPUS = $\Sigma$ MGCCPZZ
MGCMP	Motor gasoline sold to the commercial sector.	Thousand gallons	MGCMPZZ = MGMPSPZZ + MGPNPZZ MGCMPUS = $\Sigma$ MGCMPZZ
MGCUP	Motor gasoline sold for construction use.	Thousand gallons	MGCUPZZ is independent. MGCUPUS = $\Sigma$ MGCUPZZ
MGICB	Motor gasoline consumed by the industrial sector.	Billion Btu	MGICBZZ = MGICPZZ * 5.253 MGICBUS = $\Sigma$ MGICBZZ
MGICP	Motor gasoline consumed by the industrial sector.	Thousand barrels	MGICPZZ = (MGINPZZ / MGTTPZZ) * MGTCPZZ MGICPUS = $\Sigma$ MGICPZZ

**A  
P  
P  
E  
N  
D  
I  
X  
B**

MGINP	Motor gasoline sold to the industrial sector.	Thousand gallons	MGINPZZ = MGAGPZZ + MGCUPZZ + MGIYPZZ MGINPUS = ΣMGINPZZ
MGIYP	Motor gasoline sold for industrial and commercial use (Federal Highway Administration terminology).	Thousand gallons	MGIYPZZ is independent MGIYPUS = ΣMGIYPZZ
MGMFP	Motor gasoline sold for highway use.	Thousand gallons	MGMFPZZ is independent. MGMFPUS = ΣMGMFPZZ
MGMRP	Motor gasoline sold for marine use.	Thousand gallons	MGMRPZZ is independent. MGMRPUS = ΣMGMRPZZ
MGMSP	Motor gasoline sold for miscellaneous and unclassified uses.	Thousand gallons	MGMSPZZ is independent. MGMSPUS = ΣMGMSPZZ
MGPNP	Motor gasoline sold for public nonhighway use.	Thousand gallons	MGPNPZZ is independent. MGPNPUS = ΣMGPNPZZ
MGSFP	Motor gasoline special fuels sold (primarily diesel fuel with small amounts of liquefied petroleum gases).	Thousand gallons	MGSFPZZ is independent. MGSFPUS = ΣMGSFPZZ
MGTCB	Motor gasoline total consumed.	Billion Btu	MGTCBZZ = MGCCBZZ + MGICBZZ + MGACBZZ MGTCBUS = ΣMGTCBZZ
MGTCP	Motor gasoline total consumed.	Thousand barrels	MGTCPZZ = (MGTTPZZ / MGTPUS) * MGTCBUS MGTCPUS is independent.
MGTRP	Motor gasoline sold to the transportation sector.	Thousand gallons	MGTRPZZ = MGMFPZZ + MGMRPZZ - MGSFPZZ MGTRPUS = ΣMGTRPZZ
MGTTP	Motor gasoline total sold.	Thousand gallons	MGTTPZZ = MGCMPZZ + MGINPZZ + MGTRPZZ MGTTPUS = ΣMGTTPZZ
MSICB	Miscellaneous petroleum products consumed by the industrial sector.	Billion Btu	MSICBZZ = MSTCBZZ MSICBUS = MSTCBUS
MSICP	Miscellaneous petroleum products consumed by the industrial sector.	Thousand barrels	MSICPZZ = MSTCPZZ MSICPUS = MSTCPUS
MSTCB	Miscellaneous petroleum products total consumed.	Billion Btu	MSTCBZZ = MSTCPZZ * 5.796 MSTCBUS = ΣMSTCBZZ
MSTCP	Miscellaneous petroleum products total consumed.	Thousand barrels	MSTCPZZ = (OCVAVZZ / OCVAVUS) * MSTCPUS MSTCPUS is independent.

NAICB	Natural gasoline consumed by the industrial sector.	Billion Btu	NAICBZZ = NATCBZZ NAICBUS = NATCBUS
NAICP	Natural gasoline consumed by the industrial sector.	Thousand barrels	NAICPZZ = NATCPZZ NAICPUS = NATCPUS
NATCB	Natural gasoline total consumed.	Billion Btu	NATCBZZ = NATCPZZ * 4.620 NATCBUS = ΣNATCBZZ
NATCP	Natural gasoline total consumed.	Thousand barrels	NATCPZZ = (OCVAVZZ / OCVAVUS) * NATCPUS NATCPUS is independent.
NGACB	Natural gas consumed by the transportation sector.	Billion Btu	NGACBZZ = NGACPZZ * NGNUKZZ NGACBUS = ΣNGACBZZ
NGACP	Natural gas consumed by the transportation sector.	Million cubic feet	NGACPZZ = NGPZPZZ + NGVHPZZ NGACPUS = ΣNGACPZZ
NGCCB	Natural gas delivered to the commercial sector, used as consumption.	Billion Btu	NGCCBZZ = NGCCPZZ * NGNUKZZ NGCCBUS = ΣNGCCBZZ
NGCCP	Natural gas delivered to the commercial sector, used as consumption.	Million cubic feet	NGCCPZZ is independent. NGCCPUS = ΣNGCCPZZ
NGEUB	Natural gas consumed by the electric utilities.	Billion Btu	NGEUBZZ = NGEUPZZ * NGEUKZZ NGEUBUS = ΣNGEUBZZ
NGEUK	Factor for converting natural gas consumed by the electric utilities from physical units to Btu.	Thousand Btu per cubic foot	NGEUKZZ is independent. NGEUKUS = NGEUBUS / NGEUPUS
NGEUP	Natural gas consumed by the electric utilities.	Million cubic feet	NGEUPZZ is independent. NGEUPUS = ΣNGEUPZZ
NGICB	Natural gas consumed by the industrial sector.	Billion Btu	NGICBZZ = NGICPZZ * NGNUKZZ NGICBUS = ΣNGICBZZ
NGICP	Natural gas consumed by the industrial sector.	Million cubic feet	NGICPZZ = NGINPZZ + NGLEPZZ + NGPLPZZ NGICPUS = ΣNGICPZZ
NGINP	A portion of the natural gas delivered to the industrial sector.	Million cubic feet	NGINPZZ is independent. NGINPUS = ΣNGINPZZ
NGLPB	Natural gas consumed as lease and plant fuel.	Billion Btu	NGLPBZZ = NGLPPZZ * NGNUKZZ NGLPBUS = ΣNGLPBZZ

**A  
P  
P  
E  
N  
D  
I  
X  
B**

NGLPP	Natural gas consumed as lease and plant fuel.	Million cubic feet	$NGLPPZZ = NGLEPZZ + NGPLPZZ$ $NGLPPUS = \Sigma NGLPPZZ$
NGLEP	Natural gas consumed as lease fuel.	Million cubic feet	NGLEPZZ is independent. $NGLEPUS = \Sigma NGLEPZZ$
NGNUK	Factor for converting natural gas consumed by all sectors other than the electric utility sector from physical units to Btu.	Thousand Btu per cubic foot	$NGNUKZZ = (NGTCBZZ - NGEUBZZ) / (NGTCPZZ - NGEUPZZ)$ $NGNUKUS = (NGTCBUS - NGEUBUS) / (NGTCPUS - NGEUPUS)$
NGPLP	Natural gas consumed as plant fuel.	Million cubic feet	NGPLPZZ is independent. $NGPLPUS = \Sigma NGPLPZZ$
NGPZB	Natural gas consumed as pipeline fuel.	Billion Btu	$NGPZBZZ = NGPZPZZ * NGNUKZZ$ $NGPZBUS = \Sigma NGPZBZZ$
NGPZP	Natural gas consumed as pipeline fuel.	Million cubic feet	NGPZPZZ is independent. $NGPZPUS = \Sigma NGPZPZZ$
NGRCB	Natural gas delivered to the residential sector, used as consumption.	Billion Btu	$NGRCBZZ = NGRCPZZ * NGNUKZZ$ $NGRCBUS = \Sigma NGRCBZZ$
NGRCP	Natural gas delivered to the residential sector, used as consumption.	Million cubic feet	NGRCPZZ is independent. $NGRCPUS = \Sigma NGRCPZZ$
NGTCB	Natural gas total consumed.	Billion Btu	$NGTCBZZ = NGTCPZZ * NGTCKZZ$ $NGTCBUS = \Sigma NGTCBZZ$
NGTCK	Factor for converting natural gas total consumed from physical units to Btu.	Thousand Btu per cubic foot	NGTCKZZ is independent. $NGTCKUS = NGTCBUS / NGTCPUS$
NGTCP	Natural gas total consumed.	Million cubic feet	$NGTCPZZ = NGRCPZZ + NGCCPZZ + NGICPZZ + NGACPZZ + NGEUPZZ$ $NGTCPUS = \Sigma NGTCPZZ$
NGVHB	Natural gas consumed as vehicle fuel.	Billion Btu	$NGVHBZZ = NGVHPZZ * NGNUKZZ$ $NGVHBUS = \Sigma NGVHBZZ$
NGVHP	Natural gas consumed as vehicle fuel.	Million cubic feet	NGVHPZZ is independent. $NGVHPUS = \Sigma NGVHPZZ$
NUATB	Electricity produced from nuclear power by nonutility power producers.	Billion Btu	$NUATBZZ = NUATPZZ * NUEOKUS$ $NUATBUS = \Sigma NUATBZZ$

NUATP	Electricity produced from nuclear power by nonutility power producers.	Million kilowatthours	NUATPZZ is independent. NUATPUS = $\Sigma$ NUATPZZ
NUEOB	Electricity produced from nuclear power at electric utilities.	Billion Btu	NUEOBZZ = NUEOPZZ * NUEOKUS NUEOBUS = $\Sigma$ NUEOBZZ
NUEOKUS	Factor for converting electricity produced from nuclear power from physical units to Btu.	Thousand Btu per kilowatthour	NUEOKUS is independent.
NUEOP	Electricity produced from nuclear power at electric utilities.	Million kilowatthours	NUEOPZZ is independent. NUEOPUS = $\Sigma$ NUEOPZZ
NUETB	Electricity total produced from nuclear power.	Billion Btu	NUETBZZ = NUEOBZZ + NUATBZZ NUETBUS = $\Sigma$ NUETBZZ
NUETP	Electricity total produced from nuclear power.	Million kilowatthours	NUETPZZ = NUEOPZZ + NUATPZZ NUETPUS = $\Sigma$ NUETPZZ
OCVAV	Value added in manufacture of industrial organic chemicals.	Million dollars	OCVAVZZ is independent. OCVAVUS = $\Sigma$ OCVAVZZ
PAACB	All petroleum products consumed by the transportation sector.	Billion Btu	PAACBZZ = AVACBZZ + DFACBZZ + JKACBZZ + JNACBZZ + LGACBZZ + LUACBZZ + MGACBZZ + RFACBZZ PAACBUS = $\Sigma$ PAACBZZ
PAACKUS	Factor for converting all petroleum products consumed by the transportation sector from physical units to Btu.	Million Btu per barrel	PAACKUS = PAACBUS / PAACPUS
PAACP	All petroleum products consumed by the transportation sector.	Thousand barrels	PAACPZZ = AVACPZZ + DFACPZZ + JKACPZZ + JNACPZZ + LGACPZZ + LUACPZZ + MGACPZZ + RFACPZZ PAACPUS = $\Sigma$ PAACPZZ
PACCB	All petroleum products consumed by the commercial sector.	Billion Btu	PACCBZZ = DFCCBZZ + KSCCBZZ + LGCCBZZ + MGCCBZZ + RFCCBZZ PACCBUS = $\Sigma$ PACCBZZ
PACCKUS	Factor for converting all petroleum products consumed by the commercial sector from physical units to Btu.	Million Btu per barrel	PACCKUS = PACCBUS / PACCPUS
PACCP	All petroleum products consumed by the commercial sector.	Thousand barrels	PACCPZZ = DFCCPZZ + KSCCPZZ + LGCCPZZ + MGCCPZZ + RFCCPZZ PACCPUS = $\Sigma$ PACCPZZ



**A  
P  
P  
E  
N  
D  
I  
X**

PAEUB	All petroleum products consumed by the electric utilities.	Billion Btu	$\text{PAEUBZZ} = \text{DFEUBZZ} + \text{JKEUBZZ} + \text{PCEUBZZ} + \text{RFEUBZZ}$ $\text{PAEUBUS} = \Sigma \text{PAEUBZZ}$
PAEUKUS	Factor for converting all petroleum products consumed by the electric utilities from physical units to Btu.	Million Btu per barrel	$\text{PAEUKUS} = \text{PAEUBUS} / \text{PAEUPUS}$
PAEUP	All petroleum products consumed by the electric utilities.	Thousand barrels	$\text{PAEUPZZ} = \text{DFEUPZZ} + \text{JKEUPZZ} + \text{PCEUPZZ} + \text{RFEUPZZ}$ $\text{PAEUPUS} = \Sigma \text{PAEUPZZ}$
PAHCBUS	All petroleum products consumed by the residential and commercial sectors combined.	Billion Btu	$\text{PAHCBUS} = \text{PARCBUS} + \text{PACCBUS}$
PAHCKUS	Factor for converting all petroleum products consumed by the residential and commercial sectors combined from physical units to Btu.	Million Btu per barrel	$\text{PAHCKUS} = \text{PAHCBUS} / \text{PAHCPUS}$
PAHCPUS	All petroleum products consumed by the residential and commercial sectors combined.	Thousand barrels	$\text{PAHCPUS} = \text{PARCPUS} + \text{PACCPUS}$
PAICB	All petroleum products consumed by the industrial sector.	Billion Btu	$\text{PAICBZZ} = \text{ARICBZZ} + \text{DFICBZZ} + \text{KSICBZZ} + \text{LGICBZZ} + \text{LUICBZZ} + \text{MGICBZZ} + \text{RFICBZZ} + \text{POICBZZ}$ $\text{PAICBUS} = \Sigma \text{PAICBZZ}$
PAICKUS	Factor for converting all petroleum products consumed by the industrial sector from physical units to Btu.	Million Btu per barrel	$\text{PAICKUS} = \text{PAICBUS} / \text{PAICPUS}$
PAICP	All petroleum products consumed by the industrial sector.	Thousand barrels	$\text{PAICPZZ} = \text{ARICPZZ} + \text{DFICPZZ} + \text{KSICPZZ} + \text{LGICPZZ} + \text{LUICPZZ} + \text{MGICPZZ} + \text{RFICPZZ} + \text{POICPZZ}$ $\text{PAICPUS} = \Sigma \text{PAICPZZ}$
PARCB	All petroleum products consumed by the residential sector.	Billion Btu	$\text{PARCBZZ} = \text{DFRCBZZ} + \text{KSRCBZZ} + \text{LGRCBZZ}$ $\text{PARCBUS} = \Sigma \text{PARCBZZ}$
PARCKUS	Factor for converting all petroleum products consumed by the residential sector from physical units to Btu.	Million Btu per barrel	$\text{PARCKUS} = \text{PARCBUS} / \text{PARCPUS}$
PARCP	All petroleum products consumed by the residential sector.	Thousand barrels	$\text{PARCPZZ} = \text{DFRCPZZ} + \text{KSRCPZZ} + \text{LGRCPZZ}$ $\text{PARCPUS} = \Sigma \text{PARCPZZ}$

PATCB	All petroleum products consumed by all sectors.	Billion Btu	$\begin{aligned} \text{PATCBZZ} &= \text{ARTCBZZ} + \text{AVTCBZZ} + \\ &\quad \text{DFTCBZZ} + \text{JKTCBZZ} + \text{JNTCBZZ} + \\ &\quad \text{KSTCBZZ} + \text{LGTCBZZ} + \text{LUTCBZZ} + \\ &\quad \text{MGTCBZZ} + \text{RFTCBZZ} + \text{POTCBZZ} \\ \text{PATCBUS} &= \Sigma \text{PATCBZZ} \end{aligned}$
PATCKUS	Factor for converting all petroleum products consumed by all sectors from physical units to Btu.	Million Btu per barrel	$\text{PATCKUS} = \text{PATCBUS} / \text{PATCPUS}$
PATCP	All petroleum products consumed by all sectors.	Thousand barrels	$\begin{aligned} \text{PATCPZZ} &= \text{ARTCPZZ} + \text{AVTCPZZ} + \\ &\quad \text{DFTCPZZ} + \text{JKTCPZZ} + \text{JNTCPZZ} + \\ &\quad \text{KSTCPZZ} + \text{LGTCPZZ} + \text{LUTCPZZ} + \\ &\quad \text{MGTCPZZ} + \text{RFTCPZZ} + \text{POTCPZZ} \\ \text{PATCPUS} &= \Sigma \text{PATCPZZ} \end{aligned}$
PCEUB	Petroleum coke consumed by the electric utilities.	Billion Btu	$\begin{aligned} \text{PCEUBZZ} &= \text{PCEUPZZ} * 6.024 \\ \text{PCEUBUS} &= \Sigma \text{PCEUBZZ} \end{aligned}$
PCEUM	Petroleum coke consumed by the electric utilities.	Thousand tons	$\begin{aligned} \text{PCEUMZZ} &\text{ is independent.} \\ \text{PCEUMUS} &= \Sigma \text{PCEUMZZ} \end{aligned}$
PCEUP	Petroleum coke consumed by the electric utilities.	Thousand barrels	$\begin{aligned} \text{PCEUPZZ} &= \text{PCEUMZZ} * 5 \\ \text{PCEUPUS} &= \Sigma \text{PCEUPZZ} \end{aligned}$
PCICB	Petroleum coke consumed by the industrial sector.	Billion Btu	$\begin{aligned} \text{PCICBZZ} &= \text{PCICPZZ} * 6.024 \\ \text{PCICBUS} &= \Sigma \text{PCICBZZ} \end{aligned}$
PCICP	Petroleum coke consumed by the industrial sector.	Thousand barrels	$\begin{aligned} \text{PCICPZZ} &= \text{PCRFPZZ} + \text{PCOCPZZ} \\ \text{PCICPUS} &= \text{PCTCPUS} - \text{PCEUPUS} \end{aligned}$
PCOCB	Industrial use of petroleum coke other than that used for catalytic cracking.	Billion Btu	$\begin{aligned} \text{PCOCBZZ} &= \text{PCOCPZZ} * 6.024 \\ \text{PCOCBUS} &= \Sigma \text{PCOCBZZ} \end{aligned}$
PCOCP	Industrial use of petroleum coke other than that used for catalytic cracking.	Thousand barrels	$\begin{aligned} \text{PCOCPZZ} &= (\text{AICAPZZ} / \text{AICAPUS}) * \text{PCOCPUS} \\ \text{PCOCPUS} &= \text{PCICPUS} - \text{PCRFPUS} \end{aligned}$
PCRFB	Petroleum coke used at refineries as both catalytic and marketable coke.	Billion Btu	$\begin{aligned} \text{PCRFBZZ} &= \text{PCRFPZZ} * 6.024 \\ \text{PCRFBUS} &= \Sigma \text{PCRFBZZ} \end{aligned}$
PCRFP	Petroleum coke used at refineries as both catalytic and marketable coke.	Thousand barrels	$\begin{aligned} \text{PCRFPZZ} &= (\text{CTCAPZZ} / \text{CTCAPGZ}) * \text{PCRFPgz} \text{ or} \\ &\quad (\text{CTCAPZZ} / \text{CTCAPPZ}) * \text{PCRFPpz} \text{ or} \\ &\quad \text{is independent.} \\ \text{PCRFPUS} &\text{ is independent.} \end{aligned}$

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PCTCB	Petroleum coke total consumed.	Billion Btu	PCTCBZZ = PCICBZZ + PCEUBZZ PCTCBUS = ΣPCTCBZZ
PCTCP	Petroleum coke total consumed.	Thousand barrels	PCTCPZZ = PCICPZZ + PCEUPZZ PCTCPUS is independent.
PIVAV	Value added in the manufacture of paints and allied products.	Million dollars	PIVAVZZ is independent. PIVAVUS = ΣPIVAVZZ
PLICB	Plant condensate consumed by the industrial sector.	Billion Btu	PLICBZZ = PLTCBZZ PLICBUS = PLTCBUS
PLICP	Plant condensate consumed by the industrial sector.	Thousand barrels	PLICPZZ = PLTCPZZ PLICPUS = PLTCPUS
PLTCB	Plant condensate total consumed.	Billion Btu	PLTCBZZ = PLTCPZZ * 5.418 PLTCBUS = ΣPLTCBZZ
PLTCP	Plant condensate total consumed.	Thousand barrels	PLTCPZZ = (OCVAVZZ / OCVAVUS) * PLTCPUS PLTCPUS is independent.
POICB	Other petroleum products consumed by the industrial sector.	Billion Btu	POICBZZ = ABICBZZ + COICBZZ + FNICBZZ + FOICBZZ + FSICBZZ + MBICBZZ + MSICBZZ + NAICBZZ + PCICBZZ + PLICBZZ + PPICBZZ + SGICBZZ + SNICBZZ + UOICBZZ + USICBZZ + WXICBZZ POICBUS = ΣPOICBZZ
POICP	Other petroleum products consumed by the industrial sector.	Thousand barrels	POICPZZ = ABICPZZ + COICPZZ + FNICPZZ + FOICPZZ + FSICPZZ + MBICPZZ + MSICPZZ + NAICPZZ + PCICPZZ + PLICPZZ + PPICPZZ + SGICPZZ + SNICPZZ + UOICPZZ + USICPZZ + WXICPZZ POICPUS = ΣPOICPZZ
POTCB	Other petroleum products total consumed.	Billion Btu	POTCBZZ = ABTCBZZ + COTCBZZ + FNTCBZZ + FOTCBZZ + FSTCBZZ + MBTCBZZ + MSTCBZZ + NATCBZZ + PCTCBZZ + PLTCBZZ + PPTCBZZ + SGTCBZZ + SNTCBZZ + UOTCBZZ + USTCBZZ + WXTCBZZ POTCBUS = ΣPOTCBZZ

POTCP	Other petroleum products total consumed.	Thousand barrels	$\begin{aligned} \text{POTCPZZ} &= \text{ABTCPZZ} + \text{COTCPZZ} + \\ &\text{FNTCPZZ} + \text{FOTCPZZ} + \text{FSTCPZZ} + \\ &\text{MBTCPZZ} + \text{MSTCPZZ} + \text{NATCPZZ} + \\ &\text{PCTCPZZ} + \text{PLTCPZZ} + \text{PPTCPZZ} + \\ &\text{SGTCPZZ} + \text{SNTCPZZ} + \text{UOTCPZZ} + \\ &\text{USTCPZZ} + \text{WXTCPZZ} \end{aligned}$ $\text{POTCPUS} = \Sigma \text{POTCPZZ}$
PPICB	Pentanes plus consumed by the industrial sector.	Billion Btu	$\begin{aligned} \text{PPICBZZ} &= \text{PPTCBZZ} \\ \text{PPICBUS} &= \text{PPTCBUS} \end{aligned}$
PPICP	Pentanes plus consumed by the industrial sector.	Thousand barrels	$\begin{aligned} \text{PPICPZZ} &= \text{PPTCPZZ} \\ \text{PPICPUS} &= \text{PPTCPUS} \end{aligned}$
PPTCB	Pentanes plus total consumed.	Billion Btu	$\begin{aligned} \text{PPTCBZZ} &= \text{PPTCPZZ} * 4.620 \\ \text{PPTCBUS} &= \Sigma \text{PPTCBZZ} \end{aligned}$
PPTCP	Pentanes plus total consumed.	Thousand barrels	$\begin{aligned} \text{PPTCPZZ} &= (\text{OCVAVZZ} / \text{OCVAVUS}) * \text{PPTCPUS} \\ \text{PPTCPUS} &\text{ is independent.} \end{aligned}$
RDICP	Road oil consumed by the industrial sector.	Thousand barrels	$\begin{aligned} \text{RDICPZZ} &= (\text{RDINPZZ} / \text{RDINPUS}) * \text{RDTCPUS} \\ \text{RDICPUS} &= \Sigma \text{RDICPZZ} \end{aligned}$
RDINP	Road oil sold to the industrial sector.	Short tons	$\begin{aligned} \text{RDINPZZ} &\text{ is independent.} \\ \text{RDINPUS} &= \Sigma \text{RDINPZZ} \end{aligned}$
RDTCP	Road oil total consumed.	Thousand barrels	$\begin{aligned} \text{RDTCPZZ} &= \text{RDICPZZ} \\ \text{RDTCPUS} &\text{ is independent.} \end{aligned}$
REACB	Renewable energy sources consumed by the transportation sector.	Billion Btu	$\begin{aligned} \text{REACBZZ} &= \text{ENACBZZ} \\ \text{REACBUS} &= \text{ENACBUS} \end{aligned}$
REACP	Renewable energy sources consumed by the transportation sector.	Thousand gallons	$\begin{aligned} \text{REACPZZ} &= \text{ENACPZZ} \\ \text{REACPUS} &= \text{ENACPUS} \end{aligned}$
REEOB	Renewable energy sources consumed by the electric utilities.	Billion Btu	$\begin{aligned} \text{REEOBZZ} &= \text{HVENBZZ} + \text{GEENBZZ} + \\ &\text{WWEOBZZ} + \text{WNEOBZZ} \\ \text{REEOBUS} &= \text{HVENBUS} + \text{GEENBUS} + \\ &\text{WWEOBUS} + \text{WNEOBUS} \end{aligned}$
REEOP	Renewable energy sources consumed by the electric utilities.	Million kilowatthours	$\begin{aligned} \text{REEOPZZ} &= \text{HVENPZZ} + \text{GEENPZZ} + \\ &\text{WWEOPZZ} + \text{WNEOPZZ} \\ \text{REEOPUS} &= \text{HVENPUS} + \text{GEENPUS} + \\ &\text{WWEOPUS} + \text{WNEOPUS} \end{aligned}$

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RECCB	Renewable energy sources consumed by the commercial sector.	Billion Btu	RECCBZZ = WDCCBZZ + GECCBZZ RECCBUS = WDCCBUS + GECCBUS
REICB	Renewable energy sources consumed by the industrial sector.	Billion Btu	REICBZZ = GEICBZZ + HVATBZZ + SOICBZZ + WWICBZZ + WYICBZZ REICBUS = GEICBUS + HVATBUS + SOICBUS + WWICBUS + WYICBUS
RERCB	Renewable energy sources consumed by the residential sector.	Billion Btu	RERCBZZ = WDRCBZZ + GERCBZZ + SOHCBZZ RERCBUS = WDRCBUS + GERCBUS + SOHCBUS
RETCB	Renewable energy sources total consumed.	Billion Btu	RETCBZZ = RERCBZZ + RECCBZZ + REICBZZ + REACBZZ + REEOBZZ RETCBUS = RERCBUS + RECCBUS + REICBUS + REACBUS + REEOBUS
RFACB	Residual fuel consumed by the transportation sector.	Billion Btu	RFACBZZ = RFACPZZ * 6.287 RFACBUS = ΣRFACBZZ
RFACP	Residual fuel consumed by the transportation sector.	Thousand barrels	RFACPZZ = (RFTRPZZ / RFNDPZZ) * RFNCPZZ RFACPUS = ΣRFACPZZ
RFBKP	Residual fuel sold for vessel bunkering use, excluding deliveries to the Armed Forces.	Thousand barrels	RFBKPZZ is independent. RFBKPUS = ΣRFBKPZZ
RFCCB	Residual fuel consumed by the commercial sector.	Billion Btu	RFCCBZZ = RFCCPZZ * 6.287 RFCCBUS = ΣRFCCBZZ
RFCCP	Residual fuel consumed by the commercial sector.	Thousand barrels	RFCCPZZ = (RFCMPZZ / RFNDPZZ) * RFNCPZZ RFCCPUS = ΣRFCCPZZ
RFCMP	Residual fuel sold to the commercial sector.	Thousand barrels	RFCMPZZ is independent. RFCMPUS = ΣRFCMPZZ
RFEUB	Residual fuel consumed by the electric utilities.	Billion Btu	RFEUBZZ = RFEUPZZ * 6.287 RFEUBUS = ΣRFEUBZZ
RFEUP	Residual fuel consumed by the electric utilities.	Thousand barrels	RFEUPZZ is independent. RFEUPUS = ΣRFEUPZZ
RFIBP	A portion of residual fuel sold for industrial use, including industrial space heating.	Thousand barrels	RFIBPZZ is independent. RFIBPUS = ΣRFIBPZZ
RFICB	Residual fuel consumed by the industrial sector.	Billion Btu	RFICBZZ = RFICPZZ * 6.287 RFICBUS = ΣRFICBZZ

RFICP	Residual fuel consumed by the industrial sector.	Thousand barrels	$RFICPZZ = (RFINPZZ / RFNDPZZ) * RFNCPZZ$ $RFICPUS = \Sigma RFICPZZ$
RFINP	Residual fuel sold to the industrial sector.	Thousand barrels	$RFINPZZ = RFIBPZZ + RFOCPZZ + RFMSPZZ$ $RFINPUS = \Sigma RFINPZZ$
RFMIP	Residual fuel sold to the Armed Forces, regardless of use.	Thousand barrels	RFMIPZZ is independent. $RFMIPUS = \Sigma RFMIPZZ$
RFMSP	Residual fuel sold for miscellaneous uses.	Thousand barrels	RFMSPZZ is independent. $RFMSPUS = \Sigma RFMSPZZ$
RFNCP	Residual fuel consumption by all sectors other than the electric utility sector.	Thousand barrels	$RFNCPZZ = (RFNDPZZ / RFNDPUS) * RFNCPUS$ $RFNCPUS = RFTCPUS - RFEUPUS$
RFNDP	Residual fuel sold to all sectors other than the electric utility sector.	Thousand barrels	$RFNDPZZ = RFCMPZZ + RFINPZZ + RFTRPZZ$ $RFNDPUS = \Sigma RFNDPZZ$
RFOCP	Residual fuel sold for use by oil companies.	Thousand barrels	RFOCPZZ is independent. $RFOCPUS = \Sigma RFOCPZZ$
RFRRP	Residual fuel sold for use by railroads.	Thousand barrels	RFRRPZZ is independent. $RFRRPUS = \Sigma RFRRPZZ$
RFTCB	Residual fuel total consumed.	Billion Btu	$RFTCBZZ = RFCCBZZ + RFICBZZ + RFACBZZ + RFEUBZZ$ $RFTCBUS = \Sigma RFTCBZZ$
RFTCP	Residual fuel total consumed.	Thousand barrels	$RFTCPZZ = RFNCPZZ + RFEUPZZ$ RFTCPUS is independent.
RFTRP	Residual fuel sold to the transportation sector.	Thousand barrels	$RFTRPZZ = RFBKPZZ + RFMIPZZ + RFRRPZZ$ $RFTRPUS = \Sigma RFTRPZZ$
SGICB	Still gas consumed by the industrial sector.	Billion Btu	$SGICBZZ = SGTCBZZ$ $SGICBUS = SGTCBUS$
SGICP	Still gas consumed by the industrial sector.	Thousand barrels	$SGICPZZ = SGTCPZZ$ $SGICPUS = SGTCPUS$
SGTCB	Still gas total consumed.	Billion Btu	$SGTCBZZ = SGTCPZZ * 6.000$ $SGTCBUS = \Sigma SGTCBZZ$
SGTCP	Still gas total consumed.	Thousand barrels	$SGTCPZZ = (COCAPZZ / COCAPUS) * SGTCPUS$ SGTCPUS is independent.

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SNICB	Special naphthas consumed by the industrial sector.	Billion Btu	SNICBZZ = SNTCBZZ SNICBUS = SNTCBUS
SNICP	Special naphthas consumed by the industrial sector.	Thousand barrels	SNICPZZ = SNTCPZZ SNICPUS = SNTCPUS
SNTCB	Special naphthas total consumed.	Billion Btu	SNTCBZZ = SNTCPZZ * 5.248 SNTCBUS = ΣSNTCBZZ
SNTCP	Special naphthas total consumed.	Thousand barrels	SNTCPZZ = (PIVAVZZ / PIVAVUS) * SNTCPUS SNTCPUS is independent.
SOEOB	Electricity produced from photovoltaic and solar thermal energy by electric utilities.	Billion Btu	SOEOBZZ = SOEOPZZ * FFEOKUS SOEOBUS = ΣSOEOBZZ
SOEOP	Electricity produced from photovoltaic and solar thermal energy by electric utilities.	Million kilowatthours	SOEOPZZ is independent. SOEOPUS = ΣSOEOPZZ
SOHCB	Solar thermal energy consumed by the residential and commercial sectors.	Billion Btu	SOHCBZZ = (SOTTPZZ / SOTTPUS) * SOHCBUS SOHCBUS is independent.
SOICB	Electricity produced from photovoltaic and solar thermal energy sources in the industrial sector.	Billion Btu	SOICBZZ = SOICPZZ * FFEOKUS SOICBUS = ΣSOICBZZ
SOICP	Electricity produced from photovoltaic and solar thermal energy sources in the industrial sector.	Million kilowatthours	SOICPZZ is independent. SOICPUS = ΣSOICPZZ
SOTCB	Photovoltaic and solar thermal energy sources total consumed.	Billion Btu	SOTCBZZ = SOHCBZZ + SOICBZZ + SOEOBZZ SOTCBUS = ΣSOTCBZZ
SOTTP	Shipments of solar thermal collectors.	Square feet	SOTTPZZ is independent. SOTTPUS = ΣSOTTPZZ
TEACB	Total energy consumed by the transportation sector.	Billion Btu	TEACBZZ = CLACBZZ + NGACBZZ + PAACBZZ + ESACBZZ + LOACBZZ TEACBUS = CLACBUS + NGACBUS + PAACBUS + ESACBUS + LOACBUS
TEAPB	The transportation sector's energy consumption per capita.	Million Btu	TEAPBZZ = TEACBZZ / TPOPPZZ TEAPBUS = TEACBUS / TPOPPUS
TECCB	Total energy consumed by the commercial sector.	Billion Btu	TECCBZZ = CLCCBZZ + NGCCBZZ + PACCBZZ + WDCCBZZ + GECCBZZ + ESCCBZZ + LOCCBZZ

			TECCBUS = CLCCBUS + NGCCBUS + PACCBUS + WDCCBUS + GECCBUS + ESCCBUS + LOCCBUS
TECPB	The commercial sector's energy consumption per capita.	Million Btu	TECPBZZ = TECCBZZ / TPOPPZZ TECPBUS = TECCBUS / TPOPPUS
TEEUB	Total energy consumed by the electric utilities plus net imports of electricity into the United States.	Billion Btu	TEEUBZZ = CLEUBZZ + NGEUBZZ + PAEUBZZ + HYENBZZ + NUEOBZZ + GEENBZZ + WWEUBZZ + WNEOBZZ + EXNIBZZ TEEUBUS = CLEUBUS + NGEUBUS + PAEUBUS + HYENBUS + NUEOBUS + GEENBUS + WWEUBUS + WNEOBUS + EXNIBUS
TEICB	Total energy consumed by the industrial sector.	Billion Btu	TEICBZZ = CLICBZZ + NGICBZZ + PAICBZZ + HYATBZZ + WWICBZZ + GOICBZZ + ESICBZZ + LOICBZZ TEICBUS = CLICBUS + NGICBUS + PAICBUS + HYATBUS + WWICBUS + GOICBUS + ESICBUS + LOICBUS + CCNIBUS
TEIPB	The industrial sector's energy consumption per capita.	Million Btu	TEIPBZZ = TEICBZZ / TPOPPZZ TEIPBUS = TEICBUS / TPOPPUS
TERCB	Total energy consumed by the residential sector.	Billion Btu	TERCBZZ = CLRCBZZ + NGRCBZZ + PARCBZZ + WDRCBZZ + GERCBZZ + SOHCBZZ + ESRCBZZ + LORCBZZ TERCBUS = CLRCBUS + NGRCBUS + PARCBUS + WDRCBUS + GERCBUS + SOHCBUS + ESRCBUS + LORCBUS
TERPB	The residential sector's energy consumption per capita.	Million Btu	TERPBZZ = TERCBZZ / TPOPPZZ TERPBUS = TERCBUS / TPOPPUS
TESSB	Total energy consumed (sum of the four end-use sectors). CSEDS cross-check not used in <i>SEDR</i> tables.	Billion Btu	TESSBZZ = TERCBZZ + TECCBZZ + TEICBZZ + TEACBZZ TESSBUS = TERCBUS + TECCBUS + TEICBUS + TEACBUS
TETCB	Total energy consumed (sum of all energy sources) used in <i>SEDR</i> tables.	Billion Btu	TETCBZZ = CLTCBZZ + NGTCBZZ + PATCBZZ + NUETBZZ + HYTCBZZ + WWTCBZZ + GOTCBZZ + EXNIBZZ + ELISBZZ TETCBUS = CLTCBUS + CCNIBUS + NGTCBUS + PATCBUS + NUETBUS + HYTCBUS + WWTCBUS + GOTCBUS + EXNIBUS



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TETPB	Total energy consumption per capita.	Million Btu	$TETPBZZ = TETCBZZ / TPOPPZZ$ $TETPBUS = TETCBUS / TPOPPUS$
TNACB	Total net energy consumed by the transportation sector excluding the sector's share of electrical system energy losses.	Billion Btu	$TNACBZZ = TEACBZZ - LOACBZZ$ $TNACBUS = TEACBUS - LOACBUS$
TNCCB	Total net energy consumed by the commercial sector excluding the sector's share of electrical system energy losses.	Billion Btu	$TNCCBZZ = TECCBZZ - LOCCBZZ$ $TNCCBUS = TECCBUS - LOCCBUS$
TNICB	Total net energy consumed by the industrial sector excluding the sector's share of electrical system energy losses.	Billion Btu	$TNICBZZ = TEICBZZ - LOICBZZ$ $TNICBUS = TEICBUS - LOICBUS$
TNRCB	Total net energy consumed by the residential sector excluding the sector's share of electrical system energy losses.	Billion Btu	$TNRCBZZ = TERCBZZ - LORCBZZ$ $TNRCBUS = TERCBUS - LORCBUS$
TPOPP	The resident population including the Armed Forces residing in each State.	Thousand	TPOPPZZ is independent. TPOPPUS is independent.
UOICB	Unfinished oils consumed by the industrial sector.	Billion Btu	$UOICBZZ = UOTCBZZ$ $UOICBUS = UOTCBUS$
UOICP	Unfinished oils consumed by the industrial sector.	Thousand barrels	$UOICPZZ = UOTCPZZ$ $UOICPUS = UOTCPUS$
UOTCB	Unfinished oils total consumed.	Billion Btu	$UOTCBZZ = UOTCPZZ * 5.825$ $UOTCBUS = \Sigma UOTCBZZ$
UOTCP	Unfinished oils total consumed.	Thousand barrels	$UOTCPZZ = (COCAPZZ / COCAPUS) * UOTCPUS$ UOTCPUS is independent.
USICB	Unfractionated stream consumed by the industrial sector.	Billion Btu	$USICBZZ = USTCBZZ$ $USICBUS = USTCBUS$
USICP	Unfractionated stream consumed by the industrial sector.	Thousand barrels	$USICPZZ = USTCPZZ$ $USICPUS = USTCPUS$
USTCB	Unfractionated stream total consumed.	Billion Btu	$USTCBZZ = USTCPZZ * 5.418$ $USTCBUS = \Sigma USTCBZZ$
USTCP	Unfractionated stream total consumed.	Thousand barrels	$USTCPZZ = (OCVAVZZ / OCVAVUS) * USTCPUS$ USTCPUS is independent.

