Table 7. Energy Consumption Estimates by Source, Selected Years, 1960-2006, Michigan

Year	Coal [a]	Natural Gas [b]	Petroleum											Nuclear Electric Power	Hydro-electric Power [f]	Biomass [a,g]	Other [a,h]	Net Interstate Flow of Electricity/Losses [i]	Total [j]
			Asphalt & Road Oil [a]	Aviation Gasoline [a]	Distillate Fuel Oil [a]	Jet Fuel [a]	Kerosene [a]	LPG [a,c]	Lubricants [a]	Motor Gasoline [d]	Residual Fuel Oil [a]	Other [a,e]	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels											Million kWh					
1960	25,930	370	2,936	1,312	30,235	3,369	4,072	2,827	2,497	65,782	11,840	4,051	128,920	0	2,030	– –	– –	– –	– –
1965	33,132	556	2,264	2,619	30,287	4,377	5,880	3,716	3,025	78,044	8,594	8,077	146,882	181	1,813	– –	– –	– –	– –
1970	34,065	809	3,881	718	38,141	7,365	3,124	6,202	3,157	96,831	10,056	9,775	179,250	375	1,704	– –	– –	– –	– –
1975	31,198	884	3,886	347	42,170	5,776	1,349	7,475	2,751	108,255	18,291	10,245	200,545	7,176	1,110	– –	– –	– –	– –
1980	31,110	865	3,507	488	27,643	6,646	1,233	6,736	3,274	97,025	13,289	17,512	177,353	15,891	1,200	– –	– –	– –	– –
1985	32,793	709	2,779	201	26,024	6,570	507	14,225	2,979	93,447	3,109	8,260	158,101	13,452	997	– –	– –	– –	– –
1990	34,817	879	3,950	215	24,357	10,057	270	14,901	3,352	99,913	2,728	10,959	170,701	21,611	1,628	– –	– –	– –	– –
1995	36,037	976	4,955	231	27,444	8,818	366	14,497	3,198	110,546	1,602	14,132	185,790	24,448	1,597	– –	– –	– –	– –
1996	36,958	1,027	3,703	215	28,754	9,045	421	18,306	3,104	110,520	1,777	16,676	192,519	26,829	1,784	– –	– –	– –	– –
1997	36,116	994	7,777	197	29,692	9,483	354	14,524	3,279	112,389	1,553	17,713	196,961	21,914	1,712	– –	– –	– –	– –
1998	38,255	876	6,488	167	29,895	9,025	387	13,108	3,432	114,913	2,113	17,860	197,388	12,494	1,397	– –	– –	– –	– –
1999	38,510	951	6,669	286	31,573	9,116	694	15,339	3,468	121,027	2,491	17,312	207,974	14,591	1,458	– –	– –	– –	– –
2000	37,294	963	5,866	205	30,824	7,214	433	16,308	3,416	118,160	2,358	16,747	201,530	18,882	1,428	– –	– –	– –	– –
2001	37,730	906	5,629	79	29,515	6,219	302	18,876	3,130	119,472	1,590	9,206	194,018	26,711	1,562	– –	– –	– –	– –
2002	36,413	966	5,313	167	28,994	6,016	208	21,039	3,093	121,745	1,992	9,544	198,111	31,087	1,669	– –	– –	– –	– –
2003	36,973	925	5,363	89	29,463	2,695	304	20,578	2,859	119,019	2,153	10,852	193,377	27,954	1,386	– –	– –	– –	– –
2004	38,503	917	6,052	80	31,139	3,733	275	20,826	2,897	118,967	2,098	11,317	197,385	30,562	1,540	– –	– –	– –	– –
