

**Table B1. Energy-Related Carbon Dioxide Emissions from the Residential and Commercial Sectors, by Fuel Type, 1949-2002**  
(Million Metric Tons of Carbon Dioxide)

Year	Residential					Commercial				
	Natural Gas	Petroleum	Coal	Electricity	Total	Natural Gas	Petroleum	Coal	Electricity	Total
1949	55.2	85.1	110.9	69.5	320.6	18.2	48.3	154.6	54.9	276.0
1950	65.1	101.2	109.7	74.0	349.9	21.5	57.4	153.0	58.4	290.2
1951	79.8	110.3	96.8	82.6	369.5	26.3	62.6	135.0	65.2	289.1
1952	87.8	113.1	88.1	88.1	377.1	28.9	64.2	122.9	69.6	285.6
1953	90.9	114.9	75.6	96.2	377.7	30.0	65.2	105.5	75.9	276.6
1954	102.1	122.8	65.8	100.8	391.4	33.6	69.7	91.8	79.6	274.6
1955	113.2	132.0	65.4	110.0	420.5	37.3	74.9	91.2	86.8	290.2
1956	125.1	137.9	60.7	118.9	442.6	41.2	78.3	84.7	93.8	298.0
1957	134.6	133.8	46.6	127.4	442.4	44.4	75.9	65.0	100.6	285.9
1958	147.3	143.5	45.4	129.4	465.6	48.5	81.4	63.4	102.2	295.5
1959	159.6	146.2	38.8	143.3	487.9	52.6	83.0	54.1	113.1	302.8
1960	169.6	160.5	38.8	155.2	524.0	55.7	91.3	53.2	122.5	322.7
1961	177.5	165.2	35.3	162.7	540.7	58.8	92.7	48.5	126.9	326.9
1962	190.1	172.8	33.7	173.7	570.3	65.9	95.0	47.8	135.5	344.3
1963	195.1	173.9	29.4	190.2	588.6	68.7	93.6	40.8	152.7	355.8
1964	205.9	167.7	25.9	205.1	604.6	74.5	92.4	34.9	163.2	365.1
1965	212.2	175.2	24.1	220.9	632.4	78.3	103.1	33.1	175.5	390.1
1966	224.9	174.2	23.2	244.0	666.4	88.1	106.8	33.3	193.9	422.1
1967	234.4	180.3	20.0	256.1	690.7	106.4	110.4	28.5	204.4	449.6
1968	241.7	189.2	18.1	289.8	738.8	112.7	112.2	25.6	226.1	476.5
1969	256.8	192.4	16.8	319.3	785.3	122.3	112.7	24.1	243.3	502.5
1970	261.5	193.7	14.6	351.5	821.3	129.6	115.1	20.2	265.9	530.7
1971	268.8	195.3	13.7	369.7	847.5	135.6	111.9	18.9	279.9	546.3
1972	277.5	203.4	10.5	399.8	891.3	141.2	113.1	14.6	306.6	575.5
1973	264.0	198.7	10.0	430.9	903.6	140.4	115.9	13.8	331.1	601.2
1974	258.6	181.0	9.8	420.0	869.4	138.0	105.2	14.1	319.8	577.1
1975	265.2	175.5	8.0	414.8	863.6	134.9	96.5	11.4	330.3	573.2
1976	271.8	191.6	7.8	437.9	909.1	143.4	107.8	11.2	355.1	617.4
1977	259.4	189.9	7.9	473.0	930.3	134.5	111.6	11.3	376.9	634.2
1978	263.3	184.7	7.9	479.8	935.6	139.5	106.8	11.9	378.3	636.5
1979	266.7	149.6	6.9	491.8	915.0	149.6	98.6	10.6	391.3	650.1
1980	256.3	123.0	5.7	523.9	908.9	140.7	95.5	8.3	407.9	652.5
1981	245.6	108.4	6.7	517.0	877.7	136.1	80.5	9.2	426.5	652.2
1982	250.8	101.1	7.1	513.1	872.1	141.0	74.5	10.6	428.1	654.1
1983	238.3	94.8	7.1	526.0	866.3	132.2	82.4	11.0	434.8	660.5
1984	247.3	93.6	7.7	537.1	885.7	136.9	87.4	11.9	457.4	693.6
1985	241.0	103.8	6.5	548.2	899.6	132.2	75.7	10.1	476.2	694.0
1986	234.0	101.9	6.5	552.7	895.1	125.8	80.3	10.0	482.7	698.8
1987	234.2	105.3	6.2	576.1	921.8	131.9	78.7	9.4	504.6	724.6
1988	251.2	109.3	6.2	602.9	969.5	144.8	75.7	9.6	529.9	760.0
1989	260.2	108.7	2.6	618.1	989.6	147.9	70.8	11.1	554.1	784.0
1990	238.8	97.9	2.4	611.7	950.8	142.6	69.4	12.1	555.4	779.5
1991	248.0	96.6	2.2	620.0	966.7	148.5	65.9	11.1	555.5	781.0
1992	255.2	99.2	2.3	611.0	967.7	152.6	62.0	11.2	555.3	781.1
1993	269.0	100.5	2.3	654.9	1026.7	155.3	56.6	11.2	583.1	806.2
1994	263.3	98.6	2.0	656.1	1020.0	157.3	57.2	11.1	594.0	819.6
1995	263.0	95.8	1.6	665.4	1025.7	164.3	53.0	11.0	608.3	836.7
1996	284.2	102.6	1.6	696.9	1085.3	171.3	54.2	11.5	630.9	867.9
1997	270.2	98.4	1.5	706.5	1076.6	174.3	50.6	12.2	674.1	911.2
1998	246.5	90.4	1.2	758.1	1096.2	163.5	47.4	8.7	702.8	922.4
1999	256.5	100.8	1.3	765.3	1123.9	165.2	47.2	9.7	711.4	933.5
2000	270.3	107.1	1.1	790.8	1169.4	174.3	54.1	8.6	768.9	1005.9
2001	259.5	105.6	1.1	794.6	1160.8	165.0	53.0	9.2	791.1	1018.3
2002 P	267.2	104.0	1.1	820.7	1193.0	169.4	52.6	9.2	781.8	1012.9