WDCCB	Wood energy consumed by the commercial sector.	Billion Btu	$\text{WDCCBZZ} = (\text{WDRCPZZ} / \text{WDRCPUS}) * \text{WDCCBUS}$ WDCCBUS is independent.
WDCCP	Wood energy consumed by the commercial sector.	Thousand cords	$\text{WDCCPZZ} = \text{WDCCBZZ} / 20$ $\text{WDCCPUS} = \Sigma \text{WDCCPZZ}$
WDEOB	Electricity produced from wood energy sources at electric utilities.	Billion Btu	$\text{WDEOBZZ} = \text{WDEOPZZ} * \text{FFEOKUS}$ $\text{WDEOBUS} = \Sigma \text{WDEOBZZ}$
WDEOP	Electricity produced from wood energy sources at electric utilities.	Million kilowatthours	WDEOPZZ is independent. $\text{WDEOPUS} = \Sigma \text{WDEOPZZ}$
WDRCB	Wood energy consumed by the residential sector.	Billion Btu	$\text{WDRCBZZ} = \text{WDRCPZZ} * 20$ $\text{WDRCBUS} = \Sigma \text{WDRCBZZ}$
WDRCP	Wood energy consumed by the residential sector.	Thousand cords	WDRCPZZ is independent. $\text{WDRCPUS} = \Sigma \text{WDRCPZZ}$
WNEOB	Electricity produced from wind, photo-voltaic, and solar thermal energy sources at electric utilities.	Billion Btu	$\text{WNEOBZZ} = \text{SOEOBZZ} + \text{WYEOBZZ}$ $\text{WNEOBUS} = \Sigma \text{WNEOBZZ}$
WNEOP	Electricity produced from wind, photo-voltaic, and solar thermal energy sources at electric utilities.	Million kilowatthours	$\text{WNEOPZZ} = \text{SOEOPZZ} + \text{WYEOBZZ}$ $\text{WNEOPUS} = \Sigma \text{WNEOPZZ}$
WSEOB	Electricity produced from waste energy sources at electric utilities.	Billion Btu	$\text{WSEOBZZ} = \text{WSEOPZZ} * \text{FFEOKUS}$ $\text{WSEOBUS} = \Sigma \text{WSEOBZZ}$
WSEOP	Electricity produced from waste energy sources at electric utilities.	Million kilowatthours	WSEOPZZ is independent. $\text{WSEOPUS} = \Sigma \text{WSEOPZZ}$
WWATB	Electricity produced from wood and waste at nonutility power producers.	Billion Btu	WWATBZZ is independent. $\text{WWATBUS} = \Sigma \text{WWATBZZ}$
WWATP	Electricity produced from wood and waste at nonutility power producers.	Million kilowatthours	WWATPZZ is independent. $\text{WWATPUS} = \Sigma \text{WWATPZZ}$
WWEOB	Electricity produced from wood and waste at electric utilities.	Billion Btu	$\text{WWEOBZZ} = \text{WDEOBZZ} + \text{WSEOBZZ}$ $\text{WWEOBUS} = \Sigma \text{WWEOBZZ}$
WWEOP	Electricity produced from wood and waste at electric utilities.	Million kilowatthours	$\text{WWEOPZZ} = \text{WDEOPZZ} + \text{WSEOPZZ}$ $\text{WWEOPUS} = \Sigma \text{WWEOPZZ}$

WWICB	Wood and waste consumed by the industrial sector.	Billion Btu	WWICBZZ = WWATBZZ + WWINBZZ WWICBUS = $\Sigma$ WWICBZZ
WWINB	Wood and waste consumed by the manufacturing portion of the industrial sector.	Billion Btu	WWINBZZ is independent. WWINBUS = $\Sigma$ WWINBZZ
WWTCB	Wood and waste total consumed.	Billion Btu	WWTCBZZ = WDRCBZZ + WDCCBZZ + WWICBZZ + WWOEBZZ WWTCBUS = $\Sigma$ WWTCBZZ
WXICB	Waxes consumed by the industrial sector.	Billion Btu	WXICBZZ = WXTCBZZ WXICBUS = WXTCBUS
WXICP	Waxes consumed by the industrial sector.	Thousand barrels	WXICPZZ = WXTCPZZ WXICPUS = WXTCPUS
WXTCB	Waxes total consumed.	Billion Btu	WXTCBZZ = WXTCPZZ * 5.537 WXTCBUS = $\Sigma$ WXTCBZZ
WXTCP	Waxes total consumed.	Thousand barrels	WXTCPZZ = (CGVAVZZ / CGVAVUS) * WXTCPUS WXTCPUS is independent.
WYEOB	Electricity produced from wind energy at electric utilities.	Billion Btu	WYEOBZZ = WYEOPZZ * FFEOKUS WYEOBUS = $\Sigma$ WYEOBZZ
WYEOP	Electricity produced from wind energy at electric utilities.	Million kilowatthours	WYEOPZZ is independent. WYEOPUS = $\Sigma$ WYEOPZZ
WYICB	Electricity produced from wind energy by the industrial sector.	Billion Btu	WYICBZZ = WYICPZZ * FFEOKUS WYICBUS = $\Sigma$ WYICBZZ
WYICP	Electricity produced from wind energy by the industrial sector.	Million kilowatthours	WYICPZZ is independent. WYICPUS = $\Sigma$ WYICPZZ
WYTCB	Electricity produced from wind energy total produced.	Billion Btu	WYTCBZZ = WYICBZZ + WYEOBZZ WYTCBUS = $\Sigma$ WYTCBZZ

Appendix C

## Thermal Conversion Factors

**Table C1. Approximate Heat Content of Petroleum and Coal and Heat Rates for Electricity, 1960-1999**

Year	Petroleum Consumption			Anthracite Consumption			Bituminous Coal and Lignite Consumption <sup>a</sup> (BCTCKUS)	Electricity Net Generation		
	Liquefied Petroleum Gases (LGTCKUS)	Motor Gasoline (MGTCKUS)	Total Petroleum Products <sup>a</sup> (PATCKUS)	Sectors Other Electric (ACNUKUS)	Electric Utilities (ACEUKUS)	Total <sup>a</sup> (ACTCKUS)		Fossil-Fueled Steam-Electric Plants <sup>b</sup> (FFEOKUS)	Nuclear Steam-Electric Plants (NUEOKUS)	Geothermal Energy Plants (GEEOKUS)
	Million Btu per Barrel			Million Btu per Short Ton				Btu per Kilowatthour		
1960	4.011	5.253	5.55503	24.721	17.500	23.592	24.765	10,760	11,629	23,200
1961	4.011	5.253	5.55163	24.870	17.500	23.707	24.693	10,650	11,629	23,200
1962	4.011	5.253	5.54496	24.666	17.500	23.515	24.668	10,558	11,629	23,200
1963	4.011	5.253	5.53379	24.110	17.500	23.107	24.639	10,482	11,877	22,182
1964	4.011	5.253	5.52758	24.164	17.500	23.128	24.652	10,462	11,912	22,182
1965	4.011	5.253	5.53200	24.316	17.500	23.175	24.575	10,453	11,804	22,182
1966	4.011	5.253	5.53178	24.193	17.500	22.906	24.431	10,415	11,623	22,182
1967	3.838	5.253	5.51469	23.506	17.500	22.291	24.287	10,432	11,555	21,770
1968	3.818	5.253	5.50368	23.293	17.500	22.037	24.229	10,398	11,297	21,606
1969	3.805	5.253	5.49220	23.200	17.500	22.003	24.011	10,447	11,037	21,606
1970	3.779	5.253	5.50317	23.476	17.500	22.102	23.461	10,494	10,977	21,606
1971	3.772	5.253	5.50449	23.572	17.500	22.210	23.138	10,478	10,837	21,655
1972	3.760	5.253	5.50004	23.403	17.500	21.822	23.050	10,379	10,792	21,668
1973	3.746	5.253	5.51461	22.674	17.920	21.464	23.073	10,389	10,903	21,674
1974	3.730	5.253	5.50388	22.330	17.200	20.919	22.694	10,442	11,161	21,674
1975	3.715	5.253	5.49427	22.272	17.064	20.762	22.522	10,406	11,013	21,611
1976	3.711	5.253	5.50448	22.618	17.526	21.254	22.509	10,373	11,047	21,611
1977	3.677	5.253	5.51825	24.101	17.244	22.066	22.266	10,435	10,769	21,611
1978	3.669	5.253	5.51865	24.388	17.104	22.398	22.014	10,361	10,941	21,611
1979	3.680	5.253	5.49383	24.272	17.454	22.069	22.100	10,353	10,879	21,545
1980	3.674	5.253	5.47933	22.719	17.652	21.405	21.950	10,388	10,908	21,639
1981	3.643	5.253	5.44818	23.749	18.168	22.080	21.710	10,453	11,030	21,639
1982	3.615	5.253	5.41514	24.578	18.160	22.518	21.670	10,454	11,073	21,629
1983	3.614	5.253	5.40567	24.536	16.516	21.583	21.576	10,520	10,905	21,290
1984	3.599	5.253	5.39530	25.128	17.018	22.322	21.570	10,440	10,843	21,303
1985	3.603	5.253	5.38744	23.031	16.784	20.817	21.368	10,447	10,813	21,263
1986	3.640	5.253	5.41832	24.399	15.578	21.512	21.462	10,446	10,799	21,263
1987	3.659	5.253	5.40281	26.293	15.962	22.435	21.514	10,419	10,776	21,263
1988	3.652	5.253	5.41017	26.021	17.312	22.423	21.324	10,324	10,743	21,096
1989	3.683	5.253	5.40967	27.196	16.310	22.623	21.268	10,432	10,724	21,096
1990	3.625	5.253	5.41084	25.199	16.140	21.668	21.330	10,402	10,680	21,096
1991	3.614	5.253	5.38408	25.268	15.858	21.410	21.146	10,436	10,740	20,997
1992	3.624	5.253	5.37773	24.617	16.944	21.423	21.142	10,342	10,678	20,914
1993	3.606	5.253	5.37911	24.096	16.534	21.262	20.983	10,309	10,682	20,914
1994	3.635	<sup>c</sup> 5.230	5.36097	25.037	14.680	20.828	21.011	10,316	10,676	20,914
1995	3.623	5.215	5.34138	24.696	14.572	20.808	20.845	10,312	10,658	20,914
1996	3.613	5.216	5.33638	24.638	14.360	20.652	20.857	10,340	10,623	20,960
1997	3.616	5.213	5.33598	24.497	15.022	20.878	20.861	10,357	10,623	20,960
1998	3.614	5.212	5.34900	24.497	15.022	20.878	20.861	10,346	10,623	21,017
1999	3.616	5.211	5.32807	24.497	15.022	20.878	20.861	10,346	10,623	21,017

<sup>a</sup> This factor is not actually applied in CSEDS but is displayed here for information.

<sup>b</sup> This factor is the average for electricity generated at U.S. fossil-fueled steam-electric plants. In CSEDS, it is applied to convert hydroelectricity, electricity generated for distribution from wood, waste, wind, photovoltaic, and solar thermal energy, and imports and exports of electricity produced at hydroelectric and conventional power

plants.

<sup>c</sup> There is a discontinuity in this time series between 1993 and 1994; beginning in 1994, the single constant factor is replaced by a factor that is a quantity-weighted average of motor gasoline's major components.

Sources: See source listing at the end of this appendix.

**Table C2. Approximate Heat Content of Natural Gas Consumed by Electric Utilities, 1960-1985, Selected Years**  
(Thousand Btu per Cubic Foot)

State	1960	1965	1970	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
Alabama .....	1.03500	1.03400	1.03100	1.03300	1.15300	1.18200	1.12600	1.12100	1.13300	1.13400	1.12500	1.10300	1.12400	1.09900
Alaska .....	—	1.01000	1.00500	1.00600	1.00600	1.00600	1.00600	1.00600	1.00600	1.00500	1.00600	1.00600	1.00600	1.00600
Arizona .....	1.03500	1.07600	1.05900	1.07100	1.07200	1.06600	1.06400	1.05700	1.05700	1.04900	1.05100	1.04200	1.05100	1.05900
Arkansas .....	1.03500	1.00100	1.00400	1.01100	1.01300	1.05100	1.05300	1.02600	1.02600	1.03200	1.03200	1.03500	1.03700	1.05500
California .....	1.03500	1.07300	1.05400	1.06300	1.06100	1.05900	1.06000	1.05500	1.05200	1.05500	1.05300	1.04800	1.05000	1.05100
Colorado .....	1.03500	0.91200	0.97400	0.99600	0.99200	0.98800	0.99200	0.98200	0.98100	0.97500	0.96400	0.98900	0.98800	0.98900
Connecticut .....	1.03500	1.02200	1.01600	1.00500	1.00800	—	—	—	—	—	—	—	1.02800	1.03100
Delaware .....	1.03500	1.04300	1.02000	1.07300	1.07800	1.10300	1.07000	1.04300	1.04200	1.03600	1.03300	1.03500	1.03900	1.03800
District of Columbia .....	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Florida .....	1.03500	1.03700	1.04100	1.00900	1.01400	1.01900	1.02400	1.02000	1.01500	1.01300	1.01400	1.01100	1.01100	1.01100
Georgia .....	1.03500	1.04000	1.03100	1.02900	1.02900	1.02600	1.02600	1.09700	1.03500	1.02700	1.02800	1.02500	1.02300	1.02400
Hawaii .....	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Idaho .....	—	—	—	1.05300	1.05900	1.05600	1.04800	1.04200	1.03700	1.08700	1.07500	1.04700	1.04500	1.04900
Illinois .....	1.03500	1.02900	1.02500	1.02900	1.02800	1.02800	1.02800	1.02100	1.02400	1.02300	1.02400	1.02900	1.03100	1.02700
Indiana .....	1.03500	0.99900	1.00600	1.00000	1.00300	1.00800	1.00100	1.00200	1.00400	1.00200	1.00200	1.00200	1.00300	1.00500
Iowa .....	1.03500	1.01000	1.00900	1.00800	1.01100	1.01200	1.02100	1.00900	1.00800	1.00700	1.01900	1.02700	1.03500	1.02100
Kansas .....	1.03500	0.99500	0.99800	0.99100	0.98200	0.98000	0.96800	0.96200	0.96000	0.96200	0.95600	0.95300	0.97500	0.96800
Kentucky .....	1.03500	1.02800	1.01700	1.01700	1.01800	1.02000	1.02400	1.02300	1.02400	1.02400	1.02400	1.02300	1.02400	1.02400
Louisiana .....	1.03500	1.04200	1.02900	1.05900	1.06100	1.05300	1.05600	1.04700	1.04100	1.04100	1.04600	1.04900	1.04800	1.04700
Maine .....	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Maryland .....	1.03500	1.02500	1.02200	0.94300	0.94600	0.99800	1.06200	1.07600	1.02300	1.01500	1.02500	1.02500	1.02500	1.02500
Massachusetts .....	1.03500	1.01300	1.01200	1.00200	1.00100	1.00000	1.00000	1.00100	1.00000	1.00000	1.04800	1.05400	1.06000	1.03900
Michigan .....	1.03500	1.01400	1.01500	0.83400	0.76700	0.69800	0.77400	0.67700	0.73700	0.65300	0.66200	0.21300	0.59200	0.46000
Minnesota .....	1.03500	0.99800	1.00200	0.98400	0.97200	0.97200	0.92800	0.99200	0.99400	0.99400	0.99900	1.01100	1.00100	1.00200
Mississippi .....	1.03500	1.02900	1.02500	1.03000	1.01600	1.02000	1.00900	1.00900	1.01700	1.01600	1.02200	1.02900	1.02700	1.03900
Missouri .....	1.03500	1.02000	1.00700	0.97700	0.97400	0.97300	0.97400	0.97600	0.97900	0.98600	1.02200	0.99500	0.99800	0.99200
Montana .....	1.03500	1.00100	1.03200	1.14900	1.19200	1.17300	1.14600	1.08400	1.04900	1.07500	1.17300	1.19700	1.17900	1.20400
Nebraska .....	1.03500	0.99100	1.00800	0.98200	0.97100	0.96700	0.96800	0.95400	0.95000	0.94200	0.98200	0.94900	0.94800	0.95700
Nevada .....	1.03500	1.06200	1.08200	1.06700	1.06800	1.06300	1.07700	1.06400	1.07100	1.07500	1.06800	1.06300	1.06000	1.06500
New Hampshire .....	—	—	—	1.00000	1.00000	1.00000	—	1.00000	—	1.02500	—	1.02500	1.02700	—
New Jersey .....	1.03500	1.04500	1.02600	1.02800	1.02900	1.02800	1.03000	1.03900	1.03400	1.03600	1.03300	1.03700	1.03600	1.04600
New Mexico .....	1.03500	1.10800	1.08300	1.03300	1.02900	1.02800	1.04200	1.03400	1.02900	1.02900	1.02100	0.99200	0.99600	1.01300
New York .....	1.03500	1.02600	1.02100	1.02500	1.02500	1.02800	1.02900	1.03000	1.03600	1.03200	1.03000	1.03100	1.03300	1.03500
North Carolina .....	1.03500	1.03300	1.02400	1.03100	1.03300	1.03300	1.03300	1.03000	1.03400	1.03500	1.03300	1.03300	1.03300	1.03300
North Dakota .....	1.03500	1.00000	1.03100	1.05400	1.05400	1.05400	1.05400	1.05400	1.05400	1.05400	1.05400	1.05400	1.05400	1.05400
Ohio .....	1.03500	1.03300	1.02300	0.86400	0.82500	0.69600	0.65300	0.86200	1.00400	1.01000	1.01400	1.01100	1.01400	1.01400
Oklahoma .....	1.03500	1.02600	1.03200	1.03800	1.04200	1.04600	1.04800	1.05000	1.04800	1.04700	1.04500	1.05100	1.04000	1.04400
Oregon .....	1.03500	1.07000	1.04500	1.03700	1.03500	1.04200	—	1.04600	0.99800	1.04700	0.99000	0.99000	0.99000	—
Pennsylvania .....	1.03500	1.03800	1.03300	1.00000	1.00000	1.00000	1.00000	1.00400	1.02000	1.01500	1.00900	1.00000	1.00000	1.00000
Rhode Island .....	1.03500	1.04200	1.02100	1.04200	1.04200	—	—	1.04600	1.02200	1.02200	1.02000	1.03900	1.03000	1.03400
South Carolina .....	1.03500	1.04200	1.02800	1.02800	1.02800	1.02800	1.04800	1.07600	1.03000	1.02300	1.02900	1.02600	1.02700	1.02900
South Dakota .....	1.03500	0.99700	1.00400	1.00000	0.99600	0.99000	0.92800	0.98300	0.98800	0.99300	0.94800	1.01100	1.01100	1.01000
Tennessee .....	1.03500	1.04600	1.02200	—	1.02900	—	—	—	1.01600	1.01600	—	1.02300	—	—
Texas .....	1.03500	1.03700	1.02700	1.01900	1.01800	1.02600	1.03300	1.03800	1.03700	1.03000	1.03300	1.02400	1.03000	1.03600
Utah .....	1.03500	0.92500	0.93800	0.94100	0.95200	0.94500	0.95100	0.96300	0.95500	0.93200	0.94000	0.94100	1.03000	1.07500
Vermont .....	—	—	—	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000
Virginia .....	1.03500	1.03100	1.02600	1.09800	1.09100	1.17400	1.21800	1.10100	1.10400	1.09700	1.08100	1.04600	1.04100	1.04000
Washington .....	—	—	—	—	—	—	1.03000	1.03000	1.03000	1.03100	1.03300	1.03300	1.03300	1.03300
West Virginia .....	1.03500	1.07100	1.02900	0.57500	0.68300	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000
Wisconsin .....	1.03500	1.01800	1.01900	1.01600	1.01400	1.01400	1.00500	1.01000	1.00700	1.00800	1.01200	0.99100	0.99200	1.00000
Wyoming .....	1.03500	0.92600	1.02300	0.84300	0.84300	0.85400	0.83700	0.84700	0.84700	0.85500	0.84700	1.03900	1.04700	1.04800
U.S. Average .....	1.03500	1.03765	1.02944	1.02341	1.02345	1.02841	1.03289	1.03263	1.03313	1.03258	1.03396	1.02794	1.03332	1.03706

— =Not applicable.

Sources: See source listing at the end of this appendix.

**Table C3. Approximate Heat Content of Natural Gas Consumed by Electric Utilities, 1986-1999**  
(Thousand Btu per Cubic Foot)

State	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Alabama	1.09100	1.05400	1.03900	1.03000	1.03000	1.02200	1.02100	1.01600	1.01100	1.01600	1.02400	1.03100	1.04400	1.01100
Alaska	1.00600	1.00600	1.00600	1.00600	1.00600	1.00100	1.00000	0.99900	0.99900	1.00200	1.00100	1.00000	1.00000	1.00000
Arizona	1.04400	1.03400	1.03400	1.03500	1.03400	1.02700	1.03100	1.02700	1.02300	1.02200	1.01500	1.01400	1.01400	1.01100
Arkansas	1.05300	1.03100	1.02900	1.01900	1.01800	1.02000	1.02500	1.02900	1.02400	1.02300	1.02400	1.02900	1.02300	1.02200
California	1.04500	1.03800	1.03600	1.04000	1.03300	1.02800	1.03300	1.03000	1.02900	1.02700	1.02600	1.01900	1.01800	1.00600
Colorado	0.99400	0.98800	0.98500	0.97700	0.98800	0.99500	1.00000	1.01200	1.04200	1.00800	0.99800	0.99500	0.99400	1.03200
Connecticut	1.03600	1.03100	1.03100	1.03000	1.03300	1.03300	1.03100	1.03200	1.01700	1.01700	1.01900	1.01900	1.03000	1.02500
Delaware	1.04600	1.03600	1.07200	1.07500	1.05400	1.05200	1.03700	1.03300	1.03700	1.03200	1.03400	1.03500	0.97100	0.98300
District of Columbia	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Florida	1.00800	1.00800	1.00800	1.01000	1.01100	1.01400	1.01100	1.00900	1.01000	1.01000	1.00800	1.04400	1.05300	1.04400
Georgia	1.02400	1.02300	1.02300	1.02400	1.02400	1.02500	1.02400	1.02300	1.02500	1.02400	1.02400	1.02400	1.02800	1.03200
Hawaii	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Idaho	1.02100	1.01700	—	—	—	—	—	—	—	—	—	—	—	—
Illinois	1.02600	1.02500	1.02100	1.01700	1.02100	1.01800	1.01600	1.01600	1.02200	1.01600	1.02000	1.01600	1.01900	1.02200
Indiana	1.00600	1.00500	1.00200	1.00200	1.00200	1.00100	1.00100	1.01300	1.02300	1.02100	1.02100	1.02100	1.02500	1.02600
Iowa	1.01700	1.00700	1.00700	1.00700	1.00600	1.00400	1.00400	1.00600	1.00600	1.00500	1.00300	1.00300	1.00300	1.00400
Kansas	0.96900	0.98800	0.99300	0.97100	0.99000	0.96800	0.97000	0.97500	0.98300	0.98000	0.97300	0.97800	1.00100	1.01000
Kentucky	1.02200	1.02100	1.02300	1.02100	1.02000	1.02000	1.02000	1.02000	1.02100	1.02200	1.02200	1.02300	1.02400	1.02500
Louisiana	1.04400	1.04300	1.04500	1.04400	1.04500	1.04200	1.04300	1.04300	1.04600	1.04300	1.04300	1.03600	1.04300	1.03900
Maine	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Maryland	1.05800	1.04300	1.04200	1.04500	1.04200	1.04600	1.04500	1.04100	1.04300	1.03900	1.04100	1.04100	1.04700	1.04000
Massachusetts	1.02900	1.02600	1.02900	1.04800	1.05200	1.04100	1.03200	1.03400	1.03700	1.02600	1.03700	1.03300	1.02900	1.02600
Michigan	0.34600	0.40400	0.16100	0.10800	0.22400	0.38900	0.41400	0.37900	0.40300	0.36500	0.27400	0.31000	0.54200	0.60800
Minnesota	0.99900	0.99800	1.00300	1.00500	1.00300	1.00800	1.00800	1.00800	1.00500	1.00600	1.00300	1.00400	1.00800	1.01100
Mississippi	1.03800	1.02800	1.02600	1.02500	1.03600	1.02500	1.02900	1.02200	1.04300	1.03900	1.03800	1.03600	1.03900	1.02700
Missouri	0.98300	0.99000	0.99400	1.01600	1.01800	1.01400	1.00800	1.00800	1.00000	1.00600	1.01100	1.00600	1.01100	1.00300
Montana	1.20100	1.20500	1.20800	1.21300	1.21800	1.19400	1.20600	1.16500	1.05500	1.07300	1.07500	1.07100	1.07200	1.09100
Nebraska	0.97100	0.97700	0.95400	0.95900	0.94600	0.94200	0.95900	0.97600	0.98700	0.99800	1.00400	0.99800	0.98900	0.99500
Nevada	1.05300	1.03500	1.02700	1.02700	1.03100	1.02400	1.02500	1.02900	1.03300	1.02900	1.02900	1.02900	1.03400	1.03700
New Hampshire	—	1.02700	1.02700	1.02700	—	—	1.01800	1.01600	1.01500	1.01800	1.01800	1.01700	1.01700	1.02400
New Jersey	1.03600	1.03300	1.03300	1.03300	1.03200	1.03200	1.03400	1.03400	1.03500	1.03100	1.02000	1.03700	1.04500	1.03100
New Mexico	1.04100	1.02600	1.02600	1.03300	1.03400	1.01600	1.01700	1.01600	1.02200	1.01700	1.01200	1.01700	1.01000	1.01300
New York	1.03600	1.03000	1.03100	1.02800	1.03300	1.03100	1.03000	1.03100	1.03100	1.02600	1.02900	1.02600	1.02900	1.02400
North Carolina	1.03300	1.03300	1.03300	1.03300	1.03300	1.03200	1.03600	1.03300	1.03800	1.03300	1.03600	1.03700	1.04800	1.03100
North Dakota	1.05400	1.07200	1.06500	1.05000	1.03800	1.00400	1.03700	1.08000	1.09500	1.06600	1.05900	1.06600	—	—
Ohio	1.01800	1.00900	1.01200	1.00700	1.00800	1.00700	1.03300	1.03000	1.02900	1.02700	1.02800	1.02400	1.02700	1.02800
Oklahoma	1.04300	1.04700	1.03900	1.04300	1.04500	1.04000	1.03700	1.03900	1.03400	1.03400	1.02800	1.03200	1.03000	1.02800
Oregon	0.99000	—	—	1.03500	1.02300	1.01100	1.01100	1.01100	1.01100	1.01200	1.00900	1.01100	1.01100	1.01200
Pennsylvania	1.02500	1.03100	1.03500	1.02900	1.03200	1.03400	1.03100	1.03000	1.03100	1.03000	1.02800	1.03400	1.02900	1.03300
Rhode Island	—	1.03100	1.03200	1.03100	1.03300	1.03200	1.03100	1.05100	1.02900	1.02800	1.02800	1.02700	1.02800	—
South Carolina	1.02300	1.02700	1.03200	1.02300	1.02300	1.02500	1.02200	1.02100	1.02300	1.02400	1.02500	1.02400	1.02400	1.02800
South Dakota	1.00500	1.01300	1.02000	1.01700	1.01600	1.00600	1.01900	1.01400	0.97200	1.00200	1.01400	1.01800	1.00000	1.00600
Tennessee	—	—	1.03100	1.03200	1.03500	1.03300	1.03100	1.03500	1.03200	1.03100	1.03200	1.03100	1.03000	1.02700
Texas	1.03500	1.03500	1.03300	1.03400	1.03500	1.03000	1.02600	1.02600	1.02300	1.02300	1.02300	1.02300	1.02400	1.02100
Utah	1.08700	1.07800	1.07800	1.07800	1.00000	1.06700	1.07400	1.06300	1.04400	1.05500	1.02100	1.03200	1.04400	1.04300
Vermont	1.00000	—	—	1.00000	1.00000	0.98800	0.98800	0.99800	0.99600	1.00100	1.01500	1.01200	1.01400	1.01200
Virginia	1.05300	1.03900	1.05400	1.04100	1.04100	1.04400	1.05000	1.03800	1.03700	1.03100	1.05700	1.04800	1.04900	1.05500
Washington	1.03300	1.03300	1.03300	1.03300	1.03300	1.05000	1.05000	1.05000	1.05000	1.05000	1.05000	1.04800	1.05500	1.05500
West Virginia	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000
Wisconsin	1.00300	0.99200	1.00200	1.00300	1.00700	1.00800	1.00900	1.01200	1.01100	1.00900	1.01000	1.00800	1.01300	1.01000
Wyoming	1.02200	1.01900	1.02600	1.03600	1.03500	1.05100	1.03900	1.04400	1.03300	1.04300	1.04000	1.04100	1.04400	1.04400
U.S. Average	1.03311	1.03153	1.02742	1.02720	1.02658	1.02316	1.02297	1.02300	1.02337	1.01779	1.01543	1.01837	1.02136	1.01851

— =Not applicable.  
Sources: See source listing at the end of this appendix.

**Table C4. Approximate Heat Content of Natural Gas Consumed by Sectors Other Than Electric Utilities, 1960-1985, Selected Years**  
(Thousand Btu per Cubic Foot)

State	1960	1965	1970	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
Alabama	1.03500	1.03400	1.03100	1.02891	1.02782	1.02863	1.02965	1.02608	1.03349	1.03535	1.05159	1.03784	1.03286	1.03770
Alaska	1.03500	1.01000	1.00500	1.00470	1.00467	1.00475	0.99878	0.99868	1.00231	1.00369	0.99910	1.00140	1.00144	1.00600
Arizona	1.03500	1.07600	1.05900	1.04957	1.04869	1.05386	1.06502	1.04051	1.04558	1.05486	1.05490	1.04560	1.04594	1.04578
Arkansas	1.03500	1.00100	1.00400	0.99503	0.99590	1.02007	0.99920	1.01577	0.99415	0.99524	0.99681	1.02070	1.01884	1.01677
California	1.03500	1.07300	1.05400	1.05594	1.05139	1.05022	1.05157	1.04797	1.04358	1.04419	1.04714	1.04083	1.03782	1.03848
Colorado	1.03500	0.91200	0.97400	0.89576	0.90136	0.88783	0.86156	0.88005	0.99471	0.99530	1.00099	1.00637	1.00231	0.99923
Connecticut	1.03500	1.02200	1.01600	1.00500	1.00800	1.01000	1.01300	1.01170	1.02200	1.02500	1.02700	1.02900	1.02903	1.02998
Delaware	1.03500	1.04300	1.02000	1.01468	1.01779	1.02350	1.02787	1.02801	1.03285	1.03477	1.03300	1.01514	1.01746	1.02197
District of Columbia	1.03500	1.02400	1.01600	1.01200	1.01200	1.01600	1.01600	1.01600	1.00300	1.01400	1.01700	1.01000	1.01200	1.01500
Florida	1.03500	1.03700	1.04100	1.07754	1.06174	1.06668	1.06968	1.05369	1.06968	1.10649	1.08246	1.09719	1.10065	1.10911
Georgia	1.03500	1.04000	1.03100	1.02672	1.02696	1.02702	1.02794	1.03843	1.03196	1.02700	1.03001	1.02601	1.02601	1.02801
Hawaii	—	—	—	—	—	—	—	—	0.96300	0.95900	0.98900	1.02300	1.02600	1.08200
Idaho	1.03500	1.06500	1.06100	1.05500	1.05700	1.06006	1.05340	1.04715	1.05301	1.06999	1.07200	1.04700	1.04500	1.04900
Illinois	1.03500	1.02900	1.02500	1.02590	1.02492	1.02800	1.01811	1.02450	1.02196	1.01996	1.02198	1.04115	1.04005	1.04008
Indiana	1.03500	0.99900	1.00600	0.98976	0.98990	0.98995	0.98901	0.99034	0.98894	0.99290	1.01608	1.00603	1.00701	1.00801
Iowa	1.03500	1.01000	1.00900	1.00800	1.00773	1.00359	1.00153	1.00210	1.00287	1.00295	1.00788	1.01381	1.01474	1.01091
Kansas	1.03500	0.99500	0.99800	0.98159	0.98069	0.98134	0.98107	0.98175	0.99404	0.99267	1.00673	1.00627	0.99365	0.99990
Kentucky	1.03500	1.02800	1.01700	1.00799	1.01100	1.01097	1.00982	1.00984	1.00886	1.01387	1.01392	1.01998	1.02198	1.03004
Louisiana	1.03500	1.04200	1.02900	1.03153	1.03299	1.03515	1.04248	1.03433	1.03707	1.03578	1.04731	1.04014	1.04060	1.03819
Maine	—	—	1.01200	1.02400	1.02400	1.02400	1.02400	1.00000	1.02400	1.02500	1.02500	1.02600	1.03200	1.03500
Maryland	1.03500	1.02500	1.02200	1.01323	1.01411	1.01604	1.02998	1.04291	1.01990	1.01396	1.01796	1.02095	1.02601	1.03408
Massachusetts	1.03500	1.01300	1.01200	1.00402	1.00608	1.00714	1.00919	1.00947	1.01646	1.01662	1.02196	1.02077	1.02454	1.02388
Michigan	1.03500	1.01400	1.01500	1.02420	1.02345	1.01996	1.01668	1.02013	1.01961	1.02596	1.02823	1.03896	1.02283	1.02304
Minnesota	1.03500	0.99800	1.00200	1.00225	0.99914	0.99745	0.99704	0.99537	0.99709	0.99502	1.00580	1.02314	1.00302	1.00401
Mississippi	1.03500	1.02900	1.02500	1.02189	1.02438	1.02623	1.02449	1.02946	1.03421	1.02898	1.03068	1.02647	1.03091	1.02459
Missouri	1.03500	1.02000	1.00700	1.00822	1.00508	1.00419	1.00625	0.97972	1.01577	1.01581	1.01794	1.02735	1.01718	1.01714
Montana	1.03500	1.00100	1.03200	1.01927	1.01229	1.00677	0.99866	0.98687	1.00926	1.00837	1.00995	1.00662	1.00365	0.99897
Nebraska	1.03500	0.99100	1.00800	0.99650	0.99652	1.00080	1.00035	0.99737	0.98019	0.97923	0.98099	0.98241	0.98137	0.98226
Nevada	1.03500	1.06200	1.08200	1.06700	1.06480	1.03695	1.00292	0.96765	1.05209	1.07753	1.07101	1.06689	1.05871	1.06122
New Hampshire	1.03500	1.01200	1.01000	1.01024	1.01001	1.00000	1.00730	1.04014	1.02000	1.02196	1.02000	1.02099	1.02700	1.02700
New Jersey	1.03500	1.04500	1.02600	1.03111	1.03416	1.03418	1.03502	1.03549	1.03269	1.03348	1.03058	1.02912	1.02046	1.02214
New Mexico	1.03500	1.10800	1.08300	1.07555	1.06632	1.06976	1.06047	1.06537	1.04776	1.05393	1.05173	1.04148	1.06146	1.08795
New York	1.03500	1.02600	1.02100	1.01476	1.01390	1.01088	1.01186	1.01349	1.02277	1.01751	1.02128	1.02607	1.02536	1.02724
North Carolina	1.03500	1.03300	1.02400	1.01799	1.01800	1.01900	1.02080	1.02186	1.01175	1.01186	1.03300	1.03300	1.03400	1.03400
North Dakota	1.03500	1.00000	1.03100	1.00077	0.99994	0.99994	0.99997	0.99997	1.05200	1.04199	1.02598	1.04500	1.04900	1.06200
Ohio	1.03500	1.03300	1.02300	1.02403	1.02606	1.02531	1.02425	1.02592	1.01606	1.02303	1.02902	1.03403	1.03702	1.04403
Oklahoma	1.03500	1.02600	1.03200	0.99619	0.99240	1.01236	1.00408	1.00543	1.00198	1.02610	1.01036	1.03656	1.01711	1.01970
Oregon	1.03500	1.07000	1.04500	1.03900	1.03600	1.04200	1.04510	1.04477	1.04620	1.04399	1.04402	1.04100	1.03600	1.03000
Pennsylvania	1.03500	1.03800	1.03300	1.02505	1.02502	1.02101	1.02151	1.02064	1.02201	1.02203	1.02804	1.02907	1.03413	1.03409
Rhode Island	1.03500	1.04200	1.02100	1.01399	1.01208	1.01300	1.01290	1.00891	1.02094	1.02200	1.03647	1.03453	1.03000	1.03291
South Carolina	1.03500	1.04200	1.02800	1.02346	1.02287	1.02189	1.03126	1.01547	1.03312	1.02300	1.03001	1.02701	1.02600	1.02800
South Dakota	1.03500	0.99700	1.00400	1.00000	0.99910	1.00005	0.99925	0.99566	0.99811	1.00202	0.99906	1.01100	1.01100	1.01000
Tennessee	1.03500	1.04600	1.02200	1.03100	1.02900	1.03100	1.02800	1.03260	1.01600	1.01600	1.02400	1.02300	1.02400	1.03400
Texas	1.03500	1.03700	1.02700	1.02966	1.02872	1.02756	1.02542	1.02954	1.03085	1.03308	1.03139	1.03190	1.03950	1.03909
Utah	1.03500	0.92500	0.93800	0.95023	0.94792	0.95026	0.95656	0.95963	1.09212	1.07740	0.93897	1.07655	1.07511	1.07500
Vermont	—	—	1.00600	1.00930	1.00814	1.00899	1.01061	1.01151	0.98936	0.99268	0.99282	0.99157	0.99153	0.99185
Virginia	1.03500	1.03100	1.02600	1.01868	1.01872	1.02124	1.01933	1.01923	1.01471	1.02294	1.02590	1.02962	1.03589	1.03899
Washington	1.03500	1.07500	1.05500	1.04200	1.04100	1.04500	1.04761	1.04713	1.05216	1.05007	1.05302	1.04300	1.04500	1.04000
West Virginia	1.03500	1.07100	1.02900	1.03805	1.04369	1.04201	1.03140	1.02371	1.03201	1.04005	1.04705	1.03804	1.05305	1.06707
Wisconsin	1.03500	1.01800	1.01900	1.02023	1.01712	1.01502	1.01247	1.01308	1.00804	1.00902	1.01200	1.00921	1.00810	1.01004
Wyoming	1.03500	0.92600	1.02300	0.93453	0.95069	0.93775	0.91433	0.92963	1.06069	1.05932	1.00223	1.05903	1.05301	1.05100
U.S. Average	1.03500	1.03182	1.02543	1.02232	1.02149	1.02212	1.02040	1.01988	1.02375	1.02575	1.02739	1.03099	1.03023	1.03156

— =Not applicable.  
Sources: See source listing at the end of this appendix.

**Table C5. Approximate Heat Content of Natural Gas Consumed by Sectors Other Than Electric Utilities, 1986-1999**  
(Thousand Btu per Cubic Foot)

State	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Alabama	1.03571	1.03285	1.02889	1.03000	1.02898	1.02708	1.02809	1.03023	1.03026	1.02931	1.03317	1.04132	1.03858	1.03661
Alaska	1.00960	1.00942	1.00376	0.99821	0.94820	1.00209	1.00216	0.99360	1.00117	1.00630	0.98918	1.00000	0.99893	1.00000
Arizona	1.03683	1.03659	1.03400	1.04268	1.03153	1.02454	1.03100	1.02822	1.02786	1.03742	1.01024	1.02252	1.01667	1.01685
Arkansas	1.01334	1.01250	1.00673	1.00426	1.00756	1.01654	1.00681	1.01249	1.02177	1.08374	1.02629	1.01354	1.02417	1.01845
California	1.03655	1.02602	1.02879	1.03582	1.03168	1.02670	1.02746	1.03785	1.02063	1.01316	1.03328	1.01776	1.05151	1.01780
Colorado	1.00322	1.00046	1.00681	1.01222	1.00540	1.02976	1.02347	1.01098	1.00433	1.01814	1.02447	1.01231	1.01263	1.00539
Connecticut	1.02994	1.03100	1.03201	1.03414	1.03300	1.03090	1.02794	1.02697	1.03093	1.02988	1.02880	1.02811	1.02561	1.02389
Delaware	1.01639	1.00929	1.01777	1.01404	1.01536	1.02464	1.03446	1.03553	1.03544	1.03561	1.03576	1.03500	1.06179	1.06673
District of Columbia	1.01300	1.01400	1.01100	1.01000	1.00800	1.00600	1.00700	1.00700	1.01100	1.00600	1.00900	1.02100	1.02700	1.02100
Florida	1.07589	1.09473	1.07984	1.08571	1.08663	1.09834	1.10018	1.09842	1.12409	1.07028	1.10872	1.05429	1.04796	1.04140
Georgia	1.02706	1.02601	1.02501	1.02600	1.02702	1.02701	1.02500	1.02703	1.03002	1.02604	1.02299	1.02706	1.02693	1.02667
Hawaii	1.08600	1.06800	1.07800	1.08000	1.07000	1.08000	1.07300	1.06200	1.05100	1.04800	1.05700	1.03000	1.05600	1.05500
Idaho	1.02100	1.01700	1.02000	1.02700	1.02800	1.03300	1.03000	1.03800	1.03800	1.03000	1.03000	1.03100	1.03800	1.03800
Illinois	1.02097	1.01496	1.01798	1.02204	1.02201	1.01901	1.01802	1.02108	1.02097	1.02015	1.01898	1.02122	1.02219	1.02200
Indiana	1.00901	1.00901	1.01510	1.01612	1.01824	1.01429	1.01116	1.01300	1.01282	1.01186	1.01092	1.01092	1.01686	1.01789
Iowa	1.00995	1.00802	1.00700	1.01104	1.00702	1.00806	1.00400	1.00295	1.00802	1.00500	1.00604	1.00910	1.01121	1.01935
Kansas	0.98581	1.04899	0.98560	0.99325	0.99975	1.01121	0.98772	0.98770	0.99905	1.00381	0.99756	1.00290	0.99424	0.99525
Kentucky	1.03804	1.03703	1.03703	1.03903	1.04003	1.04703	1.05805	1.04804	1.06207	1.09629	1.04921	1.05026	1.03429	1.03219
Louisiana	1.03908	1.03941	1.04137	1.04281	1.04138	1.04801	1.04420	1.03590	1.03877	1.03315	1.04418	1.13446	1.07687	1.04282
Maine	1.03100	1.04000	1.02700	1.00300	1.00500	1.00600	1.01300	1.01400	1.01400	1.01600	1.01600	1.01400	1.01700	1.01800
Maryland	1.03568	1.03333	1.03168	1.03054	1.02641	1.02506	1.02684	1.02733	1.03011	1.02460	1.02845	1.03361	1.03626	1.03345
Massachusetts	1.02574	1.02965	1.03010	1.03559	1.03419	1.03863	1.03775	1.03841	1.02458	1.02600	1.02556	1.02028	1.02265	1.04854
Michigan	1.03829	1.03126	1.03962	1.05189	1.04510	1.03863	1.03742	1.03457	1.03340	1.04195	1.03617	1.04083	1.04905	1.04230
Minnesota	0.99900	0.99902	1.00707	1.00601	1.00402	1.01208	1.01105	1.01104	1.01111	1.01317	1.01822	1.01825	1.00229	1.01916
Mississippi	1.02130	1.01554	1.01533	1.03124	1.03196	1.03033	1.05226	1.02321	1.02829	1.01782	1.02642	1.03320	1.04924	1.03993
Missouri	1.01114	1.01113	1.00608	1.00796	1.01089	1.00874	1.00194	1.00393	1.00610	1.00705	1.01100	1.01011	1.01100	1.01379
Montana	0.99799	1.01769	1.02374	1.01857	1.02614	1.02802	1.02211	1.01725	1.02362	1.02971	1.02965	1.03072	1.02560	1.02369
Nebraska	0.99337	0.98513	0.98349	0.98762	0.98430	0.98538	0.97936	0.97498	0.98495	0.97959	1.00705	0.99800	1.00356	0.99916
Nevada	1.06045	1.00363	0.99619	1.03172	1.03100	1.03603	1.03432	1.03567	1.03593	1.03526	1.04028	1.02565	1.04615	1.03174
New Hampshire	1.02700	1.02900	1.02499	1.01899	1.01400	1.00700	1.00865	1.00995	1.01286	1.01011	1.01900	1.01083	1.01095	1.00857
New Jersey	1.02595	1.02448	1.02502	1.02503	1.02525	1.02508	1.02539	1.03614	1.03931	1.03425	1.03672	1.03490	1.03761	1.03945
New Mexico	1.08337	1.08057	1.07381	1.05044	1.05639	1.04239	1.04287	1.04238	0.99975	1.02052	1.03166	1.01931	0.97655	0.97276
New York	1.02743	1.03000	1.02854	1.02927	1.02895	1.02704	1.02872	1.02855	1.02734	1.02855	1.02557	1.02600	1.02778	1.02753
North Carolina	1.03300	1.03098	1.02998	1.03098	1.03198	1.03200	1.03396	1.03503	1.03599	1.03300	1.03600	1.03598	1.03950	1.03520
North Dakota	1.04300	1.04800	1.05500	1.04900	1.03200	1.04600	1.04500	1.06000	1.05800	1.05000	1.05100	1.05000	1.03800	1.04500
Ohio	1.04602	1.04504	1.04003	1.04204	1.04005	1.04416	1.03601	1.03803	1.03703	1.03809	1.03803	1.04508	1.04012	1.03712
Oklahoma	1.02282	1.03094	1.03757	1.02168	1.02002	1.01312	1.02185	1.02130	1.02581	1.01479	1.02274	1.00603	1.00692	1.02065
Oregon	1.02200	1.02800	1.02300	1.03500	1.02300	1.03074	1.03817	1.04052	1.04630	1.04423	1.04281	1.04832	1.04824	1.05590
Pennsylvania	1.03601	1.03602	1.03600	1.03705	1.03702	1.03500	1.03602	1.03709	1.03609	1.03518	1.03406	1.03501	1.03608	1.03605
Rhode Island	1.02900	1.02748	1.02697	1.02673	1.02710	1.02788	1.01792	1.02889	1.02900	1.02585	1.07392	1.02254	1.02434	1.02300
South Carolina	1.03010	1.02801	1.02689	1.02607	1.02828	1.02716	1.02707	1.02911	1.03117	1.02714	1.03004	1.03113	1.03439	1.03110
South Dakota	1.00500	1.01300	1.02000	1.01700	1.01600	1.01808	1.01499	1.01299	1.01020	1.01433	1.01400	1.01800	1.01095	1.00600
Tennessee	1.03200	1.03200	1.03100	1.03200	1.03500	1.03300	1.03100	1.03500	1.03200	1.03100	1.03200	1.03100	1.03000	1.02700
Texas	1.04266	1.04233	1.04010	1.03958	1.04194	1.03975	1.04956	1.02880	1.04261	1.04232	1.03652	1.02983	1.04858	1.03701
Utah	0.94770	1.08001	1.08101	1.08705	1.08869	1.07324	1.07823	1.08081	1.06860	1.06347	1.04255	1.04225	1.04607	1.05551
Vermont	0.98699	0.98700	0.99000	0.98591	0.98554	0.98800	0.99582	0.99800	0.99600	0.99590	1.01500	1.01200	1.01195	1.01200
Virginia	1.03992	1.04001	1.04091	1.04100	1.04204	1.04189	1.03836	1.04460	1.03809	1.03100	1.03819	1.04380	1.04245	1.03635
Washington	1.02900	1.03300	1.02592	1.03195	1.03000	1.03098	1.03244	1.03667	1.04089	1.03970	1.03663	1.04598	1.04447	1.05192
West Virginia	1.07620	1.07415	1.07705	1.07707	1.07108	1.07309	1.06510	1.06506	1.06411	1.06117	1.06108	1.06809	1.06318	1.05515
Wisconsin	1.01005	1.00813	1.00805	1.00501	1.00599	1.00699	1.00900	1.01099	1.01201	1.01105	1.01306	1.01112	1.01090	1.01208
Wyoming	1.05005	1.05704	1.05306	1.05502	1.09905	1.06001	1.05801	1.05601	1.05603	1.06303	1.06102	1.06903	1.06706	1.05101
U.S. Average	1.03018	1.03127	1.02995	1.03182	1.03076	1.03110	1.03164	1.02884	1.03022	1.03000	1.03064	1.03496	1.03680	1.02921

— =Not applicable.