2005	39,442	914	R 6,060	84	30,315	3,431	290	23,157	2,882	119,584	2,209	10,342	R 198,354	32,872	1,462	– –	– –	– –	– –
2006	37,965	809	5,185	67	29,929	4,124	214	15,036	2,808	118,106	1,201	10,320	186,990	29,066	1,520	– –	– –	– –	– –
			Trillion Btu																
1960	653.1	383.0	19.5	6.6	176.1	18.2	23.1	11.3	15.1	345.6	74.4	23.9	713.9	0.0	21.8	37.3	4.3	38.8	1,852.2
1965	830.2	563.6	15.0	13.2	176.4	24.0	33.3	14.9	18.3	410.0	54.0	45.4	804.7	2.1	19.0	36.9	-1.4	36.4	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	54.4	979.1	4.1	17.9	36.4	-1.4	39.7	2,726.0
1975	751.0	894.8	25.8	1.7	245.6	32.1	7.6	27.8	16.7	568.7	115.0	57.8	1,098.9	79.0	11.6	35.9	1.1	17.2	2,889.4
1980	759.0	874.7	23.3	2.5	161.0	37.1	7.0	24.7	19.9	509.7	83.6	96.6	965.4	173.3	12.5	90.6	19.4	R -9.8	R 2,885.0
1985	781.9	R 717.0	18.4	1.0	151.6	36.7	2.9	51.3	18.1	490.9	19.5	45.6	836.0	142.9	10.4	100.2	1.3	R 67.9	R 2,661.4
1990	788.0	R 879.3	26.2	1.1	141.9	56.6	1.5	54.0	20.3	524.8	17.2	60.9	904.5	228.7	16.9	k 80.2	-36.4	R -26.5	k R 2,839.1
1995	786.7	R 971.0	32.9	1.2	159.9	50.0	2.1	52.5	19.4	576.5	10.1	78.1	982.6	256.9	16.5	88.2	20.7	R -38.7	R 3,083.8
1996	796.3	R 1,017.1	24.6	1.1	167.5	51.3	2.4	66.1	18.8	576.5	11.2	91.5	1,010.9	281.8	18.4	102.9	7.7	R -65.0	R 3,170.0
1997	781.1	R 987.6	51.6	1.0	173.0	53.8	2.0	52.5	19.9	585.9	9.8	97.6	1,047.0	230.0	17.5	95.0	5.9	R -0.6	R 3,163.5
1998	826.9	R 871.6	43.1	0.8	174.1	51.2	2.2	47.4	20.8	598.9	13.3	98.4	1,050.2	131.1	14.2	90.4	-3.9	R 91.4	R 3,071.9
1999	832.6	R 947.0	44.3	1.4	183.9	51.7	3.9	55.5	21.0	630.7	15.7	94.4	1,102.5	152.5	14.9	91.9	0.7	R 118.4	R 3,260.5
2000	799.8	R 971.7	38.9	1.0	179.5	40.9	2.5	58.8	20.7	615.6	14.8	91.2	1,064.0	196.9	14.6	94.8	0.3	R 103.1	R 3,245.2
2001	789.7	R 924.5	37.4	0.4	171.9	35.3	1.7	68.2	19.0	622.4	10.0	50.5	1,016.8	279.1	16.1	76.6	-5.7	R -15.7	R 3,081.3
2002	739.9	966.4	35.3	0.8	168.9	34.1	1.2	76.0	18.8	634.0	12.5	52.3	1,033.9	324.5	17.0	70.7	-6.0	R -26.0	R 3,120.3
2003	747.9	924.8	35.6	0.5	171.6	15.3	1.7	74.7	17.3	619.7	13.5	60.2	1,010.2	291.3	14.2	81.1	-10.1	R 86.2	R 3,145.6
2004	773.8	918.5	40.2	0.4	181.4	21.2	1.6	75.3	17.6	620.4	13.2	62.8	1,034.0	318.7	15.4	84.3	R -8.7	R -15.7	R 3,120.2
2005	799.5	928.4	R 40.2	0.4	176.6	19.5	1.6	83.8	17.5	624.0	13.9	57.2	R 1,034.7	R 343.0	14.6	82.3	R -6.6	R -31.3	R 3,164.6
2006	770.9	823.7	34.4	0.3	174.3	23.4	1.2	54.2	17.0	616.3	7.6	57.5	986.3	303.3	15.1	79.7	-4.2	23.2	2,998.0

