

Table 1. 2002 Summary Statistics

Item	Value	U.S. Rank
Michigan		
NERC Region(s).....		ECAR/MAPP/MAIN
Primary Energy Source		Coal
Net Summer Capability (megawatts).....	29,335	9
Electric Utilities	23,279	9
Independent Power Producers & Combined Heat and Power	6,056	13
Net Generation (megawatthours).....	117,889,087	12
Electric Utilities	100,451,718	8
Independent Power Producers & Combined Heat and Power	17,437,370	15
Emissions (thousand short tons)		
Sulfur Dioxide.....	355	12
Nitrogen Oxide.....	154	13
Carbon Dioxide.....	79,781	11
Sulfur Dioxide/sq. mile.....	6	19
Nitrogen Oxide/sq. mile.....	3	18
Carbon Dioxide/sq. mile.....	1,404	20
Utility and ESP Retail Electricity Sales (megawatthours).....	107,310,696	10
Utility Retail Electricity Sales (megawatthours)	102,810,494	10
ESP Retail Electricity Sales (megawatthours).....	4,500,202	10
Direct Use (megawatthours).....	2,811,015	14
Average Retail Price (cents/kWh).....	6.92	19

See footnotes at end of tables.

Table 2. Ten Largest Plants by Generating Capability, 2002

Plant	Energy Sources	Operating Company	Net Capability (MW)
Michigan			
1. Monroe	Petroleum, Coal	Detroit Edison Co	3,034
2. Donald C Cook.....	Nuclear	Indiana Michigan Power Co	2,060
3. Ludington.....	Hydro	Consumers Energy Co	1,872
4. Midland Cogeneration	Gas	Midland Cogeneration Venture	1,808
5. Dan E Karn.....	Petroleum, Gas, Coal	Consumers Energy Co	1,787
6. St Clair.....	Gas, Petroleum, Coal	Detroit Edison Co	1,690
7. Belle River.....	Petroleum, Gas, Coal	Detroit Edison Co	1,499
8. J H Campbell.....	Petroleum, Coal	Consumers Energy Co	1,448
9. Fermi.....	Petroleum, Nuclear	Detroit Edison Co	1,162
10. Greenwood.....	Petroleum, Gas	Detroit Edison Co	1,010

See footnotes at end of tables.

Table 3. Top Five Utilities Ranked by Retail Sales, 2002
(Megawatthours)

Utility	All Sectors	Residential	Commercial	Industrial	Other
Michigan					
A. Detroit Edison Company.....	48,345,861	15,957,874	18,395,314	13,589,485	403,188
B. Consumers Energy Company.....	35,746,492	12,698,034	11,361,137	11,453,899	233,422
C. Indiana Michigan Power Co.....	3,039,931	1,196,874	751,232	1,079,556	12,269
D. Quest Energy LLC.....	2,748,187	0	1,462,970	1,285,217	0
E. Wisconsin Electric Power Co.....	2,711,308	164,576	146,120	2,398,275	2,337
Total.....	92,591,779	30,017,358	32,116,773	29,806,432	651,216
Percentage of Utility Sales.....	86	87	85	88	68

See footnotes at end of tables.

Table 4. Electric Power Industry Generating Capability by Primary Energy Source, 1993, 1997, and 2002
(Megawatts)