Sources: See source listing at the end of this appendix.



**Table C6. Approximate Heat Content of Natural Gas Total Consumption, 1960-1985, Selected Years**  
(Thousand Btu per Cubic Foot)

State	1960	1965	1970	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
Alabama	1.03500	1.03400	1.03100	1.02900	1.03000	1.03100	1.03250	1.02840	1.03400	1.03600	1.05200	1.03800	1.03300	1.03800
Alaska	1.03500	1.01000	1.00500	1.00500	1.00500	1.00500	1.00000	1.00000	1.00300	1.00400	1.00000	1.00200	1.00200	1.00600
Arizona	1.03500	1.07600	1.05900	1.05200	1.05200	1.05600	1.06470	1.04540	1.04900	1.05300	1.05400	1.04500	1.04700	1.05000
Arkansas	1.03500	1.00100	1.00400	0.99700	0.99700	1.02100	1.00090	1.01700	1.00100	1.00100	1.00200	1.02300	1.02100	1.01900
California	1.03500	1.07300	1.05400	1.05700	1.05300	1.05200	1.05320	1.04970	1.04600	1.04800	1.04900	1.04300	1.04200	1.04300
Colorado	1.03500	0.91200	0.97400	0.91300	0.91400	0.90000	0.87590	0.89240	0.99300	0.99400	1.00000	1.00600	1.00200	0.99900
Connecticut	1.03500	1.02200	1.01600	1.00500	1.00800	1.01000	1.01300	1.01170	1.02200	1.02500	1.02700	1.02900	1.02900	1.03000
Delaware	1.03500	1.04300	1.02000	1.02000	1.02500	1.03000	1.03090	1.03110	1.03500	1.03500	1.03300	1.01800	1.02100	1.02500
District of Columbia	1.03500	1.02400	1.01600	1.01200	1.01200	1.01600	1.01600	1.01600	1.00300	1.01400	1.01700	1.01000	1.01200	1.01500
Florida	1.03500	1.03700	1.04100	1.04300	1.04100	1.04500	1.04700	1.03730	1.04100	1.05900	1.04400	1.04800	1.04900	1.05300
Georgia	1.03500	1.04000	1.03100	1.02700	1.02700	1.02700	1.02790	1.03900	1.03200	1.02700	1.03000	1.02600	1.02600	1.02800
Hawaii	1.03500	—	0.96200	0.94700	0.91100	0.94900	0.95800	0.95000	0.96300	0.95900	0.98900	1.02300	1.02600	1.08200
Idaho	1.03500	1.06500	1.06100	1.05500	1.05700	1.06000	1.05340	1.04710	1.05300	1.07000	1.07200	1.04700	1.04500	1.04900
Illinois	1.03500	1.02900	1.02500	1.02600	1.02500	1.02800	1.01830	1.02440	1.02200	1.02000	1.02200	1.04100	1.04000	1.04000
Indiana	1.03500	0.99900	1.00600	0.99000	0.99000	0.99000	0.98910	0.99040	0.98900	0.99300	1.01600	1.00600	1.00700	1.00800
Iowa	1.03500	1.01000	1.00900	1.00800	1.00800	1.00400	1.00220	1.00230	1.00300	1.00300	1.00800	1.01400	1.01500	1.01100
Kansas	1.03500	0.99500	0.99800	0.98400	0.98100	0.98100	0.97810	0.97780	0.98700	0.98700	0.99900	0.99900	0.99200	0.99800
Kentucky	1.03500	1.02800	1.01700	1.00800	1.01100	1.01100	1.00990	1.00990	1.00900	1.01400	1.01400	1.02000	1.02200	1.03000
Louisiana	1.03500	1.04200	1.02900	1.03700	1.03800	1.03800	1.04470	1.03690	1.03800	1.03700	1.04700	1.04200	1.04200	1.04000
Maine	1.03500	—	1.01200	1.02400	1.02400	1.02400	1.02400	1.00000	1.02400	1.02500	1.02500	1.02600	1.03200	1.03500
Maryland	1.03500	1.02500	1.02200	1.01300	1.01400	1.01600	1.03010	1.04480	1.02000	1.01400	1.01800	1.02100	1.02600	1.03400
Massachusetts	1.03500	1.01300	1.01200	1.00400	1.00600	1.00700	1.00910	1.00910	1.01600	1.01600	1.02400	1.02500	1.03000	1.02700
Michigan	1.03500	1.01400	1.01500	1.01200	1.00800	1.00600	1.00550	1.00530	1.01100	1.01700	1.02200	1.02400	1.01700	1.01500
Minnesota	1.03500	0.99800	1.00200	1.00100	0.99800	0.99700	0.99670	0.99530	0.99700	0.99500	1.00500	1.02300	1.00300	1.00400
Mississippi	1.03500	1.02900	1.02500	1.02300	1.02300	1.02500	1.02120	1.02430	1.02800	1.02500	1.02800	1.02700	1.03000	1.02800
Missouri	1.03500	1.02000	1.00700	1.00600	1.00300	1.00200	1.00380	0.97950	1.01400	1.01500	1.01800	1.02700	1.01700	1.01700
Montana	1.03500	1.00100	1.03200	1.02100	1.01400	1.00900	1.00050	0.99010	1.01200	1.01100	1.01100	1.00800	1.00500	1.00100
Nebraska	1.03500	0.99100	1.00800	0.99400	0.99400	0.99800	0.99780	0.99380	0.97800	0.97800	0.98100	0.98200	0.98100	0.98200
Nevada	1.03500	1.06200	1.08200	1.06700	1.06600	1.04900	1.02790	1.01310	1.06100	1.07600	1.07000	1.06600	1.05900	1.06200
New Hampshire	1.03500	1.01200	1.01000	1.01000	1.01000	1.00000	1.00730	1.04000	1.02000	1.02200	1.02000	1.02100	1.02700	1.02700
New Jersey	1.03500	1.04500	1.02600	1.03100	1.03400	1.03400	1.03500	1.03590	1.03300	1.03400	1.03100	1.03100	1.02400	1.02600
New Mexico	1.03500	1.10800	1.08300	1.06400	1.05700	1.05700	1.05500	1.05640	1.04300	1.04700	1.04500	1.03300	1.04900	1.07400
New York	1.03500	1.02600	1.02100	1.01500	1.01400	1.01100	1.01190	1.01550	1.02500	1.02000	1.02300	1.02700	1.02700	1.02900
North Carolina	1.03500	1.03300	1.02400	1.01800	1.01800	1.01900	1.02080	1.02190	1.01200	1.01200	1.03300	1.03300	1.03400	1.03400
North Dakota	1.03500	1.00000	1.03100	1.00100	1.00000	1.00000	1.00000	1.00000	1.05200	1.04200	1.02600	1.04500	1.04900	1.06200
Ohio	1.03500	1.03300	1.02300	1.02300	1.02500	1.02400	1.02300	1.02490	1.01600	1.02300	1.02900	1.03400	1.03700	1.04400
Oklahoma	1.03500	1.02600	1.03200	1.01500	1.01400	1.02700	1.02390	1.02350	1.02300	1.03500	1.02300	1.04200	1.02500	1.02800
Oregon	1.03500	1.07000	1.04500	1.03900	1.03600	1.04200	1.04510	1.04480	1.04600	1.04400	1.04400	1.04100	1.03600	1.03000
Pennsylvania	1.03500	1.03800	1.03300	1.02500	1.02500	1.02100	1.02150	1.02060	1.02200	1.02200	1.02800	1.02900	1.03400	1.03400
Rhode Island	1.03500	1.04200	1.02100	1.01400	1.01300	1.01300	1.01290	1.01130	1.02100	1.02200	1.03600	1.03500	1.03000	1.03300
South Carolina	1.03500	1.04200	1.02800	1.02400	1.02300	1.02200	1.03200	1.01810	1.03300	1.02300	1.03000	1.02700	1.02600	1.02800
South Dakota	1.03500	0.99700	1.00400	1.00000	0.99900	1.00000	0.99920	0.99560	0.99800	1.00200	0.99900	1.01100	1.01100	1.01000
Tennessee	1.03500	1.04600	1.02200	1.03100	1.02900	1.03100	1.02800	1.03260	1.01600	1.01600	1.02400	1.02300	1.02400	1.03400
Texas	1.03500	1.03700	1.02700	1.02600	1.02500	1.02700	1.02810	1.03250	1.03300	1.03200	1.03200	1.02900	1.03600	1.03800
Utah	1.03500	0.92500	0.93800	0.95000	0.94800	0.95000	0.95620	0.95980	1.08600	1.07300	0.93900	1.07500	1.07500	1.07500
Vermont	1.03500	—	1.00600	1.00800	1.00800	1.00800	1.01050	1.01010	0.99000	0.99300	0.99300	0.99200	0.99200	0.99200
Virginia	1.03500	1.03100	1.02600	1.01900	1.01900	1.02300	1.02080	1.02140	1.01600	1.02400	1.02700	1.03000	1.03600	1.03900
Washington	1.03500	1.07500	1.05500	1.04200	1.04100	1.04500	1.04760	1.04690	1.05200	1.05000	1.05300	1.04300	1.04500	1.04000
West Virginia	1.03500	1.07100	1.02900	1.03700	1.04300	1.04200	1.03140	1.02370	1.03200	1.04000	1.04700	1.03800	1.05300	1.06700
Wisconsin	1.03500	1.01800	1.01900	1.02000	1.01700	1.01500	1.01230	1.01290	1.00800	1.00900	1.01200	1.00900	1.00800	1.01000
Wyoming	1.03500	0.92600	1.02300	0.93400	0.95000	0.93700	0.91370	0.92920	1.06000	1.05900	1.00200	1.05900	1.05300	1.05100
U.S. Average	1.03500	1.03271	1.02618	1.02249	1.02179	1.02315	1.02243	1.02208	1.02549	1.02703	1.02856	1.03046	1.03077	1.03253

— =Not applicable.

Sources: See source listing at the end of this appendix.

**Table C7. Approximate Heat Content of Natural Gas Total Consumption, 1986-1999**  
 (Thousand Btu per Cubic Foot)

State	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Alabama	1.03600	1.03300	1.02900	1.03000	1.02900	1.02700	1.02800	1.03000	1.03000	1.02900	1.03300	1.04100	1.03900	1.03500
Alaska	1.00900	1.00900	1.00400	0.99900	0.95400	1.00200	1.00200	0.99400	1.00100	1.00600	0.99000	1.00000	0.99900	1.00000
Arizona	1.03900	1.03600	1.03400	1.04000	1.03200	1.02500	1.03100	1.02800	1.02700	1.03500	1.01100	1.02100	1.01600	1.01500
Arkansas	1.01900	1.01600	1.00900	1.00600	1.00900	1.01700	1.00900	1.01400	1.02200	1.07600	1.02600	1.01500	1.02400	1.01900
California	1.03900	1.03000	1.03100	1.03700	1.03200	1.02700	1.02900	1.03600	1.02300	1.01600	1.03200	1.01800	1.04700	1.01700
Colorado	1.00300	1.00000	1.00600	1.01100	1.00500	1.02900	1.02300	1.01100	1.00500	1.01800	1.02400	1.01200	1.01200	1.00700
Connecticut	1.03000	1.03100	1.03200	1.03400	1.03300	1.03100	1.02800	1.02700	1.03000	1.02800	1.02800	1.02700	1.02600	1.02400
Delaware	1.01800	1.01500	1.02300	1.02800	1.02600	1.03400	1.03500	1.03500	1.03600	1.03400	1.03500	1.03500	1.03700	1.03700
District of Columbia	1.01300	1.01400	1.01100	1.01000	1.00800	1.00600	1.00700	1.00700	1.01100	1.00600	1.00900	1.02100	1.02700	1.02100
Florida	1.03600	1.04400	1.04200	1.04200	1.04300	1.04900	1.04900	1.05200	1.06800	1.03300	1.05000	1.04800	1.05100	1.04300
Georgia	1.02700	1.02600	1.02500	1.02600	1.02700	1.02700	1.02500	1.02700	1.03000	1.02600	1.02300	1.02700	1.02700	1.02700
Hawaii	1.08600	1.06800	1.07800	1.08000	1.07000	1.08000	1.07300	1.06200	1.05100	1.04800	1.05700	1.03000	1.05600	1.05500
Idaho	1.02100	1.01700	1.02000	1.02700	1.02800	1.03300	1.03000	1.03800	1.03800	1.03000	1.03000	1.03100	1.03800	1.03800
Illinois	1.02100	1.01500	1.01800	1.02200	1.02200	1.01900	1.01800	1.02100	1.02100	1.02000	1.01900	1.02100	1.02200	1.02200
Indiana	1.00900	1.00900	1.01500	1.01600	1.01800	1.01400	1.01100	1.01300	1.01300	1.01200	1.01100	1.01100	1.01700	1.01800
Iowa	1.01000	1.00800	1.00700	1.01100	1.00700	1.00800	1.00400	1.00300	1.00800	1.00500	1.00600	1.00900	1.01100	1.01900
Kansas	0.98500	1.04600	0.98600	0.99200	0.99900	1.00700	0.98700	0.98700	0.99800	1.00200	0.99600	1.00100	0.99500	0.99700
Kentucky	1.03800	1.03700	1.03700	1.03900	1.04000	1.04700	1.05800	1.04800	1.06200	1.09600	1.04900	1.05000	1.03400	1.03200
Louisiana	1.04000	1.04000	1.04200	1.04300	1.04200	1.04700	1.04400	1.03700	1.04000	1.03500	1.04400	1.11800	1.07000	1.04200
Maine	1.03100	1.04000	1.02700	1.00300	1.00500	1.00600	1.01300	1.01400	1.01400	1.01600	1.01600	1.01400	1.01700	1.01800
Maryland	1.03600	1.03400	1.03200	1.03200	1.02800	1.02700	1.02800	1.02800	1.03100	1.02600	1.02900	1.03400	1.03700	1.03400
Massachusetts	1.02600	1.02900	1.03000	1.03800	1.03800	1.03800	1.03700	1.03800	1.02600	1.02700	1.02600	1.02200	1.02300	1.04800
Michigan	1.02700	1.02100	1.02200	1.02900	1.02200	1.02000	1.02000	1.02100	1.02100	1.01700	1.01200	1.01600	1.02000	1.01800
Minnesota	0.99900	0.99900	1.00700	1.00600	1.00400	1.01200	1.01100	1.01100	1.01100	1.01300	1.01800	1.01800	1.02000	1.01900
Mississippi	1.02500	1.01800	1.01700	1.03000	1.03300	1.02900	1.04700	1.02300	1.03300	1.02600	1.03000	1.03000	1.04600	1.03600
Missouri	1.01100	1.01100	1.00600	1.00800	1.01100	1.00900	1.00200	1.00400	1.00600	1.00700	1.01100	1.01000	1.01100	1.01300
Montana	1.00000	1.02000	1.02500	1.02000	1.02800	1.02900	1.02300	1.01800	1.02400	1.03000	1.03000	1.03100	1.02600	1.02400
Nebraska	0.99300	0.98500	0.98300	0.98700	0.98300	0.98400	0.97900	0.97500	0.98500	0.98000	1.00700	0.99800	1.00300	0.99900
Nevada	1.05900	1.00900	1.00300	1.03000	1.03100	1.03200	1.03100	1.03400	1.03500	1.03300	1.03600	1.02700	1.04100	1.03400
New Hampshire	1.02700	1.02900	1.02500	1.01900	1.01400	1.00700	1.00900	1.01000	1.01300	1.01100	1.01900	1.01100	1.01100	1.00900
New Jersey	1.02700	1.02600	1.02600	1.02600	1.02600	1.02600	1.02600	1.03600	1.03900	1.03400	1.03600	1.03500	1.03800	1.03900
New Mexico	1.07700	1.07400	1.06800	1.04800	1.05400	1.03900	1.04000	1.03900	1.00300	1.02000	1.02900	1.01900	0.98200	0.97900
New York	1.02900	1.03000	1.02900	1.02900	1.03000	1.02800	1.02900	1.02900	1.02800	1.02800	1.02600	1.02600	1.02800	1.02700
North Carolina	1.03300	1.03100	1.03000	1.03100	1.03200	1.03200	1.03400	1.03500	1.03600	1.03300	1.03600	1.03600	1.04000	1.03500
North Dakota	1.04300	1.04800	1.05500	1.04900	1.03200	1.04600	1.04500	1.06000	1.05800	1.05000	1.05100	1.05000	1.03800	1.04500
Ohio	1.04600	1.04500	1.04000	1.04200	1.04000	1.04400	1.03600	1.03800	1.03700	1.03800	1.03800	1.04500	1.04000	1.03700
Oklahoma	1.03000	1.03600	1.03800	1.02800	1.02700	1.02100	1.02600	1.02600	1.02800	1.02000	1.02400	1.01200	1.01400	1.02300
Oregon	1.02200	1.02800	1.02300	1.03500	1.02300	1.02900	1.03500	1.03700	1.04000	1.04000	1.04000	1.04600	1.04300	1.05100
Pennsylvania	1.03600	1.03600	1.03600	1.03700	1.03700	1.03500	1.03600	1.03700	1.03600	1.03500	1.03400	1.03500	1.03600	1.03600
Rhode Island	1.02900	1.02800	1.02700	1.02700	1.02800	1.02800	1.01800	1.02900	1.02900	1.02600	1.06000	1.02400	1.02500	1.02300
South Carolina	1.03000	1.02800	1.02700	1.02600	1.02800	1.02700	1.02700	1.02900	1.03100	1.02700	1.03000	1.03100	1.03400	1.03100
South Dakota	1.00500	1.01300	1.02000	1.01700	1.01600	1.01800	1.01500	1.01300	1.01000	1.01400	1.01400	1.01800	1.01000	1.00600
Tennessee	1.03200	1.03200	1.03100	1.03200	1.03500	1.03100	1.03100	1.03500	1.03200	1.03100	1.03200	1.03100	1.03000	1.02700
Texas	1.04000	1.04000	1.03800	1.03800	1.04000	1.03700	1.04300	1.02800	1.03700	1.03700	1.03300	1.02800	1.04100	1.03200
Utah	0.94800	1.08000	1.08100	1.08700	1.08800	1.07300	1.07800	1.08000	1.06700	1.06300	1.04200	1.04200	1.04600	1.05500
Vermont	0.98700	0.98700	0.99000	0.98600	0.98700	0.98800	0.99500	0.99800	0.99600	0.99600	1.01500	1.01200	1.01200	1.01200
Virginia	1.04000	1.04000	1.04100	1.04100	1.04200	1.04200	1.03900	1.04400	1.03800	1.03100	1.03900	1.04400	1.04300	1.03800
Washington	1.02900	1.03300	1.02600	1.03200	1.03000	1.03100	1.03300	1.03700	1.04100	1.04000	1.03700	1.04600	1.04500	1.05200
West Virginia	1.07600	1.07400	1.07700	1.07700	1.07100	1.07300	1.06500	1.06500	1.06400	1.06100	1.06100	1.06800	1.06300	1.05500
Wisconsin	1.01000	1.00800	1.00800	1.00500	1.00600	1.00700	1.00900	1.01100	1.01200	1.01100	1.01300	1.01100	1.01100	1.01200
Wyoming	1.05000	1.05700	1.05300	1.05500	1.09900	1.06000	1.05800	1.05600	1.05600	1.06300	1.06100	1.06900	1.06700	1.05100
U.S. Average	1.03065	1.03131	1.02958	1.03113	1.03014	1.02994	1.03041	1.02806	1.02923	1.02819	1.02875	1.03271	1.03444	1.02768

Sources: See source listing at the end of this appendix.

**Table C8. Approximate Heat Content of Bituminous Coal and Lignite Consumed by the Residential and Commercial Sector, 1960-1985, Selected Years**  
(Million Btu per Short Ton)

State	1960	1965	1970	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
Alabama	24.90955	24.77905	23.93285	23.51979	23.61816	23.50701	23.94624	24.01274	24.04242	24.22595	24.31358	24.15500	24.30488	24.40711
Alaska	18.90636	18.80731	18.16504	17.68304	17.73431	17.65792	17.64148	15.80000	15.80000	15.80000	15.80000	15.80000	15.80000	15.80000
Arizona	—	—	—	—	—	23.13886	23.03907	—	—	19.98524	19.99547	19.86600	19.79000	19.78800
Arkansas	23.58822	23.46464	22.66333	22.78461	—	23.25776	24.55559	—	23.89952	26.51913	22.89048	22.94800	22.81074	22.99047
California	23.01295	22.89238	22.11061	21.37302	—	21.42094	22.18359	22.38055	23.10930	23.02922	23.28646	23.09600	23.14219	23.55520
Colorado	22.95289	22.83264	22.05291	20.82582	21.41799	21.55660	19.87246	21.73459	21.46057	21.33917	21.51570	21.37000	21.55892	21.21743
Connecticut	25.06247	24.93116	24.07977	—	—	—	22.40550	24.09419	24.45394	24.29057	25.13790	25.92800	—	24.66397
Delaware	—	—	—	—	—	—	—	—	24.41454	24.28610	24.41599	24.59400	—	24.66000
District of Columbia	25.10862	24.97707	24.12411	23.24075	23.71388	—	—	24.14581	24.54122	24.30399	24.49389	24.78500	24.81371	24.88768
Florida	24.33573	24.20824	23.38153	23.49264	—	—	—	24.06838	24.28341	24.32752	22.98457	24.68400	24.75000	24.88200
Georgia	24.74225	24.61262	23.77210	23.49417	23.84904	23.59090	23.62811	24.09985	24.32123	24.31119	24.36058	24.50100	24.74515	24.88078
Hawaii	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Idaho	24.83140	24.70130	23.85776	22.66294	21.31072	21.63582	20.09020	19.14751	22.29152	21.71739	21.67035	22.12100	22.22887	22.83215
Illinois	24.04090	23.91495	23.09826	22.52306	22.45631	22.23331	22.26637	22.26385	22.06574	22.06493	22.01927	22.21700	22.27314	22.26660
Indiana	24.06302	23.93695	23.11951	22.13211	22.47946	22.89893	22.29510	22.38371	21.87750	21.95293	22.06379	22.05200	22.08600	22.25712
Iowa	21.32126	21.20956	20.48526	18.27722	18.94425	21.89519	19.92939	21.33432	20.22308	20.61051	20.52589	21.64800	20.92480	21.39008
Kansas	21.78815	21.67400	20.93384	19.74632	—	—	21.09194	20.90868	21.18218	21.18317	22.42143	21.32800	21.43826	21.14600
Kentucky	24.41023	24.28234	23.45311	23.20915	23.73730	23.44388	23.40679	23.94161	23.86491	23.96212	23.97577	24.00400	24.28360	24.34440
Louisiana	—	—	—	20.47422	—	—	—	—	21.36502	—	21.42848	—	—	22.77784
Maine	25.15186	25.02009	24.16566	23.25980	23.71388	23.36163	23.47358	24.18655	24.44110	24.39970	24.50683	24.75000	24.74849	24.88310
Maryland	25.11916	24.98756	24.13424	23.33369	23.75979	23.57470	23.80769	24.31769	24.46833	24.30977	24.51908	24.60400	24.74104	24.85439
Massachusetts	25.07336	24.94200	24.09023	23.24075	23.71388	23.33604	23.59895	23.06344	24.50975	24.73845	24.82777	25.01800	24.82431	25.07917
Michigan	24.75962	24.62990	23.78880	23.47415	23.57719	23.31103	23.06861	24.08615	24.36325	24.24302	24.38544	24.56500	24.38057	24.47177
Minnesota	21.97087	21.85576	21.10939	19.25676	23.25512	23.22381	20.59904	18.75714	20.82860	18.49710	18.04556	19.19900	18.57345	19.14210
Mississippi	23.04357	22.92284	22.14003	21.95036	—	—	23.31499	24.09419	22.99343	—	—	23.87900	24.75000	24.54115
Missouri	22.94167	22.82147	22.04212	21.40447	21.61124	21.51115	21.34634	21.24613	21.80697	21.54143	21.47124	21.66500	21.67702	22.80191
Montana	21.33557	21.22380	20.49901	20.38911	20.03721	18.94201	18.43165	18.69575	22.04235	17.67068	17.59846	20.40500	17.70690	17.8025
Nebraska	20.91322	20.80366	20.09322	18.40616	18.41033	18.07395	17.96742	18.44085	18.03826	17.70058	19.19546	20.61600	21.37525	21.52621
Nevada	25.23114	25.09895	24.24182	23.52145	22.47754	23.07994	18.67965	17.79288	22.33387	22.62540	23.09437	23.09600	21.78448	23.56200
New Hampshire	24.95798	24.82722	23.97937	—	—	—	—	—	24.45810	—	24.49270	24.75000	24.58800	—
New Jersey	24.74372	24.61409	23.77352	21.82099	—	—	—	—	24.32119	24.28610	24.88430	24.59400	24.74516	24.87099
New Mexico	22.99301	22.87255	22.09146	—	—	21.82706	19.97236	20.00716	19.78553	20.01748	20.06988	19.86600	19.79000	19.81693
New York	24.62410	24.49509	23.65859	23.38572	23.83645	23.38315	23.87414	24.01167	24.36952	24.21078	24.36286	24.66000	24.56787	24.65957
North Carolina	24.76213	24.63240	23.79120	23.49258	23.86489	23.59213	23.46900	24.09999	24.42236	24.32632	24.49270	24.74900	24.75007	24.87841
North Dakota	15.55018	15.46871	14.94046	13.75718	13.48724	13.49456	13.28937	13.45096	13.24298	13.22083	13.26253	13.15700	13.00063	13.13815
Ohio	23.84944	23.72449	22.91430	22.32524	22.92489	22.69671	22.65768	22.97712	23.21312	23.47004	23.57085	23.74600	23.80036	23.84836
Oklahoma	22.72718	22.60811	21.83605	20.67259	20.96468	21.30529	21.53110	25.72233	23.29143	21.66746	21.84151	21.31800	21.50073	23.39403
Oregon	24.60503	24.47612	23.64027	22.38275	21.53895	21.41286	20.44651	19.56036	22.72195	20.26182	19.75846	20.24000	21.75434	22.60723
Pennsylvania	24.79066	24.66078	23.81862	23.49453	23.80811	23.82432	24.03394	24.02308	24.18275	24.12648	24.48508	24.62600	24.64525	24.84190
Rhode Island	25.87949	25.74390	24.86475	—	—	—	—	—	24.41454	—	—	24.59400	24.58800	24.66000
South Carolina	24.76172	24.63199	23.79081	23.49264	23.86489	23.59214	23.62799	24.09999	24.41433	24.14642	24.49270	24.75000	24.67873	24.88200
South Dakota	19.41154	19.30984	18.65041	16.85997	19.54143	19.15533	22.22392	17.79288	18.42630	18.29957	18.03164	19.83900	23.33603	19.36902
Tennessee	24.71529	24.58580	23.74620	23.48538	23.85462	23.52067	23.32331	23.37282	23.97514	24.15563	24.00493	24.58200	24.27867	24.38903
Texas	14.95177	14.87344	14.36552	13.10400	—	13.20200	—	—	15.20049	19.31609	17.79300	23.10500	—	22.51056
Utah	25.89198	25.75633	24.87676	23.74007	22.41031	23.08304	22.96192	23.36462	23.17910	23.13998	23.27931	23.09600	23.14200	23.56200
Vermont	25.14754	25.01579	24.16151	24.28203	—	—	—	—	—	24.32752	25.16538	24.59400	24.74251	24.88200
Virginia	24.78594	24.65608	23.81408	23.47257	23.85106	23.58575	23.56409	24.04433	24.43211	24.36232	24.58812	24.84300	24.79707	24.87725
Washington	22.90924	22.78922	22.01097	19.96772	19.34891	22.16433	21.80682	21.65332	22.77100	22.97649	23.03893	22.74400	22.78786	23.45190
West Virginia	24.99691	24.86595	24.01679	23.70919	24.02458	23.88573	24.18947	24.14787	24.05881	24.18392	24.71583	24.89700	24.81981	24.93027
Wisconsin	21.91550	21.80068	21.05619	18.97225	23.53615	23.47004	20.61526	20.48444	24.29637	23.34779	23.42252	23.24900	24.16838	24.62943
Wyoming	20.62538	20.51732	19.81665	18.57163	18.61369	18.37162	18.05772	17.84923	17.80856	17.90710	17.58366	17.46800	17.91289	17.26200
U.S. Average	24.05400	23.92800	23.11100	22.25800	22.81900	22.59400	22.07800	21.88400	22.48800	22.01000	22.22600	22.43800	22.40600	22.56800

— =Not applicable.

Sources: See source listing at the end of this appendix.

**Table C9. Approximate Heat Content of Bituminous Coal and Lignite Consumed by the Residential and Commercial Sector, 1986-1999**  
(Million Btu per Short Ton)

State	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Alabama	24.63975	25.08310	25.79266	24.43388	24.62888	24.64340	24.20326	24.25081	24.43623	24.64589	24.63827	24.64237	24.71187	24.71187
Alaska	15.80000	15.80000	15.80000	15.80000	15.80000	15.80000	15.80000	15.80000	15.80000	15.80000	15.80000	15.84800	15.71000	15.71000
Arizona	19.88600	20.38358	19.88400	21.63113	18.69800	18.61200	21.70074	21.38908	—	21.96150	19.28500	19.10307	19.90042	19.90042
Arkansas	—	21.49000	21.92000	24.24994	24.83400	25.96800	24.96800	23.89800	26.55800	—	—	—	24.43167	24.43167
California	18.98169	22.68814	23.12753	22.37275	23.18400	23.14011	23.07808	23.20120	23.23636	23.29600	23.28200	23.10055	23.04000	23.04000
Colorado	21.56464	21.39947	21.95565	21.38168	21.43489	21.57494	20.91578	21.81200	22.14453	22.16939	22.10652	18.70031	22.19459	22.19459
Connecticut	24.95467	24.95908	25.04400	24.80362	24.95377	25.02600	25.04256	25.18800	25.23600	23.33821	25.23000	25.41000	—	—
Delaware	24.72400	24.77250	24.98711	24.69741	24.85030	25.02600	25.18400	23.83055	23.80800	—	25.03700	25.17800	25.14287	25.14287
District of Columbia	24.96200	25.06317	25.10269	24.81697	24.96081	25.03991	24.93954	24.99205	24.95656	25.17800	24.74271	24.57969	24.44600	24.44600
Florida	24.96195	25.03600	25.04400	24.88400	24.83209	—	23.20460	24.98000	24.94600	24.64400	25.04400	—	24.95800	24.95800
Georgia	24.96009	25.12917	25.21017	24.65345	25.14236	25.18717	25.19639	25.01321	25.34707	24.98009	25.04400	25.69800	25.73000	25.73000
Hawaii	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Idaho	22.85769	22.57736	22.58220	21.56850	22.47778	22.57314	22.43044	22.43248	22.45583	21.71685	21.72486	22.68311	22.80723	22.80723
Illinois	22.34029	22.53093	22.45239	22.62147	22.43881	22.55972	22.81144	22.61095	22.44583	22.50579	22.66766	22.80180	22.89998	22.89998
Indiana	22.39394	22.71158	22.58785	22.29989	22.44825	22.43100	22.44030	22.58687	22.62002	22.24440	22.17831	22.14894	22.26866	22.26866
Iowa	21.12940	20.63182	20.47464	22.67388	23.94746	24.08615	23.69806	23.40503	23.48865	24.36084	24.52912	23.56166	23.80418	23.80418
Kansas	21.37600	21.49000	21.92000	23.70114	24.27952	24.17200	24.41040	22.71888	24.51341	23.94481	24.10800	22.52800	23.04000	23.04000
Kentucky	24.55696	24.57961	24.40565	23.50634	24.44827	24.71214	24.79946	24.87999	24.86187	24.92797	24.35637	23.26357	24.28534	24.28534
Louisiana	—	—	—	24.88400	—	—	—	—	—	25.07800	—	24.53000	25.18061	25.18061
Maine	25.11291	25.27582	25.16907	25.20764	24.83202	24.97980	25.08398	24.98302	—	25.27600	—	25.30930	—	—
Maryland	24.86479	24.83938	24.92307	24.93809	25.05609	25.15721	25.25327	25.32011	25.28911	24.84383	25.09521	25.17919	25.18171	25.18171
Massachusetts	24.88914	24.99179	25.60034	25.46184	24.95675	24.99377	24.95331	24.96353	24.94911	25.07519	24.98651	24.94094	24.95852	24.95852
Michigan	24.86180	24.92704	25.02796	24.85836	24.81175	24.88522	24.91553	24.73038	24.47621	24.66145	24.85003	24.59371	24.91677	24.91677
Minnesota	18.97575	17.94151	18.19799	19.27225	17.89230	17.72586	17.73500	18.34923	19.59694	20.25825	17.54796	18.40250	23.48431	23.48431
Mississippi	24.96200	24.40747	23.61910	23.28820	24.85200	—	—	—	—	—	—	—	—	—
Missouri	22.61640	21.77716	22.01127	22.36218	21.93585	21.94880	22.01651	22.43578	22.86555	22.63423	22.66103	22.82506	22.71555	22.71555
Montana	17.57944	17.57643	17.76117	19.70627	18.78135	18.01546	18.17794	18.88756	18.05498	21.22785	18.18800	17.85986	18.04509	18.04509
Nebraska	20.80859	20.93504	18.27452	21.37921	21.37396	21.54400	20.43600	21.70581	21.88812	20.32116	17.30000	17.33200	17.33400	17.33400
Nevada	23.23400	23.41600	23.15000	22.87600	23.18400	23.14800	23.09600	23.20000	23.23600	23.44269	23.28200	23.09600	23.04000	23.04000
New Hampshire	24.96200	—	24.73200	24.93406	24.86200	25.02600	25.18400	—	—	25.21627	25.23000	25.41000	25.31400	25.31400
New Jersey	24.72400	24.75000	—	24.66400	24.86200	25.02600	25.18400	25.18800	—	25.17800	25.03108	25.12600	—	—
New Mexico	19.88600	17.96000	19.89220	22.98538	18.69800	18.63858	19.68776	19.18470	19.32173	19.23183	19.32888	18.92150	18.87750	18.87750
New York	24.62179	24.81538	24.78285	24.69638	24.53057	24.78691	24.84495	24.97660	25.05627	25.23274	25.02655	25.06754	25.03727	25.03727
North Carolina	24.96217	25.05752	25.05591	24.88555	25.18700	25.26828	25.03913	25.01686	24.99583	25.16371	24.83876	24.99475	24.84401	24.84401
North Dakota	13.12892	13.19509	13.09800	13.08417	13.90962	13.89793	14.54945	14.76482	14.92006	15.53547	14.75327	14.93796	15.51366	15.51366
Ohio	23.98021	24.14433	24.27434	23.87649	24.14209	24.17118	24.36112	24.32488	24.31907	24.43814	23.78173	23.87340	24.36456	24.36456
Oklahoma	21.89519	22.90130	21.87471	23.17382	24.83400	25.96800	24.96800	23.89800	26.55800	25.89400	26.12800	17.35345	25.32800	25.32800
Oregon	20.67402	22.83495	24.26966	24.37594	23.18400	23.14800	23.09600	23.20000	23.23600	23.29600	23.28200	23.09600	23.04000	23.04000
Pennsylvania	24.94691	24.89646	24.99069	25.07618	24.87715	25.01966	25.16609	25.17773	25.11524	25.19002	25.17498	25.29357	25.20810	25.20810
Rhode Island	24.72400	—	—	—	21.38800	—	—	24.80800	—	—	—	24.53000	—	—
South Carolina	24.96200	25.03600	25.04400	24.88400	24.85514	25.13802	24.98563	24.98327	24.93865	25.69344	24.71660	24.97200	24.67971	24.67971
South Dakota	20.80221	17.78380	16.94015	17.32800	18.37453	17.28738	17.26200	17.29400	20.51158	19.07166	21.61937	17.33200	17.33400	17.33400
Tennessee	24.08855	24.32695	24.71849	24.35723	24.72241	25.10340	24.27660	25.12128	25.16428	25.28058	25.04338	25.02948	24.44179	24.44179
Texas	24.95990	23.52781	23.44597	23.69531	25.89608	25.72253	21.62533	18.08517	26.55800	—	25.23000	25.51017	25.72933	25.72933
Utah	23.23400	23.41600	23.04841	22.82872	23.14974	23.14775	23.09571	23.20000	23.23600	23.29600	23.28200	23.09345	23.04000	23.04000
Vermont	24.99482	24.75000	—	24.66400	24.86200	25.02600	—	25.18800	24.83200	—	25.23000	25.41000	—	—
Virginia	25.01061	25.07076	25.17455	25.00443	25.08653	25.12406	25.14160	24.99711	24.98384	24.99803	25.10558	24.93091	24.88224	24.88224
Washington	22.18962	22.47533	22.02189	22.05743	21.73662	22.32965	22.18045	22.50221	22.42899	22.63392	23.09783	22.87154	23.04000	23.04000
West Virginia	25.21287	25.27135	25.27741	25.22664	25.01710	25.01287	24.98555	24.90895	24.95371	24.83139	24.68019	24.73779	24.53394	24.53394
Wisconsin	24.59992	24.06919	24.40016	24.67810	24.90557	25.06289	25.06301	24.96835	24.94350	25.07766	25.05235	24.92049	24.95800	24.95800
Wyoming	17.65003	17.36854	17.83575	17.55041	19.93489	23.14800	18.91636	18.55083	18.45662	18.24057	18.19276	18.03000	18.03200	18.03200
U.S. Average	22.66900	22.80000	23.13500	22.91700	22.67800	22.63500	22.76800	22.74900	22.68300	22.76700	22.64895	22.04800	22.54054	22.54054

— =Not applicable.

Sources: See source listing at the end of this appendix.