[a] The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the Technical Notes for each type of energy.

[b] Physical unit data include supplemental gaseous fuels (SGF) for all years; Btu data exclude SGF for 1980 forward.

[c] Liquefied petroleum gases.

[d] Beginning in 1993, includes fuel ethanol blended into motor gasoline.

[e] "Other" is the subtotal of 16 petroleum products consumed in the industrial sector. See a full description in the Technical Notes, Section 4, "Other Petroleum Products."

[f] Conventional hydroelectric power. Includes pumped-storage hydroelectricity, which cannot be separately identified, from 1960 through 1989.

[g] Wood and waste. Prior to 2001, includes non-biomass waste.

[h] "Other" is geothermal, wind, photovoltaic, solar thermal energy, and net imports of electricity.

[i] 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.

[j] From 1981 through 1992, includes fuel ethanol blended into motor gasoline but not shown in the motor gasoline column.

[k] 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. – – = Not applicable.

Where shown, R = Revised data and (s) = Physical unit value less than +0.5 and greater than -0.5 or Btu value less than +0.05 and greater 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 Technical Notes.

Table 8. Residential Sector Energy Consumption Estimates, Selected Years, 1960-2006, Michigan

Year	Coal [a]	Natural Gas [b]	Petroleum				Wood [a]	Geothermal	Solar/PV [d]	Retail Electricity Sales	Net Energy	Electrical System Energy Losses [e]	Total
			Distillate Fuel Oil [a]	Kerosene [a]	LPG [a,c]	Total							
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels				Thousand Cords			Million Kilowatthours			
1960	1,414	202	17,380	765	1,940	20,084	1,103	– –	– –	8,728	– –	– –	– –
1965	1,007	271	16,334	1,279	2,346	19,959	890	– –	– –	11,309	– –	– –	– –
1970	481	340	18,839	545	4,493	23,877	829	– –	– –	17,103	– –	– –	– –
1975	119	335	19,420	302	5,219	24,942	796	– –	– –	20,886	– –	– –	– –
1980	65	387	9,195	83	3,375	12,653	2,115	– –	– –	22,260	– –	– –	– –
1985	56	341	6,192	425	4,427	11,045	2,193	– –	– –	22,302	– –	– –	– –
1990	54	327	4,842	217	6,538	11,597	1,373	– –	– –	25,319	– –	– –	– –
1995	33	380	3,815	233	8,015	12,062	739	– –	– –	28,623	– –	– –	– –
1996	32	400	3,859	230	10,758	14,847	768	– –	– –	28,901	– –	– –	– –
1997	21	380	3,662	254	10,166	14,082	503	– –	– –	28,726	– –	– –	– –
1998	16	320	2,653	272	9,500	12,426	447	– –	– –	29,808	– –	– –	– –
1999	2	351	2,994	606	10,763	14,364	471	– –	– –	30,661	– –	– –	– –
2000	2	368	2,902	356	11,080	14,338	506	– –	– –	30,707	– –	– –	– –
2001	1	344	2,654	222	13,848	16,724	673	– –	– –	32,305	– –	– –	– –
2002	32	368	2,212	160	14,789	17,161	683	– –	– –	34,336	– –	– –	– –
2003	4	386	2,216	264	14,776	17,255	719	– –	– –	33,669	– –	– –	– –
2004	R 18	362	2,040	221	13,021	15,283	737	– –	– –	33,104	– –	– –	– –
2005	R 12	359	1,945	219	13,915	16,079	R 809	– –	– –	36,095	– –	– –	– –
2006	1	316	1,504	153	8,999	10,655	737	– –	– –	34,622	– –	– –	– –
							Trillion Btu						
1960	35.0	209.0	101.2	4.3	7.8	113.4	22.1	0.0	0.0	29.8	409.2	73.6	482.9
1965	24.8	274.8	95.1	7.3	9.4	111.8	17.8	0.0	0.0	38.6	467.8	92.1	559.9
1970	11.4	345.1	109.7	3.1	17.0	129.8	16.6	0.0	0.0	58.4	561.3	141.2	702.6
1975	2.8	343.0	113.1	1.7	19.4	134.2	15.9	0.0	0.0	71.3	567.2	171.4	738.6
1980	1.6	394.9	53.6	0.5	12.4	66.4	42.3	0.0	0.0	76.0	581.1	183.1	R 764.2
1985	1.4	R 347.5	36.1	2.4	16.0	54.4	43.9	0.0	0.0	76.1	R 523.2	175.3	R 698.5
1990	1.3	R 334.3	28.2	1.2	23.7	53.1	27.5	f 0.6	f 0.2	86.4	f R 503.4	199.8	f R 703.1
1995	0.8	R 386.4	22.2	1.3	29.0	52.6	14.8	0.7	0.3	97.7	R 553.2	221.8	R 775.0
1996	0.8	R 404.1	22.5	1.3	38.9	62.6	15.4	0.8	0.3	98.6	R 582.5	R 224.2	R 806.8
1997	0.5	R 386.0	21.3	1.4	36.8	59.5	10.1	0.8	0.3	98.0	R 555.2	222.1	R 777.2
1998	0.4	R 326.1	15.5	1.5	34.3	51.3	8.9	0.8	0.3	101.7	R 489.5	R 230.6	R 720.2
1999	0.1	R 357.0	17.4	3.4	38.9	59.8	9.4	0.9	0.3	104.6	R 532.1	R 239.3	R 771.4
2000	(s)	R 376.0	16.9	2.0	40.0	58.9	10.1	0.9	0.2	104.8	R 551.0	R 238.3	R 789.3
2001	(s)	R 352.7	15.5	1.3	50.0	66.8	13.5	1.0	0.2	110.2	R 544.4	R 245.6	R 790.1
2002	0.8	367.2	12.9	0.9	53.4	67.2	13.7	1.1	0.2	117.2	567.4	R 261.2	R 828.5
2003	0.1	385.0	12.9	1.5	53.6	68.0	14.4	1.4	0.2	114.9	584.0	R 253.5	R 837.5
2004	R 0.4	361.8	11.9	1.3	47.1	60.2	14.7	1.5	0.3	112.9	552.0	R 249.9	R 801.9
2005	0.3	364.4	11.3	1.2	50.4	62.9	R 16.2	R 1.8	0.3	123.2	R 569.1	R 269.4	R 838.4
2006	(s)	321.8	8.8	0.9	32.4	42.1	14.7	2.1	0.4	118.1	499.3	255.4	754.7