Energy Source	1993	1997	2002	Annual Growth Rate 1993-2002 (Percent)	Percentage Share 1993	Percentage Share 1997	Percentage Share 2002
Michigan							
Coal	11,929	11,796	11,627	-0.3	47.4	47.5	39.6
Petroleum	1,505	2,367	1,567	.5	6.0	9.5	5.3
Natural Gas	403	405	2,132	20.3	1.6	1.6	7.3
Other Gases	282	11	0	NM	1.1	.0	.0
Dual Fired	2,128	1,280	1,913	-1.2	8.5	5.2	6.5
Nuclear	3,967	3,922	3,938	-.1	15.8	15.8	13.4
Hydroelectric	2,200	2,129	2,101	-.5	8.7	8.6	7.2
Total Electric Utilities	22,412	21,909	23,279	.4	89.0	88.1	79.4
Coal	643	636	354	-6.4	2.6	2.6	1.2
Petroleum	2	2	43	37.6	.0	.0	.1
Natural Gas	1,651	1,782	5,157	13.5	6.6	7.2	17.6
Dual Fired	88	79	87	-.1	.3	.3	.3
Hydroelectric	26	26	27	.3	.1	.1	.1
Other Renewables	346	426	388	1.3	1.4	1.7	1.3
Total IPP's & Combined Heat and Power	2,757	2,950	6,056	9.1	11.0	11.9	20.6
Coal	12,572	12,432	11,981	-.5	49.9	50.0	40.8
Petroleum	1,507	2,369	1,610	.7	6.0	9.5	5.5
Natural Gas	2,054	2,186	7,289	15.1	8.2	8.8	24.8
Other Gases	282	11	0	NM	1.1	.0	.0
Dual Fired	2,215	1,359	2,000	-1.1	8.8	5.5	6.8
Nuclear	3,967	3,922	3,938	-.1	15.8	15.8	13.4
Hydroelectric	2,226	2,154	2,129	-.5	8.8	8.7	7.3
Other Renewables	346	426	388	1.3	1.4	1.7	1.3
Total Electric Industry	25,169	24,859	29,335	1.7	100.0	100.0	100.0

See footnotes at end of tables.

Table 5. Electric Power Industry Generation of Electricity by Primary Energy Source, 1993, 1997, and 2002
(Megawatthours)

Energy Source	1993	1997	2002	Annual Growth Rate 1993-2002 (Percent)	Percentage Share 1993	Percentage Share 1997	Percentage Share 2002
Michigan							
Coal	61,558,991	65,552,021	65,389,899	0.7	57.9	61.3	55.5
Petroleum	619,777	602,053	1,090,767	6.5	.6	.6	.9
Natural Gas	680,194	838,412	2,336,031	14.7	.6	.8	2.0
Nuclear	28,525,000	21,913,808	31,087,454	1.0	26.8	20.5	26.4
Hydroelectric	866,145	658,322	522,382	-5.5	.8	.6	.4
Other Renewables	0	0	25,185	NM	.0	.0	.0
Total Electric Utilities	92,250,107	89,564,616	100,451,718	1.0	86.7	83.7	85.2
Coal	2,400,090	1,892,829	1,309,610	-6.5	2.3	1.8	1.1
Petroleum	141,798	155,600	12,718	-23.5	.1	.1	.0
Natural Gas	9,340,020	12,549,899	13,517,387	4.2	8.8	11.7	11.5
Other Gases	3,371	959	10,108	13.0	.0	.0	.0
Hydroelectric	122,483	119,758	111,310	-1.1	.1	.1	.1
Other Renewables	2,073,571	2,668,976	2,476,219	2.0	1.9	2.5	2.1
Other	37,112	18,122	18	-57.2	.0	.0	.0
Total IPP's & Combined Heat and Power	14,118,445	17,406,144	17,437,370	2.4	13.3	16.3	14.8
Coal	63,959,081	67,444,850	66,699,509	.5	60.1	63.0	56.6
Petroleum	761,575	757,653	1,103,485	4.2	.7	.7	.9
Natural Gas	10,020,214	13,388,311	15,853,418	5.2	9.4	12.5	13.4
Other Gases	3,371	959	10,108	13.0	.0	.0	.0
Nuclear	28,525,000	21,913,808	31,087,454	1.0	26.8	20.5	26.4
Hydroelectric	988,628	778,080	633,692	-4.8	.9	.7	.5
Other Renewables	2,073,571	2,668,976	2,501,404	2.1	1.9	2.5	2.1
Other	37,112	18,122	18	-57.2	.0	.0	.0
Total Electric Industry	106,368,552	106,970,760	117,889,087	1.1	100.0	100.0	100.0

See footnotes at end of tables.