Notes: P = Preliminary.

Sources: 1990-2002 Estimates documented in this report.  
1960-1989 Calculated from energy data in the *State Energy Data Report*.  
1949-1959 Calculated from energy data in the *Annual Energy Review*.

**Table B2. Energy-Related Carbon Dioxide Emissions from the Industrial and Transportation Sectors, by Fuel Type, 1949-2002**

(Million Metric Tons of Carbon Dioxide)

Year	Industrial					Transportation				
	Natural Gas	Petroleum	Coal	Electricity	Total/1	Natural Gas	Petroleum	Coal	Electricity	Total
1949	168.4	211.7	482.4	121.5	984.0	7.1	436.8	157.5	1.9	603.3
1950	187.4	241.8	514.1	140.8	1084.2	10.4	475.5	142.5	2.1	630.5
1951	213.8	258.5	549.6	156.0	1177.9	11.5	523.1	125.6	2.2	662.3
1952	220.7	262.6	489.4	160.3	1133.0	12.6	546.8	89.7	2.1	651.2
1953	227.0	269.4	526.5	180.0	1203.0	12.6	572.3	66.9	2.3	654.0
1954	228.1	275.4	419.8	177.8	1101.1	13.7	578.6	42.0	2.3	636.6
1955	248.1	303.8	498.7	221.7	1272.3	16.4	623.0	38.5	2.4	680.2
1956	257.1	312.1	502.7	239.6	1311.5	16.4	646.9	31.0	2.5	696.8
1957	269.8	307.9	490.6	240.0	1308.2	16.9	659.4	22.1	2.5	700.9
1958	275.0	314.5	402.3	224.7	1216.5	19.1	672.1	10.5	2.5	704.2
1959	298.3	331.3	391.7	247.3	1268.5	19.1	698.7	8.1	2.8	728.7
1960	315.3	328.2	403.9	249.8	1297.3	19.0	716.8	6.9	2.4	745.0
1961	318.5	326.6	386.1	255.5	1286.7	20.6	730.8	1.7	2.6	755.7
1962	333.1	337.3	390.0	268.6	1328.9	20.9	762.4	1.6	2.5	787.3
1963	349.2	342.9	408.2	286.4	1386.7	23.1	790.1	1.5	2.4	817.1
1964	367.9	361.4	436.8	305.6	1471.7	23.8	813.5	1.6	2.2	841.0
1965	379.5	374.4	454.6	325.4	1533.9	27.3	839.3	1.5	2.1	870.2
1966	403.2	387.0	461.8	357.0	1609.0	29.2	884.0	1.4	2.2	916.7
1967	416.4	386.8	437.7	365.2	1606.0	31.3	928.1	1.0	2.0	962.4
1968	445.1	393.2	430.7	395.8	1664.8	32.1	1005.5	0.9	1.9	1040.4
1969	476.1	408.0	415.7	418.5	1718.2	34.2	1047.7	0.7	1.8	1084.4
1970	490.4	407.2	408.7	430.4	1736.7	39.1	1082.6	0.6	1.9	1124.2
1971	508.6	407.9	347.7	436.3	1700.5	40.2	1125.6	0.4	1.8	1168.0