[a] The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the Technical Notes for each type of energy.

[b] Physical unit data include supplemental gaseous fuels (SGF) for all years; Btu data exclude SGF for 1980 forward.

[c] Liquefied petroleum gases.

[d] Solar thermal and photovoltaic energy. Includes small amounts consumed by the commercial sector that cannot be separately identified. See Section 5 of the Technical Notes for explanation of estimation methodology.

[e] Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

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

– – = Not applicable.

Where shown, R = Revised data and (s) = Physical unit value less than 0.5 or Btu value 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 Technical Notes.

Table 9. Commercial Sector Energy Consumption Estimates, Selected Years, 1960-2006, Michigan

Year	Coal [a]	Natural Gas [b]	Petroleum						Hydro-electric Power [f]	Biomass [a,g]	Geothermal	Retail Electricity Sales	Net Energy	Electrical System Energy Losses [h]	Total [i,j]
			Distillate Fuel Oil [a]	Kerosene [a]	LPG [a,c]	Motor Gasoline [d]	Residual Fuel Oil [a]	Total [e]							
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels						Million Kilowatthours			Million Kilowatthours			
1960	982	43	3,212	566	342	324	1,175	5,619	0	– –	– –	6,381	– –	– –	– –
1965	760	85	3,019	946	414	536	839	5,754	0	– –	– –	9,124	– –	– –	– –
1970	378	133	3,482	403	793	804	558	6,040	0	– –	– –	13,021	– –	– –	– –
1975	279	182	3,589	224	921	954	390	6,078	0	– –	– –	14,596	– –	– –	– –
1980	243	190	3,123	15	596	823	225	4,781	0	– –	– –	16,765	– –	– –	– –
1985	197	158	2,449	11	781	699	274	4,216	0	– –	– –	18,421	– –	– –	– –
1990	214	159	2,010	18	1,154	770	71	4,023	[k] 0	– –	– –	21,986	– –	– –	– –
1995	221	194	1,638	102	1,414	77	5	3,236	0	– –	– –	32,153	– –	– –	– –
1996	238	201	1,766	149	1,899	77	5	3,896	0	– –	– –	32,896	– –	– –	– –
1997	167	192	1,917	56	1,794	76	55	3,897	0	– –	– –	33,231	– –	– –	– –
1998	129	163	1,506	66	1,676	208	2	3,458	0	– –	– –	34,710	– –	– –	– –
1999	18	179	1,401	37	1,899	171	3	3,511	0	– –	– –	36,040	– –	– –	– –
2000	12	187	1,577	33	1,955	159	5	3,728	0	– –	– –	36,793	– –	– –	– –