**Table C10. Approximate Heat Content of Bituminous Coal and Lignite Consumed by Other Industrial Users, 1960-1985, Selected Years**  
(Million Btu per Short Ton)

State	1960	1965	1970	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
Alabama .....	25.21478	24.99246	23.54274	22.99662	23.44664	23.46569	23.81664	24.03186	24.11858	24.21881	24.19950	24.14200	24.28378	24.38730
Alaska .....	19.42837	19.25707	18.14004	17.68383	17.73431	17.71652	—	—	—	—	—	—	—	—
Arizona .....	21.61434	21.42376	20.18105	19.77788	20.06876	20.52769	20.36556	20.23336	20.37305	20.35804	20.32161	20.17200	20.30712	20.25740
Arkansas .....	25.42843	25.20422	23.74222	21.33575	21.42189	21.16227	21.38481	21.26347	21.40613	21.48376	21.43682	21.39500	21.54256	21.30956
California .....	26.05221	25.82250	24.32464	22.98540	22.10274	22.53203	22.27807	22.45862	22.17313	22.20901	22.12114	21.99800	22.30241	23.29923
Colorado .....	23.55826	23.35054	21.99607	21.39183	20.81646	21.03070	21.44647	21.58818	21.81821	21.41732	21.38437	21.38500	21.62012	21.56832
Connecticut .....	25.78016	25.55285	24.07063	23.62736	23.86489	24.28112	23.13179	24.37246	24.45810	24.32752	25.03611	24.63900	22.06048	24.88200
Delaware .....	25.44489	25.22054	23.75760	23.49264	23.86489	23.78426	24.12927	24.40975	24.48200	24.29050	24.42794	24.59900	24.61639	24.72755
District of Columbia .....	25.88358	25.65536	24.16719	23.78591	24.16220	23.96173	24.27625	24.37709	24.35746	24.32752	—	—	—	—
Florida .....	25.65932	25.43308	23.95781	23.54145	23.61816	23.50909	23.59896	22.82220	22.89184	23.91138	24.48338	24.68100	24.57895	24.78536
Georgia .....	25.42319	25.19903	23.73733	23.50777	23.77935	23.55063	23.69765	24.06854	24.33122	24.31279	24.47558	24.71700	24.72146	24.81892
Hawaii .....	—	—	—	—	—	—	—	—	—	—	24.68800	24.68800	24.68800	24.68800
Idaho .....	22.54363	22.34486	21.04872	19.93455	19.02890	18.89684	18.40186	18.78585	17.68403	17.67976	17.49468	17.61400	17.59828	17.76163
Illinois .....	23.82775	23.61766	22.24769	21.68412	21.83288	21.83742	21.66987	22.08390	22.34991	22.34499	22.47097	22.57300	22.70065	22.79768
Indiana .....	24.01079	23.79909	22.41859	21.82403	21.88521	21.87688	21.82879	22.00770	22.25313	22.45291	22.17212	22.24700	22.35404	22.43106
Iowa .....	23.49229	23.28515	21.93447	21.29119	20.98514	20.91487	20.97292	21.33605	21.48878	21.66708	21.95357	22.04500	22.34207	22.60618
Kansas .....	22.67087	22.47098	21.16753	20.47974	21.06172	21.23720	21.43162	21.16215	21.56793	21.44305	21.40247	21.44300	21.44035	21.50635
Kentucky .....	24.73684	24.51873	23.09650	22.94563	23.22292	23.10392	23.28813	23.69344	24.11828	24.04754	24.15263	24.32300	24.40871	24.53122
Louisiana .....	24.03617	23.82424	22.44229	21.03356	—	22.54598	21.73372	21.42447	22.15263	21.99870	22.87269	22.60500	23.21779	24.05362
Maine .....	25.90485	25.67644	24.18705	24.10633	24.47161	23.61095	23.63873	24.67511	24.47496	24.29991	24.49638	24.66700	24.70565	24.88489
Maryland .....	25.90896	25.68051	24.19089	23.66256	24.02590	24.03565	24.26513	24.17525	24.48732	24.25471	24.48312	24.68200	24.67448	24.73226
Massachusetts .....	26.15947	25.92882	24.42479	23.83052	23.92185	24.10376	23.91167	24.32701	24.64126	24.42603	24.68320	24.76600	24.82907	24.88114
Michigan .....	24.83219	24.61324	23.18553	22.89705	23.39704	23.17567	23.32079	23.68529	24.05295	24.04816	24.24167	24.50300	24.63379	24.74502
Minnesota .....	19.52134	19.34921	18.22684	18.91730	18.66561	17.38097	16.78420	17.74574	17.08375	17.80847	16.76763	16.83900	18.34313	20.68817
Mississippi .....	25.68109	25.45466	23.97813	23.21260	23.65472	23.21358	22.75569	22.72431	23.44243	22.97063	24.19676	23.75100	23.41970	23.39939
Missouri .....	23.59774	23.38967	22.03293	21.42920	21.79111	21.70699	21.65832	21.78163	22.00164	21.95193	21.99374	22.07900	22.35139	22.32881
Montana .....	22.82715	22.62588	21.31344	20.87854	19.46858	18.70236	18.18885	19.52277	19.03489	19.40601	19.55212	19.53400	18.98653	18.06841
Nebraska .....	21.97456	21.78080	20.51738	19.28537	19.24307	19.04364	18.54137	18.82053	19.19380	18.66559	18.82961	19.69900	19.39072	18.59708
Nevada .....	26.61837	26.38367	24.85326	23.45688	22.17008	22.68446	23.03907	23.33191	23.16753	23.14666	23.28646	23.08500	23.15000	23.56200
New Hampshire .....	24.43928	24.22379	22.81867	23.62685	—	23.62119	23.89769	24.40709	24.26685	24.24115	24.42698	24.59400	24.65243	24.66504
New Jersey .....	25.41947	25.19535	23.73386	23.90927	24.32098	24.02806	23.80699	24.23881	24.62203	24.59997	24.49725	25.25600	25.15405	25.18567
New Mexico .....	23.03750	22.83438	21.50984	20.84886	19.87440	20.02211	20.61728	21.64103	21.86701	21.59372	21.73974	21.46000	21.64352	21.62540
New York .....	25.78738	25.56001	24.07738	23.71372	24.07562	24.05600	24.08523	24.31275	24.54285	24.36094	24.67995	24.82600	24.76577	24.90054
North Carolina .....	25.44614	25.22177	23.75876	23.49028	23.86331	23.59142	23.62761	24.09967	24.41869	24.34556	24.49462	24.75700	24.75049	24.88021
North Dakota .....	14.81208	14.68148	13.82987	13.03850	13.13702	13.15361	13.20285	13.20499	13.12013	13.14596	13.19186	13.11100	13.15921	13.16040
Ohio .....	24.79041	24.57183	23.14651	22.67857	23.09331	22.87035	22.85510	23.02076	23.34608	23.34324	23.69772	23.96100	24.02854	24.18707
Oklahoma .....	25.38348	25.15967	23.70025	23.43863	21.24853	21.13670	21.32772	20.97569	21.21166	21.29758	21.16918	21.59600	21.22483	21.43419
Oregon .....	22.67719	22.47724	21.17342	20.34784	19.03680	18.62700	18.42399	18.27389	17.69347	18.85957	17.62852	17.85400	18.79888	17.86804
Pennsylvania .....	25.63637	25.41032	23.93637	23.55093	23.91019	23.86696	23.92417	24.10154	24.27132	24.17713	24.43020	24.71100	24.68425	24.75865
Rhode Island .....	25.88998	25.66170	24.17316	23.62848	24.02602	—	23.90094	24.09419	24.55884	24.80291	—	24.75000	24.75000	24.88200
South Carolina .....	25.44802	25.22364	23.76052	23.49264	23.86447	23.59214	23.62575	24.09992	24.41495	24.32772	24.49270	24.74800	24.74514	24.87375
South Dakota .....	19.90924	19.73370	18.58902	18.76511	18.39672	18.31700	18.13422	18.32970	19.21967	18.90864	19.53656	17.49100	17.30716	17.26200
Tennessee .....	25.07407	24.85299	23.41137	23.14381	23.60742	23.28270	23.52987	23.89406	24.16031	24.07700	24.21983	24.13900	24.44395	24.58220
Texas .....	16.66356	16.51663	15.55857	18.82199	15.35991	15.19524	15.53031	15.97410	16.28985	16.09697	17.14501	15.67900	15.95326	15.57497
Utah .....	26.19847	25.96747	24.46120	23.64361	22.29235	22.51964	22.58035	22.85108	22.33114	22.37915	22.74751	22.49900	22.29674	22.27355
Vermont .....	26.52519	26.29132	24.76626	24.05572	24.47161	24.25426	24.14397	24.61088	24.88781	24.82061	24.94685	25.29600	24.75000	24.88200
Virginia .....	25.46723	25.24268	23.77845	23.47709	23.86786	23.60175	23.64080	24.11594	24.45338	24.30873	24.52204	24.88000	24.78298	24.90295
Washington .....	25.95480	25.72596	24.23369	23.54643	21.42615	22.04600	21.84493	22.14239	21.36337	21.14070	20.83484	20.19800	21.42922	21.63429
West Virginia .....	25.52388	25.29883	23.83135	23.52495	23.97297	23.89849	23.75104	24.24072	24.35268	24.24070	24.49161	24.69900	24.63634	24.85455
Wisconsin .....	24.59672	24.37985	22.96567	21.95711	22.52296	22.55520	22.31512	22.70310	22.73536	22.59751	22.86002	22.76400	22.65053	23.32322
Wyoming .....	20.53852	20.35742	19.17657	18.35566	18.41033	18.22728	18.01954	18.11049	17.95474	17.97026	17.82097	17.72300	17.51430	17.55529
U.S. Average .....	24.60400	24.38700	22.97300	22.43900	22.52800	22.29000	22.17500	22.43600	22.69000	22.57200	22.69500	22.68000	22.52500	22.01300

— =Not applicable.  
Sources: See source listing at the end of this appendix.

**Table C11. Approximate Heat Content of Bituminous Coal and Lignite Consumed by Other Industrial Users, 1986-1999**  
(Million Btu per Short Ton)

State	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Alabama	24.61848	24.79504	24.64061	24.39340	24.67898	24.58103	24.64284	24.53609	24.65595	24.84816	24.78515	24.67910	24.87526	24.87526
Alaska	—	—	—	—	—	—	—	15.80000	15.80000	—	15.80000	15.84800	15.71000	15.71000
Arizona	20.21439	19.87616	20.71750	20.70390	20.07050	19.94197	20.31671	19.99280	20.15568	19.96204	19.78877	19.52533	19.23730	19.23730
Arkansas	22.44673	22.33706	22.22411	22.39587	22.80790	24.18843	20.00552	23.45036	24.82737	23.95685	23.98664	23.58123	24.43167	24.43167
California	22.80372	23.24871	23.00565	22.70929	22.52224	22.73094	22.97040	23.20010	23.22941	23.29600	23.28200	23.05469	22.99659	22.99659
Colorado	21.47479	21.01452	21.29274	20.79333	21.10513	21.08138	20.10740	20.92088	21.49432	21.64981	21.44989	21.51822	21.16491	21.16491
Connecticut	24.83445	21.64868	24.74529	24.78080	—	24.84324	24.93613	24.80412	25.27560	—	24.62879	24.53000	—	—
Delaware	24.80786	24.82025	24.76803	24.71851	24.93784	25.07321	25.26267	25.30129	25.25866	25.22011	25.17571	25.23956	25.18449	25.18449
District of Columbia	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Florida	24.91018	25.04755	25.12819	24.78882	25.00386	25.13063	25.00227	24.88729	24.92714	25.10990	25.11787	25.05439	25.00308	25.00308
Georgia	24.93856	25.02236	24.99673	24.79070	25.14817	25.13954	25.14666	25.10259	25.07264	25.19814	25.13735	25.08994	25.07959	25.07959
Hawaii	24.68800	24.97000	24.83000	24.83000	24.81000	24.85000	24.83000	24.83000	21.50000	21.50000	21.50000	22.49862	23.04000	23.04000
Idaho	18.12203	17.71016	17.85648	17.70091	17.85823	17.75592	17.52799	18.16027	17.69006	19.03477	18.16585	17.33200	18.15972	18.15972
Illinois	23.05064	23.04103	22.86002	22.75566	22.55466	21.86176	22.75323	22.85602	22.64953	22.83250	22.84669	23.16804	23.04668	23.04668
Indiana	22.44890	22.44930	22.46119	22.52258	22.71130	22.92005	22.95050	22.85572	22.63550	23.05468	22.71501	23.18017	23.25622	23.25622
Iowa	22.67574	22.83502	22.03526	22.90901	22.55246	22.17587	20.55435	20.11837	20.06032	20.92318	21.25463	20.89736	21.15456	21.15456
Kansas	21.37701	21.74703	21.92655	22.21132	24.22372	24.42437	24.48764	23.55143	23.96144	24.24071	25.47579	24.52319	24.79699	24.79699
Kentucky	24.62470	24.82229	24.93611	24.74632	24.63025	24.89972	24.89276	24.84423	24.75628	24.84817	24.74611	24.48054	24.69688	24.69688
Louisiana	24.02294	24.00203	19.27825	20.30941	19.97897	18.36116	18.56416	18.32271	18.37139	17.96874	25.04400	24.89054	25.18061	25.18061
Maine	24.74816	24.97847	24.85678	24.83842	24.92293	25.01017	25.06970	24.97451	24.96127	25.10225	25.02589	24.98213	24.50979	24.50979
Maryland	24.74789	24.76853	24.69124	24.73817	25.11786	25.14565	25.20668	25.26208	25.40234	25.32641	25.13270	25.11468	25.02943	25.02943
Massachusetts	25.05734	25.16054	25.20906	25.15893	24.86533	24.92877	24.89677	24.90752	24.96412	25.17556	24.90749	25.03547	24.47621	24.47621
Michigan	24.82194	24.86182	24.85242	24.66003	24.45049	24.52137	24.40007	24.20803	24.22411	24.02413	24.34512	24.35386	23.73938	23.73938
Minnesota	20.99743	20.25035	19.15527	19.58753	18.56250	19.36088	18.52981	18.12766	18.48813	19.04840	19.11958	18.85851	18.60075	18.60075
Mississippi	23.79343	23.70762	23.66379	23.34870	23.25386	23.26526	23.34142	24.01947	23.89320	24.07263	23.90664	23.67600	24.07408	24.07408
Missouri	22.56149	23.01241	23.10553	22.94751	22.98843	23.26695	23.43390	23.57752	23.00175	23.17545	23.13412	22.82012	22.90858	22.90858
Montana	17.73772	17.89376	18.28221	18.48953	18.37578	18.47768	18.47768	18.54933	18.33343	18.09956	18.10811	18.24449	17.91315	17.91315
Nebraska	18.41177	18.61192	18.72166	19.12737	19.03574	18.90751	18.44837	18.73037	19.09831	19.35912	18.82313	19.07998	18.95268	18.95268
Nevada	23.23400	23.41600	23.15000	21.18601	23.18400	23.14800	23.09600	23.20000	23.23600	22.66800	22.61981	22.98074	23.13890	23.13890
New Hampshire	24.72400	24.75000	24.75555	24.87616	24.83592	25.26108	25.31936	24.98000	—	25.21627	—	—	—	—
New Jersey	25.34722	25.25123	25.30837	25.18493	25.23731	25.26678	25.33398	25.34405	25.07266	22.50200	—	—	22.83642	22.83642
New Mexico	21.81340	21.38000	21.92000	24.43675	21.38800	21.54400	20.39800	21.70600	21.92600	22.00800	21.97600	21.78800	21.98800	21.98800
New York	25.15288	25.10523	25.10772	25.05043	25.10695	25.19113	25.16182	25.18280	25.21171	25.12813	25.03732	25.17514	25.05062	25.05062
North Carolina	24.96369	25.03348	25.04250	24.88239	24.93830	25.10847	25.08579	25.14487	25.10471	25.26890	25.14978	25.06093	25.06878	25.06878
North Dakota	13.24260	13.37441	13.28101	13.32203	13.48903	13.41305	13.32713	13.32856	13.44957	13.35266	13.38232	13.28668	13.34170	13.34170
Ohio	24.40010	24.46262	24.51939	24.30903	24.30127	24.44324	24.42126	24.55259	24.54913	24.51123	24.46909	24.43842	24.36416	24.36416
Oklahoma	21.48813	21.10301	21.25901	21.31431	22.80216	23.80519	22.75512	22.42719	21.08848	22.67545	22.23193	20.88353	23.32931	23.32931
Oregon	17.83270	17.90776	17.39654	17.66001	17.35230	17.33432	17.88959	18.41864	19.41867	18.49627	20.83590	20.09775	18.86882	18.86882
Pennsylvania	24.95376	24.99285	24.94624	24.87805	24.90486	25.05394	25.10939	25.11823	25.12576	25.16321	25.08764	25.20190	24.92877	24.92877
Rhode Island	25.33053	25.03600	25.04400	24.88400	—	—	—	—	—	—	—	—	—	—
South Carolina	24.96200	25.03642	25.03879	24.88075	25.11758	25.22592	25.19592	25.17505	25.07482	25.19274	25.06364	25.09419	25.03948	25.03948
South Dakota	17.34693	17.27400	17.41784	17.35218	17.33800	17.46595	17.29575	17.29400	17.26800	17.25800	17.30000	17.41854	17.51564	17.51564
Tennessee	24.68635	24.81370	24.77826	24.67578	25.13262	25.12430	25.25292	25.16308	25.05633	25.13795	25.02275	25.00474	25.02279	25.02279
Texas	15.90663	15.15325	14.06793	14.56476	14.78802	15.05199	14.30566	15.18034	15.47725	14.96020	15.34020	15.54805	14.22230	14.22230
Utah	21.75533	22.08866	22.91453	22.46491	23.18867	23.12437	23.09600	23.49325	22.92070	23.00279	23.28200	23.48478	23.05627	23.05627
Vermont	—	25.03600	25.04400	24.88400	24.84559	25.74698	25.70000	25.18800	—	—	—	21.78800	24.44600	24.44600
Virginia	25.00743	25.06726	25.09173	24.97442	25.06917	25.16462	25.19564	25.10255	25.05076	25.08578	25.09909	24.94650	24.86122	24.86122
Washington	19.84933	19.76416	20.92868	20.75464	22.70686	21.74506	20.69363	20.21833	19.27531	19.00628	19.65817	20.64702	23.00664	23.00664
West Virginia	25.05416	25.06408	25.10557	24.99539	24.88783	24.99394	24.94784	24.94007	24.97733	24.97866	24.94501	24.97478	24.78655	24.78655
Wisconsin	23.60191	23.10643	21.87589	22.59549	24.14900	24.30622	24.27108	23.95833	24.16061	24.21811	23.88933	24.13023	24.27883	24.27883
Wyoming	17.33729	17.46332	17.77149	17.74126	22.17752	22.05079	21.11792	21.28113	21.75576	21.94055	21.89552	21.57904	21.93124	21.93124
U.S. Average	22.18500	22.36000	22.34100	22.32400	22.44400	22.44800	22.24200	22.11100	22.04600	21.93100	22.08694	22.15700	22.09290	22.09290

— =Not applicable.

Sources: See source listing at the end of this appendix.

**Table C12. Approximate Heat Content of Bituminous Coal and Lignite Consumed by Electric Utilities, 1960-1985, Selected Years**  
(Million Btu per Short Ton)

State	1960	1965	1970	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
Alabama	24.12600	23.70400	23.31400	23.16350	23.13570	23.17042	23.63231	23.75441	23.91189	23.99756	24.04115	23.97230	24.05936	24.11116
Alaska	17.72900	17.85800	17.08000	17.40000	17.40000	17.40000	17.40000	15.80000	15.80000	15.80000	15.80000	15.80000	15.80000	15.80000
Arizona	—	20.85000	21.23800	21.08957	21.10154	21.55725	21.52545	21.22455	21.24312	21.01265	21.08605	21.26936	21.19024	20.98564
Arkansas	—	—	—	—	—	—	16.79503	16.81367	17.00887	16.96304	17.04517	17.46096	17.18364	17.20748
California	—	—	—	—	—	—	—	—	—	—	—	—	22.78020	—
Colorado	20.54600	21.32200	21.53000	19.80780	19.59369	20.19681	20.06857	20.26222	19.99201	20.11977	19.62760	19.46681	19.31025	19.49701
Connecticut	26.54800	25.90800	23.54800	23.90400	23.90400	23.90400	23.90400	23.90400	23.90400	23.90400	—	—	26.27193	26.31651
Delaware	25.98200	26.39200	24.18600	24.53412	24.93623	24.17667	24.50155	24.73148	24.92212	24.96266	25.21723	25.59153	25.97302	25.92406
District of Columbia	27.46000	26.94800	25.92000	25.61888	25.61900	—	—	—	—	—	—	—	—	—
Florida	24.60600	23.76200	22.74800	23.09252	23.29396	23.12095	23.57892	23.75577	23.68622	23.82572	24.02140	24.36947	24.45588	24.45038
Georgia	25.04200	24.93200	23.75600	23.75121	23.76698	23.71061	23.74715	23.76535	23.80495	23.90946	23.99180	24.12916	24.25098	24.24094
Hawaii	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Idaho	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Illinois	21.69400	21.44800	21.00200	20.25912	20.49264	20.59551	20.56480	20.56107	20.59267	20.81535	20.85878	20.80897	21.18724	20.96903
Indiana	22.64000	22.46600	22.03000	21.22923	21.47196	21.46193	21.35963	21.64839	21.63186	21.64290	21.77556	21.89759	21.57470	21.31356
Iowa	20.76800	21.21800	20.88800	20.38486	20.28500	20.00208	19.72120	18.89463	18.63318	18.28830	18.27544	18.28866	17.94484	18.19661
Kansas	23.75400	24.19200	24.10000	19.95680	20.38510	19.04115	18.27252	18.64276	18.36976	18.12214	17.74540	17.55593	17.58032	17.53691
Kentucky	22.97200	22.89200	21.85200	21.48102	21.89305	22.00190	22.05307	22.52345	22.91705	22.89628	22.80264	22.97313	22.87114	22.76930
Louisiana	—	16.03800	—	—	—	—	—	—	16.03794	16.18703	16.71399	16.70594	17.01545	16.90673
Maine	28.58000	—	—	—	—	—	—	—	—	—	—	—	—	—
Maryland	26.61600	26.37200	24.61200	24.32290	24.54193	24.40737	24.40198	24.57160	24.75727	24.51454	24.82195	25.34179	25.23585	25.32555
Massachusetts	26.35200	26.07200	23.26000	24.34726	—	—	—	27.00400	26.75129	26.11421	26.30974	26.59218	26.46597	26.56066
Michigan	24.88400	24.80400	24.20200	23.66213	23.69480	23.56164	23.09854	23.62384	24.02458	23.48699	23.90599	23.35495	23.33954	23.39292
Minnesota	22.39000	22.17600	20.27400	17.94022	17.80782	17.58357	17.46097	17.64346	17.55670	17.54394	17.61363	17.67612	17.35450	17.45075
Mississippi	24.85800	24.89000	24.09800	23.16389	23.28381	22.85098	23.70814	23.41259	23.99361	24.10518	24.17577	24.27107	24.23072	24.25244
Missouri	21.90400	21.55000	21.51800	21.49363	21.68849	21.77477	21.49045	21.47318	21.30576	21.18322	21.39835	21.42307	21.41418	21.28962
Montana	13.50000	13.14000	15.47400	15.95909	16.67636	16.98389	16.91115	17.05584	17.00328	17.08734	17.01129	16.69349	17.02300	17.30703
Nebraska	24.78200	24.56800	23.91400	20.95357	20.82335	21.31316	20.57478	19.18090	18.80879	18.01500	17.85122	17.57216	17.79651	17.29876
Nevada	—	25.48800	25.65400	22.38788	22.23695	22.14854	22.06110	22.09228	22.07779	22.06220	22.09859	22.27924	22.38221	22.76835
New Hampshire	25.44800	27.90400	27.43200	26.70098	26.91783	26.72821	26.02806	26.85374	26.81635	26.95102	27.04008	27.09411	27.08116	26.90451
New Jersey	26.77200	26.45800	24.94400	25.40124	26.11872	25.97444	26.12003	26.09810	26.18199	26.22582	26.40196	26.44328	26.42461	26.47525
New Mexico	25.00000	18.00400	17.96600	17.84874	17.85784	17.91460	18.01263	17.81728	17.69514	18.27875	18.28261	18.19864	18.06930	18.37577
New York	26.59600	26.67800	24.66400	24.05032	24.49860	24.25853	24.06477	24.50405	24.63519	24.41983	24.84383	24.96993	25.10649	25.20035
North Carolina	26.24200	25.81400	24.11400	23.78836	24.08088	23.86663	24.05255	24.36301	24.53799	24.44275	24.53774	24.88739	24.95315	24.97487
North Dakota	13.83600	13.91800	13.66600	13.34445	13.21203	13.28981	13.38652	13.35023	13.23368	13.24692	13.28593	13.18710	13.04344	13.15028
Ohio	23.77000	23.56400	22.50000	21.91934	22.00498	21.78940	21.82734	22.24000	22.88041	22.70638	23.10614	23.57204	23.51935	23.62539
Oklahoma	25.94200	24.00000	25.07600	25.07600	16.54801	16.80255	17.08004	17.40878	17.39280	17.11773	17.06022	17.15725	17.20674	17.16768
Oregon	—	—	—	—	—	—	—	20.05400	16.39258	16.57304	16.61288	16.61300	16.65419	16.58400
Pennsylvania	24.44600	24.77200	23.74800	23.76856	24.18296	24.14879	24.20162	24.27728	24.32574	24.19477	24.41086	24.66268	24.63148	24.63954
Rhode Island	28.15200	27.46800	—	—	—	—	—	—	—	—	—	—	—	—
South Carolina	26.73400	25.82200	24.27400	24.16051	24.35910	23.86756	24.17648	24.73525	24.84295	24.60532	24.76354	25.05966	25.05792	25.13214
South Dakota	17.16800	17.90400	16.57200	12.61613	12.69515	12.62262	12.45706	12.66039	12.59940	12.62686	12.68694	12.29735	12.20422	12.20986
Tennessee	24.04000	23.59000	22.59400	21.98283	22.43149	22.19482	22.56593	22.97477	23.25397	23.22690	23.62140	23.55640	23.61027	23.65727
Texas	—	—	—	13.10305	13.23206	14.07706	14.22569	14.42718	14.79112	14.99738	14.98340	14.85580	14.66297	14.80734
Utah	24.94000	25.18400	24.81200	23.64976	23.19920	23.28042	23.28369	23.35795	22.90042	22.91941	23.08217	22.86611	22.85458	23.60722
Vermont	27.76000	27.34000	24.87000	25.74400	25.74400	25.70862	25.70900	25.92600	25.92600	25.09632	25.62833	25.62800	25.62800	25.62800
Virginia	26.72600	26.47400	24.78200	23.93019	24.52895	24.35599	24.45058	24.74846	25.01317	24.79074	24.97461	25.31446	25.24274	25.62794
Washington	—	—	—	16.20000	16.20000	16.20000	16.20000	16.20000	16.20000	16.20000	16.20000	16.20000	16.20000	16.20000
West Virginia	23.90800	23.73600	23.31800	23.22075	23.49564	23.30439	23.46206	23.89989	24.26929	24.20780	24.45099	24.71696	24.66725	24.82719
Wisconsin	24.20800	24.03600	22.44600	21.23552	21.34361	21.11875	20.90142	20.84450	20.52333	19.76022	20.08694	19.87583	19.90783	19.54733
Wyoming	14.84600	15.99000	16.53400	16.62585	17.53234	17.62611	17.54996	17.48885	17.59029	17.31142	17.33698	17.42590	17.29186	17.50962
U.S. Average	24.02900	23.83600	22.60300	21.65900	21.69200	21.52100	21.28400	21.37200	21.30100	21.09100	21.20000	21.14100	21.10800	20.96500

— =Not applicable.  
Sources: See source listing at the end of this appendix.

**Table C13. Approximate Heat Content of Bituminous Coal and Lignite Consumed by Electric Utilities, 1986-1999**

(Million Btu per Short Ton)

State	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Alabama	24.34921	24.44506	24.32805	24.04527	24.18828	24.21421	24.12231	24.18379	24.17560	23.72228	23.58782	23.16839	23.03741	21.92557
Alaska	15.80000	15.80000	15.80000	15.80000	15.80000	15.80000	15.80000	15.80000	15.80000	15.80000	15.80000	15.80000	15.71000	15.71000
Arizona	21.04448	21.21656	21.29993	21.19271	20.96337	20.71212	20.60673	20.54290	20.56138	20.54809	20.46484	20.31761	20.37299	20.51329
Arkansas	17.33929	17.36371	17.32804	17.43904	17.47970	17.46879	17.44830	17.32933	17.41418	17.37423	17.40510	17.41407	17.34133	17.30145
California	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Colorado	19.54026	19.68454	19.54309	19.69685	19.61551	19.77520	19.83981	19.77533	19.89191	19.79050	19.71663	19.74334	19.66760	19.49709
Connecticut	26.34394	26.26827	26.27739	26.61558	26.46571	26.47664	26.33450	26.28876	26.18816	26.21972	26.20002	26.26388	26.27555	—
Delaware	26.00008	26.13094	25.80238	25.88695	26.06988	26.10578	26.12845	26.05318	25.90726	26.17075	26.04029	26.12436	25.92332	25.87070
District of Columbia	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Florida	24.55139	24.79878	24.84874	24.76555	24.72855	24.70131	24.73977	24.66394	24.58521	24.59295	24.38601	24.24307	24.28767	24.59737
Georgia	24.29147	24.34988	24.34509	24.19948	23.78608	23.87269	24.07813	24.29572	23.54887	23.15189	23.16181	23.51077	23.50066	23.47906
Hawaii	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Idaho	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Illinois	21.07475	21.39665	21.27149	21.41052	21.57798	21.44217	21.33289	20.72305	20.36161	19.94090	19.75506	19.56279	19.40084	19.12098
Indiana	21.35811	21.75674	21.66827	21.39682	21.12394	21.13900	21.25663	21.07839	21.06908	20.67609	20.71372	20.92237	21.03476	21.23983
Iowa	18.37163	18.30428	18.42196	17.87940	17.78347	17.78073	17.73343	17.31996	17.56560	17.35696	17.31594	17.32483	17.27195	17.16250
Kansas	17.45659	17.52886	17.95627	17.75137	17.89698	17.99569	17.79922	17.30731	17.41698	17.46010	17.65448	17.53189	17.39208	17.25612
Kentucky	23.04657	22.99234	23.05611	22.98604	23.11655	23.10311	23.24019	23.39372	23.36552	23.24978	23.07184	23.14125	23.15715	23.16483
Louisiana	16.24104	16.32004	16.38486	16.37353	16.38807	16.44601	16.24345	16.18493	16.27256	16.21951	16.34229	16.20350	16.19456	16.29872
Maine	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Maryland	25.37716	25.35115	25.44911	25.39531	25.46891	25.59121	25.50566	25.50384	25.64809	25.93085	25.75778	25.82585	25.82899	25.88507
Massachusetts	26.43708	26.25661	26.21825	26.01748	26.12464	26.28298	26.14010	25.90208	25.62884	25.39576	25.26651	25.14198	25.23391	26.31921
Michigan	23.44262	23.12783	23.22394	22.55661	22.26254	22.10306	21.99037	21.70619	21.85082	21.35367	21.00751	21.13297	21.12631	20.97363
Minnesota	17.45061	17.48309	17.47699	17.53444	17.57650	17.60493	17.67522	17.68736	17.64162	17.65591	17.82721	17.78977	17.76587	17.76626
Mississippi	24.45673	25.34749	25.32763	25.30847	25.08625	25.11010	25.01366	24.67509	22.62320	22.44121	22.04690	20.97206	21.13795	22.12427
Missouri	21.37715	21.19511	20.80806	20.73534	20.79962	20.59603	20.64120	19.71902	19.43673	18.43195	18.12585	17.98834	17.87674	17.89638
Montana	17.09975	17.18001	17.03980	17.01785	17.12889	17.04419	17.15114	16.99101	17.00015	17.04023	16.87714	16.85154	16.86633	16.87000
Nebraska	17.42659	17.20153	17.23870	17.32878	17.12200	17.08328	17.10544	17.12281	17.14137	17.18777	17.19766	17.18964	17.16895	16.99644
Nevada	22.44442	22.36459	22.15912	22.23307	22.24492	22.24210	22.10266	22.02420	22.58166	22.15036	22.27947	22.33768	22.39808	22.51434
New Hampshire	26.88676	26.83174	26.66593	26.71818	26.60524	26.49442	26.52056	26.35868	26.06363	26.22105	26.29103	26.10859	26.26535	26.26674
New Jersey	26.45777	26.47223	26.64705	26.63810	26.85863	26.80446	26.93038	26.79478	26.68271	26.56460	25.98652	26.16773	26.22677	26.29982
New Mexico	18.21464	18.09713	18.07206	18.25702	18.23411	18.18453	18.02544	17.98299	18.08502	18.06533	18.23235	18.13797	18.16456	18.26448
New York	25.44420	25.57463	25.62880	25.64752	25.69197	25.84622	25.95997	25.82701	25.91765	26.10186	26.02591	26.21098	26.10375	26.06778
North Carolina	25.10762	25.09931	25.15052	25.06111	25.08769	25.01190	24.91255	24.92951	24.83219	24.92268	24.84374	24.73536	24.79516	24.90022
North Dakota	13.15796	13.20282	13.16802	13.15988	13.27219	13.21236	13.11531	13.13958	13.18516	13.16914	13.19349	13.11843	13.13244	13.09457
Ohio	23.82083	23.80822	23.79040	23.66929	23.76388	23.89059	23.96512	24.09765	24.10449	24.24332	24.11103	23.78207	23.82583	23.83596
Oklahoma	17.32594	17.70292	17.82347	17.65022	17.78795	17.58356	17.40032	17.24222	17.14643	17.11329	17.20030	17.28203	17.30245	17.23900
Oregon	—	16.96721	17.05667	17.05668	16.69610	16.85865	19.28329	17.60154	17.87428	17.76458	17.56307	17.51491	17.37052	17.92286
Pennsylvania	24.66989	24.70677	24.65095	24.66892	24.62435	24.60441	24.89437	24.88653	24.91671	24.85950	24.83063	24.72415	24.75911	25.14382
Rhode Island	—	—	—	—	—	—	—	—	—	—	—	—	—	—
South Carolina	25.32515	25.29714	25.35043	25.32524	25.30955	25.44893	25.63409	25.60405	25.54228	25.70337	25.51496	25.71003	25.61042	25.61851
South Dakota	12.16911	12.12305	12.67660	12.27333	12.19168	12.05040	12.06852	12.11449	12.09793	13.94369	18.06768	17.37335	17.45545	17.25950
Tennessee	23.81593	23.95699	24.08916	23.78969	23.93271	24.33817	24.36350	24.53656	24.37185	24.26010	24.12411	23.71094	23.46508	23.27013
Texas	14.58271	14.48383	14.60802	14.57334	14.58137	14.45089	14.46813	14.56804	14.69177	14.69101	14.88092	14.84508	15.01800	15.01164
Utah	22.97536	23.23687	22.98103	22.64441	22.96536	22.93866	22.76877	22.97756	22.98241	23.09903	23.02688	22.66014	22.62079	23.24037
Vermont	25.62800	—	—	—	—	—	—	—	—	—	—	—	—	—
Virginia	25.70845	25.62891	25.59915	25.38617	25.42742	25.53520	25.66017	25.63333	25.55607	25.48669	25.19465	25.10770	25.20529	25.40303
Washington	16.20000	16.20811	16.41283	16.32236	16.27014	16.02823	16.37826	16.24949	16.80068	16.53312	15.87148	16.08594	16.43006	16.44807
West Virginia	24.87872	24.87305	24.94550	24.79060	24.90334	25.01093	25.04815	24.97885	24.93653	24.83633	24.75682	24.79556	24.61094	24.72214
Wisconsin	19.32331	19.25995	19.38606	19.41028	19.28421	19.28565	19.44991	18.98001	19.12997	18.70226	18.44322	18.74990	18.59798	18.22942
Wyoming	17.41260	17.55502	17.51124	17.57672	17.62122	17.51118	17.68028	17.55731	17.53159	17.47534	17.43285	17.57360	17.58854	17.56763
U.S. Average	21.09100	21.14300	20.90500	20.85400	20.93500	20.76100	20.79200	20.64400	20.68100	20.50200	20.53200	20.55400	20.48453	20.32669

— =Not applicable.

Sources: See source listing at the end of this appendix.



## Thermal Conversion Factor Source Documentation

### Approximate Heat Content of Petroleum and Natural Gas Plant Liquids

**Asphalt.** EIA adopted the thermal conversion factor of 6.636 million British thermal units (Btu) per barrel as estimated by the Bureau of Mines and first published in the *Petroleum Statement, Annual, 1956*.

**Aviation Gasoline.** EIA adopted the Bureau of Mines thermal conversion factor of 5.048 million Btu per barrel for “Gasoline, Aviation” as published by the Texas Eastern Transmission Corporation in Appendix V of *Competition and Growth in American Energy Markets 1947-1985*, a 1968 release of historical and projected statistics.

**Butane.** EIA adopted the Bureau of Mines thermal conversion factor of 4.326 million Btu per barrel as published in the *California Oil World and Petroleum Industry*, First Issue, April 1942.

**Butane-Propane Mixture.** EIA adopted the Bureau of Mines calculation of 4.130 million Btu per barrel based on an assumed mixture of 60 percent butane and 40 percent propane. See **Butane** and **Propane**.

**Crude Oil (Including Lease Condensate) Used Directly.** EIA adopted the thermal conversion factor of 5.800 million Btu per barrel as reported in a Bureau of Mines internal memorandum, “Bureau of Mines Standard Average Heating Value of Various Fuels, Adopted January 3, 1950.”

**Distillate Fuel Oil.** EIA adopted the thermal conversion factor of 5.825 million Btu per barrel as reported in a Bureau of Mines internal memorandum, “Bureau of Mines Standard Average Heating Value of Various Fuels, Adopted January 3, 1950.”

**Ethane.** EIA adopted the Bureau of Mines thermal conversion factor of 3.082 million Btu per barrel as published in the *California Oil World and Petroleum Industry*, First Issue, April 1942.

**Ethane-Propane Mixture.** EIA calculated 3.308 million Btu per barrel on the basis of an assumed mixture of 70 percent ethane and 30 percent propane. See **Ethane** and **Propane**.

**Isobutane.** EIA adopted the Bureau of Mines thermal conversion factor of 3.974 million Btu per barrel as published in the *California Oil World and Petroleum Industry*, First Issue, April 1942.

**Jet Fuel, Kerosene Type.** EIA adopted the Bureau of Mines thermal conversion factor of 5.670 million Btu per barrel for “Jet Fuel, Commercial” as published by the Texas Eastern Transmission Corporation in Appendix V of *Competition and Growth in American Energy Markets 1947-1985*, a 1968 release of historical and projected statistics.

**Jet Fuel, Naphtha Type.** EIA adopted the Bureau of Mines thermal conversion factor of 5.355 million Btu per barrel for “Jet Fuel, Military” as published by the Texas Eastern Transmission Corporation in Appendix V of *Competition and Growth in American Energy Markets 1947-1985*, a 1968 release of historical and projected statistics.

**Kerosene.** EIA adopted the thermal conversion factor of 5.670 million Btu per barrel as reported in a Bureau of Mines internal memorandum, “Bureau of Mines Standard Average Heating Values of Various Fuels, Adopted January 3, 1950.”

**Liquefied Petroleum Gases.** (LGTCCKUS) • 1960 through 1966: U.S. Department of the Interior, Bureau of Mines, *Mineral Industry Surveys*, “Crude Petroleum and Petroleum Products, 1956,” Table 4 footnote, constant value of 4.011 million Btu per barrel. • 1967 forward: Calculated annually

by EIA as a weighted average by multiplying the quantity consumed of each of the component products by each product's conversion factor, listed in this appendix, and dividing the sum of those heat contents by the sum of the quantities consumed. The component products are ethane (including ethylene), propane (including propylene), normal butane (including butylene), butane-propane mixtures, ethane-propane mixtures, and isobutane. Quantities consumed are from: 1967 through 1980: EIA, *Energy Data Reports*, "Petroleum Statement, Annual," Table 1. 1981 forward: EIA, *Petroleum Supply Annual*, Table 2.

**Lubricants.** EIA adopted the thermal conversion factor of 6.065 million Btu per barrel as estimated by the Bureau of Mines and first published in the *Petroleum Statement, Annual, 1956*.

**Miscellaneous Products.** EIA adopted the thermal conversion factor of 5.796 million Btu per barrel as estimated by the Bureau of Mines and first published in the *Petroleum Statement, Annual, 1956*.

**Motor Gasoline.** (MGTCCKUS) • 1960 through 1993: EIA adopted the Bureau of Mines thermal conversion factor of 5.253 million Btu per barrel for "Gasoline, Motor Fuel" as published by the Texas Eastern Transmission Corporation in Appendix V of *Competition and Growth in American Energy Markets 1947-1985*, a 1968 release of historical and projected statistics. • 1994 forward: EIA calculated national annual quantity-weighted average conversion factors for conventional, reformulated, and oxygenated motor gasolines (shown in appendix Table C1). The factor for conventional motor gasoline is 5.253 million Btu per barrel, as used for previous years. The factors for reformulated and oxygenated gasolines, both currently 5.150 million Btu per barrel, are based on data published in the Environmental Protection Agency, Office of Mobile Sources, National Vehicle and Fuel Emissions Laboratory report EPA 420-F-95-003, *Fuel Economy Impact Analysis of Reformulated Gasoline*.

**Natural Gasoline.** EIA adopted the thermal conversion factor of 4.620 million Btu per barrel as estimated by the Bureau of Mines and first published in the *Petroleum Statement, Annual, 1956*.

**Pentanes Plus.** EIA assumed the thermal conversion factor to be 4.620 million Btu per barrel, equal to that for natural gasoline. See **Natural Gasoline**.

**Petrochemical Feedstocks, Naphtha Less Than 401 °F.** EIA assumed the thermal conversion factor to be 5.248 million Btu per barrel, equal to that for special naphthas. See **Special Naphthas**.

**Petrochemical Feedstock, Other Oils Equal to or Greater Than 401 °F.** EIA assumed the thermal conversion factor to be 5.825 million Btu per barrel, equal to that for distillate fuel oil. See **Distillate Fuel Oil**.

**Petrochemical Feedstock, Still Gas.** Assumed by EIA to be 6.000 million Btu per barrel, equal to the thermal conversion factor for still gas. See **Still Gas**.

**Petroleum Coke.** EIA adopted the thermal conversion factor of 6.024 million Btu per barrel as reported in Btu per short ton in a Bureau of Mines internal memorandum, "Bureau of Mines Standard Average Heating Value of Various Fuels, Adopted January 3, 1950." The Bureau of Mines calculated this factor by dividing 30,120,000 Btu per short ton, as given in the referenced Bureau of Mines internal memorandum, by 5.0 barrels per short ton, as given in the Bureau of Mines Form 6-1300-M and successor EIA forms.

**Petroleum Products, Total Consumption.** Calculated annually by EIA as the average of the thermal conversion factors for all petroleum products consumed, weighted by the quantity of each petroleum product consumed.

**Plant Condensate.** EIA estimated 5.418 million Btu per barrel from data provided by McClanahan Consultants, Inc., Houston, Texas.

**Propane.** EIA adopted the thermal conversion factor of 3.836 million Btu per barrel as published in the *California Oil World and Petroleum Industry*, First Issue, April 1942.

**Residual Fuel Oil.** EIA adopted the thermal conversion factor of 6.287 million Btu per barrel as reported in a Bureau of Mines internal memorandum, "Bureau of Mines Standard Average Heating Values of Various Fuels, Adopted January 3, 1950."

**Road Oil.** EIA adopted the Bureau of Mines thermal conversion factor of 6.636 million Btu per barrel, equal to that of asphalt and first published by the Bureau of Mines in the *Petroleum Statement, Annual, 1970*. See **Asphalt**.

**Special Naphthas.** EIA adopted the Bureau of Mines thermal conversion factor of 5.248 million Btu per barrel, equal to that of total gasoline (aviation and motor) and first published in the *Petroleum Statement, Annual, 1970*.

**Still Gas.** EIA adopted the Bureau of Mines estimated thermal conversion factor of 6.000 million Btu per barrel and first published in the *Petroleum Statement, Annual, 1970*.

**Unfinished Oil.** EIA assumed the thermal conversion factor to be 5.825 million Btu per barrel, equal to that for distillate fuel oil and first published in the *Annual Report to Congress, Volume 3, 1977*. See **Distillate Fuel Oil**.

**Unfractionated Stream.** EIA assumed the thermal conversion factor to be 5.418 million Btu per barrel, equal to that for plant condensate and first published in the EIA, *Annual Report to Congress, Volume 2, 1981*. See **Plant Condensate**.

**Waxes.** EIA adopted the thermal conversion factor of 5.537 million Btu per barrel as estimated by the Bureau of Mines and first published in the EIA, *Petroleum Statement, Annual, 1956*.

### Approximate Heat Content of Natural Gas

**Natural Gas, Total Consumption.** (NGTCKZZ) • 1960 through 1962: EIA adopted the thermal conversion factor of 1,035 Btu per cubic foot as estimated by the Bureau of Mines and first published in the *Petroleum Statement, Annual, 1956*. • 1963 through 1979: EIA adopted the thermal conversion factors calculated annually by the American Gas Association (AGA) and published in *Gas Facts*, an AGA annual. • 1980 forward: EIA, *Historical Natural Gas Annual 1930 Through 1999*, Table 16. This report is available only via the Internet at <http://www.eia.doe.gov>. In the box titled “Search EIA by Google” type “Historical Natural Gas Annual 1930” and click the “Go” button. Select the report from the list.

**Natural Gas, Consumption by Electric Utilities.** (NGEUKZZ) • 1960 through 1971: Assumed by EIA to be equal to the thermal conversion factor for the consumption of natural gas by all users. See **Natural Gas, Total Consumption**. • 1972 through 1982: Calculated annually by EIA by dividing the total heat content of natural gas received at steam

electric plants 25 megawatts or greater by the total quantity received at those electric plants. The heat contents and quantities received are from the Federal Energy Regulatory Commission (FERC) Form 423, “Monthly Report of Cost and Quality of Fuels for Electric Plants.” • 1983 forward: The average heat content of natural gas received at steam electric plants 50 megawatts capacity or larger from FERC Form 423 and published from 1993 forward in Btu per cubic foot in the EIA, *Cost and Quality of Fuels for Electric Utility Plants*, Table 14. This report is available only via the Internet at <http://www.eia.doe.gov>. In the box titled “Search EIA by Google” type “Cost and Quality of Fuels for Electric” and click on the “Go” button. Select the report from the list.

**Natural Gas, Consumption by Sectors Other Than Electric Utilities.** (NGNUKZZ) • 1960 through 1972: Assumed by EIA to be equal to the thermal conversion factor for the consumption of natural gas. See **Natural Gas, Total Consumption**. • 1973 forward: Calculated annually by EIA by dividing the heat content of all natural gas consumed less the heat content of natural gas consumed at electric utilities by the quantity of all natural gas consumed less the quantity of electric utility consumption. Data are from FERC Form 423, Forms EIA-176 and EIA-759, and predecessor forms.

### Approximate Heat Content of Coal and Coal Coke

**Anthracite, Total Consumption.** Calculated annually by EIA by dividing the sum of the heat content of anthracite consumed by electric utilities and by all other sectors combined by the total quantity of anthracite consumed.