1972	510.2	445.2	352.1	475.8	1783.2	41.5	1193.3	0.3	1.9	1237.0
1973	539.6	470.8	358.1	510.4	1879.0	39.3	1260.5	0.2	1.8	1301.9
1974	517.4	444.3	347.2	497.5	1806.6	36.1	1230.1	0.2	1.9	1268.3
1975	442.5	420.1	325.9	485.1	1673.5	31.4	1245.2	0.0	2.1	1278.8
1976	454.5	465.5	323.3	544.5	1787.9	29.5	1308.6	0.0	2.2	1340.4
1977	448.4	505.4	306.9	576.3	1837.0	28.7	1361.4	0.0	2.2	1392.4
1978	444.2	498.2	304.6	575.5	1822.6	28.6	1418.3	0.0	1.9	1448.7
1979	443.2	526.6	323.6	606.4	1899.8	32.3	1405.2	0.0	2.2	1439.8
1980	434.1	477.2	284.6	594.9	1787.4	34.3	1349.6	0.0	2.3	1386.2
1981	426.4	413.6	284.5	590.9	1714.0	34.8	1334.6	0.0	2.3	1371.7
1982	367.1	387.3	230.6	523.7	1506.7	32.4	1305.8	0.0	2.2	1340.5
1983	349.1	349.5	225.8	543.4	1466.4	26.7	1316.4	0.0	2.2	1345.3
1984	381.7	396.7	258.5	576.6	1612.3	28.8	1358.4	0.0	2.4	1389.6
1985	362.5	375.2	253.3	577.6	1567.4	27.5	1378.8	0.0	2.6	1408.9
1986	341.5	381.0	242.1	560.2	1523.2	26.5	1433.8	0.0	2.6	1462.9
1987	373.2	385.9	244.1	581.3	1585.4	28.4	1476.0	0.0	2.5	1506.9
1988	392.1	398.7	259.4	605.3	1659.1	33.4	1530.6	0.0	2.7	1566.8
1989	412.7	375.4	254.3	631.8	1677.0	34.3	1547.3	0.0	2.7	1584.3
1990	432.9	380.3	249.5	625.7	1688.8	35.9	1530.9	0.0	2.7	1569.5
1991	439.8	354.3	234.8	614.1	1643.9	32.7	1514.0	0.0	2.6	1549.4
1992	459.9	399.8	225.7	634.8	1723.5	32.1	1535.8	0.0	2.6	1570.5
1993	465.9	368.9	224.8	643.0	1705.1	34.0	1554.1	0.0	2.5	1590.6
1994	464.6	381.9	226.1	655.5	1733.5	37.4	1591.0	0.0	3.3	1631.7
1995	490.5	365.5	224.3	646.0	1732.0	38.2	1620.1	0.0	3.2	1661.4
1996	506.9	393.0	219.0	663.0	1785.2	38.9	1663.3	0.0	3.2	1705.3
1997	507.3	394.7	215.3	677.9	1800.4	41.1	1678.4	0.0	3.2	1722.7
1998	495.0	387.0	201.2	685.4	1776.0	35.1	1719.5	0.0	3.3	1757.9
1999	477.7	404.3	196.6	682.0	1767.0	35.6	1767.1	0.0	3.3	1806.0
2000	483.5	378.2	199.5	705.8	1774.1	35.5	1810.2	0.0	3.6	1849.2
2001	441.5	410.0	192.7	637.2	1685.3	33.9	1789.7	0.0	3.7	1827.3
2002 P	432.7	412.8	179.4	643.1	1673.7	35.2	1811.2	0.0	3.4	1849.7