2001	8	174	1,525	35	2,444	433	17	4,453	0	– –	– –	35,925	– –	– –	– –
2002	234	176	966	28	2,610	247	64	3,915	0	– –	– –	36,835	– –	– –	– –
2003	28	186	1,149	19	2,607	203	90	4,069	0	– –	– –	35,391	– –	– –	– –
2004	[R] 161	175	1,063	22	2,298	191	49	3,623	0	– –	– –	38,632	– –	– –	– –
2005	[R] 141	175	1,267	28	2,456	207	4	3,963	0	– –	– –	39,600	– –	– –	– –
2006	8	154	1,337	26	1,588	91	2	3,043	0	– –	– –	39,299	– –	– –	– –
									Trillion Btu						
1960	24.3	44.5	18.7	3.2	1.4	1.7	7.4	32.4	0.0	0.4	0.0	21.8	123.4	53.8	177.2
1965	18.7	86.0	17.6	5.4	1.7	2.8	5.3	32.7	0.0	0.3	0.0	31.1	168.9	74.3	243.2
1970	9.0	134.7	20.3	2.3	3.0	4.2	3.5	33.3	0.0	0.3	0.0	44.4	221.7	107.5	329.3
1975	6.5	186.4	20.9	1.3	3.4	5.0	2.4	33.1	0.0	0.3	0.0	49.8	276.0	119.8	395.8
1980	5.9	194.0	18.2	0.1	2.2	4.3	1.4	26.2	0.0	1.0	0.0	57.2	284.4	137.9	422.3
1985	4.8	[R] 160.7	14.3	0.1	2.8	3.7	1.7	22.5	0.0	1.0	0.0	62.9	[R] 252.0	144.8	[R] 396.8
1990	5.3	[R] 162.8	11.7	0.1	4.2	4.0	0.4	20.5	[k] 0.0	[k] 7.3	[k] 0.0	75.0	[k] 270.9	173.5	[k] 444.4
1995	5.4	[R] 197.3	9.5	0.6	5.1	0.4	(s)	15.7	0.0	9.0	0.1	109.7	[R] 337.3	[R] 249.1	[R] 586.5
1996	5.9	[R] 203.7	10.3	0.8	6.9	0.4	(s)	18.4	0.0	10.8	0.1	112.2	[R] 351.2	[R] 255.2	[R] 606.4
1997	4.1	[R] 195.4	11.2	0.3	6.5	0.4	0.3	18.7	0.0	11.0	0.2	113.4	[R] 342.7	[R] 256.9	[R] 599.6
1998	3.2	[R] 166.6	8.8	0.4	6.1	1.1	(s)	16.3	0.0	9.4	0.2	118.4	[R] 314.2	[R] 268.6	[R] 582.8
1999	0.4	[R] 182.6	8.2	0.2	6.9	0.9	(s)	16.1	0.0	9.4	0.2	123.0	[R] 331.8	[R] 281.3	[R] 613.0
2000	0.3	[R] 191.0	9.2	0.2	7.1	0.8	(s)	17.3	0.0	8.6	0.2	125.5	[R] 343.0	[R] 285.5	[R] 628.5
2001	0.2	[R] 178.3	8.9	0.2	8.8	2.3	0.1	20.3	0.0	[R] 2.6	0.2	122.6	[R] 324.2	[R] 273.2	[R] 597.3
2002	5.5	175.8	5.6	0.2	9.4	1.3	0.4	16.9	0.0	[R] 6.5	0.3	125.7	[R] 330.6	[R] 280.2	[R] 610.8
2003	0.7	185.8	6.7	0.1	9.5	1.1	0.6	17.9	0.0	[R] 6.5	[R] 0.4	120.8	[R] 332.0	[R] 266.5	[R] 598.5
2004	3.9	175.1	6.2	0.1	8.3	1.0	0.3	15.9	0.0	[R] 7.0	0.4	131.8	[R] 334.2	[R] 291.6	[R] 625.8
2005	3.4	177.4	7.4	0.2	8.9	1.1	(s)	17.5	0.0	[R] 6.6	[R] 0.5	135.1	[R] 340.6	[R] 295.5	[R] 636.2
2006	0.2	156.8	7.8	0.1	5.7	0.5	(s)	14.1	0.0	6.8	0.5	134.1	312.6	290.0	602.6