**Anthracite, Consumption by Electric Utilities.** (ACEUKUS) • 1960 through 1972: EIA assumed that all anthracite consumed at electric utilities was recovered from culm banks and river dredging and was estimated to have an average heat content of 17.500 million Btu per short ton. • 1973 forward: Calculated annually by EIA by dividing the heat content of anthracite received at electric utilities by the quantity of anthracite received at electric utilities, as reported on FERC Form 423 and predecessor forms.

**Anthracite, Consumption by Sectors Other Than Electric Utilities.** (ACNUKUS) Calculated annually by EIA by dividing the heat content of

anthracite produced less the heat content of the anthracite consumed at electric utilities, net exports, and shipments to U.S. Armed Forces overseas by the quantity of anthracite consumed by all sectors other than electric utilities less the quantity of anthracite stock changes, losses, and “unaccounted for.”

**Bituminous Coal and Lignite, Total Consumption.** Calculated annually by EIA by dividing the sum of the heat content of bituminous coal and lignite consumed by electric utilities, coal coke plants, other industrial plants, the residential and commercial sector, and the transportation sector by the sum of their respective tonnages.

**Bituminous Coal and Lignite, Consumption by Coke Plants.** Estimated by EIA to be 26.800 million Btu per short ton on the basis of an input-output analysis of coal carbonization.

**Bituminous Coal and Lignite, Consumption by Electric Utilities.** (BCEUKZZ) • 1960 through 1972: EIA adopted the average thermal conversion factor of the Bureau of Mines, which used the National Coal Association (NCA) average thermal conversion factor for electric utilities calculated from the Federal Power Commission’s (FPC) Form 1 and published in *Steam Electric Plant Factors*, an NCA annual report. • 1973 through 1982: The average heat content of coal received at steam electric plants 25 megawatts or greater from FERC Form 423 and published in Btu per pound in EIA, *Cost and Quality of Fuels for Electric Utility Plants*, “Destination and Origin of Coal ‘Delivered to’ (1973–1979) ‘Receipts to’ (1980) ‘Received at’ (1981–1982) Steam-Electric Plants 25–MW or Greater.” • 1983 forward: The average heat content of coal received at steam electric plants having 50 megawatts capacity or larger from FERC Form 423 and published in Btu per pound in EIA, *Cost and Quality of Fuels for Electric Utility Plants*. This report is available only via the Internet at <http://www.eia.doe.gov>. In the box titled “Search EIA by Google” type “Cost and Quality of Fuels for Electric” and click on the “Go” button. Select the report from the list.

Notes: • The State conversion factors for 1960 through 1972 were derived from actual consumption data, while the conversion factors for 1973 to the present were based on receipts of coal. The factors for 1960 through 1972 may also have included some quantities of anthracite. These breaks in the series create some data discrepancies. • Alaska and Hawaii were excluded from the NCA report, FPC Form 423 and FERC Form 423. However,

Alaska reported consumption of bituminous coal and lignite at electric utilities for all years. An FPC heat rate for coal at electric utilities in Alaska was used for 1960 through 1978 as published by EIA in *Federal Energy Data System (FEDS) Technical Documentation*, June 1978, Table 21. The 1972 conversion factor (the last year for which a conversion factor was reported for Alaska) was used for 1972 through 1978. According to industry sources, new mines were opened in 1978 and a more representative factor was used for 1979 and following years. • In instances where a State had no receipts for a particular year but did report consumption, it was assumed that the coal received in one year was consumed during the following year and the Btu value of the previous year’s receipts was used.

**Bituminous Coal and Lignite, Consumption by Other Industrial Users.** (BCKCKZZ) • 1960 through 1973: Estimated by EIA by adjusting the 1974 average heat value of bituminous coal and lignite consumed by industrial users other than coke plants by the ratios of 1960 through 1973 national averages for the other industrial users to its 1974 average. • 1974 forward: Calculated by EIA by assuming that the bituminous coal and lignite consumed by industrial users other than coke plants in each State contained heating values equal to those of bituminous coal and lignite received at electric utilities in each State from identified coal-producing districts as reported on FERC Form 423. The average Btu content of coal delivered from each coal-producing district was applied to deliveries to other industrial users in each State and the sum total of the heat content was divided by total tonnages, yielding a weighted average. The coal distribution data by coal-producing district are reported on Form EIA-6 and predecessor Bureau of Mines Form 6-1419-Q.

**Bituminous Coal and Lignite, Consumption by Residential and Commercial Users.** (BCHCKZZ) • 1960 through 1973: Estimated by EIA by adjusting the 1974 average heat value of bituminous coal and lignite consumed in the residential and commercial sector by the ratios of 1960 through 1973 national averages for the sector to its 1974 average. • 1974 forward: Calculated by EIA by assuming that the bituminous coal and lignite consumed in the residential and commercial sector in each State contained heating values equal to those of bituminous coal and lignite received at electric utilities in each State from identified coal-producing districts as reported on FERC Form 423. The average Btu content of coal delivered from each coal-producing district was applied to deliveries to the residential and commercial sector in each State and the sum total of the heat content was divided by total tonnages, yielding a weighted average. The coal

distribution data by coal-producing district are reported on Form EIA-6 and predecessor Bureau of Mines Form 6-1419-Q.

**Bituminous Coal and Lignite, Consumption by Transportation Users.** Assumed by EIA to be equal to the Btu conversion factor for bituminous coal and lignite consumption by other industrial users. See **Bituminous Coal and Lignite, Consumption by Other Industrial Users.**

**Coal Coke, Imports and Exports.** EIA adopted the Bureau of Mines estimate of 24.800 million Btu per short ton.

## Approximate Heat Content of Renewable Energy Sources

**Ethanol, Consumption by the Transportation Sector.** Fuel ethanol, which is derived from agricultural feedstocks (primarily corn) and blended into motor gasoline, is shown separately in *SEDR* to display the use of renewable energy in the transportation sector. Its gross heat content, calculated by EIA, is 3.539 million Btu per barrel.

**Wood, Consumption by the Residential and Commercial Sectors.** Estimated by EIA to be 20 million Btu per cord of wood. This rough average factor takes into account a number of variables, such as moisture content and species of wood, as explained in the EIA, *Household Energy Consumption and Expenditures 1993*, page 314.

## Approximate Heat Rates for Electricity

**Fossil-Fueled Steam-Electric Plant Generation.** (FFEOKUS) There is no generally accepted practice for measuring the thermal conversion rates for power plants that generate electricity from hydroelectric, biomass fuels, wind, photovoltaic, or solar thermal energy sources. Therefore, EIA uses data from Form EIA-767 to calculate a rate factor that is equal to the prevailing annual average heat rate factor for fossil-fueled steam-electric power plants in the United States. By using that factor, it is possible to evaluate fossil fuel requirements for replacing those sources during periods of interruption, such as droughts. The heat content of a kilowatthour of electricity produced, regardless of the generation process, is 3,412 Btu per kilowatthour. • 1960 through 1988: The weighted annual average heat rate for fossil-fueled steam-electric power plants in the United States, as published by EIA in *Electric Plant Cost and Power Production Expenses 1991*, Table 9. • 1989 forward: Calculated annually by EIA on the basis of data from Form EIA-767 “Steam-Electric Plant Operation and Design Report.”

**Geothermal Energy Plant Generation.** (GEEOKUS) • 1960 through 1981: Calculated by EIA by weighting the annual average heat rates of operating geothermal units by the installed nameplate capacities as reported on FPC Form 12. • 1982 forward: Estimated annually by EIA based on an informal survey of relevant plants.

**Nuclear Steam-Electric Plant Generation.** (NUEOKUS) • 1960 through 1991: Calculated annually by EIA by dividing the total heat content consumed in nuclear generating units by the total (net) electricity generated by nuclear generating units. The heat content and electricity generation data are reported on FERC Form 1, Form EIA-412, and predecessor forms. The factors for 1982 through 1991 are published in the following EIA reports—1982: *Historical Plant Cost and Annual Production Expenses for Selected Electric Plants 1982*, page 215; 1983 through 1991: *Electric Plant Cost and Power Production Expenses 1991*, Table 13. • 1992 forward: Calculated annually by EIA by dividing the total heat content of the steam leaving nuclear generating units to generate electricity by the total (net) electricity generated by nuclear generating units. The heat content and electricity generation data are reported in the Nuclear Regulatory Commission, *Licensed Operating Reactors—Status Summary Report*.

## Appendix D

**Resident Population**

The population data used in the Energy Information Administration Combined State Energy Data System (CSEDS) to calculate per capita consumption are shown in Tables D1 and D2. The data are the U.S. Department of Commerce, Bureau of the Census, census of resident population by State conducted every 10 years with estimates of population for intervening years.

**Data Sources**

TPOPPUS — Resident population of the United States. April 1 census for 1960, 1970, 1980, and 1990, and July 1 estimates for all other years.

- 1960 through 1989: U.S. Department of Commerce, Bureau of the Census, *Current Population Reports*, “Population Estimates and Projections,” Series P-25. Specific publication numbers and table numbers:
  - 1960 through 1969: Number 990, Table 4.
  - 1970 through 1979: Number 957, Table 4.
  - 1980 through 1989: Number 1058, Table 3.

- 1990 forward: U.S. Department of Commerce, Bureau of the Census, Internet Release ST-99-3, December 29, 1999. <http://www.census.gov/population/www/estimates/statepop.html>, select “Annual Time Series.”

TPOPPZZ — Resident population by State. April 1 census for 1960, 1970, 1980, and 1990, and July 1 estimates for all other years.

- 1960 through 1989: U.S. Department of Commerce, Bureau of the Census, *Current Population Reports*, “Population Estimates and Projections,” Series P-25. Specific publication numbers and table numbers:
  - 1960 through 1969: Number 460, Table 1.
  - 1970 through 1979: Number 957, Table 4.
  - 1980 through 1989: Number 1058, Table 3.
- 1990 forward: U.S. Department of Commerce, Bureau of the Census, Internet Release ST-99-3, December 29, 1999. <http://www.census.gov/population/www/estimates/statepop.html>, select “Annual Time Series.”

**Table D1. Resident Population by State, 1960-1969**  
(Thousand People)

State	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969
Alabama	3,267.000	3,316.000	3,323.000	3,358.000	3,395.000	3,443.000	3,464.000	3,458.000	3,446.000	3,440.000
Alaska	226.000	238.000	246.000	256.000	263.000	271.000	271.000	278.000	285.000	296.000
Arizona	1,302.000	1,407.000	1,471.000	1,521.000	1,556.000	1,584.000	1,614.000	1,646.000	1,682.000	1,737.000
Arkansas	1,786.000	1,806.000	1,853.000	1,875.000	1,897.000	1,894.000	1,899.000	1,901.000	1,902.000	1,913.000
California	15,717.000	16,497.000	17,072.000	17,668.000	18,151.000	18,585.000	18,858.000	19,176.000	19,394.000	19,711.000
Colorado	1,754.000	1,844.000	1,899.000	1,936.000	1,970.000	1,985.000	2,007.000	2,053.000	2,120.000	2,166.000
Connecticut	2,535.000	2,586.000	2,647.000	2,727.000	2,798.000	2,857.000	2,903.000	2,935.000	2,964.000	3,000.000
Delaware	446.000	461.000	469.000	483.000	497.000	507.000	516.000	525.000	534.000	540.000
District of Columbia	764.000	778.000	788.000	798.000	798.000	797.000	791.000	791.000	778.000	762.000
Florida	4,952.000	5,243.000	5,458.000	5,628.000	5,781.000	5,954.000	6,104.000	6,242.000	6,433.000	6,641.000
Georgia	3,943.000	4,015.000	4,086.000	4,172.000	4,258.000	4,332.000	4,379.000	4,408.000	4,482.000	4,551.000
Hawaii	633.000	659.000	684.000	682.000	700.000	704.000	710.000	723.000	734.000	750.000
Idaho	667.000	684.000	692.000	683.000	680.000	686.000	689.000	688.000	695.000	707.000
Illinois	10,081.000	10,130.000	10,280.000	10,402.000	10,580.000	10,693.000	10,836.000	10,947.000	10,995.000	11,039.000
Indiana	4,662.000	4,730.000	4,736.000	4,799.000	4,856.000	4,922.000	4,999.000	5,053.000	5,093.000	5,143.000
Iowa	2,758.000	2,756.000	2,750.000	2,747.000	2,746.000	2,742.000	2,762.000	2,793.000	2,803.000	2,805.000
Kansas	2,179.000	2,215.000	2,231.000	2,217.000	2,209.000	2,206.000	2,200.000	2,197.000	2,216.000	2,236.000
Kentucky	3,038.000	3,054.000	3,079.000	3,096.000	3,129.000	3,140.000	3,147.000	3,172.000	3,195.000	3,198.000
Louisiana	3,257.000	3,287.000	3,345.000	3,377.000	3,446.000	3,496.000	3,550.000	3,581.000	3,603.000	3,619.000
Maine	969.000	995.000	994.000	993.000	993.000	997.000	999.000	1,004.000	994.000	992.000
Maryland	3,101.000	3,176.000	3,263.000	3,386.000	3,492.000	3,600.000	3,695.000	3,757.000	3,815.000	3,868.000
Massachusetts	5,149.000	5,219.000	5,263.000	5,344.000	5,448.000	5,502.000	5,535.000	5,594.000	5,618.000	5,650.000
Michigan	7,823.000	7,893.000	7,933.000	8,058.000	8,187.000	8,357.000	8,512.000	8,630.000	8,696.000	8,781.000
Minnesota	3,414.000	3,470.000	3,513.000	3,531.000	3,558.000	3,592.000	3,617.000	3,659.000	3,703.000	3,758.000
Mississippi	2,178.000	2,206.000	2,243.000	2,244.000	2,241.000	2,246.000	2,245.000	2,228.000	2,219.000	2,220.000
Missouri	4,320.000	4,349.000	4,357.000	4,392.000	4,442.000	4,467.000	4,523.000	4,539.000	4,568.000	4,640.000
Montana	675.000	696.000	698.000	703.000	706.000	706.000	707.000	701.000	700.000	694.000
Nebraska	1,411.000	1,446.000	1,464.000	1,476.000	1,482.000	1,471.000	1,456.000	1,457.000	1,467.000	1,474.000
Nevada	285.000	315.000	352.000	397.000	426.000	444.000	446.000	449.000	464.000	480.000
New Hampshire	607.000	618.000	632.000	649.000	663.000	676.000	681.000	697.000	709.000	724.000
New Jersey	6,067.000	6,265.000	6,376.000	6,531.000	6,660.000	6,767.000	6,851.000	6,928.000	7,005.000	7,095.000
New Mexico	951.000	965.000	979.000	989.000	1,006.000	1,012.000	1,007.000	1,000.000	994.000	1,011.000
New York	16,782.000	17,061.000	17,301.000	17,461.000	17,589.000	17,734.000	17,843.000	17,935.000	18,051.000	18,105.000
North Carolina	4,556.000	4,663.000	4,707.000	4,742.000	4,802.000	4,863.000	4,896.000	4,952.000	5,004.000	5,031.000
North Dakota	632.000	641.000	637.000	644.000	649.000	649.000	647.000	626.000	621.000	621.000
Ohio	9,706.000	9,854.000	9,929.000	9,986.000	10,080.000	10,201.000	10,330.000	10,414.000	10,516.000	10,563.000
Oklahoma	2,328.000	2,380.000	2,427.000	2,439.000	2,446.000	2,440.000	2,454.000	2,489.000	2,503.000	2,535.000
Oregon	1,769.000	1,787.000	1,818.000	1,853.000	1,888.000	1,937.000	1,969.000	1,979.000	2,004.000	2,062.000
Pennsylvania	11,319.000	11,392.000	11,355.000	11,424.000	11,519.000	11,620.000	11,664.000	11,681.000	11,741.000	11,741.000
Rhode Island	859.000	858.000	871.000	876.000	885.000	893.000	899.000	909.000	922.000	932.000
South Carolina	2,383.000	2,409.000	2,423.000	2,460.000	2,475.000	2,494.000	2,520.000	2,533.000	2,559.000	2,570.000
South Dakota	681.000	693.000	705.000	708.000	701.000	692.000	683.000	671.000	669.000	668.000
Tennessee	3,567.000	3,622.000	3,673.000	3,718.000	3,771.000	3,798.000	3,822.000	3,859.000	3,878.000	3,897.000
Texas	9,580.000	9,820.000	10,053.000	10,159.000	10,270.000	10,378.000	10,492.000	10,599.000	10,819.000	11,045.000
Utah	891.000	936.000	958.000	974.000	978.000	991.000	1,009.000	1,019.000	1,029.000	1,047.000
Vermont	390.000	390.000	393.000	397.000	399.000	404.000	413.000	423.000	430.000	437.000
Virginia	3,967.000	4,095.000	4,180.000	4,276.000	4,357.000	4,411.000	4,456.000	4,508.000	4,558.000	4,614.000
Washington	2,853.000	2,882.000	2,942.000	2,955.000	2,961.000	2,967.000	3,057.000	3,174.000	3,270.000	3,343.000
West Virginia	1,860.000	1,828.000	1,809.000	1,796.000	1,797.000	1,786.000	1,775.000	1,769.000	1,763.000	1,746.000
Wisconsin	3,952.000	4,009.000	4,049.000	4,112.000	4,165.000	4,232.000	4,274.000	4,303.000	4,345.000	4,378.000
Wyoming	330.000	337.000	333.000	336.000	339.000	332.000	323.000	322.000	324.000	329.000
U.S. Total	179,323.000	182,973.000	185,738.000	188,438.000	191,085.000	193,460.000	195,501.000	197,374.000	199,312.000	201,306.000

Source: See first page of this appendix.

**Table D2. Resident Population by State, 1970-1979**  
(Thousand People)

State	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
Alabama	3,444.354	3,497.076	3,539.400	3,579.780	3,626.499	3,678.814	3,735.139	3,780.403	3,831.836	3,866.248
Alaska	302.583	315.510	324.464	330.543	341.063	376.170	400.969	403.436	404.766	402.753
Arizona	1,775.399	1,895.814	2,008.291	2,124.438	2,223.196	2,284.847	2,346.157	2,425.197	2,515.316	2,635.571
Arkansas	1,923.322	1,972.312	2,018.638	2,059.256	2,101.403	2,159.526	2,170.161	2,209.010	2,243.127	2,271.333
California	19,971.069	20,345.939	20,585.469	20,868.728	21,173.865	21,537.849	21,935.909	22,352.396	22,835.958	23,256.880
Colorado	2,209.596	2,303.524	2,404.619	2,495.868	2,541.406	2,586.192	2,632.306	2,696.140	2,766.748	2,849.234
Connecticut	3,032.217	3,060.938	3,068.699	3,067.814	3,074.047	3,082.500	3,083.335	3,085.722	3,091.627	3,095.917
Delaware	548.104	564.708	572.913	577.759	581.418	586.589	590.166	591.829	594.776	594.984
District of Columbia	756.668	749.781	742.241	731.488	717.947	706.871	692.295	677.228	665.052	650.016
Florida	6,791.418	7,158.304	7,511.463	7,913.696	8,298.762	8,518.422	8,667.379	8,856.183	9,102.032	9,426.159
Georgia	4,587.930	4,711.550	4,809.490	4,910.374	4,999.419	5,064.075	5,132.812	5,219.697	5,295.751	5,401.384
Hawaii	769.913	801.644	828.331	851.595	867.978	886.160	904.191	918.259	931.584	953.306
Idaho	713.015	738.753	763.237	782.074	807.990	831.982	856.983	883.469	910.690	932.627
Illinois	11,110.285	11,202.397	11,251.948	11,251.367	11,262.145	11,291.743	11,342.853	11,386.316	11,412.561	11,396.837
Indiana	5,195.392	5,253.396	5,302.435	5,338.277	5,361.890	5,365.766	5,389.088	5,425.638	5,470.214	5,501.174
Iowa	2,825.368	2,851.705	2,860.287	2,863.715	2,867.530	2,880.847	2,903.082	2,913.573	2,918.069	2,915.739
Kansas	2,249.071	2,246.600	2,256.375	2,265.603	2,269.499	2,280.578	2,301.001	2,320.647	2,335.657	2,350.906
Kentucky	3,220.711	3,298.053	3,335.728	3,371.024	3,416.315	3,467.769	3,529.257	3,573.693	3,609.976	3,641.804
Louisiana	3,644.637	3,710.487	3,761.646	3,788.375	3,820.109	3,886.104	3,950.605	4,014.459	4,068.579	4,137.665
Maine	993.722	1,015.390	1,034.292	1,045.655	1,059.040	1,071.995	1,088.412	1,103.578	1,113.566	1,122.563
Maryland	3,923.897	4,018.324	4,073.499	4,097.974	4,118.815	4,139.096	4,150.539	4,169.595	4,183.603	4,191.160
Massachusetts	5,689.170	5,737.580	5,760.302	5,781.172	5,773.548	5,757.756	5,743.672	5,738.199	5,736.469	5,738.404
Michigan	8,881.826	8,974.186	9,028.944	9,077.956	9,117.507	9,129.205	9,129.205	9,171.110	9,217.761	9,266.268
Minnesota	3,806.103	3,853.486	3,869.747	3,889.332	3,903.925	3,932.515	3,964.680	3,989.364	4,015.341	4,050.316
Mississippi	2,216.994	2,265.432	2,307.117	2,349.546	2,378.268	2,399.449	2,429.756	2,459.201	2,487.816	2,507.069
Missouri	4,677.623	4,725.764	4,758.780	4,782.645	4,795.930	4,808.308	4,839.029	4,863.173	4,889.399	4,912.430
Montana	694.409	710.814	718.732	726.798	736.419	748.208	757.317	769.953	782.317	787.305
Nebraska	1,485.333	1,504.604	1,519.013	1,529.567	1,539.191	1,543.117	1,550.911	1,556.842	1,563.884	1,567.344
Nevada	488.738	520.018	546.789	568.991	596.822	619.972	646.975	678.333	719.436	765.367
New Hampshire	737.681	761.851	781.107	800.951	815.914	828.555	845.248	869.763	891.520	909.074
New Jersey	7,171.112	7,281.107	7,335.042	7,333.083	7,332.411	7,337.765	7,339.745	7,337.169	7,350.804	7,366.512
New Mexico	1,017.055	1,053.737	1,078.697	1,105.529	1,131.309	1,159.944	1,189.295	1,215.720	1,238.034	1,284.722
New York	18,241.391	18,357.982	18,339.400	18,177.063	18,049.775	18,003.485	17,940.541	17,812.602	17,680.589	17,583.838
North Carolina	5,084.411	5,203.531	5,301.150	5,389.852	5,470.911	5,547.188	5,607.964	5,685.607	5,759.492	5,823.491
North Dakota	617.792	626.760	631.119	632.675	634.559	638.886	645.797	649.769	651.301	652.896
Ohio	10,657.423	10,734.818	10,746.993	10,767.314	10,765.759	10,770.425	10,752.662	10,771.394	10,795.581	10,798.298
Oklahoma	2,559.463	2,618.601	2,658.646	2,695.931	2,734.768	2,774.683	2,826.815	2,870.014	2,917.336	2,975.310
Oregon	2,091.533	2,151.022	2,197.297	2,241.932	2,285.013	2,329.661	2,378.262	2,446.673	2,518.298	2,588.012
Pennsylvania	11,800.766	11,886.400	11,908.233	11,890.527	11,870.884	11,906.095	11,897.378	11,893.591	11,879.396	11,887.975
Rhode Island	949.723	963.107	974.790	975.738	950.615	942.788	946.089	950.230	951.816	950.382
South Carolina	2,590.713	2,662.269	2,719.197	2,776.605	2,844.749	2,902.028	2,943.657	2,991.681	3,044.364	3,090.267
South Dakota	666.257	671.297	677.234	678.715	679.585	681.042	686.390	688.480	688.580	688.335
Tennessee	3,926.018	4,013.608	4,094.611	4,147.401	4,213.509	4,275.566	4,346.928	4,422.921	4,486.314	4,560.473
Texas	11,198.655	11,509.848	11,759.148	12,019.543	12,268.629	12,568.843	12,904.089	13,193.050	13,500.429	13,888.371
Utah	1,059.273	1,101.192	1,135.449	1,170.040	1,200.471	1,236.030	1,274.928	1,319.512	1,367.510	1,420.238
Vermont	444.732	454.318	463.143	468.430	473.002	479.713	484.928	491.931	498.109	505.372
Virginia	4,651.448	4,750.838	4,824.472	4,901.292	4,971.069	5,047.395	5,121.863	5,193.112	5,270.240	5,307.945
Washington	3,413.244	3,447.553	3,447.885	3,478.782	3,549.946	3,621.339	3,693.610	3,776.050	3,889.073	4,017.632
West Virginia	1,744.237	1,770.657	1,797.648	1,806.360	1,815.447	1,842.250	1,879.503	1,908.088	1,923.395	1,942.146
Wisconsin	4,417.821	4,462.155	4,502.412	4,524.244	4,545.782	4,578.986	4,595.904	4,626.514	4,646.108	4,682.811
Wyoming	332.416	340.285	347.345	354.061	365.501	381.695	396.952	413.354	432.880	454.378
U.S. Total	203,302.031	206,827.026	209,283.905	211,357.481	213,341.554	215,465.255	217,562.735	219,759.869	222,095.080	224,567.241

Source: See first page of this appendix.



**Table D3. Resident Population by State, 1980-1989**  
(Thousand People)

State	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Alabama	3,893.888	3,918.531	3,925.266	3,934.102	3,951.820	3,972.523	3,991.569	4,015.264	4,023.844	4,030.222
Alaska	401.851	418.491	449.606	488.417	513.702	532.495	544.268	539.309	541.983	547.159
Arizona	2,718.215	2,810.107	2,889.861	2,968.925	3,067.135	3,183.538	3,308.262	3,437.103	3,535.183	3,622.185
Arkansas	2,286.435	2,293.201	2,294.257	2,305.761	2,319.768	2,327.046	2,331.984	2,342.355	2,342.656	2,346.358
California	23,667.902	24,285.933	24,820.009	25,360.026	25,844.393	26,441.109	27,102.237	27,777.158	28,464.249	29,218.164
Colorado	2,889.964	2,977.898	3,061.564	3,133.630	3,169.992	3,208.723	3,237.450	3,260.480	3,262.281	3,275.818
Connecticut	3,107.576	3,128.836	3,139.013	3,162.354	3,180.014	3,201.131	3,223.740	3,247.291	3,271.953	3,283.403
Delaware	594.338	595.975	599.148	605.458	611.565	618.280	627.559	636.947	647.622	658.273
District of Columbia	638.333	636.893	634.174	632.433	633.382	634.549	638.269	636.930	630.432	624.168
Florida	9,746.324	10,192.774	10,471.407	10,749.851	11,039.925	11,351.118	11,667.505	11,997.283	12,306.395	12,637.715
Georgia	5,463.105	5,568.345	5,649.792	5,728.250	5,834.954	5,962.661	6,084.666	6,208.467	6,316.142	6,411.099
Hawaii	964.691	978.195	993.780	1,012.717	1,027.922	1,039.698	1,051.762	1,067.918	1,079.828	1,094.588
Idaho	943.935	962.204	973.721	981.869	990.839	994.051	990.224	984.997	985.664	994.416
Illinois	11,426.518	11,443.458	11,423.412	11,408.818	11,412.132	11,399.806	11,387.257	11,391.178	11,390.183	11,409.782
Indiana	5,490.224	5,480.435	5,467.922	5,450.395	5,458.322	5,459.211	5,454.108	5,473.012	5,491.735	5,523.693
Iowa	2,913.808	2,907.983	2,888.189	2,870.543	2,858.618	2,829.684	2,791.970	2,767.011	2,768.388	2,770.592
Kansas	2,363.679	2,384.849	2,401.202	2,415.531	2,424.086	2,427.405	2,432.619	2,445.367	2,461.996	2,472.849
Kentucky	3,660.777	3,670.394	3,683.445	3,694.484	3,695.453	3,694.826	3,687.809	3,683.329	3,679.999	3,677.306
Louisiana	4,205.900	4,283.303	4,352.608	4,395.316	4,400.477	4,408.118	4,406.919	4,344.148	4,288.863	4,252.894
Maine	1,124.660	1,133.033	1,136.684	1,144.772	1,155.635	1,162.936	1,170.126	1,184.574	1,203.840	1,219.961
Maryland	4,216.975	4,261.905	4,282.923	4,313.327	4,365.243	4,413.071	4,486.957	4,565.557	4,657.904	4,727.301
Massachusetts	5,737.037	5,768.685	5,771.222	5,799.407	5,840.773	5,880.733	5,902.678	5,935.204	5,979.982	6,015.478
Michigan	9,262.078	9,209.287	9,115.198	9,047.754	9,049.452	9,072.793	9,127.775	9,187.481	9,217.998	9,253.295
Minnesota	4,075.970	4,111.728	4,131.450	4,141.456	4,157.706	4,184.302	4,205.212	4,235.136	4,296.166	4,338.057
Mississippi	2,520.638	2,539.036	2,556.777	2,567.717	2,578.051	2,588.102	2,593.597	2,588.545	2,580.352	2,574.269
Missouri	4,916.686	4,932.064	4,929.451	4,943.733	4,975.278	5,000.268	5,023.068	5,056.696	5,081.736	5,095.830
Montana	786.690	795.328	803.986	814.031	820.905	822.320	813.739	805.063	800.202	799.636
Nebraska	1,569.825	1,578.515	1,581.780	1,584.293	1,584.664	1,584.664	1,574.333	1,566.547	1,571.477	1,574.864
Nevada	800.493	847.655	881.537	901.977	924.922	951.030	980.613	1,023.376	1,075.022	1,137.382
New Hampshire	920.610	936.621	947.719	958.134	976.864	996.753	1,025.053	1,054.289	1,082.577	1,104.522
New Jersey	7,364.823	7,407.472	7,430.968	7,467.785	7,515.473	7,565.528	7,622.159	7,670.742	7,712.333	7,726.089
New Mexico	1,302.894	1,332.748	1,363.823	1,394.361	1,416.717	1,438.361	1,462.729	1,478.520	1,490.337	1,503.901
New York	17,558.072	17,567.734	17,589.738	17,686.905	17,745.684	17,791.672	17,833.419	17,868.848	17,941.309	17,983.086
North Carolina	5,881.766	5,956.653	6,019.101	6,077.056	6,164.006	6,253.954	6,321.578	6,403.700	6,480.594	6,565.459
North Dakota	652.717	659.505	668.972	676.688	680.497	676.980	669.512	661.136	655.331	646.351
Ohio	10,797.630	10,788.330	10,757.087	10,737.632	10,737.746	10,734.926	10,730.268	10,760.090	10,798.552	10,829.217
Oklahoma	3,025.290	3,096.164	3,206.123	3,290.402	3,285.533	3,271.332	3,252.735	3,210.122	3,167.057	3,150.307
Oregon	2,633.105	2,667.982	2,664.922	2,653.066	2,666.588	2,672.652	2,683.528	2,700.991	2,741.297	2,790.575
Pennsylvania	11,863.895	11,858.567	11,845.146	11,837.723	11,815.172	11,770.862	11,782.752	11,810.866	11,845.752	11,865.996
Rhode Island	947.154	953.013	954.170	956.382	961.894	968.955	977.341	989.604	996.408	1,000.666
South Carolina	3,121.820	3,179.255	3,207.614	3,234.066	3,271.868	3,303.209	3,342.758	3,380.506	3,412.096	3,456.775
South Dakota	690.768	689.584	690.597	693.008	697.249	698.402	696.034	696.036	698.165	696.701
Tennessee	4,591.120	4,627.658	4,646.041	4,659.749	4,686.737	4,715.296	4,738.708	4,782.927	4,822.437	4,854.444
Texas	14,229.191	14,746.318	15,331.415	15,751.676	16,007.086	16,272.734	16,561.113	16,621.791	16,667.022	16,806.735
Utah	1,461.037	1,515.471	1,558.314	1,594.943	1,622.342	1,642.910	1,662.834	1,678.119	1,689.372	1,705.864
Vermont	511.456	515.594	519.109	523.302	526.660	530.035	534.066	540.267	549.763	557.707
Virginia	5,346.818	5,444.097	5,492.783	5,564.657	5,643.870	5,715.153	5,811.700	5,932.268	6,036.909	6,120.246
Washington	4,132.156	4,235.731	4,276.552	4,300.266	4,343.656	4,400.098	4,452.720	4,531.901	4,639.893	4,746.316
West Virginia	1,949.644	1,954.124	1,949.604	1,945.061	1,927.697	1,906.831	1,882.350	1,857.585	1,830.215	1,806.568
Wisconsin	4,705.767	4,726.343	4,728.870	4,721.438	4,735.563	4,747.767	4,755.618	4,777.919	4,822.388	4,856.574
Wyoming	469.557	491.712	506.400	510.345	504.896	499.695	495.633	476.965	465.101	458.374
U.S. Total	226,545.805	229,465.714	231,664.458	233,791.994	235,824.902	237,923.795	240,132.887	242,288.918	244,498.982	246,819.230

Source: See first page of this appendix.

**Table D4. Resident Population by State, 1990-1999**  
(Thousand People)

State	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Alabama	R 4,040.587	R 4,091.025	R 4,139.269	R 4,193.114	R 4,232.965	R 4,262.731	R 4,290.403	R 4,320.281	4,351.037	4,369.862
Alaska	550.043	R 569.273	R 587.073	R 596.993	R 600.624	R 601.345	R 604.918	R 608.846	615.205	619.500
Arizona	R 3,665.228	R 3,762.394	R 3,867.333	R 3,993.390	R 4,147.561	R 4,306.908	R 4,432.308	R 4,552.207	4,667.277	4,778.332
Arkansas	R 2,350.725	R 2,370.666	R 2,394.098	R 2,423.743	R 2,450.605	R 2,480.121	R 2,504.858	R 2,524.007	2,538.202	2,551.373
California	R 29,760.021	R 30,414.114	R 30,875.920	R 31,147.208	R 31,317.179	R 31,493.525	R 31,780.829	R 32,217.708	32,682.794	33,145.121
Colorado	R 3,294.394	R 3,367.567	R 3,459.995	R 3,560.884	R 3,653.910	R 3,738.061	R 3,812.716	R 3,891.293	3,968.967	4,056.133
Connecticut	3,287.116	R 3,288.640	R 3,274.997	R 3,272.325	R 3,268.346	R 3,265.293	R 3,267.030	R 3,268.514	3,272.563	3,282.031
Delaware	666.168	R 680.495	R 690.158	R 699.475	R 708.416	R 718.265	R 727.090	R 735.024	744.066	753.538
District of Columbia	606.900	R 593.239	R 584.183	R 576.358	R 564.982	R 551.273	R 538.273	R 528.752	521.426	519.000
Florida	R 12,937.926	R 13,289.497	R 13,504.775	R 13,713.593	R 13,961.798	R 14,185.403	R 14,426.911	R 14,683.350	14,908.230	15,111.244
Georgia	R 6,478.216	R 6,621.279	R 6,759.474	R 6,894.092	R 7,045.900	R 7,188.538	R 7,332.225	R 7,486.094	7,636.522	7,788.240
Hawaii	1,108.229	R 1,131.412	R 1,149.926	R 1,161.508	R 1,173.903	R 1,180.490	R 1,184.434	R 1,189.322	1,190.472	1,185.497
Idaho	R 1,006.749	R 1,038.915	R 1,066.490	R 1,101.204	R 1,135.459	R 1,165.000	R 1,187.706	R 1,210.638	1,230.923	1,251.700
Illinois	11,430.602	R 11,535.973	R 11,635.197	R 11,725.984	R 11,804.986	R 11,884.935	R 11,953.003	R 12,011.509	12,069.774	12,128.370
Indiana	R 5,544.159	R 5,602.062	R 5,648.649	R 5,701.965	R 5,745.626	R 5,791.819	R 5,834.908	R 5,872.370	5,907.617	5,942.901
Iowa	R 2,776.755	R 2,791.227	R 2,806.923	R 2,820.525	R 2,829.427	R 2,840.860	R 2,848.473	R 2,854.396	2,861.025	2,869.413
Kansas	R 2,477.574	R 2,495.209	R 2,526.042	R 2,547.605	R 2,569.118	R 2,586.942	R 2,598.266	R 2,616.339	2,638.667	2,654.052
Kentucky	R 3,685.296	R 3,714.686	R 3,756.358	R 3,792.288	R 3,823.215	R 3,855.248	R 3,881.051	R 3,907.816	3,934.310	3,960.825
Louisiana	R 4,219.973	R 4,240.950	R 4,284.749	R 4,328.500	R 4,367.978	R 4,407.500	R 4,447.028	R 4,486.556	4,526.084	4,565.612
Maine	1,227.928	R 1,235.439	R 1,235.748	R 1,238.256	R 1,237.687	R 1,237.438	R 1,241.436	R 1,245.215	1,247.554	1,253.040
Maryland	R 4,781.468	R 4,856.176	R 4,902.545	R 4,942.504	R 4,985.411	R 5,023.650	R 5,057.142	R 5,092.914	5,130.072	5,171.634
Massachusetts	6,016.425	R 5,998.652	R 5,993.474	R 6,010.884	R 6,031.352	R 6,062.335	R 6,085.393	R 6,115.476	6,144.407	6,175.169
Michigan	R 9,295.297	R 9,395.022	R 9,470.323	R 9,529.240	R 9,584.481	R 9,659.871	R 9,739.184	R 9,785.450	9,820.231	9,863.775
Minnesota	R 4,375.099	R 4,427.429	R 4,471.503	R 4,521.709	R 4,566.028	R 4,605.445	R 4,647.723	R 4,687.726	4,726.411	4,775.508
Mississippi	R 2,573.216	R 2,591.230	R 2,610.193	R 2,635.574	R 2,660.788	R 2,690.925	R 2,709.925	R 2,731.826	2,751.335	2,768.619
Missouri	R 5,117.073	R 5,157.770	R 5,193.686	R 5,237.757	R 5,281.206	R 5,324.610	R 5,367.888	R 5,407.113	5,437.562	5,468.338
Montana	799.065	R 807.837	R 822.436	R 839.876	R 854.923	R 868.522	R 876.656	R 878.706	879.533	882.779
Nebraska	R 1,578.385	R 1,590.805	R 1,602.406	R 1,612.149	R 1,621.551	R 1,631.442	R 1,641.657	R 1,656.042	1,660.772	1,666.028
Nevada	R 1,201.833	R 1,285.046	R 1,330.694	R 1,380.197	R 1,456.388	R 1,525.777	R 1,596.476	R 1,675.581	1,743.772	1,809.253
New Hampshire	1,109.252	R 1,107.055	R 1,112.766	R 1,122.191	R 1,133.054	R 1,145.604	R 1,160.768	R 1,173.239	1,185.823	1,201.134
New Jersey	R 7,730.188	R 7,784.269	R 7,827.770	R 7,874.891	R 7,918.796	R 7,965.523	R 8,009.624	R 8,054.178	8,095.542	8,143.412
New Mexico	1,515.069	R 1,547.115	R 1,580.750	R 1,614.937	R 1,653.329	R 1,682.417	R 1,706.151	R 1,722.939	1,733.535	1,739.844
New York	R 17,990.455	R 18,029.532	R 18,082.032	R 18,140.894	R 18,156.652	R 18,150.928	R 18,143.805	R 18,143.184	18,159.175	18,196.601
North Carolina	R 6,628.637	R 6,748.135	R 6,831.850	R 6,947.412	R 7,060.959	R 7,185.403	R 7,307.658	R 7,428.672	7,545.828	7,650.789
North Dakota	638.800	R 634.199	R 635.427	R 637.229	R 639.762	R 641.548	R 642.858	R 640.945	637.808	633.666
Ohio	10,847.115	R 10,933.683	R 11,007.609	R 11,070.385	R 11,111.451	R 11,155.493	R 11,187.032	R 11,212.498	11,237.752	11,256.654
Oklahoma	R 3,145.585	R 3,166.471	R 3,204.174	R 3,228.829	R 3,246.119	R 3,265.547	R 3,289.634	R 3,314.259	3,339.478	3,358.044
Oregon	R 2,842.321	R 2,918.745	R 2,973.934	R 3,034.490	R 3,087.142	R 3,141.421	R 3,195.087	R 3,243.254	3,282.055	3,316.154
Pennsylvania	R 11,881.643	R 11,943.160	R 11,980.819	R 12,022.128	R 12,042.545	R 12,044.780	R 12,038.008	R 12,015.888	12,002.329	11,994.016
Rhode Island	1,003.464	R 1,003.990	R 1,000.571	R 997.852	R 993.412	R 989.203	R 987.858	R 986.966	987.704	990.819
South Carolina	R 3,486.703	R 3,559.470	R 3,600.576	R 3,634.507	R 3,666.456	R 3,699.943	R 3,738.974	R 3,790.066	3,839.578	3,885.736
South Dakota	696.004	R 701.445	R 708.698	R 716.258	R 723.038	R 728.251	R 730.699	R 730.855	730.789	733.133
Tennessee	R 4,877.185	R 4,946.886	R 5,013.999	R 5,085.666	R 5,163.016	R 5,241.168	R 5,313.576	R 5,378.433	5,432.679	5,483.535
Texas	R 16,986.510	R 17,339.904	R 17,650.479	R 17,996.764	R 18,338.319	R 18,679.706	R 19,006.240	R 19,355.427	19,712.389	20,044.141
Utah	1,722.850	R 1,771.941	R 1,821.498	R 1,875.993	R 1,930.436	R 1,976.774	R 2,022.253	R 2,065.397	2,100.562	2,129.836
Vermont	562.758	R 567.141	R 570.115	R 574.004	R 578.900	R 582.827	R 586.352	R 588.665	590.579	593.740
Virginia	R 6,187.358	R 6,283.853	R 6,383.315	R 6,464.795	R 6,536.771	R 6,601.392	R 6,665.491	R 6,732.878	6,789.225	6,872.912
Washington	R 4,866.692	R 5,013.443	R 5,139.011	R 5,247.704	R 5,334.896	R 5,431.024	R 5,509.963	R 5,604.105	5,687.832	5,756.361
West Virginia	1,793.477	R 1,798.212	R 1,805.462	R 1,816.179	R 1,818.490	R 1,820.560	R 1,818.588	R 1,815.588	1,811.688	1,806.928
Wisconsin	4,891.769	R 4,952.675	R 5,004.636	R 5,055.318	R 5,095.504	R 5,137.004	R 5,173.828	R 5,200.235	5,222.124	5,250.446
Wyoming	R 453.588	R 457.739	R 463.491	R 469.033	R 474.982	R 478.447	R 480.085	R 480.031	480.045	479.602
U.S. Total	R 248,709.873	R 252,153.092	R 255,029.699	R 257,782.608	R 260,327.021	R 262,803.276	R 265,228.572	R 267,783.607	270,248.003	272,690.813

Source: See first page of this appendix.



## Appendix E

**Metric and Other Physical Conversion Factors**

Data presented in the *State Energy Data Report* and in other Energy Information Administration publications are expressed predominately in units that historically have been used in the United States, such as British thermal units, barrels, cubic feet, and short tons. However, because U.S. commerce involves other nations, most of which use metric units of measure, the U.S. Government is committed to the transition to the metric system, as stated in the Metric Conversion Act of 1975 (Public Law 94-168), amended by the Omnibus Trade and Competitiveness Act of 1988 (Public Law 100-418), and Executive Order 12770 of July 25, 1991.