Notes: P = Preliminary.

1/ Industrial total includes net coke imports.

Sources: 1990-2002 Estimates documented in this report.

1960-1989 Calculated from energy data in the *State Energy Data Report*.

1949-1959 Calculated from energy data in the *Annual Energy Review*.

**Table B3. Total Energy-Related Carbon Dioxide Emissions by End-Use Sector, and the Electric Power Sector, by Fuel Type, 1949-2002**  
(Million Metric Tons of Carbon Dioxide)

Year	End-Use Sector					Electric Power Sector			
	Residential	Commercial	Industrial	Transportation	Total	Natural Gas	Petroleum	Coal	Total/1
1949	320.6	276.0	984.0	603.3	2183.9	30.1	31.9	185.8	247.8
1950	349.9	290.2	1084.2	630.5	2354.8	34.3	36.6	204.4	275.3
1951	369.5	289.1	1177.9	662.3	2498.8	41.7	31.1	233.2	306.0
1952	377.1	285.6	1133.0	651.2	2446.8	49.6	32.7	237.9	320.2
1953	377.7	276.6	1203.0	654.0	2511.2	56.5	39.7	258.3	354.5
1954	391.4	274.6	1101.1	636.6	2403.7	63.9	32.7	263.9	360.4
1955	420.5	290.2	1272.3	680.2	2663.3	62.8	36.6	321.5	420.9
1956	442.6	298.0	1311.5	696.8	2748.8	67.6	35.0	352.1	454.7
1957	442.4	285.9	1308.2	700.9	2737.4	72.9	38.9	358.6	470.4
1958	465.6	295.5	1216.5	704.2	2681.8	75.0	38.1	345.6	458.7
1959	487.9	302.8	1268.5	728.7	2787.9	89.2	42.8	374.4	506.4
1960	524.0	322.7	1297.3	745.0	2889.0	94.2	43.0	392.7	529.9
1961	540.7	326.9	1286.7	755.7	2910.1	99.7	43.4	404.6	547.7
1962	570.3	344.3	1328.9	787.3	3030.9	107.4	43.5	429.4	580.3
1963	588.6	355.8	1386.7	817.1	3148.2	117.2	45.5	469.1	631.7
1964	604.6	365.1	1471.7	841.0	3282.5	127.2	49.3	499.7	676.2
1965	632.4	390.1	1533.9	870.2	3426.6	127.1	56.2	540.7	724.0
1966	666.4	422.1	1609.0	916.7	3614.3	143.2	68.7	585.2	797.1
1967	690.7	449.6	1606.0	962.4	3708.8	150.6	78.6	598.5	827.7
1968	738.8	476.5	1664.8	1040.4	3920.5	172.3	91.8	649.5	913.6
1969	785.3	502.5	1718.2	1084.4	4090.4	190.5	122.1	670.4	983.0
1970	821.3	530.7	1736.7	1124.2	4212.9	213.7	164.8	671.2	1049.7
1971	847.5	546.3	1700.5	1168.0	4262.3	216.0	193.9	677.8	1087.7
1972	891.3	575.5	1783.2	1237.0	4487.0	215.6	240.2	728.2	1184.0
1973	903.6	601.2	1879.0	1301.9	4685.7	197.3	272.9	804.0	1274.3
1974	869.4	577.1	1806.6	1268.3	4521.3	185.4	261.1	792.8	1239.3
1975	863.6	573.2	1673.5	1278.8	4389.1	170.6	245.7	816.0	1232.3