[a] The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the Technical Notes for each type of energy.
[b] Physical unit data include supplemental gaseous fuels (SGF) for all years; Btu data exclude SGF for 1980 forward.
[c] Liquefied petroleum gases.
[d] Beginning in 1993, includes fuel ethanol blended into motor gasoline.
[e] Includes small amounts of petroleum coke not shown separately.
[f] Conventional hydroelectric power. Does not include pumped-storage hydroelectricity.
[g] Wood and waste. Prior to 2001, includes non-biomass waste.
[h] Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.
[i] Small amounts of solar thermal and photovoltaic energy consumed in the commercial sector cannot be separately identified and are included in residential consumption.
[j] From 1981 through 1992, includes fuel ethanol blended into motor gasoline but not shown in the motor gasoline column.
[k] There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.
– – = Not applicable.
Where shown, R = Revised data and (s) = Physical unit value less than 0.5 or Btu value 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 Technical Notes.

Table 10. Industrial Sector Energy Consumption Estimates, Selected Years, 1960-2006, Michigan

Year	Coal [a]	Natural Gas [b]	Petroleum									Hydro-electric Power [f]	Biomass [a,g]	Geo-thermal	Retail Electricity Sales	Net Energy	Electrical System Energy Losses [h]	Total [i]
			Asphalt and Road Oil [a]	Distillate Fuel Oil [a]	Kero-sene [a]	LPG [a,c]	Lubri-cants [a]	Motor Gasoline [d]	Residual Fuel Oil [a]	Other [a,e]	Total							
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels									Million kWh			Million kWh			
1960	13,011	117	2,936	7,091	2,741	524	1,221	3,151	9,574	4,051	31,288	212	– –	– –	12,482	– –	– –	– –
1965	15,193	192	2,264	7,518	3,655	923	1,898	2,694	6,660	8,077	33,689	146	– –	– –	19,350	– –	– –	– –
1970	13,061	262	3,881	8,502	2,175	854	1,834	2,758	4,557	9,775	34,336	123	– –	– –	25,169	– –	– –	– –
1975	9,885	300	3,886	8,749	823	1,239	1,430	1,889	3,343	10,245	31,603	121	– –	– –	28,866	– –	– –	– –
1980	8,652	249	3,507	4,804	1,135	2,637	1,796	967	3,213	17,512	35,572	117	– –	– –	30,656	– –	– –	– –
1985	6,645	190	2,779	4,408	70	8,725	1,635	1,192	2,213	8,260	29,283	117	– –	– –	33,704	– –	– –	– –
1990	4,719	290	3,950	3,957	34	6,926	1,839	976	1,416	10,959	30,058	[j] 23	– –	– –	35,062	– –	– –	– –
1995	4,383	254	4,955	3,457	32	4,826	1,755	1,310	402	14,132	30,869	27	– –	– –	33,921	– –	– –	– –
1996	4,283	260	3,703	3,889	42	5,425	1,703	1,418	415	16,673	33,267	29	– –	– –	34,499	– –	– –	– –
1997	3,770	255	7,777	3,986	44	2,361	1,799	1,271	415	17,713	35,366	26	– –	– –	35,430	– –	– –	– –
1998	3,857	224	6,488	4,122	50	1,127	1,883	1,097	400	17,757	32,924	25	– –	– –	35,983	– –	– –	– –
1999	4,636	248	6,669	4,909	51	2,323	1,903	1,017	332	17,247	34,452	26	– –	– –	37,276	– –	– –	– –