The metric conversion factors presented in Table E1 can be used to calculate the metric-unit equivalents of values expressed in U.S. customary

units. For example, 500 short tons are the equivalent of 453.6 metric tons (500 short tons x 0.9071847 metric tons/short ton = 453.6 metric tons).

In the metric system of weights and measures, the names of multiples and subdivisions of any unit may be derived by combining the name of the unit with prefixes, such as deka, hecto, and kilo, meaning, respectively, 10, 100, 1,000, and deci, centi, and milli, meaning, respectively, one-tenth, one-hundredth, and one-thousandth. Common metric prefixes can be found in Table E2.

The conversion factors presented in Table E3 can be used to calculate equivalents in various physical units commonly used in energy analyses. For example, 10 barrels are the equivalent of 420 U.S. gallons (10 barrels x 42 gallons/barrel = 420 gallons).

**Table E1. Metric Conversion Factors**

U.S. Unit	<i>multiplied by</i>	Conversion Factor	<i>equals</i>	Metric Unit	U.S. Unit	<i>multiplied by</i>	Conversion Factor	<i>equals</i>	Metric Unit
<b>Mass</b>					<b>Volume</b>				
short tons (2,000 lb)	x	0.907 184 7	=	metric tons (t)	barrels of oil (bbl)	x	0.158 987 3	=	cubic meters (cm <sup>3</sup> )
long tons	x	1.016 047	=	metric tons (t)	cubic yards (yd <sup>3</sup> )	x	0.764 555	=	cubic meters (cm <sup>3</sup> )
pounds (lb)	x	0.453 592 37 <sup>a</sup>	=	kilograms (kg)	cubic feet (ft <sup>3</sup> )	x	0.028 316 85	=	cubic meters (cm <sup>3</sup> )
pounds uranium oxide (lb U <sub>3</sub> O <sub>8</sub> )	x	0.384 647 <sup>b</sup>	=	kilograms uranium (kgU)	U.S. gallons (gal)	x	3.785 412	=	liters (L)
ounces, avoirdupois (avdp oz)	x	28.349 52	=	grams (g)	ounces, fluid (fl oz)	x	29.573 53	=	milliliters (mL)
					cubic inches (in <sup>3</sup> )	x	16.387 06	=	milliliters (mL)
<b>Length</b>					<b>Area</b>				
miles (mi)	x	1.609 344 <sup>a</sup>	=	kilometers (km)	acres	x	0.404 69	=	hectares (ha)
yard (yd)	x	0.914 4 <sup>a</sup>	=	meters (m)	square miles (mi <sup>2</sup> )	x	2.589 988	=	square kilometers (km <sup>2</sup> )
feet (ft)	x	0.304 8 <sup>a</sup>	=	meters (m)	square yards (yd <sup>2</sup> )	x	0.836 127 4	=	square meters (m <sup>2</sup> )
inches (in)	x	2.54 <sup>a</sup>	=	centimeters (cm)	square feet (ft <sup>2</sup> )	x	0.092 903 04 <sup>a</sup>	=	square meters (m <sup>2</sup> )
					square inches (in <sup>2</sup> )	x	6.451 6 <sup>a</sup>	=	square centimeters (cm <sup>2</sup> )
<b>Energy</b>					<b>Temperature</b>				
British Thermal Units (Btu)	x	1,055.055 852 62 <sup>a,c</sup>	=	joules (J)	degrees Fahrenheit (°F)	x	5/9 (after subtracting 32) <sup>a,d</sup>	=	degrees Celsius (°C)
calories (cal)	x	4.186 8 <sup>a</sup>	=	joules (J)					
kilowatthours (kWh)	x	3.6 <sup>a</sup>	=	megajoules (MJ)					

<sup>a</sup>Exact conversion.

<sup>b</sup>Calculated by the Energy Information Administration.

<sup>c</sup>The Btu used in this table is the International Table Btu adopted by the Fifth International Conference on Properties of Steam, London, 1956.

<sup>d</sup>To convert degrees Celsius (°C) to degrees Fahrenheit (°F) exactly, multiply by 9/5, then add 32.

Notes: • Spaces have been inserted after every third digit to the right of the decimal for ease of reading.

• Most metric units shown belong to the International System of Units (SI), and the liter, hectare, and

metric ton are accepted for use with the SI units. For more information about the SI units, contact Dr. Barry Taylor at Building 221, Room B160, National Institute of Standards and Technology, Gaithersburg, MD 20899, or on telephone number 301-975-4220.

Sources: General Services Administration, Federal Standard 376B, *Preferred Metric Units for General Use by the Federal Government* (Washington, DC, January 27, 1993), pp. 9-11, 13, and 16. National Institute of Standards and Technology, Special Publications 330, 811, and 814. American National Standards Institute/Institute of Electrical and Electronic Engineers, ANSI/IEEE Std 268-1992, pp. 28 and 29.

**Table E2. Metric Prefixes**

Unit Multiple	Prefix	Symbol	Unit Subdivision	Prefix	Symbol
10 <sup>1</sup>	deka	da	10 <sup>-1</sup>	deci	d
10 <sup>2</sup>	hecto	h	10 <sup>-2</sup>	centi	c
10 <sup>3</sup>	kilo	k	10 <sup>-3</sup>	milli	m
10 <sup>6</sup>	mega	M	10 <sup>-6</sup>	micro	μ
10 <sup>9</sup>	giga	G	10 <sup>-9</sup>	nano	n
10 <sup>12</sup>	tera	T	10 <sup>-12</sup>	pico	p
10 <sup>15</sup>	peta	P	10 <sup>-15</sup>	femto	f
10 <sup>18</sup>	exa	E	10 <sup>-18</sup>	atto	a
10 <sup>21</sup>	zetta	Z	10 <sup>-21</sup>	zepto	z
10 <sup>24</sup>	yotta	Y	10 <sup>-24</sup>	yocto	Y

Source: U.S. Department of Commerce, National Institute of Standards and Technology, *The International System of Units (SI)*, NIST Special Publication 330, 1991 Edition (Washington, DC, August 1991), p. 10.

**Table E3. Other Physical Conversion Factors**

Energy Source	Original Unit		Conversion Factor	=	Final Unit
<b>Petroleum</b>	barrels (bbl)	x	42 <sup>a</sup>	=	U.S. gallons (gal)
	<b>Coal</b>	short tons	x	2,000 <sup>a</sup>	= pounds (lb)
		long tons	x	2,240 <sup>a</sup>	= pounds (lb)
	metric tons (t)	x	1,000 <sup>a</sup>	= kilograms (kg)	
<b>Wood</b>	ords (cd)	x	1.25 <sup>b</sup>	=	short tons
	ords (cd)	x	128 <sup>a</sup>	=	cubic feet (ft <sup>3</sup> )

<sup>a</sup>Exact conversion.

<sup>b</sup>Calculated by the Energy Information Administration.

Source: U.S. Department of Commerce, National Institute of Standards and Technology, *Specifications, Tolerances and Other Technical Requirements for Weighing and Measuring Devices*, NIST Handbook 44, 1994 Edition (Washington, DC, October 1993), pp. B-10, C-17, and C-21.



## Appendix F

**Carbon Dioxide Emission Factors for Coal**

The need for accurate estimates of carbon dioxide emissions produced during the combustion of coal has led the Energy Information Administration (EIA) to develop basic emission factors. Basic emission factors reflect the carbon-to-heat-content ratio of coal, a ratio that measures carbon dioxide emissions per unit of energy (pounds per million Btu), assuming complete combustion. These basic factors are derived from 5,426 sample analyses maintained in EIA's Coal Analysis File. Variations in the carbon-to-heat-content of different coals were observed to follow coal rank and geographic

origin, leading EIA to develop basic emission factors specific to the rank and the State of origin of the coal.

On the basis of these rank- and State-specific basic emission factors for coal, EIA has also developed emission factors by sector. These sectoral emission factors weight the coal consumed in a given sector by its rank and State of origin. Tables F1 through F5 present the U.S. average carbon dioxide emission factors for coal by sector.



**Table F1. Average Carbon Dioxide Emission Factors for Coal Consumed by the Residential and Commercial Sector, 1980-1999**  
(Pounds of Carbon Dioxide per Million Btu)

State	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Alabama .....	205.4	205.5	205.7	205.2	205.4	205.4	205.4	205.9	205.9	205.7	206.0	205.6	205.5	205.7	205.7	205.7	205.5	205.3	205.5	205.5
Alaska .....	—	214.0	214.0	214.0	214.0	214.0	214.0	214.0	214.0	214.0	214.0	214.0	214.0	214.0	214.0	214.0	214.0	214.0	214.0	214.0
Arizona .....	—	209.7	209.7	209.7	209.7	209.7	209.9	212.1	210.8	206.2	208.3	218.3	208.6	212.0	227.4	212.7	206.9	206.8	210.2	212.7
Arkansas .....	205.3	211.3	203.4	206.5	202.5	205.4	227.4	201.3	203.8	205.4	205.9	205.9	222.3	209.9	207.2	—	—	227.4	—	227.4
California .....	204.5	205.3	204.6	204.4	204.1	204.1	209.7	203.7	204.2	203.6	204.1	204.2	204.1	204.1	204.1	204.1	204.1	204.1	204.1	204.1
Colorado .....	212.6	212.3	212.4	211.8	212.0	212.4	212.5	212.5	212.5	212.4	212.4	212.4	211.0	212.0	211.2	211.6	211.8	212.2	211.0	206.2
Connecticut .....	226.1	225.7	227.2	227.3	227.4	227.4	226.9	226.9	226.5	226.3	226.7	227.3	220.2	226.9	226.3	211.9	226.4	226.6	224.0	226.9
Delaware .....	221.8	227.0	211.3	213.8	227.4	214.2	213.9	207.0	207.1	206.4	206.7	206.0	221.1	203.0	203.4	227.4	209.7	209.2	208.5	218.1
Dist. of Columbia ..	205.5	204.9	205.0	205.1	205.3	204.9	205.2	205.1	205.3	205.4	206.4	205.5	206.3	206.4	206.5	207.8	207.2	207.2	207.4	206.2
Florida .....	205.0	205.3	203.7	204.9	204.8	204.8	204.8	206.9	214.3	215.2	207.5	227.4	205.7	205.1	205.0	207.8	204.8	—	204.8	204.9
Georgia .....	204.7	204.8	204.9	205.4	204.8	205.3	205.2	205.0	205.0	205.4	205.1	206.3	204.9	205.1	206.0	205.9	204.8	206.2	206.2	205.7
Hawaii .....	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Idaho .....	205.4	205.8	206.0	205.2	205.1	204.8	204.5	205.0	204.7	205.7	204.9	204.7	205.0	204.9	205.0	206.0	205.9	204.6	207.3	204.1
Illinois .....	203.9	204.1	203.6	203.7	203.6	203.6	203.6	203.7	203.6	203.7	203.5	203.9	203.9	203.6	203.6	203.6	203.8	204.1	203.6	203.7
Indiana .....	203.7	203.9	203.8	203.6	203.6	203.6	203.6	203.7	203.6	203.8	203.7	203.8	203.8	204.1	204.1	204.1	204.1	204.1	204.2	204.1
Iowa .....	205.1	202.6	202.8	202.8	202.8	202.9	202.0	206.9	204.2	204.1	203.7	204.2	204.5	204.6	204.8	—	203.9	204.8	204.8	204.4
Kansas .....	202.2	202.3	202.8	201.3	201.3	201.3	201.3	201.3	201.5	203.6	203.2	203.8	202.9	203.9	203.6	202.8	202.8	202.8	204.1	204.9
Kentucky .....	204.6	204.7	204.4	204.2	204.8	204.2	204.4	204.6	204.3	204.0	204.3	204.3	204.6	205.1	205.0	204.7	205.0	203.2	205.0	205.2
Louisiana .....	201.3	—	201.4	—	203.5	—	227.4	—	227.4	204.8	—	227.4	—	227.4	—	204.8	—	207.1	—	227.4
Maine .....	216.2	224.1	215.1	215.2	214.2	211.9	210.1	213.0	210.9	213.6	212.0	223.9	213.0	212.2	226.8	226.7	227.4	226.2	227.4	227.2
Maryland .....	210.6	216.0	208.2	207.0	207.9	207.3	207.1	206.8	207.8	207.5	207.8	208.1	211.7	212.1	208.6	207.9	207.8	208.2	207.6	208.2
Massachusetts .....	218.2	220.9	217.0	217.4	214.2	219.1	219.9	223.7	218.1	217.6	213.8	221.5	214.1	217.0	225.8	217.7	214.2	215.9	213.3	210.6
Michigan .....	205.0	205.1	204.8	204.8	204.4	204.6	204.7	204.9	204.8	204.8	204.9	204.9	205.0	204.6	204.3	204.8	204.6	204.6	204.9	205.9
Minnesota .....	208.6	211.6	212.2	209.9	211.0	210.8	210.8	211.8	211.6	209.5	212.0	212.2	212.3	211.7	209.4	208.6	212.5	211.0	205.8	208.3
Mississippi .....	202.6	227.4	227.4	204.6	204.8	205.2	204.8	204.0	202.8	206.2	208.4	227.4	227.4	227.4	—	—	—	227.4	—	—
Missouri .....	202.1	201.9	201.7	202.0	202.0	204.4	203.9	201.9	201.8	203.4	202.7	202.8	203.4	204.1	203.5	203.1	203.3	203.8	203.5	204.5
Montana .....	205.6	213.1	213.2	209.7	213.3	213.3	213.1	213.1	213.2	209.3	211.7	213.4	213.3	211.3	213.4	207.2	213.4	211.8	209.2	209.3
Nebraska .....	212.6	212.6	212.7	212.9	212.6	212.6	212.7	212.7	212.5	212.7	212.7	217.4	219.2	212.7	212.7	210.1	227.0	212.7	212.7	212.7
Nevada .....	208.4	207.7	204.3	204.3	211.9	204.1	204.1	204.1	204.1	204.1	212.3	204.1	204.1	204.1	204.1	204.3	204.1	204.1	204.1	204.2
New Hampshire .....	227.2	227.4	225.9	225.8	226.9	227.4	227.2	227.4	226.1	226.6	226.4	226.9	225.4	227.4	227.4	217.7	215.5	223.5	222.4	227.4
New Jersey .....	227.2	226.1	227.1	227.3	224.8	225.0	226.7	226.9	227.4	226.1	227.2	226.9	227.1	227.3	227.0	227.3	227.2	227.1	227.4	227.4
New Mexico .....	209.8	209.7	209.8	209.6	209.7	209.7	209.7	209.7	209.7	208.1	205.7	205.8	206.3	206.5	206.6	206.6	207.1	206.3	209.0	205.7
New York .....	218.9	217.3	215.3	215.2	215.1	216.4	213.3	216.1	214.6	215.5	214.0	215.4	218.0	218.8	214.8	216.0	214.1	213.7	212.2	209.9
North Carolina .....	204.9	204.8	204.8	204.9	204.8	205.0	204.8	204.9	204.8	204.9	206.7	206.1	206.2	205.9	206.0	206.4	206.0	205.6	205.9	205.8
North Dakota .....	218.5	218.6	218.6	218.6	218.7	218.6	218.6	218.7	218.8	218.8	217.6	217.6	216.8	216.5	216.4	215.7	216.9	216.4	216.2	215.0
Ohio .....	203.8	203.8	203.6	203.5	203.7	203.9	203.6	203.8	204.3	203.9	204.2	204.4	205.5	204.2	204.5	204.4	203.4	204.1	205.5	204.4
Oklahoma .....	205.7	201.9	202.7	201.4	201.5	205.7	202.6	204.8	212.3	203.0	206.2	205.9	207.0	205.9	206.9	205.9	205.9	212.7	205.9	205.9
Oregon .....	205.6	208.4	209.2	207.5	205.7	205.1	207.2	204.7	204.6	204.1	204.1	204.1	204.1	214.2	213.6	204.1	204.1	204.1	207.1	204.1
Pennsylvania .....	221.2	222.8	219.8	219.8	220.6	219.3	218.9	218.1	218.7	218.8	219.0	218.2	219.7	218.6	220.1	220.4	220.3	221.7	221.3	221.0
Rhode Island .....	223.9	227.4	227.4	224.2	226.7	227.1	225.8	227.4	227.4	227.3	227.4	227.3	227.4	227.2	227.4	227.4	227.4	227.2	227.4	227.4
South Carolina .....	204.8	204.5	204.8	204.8	204.8	205.2	204.8	204.8	204.8	204.8	204.9	205.1	205.3	207.0	207.0	209.5	206.8	204.8	206.2	207.1
South Dakota .....	212.0	212.3	211.7	209.1	205.9	209.9	208.3	211.9	213.2	212.9	211.6	212.8	212.8	212.7	209.9	212.2	208.9	212.7	212.7	212.7
Tennessee .....	204.5	204.6	204.1	204.6	204.2	204.2	203.7	204.0	204.4	204.8	205.4	206.3	204.6	205.1	205.0	205.5	204.8	204.9	204.5	204.6
Texas .....	213.7	209.8	215.3	216.3	227.4	207.5	205.4	204.3	204.5	206.8	206.8	207.1	211.0	213.3	227.0	—	213.0	205.9	206.2	206.3
Utah .....	204.1	204.1	204.1	204.1	204.1	204.1	204.1	204.1	204.2	204.2	204.1	204.1	204.1	204.1	204.1	204.1	204.1	204.1	204.1	204.1
Vermont .....	227.4	227.3	227.3	224.3	227.0	210.4	226.1	227.2	227.4	227.1	227.2	227.1	227.2	227.3	227.2	227.4	227.1	227.2	227.4	227.4
Virginia .....	205.0	205.1	205.2	205.3	205.4	205.2	205.1	205.2	205.3	205.1	205.9	206.2	206.3	206.0	206.4	206.7	206.5	205.9	206.0	205.7
Washington .....	204.3	204.6	204.4	204.4	204.5	204.2	208.5	204.8	205.2	204.8	206.8	207.5	206.9	207.6	209.2	208.1	204.4	204.4	204.2	204.1
West Virginia .....	205.0	205.2	205.9	205.6	205.7	206.8	206.1	206.5	205.3	206.3	206.2	207.0	210.2	208.3	207.0	208.4	207.1	207.4	207.2	207.2
Wisconsin .....	205.8	203.7	205.1	204.4	205.2	205.6	205.3	203.8	205.3	205.8	211.8	205.0	204.9	204.9	204.9	204.9	204.9	205.1	204.8	204.8
Wyoming .....	212.3	211.9	212.5	212.8	212.9	212.7	212.7	212.7	212.7	212.3	212.7	212.7	212.7	212.8	212.8	213.0	212.9	212.8	213.0	212.7
U.S. Average <sup>a</sup> .....	210.6	212.0	210.4	209.2	209.5	209.3	209.2	209.4	209.1	209.7	209.5	210.2	211.2	209.9	209.8	210.2	209.5	210.2	209.7	208.8

<sup>a</sup> Weighted average. The weights used are consumption values by State.  
— =Not applicable.

Source: Energy Information Administration, Office of Coal, Nuclear, Electric and Alternate Fuels.

**Table F2. Average Carbon Dioxide Emission Factors for Coal Consumed<sup>a</sup> by Coke Plants, 1980-1999**

(Pounds of Carbon Dioxide per Million Btu)

State	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Alabama	205.5	205.5	205.4	205.4	205.4	205.4	205.5	205.3	205.3	205.4	206.0	206.2	206.1	206.2	206.2	206.2	206.1	206.2	206.4	206.5
Alaska	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Arizona	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Arkansas	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
California	208.7	207.8	207.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Colorado	212.6	212.4	212.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Connecticut	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Delaware	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dist. of Columbia	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Florida	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Georgia	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hawaii	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Idaho	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Illinois	205.2	205.4	205.6	205.7	205.4	204.6	205.0	204.6	204.7	204.5	205.8	206.4	206.5	206.4	206.8	206.6	206.6	206.7	206.8	206.7
Indiana	205.0	205.1	204.9	205.0	204.9	205.1	205.0	204.9	204.9	204.9	205.8	206.0	206.0	206.1	206.3	206.4	206.3	206.9	206.8	206.8
Iowa	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Kansas	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Kentucky	204.6	204.3	205.9	205.2	205.1	204.9	204.8	204.8	204.8	205.0	206.7	206.8	206.3	206.4	206.7	206.8	206.5	206.4	206.6	206.5
Louisiana	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Maine	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Maryland	205.9	206.1	205.7	205.5	205.5	205.5	205.5	205.5	205.3	205.1	206.2	205.9	—	—	—	—	—	—	—	—
Massachusetts	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Michigan	205.5	205.4	205.4	205.3	205.4	205.4	205.5	205.8	205.4	205.3	206.4	206.7	207.8	207.6	205.7	206.0	206.4	206.1	206.1	206.2
Minnesota	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mississippi	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Missouri	205.2	205.6	205.7	205.1	205.4	205.4	204.9	206.0	205.3	—	—	—	—	—	—	—	—	—	—	—
Montana	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Nebraska	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Nevada	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
New Hampshire	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
New Jersey	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
New Mexico	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
New York	205.5	205.4	205.4	205.4	205.5	205.5	205.5	205.4	205.5	205.6	206.2	206.1	206.1	206.8	206.7	206.7	206.7	206.1	207.0	206.8
North Carolina	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
North Dakota	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Ohio	205.4	205.3	205.3	205.3	205.2	205.3	205.2	205.1	205.1	205.1	206.6	206.4	206.4	206.0	206.4	206.6	206.6	206.4	206.6	206.6
Oklahoma	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Oregon	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Pennsylvania	205.7	205.6	205.5	205.6	205.6	205.7	205.6	205.6	205.5	205.4	206.2	206.2	206.1	206.2	206.2	206.2	206.3	206.5	206.6	206.7
Rhode Island	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
South Carolina	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
South Dakota	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tennessee	210.2	207.1	205.3	205.1	205.3	205.3	205.2	205.1	204.8	204.8	207.6	207.6	206.2	—	204.8	—	—	—	—	—
Texas	209.8	212.2	212.3	212.7	212.7	212.7	212.7	—	—	—	—	—	—	—	—	—	—	—	—	—
Utah	210.8	210.6	211.3	212.4	211.7	212.5	207.9	208.3	209.7	209.9	208.2	206.0	205.6	205.5	205.8	207.3	208.4	209.0	206.4	206.4
Vermont	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Virginia	206.2	206.2	206.2	206.2	206.2	206.2	206.2	206.2	206.2	206.2	206.2	206.2	206.2	206.2	206.2	206.2	206.2	206.2	206.2	206.2
Washington	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
West Virginia	205.4	205.4	205.6	205.5	205.3	205.3	205.0	205.1	204.9	205.1	206.7	206.8	206.7	206.8	206.8	207.0	206.8	206.8	207.1	207.1
Wisconsin	205.3	205.3	205.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Wyoming	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
U.S. Average <sup>b</sup>	205.8	205.8	205.7	205.5	205.6	205.6	205.4	205.2	205.3	205.3	206.2	206.2	206.2	206.2	206.3	206.4	206.5	206.6	206.7	206.7

<sup>a</sup> No allowances have been made for carbon retained in non-energy coal chemical byproducts from the coal carbonization process.

— =Not applicable.

Source: Energy Information Administration, Office of Coal, Nuclear, Electric and Alternate Fuels.

<sup>b</sup> Weighted average. The weights used are consumption values by State.

**Table F3. Average Carbon Dioxide Emission Factors for Coal Consumed by Other Industrial Users, 1980-1999**  
(Pounds of Carbon Dioxide per Million Btu)

State	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Alabama	205.5	205.5	205.3	205.2	205.5	205.5	205.5	205.4	205.4	205.4	205.5	205.6	205.7	205.4	205.4	205.4	205.4	205.5	205.4	205.4
Alaska	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Arizona	209.2	210.4	210.3	210.3	210.0	210.1	209.9	210.1	209.4	209.6	207.5	207.0	206.7	206.9	207.2	206.7	207.0	206.4	208.0	208.1
Arkansas	201.4	201.4	201.4	201.4	201.5	201.6	203.7	203.2	202.4	203.9	205.3	205.1	205.2	206.0	206.3	205.9	206.0	205.8	206.0	205.7
California	205.6	205.9	206.1	206.4	205.6	204.7	205.0	204.4	204.6	204.7	204.6	204.6	204.2	204.1	204.1	204.1	204.1	204.3	204.6	204.6
Colorado	212.6	212.7	212.4	212.7	212.7	212.7	212.7	212.1	212.8	212.6	212.0	212.6	212.5	212.7	213.1	213.0	213.1	213.2	206.3	206.2
Connecticut	225.4	223.2	213.9	207.6	215.9	209.2	208.2	212.8	207.5	224.8	227.4	205.9	204.7	207.1	207.1	227.4	207.1	—	207.1	205.0
Delaware	205.9	205.6	205.6	205.8	205.8	205.9	205.9	205.9	205.8	205.9	206.1	206.0	207.4	208.0	207.7	207.6	208.0	208.0	205.2	205.7
Dist. of Columbia	205.0	204.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	227.4	—	208.4	208.5
Florida	204.2	204.8	204.8	204.9	204.8	205.0	205.0	205.0	205.2	205.2	205.4	205.2	205.1	205.2	205.1	205.4	205.3	205.2	204.9	204.8
Georgia	204.9	204.9	204.9	204.8	204.9	204.9	204.9	204.9	204.8	204.8	205.1	205.0	204.9	204.9	205.0	205.0	205.0	205.1	204.9	205.1
Hawaii	—	—	204.4	204.4	204.4	204.4	204.4	204.4	204.4	204.4	204.4	204.4	204.4	204.4	204.4	204.4	204.4	204.3	204.1	—
Idaho	212.6	212.4	212.5	212.3	212.1	211.9	211.4	212.0	211.8	212.4	212.1	212.1	212.2	211.1	212.1	209.7	211.1	212.7	212.2	207.9
Illinois	204.2	204.3	204.1	204.1	204.1	204.0	203.9	203.9	203.7	203.7	203.9	205.1	203.7	203.9	203.9	204.0	204.3	204.5	204.0	204.0
Indiana	203.7	203.9	203.8	203.7	203.8	203.7	203.7	203.7	203.7	203.8	204.2	204.4	204.5	204.2	204.1	204.3	204.1	204.4	204.4	204.6
Iowa	205.7	205.7	204.5	204.4	204.1	203.6	203.9	203.9	204.1	204.6	205.0	206.1	208.3	208.2	208.6	207.8	204.4	208.3	207.7	207.7
Kansas	201.9	201.3	201.7	201.4	201.3	201.8	201.3	201.6	201.4	201.8	203.4	205.2	205.3	203.3	203.2	203.6	205.3	205.4	203.2	203.0
Kentucky	205.4	204.9	204.9	205.0	204.9	204.7	204.9	205.1	205.4	205.2	205.5	205.6	205.4	205.3	205.1	205.1	205.0	205.5	205.1	205.2
Louisiana	203.9	203.4	204.2	204.4	204.1	204.4	204.3	205.2	209.9	207.5	208.0	211.3	210.9	211.5	211.3	212.3	207.7	206.9	204.8	204.8
Maine	206.0	205.7	205.1	205.4	205.1	207.9	206.0	206.5	207.0	205.2	207.0	204.9	204.9	204.9	204.8	205.0	205.0	204.8	204.9	205.0
Maryland	206.1	205.9	206.0	205.9	205.8	205.8	205.5	205.8	205.6	205.9	207.8	207.8	208.4	208.7	208.2	208.6	208.3	208.0	208.4	208.5
Massachusetts	206.3	207.6	206.9	206.3	206.6	206.4	206.8	207.0	207.1	207.4	208.0	206.7	207.0	206.7	206.6	206.8	206.7	206.9	207.1	205.0
Michigan	204.8	204.8	204.7	204.9	205.0	205.0	204.9	204.9	204.8	204.8	204.9	204.9	205.3	205.6	205.6	205.9	205.3	205.2	205.3	205.5
Minnesota	211.6	210.8	212.9	213.0	211.8	208.9	208.9	209.8	210.8	210.3	211.6	211.1	211.8	212.1	211.7	211.2	211.2	211.5	209.3	209.7
Mississippi	204.0	203.5	205.0	204.5	204.2	204.0	204.4	204.0	204.0	204.0	203.7	204.2	204.6	205.2	205.2	205.2	204.9	204.8	204.8	204.3
Missouri	203.6	203.3	203.3	203.2	203.5	203.5	203.6	203.8	203.7	203.3	204.1	204.1	204.5	204.6	204.2	204.4	203.9	203.7	204.1	204.0
Montana	211.2	210.3	209.7	209.7	210.5	212.6	213.4	213.1	211.8	211.6	211.7	211.6	211.4	212.1	212.8	213.4	213.4	212.9	215.5	214.8
Nebraska	212.3	212.7	212.8	212.7	213.1	213.1	213.2	213.2	213.1	212.9	213.3	213.3	213.1	213.2	212.9	213.2	210.9	211.1	209.3	209.7
Nevada	204.5	204.1	204.1	204.1	204.1	204.1	204.1	204.1	204.1	206.7	204.1	204.1	204.1	204.1	204.1	208.2	208.3	204.8	205.4	204.4
New Hampshire	207.0	217.3	214.2	206.7	206.9	219.5	218.6	218.8	218.6	207.0	216.2	206.8	207.1	204.8	—	227.4	227.4	—	207.1	205.0
New Jersey	218.3	224.6	213.8	212.9	213.4	217.5	210.8	210.0	209.1	207.9	207.9	207.7	207.3	208.0	210.3	227.3	227.4	227.4	221.2	220.1
New Mexico	212.0	212.7	212.3	212.7	212.7	212.6	212.7	212.7	212.7	212.7	212.7	212.7	212.7	212.7	212.7	212.7	212.7	212.7	206.2	206.2
New York	206.9	206.7	207.0	207.1	206.8	206.9	206.9	207.1	207.4	206.9	206.9	206.9	207.0	206.8	207.0	207.2	207.3	207.2	206.6	206.1
North Carolina	204.8	—	204.8	204.8	204.8	204.8	204.8	204.8	204.8	204.8	205.7	205.4	205.7	205.4	205.6	205.5	205.4	205.4	205.4	205.5
North Dakota	218.8	218.7	218.7	218.7	218.5	218.6	218.5	218.4	218.5	218.5	218.3	218.3	218.3	218.4	218.2	218.4	218.5	218.5	218.4	218.3
Ohio	204.0	203.9	204.0	203.9	204.1	204.3	204.3	204.2	204.4	204.3	204.6	204.7	204.5	204.8	204.9	204.5	204.7	204.5	203.6	203.8
Oklahoma	202.2	201.9	201.8	203.3	201.9	202.4	202.5	202.2	203.1	205.7	207.8	207.5	207.5	207.5	209.1	207.8	208.1	208.0	203.4	206.0
Oregon	212.7	211.3	211.9	212.0	210.0	211.8	211.9	211.7	212.7	212.2	212.7	212.7	211.5	212.8	210.4	213.0	212.5	212.5	212.7	204.7
Pennsylvania	207.9	206.9	207.0	207.0	206.8	207.3	207.4	207.1	208.8	208.8	207.8	208.4	208.5	206.4	206.9	207.1	207.0	207.3	208.2	208.1
Rhode Island	210.0	210.3	—	204.8	204.8	205.7	206.9	219.6	204.8	204.8	227.4	—	—	227.4	—	—	—	—	207.1	205.0
South Carolina	205.0	205.0	205.0	205.0	204.9	205.0	205.1	205.1	205.1	205.0	205.3	205.3	205.3	205.3	205.5	205.4	205.4	205.5	205.5	205.5
South Dakota	210.5	210.7	209.6	212.7	212.7	212.7	212.6	212.7	212.7	212.7	212.7	212.7	212.7	212.7	212.7	212.7	212.7	212.6	210.0	208.9
Tennessee	204.8	204.9	204.7	204.3	204.8	204.7	204.6	204.7	204.8	205.2	205.2	205.5	205.4	205.2	205.3	205.3	205.3	205.1	205.2	205.3
Texas	212.3	212.9	212.9	212.9	213.0	213.1	213.0	213.2	213.3	213.2	212.5	212.1	212.3	212.1	212.1	212.5	212.0	212.0	210.3	210.4
Utah	205.2	205.3	204.8	205.0	205.1	205.6	206.0	206.2	204.9	204.6	204.2	204.1	204.1	204.6	206.1	206.0	204.1	204.7	204.4	204.4
Vermont	207.8	207.0	220.3	223.8	226.7	216.3	227.4	226.6	223.8	218.5	226.3	206.2	212.2	205.7	—	—	—	—	207.1	205.0
Virginia	205.1	205.0	205.0	205.1	205.1	205.1	205.1	205.1	205.1	205.1	205.9	205.9	206.2	205.9	206.0	206.0	205.9	205.9	206.0	206.5
Washington	206.3	207.1	207.1	207.6	205.6	206.1	208.7	209.7	208.9	208.7	207.9	206.6	205.8	205.5	206.1	206.4	206.3	205.3	204.2	204.3
West Virginia	205.4	205.3	205.3	205.1	205.1	205.5	205.8	205.6	205.4	205.4	206.4	206.5	206.6	206.5	206.8	206.9	207.0	207.1	206.6	206.6
Wisconsin	205.5	204.9	204.9	205.0	204.6	205.0	205.4	205.6	206.3	206.0	206.1	205.9	206.1	206.5	206.0	205.9	206.2	209.7	205.5	205.4
Wyoming	212.0	212.2	212.5	212.7	212.7	212.7	212.7	212.6	212.4	212.1	212.2	212.3	212.5	212.6	212.6	212.5	212.7	212.7	212.2	212.3
U.S. Average <sup>a</sup>	205.9	205.9	206.0	205.9	206.2	206.4	206.5	206.4	206.4	206.6	206.8	206.9	207.1	207.0	207.2	207.2	207.0	207.2	206.9	207.0

<sup>a</sup> Weighted average. The weights used are consumption values by State.  
— =Not applicable.

Source: Energy Information Administration, Office of Coal, Nuclear, Electric and Alternate Fuels.

**Table F4. Average Carbon Dioxide Emission Factors for Coal Consumed by Electric Utilities, 1980-1999**  
(Pounds of Carbon Dioxide per Million Btu)

State	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Alabama .....	205.0	204.8	204.9	205.0	205.0	204.9	205.0	204.9	204.9	204.9	205.1	205.3	205.3	205.3	205.3	205.8	205.8	206.2	203.1	203.0
Alaska .....	214.0	214.0	214.0	214.0	214.0	214.0	214.0	214.0	214.0	214.0	214.0	214.0	214.0	214.0	—	214.0	214.0	—	206.1	206.1
Arizona .....	208.0	208.1	208.0	207.9	207.9	207.8	207.9	208.0	207.8	207.9	207.7	207.7	207.7	207.5	207.5	207.6	207.6	207.5	204.0	205.8
Arkansas .....	212.7	212.7	212.7	212.7	212.7	212.7	212.7	212.7	212.7	212.7	211.0	212.7	212.7	212.7	212.7	212.7	212.7	212.7	206.1	206.1
California .....	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Colorado .....	211.5	209.5	209.7	211.0	212.1	212.0	211.9	211.9	210.3	210.3	209.9	209.8	209.8	209.9	209.7	209.8	210.1	209.9	204.0	204.8
Connecticut .....	—	—	—	—	204.8	204.8	204.8	204.8	204.8	204.9	204.8	204.8	204.8	204.9	205.0	205.0	204.8	204.8	205.2	203.1
Delaware .....	206.0	206.1	206.2	206.4	206.5	206.5	206.1	206.8	206.6	206.7	206.7	206.8	206.9	206.9	207.1	207.3	207.3	206.9	203.1	204.7
Dist. of Columbia ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Florida .....	204.0	204.1	204.0	204.5	204.4	204.3	204.3	204.4	204.6	204.5	204.5	204.4	204.4	204.5	204.6	204.5	204.6	204.8	203.7	203.0
Georgia .....	204.3	204.4	204.4	204.4	204.7	204.7	204.7	204.7	204.8	204.8	205.2	205.2	204.8	205.3	206.2	206.6	206.6	206.4	203.2	203.2
Hawaii .....	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Idaho .....	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Illinois .....	207.1	207.1	206.5	206.6	205.9	206.6	206.6	206.1	206.3	205.8	205.6	205.9	206.2	206.9	207.3	207.8	207.9	208.0	204.3	203.5
Indiana .....	204.0	204.2	204.2	204.2	204.3	204.6	204.7	204.5	204.6	205.0	205.4	205.6	205.6	205.8	206.0	206.5	206.5	206.3	203.1	202.3
Iowa .....	207.2	208.2	210.3	210.3	210.8	210.2	210.1	210.4	209.9	210.5	210.7	210.8	211.1	211.9	211.5	211.9	211.9	211.9	205.0	205.3
Kansas .....	209.2	209.7	210.8	210.9	210.6	210.5	210.7	210.6	210.7	210.8	210.7	210.6	210.9	211.9	211.4	211.5	211.1	211.4	204.9	204.3
Kentucky .....	204.0	204.0	204.0	204.0	204.0	203.9	204.1	204.0	204.1	204.0	204.1	204.3	204.1	204.3	204.3	204.3	204.5	204.6	203.2	202.9
Louisiana .....	212.7	212.7	212.7	212.6	212.7	212.7	212.9	212.7	212.7	212.7	212.7	212.8	212.9	212.9	212.9	212.9	212.9	212.9	206.2	207.1
Maine .....	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Maryland .....	206.6	206.7	206.9	207.2	206.9	206.9	207.0	207.1	207.0	207.0	207.2	207.2	207.0	206.8	207.0	207.0	207.0	207.0	203.1	204.6
Massachusetts .....	206.4	206.5	206.4	206.5	206.3	206.4	206.5	206.5	206.7	206.4	206.5	206.7	206.8	206.8	206.7	206.6	206.6	206.4	203.1	203.1
Michigan .....	206.0	206.6	206.4	207.1	207.1	207.0	207.3	207.8	207.9	208.5	208.7	208.9	208.9	209.1	209.0	209.4	209.8	209.6	203.5	204.1
Minnesota .....	212.9	213.0	212.9	213.0	213.3	213.0	212.9	212.9	213.0	213.0	213.0	213.0	213.0	213.0	213.0	213.0	213.0	213.0	206.1	206.0
Mississippi .....	204.7	204.8	204.7	204.9	205.0	205.2	204.9	204.9	204.6	204.2	204.2	204.5	204.5	204.8	206.9	206.9	207.3	208.9	204.3	202.9
Missouri .....	204.5	204.6	204.4	204.2	204.3	204.4	204.4	204.7	205.4	205.5	205.7	206.2	206.2	208.4	208.7	210.6	211.1	211.5	204.8	204.7
Montana .....	213.9	213.8	213.8	214.0	213.7	213.6	213.6	213.6	213.5	213.6	213.5	213.5	213.5	213.6	213.5	213.6	213.5	213.5	206.3	206.3
Nebraska .....	211.7	212.2	212.4	212.6	212.2	212.4	212.4	212.6	212.6	212.6	212.7	212.7	212.7	212.7	212.6	212.7	212.7	212.7	205.8	206.0
Nevada .....	208.2	207.9	208.1	207.8	207.8	206.3	207.6	207.8	208.2	207.9	207.7	208.0	208.4	208.4	208.4	208.1	207.7	207.6	203.1	205.2
New Hampshire .....	206.9	207.1	207.1	207.1	207.1	206.8	206.8	207.0	206.9	206.7	206.7	206.2	206.3	206.3	206.1	206.1	206.2	206.2	203.1	203.8
New Jersey .....	206.6	206.6	206.7	206.8	206.9	206.9	206.9	206.9	206.8	206.7	206.7	206.7	206.6	206.7	206.5	206.4	206.7	206.6	203.1	204.6
New Mexico .....	205.7	205.7	205.7	205.7	205.7	205.7	205.7	205.7	205.7	205.7	205.9	205.7	205.7	205.7	205.7	205.7	205.7	205.7	206.1	206.1
New York .....	205.7	205.8	205.8	205.8	206.0	206.1	206.1	206.2	206.0	206.1	206.3	206.2	206.1	206.0	206.0	206.3	206.2	206.4	203.1	203.9
North Carolina .....	205.6	205.6	205.8	206.0	205.8	205.8	205.8	205.8	205.8	205.7	205.8	205.8	205.8	205.8	205.8	205.8	205.7	205.7	203.1	203.6
North Dakota .....	218.8	213.8	218.8	218.8	218.8	218.8	218.8	218.8	218.8	218.8	214.9	218.8	218.8	218.8	218.8	218.8	218.7	218.7	213.1	216.6
Ohio .....	204.4	204.3	204.5	204.3	204.3	204.3	204.4	204.4	204.5	204.5	204.5	204.4	204.4	204.5	204.6	205.0	205.0	205.0	203.1	202.9
Oklahoma .....	210.5	212.5	212.7	212.7	212.7	212.7	212.5	212.1	212.2	212.2	212.1	212.4	212.6	212.7	212.6	212.6	212.7	212.7	205.5	205.6
Oregon .....	212.7	212.7	212.7	212.7	212.7	212.7	—	212.7	212.7	212.7	212.7	212.7	212.9	212.4	212.2	212.7	212.7	212.7	206.1	202.1
Pennsylvania .....	206.1	206.0	206.1	206.0	205.9	205.9	205.8	206.0	206.1	206.1	206.2	206.2	206.2	206.0	206.0	206.2	206.2	206.2	203.1	202.2
Rhode Island .....	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
South Carolina .....	204.9	204.9	205.0	205.0	204.9	204.9	205.0	205.0	205.0	205.0	205.0	205.0	205.0	205.0	205.0	205.0	205.0	205.0	203.2	202.3
South Dakota .....	218.1	218.1	218.0	218.8	218.4	218.8	218.8	218.8	218.3	218.8	218.7	218.8	218.8	218.8	218.8	216.9	213.4	213.4	206.1	206.1
Tennessee .....	204.0	204.0	204.0	204.0	204.2	204.2	204.0	204.1	204.1	204.2	204.1	204.0	204.0	204.3	204.1	204.0	204.2	204.7	203.4	202.5
Texas .....	213.0	212.9	212.8	212.9	212.9	212.9	212.9	212.9	213.1	212.9	212.9	212.9	212.9	212.9	213.1	212.8	212.9	213.0	209.1	208.3
Utah .....	204.1	204.1	204.1	204.1	204.1	204.1	204.5	204.3	204.2	204.3	204.3	204.3	204.3	204.3	204.3	204.2	204.3	204.4	203.1	202.2
Vermont .....	205.7	205.7	205.7	205.7	205.7	205.7	205.7	—	—	—	—	—	—	—	—	—	—	—	—	—
Virginia .....	205.9	205.7	205.8	205.7	205.7	205.8	206.0	206.0	206.1	205.9	206.0	206.0	206.0	205.9	205.9	206.0	206.0	206.1	203.1	203.8
Washington .....	208.7	208.7	208.7	208.7	208.7	208.7	208.7	208.8	209.0	209.2	209.0	208.7	209.3	209.4	209.2	209.2	208.8	209.1	206.1	206.1
West Virginia .....	206.9	206.9	207.0	207.0	207.0	207.0	207.1	207.1	207.2	207.0	206.9	207.1	207.0	207.1	207.1	207.0	207.0	207.0	203.1	204.9
Wisconsin .....	207.0	208.0	207.7	207.8	207.8	208.6	209.3	209.2	209.3	209.5	209.8	209.7	209.9	210.7	210.4	210.8	211.2	210.9	205.2	205.4
Wyoming .....	212.7	212.7	212.7	212.7	212.7	212.7	212.7	212.7	212.7	212.6	212.0	212.0	212.0	212.0	211.9	211.9	211.9	211.9	205.8	205.9
U.S. Average <sup>a</sup> .....	206.7	206.9	207.0	207.1	207.1	207.3	207.3	207.3	207.6	207.5	207.6	207.7	207.7	207.8	207.9	208.1	208.1	208.2	204.4	204.6

<sup>a</sup> Weighted average. The weights used are consumption values by State.  
— =Not applicable.