1976	909.1	617.4	1787.9	1340.4	4654.8	166.5	269.9	903.4	1339.7
1977	930.3	634.2	1837.0	1392.4	4793.8	173.3	302.7	952.4	1428.4
1978	935.6	636.5	1822.6	1448.7	4843.5	173.9	309.7	951.9	1435.4
1979	915.0	650.1	1899.8	1439.8	4904.7	190.3	255.3	1046.3	1491.8
1980	908.9	652.5	1787.4	1386.2	4735.0	200.8	202.8	1125.3	1529.0
1981	877.7	652.2	1714.0	1371.7	4615.6	198.4	169.6	1168.5	1536.7
1982	872.1	654.1	1506.7	1340.5	4373.4	176.1	120.8	1170.1	1467.1
1983	866.3	660.5	1466.4	1345.3	4338.5	158.0	119.0	1229.4	1506.5
1984	885.7	693.6	1612.3	1389.6	4581.3	169.7	99.1	1304.4	1573.5
1985	899.6	694.0	1567.4	1408.9	4569.9	166.7	84.0	1353.7	1604.6
1986	895.1	698.8	1523.2	1462.9	4580.0	141.9	112.0	1343.9	1598.2
1987	921.8	724.6	1585.4	1506.9	4738.6	154.9	96.9	1412.4	1664.5
1988	969.5	760.0	1659.1	1566.8	4955.5	143.0	120.6	1476.9	1740.8
1989	989.6	784.0	1677.0	1584.3	5034.8	168.5	130.4	1507.1	1806.7
1990	950.8	779.5	1688.8	1569.5	4988.6	176.0	99.2	1519.4	1795.5
1991	966.7	781.0	1643.9	1549.4	4941.0	179.4	92.6	1519.1	1792.2
1992	967.7	781.1	1723.5	1570.5	5042.7	186.6	77.1	1538.8	1803.7
1993	1026.7	806.2	1705.1	1590.6	5128.6	187.9	88.0	1606.5	1883.6
1994	1020.0	819.6	1733.5	1631.7	5204.7	211.1	82.8	1613.8	1908.9
1995	1025.7	836.7	1732.0	1661.4	5255.8	228.4	59.5	1633.8	1922.9
1996	1085.3	867.9	1785.2	1705.3	5443.7	204.9	64.5	1723.5	1994.0
1997	1076.6	911.2	1800.4	1722.7	5510.9	218.9	73.3	1768.3	2061.7
1998	1096.2	922.4	1776.0	1757.9	5552.5	248.0	102.9	1797.5	2149.6
1999	1123.9	933.5	1767.0	1806.0	5630.5	259.9	95.6	1805.2	2161.9
2000	1169.4	1005.9	1774.1	1849.2	5798.6	280.7	89.9	1895.7	2269.2
2001	1160.8	1018.3	1685.3	1827.3	5691.7	289.1	99.6	1834.9	2226.6
2002 P	1193.0	1012.9	1673.7	1849.7	5729.3	299.1	72.2	1874.7	2249.0

Notes: Emissions from the electric power sector are apportioned to each end-use sector according to their share of electricity sales.

P = Preliminary.

1/Electric power sector total includes emissions from municipal solid waste and geothermal electricity generation.

Sources: 1990-2002 Estimates documented in this report.  
1960-1989 Calculated from energy data in the *State Energy Data Report*.  
1949-1959 Calculated from energy data in the *Annual Energy Review*.