2000	4,004	247	5,866	4,055	44	3,006	1,875	1,060	622	16,738	33,267	27	– –	– –	37,268	– –	– –	– –
2001	3,793	233	5,629	3,494	45	2,434	1,718	1,835	352	9,204	24,711	26	– –	– –	34,174	– –	– –	– –
2002	2,781	250	5,313	2,767	19	3,457	1,697	1,931	344	9,470	24,998	29	– –	– –	33,537	– –	– –	– –
2003	2,840	222	5,363	3,134	21	2,999	1,569	2,018	713	10,792	26,610	75	– –	– –	39,813	– –	– –	– –
2004	3,012	219	6,052	3,651	32	5,110	1,590	2,308	687	11,299	30,730	30	– –	– –	34,867	– –	– –	– –
2005	3,017	222	[R] 6,060	3,475	42	6,279	1,581	2,237	909	10,173	[R] 30,756	29	– –	– –	34,745	– –	– –	– –
2006	3,030	205	5,185	3,020	35	4,219	1,541	2,378	736	10,102	27,216	32	– –	– –	34,093	– –	– –	– –
			Trillion Btu															
1960	332.0	121.3	19.5	41.3	15.5	2.1	7.4	16.5	60.2	23.9	186.5	2.3	14.8	0.0	42.6	699.4	105.3	804.7
1965	385.6	195.1	15.0	43.8	20.7	3.7	11.5	14.2	41.9	45.4	196.2	1.5	18.8	0.0	66.0	863.2	157.7	1,020.9
1970	320.9	265.7	25.8	49.5	12.3	3.2	11.1	14.5	28.7	54.4	199.5	1.3	19.5	0.0	85.9	892.8	207.9	1,100.7
1975	246.7	307.7	25.8	51.0	4.7	4.6	8.7	9.9	21.0	57.8	183.5	1.3	19.7	0.0	98.5	857.4	236.9	1,094.2
1980	219.4	253.7	23.3	28.0	6.4	9.7	10.9	5.1	20.2	96.6	200.2	1.2	47.2	0.0	104.6	826.3	[R] 252.1	1,078.5
1985	169.9	[R] 193.4	18.4	25.7	0.4	31.4	9.9	6.3	13.9	45.6	151.7	1.2	55.3	0.0	115.0	[R] 686.6	264.9	[R] 951.4
1990	117.9	[R] 296.0	26.2	23.1	0.2	25.1	11.2	5.1	8.9	60.9	160.7	[j] 0.2	[j] 36.5	[j] 0.0	119.6	[j R] 731.0	[R] 276.6	[j R] 1,007.6
1995	109.2	[R] 258.6	32.9	20.1	0.2	17.5	10.6	6.8	2.5	78.1	168.8	0.3	44.7	0.0	115.7	[R] 697.3	[R] 262.8	[R] 960.1
1996	107.5	[R] 263.1	24.6	22.7	0.2	19.6	10.3	7.4	2.6	91.5	178.9	0.3	53.3	0.0	117.7	[R] 720.8	267.7	[R] 988.5
1997	95.1	[R] 259.8	51.6	23.2	0.3	8.5	10.9	6.6	2.6	97.6	201.3	0.3	51.4	0.0	120.9	[R] 728.8	[R] 273.9	[R] 1,002.7
1998	97.9	[R] 229.1	43.1	24.0	0.3	4.1	11.4	5.7	2.5	97.8	188.9	0.3	49.6	0.0	122.8	[R] 688.5	[R] 278.4	[R] 966.9
1999	120.0	[R] 252.9	44.3	28.6	0.3	8.4	11.5	5.3	2.1	94.0	194.5	0.3	51.4	0.0	127.2	[R] 746.2	[R] 290.9	[R] 1,037.1
2000	104.8	[R] 252.9	38.9	23.6	0.3	10.8	11.4	5.5	3.9	91.1	185.6	0.3	50.4	0.0	127.2	[R] 721.0	[R] 289.2	[R] 1,010.3
2001	99.0	[R] 239.4	37.4	20.4	0.3	8.8	10.4	9.6	2.2	50.5	139.4	0.3	[R] 35.5	0.0	116.6	[R] 630.1	[R] 259.8	[R] 890.0
2002	72.8	249.1	35.3	16.1	0.1	12.5	10.3	10.1	2.2	51.9	138.4	0.3	[R] 25.7	0.0	114.4	[R] 600.7	[R] 255.1	[R] 855.8
2003	74.6	222.0	35.6	18.3	0.1	10.9	9.5	10.5	4.5	59.9	149.2	0.8	[R] 35.4	0.0	135.8	[R] 617.8	[R] 299.8	[R] 917.6
2004	78.2	218.5	40.2	21.3	0.2	18.5	9.6	12.0	4.3	62.7	168.7	0.3	[R] 37.2	0.0	119.0	[R] 622.0	[R] 263.2	[R] 885.3
2005	77.5	225.7	[R] 40.2	20.2	0.2	22.7	9.6	11.7	5.7	56.2	[R] 166.6	0.3	[R] 36.3	0.0	118.5	[R] 624.8	[R] 259.3	[R] 884.1
2006	77.3	208.5	34.4	17.6	0.2	15.2	9.3	12.4	4.6	56.2	150.0	0.3	35.0	0.0	116.3	587.5	251.5	839.0