Table 6. Electric Power Delivered Fuel Prices for Coal, Petroleum, and Natural Gas, 1993, 1997, and 2002

Fuel	1993	1997	2002	Annual Growth Rate 1993-2002 (Percent)
Michigan				
Coal (2002 cents per million Btu)	170.4	140.7	131.7	-2.8
Average heat value (Btu per pound)	10,853	10,566	9,991	-.9
Average sulfur Content(percent)7	.7	.6	-1.9
Petroleum (2002 cents per million Btu)	340.9	317.2	273.8	-2.4
Average heat value (Btu per gallon)	147,229	135,205	146,871	*
Average sulfur Content(percent)9	1.6	1.9	9.0
Gas (2002 cents per million Btu)	269.4	263.4	352.1	3.0
Average heat value (Btu per cubic foot)	379	310	1,007	11.5

See footnotes at end of tables.

Table 7. Electric Power Industry Emissions Estimates, 1993, 1997, and 2002
(Thousand Short Tons)

Emission Type	1993	1997	2002	Annual Growth Rate 1993-2002 (Percent)
Michigan				
Sulfur Dioxide				
Coal	372	421	350	-0.7
Petroleum	5	7	4	-4.6
Gas.....*	*	*	*	1.7
Other.....	2	2	2	-2.1
Total	380	430	355	-8
Nitrogen Oxide				
Coal	291	188	135	-8.2
Petroleum	1	1	1	-6.7
Gas.....	10	13	13	3.6
Other.....	3	4	5	7.3
Total	304	207	154	-7.3
Carbon Dioxide				
Coal	67,051	71,693	70,623	.6
Petroleum	822	838	1,082	3.1
Gas.....	5,294	7,088	7,977	4.7
Other.....	50	86	100	7.9
Total	73,217	79,705	79,781	1.0

See footnotes at end of tables.

Table 8. Retail Sales, Revenue, and Average Revenue per Kilowatthour by Sector, 1993, 1997, and 2001

Sector	1993	1997	2002	Annual Growth Rate 1993-2002 (Percent)	Percentage Share 1993	Percentage Share 1997	Percentage Share 2002
Michigan							
Retail Sales (thousand megawatthours)							
Residential.....	26,770	28,726	34,336	2.8	30.6	29.5	32.0
Commercial.....	28,930	32,411	37,969	3.1	33.0	33.3	35.4
Industrial	30,572	35,430	34,046	1.2	34.9	36.4	31.7
Other	1,317	824	960	-3.4	1.5	.8	.9
Total	87,589	97,391	107,311	2.3	100.0	100.0	100.0
Retail Sales Revenue (million 2002 dollars)							
Residential.....	2,433	2,530	2,845	1.8	34.9	35.9	38.3
Commercial.....	2,583	2,610	2,794	.9	37.1	37.1	37.6
Industrial	1,818	1,809	1,684	-.8	26.1	25.7	22.7
Other	134	92	100	-3.2	1.9	1.3	1.3
Total	6,969	7,041	7,423	.7	100.0	100.0	100.0
Average Revenue per Kilowatthour (2002 cents/kWh)							
Residential.....	9.09	8.81	8.28	-1.0	NA	NA	NA
Commercial.....	8.93	8.05	7.36	-2.1	NA	NA	NA
Industrial	5.95	5.11	4.95	-2.0	NA	NA	NA
Other	10.19	11.18	10.43	.3	NA	NA	NA
Total	7.96	7.23	6.92	-1.5	NA	NA	NA

See footnotes at end of tables.

Table 9. Utility Retail Sales Statistics, 2002

Item	Investor-Owned	Public	Federal	Cooperative	Energy Service Providers	Total
Michigan						
Number of Entities	8	44	0	9	6	67
Number of Retail Customers	3,989,397	450,696	0	241,973	16,947	4,699,013
Retail Sales (thousand megawatthours).....	88,973	11,548	0	2,289	4,500	107,311
Percentage of Retail Sales.....	82.91	10.76	.00	2.13	4.19	100.00
Revenue from Retail Sales (million 2002 dollars)	6,253	729	0	212	229	7,423
Percentage of Revenue.....	84.23	9.82	.00	2.86	3.09	100.00
Revenue per Kilowatthour (2002 cents/kWh).....	7.03	6.32	.00	9.28	0	6.92

IPP = Independent Power Producer.

NA = Not available.

NM = Not meaningful.

* = Value is less than half of the smallest unit of measure (e.g., for values with no decimals, the smallest unit is "1" and values under 0.5 are shown as "**".)