Source: Energy Information Administration, Office of Coal, Nuclear, Electric and Alternate Fuels.

**Table F5. Average Carbon Dioxide Emission Factors for Total Coal Consumed, 1980-1999**  
(Pounds of Carbon Dioxide per Million Btu)

State	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Alabama	205.1	205.0	205.0	205.0	205.1	205.0	205.1	205.0	205.0	205.0	205.3	205.4	205.4	205.4	205.4	205.9	205.8	206.2	205.4	203.4
Alaska	214.0	214.0	214.0	214.0	214.0	214.0	214.0	214.0	214.0	214.0	214.0	214.0	214.0	214.0	214.0	214.0	214.0	214.0	212.1	212.0
Arizona	208.1	208.2	208.2	208.2	208.1	208.1	208.2	208.1	207.9	207.9	207.7	207.7	207.6	207.4	207.5	207.6	207.5	207.4	208.0	205.9
Arkansas	210.7	211.9	212.0	212.1	212.1	212.3	212.4	212.4	209.5	212.4	212.5	212.5	212.5	212.5	212.5	212.5	212.5	212.5	206.0	206.1
California	207.5	206.8	206.8	206.4	205.6	204.7	205.0	204.4	204.6	204.7	204.6	204.6	204.1	204.1	204.1	204.1	204.1	204.3	204.6	204.6
Colorado	211.7	209.9	210.0	211.1	212.1	212.0	212.0	211.9	210.4	210.4	210.0	210.0	209.9	210.0	209.9	210.0	210.1	210.1	206.2	204.9
Connecticut	226.1	225.6	225.6	221.8	221.4	205.7	205.8	205.5	205.2	205.2	205.1	205.1	205.2	205.5	205.3	205.0	204.9	205.3	203.3	226.9
Delaware	206.0	206.1	206.2	206.4	206.5	206.4	206.5	206.7	206.6	206.7	206.6	206.7	207.0	206.9	207.1	207.3	207.3	207.0	207.4	206.2
Dist. of Columbia	205.4	204.9	205.0	205.1	205.3	204.9	205.2	205.1	205.3	205.4	206.4	205.5	206.3	206.4	206.5	207.8	207.2	207.2	—	—
Florida	204.0	204.1	204.0	204.5	204.4	204.3	204.3	204.4	204.6	204.8	204.5	204.5	204.5	204.5	204.6	204.6	204.6	204.8	204.8	203.0
Georgia	204.3	204.4	204.4	204.5	204.7	204.7	204.7	204.8	204.8	204.8	205.2	205.2	204.8	205.3	206.1	206.1	206.5	206.3	204.9	203.3
Hawaii	—	—	204.4	204.4	204.4	204.4	204.4	204.4	204.4	204.4	204.4	204.4	204.4	204.4	204.4	204.4	204.4	204.3	204.1	204.1
Idaho	210.7	211.2	211.5	210.9	210.6	211.1	210.7	211.6	210.6	211.2	211.1	211.1	211.3	210.5	211.4	209.3	210.7	211.8	212.2	207.4
Illinois	206.7	206.8	206.2	206.3	205.7	206.2	206.2	205.7	205.8	205.4	205.4	205.8	205.9	206.5	206.9	207.3	207.4	207.6	204.1	203.8
Indiana	204.3	204.4	204.3	204.3	204.4	204.6	204.7	204.5	204.6	204.8	205.4	205.5	205.5	205.7	205.9	206.3	206.3	206.2	204.4	203.1
Iowa	207.0	207.8	209.4	209.4	209.8	209.2	209.1	209.3	209.0	209.4	209.7	209.9	210.7	211.3	211.0	211.2	211.1	211.1	207.7	205.6
Kansas	209.0	209.3	210.4	210.6	210.4	210.2	210.5	210.4	210.5	210.6	210.6	210.5	210.8	211.8	211.3	211.4	211.0	211.3	203.3	204.3
Kentucky	204.1	204.1	204.1	204.1	204.1	204.0	204.2	204.1	204.2	204.2	204.3	204.4	204.2	204.4	204.4	204.5	204.6	204.7	205.1	203.1
Louisiana	212.1	210.3	211.7	212.1	212.1	212.2	212.6	212.3	212.6	212.4	212.4	212.7	212.8	212.8	212.8	212.9	212.8	212.9	205.0	207.1
Maine	207.9	211.0	207.1	207.1	207.4	208.8	206.7	207.6	207.6	206.0	207.8	205.6	205.3	205.3	205.1	205.2	205.3	205.2	204.9	206.2
Maryland	206.3	206.5	206.5	206.7	206.5	206.5	206.6	206.7	206.7	206.7	207.1	207.1	207.1	207.0	207.1	207.2	207.1	207.0	208.3	204.9
Massachusetts	207.6	208.2	206.8	206.9	206.7	206.8	206.8	206.8	206.8	206.6	206.6	206.8	206.9	206.9	206.8	206.6	206.7	206.5	206.8	203.8
Michigan	205.7	206.2	206.1	206.6	206.6	206.6	206.8	207.4	207.4	208.0	208.2	208.5	208.5	208.7	208.5	208.8	209.2	209.1	205.3	204.2
Minnesota	212.7	212.8	212.8	212.9	213.1	212.6	212.5	212.7	212.9	212.8	212.9	212.9	212.9	212.9	212.8	212.9	212.9	212.9	209.3	206.2
Mississippi	204.7	204.8	204.7	204.9	204.9	205.1	204.8	204.8	204.5	204.2	204.2	204.4	204.5	204.8	206.7	206.7	207.2	208.8	204.7	202.9
Missouri	204.5	204.5	204.4	204.1	204.2	204.4	204.4	204.7	205.3	205.4	205.6	206.0	206.1	208.1	208.5	210.3	210.7	211.1	204.1	204.6
Montana	213.7	213.5	213.4	213.7	213.5	213.5	213.6	213.6	213.5	213.5	213.5	213.5	213.5	213.5	213.5	213.5	213.5	213.5	214.8	206.4
Nebraska	211.7	212.2	212.5	212.6	212.2	212.4	212.4	212.6	212.6	212.6	212.7	212.7	212.7	212.7	212.6	212.7	212.7	212.6	209.2	206.1
Nevada	208.1	207.7	208.0	207.7	207.7	206.2	207.6	207.7	208.1	207.9	207.6	207.9	208.3	208.3	208.3	208.1	207.7	207.6	205.3	205.1
New Hampshire	207.0	207.3	207.6	207.3	207.3	207.2	207.1	207.2	207.1	206.9	207.1	206.5	206.5	206.3	206.2	206.2	206.2	206.3	203.2	203.9
New Jersey	207.1	207.3	207.6	207.7	207.6	208.2	207.6	207.3	207.1	206.9	206.9	206.9	206.8	206.8	206.7	206.5	206.8	206.7	217.8	204.7
New Mexico	205.7	205.8	205.8	205.8	205.8	205.8	205.8	205.7	205.7	205.7	205.7	205.7	205.7	205.7	205.8	205.8	205.8	205.8	206.2	206.1
New York	206.3	206.3	206.5	206.4	206.5	206.6	206.5	206.5	206.4	206.4	206.5	206.5	206.5	206.5	206.4	206.6	206.6	206.6	206.6	205.0
North Carolina	205.6	205.6	205.7	205.9	205.7	205.7	205.7	205.6	205.6	205.6	205.8	205.8	205.8	205.7	205.8	205.7	205.7	205.7	205.4	203.7
North Dakota	218.8	214.1	218.8	218.8	218.7	218.7	218.7	218.7	218.7	218.7	218.6	218.6	218.6	218.6	218.6	218.7	218.7	218.7	218.4	217.0
Ohio	204.5	204.4	204.5	204.4	204.3	204.4	204.5	204.4	204.6	204.5	204.7	204.6	204.6	204.6	204.8	205.0	205.0	205.0	203.6	203.1
Oklahoma	210.0	211.5	211.9	212.2	212.0	211.9	211.8	211.5	211.8	211.9	211.9	212.1	212.3	212.3	212.5	212.2	212.4	212.5	206.3	205.7
Oregon	212.5	212.4	212.5	208.3	211.9	212.4	212.4	212.3	212.6	212.4	212.7	212.7	212.8	212.4	212.1	212.8	212.7	212.7	212.4	202.2
Pennsylvania	206.4	206.4	206.5	206.3	206.3	206.2	206.2	206.3	206.5	206.5	206.6	206.7	206.7	206.4	206.4	206.6	206.5	206.7	208.2	203.6
Rhode Island	217.2	222.8	227.4	223.0	223.7	217.9	210.1	226.6	205.3	207.5	227.3	227.4	227.4	227.3	227.4	227.4	227.2	227.2	227.4	227.4
South Carolina	204.9	204.9	205.0	205.0	204.9	205.0	205.0	205.0	205.0	205.0	205.0	205.0	205.0	205.1	205.1	205.1	205.0	205.0	205.5	202.8
South Dakota	217.6	217.3	216.6	218.0	218.0	217.8	217.7	217.1	217.7	217.9	218.0	217.9	217.9	217.7	217.5	216.1	213.3	213.3	210.0	206.7
Tennessee	204.1	204.1	204.1	204.1	204.3	204.3	204.1	204.2	204.2	204.3	204.3	204.2	204.2	204.5	204.3	204.2	204.3	204.7	205.2	202.9
Texas	212.8	212.9	212.8	212.9	212.9	212.9	212.9	212.9	213.1	212.9	212.9	212.9	212.9	212.9	213.0	212.8	212.9	212.9	210.3	208.4
Utah	205.7	205.7	205.2	205.3	205.6	205.6	204.9	204.3	204.8	204.8	204.6	204.4	204.4	204.4	204.5	204.5	204.6	204.8	204.4	202.5
Vermont	216.0	218.3	213.1	208.4	212.7	209.2	216.6	227.1	226.3	222.7	227.1	215.2	216.8	226.9	227.2	227.2	227.1	227.2	227.4	227.4
Virginia	205.7	205.5	205.5	205.8	205.5	205.6	205.7	205.8	205.8	205.7	206.0	206.0	206.1	205.9	205.9	206.0	206.0	206.1	206.0	204.4
Washington	208.3	208.4	208.3	208.4	208.3	208.3	208.7	208.8	208.9	209.1	208.9	208.6	209.1	209.3	209.1	209.0	208.7	208.9	204.3	206.1
West Virginia	206.6	206.6	206.8	206.8	206.8	206.8	206.9	206.9	206.9	206.7	206.9	207.0	207.0	207.0	207.1	207.0	207.0	207.0	206.5	205.1
Wisconsin	206.8	207.5	207.2	207.4	207.4	208.1	208.8	208.8	208.9	209.1	209.4	209.3	209.5	210.3	209.9	210.3	210.8	210.8	205.5	205.4
Wyoming	212.6	212.7	212.7	212.7	212.7	212.7	212.7	212.7	212.7	212.6	212.0	212.1	212.1	212.1	212.0	212.0	212.0	212.0	212.0	206.4
U.S. Average <sup>a</sup>	206.5	206.7	206.9	207.0	207.0	207.1	207.1	207.2	207.3	207.3	207.4	207.5	207.6	207.7	207.8	207.9	208.0	208.0	206.9	204.8

<sup>a</sup> Weighted average. The weights used are consumption values by sector and State.  
— =Not applicable.

Source: Energy Information Administration, Office of Coal, Nuclear, Electric and Alternate Fuels.

## Appendix G

## Summary of Changes Since the *State Energy Data Report 1997*

Modifications to the Combined State Energy Data System (CSEDS) that are incorporated in this edition of the *State Energy Data Report (SEDR)* are summarized in this appendix. The constraint of page size in *SEDR* does not allow for all 40 years of CSEDS data to be included in the published tables. Data for selected years 1960 through 1997 are shown in the report tables; data for all years are included in the data files and html-formatted tables available via the Internet and are covered by this documentation.

### Natural Gas

**Commercial and Transportation Sectors, 1997.** Deliveries of natural gas to the commercial sector are published in the Energy Information Administration (EIA) *Historical Natural Gas Annual* and include revisions for two States in 1997; consumption in Kansas increased by 246 million cubic feet to 41,482 million cubic feet and consumption in New Mexico decreased by 3,940 million cubic feet to 27,403 million cubic feet, causing a 0.1-percent decrease in the U.S. total. Natural gas used as pipeline fuel, shown in CSEDS transportation sector, decreased for New Mexico by 125 million cubic feet to 61,772 million cubic feet in 1997 causing the same small decrease in the U.S. total.

**Industrial Sector, 1995 Through 1997.** Data for natural gas used as lease fuel are published in the EIA *Historical Natural Gas Annual* and include revisions for Missouri and Nevada in 1995, West Virginia in 1996, and South Dakota in 1997. Additional revisions to deliveries of natural gas to industrial customers in 1997 occur in Kansas, New Mexico, Oklahoma, and South Dakota. These revisions cause industrial natural gas

consumption estimates in CSEDS to be revised by less than 1 percent (too small to be seen in *SEDR* tables) in Missouri and Nevada in 1995, West Virginia in 1996, Oklahoma in 1997, and the U.S. total industrial natural gas for 1995 and 1996. Natural gas industrial use in 1997 decreases by 14 percent in New Mexico, increases by 10 percent in South Dakota, and increases by 3 percent in Kansas, causing a net decrease in the U.S. total of 0.1 percent.

**Thermal Conversion Factors, 1997.** In addition to the data revisions described above, the factors for converting cubic feet of natural gas into equivalent British thermal units (Btu) were revised in the EIA *Historical Natural Gas Annual* for Kansas (from 1,000 to 1,001 Btu per cubic foot) and New Mexico (from 1,021 to 1,019 Btu per cubic foot) in 1997. These revisions cause small changes in the natural gas Btu values for all sectors in those two States in 1997.

### Coal

#### ***Coal Coke Imports and Exports, 1991 Through 1997***

The Energy Information Administration reviewed the U.S. coal coke imports and exports data that it provides to international statistical organizations and revised the data for 1991 through 1997. These data are included in CSEDS U.S. industrial sector and total energy, but are not available by State and not included in the State data. All U.S. values increase, and imports increase more than exports. Coal coke imports double for 1994 through 1997, while increases in exports range from 45 percent in 1996 to

81 percent in 1995. The smallest increases of 7 percent for exports and 8 percent for imports occur in 1991.

## Petroleum

### *Aviation Gasoline, 1996 and 1997*

Although the U.S. total aviation gasoline consumption values are not revised for 1996 and 1997, replacement of preliminary estimates for military use of aviation gasoline in the six States with military consumption causes all State aviation gasoline consumption estimates to be reallocated and revised by less than 1 percent in both years.

### *Liquefied Petroleum Gases, 1995 Through 1997*

**Hawaii and California, 1995.** The American Petroleum Institute (API) revised internal combustion engine use of liquefied petroleum gases (LPG) in 1995. Consumption was decreased by 15 thousand gallons in Hawaii to 793 thousand gallons and increased by 15 thousand gallons in California to 56,935 thousand gallons. These revisions cause small shifts in industrial, transportation, and total consumption estimates of LPG for both States but do not affect other State data or the U.S. total.

**All Sectors, 1996.** The U.S. total consumption of LPG for 1996 remains unchanged, but API data series that are used as allocators for estimating the State and consuming sector portions of the total were revised; therefore, estimates of LPG consumption for all sectors in all States are revised for 1996 in CSEDS. Total LPG consumption for most of the States in Petroleum Administration for Defense District (PADD) I increase by 2 percent; in PADD II increase by 10 percent; and in PADD's III, IV, and V decrease by 3 percent. The exceptions are increases of 1 percent in Delaware, 5 percent in Illinois, 3 percent in Kansas, 9 percent in Kentucky, and 12 percent in North Dakota. Although residential and commercial estimates are not revised for all States, they do increase by 13 percent in nearly all 15 States in PADD II; the one exception is a 3-percent increase in North Dakota. Residential and commercial LPG estimates also increased by 5 percent in all 18 States in PADD I. Estimates of transportation use of LPG decreased by 1 percent for all States in PADD I and by 6 percent for all States in PADD II and PADD V (with the exception of North Dakota's

increase from 8,424 barrels to 20,966 barrels). Industrial sector consumption for each State is estimated by subtracting the consumption of the other sectors from the State total; therefore, all States have revisions to industrial consumption and the size of the revisions range from a 1-percent increase in Delaware to a 12-percent increase in North Dakota.

**All Sectors 1997.** In the previous edition of *SEDR*, 1997 State-level estimates of LPG consumption were not available, and 1996 data were repeated for 1997. In this edition, the use of actual 1997 estimates causes revisions to all sectors in all States, although the U.S. total consumption remains the same. Revisions in total consumption values range from decreases of 83 percent (the largest percentage, equivalent to 1,400 thousand barrels) in Montana to a 1-percent decrease in Iowa (the smallest percentage equaling 128 thousand barrels) and from an increase of 39,594 thousand barrels (the largest quantity, equivalent to a 10-percent change) in Texas to an increase of 2 thousand barrels (the smallest quantity, equaling a 29-percent change) in the District of Columbia.

### *Motor Gasoline, 1994 Through 1997*

Although motor gasoline consumption in thousand barrels for 1994 through 1997 has not changed in CSEDS, the equivalent values expressed in British thermal units (Btu) are revised due to a change in the factor used to convert barrels to Btu. For 1994 forward, the constant factor has been replaced with a factor that varies from year to year and is a quantity-weighted average that takes into account the increased use of motor gasoline additives. The new factors, shown in Table G1, are applied to all motor gasoline consumption in 1994 through 1997, causing Btu values for

**Table G1. Revisions to Motor Gasoline Thermal Conversion Factors**

Year	Previous	Current	Percent Change
	(Million Btu per barrel)		
1994	5.253	5.230	-0.4
1995	5.253	5.215	-0.7
1996	5.253	5.216	-0.7
1997	5.253	5.213	-0.8

all States in a year to be reduced by the same percentages as shown in the table.

### **Other Petroleum Products**

**Petroleum Coke, 1960 Through 1997.** U.S. total petroleum coke consumption at refineries was previously allocated to the States in CSEDS on the basis of each State's petroleum refinery catalytic cracking capacity. Investigation of data sources revealed that refinery use of petroleum coke was available by groups of States and by some individual States for 1960 through 1982 and by Petroleum Administration for Defense Districts (PADD) for 1983 forward. By using the State-level data or allocating the smaller State groupings to the States based on their catalytic cracking capacity, more accurate estimates of refinery use of petroleum coke are incorporated in this version of CSEDS. Petroleum coke industrial sector and total consumption estimates for all States 1960 through 1997 are revised. The largest revisions occur where individual State data replace calculated estimates in 1960 through 1982. Refinery use of petroleum coke in Arkansas for 1973 through 1989 and West Virginia from 1960 through 1962 are revised to zero. Mississippi's refinery petroleum coke in 1960 through 1962 is increased from around 95 thousand barrels to approximately 900 thousand barrels. Colorado refinery use of petroleum coke in 1980 is revised from 79 to 260 thousand barrels. Estimates of consumption in Delaware, Massachusetts, and Virginia are doubled or tripled in the 1960's and 1970's because their combined reported petroleum coke consumption is larger than their portions of the U.S. total refinery catalytic cracking capacity, the previous allocator. A few States' petroleum coke consumption is revised by as little as 1 percent in some years; Arkansas, Kentucky, Tennessee, and Washington are among those States.

A review of aluminum ingot production capacity, which is the allocating series for all other industrial uses of petroleum coke, the capacity for the Washington, and, as a result, the U.S. total, was reduced by 1 metric ton in 1995 through 1997 to be consistent with the intended methodology. This change caused insignificant decreases in Washington's industrial petroleum coke consumption and insignificant increases in the other 13 States with that type of petroleum coke consumption in 1995, 1996, and 1997. The revisions can be seen only in the CSEDS full precision data files available on the Internet.

**Special Naphthas, Waxes, and Petrochemical Industry Feedstocks, 1996 and 1997.** Although the U.S. total consumption of special naphthas, waxes, petrochemical feedstocks, and other minor petroleum products is not changed in this edition of *SEDR*, the State-level estimates are revised due to revisions in the State-level allocating data series. State estimates of consumption of these petroleum products are based on three data series that are measures of industrial activity from the U.S. Department of Commerce, Bureau of the Census. The series are from the Economic Census, previously called the Census of Manufactures, and are available every 5 years. In this version of CSEDS, the 1997 Census replaces the 1992 Census data for 1996 and 1997. Since the same allocating series is used for both years, the percentage changes for each State are the same in both years.

The most significant changes in estimates of special naphthas consumption, which is generally used in paint and varnish manufacturing, occur in Arkansas, Colorado, Delaware, and Mississippi where consumption estimates more than double in 1996 and 1997 and in South Carolina where consumption decreases by 89 percent. Estimates of special naphthas consumption in Nevada, Rhode Island, and West Virginia are revised from zero to small amounts in 1996 and 1997.

The Bureau of the Census data series that is used to allocate the U.S. totals of petrochemical feedstocks, miscellaneous petroleum products, natural gasoline, plant condensate, pentanes plus, and unfractionated stream to the States was changed by the conversion from Standard Industrial Categories to North American Industrial Codes causing a discontinuity in the data series. Consumption estimates based on the new series are revised for the 39 States with consumption of those petroleum products in 1996 and 1997. Oregon's consumption is revised to zero, while consumption changes from zero to small quantities in Arizona, Colorado, and Wyoming. Estimates for Texas, the State with the most consumption in the old and new series, increase by 10 percent in 1996 and 1997. Estimates for Louisiana and New Jersey the second- and third-largest consuming States in the previous CSEDS, are decreased by 81 percent and 47 percent, respectively. Estimates for Kentucky and New York, the second- and third-largest consumers in the new series increase by 75 percent and 180 percent, respectively. The smallest revisions to estimates occur in Maryland and Mississippi, with increases of 2 percent and 4 percent, respectively.



Revisions to estimates of waxes consumption in the 43 States where it occurs are smaller than revisions to the other petroleum products, with half of the estimates changing by 10 percent or less. Consumption estimates in South Dakota decrease by 51 percent in 1996 and 1997, the largest decrease. The largest increase is 24 percent in West Virginia in 1996 and 1997.

## Nuclear Electric Power

**G Industrial Sector, 1989 Through 1997.** Electricity generation by nuclear plants that are not owned by traditional electric utilities are added to the industrial sector of this version of CSEDS for 1989 through 1997. The U.S. sums of the additional generation range from 47 million kilowatthours in 1989 to 113 million kilowatthours in 1990 (representing less than 0.02 percent of the U.S. total nuclear generation) and are zero in 1995 through 1997.

## Renewable Energy Sources

### *Ethanol*

Ethanol consumption in the transportation sector for 1981 through 1988 have been included in this version of CSEDS. The data, previously shown in thousand gallons in the *SEDR* tables, are now in thousand barrels in the tables and data system to be comparable to the motor gasoline data. A new data series is used as a State allocator for the U.S. total in 1989 through 1992. A different conversion factor of 3.539 million Btu per barrel, which represents gross heat content, is applied to data for all years in this edition of CSEDS.

All of these revisions have no effect on consumption estimates in CSEDS since quantities of ethanol actually consumed are included in the motor gasoline volumes in the system. This ethanol data series, which is shown separately in the report tables and data system, is included only to indicate trends in ethanol use as a renewable energy source.

### *Geothermal*

**Residential, Commercial, and Industrial Sectors, 1990 Through 1993, 1995 Through 1997.** U.S. totals for the residential, commercial, and industrial use of geothermal energy for 1990 Through 1993 and 1995 through 1997 are revised in this edition of CSEDS to be consistent with U.S. totals published in the *EIA Annual Energy Review 1999*. This causes all State-level estimates for those sectors to be revised by the same percentage each year, 1990 through 1993 and 1995 through 1997. The percentage changes vary from year to year, but all are by 3 percent or less.

**Industrial Sector, 1989 Through 1997.** In addition to the industrial sector revisions above, electricity generation from geothermal energy by nonutility power producers is revised in this edition of CSEDS. Some of the revisions are caused by a review of the data collected on Form EIA-867 and Form EIA-860B. In addition, the gross electricity generation estimates previously used are replaced with net generation for 1989 through 1997. Estimates of generation by smaller facilities, with capacities of 1 to 5 megawatts, are added for 1989 through 1991. These revisions cause the U.S. total nonutility geothermal-based generation estimates to be revised by 3 percent or less in 1989 through 1997. Most State revisions are also small with the exception of a 42-percent decrease in Hawaii in 1992 and a 42-percent decrease in Illinois in 1991.

### *Hydroelectric Power*

**Industrial Sector, 1989 Through 1997.** Estimates of electricity generation from hydropower by nonutility power producers are revised in this edition of CSEDS. There were a number of revisions caused by a review of the data collected on Form EIA-867 and Form EIA-860B. In addition, the gross electricity generation estimates previously used are replaced with net generation for 1989 through 1997. Estimates of generation by smaller facilities, with capacities of 1 to 5 megawatts, are added for 1989 through 1991. The addition of smaller facilities adds Nevada and Rhode Island to the list of 29 other States with nonutilities hydropower generation in 1989 through 1991 and causes the U.S. total to increase by 15 to 20 percent for those 3 years. In 1992 through 1997 the revised estimates affect all 32 States with nonutility hydropower generation, some by only 1 percent while other State generation values more than doubled.

**Hydroelectricity Imports and Exports, 1990 Through 1997.** Although there are no revisions to electricity generation from hydropower at electric utilities in kilowatthours in 1990 through 1997, revisions can be seen in the “Hydroelectric Power” column of the *SEDR* tables titled “Estimates of Energy Input at Electric Utilities.” The revisions to electricity imports and exports from Canada and Mexico described on page 509 affect the estimates of the hydro-based electricity imports and exports. These trade estimates are added to the electric utilities’ hydroelectric generation to be shown in the “Hydroelectric Power” column. Data for as many as 27 States are affected by the revised hydro-based electricity imports and exports; some State trade data change by as little as 2 percent while others more than double. The U.S. total values decrease by as much as 42 percent in 1990 and 1991 and by as little as 2 percent in 1994 and 1995.

**Conversion Factors, 1996 and 1997.** The factor used to convert kilowatthours to British thermal units (Btu) is revised for 1996 and 1997. This factor, FFEOKUS, is the U.S. average heat content of fossil fuels consumed at steam-electric power plants. The Btu values for electricity generated from hydropower in all sectors, as well as imports and exports, are revised by the small percentages shown in Table G2.

**Solar**

**Residential/Commercial Sector, 1989 Through 1997.** The method of estimating residential (including the commercial) use of solar energy is revised in this edition of CSEDS to be more consistent with other EIA reports. The U.S. totals are revised to be the same as those published in the EIA *Annual Energy Review 1999*, Table 10.2. The U.S. data are allocated to the States by a State-level series compiled from data collected on Form EIA-63A, “Annual Solar Thermal Collector Manufacturers Survey,” which is published in the EIA *Renewable Energy Annual* (and predecessor reports). Adjustments are made to the compiled State series to account for

an estimated 20-year period for equipment replacement and retirement. Increases in the estimates of residential/commercial solar energy use for all States in 1989 through 1995 range from 12 percent to 16 percent. In 1996 increases in all States ranged from 16 percent in Montana to 9 percent in South Dakota, and in 1997 increases ranged from 16 percent in Montana to 2 percent in South Dakota.

**Industrial Sector, 1989 Through 1997.** Electricity generation from solar energy by nonutility power producers is revised in this edition of CSEDS. The gross electricity generation estimates previously used are replaced with net generation for 1989 through 1997. Estimates of generation by smaller facilities, with capacities of 1 to 5 megawatts, are added for 1989 through 1991. These revisions cause the California and U.S. total industrial solar generation to be increased by 27 percent in 1989 and reduced by 3 percent in 1990 through 1997. Small revisions also occur in the Btu values in 1996 and 1997 due to the conversion factor change described in the next paragraph and shown in Table G2.

**Electric Utilities, 1996 and 1997.** Although there are no revisions to electricity generation by electric utilities from solar energy in kilowatthours, the factor used to convert kilowatthours to British thermal units (Btu) is revised for 1996 and 1997. This factor, FFEOKUS, is the U.S. average heat content of fossil fuels consumed at steam-electric power plants. The Btu values for electricity generated from solar energy in California and Texas, as well as the U.S. total, are revised by the percentages shown in Table G2.

**Wind**

**Industrial Sector, 1989 Through 1997.** Electricity generation from wind energy by nonutility power producers is revised in this edition of CSEDS. The gross electricity generation estimates previously used are replaced with net generation for 1989 through 1997. Estimates of generation by smaller facilities, with capacities of 1 to 5 megawatts, are added for 1989 through 1991. The addition of smaller facilities increases wind-power generation estimates for California, Hawaii, and Oregon in 1989 through 1991 and causes the U.S. total nonutilities wind generation to increase in those 3 years by 24 percent, 35 percent, and 16 percent, respectively. Revisions from gross to net generation causes the U.S. total nonutilities wind generation to decrease by less than 5 percent in 1992 through 1997 even with the addition of facilities in Minnesota, Iowa, and Texas. Small revisions occur

**Table G2. Revisions to Fossil-Fueled Steam-Electric Plants Thermal Conversion Factors**

Year	Previous	Current	Percent Change
	(Btu per Kilowatthour)		
1996	10,335	10,340	+ 0.05
1997	10,311	10,357	+ 0.45

in the comparable Btu values in 1996 and 1997 due to the conversion factor change described in the next paragraph and shown in Table G2.

**Electric Utilities, 1996 and 1997.** Although there are no revisions to electricity generated from wind energy at electric utilities in kilowatthours, the factor used to convert kilowatthours to Btu is revised. This factor, FFEOKUS, is the U.S. average heat content of fossil fuels consumed at steam-electric power plants. The Btu values for wind-generated electricity in California, Iowa, and Minnesota, as well as the U.S. total, are revised by the percentages shown in Table G2.

### **Wood and Waste**

**Residential Sector, 1980, 1990 Through 1997.** A small revision to the 1980 U.S. total wood consumption published in the EIA *Annual Energy Review 1999* causes a 0.1-percent increase in consumption estimates for all States. Revisions to the U.S. Bureau of the Census's number of housing units for April 1, 1990, July 1, 1993, and July 1, 1997, cause revisions to residential wood consumption estimates to all years 1990 forward. In 1990 through 1992, only Alabama, Kentucky, Mississippi, and Tennessee are affected and the revisions are too small to be seen in the *SEDR* tables, although they may be noticed in the full-precision data files available via the Internet. All States' residential wood consumption estimates are revised in 1993 through 1996, but all revisions are less than 1 percent. The estimates for 1997 are affected by both a revision in the U.S. total and revisions in the State-level allocating series causing changes to consumption for all States ranging from a 93-percent increase in New York to 1-percent decreases in Georgia, North Carolina, and South Dakota.

**Commercial Sector, 1980, 1985 Through 1992, 1996, and 1997.** U.S. total commercial sector wood consumption as published in the EIA *Annual Energy Review 1999 (AER)* were revised for 1980, 1996, and 1997. This edition of CSEDS also includes estimates for commercial wood consumption in 1985 through 1992, as published in the *AER*, which were previously unavailable. State-level residential wood consumption is used to allocate the U.S. total commercial wood use to the States; therefore, the revisions in the residential sector data described above cause proportional State-level commercial sector revisions for 1993 through 1996. In 1997 the 12-percent increase in the estimate of U.S. total consumption from the *AER*, in addition to the revisions to residential sector State allocators, cause revisions to

all State commercial wood consumption estimates. The 1997 State revisions range from a more than doubling of commercial wood use in New York to a 32-percent decrease in Oklahoma with the smallest revision being a 1-percent increase in Rhode Island.

**Industrial Sector, 1980 Through 1997.** All three data series used to estimate wood and waste consumption were revised in their source documents and affect CSEDS estimates. (1) Small revisions in the estimates of U.S. total industrial wood and waste use as published in the EIA *Annual Energy Review 1999* are reflected in CSEDS data for 1980 through 1997, all of which are less than 1 percent. (2) State-level series that are measures of industrial activity in each State from the U.S. Department of Commerce, Bureau of the Census, are used to allocate the U.S. total wood and waste consumption to the States. A different series is used to represent waste wood consumed by furniture manufacturing industries for 1980 through 1995. In addition, the Census series used to estimate all types of wood and waste consumption are changed in 1996 and 1997 to adopt the new North American Industry Classification System data categories used in the 1997 Economic Census, which replaced the Standard Industrial Code groups used in previous Censuses. (3) Electricity generation from wood and waste by nonutility power producers is revised in this CSEDS. The gross electricity generation estimates previously used are replaced with net generation for 1989 through 1997. Estimates of generation by smaller facilities, with capacities of 1 to 5 megawatts, are added for 1989 through 1991. All State industrial wood and waste consumption estimates are revised from 1980 through 1997 by these three series changes. Most revisions are by more than 10 percent and estimates more than double for several States in some years. Additional small revisions occur in the corresponding Btu values in 1996 and 1997 due to the conversion factor change described in the next paragraph and shown in Table G2.

**Electric Utilities, 1996 and 1997.** Although there are no revisions to electricity generated from wood and waste at electric utilities in kilowatthours, the factor used to convert kilowatthours to Btu is revised. This factor, FFEOKUS, is the U.S. average heat content of fossil fuels consumed at steam-electric power plants. The Btu values for electricity generated from wood and waste in the 12 States with that type of generation, and the U.S. totals, are revised by the percentages shown in Table G2.

## Electricity Imports and Exports, 1990 Through 1997

The Energy Information Administration reviewed the methodology for estimating electricity imports and exports from Canada and Mexico and developed a new methodology that is less complex. The trade estimates are revised in this edition of CSEDS for the 20 States with electricity trade activity in 1990 through 1997. The revisions range from less than 1 percent to more than 200 percent with about half the estimates changing by less than 40 percent. These electricity imports and exports data are not shown separately in *SEDR* tables, but are included in the values shown in “Estimates of Energy Input at Electric Utilities” table columns for geothermal, hydroelectric power, and total energy input. Small revisions occur in the corresponding Btu values for hydroelectricity and total energy input for 1996 and 1997 due to the revised conversion factors shown in Table G2.

## Electrical System Energy Losses, 1990 Through 1997

Electrical system energy losses are estimated at the national level and allocated to the States in proportion to electricity sales. Revisions to the fossil-fueled steam-electric power plant factor for 1996 and 1997, shown in Table G2, and the estimates of electricity international trade in 1990 through 1997, described in the preceding paragraph, affect estimates of electrical system energy losses. The annual percentage shares of electrical system losses that are used to allocate total losses to all States and sectors are revised by less than 0.2 percent for 1990 through 1997 causing revisions

in electrical system energy losses that are too small to be seen in most of the report tables, but can be seen in the data files available via the Internet.

## Net Interstate Flow of Electricity, 1990 Through 1997

The revisions to electricity international trade in 1990 through 1997, described in the preceding paragraphs, affect the calculated estimates of net interstate flow of electricity for all States in those years. Most State’s revisions are small, but for the 20 States with international electricity trade, the size of the revisions to net interstate flow is directly comparable to the size of the revisions in their international trade. In 1996 and 1997, additional changes in net interstate flow estimates for all States are caused by the revisions to the factor used to convert kilowatthours of electricity generated from wood, waste, hydroelectric, solar, and wind energy sources into British thermal units. Those revisions are shown in Table G2.

## Population, 1990 Through 1997

The U.S. Department of Commerce, Bureau of the Census, revised the resident population series for 1990 through 1997. The revisions are by less than 1 percent in all States and years. The population estimates, which are used in the calculation of the data shown in the “Total Energy per Capita” ranking column of Table 9, are shown in Appendix D and are included in the Internet data files.



## Appendix H

**State Data from EIA**

Many Energy Information Administration (EIA) reports contain tables with State-level data on various subjects. The following is a list of some of those publications.

**Multiple Energy Sources**

*State Energy Data Report, Consumption Estimates*, DOE/EIA-0214. (Also available electronically at <http://www.eia.doe.gov/emeu/sedr/contents.html>) Energy consumption estimates by energy sources within consuming sectors from 1960 through 1999; State rankings of consumption by major energy sources and total consumption per capita; thermal conversion factors for bituminous and lignite coal and natural gas; carbon emission factors for coal; resident population.

*State Energy Price and Expenditure Report*, DOE/EIA-0376. (Also available electronically at <http://www.eia.doe.gov/emeu/seper/contents.html>) Energy prices and expenditures by energy sources within consuming sectors from 1970 through 1997 based on the consumption values estimated in the *State Energy Data Report*; State rankings of prices and expenditures by major energy sources and total expenditures per capita.

*Energy Market Maps*, (Only available electronically via the Internet at <http://www.eia.doe.gov/emeu/repstates/maps/contents.html>) Customized maps showing the geographic location of key energy sites. Electric plants and transmission lines, oil ports, refineries, natural gas pipeline flows and market centers, and other sites are included. The series will

include maps on each of the 50 States plus Washington, DC, the nine Census Divisions, and the four Census Regions.

**Petroleum**

*Petroleum Supply Monthly*, DOE/EIA-0109. (Also available electronically at [http://www.eia.doe.gov/oil\\_gas/petroleum/data\\_publications/petroleum\\_supply\\_monthly/psm.html](http://www.eia.doe.gov/oil_gas/petroleum/data_publications/petroleum_supply_monthly/psm.html)) Production of crude oil; imports of residual fuel by State of entry and sulfur content; and refinery, bulk terminal, and natural gas plant stocks of selected petroleum products.

*Petroleum Supply Annual, Volume 1*, DOE/EIA-0340/1. (Also available electronically at [http://www.eia.doe.gov/oil\\_gas/petroleum/data\\_publications/petroleum\\_supply\\_annual/psa\\_volume1/psa\\_volume1.html](http://www.eia.doe.gov/oil_gas/petroleum/data_publications/petroleum_supply_annual/psa_volume1/psa_volume1.html)) Annual data on production of crude oil; imports of residual fuel by State of entry and sulfur content; refinery, bulk terminal, and natural gas plant stocks of selected petroleum products. Biennial tables on number, capacity and production capacity of operable refineries.

*Petroleum Supply Annual, Volume 2*, DOE/EIA-0340/2. (Only available electronically via the Internet at [http://www.eia.doe.gov/oil\\_gas/petroleum/data\\_publications/petroleum\\_supply\\_annual/psa\\_volume2/psa\\_volume2.html](http://www.eia.doe.gov/oil_gas/petroleum/data_publications/petroleum_supply_annual/psa_volume2/psa_volume2.html)) Data series as in Volume 1 shown by month for production of crude oil; refinery, bulk terminal, and natural gas plant stocks of selected petroleum products; and imports of residual fuel oil by State of entry and sulfur content.

*Petroleum Marketing Monthly*, DOE/EIA-0380. (Also available electronically at [http://www.eia.doe.gov/oil\\_gas/petroleum/data\\_publications/petroleum\\_marketing\\_monthly/pmm.html](http://www.eia.doe.gov/oil_gas/petroleum/data_publications/petroleum_marketing_monthly/pmm.html)) Prices of No. 2 distillate to residences; domestic crude oil first purchase price; refiner/reseller sales prices for conventional, oxygenated, reformulated, and unleaded regular, midgrade, premium, and all grades motor gasoline by type of seller; refiner sales prices and volumes to end users and for resale of motor gasoline, aviation gasoline, kerosene-type jet fuel, kerosene, No. 1 distillate, No. 2 distillate, No. 4 fuel oil, and residual fuel; prices of No. 2 distillate for selected States by seller type and end user; prices of No. 2 fuel oil for selected States by end user; residual fuel oil prices for selected States by sulfur content; and prime supplier sales volumes of motor gasoline by grades, aviation gasoline, kerosene-type and naphtha-type jet fuels, propane, residual fuel oil (by sulfur content), kerosene, No. 1 and No. 2 distillates, and No. 4 fuel oil. The explanatory notes contain Federal and State motor fuel taxes.

*Petroleum Marketing Annual*, DOE/EIA-0487. (Only available electronically via the Internet at [http://www.eia.doe.gov/oil\\_gas/petroleum/data\\_publications/petroleum\\_marketing\\_annual/pma.html](http://www.eia.doe.gov/oil_gas/petroleum/data_publications/petroleum_marketing_annual/pma.html)) Refiner/reseller sales prices for conventional, oxygenated, reformulated, and unleaded regular, midgrade, premium, and all grades of motor gasoline by seller type; refiner motor gasoline volumes by grade and formulation; refiner sales prices and volumes to end users and for resale of motor gasoline, aviation gasoline, kerosene-type jet fuels, kerosene, No. 1 distillate, No. 2 distillate, No. 4 fuel oil, and propane (consumer grade); sales prices of No. 2 distillate for selected States by seller type and end user; sales prices of No. 2 diesel for selected States by end user; residual fuel oil prices for selected States by sulfur content; prime supplier sales volumes of motor gasoline by seller type, grade, and formulation, aviation gasoline, kerosene-type and naphtha-type jet fuels, propane, residual fuel oil (by sulfur content), kerosene, distillate fuel oils, and No. 4 fuel oil; prices of No. 2 distillate to residences by PAD district and selected States; domestic crude oil first purchase prices; domestic crude oil first purchase prices for selected crude streams; No. 2 diesel fuel prices by sulphur content, sales type, and PAD district; Explanatory notes contain Federal and State motor fuel taxes.

*Fuel Oil and Kerosene Sales*, DOE/EIA-0535 (Annual). (Also available electronically at [http://www.eia.doe.gov/oil\\_gas/petroleum/data\\_publications/fuel\\_oil\\_and\\_kerosene\\_sales/foks.html](http://www.eia.doe.gov/oil_gas/petroleum/data_publications/fuel_oil_and_kerosene_sales/foks.html)) Sales and adjusted

sales of distillate fuel oil, residual fuel oil, and kerosene by the following sectors: residential, commercial, industrial, farm, electric utilities, oil companies, military, off-highway, onhighway, railroad, vessel bunkering, and "all other."

*Weekly Petroleum Status Report*, DOE/EIA-0208. (Also available electronically at [http://www.eia.doe.gov/oil\\_gas/petroleum/data\\_publications/weekly\\_petroleum\\_status\\_report/wpsr.html](http://www.eia.doe.gov/oil_gas/petroleum/data_publications/weekly_petroleum_status_report/wpsr.html)) During the winter season only has residential heating oil prices, wholesale heating oil prices, residential propane prices, and wholesale propane prices.

## Natural Gas

*U.S. Crude Oil, Natural Gas, and Natural Gas Liquids Reserves*, DOE/EIA-0216 (Annual). (Also available electronically at [http://www.eia.doe.gov/oil\\_gas/natural\\_gas/data\\_publications/crude\\_oil\\_natural\\_gas\\_reserves/cr99.html](http://www.eia.doe.gov/oil_gas/natural_gas/data_publications/crude_oil_natural_gas_reserves/cr99.html)) Crude oil proved reserves and indicated additional reserves, reserves changes, and production; total, nonassociated, and associated-dissolved natural gas proved reserves, reserves changes, and production (wet after lease separation); coalbed methane proved reserves and production; reported reserves of natural gas, wet after lease separation, in nonproducing reservoirs; dry natural gas and natural gas liquids proved reserves, reserves changes, and production; and natural gas plant liquids and lease condensate proved reserves and production. Appendix D contains historic reserves statistics, 1977 forward.

*Natural Gas Monthly*, DOE/EIA-0130. (Also available electronically at [http://www.eia.doe.gov/oil\\_gas/natural\\_gas/data\\_publications/natural\\_gas\\_monthly/ngm.html](http://www.eia.doe.gov/oil_gas/natural_gas/data_publications/natural_gas_monthly/ngm.html)) Marketed production of natural gas; gross withdrawals and marketed production; net withdrawals from underground storage; activities of underground storage operators; deliveries and average prices to residential, commercial, industrial, electric utility consumers; deliveries to all consumers; average city gate prices; and percentage of total deliveries represented by onsystem sales.

*Natural Gas Annual*, DOE/EIA-0131. (Also available electronically at [http://www.eia.doe.gov/oil\\_gas/natural\\_gas/data\\_publications/natural\\_gas\\_annual/nga.html](http://www.eia.doe.gov/oil_gas/natural_gas/data_publications/natural_gas_annual/nga.html)) Natural gas production, transmission, and consumption balance table; gross withdrawals and marketed production;

offshore withdrawals; number of producing wells and gas condensate wells; estimated total dry natural gas proved reserves; wellhead value and marketed production; natural gas processed, liquids extracted, and estimated extraction loss; interstate movements and movements across U.S. borders; additions to and withdrawals from gas storage; underground storage capacity; supplemental gas supplies; consumption of natural gas; number of consumers and quantity of natural gas delivered to consuming sectors, and heat content of total natural gas delivered; natural gas delivered for the account of others to commercial and industrial customers, and electric utilities; firm and interruptible deliveries to consuming sectors; average city gate price; average price of natural gas delivered to consuming sectors, including average firm and interruptible prices; average consumption and annual cost per customer for the residential sector; and extensive summary statistics tables for each State; leading suppliers of natural gas sold to residential customers in the United States; leading suppliers of natural gas sold to commercial consumers in the United States. Appendix A contains a comparison of electric utilities consumption data from forms EIA-176 and EIA-759; volumes of natural gas “unaccounted for;” and natural gas processing plant volumes and composition of liquids extracted, extraction losses, estimated heat content of extraction losses, and estimated dry natural gas proved reserves.

*Historical Natural Gas Annual*, DOE/EIA-E-0110. (Only available electronically via the Internet at [http://www.eia.doe.gov/oil\\_gas/natural\\_gas/data\\_publications/historical\\_natural\\_gas\\_annual/hnga.html](http://www.eia.doe.gov/oil_gas/natural_gas/data_publications/historical_natural_gas_annual/hnga.html)) Data for 1967 forward for gross withdrawals and marketed production; number of producing gas and gas condensate wells; average wellhead price, marketed production, and imputed wellhead value; movements of natural gas by state; changes to underground and liquefied natural gas storage; supplemental gas supplies 1980 forward; production, transmission, and consumption balance table; consumption of natural gas; firm and interruptible deliveries to consumers, 1993 forward; quantity and number of consumers of natural gas delivered by sector, and heat content of total natural gas delivered; average price and heat content price of natural gas delivered to consuming sectors; and average consumption and annual cost per consumer in the residential, commercial, and industrial sectors.

*Oil and Gas Field Code Master List*, DOE/EIA-0370 (Annual). (Also available electronically at [http://www.eia.doe.gov/oil\\_gas/natural\\_gas/data\\_publications/field\\_code\\_master\\_list/fcml.html](http://www.eia.doe.gov/oil_gas/natural_gas/data_publications/field_code_master_list/fcml.html)) List of

all oil and gas fields grouped by State including field name, county, field code, type of field, and year of discovery; list of authorities on oil and gas field nomenclature; coalbed methane fields; subdivisions of Alaska, California, Louisiana, New Mexico, Texas, and the Gulf of Mexico Continental Shelf Region.

## Coal

*U.S. Coal Reserves: A Review and Update*, DOE/EIA-0529. (Only available electronically via the internet at <http://www.eia.doe.gov/cneaf/coal/reserves/front-1.html>) Demonstrated reserve base of coal by State and rank; demonstrated reserve base of coal by State and potential mining method; demonstrated reserve base of coal by State, rank, and potentially minable by underground methods; demonstrated reserve base of coal by State, rank, and potentially minable by surface methods. Has numerous tables on Illinois. Appendix A1 and A2 contain estimates of recoverable reserves at active mines by heat and sulfur content.

*Weekly Coal Production*, DOE/EIA-0218. (Only available electronically via the Internet at [http://www.eia.doe.gov/cneaf/coal/weekly/weekly\\_html/wcpage.html](http://www.eia.doe.gov/cneaf/coal/weekly/weekly_html/wcpage.html)) Weekly coal production by region and State.

*Quarterly Coal Report*, DOE/EIA-0121. (Also available electronically at [http://www.eia.doe.gov/cneaf/coal/quarterly/qcr\\_sum.html](http://www.eia.doe.gov/cneaf/coal/quarterly/qcr_sum.html)) Coal production; destination of coal received at electric utilities by origin; origin of coal received at electric utilities by destination; coal receipts and average price at other industrial plants; total coal consumption by end use sectors; receipts and consumption by residential and commercial sectors; consumer coal stocks; stocks at electric utilities and other industrial plants; coal receipts; quantity and price of coal receipts, contract coal, and spot coal at electric utilities; average cost of coal receipts at electric utilities; coal receipts and prices by sulfur content at electric utilities; change in electric utility net generation; and cost and quality of all coal received at electric utilities that import coal by origin.

*Coal Industry Annual*, DOE/EIA-0584. (Also available electronically at [http://www.eia.doe.gov/cneaf/coal/cia/summary/cia\\_sum.html](http://www.eia.doe.gov/cneaf/coal/cia/summary/cia_sum.html)) Coal production and number of mines by type of mining, and mine production range; bituminous, subbituminous, lignite, and anthracite production by coal group; acreage, production and royalties from federal and Indian



leases; underground production by mining method; production and average mine price and real mine price by type of mining, disposition, coal rank, and productivity range; recoverable coal reserves and average recovery percentage by type of mining; productivity by mine type; weighted average days worked by type and mine production range; average price of coal delivered by end-use sector; average quality of coal received by electric utilities and manufacturing and coke plants; year-end producer and distributor stocks; imports received by electric utilities and manufacturing and coke plants; consumption and stocks by end-use sector; and detailed statistics for major coal-producing States; coal production by mine type, union type, and disposition; production, productive capacity, and capacity utilization of mines by mine type, rank, mining method, and production range; production and capacity utilization by recoverable reserves and union type; receipts of imported coal by country of origin and destination State; average number of miners by mine type, production range, and union type; productivity by mining method and production range; coal carbonized at coke plants; recoverable reserves by sulfur range and mine type; and domestic and foreign distribution by origin, destination, and method of transportation.

*State Coal Profiles*, (Only available electronically via the Internet at [http://www.eia.doe.gov/cneaf/coal/st\\_coal\\_pdf/content.html](http://www.eia.doe.gov/cneaf/coal/st_coal_pdf/content.html)). Coal statistics for the 16 major coal-producing States. Recoverable reserves, productive capacity, production by underground and surface mines, number of miners and productivity by type of mine, producer/distributor stocks, imports, distribution within the State and to other States, to Canada, and overseas. Coal consumption and stocks by consuming sector and prices at underground and surface mines and delivered to consuming sectors. Net generation of electricity by type of fuel. Coal used for electricity generation: average quality and delivered cost, heat, sulfur and ash content, price per million Btu and by short ton. Demonstrated and estimated reserves by sulfur content, recoverable reserves at mines, number of mines, production range in thousand short tons, by type of mine.

## Electric Power

*Electric Power Monthly*, DOE/EIA-0226. (Also available electronically in Adobe format at [http://www.eia.doe.gov/cneaf/electricity/epm/epm\\_sum.html](http://www.eia.doe.gov/cneaf/electricity/epm/epm_sum.html)) Net generation, total and by energy source; consumption of

fossil fuels by type of fuel; receipts by type, average cost of coal, total and by type of purchase; receipts by type, average cost of petroleum products, and average cost of petroleum products by type of purchase; receipts and average cost of heavy oil by sulfur content; receipts and average cost of natural gas by type of purchase; estimated sales of electricity to ultimate consumers by sector; revenue from sales to ultimate consumers by sector; estimated average revenue per kilowatthour by sector; and average heat content of fossil-fuel receipts.

*Electric Power Annual Volume I*, DOE/EIA-0348/1. (Also available electronically at [http://www.eia.doe.gov/cneaf/electricity/epav1/epav1\\_sum.html](http://www.eia.doe.gov/cneaf/electricity/epav1/epav1_sum.html)) Number of electricity generators and generating capability, by fuel source and by type of generating unit; net generation by type of generating unit and by energy source; consumption and receipts of fossil fuels; stocks of coal and petroleum; average cost of fossil fuel receipts; and estimated sales, revenue, and average revenue per kilowatthour to ultimate consumers.

*Electric Power Annual Volume II*, DOE/EIA-0348/2. (Also available electronically in Adobe format at [http://www.eia.doe.gov/cneaf/electricity/epav2/epav2\\_sum.html](http://www.eia.doe.gov/cneaf/electricity/epav2/epav2_sum.html)) Sales, number of consumers, revenue, and average revenue per kilowatthour by consuming sectors; sulfur dioxide, nitrogen oxides, and carbon dioxide emissions by type of fossil fuel; number and capacity of generators with environmental equipment by type of equipment for coal-fired generators and for petroleum-and gas-fired generators combined; average quality of fossil fuels burned; average flue gas desulfurization costs; installed capacity at nonutility generating facilities by energy source and gross generation for nonutility power producers by energy source and by receipts, sales, and facility use; and carbon-emission factors by type of coal.

*Cost and Quality of Fuels for Electric Utility Plants*, DOE/EIA-0191 (Only available electronically via the Internet at [http://www.eia.doe.gov/cneaf/electricity/cq/cq\\_sum.html](http://www.eia.doe.gov/cneaf/electricity/cq/cq_sum.html)) Data for steam-electric plants with a capacity of 50 megawatts or larger: total heating value and cost of fossil fuels; receipts of coal and average cost by sulfur content; receipts by type of coal; petroleum receipts by product type; gas receipts by type of gas; average cost of coal receipts by type of purchase, type of mining, rank, and sulfur content, of petroleum receipts by type of purchase, product, fuel-type, and sulfur content, and of gas receipts by type of purchase and fuel type; coal and petroleum receipts and average cost by sulfur content; average sulfur

content of coal shipped to electric utilities by State of origin; origin and destination of coal receipts; destination and origin of coal receipts; quantity, quality, and cost of coal; and average quality of coal by State of origin.

*Inventory of Electric Power Plants in the United States*, DOE/EIA-0095(Annual)/1. (Also available electronically at [http://www.eia.doe.gov/cneaf/electricity/ipp/ipp99\\_sum.html](http://www.eia.doe.gov/cneaf/electricity/ipp/ipp99_sum.html)) Number of generating units, nameplate capacity, new summer and winter capability, and planned capacity additions by energy source; generating units that started operation and retired from service during report year; generating units' capacity, type, energy source, and year of initial operation by company and plant; existing renewable generating units capacity, type, energy source and year of initial operation by company and plant; planned generating unit changes and additions by company and plant; existing capacity of nonutility power producers by owner and facility. Appendix C contains jointly-owned generating units by company and plant.

*Inventory of Nonutility Electric Power Plants in the United States*, DOE/EIA-0095(Annual)/2. (Also Available electronically at [http://www.eia.doe.gov/cneaf/electricity/ipp/ipp\\_sum2.html](http://www.eia.doe.gov/cneaf/electricity/ipp/ipp_sum2.html)) Existing capacity and planned capacity additions at US nonutilities by energy source and State; generating units that started operation at US nonutilities by State, company, and facilities; existing generating units at US nonutilities by State, company, and facilities; existing generating units powered by renewable energy sources at US nonutilities by State, company, and facilities. Appendix C contains US nonutility electric power plants.

*State Electricity Profiles*, DOE/EIA-0629. (Also available electronically at [http://www.eia.doe.gov/cneaf/electricity/st\\_profiles/e\\_profiles\\_sum.html](http://www.eia.doe.gov/cneaf/electricity/st_profiles/e_profiles_sum.html)) Capability, generation, and other summary data for the electric power industry; type and net capability of the five largest utility plants; top utilities with largest generating capability by type; generation, generating

capability, and consumption by prime energy source; utility delivered fuel prices for fossil fuels; emission estimates by type; retail sales by sector; and number of utilities, customers, retail sales, and revenue from retail sales by ownership type.

*Electric Sales and Revenue*, DOE/EIA-0540. (Also available electronically in Adobe format at [http://www.eia.doe.gov/cneaf/electricity/esr/esr\\_sum.html](http://www.eia.doe.gov/cneaf/electricity/esr/esr_sum.html)) Electric sales, revenues from sales, average revenue per kilowatthour, and number of consumers by consuming sector and by utility, plant, and class of ownership.

## **Nuclear Energy**

*Uranium Industry Annual*, DOE/EIA-0478. (Also available electronically at [http://www.eia.doe.gov/cneaf/nuclear/uia/summary/uia\\_sum.html](http://www.eia.doe.gov/cneaf/nuclear/uia/summary/uia_sum.html)) Employment in the uranium industry; and forward-cost uranium reserves.

## **Renewable Energy**

*Renewable Energy Annual*, DOE/EIA-0603. (Also available electronically at [http://www.eia.doe.gov/cneaf/solar.renewables/page/rea\\_data/rea\\_sum.html](http://www.eia.doe.gov/cneaf/solar.renewables/page/rea_data/rea_sum.html)) Shipments of solar thermal collectors by destination; renewable electric utility net generation by type of energy; nonutility gross generation by type of energy.

## **Alternative Fuels**

*Alternatives to Traditional Transportation Fuels* (Annual). (Only available electronically via the Internet at [http://www.eia.doe.gov/cneaf/alternate/page/datatables/atf1-13\\_00.html](http://www.eia.doe.gov/cneaf/alternate/page/datatables/atf1-13_00.html)) Estimated number of Alternative-Fueled Vehicles in use, by State and by fuel type.



## Glossary

**Anthracite:** The highest rank of coal; used primarily for residential and commercial space heating. It is a hard, brittle, and black lustrous coal, often referred to as hard coal, containing a high percentage of fixed carbon and a low percentage of volatile matter. The moisture content of fresh-mined anthracite generally is less than 15 percent. The heat content of anthracite ranges from 22 to 28 million Btu per ton on a moist, mineral-matter-free basis. The heat content of anthracite coal consumed in the United States averages 25 million Btu per ton, on the as-received basis (i.e., containing both inherent moisture and mineral matter). Note: Since the 1980's anthracite refuse or mine waste has been used for steam electric power generation. This fuel typically has a heat content of 15 million Btu per ton or less.

**Asphalt:** A dark brown-to-black cement-like material obtained by petroleum processing and containing bitumens as the predominant component; used primarily for road construction. It includes crude asphalt as well as the following finished products: cements, fluxes, the asphalt content of emulsions (exclusive of water), and petroleum distillates blended with asphalt to make cutback asphalts.

**ASTM:** The American Society for Testing and Materials.

**Aviation Gasoline:** A complex mixture of relatively volatile hydrocarbons with or without small quantities of additives, blended to form a fuel suitable for use in aviation reciprocating engines. Fuel specifications are provided in ASTM Specification D 910 and Military Specification MIL-G-5572. Note: Data on blending components are not counted in data on finished aviation gasoline.

**Aviation Gasoline Blending Components:** Naphthas that are used for blending or compounding into finished aviation gasoline (e.g., straight-run

gasoline, alkylate, and reformat). Excluded are oxygenates (alcohols and ethers), butane, and pentanes plus.

**Barrel (petroleum):** A unit of volume equal to 42 U.S. gallons.

**Barrels per Calendar Day (operable refinery capacity):** The amount of input that a distillation facility can process under usual operating conditions during a 24-hour period after making allowances for the following limitations: the capability of downstream facilities to absorb the output of crude oil processing facilities of a given refinery (no reduction is made when a planned distribution of intermediate streams through other than downstream facilities is part of a refinery's normal operation); the types and grades of inputs to be processed; the types and grades of products to be manufactured; the environmental constraints associated with refinery operations; the reduction of capacity for scheduled downtime, such as routine inspection, mechanical problems, maintenance, repairs, and turnaround; and the reduction of capacity for unscheduled downtime, such as mechanical problems, repairs, and slowdowns.

**Barrels per Stream Day (operable refinery capacity):** The maximum number of barrels of input that a distillation facility can process within a 24-hour period when running at full capacity under optimal crude and product slate conditions with no allowance for downtime.

**Bituminous Coal:** A dense, black coal, often with well-defined bands of bright and dull material; used primarily as fuel in steam-electric power generation, with substantial quantities also used for heat and power applications in manufacturing and to make coke. Bituminous coal is the most abundant coal in active U.S. mining regions. Its moisture content usually is less than 20 percent. The heat content of bituminous coal ranges from 21 to 30 million Btu per ton on a moist, mineral-matter-free basis. The heat content of bituminous coal consumed in the United States averages 24

million Btu per ton, on the as-received basis (i.e., containing both inherent moisture and mineral matter). In this report, bituminous coal includes subbituminous coal.

**British Thermal Unit (Btu):** The quantity of heat needed to raise the temperature of 1 pound of water by 1° F at or near 39.2° F.

**Butane:** A normally gaseous straight-chain or branched-chain hydrocarbon (C<sub>4</sub>H<sub>10</sub>). It is extracted from natural gas or refinery gas streams. It includes isobutane and normal butane and is designated in ASTM Specification D1835 and Gas Processors Association Specifications for commercial butane.

- *Isobutane:* A normally gaseous branched-chain hydrocarbon. It is a colorless paraffinic gas that boils at a temperature of 10.9° F. It is extracted from natural gas or refinery gas streams.
- *Normal Butane:* A normally gaseous straight-chain hydrocarbon. It is a colorless paraffinic gas that boils at a temperature of 31.1° F. It is extracted from natural gas or refinery gas streams.

**Butylene:** An olefinic hydrocarbon (C<sub>4</sub>H<sub>8</sub>) recovered from refinery processes.

**Catalytic Cracking:** A refining process that consists of using a catalyst and heat to break down the heavier and more complex hydrocarbon molecules into lighter and simpler molecules.

**Coal:** A readily combustible black or brownish-black rock whose composition, including inherent moisture, consists of more than 50 percent by weight and more than 70 percent by volume of carbonaceous material. It is formed from plant remains that have been compacted, hardened, chemically altered, and metamorphosed by heat and pressure over geologic time. Coals are classified according to their degree of progressive alteration from lignite to anthracite. In the U.S. classification, the ranks of coal include lignite, subbituminous coal, bituminous coal, and anthracite and are based on fixed carbon, volatile matter, heating value, and agglomerating (or caking) properties.

**Coal Coke:** A solid carbonaceous residue derived from low-ash, low-sulfur bituminous coal from which the volatile constituents are driven off by baking in an oven at temperatures as high as 2,000 degrees

Fahrenheit so that the fixed carbon and residual ash are fused together. Coke is used as a fuel and as a reducing agent in smelting iron ore in a blast furnace.

**Coke Plants:** Plants where coal is carbonized in slot or beehive ovens for the manufacture of coke.

**Commercial Sector:** An energy-consuming sector that consists of service-providing facilities and equipment of: businesses; Federal, State, and local governments; and other private and public organizations, such as religious, social, or fraternal groups. The commercial sector includes institutional living quarters. Common uses of energy associated with this sector include space heating, water heating, air conditioning, lighting, refrigeration, cooking, and running a wide variety of other equipment.

**Conversion Factor:** A number that translates units of one system into corresponding values of another system. Conversion factors can be used to translate physical units of measure for various fuels into Btu equivalents. See **British Thermal Unit**.

**Cord (wood):** A cord of wood measures 4 feet by 4 feet by 8 feet or 128 cubic feet.

**Crude Oil (Including Lease Condensate):** A mixture of hydrocarbons that exists in liquid phase in underground reservoirs and remains liquid at atmospheric pressure after passing through surface separating facilities. Included are lease condensate and liquid hydrocarbons produced from tar sands, gilsonite, and oil shale. Drip gases are also included, but topped crude oil (residual oil) and other unfinished oils are excluded. Where identifiable, liquids produced at natural gas processing plants and mixed with crude oil are likewise excluded.

**Crude Oil Used Directly:** Crude oil consumed as fuel by crude oil pipelines and on crude oil leases.

**Cubic foot (cf), natural gas:** The amount of natural gas contained at standard temperature and pressure (60 degrees Fahrenheit and 14.73 pounds standard per square inch) in a cube whose edges are one foot long.

**Diesel Fuel:** Fuel used for internal combustion in diesel engines; usually that fraction of crude oil that distills after kerosene. See **Distillate Fuel Oil**.

**Distillate Fuel Oil:** A general classification for one of the petroleum fractions produced in conventional distillation operations. It includes diesel fuels and fuel oils. Products known as No. 1, No. 2, and No. 4 diesel fuel are used in on-highway diesel engines, such as those in trucks and automobiles, as well as off-highway engines, such as those in railroad locomotives and agricultural machinery. Products known as No. 1, No. 2, and No. 4 fuel oils are used primarily for space heating and electric power generation.

**Electrical System Energy Losses:** The amount of energy lost during generation, transmission, and distribution of electricity, including plant and unaccounted-for uses.

**Electricity Sales:** The amount of kilowatthours sold in a given period of time; usually grouped by classes of service, such as residential, commercial, industrial, and other. "Other" sales include sales for public street and highway lighting and other sales to public authorities, sales to railroads and railways, and interdepartmental sales.

**Electric Utility:** A corporation, person, agency, authority, or other legal entity or instrumentality that owns and/or operates facilities for the generation, transmission, distribution, or sale of electric energy for use primarily by the public. Utilities provide electricity within a designated franchised service area and file forms listed in the *Code of Federal Regulations*, Title 18, Part 141. Note: Facilities that qualify as cogenerators or small power producers under the Public Utility Regulatory Power Act (PURPA) are not considered electric utilities. See **Nonutility power producer**.

**Electric Utility Sector:** The electric utility sector consists of privately and publicly owned establishments that generate, transmit, distribute, or sell electricity primarily for use by the public and that meet the definition of an electric utility. Nonutility power producers are not included in the electric utility sector.

**End-Use Sectors:** The residential, commercial, industrial, and transportation sectors of the economy.

**Energy:** The capacity for doing work as measured by the capability of doing work (potential energy) or the conversion of this capability to motion (kinetic energy). Energy has several forms, some of which are easily convertible and can be changed to another form useful for work. Most of the world's convertible energy comes from fossil fuels that are burned to produce heat that is then used as a transfer medium to mechanical or other means in order to accomplish tasks. Electrical energy is usually measured in kilowatthours, while heat energy is usually measured in British thermal units.

**Energy Consumption:** The use of energy as a source of heat or power or as an input in the manufacturing process.

**Energy Consumption, End-Use:** The sum of fossil fuel consumption by the four end-use sectors (residential, commercial, industrial, and transportation) plus electric utility sales to those sectors and generation of hydroelectric power by nonelectric utilities. **Net** end-use energy consumption excludes electrical system energy losses. **Total** end-use energy consumption includes electrical system energy losses.

**Energy Consumption, Total:** The sum of fossil fuel consumption by the five sectors (residential, commercial, industrial, transportation, and electric utility) plus hydroelectric power, nuclear electric power, net imports of coal coke, and electricity generated for distribution from wood and waste and geothermal, wind, photovoltaic, and solar thermal energy.

**Ethane:** A normally gaseous straight-chain hydrocarbon (C<sub>2</sub>H<sub>6</sub>). It is a colorless, paraffinic gas that boils at a temperature of -127.48° F. It is extracted from natural gas and refinery gas streams.

**Ethanol:** An anhydrous, denatured aliphatic alcohol (C<sub>2</sub>H<sub>5</sub>OH) intended for motor gasoline blending.

**Ethylene:** An olefinic hydrocarbon (C<sub>2</sub>H<sub>4</sub>) recovered from refinery processes or petrochemical processes.

**Exports:** Shipments of goods from within the 50 States and the District of Columbia to U.S. possessions and territories or to any foreign country.

**Federal Energy Regulatory Commission (FERC):** The Federal agency with jurisdiction over interstate electricity sales, wholesale electric rates,

hydroelectric licensing, natural gas pricing, oil pipeline rates, and gas pipeline certification. FERC is an independent regulatory agency within the Department of Energy and is the successor to the Federal Power Commission.

**Federal Power Commission (FPC):** The predecessor agency of the Federal Energy Regulatory Commission. The Federal Power Commission was created by an Act of Congress under the Federal Water Power Act on June 10, 1920. It was charged originally with regulating the electric power and natural gas industries. It was abolished on September 30, 1977, when the Department of Energy was created. Its functions were divided between the Department of Energy and the Federal Energy Regulatory Commission, an independent regulatory agency.

**Fiscal Year:** The U.S. Government's fiscal year runs from October 1 through September 30. The fiscal year is designated by the calendar year in which it ends; e.g., fiscal year 1992 begins on October 1, 1991, and ends on September 30, 1992.

**Fossil Fuel:** Any naturally occurring fuel, such as petroleum, coal, and natural gas, formed in the Earth's crust from long-term organic matter.

**Fossil-Fueled Steam-Electric Power Plant:** An electricity generation plant in which the prime mover is a turbine rotated by high-pressure steam produced in a boiler by heat from burning fossil fuels.

**Gasohol:** A blend of finished motor gasoline containing alcohol (generally ethanol but sometimes methanol) at a concentration of 10 percent or less by volume. Data on gasohol that has at least 2.7 percent oxygen, by weight, and is intended for sale inside carbon monoxide nonattainment areas are included in data on oxygenated gasoline.

**Geothermal Energy:** Hot water or steam extracted from geothermal reservoirs in the earth's crust. Water or steam extracted from geothermal reservoirs can be used for geothermal heat pumps, water heating, or electricity generation.

**Heat Content of a Quantity of Fuel, Gross:** The total amount of heat released when a fuel is burned. Coal, crude oil, and natural gas all include chemical compounds of carbon and hydrogen. When those fuels are

burned, the carbon and hydrogen combine with oxygen in the air to produce carbon dioxide and water. Some of the energy released in burning goes into transforming the water into steam and is usually lost. The amount of heat spent in transforming the water into steam is counted as part of gross heat content but is not counted as part of net heat content. Also referred to as the higher heating value. Btu conversion factors typically used in EIA represent gross heat content.

**Heat Content of a Quantity of Fuel, Net:** The amount of usable heat energy released when a fuel is burned under conditions similar to those in which it is normally used. Also referred to as the lower heating value. Btu conversion factors typically used in EIA represent gross heat content.

**Heavy Oil:** The fuel oils remaining after the lighter oils have been distilled off during the refining process. Except for start-up and flame stabilization, virtually all petroleum used in steam-electric power plants is heavy oil.

**Hydroelectric Power:** The production of electricity from the kinetic energy of falling water.

**Hydroelectric Power Plant:** A plant in which the turbine generators are driven by falling water.

**Imports:** Receipts of goods into the 50 States and the District of Columbia from U.S. possessions and territories or from any foreign country.

**Industrial Sector:** An energy-consuming sector that consists of all facilities and equipment used for producing, processing, or assembling goods. The industrial sector encompasses the following types of activity: manufacturing; agriculture, forestry, and fisheries; mining; and construction. Overall energy use in this sector is largely for process heat and cooling and powering machinery, with lesser amounts used for facility heating, air conditioning, and lighting. Fossil fuels are also used as raw material inputs to manufactured products. In this report, nonutility power producers are included in the industrial sector.

**Internal Combustion Electric Power Plant:** A power plant in which the prime mover is an internal combustion engine. Diesel or gas-fired engines are the principal types used in electric power plants. The plant is usually operated during periods of high demand for electricity.

**Isopentane:** A saturated branched-chain hydrocarbon (C<sub>5</sub>H<sub>12</sub>) obtained by fractionation of natural gasoline or isomerization of normal pentane.

**Jet Fuel, Kerosene-Type:** A kerosene-based product with a maximum distillation temperature of 400 degrees Fahrenheit at the 10-percent recovery point and a final maximum boiling point of 572 degrees Fahrenheit and meeting ASTM Specification D 1655 and Military Specifications MIL-T-5624P and MIL-T-83133D (Grades JP-5 and JP-8). It is used for commercial and military turbojet and turboprop aircraft engines.

**Jet Fuel, Naphtha-Type:** A fuel in the heavy naphtha boiling range having an average gravity of 52.8 degrees API, 20 to 90 percent distillation temperatures of 290 degrees to 470 degrees F., and meeting Military Specification MIL-T-5624L (Grade JP-4). It is used primarily for military turbojet and turboprop aircraft engines because it has a lower freeze point than other aviation fuels and meets engine requirements at high altitudes and speeds.

**Kilowatthour (kWh):** The electrical energy unit of measure equal to one thousand watts of power supplied to, or taken from, an electric circuit steadily for one hour.

**Kerosene:** A light petroleum distillate that is used in space heaters, cook stoves, and water heaters and is suitable for use as a light source when burned in wick-fed lamps. Kerosene has a maximum distillation temperature of 400 degrees Fahrenheit at the 10-percent recovery point, a final boiling point of 572 degrees Fahrenheit, and a minimum flash point of 100 degrees Fahrenheit. Included are No. 1-K and No. 2-K, the two grades recognized by ASTM Specification D 3699 as well as all other grades of kerosene called range or stove oil, which have properties similar to those of No. 1 fuel oil. See **Jet Fuel, Kerosene-Type**.

**Lease and Plant Fuel:** Natural gas used in well, field, and lease operations (such as gas used in drilling operations, heaters, dehydrators, and field compressors), and as fuel in natural gas processing plants.

**Lease Condensate:** A mixture consisting primarily of pentanes and heavier hydrocarbons which is recovered as a liquid from natural gas in lease separation facilities. This category excludes natural gas plant liquids, such as butane and propane, which are recovered at downstream natural gas processing plants or facilities.

**Light Oil:** Lighter fuel oils distilled off during the refining process. Virtually all petroleum used in internal combustion and gas-turbine engines is light oil.

**Lignite:** The lowest rank of coal, often referred to as brown coal, used almost exclusively as fuel for steam-electric power generation. It is brownish-black and has a high inherent moisture content, sometimes as high as 45 percent. The heat content of lignite ranges from 9 to 17 million Btu per ton on a moist, mineral-matter-free basis. The heat content of lignite consumed in the United States averages 13 million Btu per ton, on the as-received basis (i.e., containing both inherent moisture and mineral matter).

**Liquefied Petroleum Gases (LPG):** A group of hydrocarbon-based gases derived from crude oil refining or natural gas fractionation. They include ethane, ethylene, propane, propylene, normal butane, butylene, isobutane, and isobutylene. For convenience of transportation, these gases are liquefied through pressurization.

**Lubricants:** Substances used to reduce friction between bearing surfaces, or incorporated into other materials used as processing aids in the manufacture of other products, or used as carriers of other materials. Petroleum lubricants may be produced either from distillates or residues. Lubricants include all grades of lubricating oils, from spindle oil to cylinder oil to those used in greases.

**Methanol:** A light, volatile alcohol (CH<sub>3</sub>OH) eligible for motor gasoline blending.

**Miscellaneous Petroleum Products:** All finished petroleum products not classified elsewhere—for example, petrolatum, lube refining byproducts (aromatic extracts and tars), absorption oils, ram-jet fuel, petroleum rocket fuels, synthetic natural gas feedstocks, and specialty oils.

**Motor Gasoline:** A complex mixture of relatively volatile hydrocarbons with or without small quantities of additives, blended to form a fuel suitable for use in spark-ignition engines. Motor gasoline, as defined in ASTM Specification D-4814 or Federal Specification VV-G-1690C, is characterized as having a boiling range of 122 to 158 degrees Fahrenheit at the 10-percent recovery point to 365 to 374 degrees Fahrenheit at the 90-percent recovery point. "Motor Gasoline" includes conventional



gasoline; all types of oxygenated gasoline, including gasohol; and reformulated gasoline, but excludes aviation gasoline. *Note:* Volumetric data on blending components, such as oxygenates, are not counted in data on finished motor gasoline until the blending components are blended into the gasoline.

**Motor Gasoline Blending Components:** Naphthas (e.g., straight-run gasoline, alkylate, reformate, benzene, toluene, xylene) used for blending or compounding into finished motor gasoline. These components include reformulated gasoline blendstock for oxygenate blending (RBOB) but exclude oxygenates (alcohols, ethers), butane, and pentanes plus.

**Natural Gas (dry natural gas):** Natural gas which remains after: 1) the liquefiable hydrocarbon portion has been removed from the gas stream (i.e., gas after lease, field, and/or plant separation); and 2) any volumes of nonhydrocarbon gases have been removed where they occur in sufficient quantity to render the gas unmarketable. Dry natural gas is also known as consumer-grade natural gas. The parameters for measurement are cubic feet at 60 degrees Fahrenheit and 14.73 pounds per square inch absolute.

**Natural Gasoline:** A term used in the gas processing industry to refer to a mixture of liquid hydrocarbons (mostly pentanes and heavier hydrocarbons) extracted from natural gas. It includes isopentane.

**Net Interstate Flow of Electricity:** The difference between the sum of electricity sales and losses within a State and the total amount of electricity generated within that State. A positive number indicates that more electricity (including associated losses) came into the State than went out of the State during the year; conversely, a negative number indicates that more electricity (including associated losses) went out of the State than came into the State.

**Nonutilities:** See **Nonutility Power Producer**.

**Nonutility Power Producer:** A corporation, person, agency, authority, or other legal entity or instrumentality that owns or operates facilities for electric generation and is not an electric utility. Nonutility power producers include qualifying cogenerators, qualifying small power producers, and other nonutility generators (including independent power producers). Nonutility power producers are without a designated franchised service

area and do not file forms listed in the *Code of Federal Regulations*, Title 18, Part 141.

**North American Industrial Classification System (NAICS):** A system of numeric codes used to categorize businesses by type of activity in which they are engaged. It replaces the Standard Industrial Classification (SIC). This new structure was developed jointly by the United States, Canada, and Mexico to provide consistent, comparable information on an industry-by-industry basis for all three economies.

**Nuclear Electric Power (nuclear power):** Electricity generated by an electric power plant whose turbines are driven by steam produced by the heat from the fission of nuclear fuel in a reactor.

**Pentanes Plus:** A mixture of hydrocarbons, mostly pentanes and heavier, extracted from natural gas. Included are isopentane, natural gasoline, and plant condensate.

**Petrochemical Feedstocks:** Chemical feedstocks derived from petroleum principally for the manufacture of chemicals, synthetic rubber, and a variety of plastics. The categories reported are "Naphthas Less Than 401° F. Endpoint" and "Other Oils Equal to or Greater Than 401° F. Endpoint."

**Petroleum:** A broadly defined class of liquid hydrocarbon mixtures. Included are crude oil, lease condensate, unfinished oils, refined products obtained from the processing of crude oil, and natural gas plant liquids. Nonhydrocarbon compounds blended into finished petroleum products, such as additives and detergents, are included after blending has been completed.

**Petroleum Coke:** A residue high in carbon content and low in hydrogen that is the final product of thermal decomposition in the condensation process in cracking. This product is reported as marketable coke or catalyst coke.

**Petroleum Coke, Catalyst:** The carbonaceous residue that is deposited on and deactivates the catalyst used in many catalytic operations (e.g., catalytic cracking). Carbon is deposited on the catalyst, thus deactivating the catalyst. The catalyst is reactivated by burning off the carbon, which is used as a fuel in the refining process. That carbon or coke is not recoverable in a concentrated form.

**Petroleum Coke, Marketable:** Those grades of coke produced in delayed or fluid cokers that may be recovered as relatively pure carbon. Marketable petroleum coke may be sold as is or further purified by calcining.

**Petroleum Consumption:** The sum of all refined petroleum products supplied. For each refined petroleum product, the amount supplied is calculated by adding production and imports, then subtracting changes in primary stocks (net withdrawals are a plus quantity and net additions are a minus quantity) and exports.

**Petroleum Products:** Products obtained from the processing of crude oil (including lease condensate), natural gas, and other hydrocarbon compounds. Petroleum products include unfinished oils, liquefied petroleum gases, pentanes plus, aviation gasoline, motor gasoline, naphtha-type jet fuel, kerosene-type jet fuel, kerosene, distillate fuel oil, residual fuel oil, petrochemical feedstocks, special naphthas, lubricants, waxes, petroleum coke, asphalt, road oil, still gas, and miscellaneous products.

**Petroleum Products Supplied:** See **Petroleum Consumption**.

**Photovoltaic and Solar Thermal Energy:** Energy radiated by the sun as electromagnetic waves (electromagnetic radiation) that is converted into electricity by means of solar (photovoltaic) cells or concentrating (focusing) collectors.

**Plant Condensate:** One of the natural gas liquids, mostly pentanes and heavier hydrocarbons, recovered and separated as liquids at gas inlet separators or scrubbers in processing plants.

**Propane:** A normally gaseous straight-chain hydrocarbon ( $C_3H_8$ ). It is a colorless paraffinic gas that boils at a temperature of  $-43.67^\circ F$ . It is extracted from natural gas or refinery gas streams. It includes all products designated in ASTM Specification D1835 and Gas Processors Association Specifications for commercial propane and HD-5 propane.

**Propylene:** An olefinic hydrocarbon ( $C_3H_6$ ) recovered from refinery or petrochemical processes.

**Refinery (petroleum):** An installation that manufactures finished petroleum products from crude oil, unfinished oils, natural gas liquids, other hydrocarbons, and alcohol.

**Renewable energy resources:** Energy resources that are naturally replenishing but flow-limited. They are virtually inexhaustible in duration but limited in the amount of energy that is available per unit of time. Renewable energy resources include: alcohol fuels, wood, waste, hydro, geothermal, solar, wind, ocean thermal, wave action, and tidal action.

**Residential Sector:** An energy-consuming sector that consists of living quarters for private households. Common uses of energy associated with this sector include space heating, water heating, air conditioning, lighting, refrigeration, cooking, and running a variety of other appliances. The residential sector excludes institutional living quarters.

**Residual Fuel Oil:** The heavier oils, known as No. 5 and No. 6 fuel oils, that remain after the distillate fuel oils and lighter hydrocarbons are distilled away in refinery operations. It conforms to ASTM Specifications D396 and D975 and Federal Specification VV-F-815C. No. 5, a residual fuel oil of medium viscosity, is also known as Navy Special and is defined in Military Specification MIL-F-859E, including Amendment 2 (NATO Symbol F-770). It is used in steam-powered vessels in government service and inshore powerplants. No. 6 fuel oil includes Bunker C fuel oil and is used for the production of electric power, space heating, vessel bunkering, and various industrial purposes.

**Road Oil:** Any heavy petroleum oil, including residual asphaltic oil, used as a dust palliative and surface treatment on roads and highways. It is generally produced in six grades, from 0, the most liquid, to 5, the most viscous.

**Short Ton (coal):** A unit of weight equal to 2,000 pounds.

**Solar Energy:** The radiant energy of the sun that can be converted into other forms of energy, such as heat or electricity.

**Special Naphthas:** All finished products within the naphtha boiling range that are used as paint thinners, cleaners, or solvents. Those products are refined to a specified flash point. Special naphthas include all commercial hexane and cleaning solvents conforming to ASTM Specifications D1836

and D484, respectively. Naphthas to be blended or marketed as motor gasoline or aviation gasoline, or that are to be used as petrochemical and synthetic natural gas (SNG) feedstocks, are excluded.

**Standard Industrial Classification (SIC):** A set of codes developed by the Office of Management and Budget which categorizes industries into groups with similar economic activities. It has been replaced by **North American Industry Classification System**.

**Still Gas (refinery gas):** Any form or mixture of gas produced in refineries by distillation, cracking, reforming, and other processes. The principal constituents are methane, ethane, ethylene, normal butane, butylene, propane, and propylene. It is used primarily as refinery fuel and petrochemical feedstock.

**Subbituminous Coal:** A coal whose properties range from those of lignite to those of bituminous coal and used primarily as fuel for steam-electric power generation. It may be dull, dark brown or black, soft and crumbly, at the lower end of the range, to bright, jet black, hard, and relatively strong, at the upper end. Subbituminous coal contains 20 to 30 percent inherent moisture by weight. The heat content of subbituminous coal ranges from 17 to 24 million Btu per ton on a moist, mineral-matter-free basis. The heat content of subbituminous coal consumed in the United States averages 17 to 18 million Btu per ton, on the as-received basis (i.e., containing both inherent moisture and mineral matter). In this report, subbituminous coal is included in bituminous coal.

**Supplemental Gaseous Fuels:** Any gaseous substance that, introduced into or commingled with natural gas, increases the volume available for disposition. Such substances include, but are not limited to, propane-air, refinery gas, coke oven gas, still gas, manufactured gas, biomass gas, and air or inert gases added for Btu stabilization.

**Transportation Sector:** An energy-consuming sector that consists of all vehicles whose primary purpose is transporting people and/or goods from one physical location to another. Included are automobiles; trucks; buses; motorcycles; trains, subways, and other rail vehicles; aircraft; and ships, barges, and other waterborne vehicles. Vehicles whose primary purpose is not transportation (e.g., construction cranes and bulldozers, farming

vehicles, and warehouse tractors and forklifts) are classified in the sector of their primary use. In this report, natural gas used in the operation of natural gas pipelines is included in the transportation sector.

**Unfinished Oils:** All oils requiring further processing, except those requiring only mechanical blending. In most cases, these are produced by partial refining or are purchased in an unfinished state for conversion to finished products by further refining.

**Unfractionated Streams:** Mixtures of unsegregated natural gas liquid components, excluding those in plant condensate. This product is extracted from natural gas.

**United States:** The 50 States and the District of Columbia.

**Value Added by Manufacture:** A measure of manufacturing activity that is derived by subtracting the cost of materials (which covers materials, supplies, containers, fuel, purchased electricity, and contract work) from the value of shipments. This difference is then adjusted by the net change in finished goods and work-in-progress between the beginning and end-of-year inventories.

**Waste Energy:** Garbage, bagasse, sewerage gas, and other industrial, agricultural, and urban refuse used to generate electricity.

**Waxes:** Solid or semisolid materials derived from petroleum distillates or residues. Waxes are light-colored, more or less translucent crystalline masses, slightly greasy to the touch, consisting of a mixture of solid hydrocarbons in which the paraffin series predominates. Included are all marketable waxes, whether crude scale or fully refined. Waxes are used primarily as industrial coating for surface protection.

**Wind Energy:** The kinetic energy of wind converted into mechanical energy by wind turbines (i.e., blades rotating from a hub) that drive generators to produce electricity for distribution.

**Wood Energy:** Wood and wood products used as fuel, including round wood (cord wood), limb wood, wood chips, bark, sawdust, forest residues, charcoal, pulp waste, and spent pulping liquor.

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