[a] The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the Technical Notes for each type of energy.

[b] Physical unit data include supplemental gaseous fuels (SGF) for all years; Btu data exclude SGF for 1980 forward.

[c] Liquefied petroleum gases.

[d] Beginning in 1993, includes fuel ethanol blended into motor gasoline.

[e] "Other" is the subtotal of 16 petroleum products. See a full description in the Technical Notes, Section 4, "Other Petroleum Products."

[f] Conventional hydroelectric power. Does not include pumped-storage hydroelectricity.

[g] Wood and waste. Prior to 2001, includes non-biomass waste.

[h] Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

[i] From 1981 through 1992, includes fuel ethanol blended into motor gasoline but not shown in the motor gasoline column.

[j] 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. – – = Not applicable.

Where shown, R = Revised data and (s) = Physical unit value less than 0.5 or Btu 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 Technical Notes.

Table 11. Transportation Sector Energy Consumption Estimates, Selected Years, 1960-2006, Michigan

Year	Coal [a]	Natural Gas [b]	Petroleum								Fuel Ethanol [d]	Retail Electricity Sales	Net Energy	Electrical System Energy Losses [e]	Total [d]
			Aviation Gasoline [a]	Distillate Fuel Oil [a]	Jet Fuel [a]	LPG [a,c]	Lubricants [a]	Motor Gasoline [d]	Residual Fuel Oil [a]	Total					
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels								Thousand Barrels	Million Kilowatthours			
1960	223	3	1,312	2,475	3,369	21	1,277	62,307	728	71,489	0	9	– –	– –	– –
1965	50	5	2,619	3,348	4,377	34	1,126	74,814	779	87,097	0	0	– –	– –	– –
1970	21	10	718	6,353	7,365	62	1,324	93,269	427	109,518	0	0	– –	– –	– –
1975	2	10	347	8,949	5,700	95	1,321	105,412	423	122,248	0	0	– –	– –	– –
1980	0	12	488	9,741	6,646	128	1,477	95,235	232	113,946	0	0	– –	– –	– –
1985	0	11	201	12,328	6,570	291	1,344	91,556	99	112,389	[f R] 1,011	0	– –	– –	– –
1990	0	18	215	13,207	10,057	283	1,513	98,167	92	123,533	[R] 1,184	0	– –	– –	– –
1995	0	25	231	18,125	8,818	241	1,443	109,159	94	138,111	[R] 1,204	4	– –	– –	– –
1996	0	26	215	18,940	9,045	224	1,401	109,025	123	138,970	[R] 507	5	– –	– –	– –
1997	0	24	197	19,815	9,483	204	1,480	111,042	52	142,272	[R] 646	4	– –	– –	– –
1998	0	21	167	21,145	9,025	804	1,549	113,608	82	146,379	[R] 835	5	– –	– –	– –
1999	0	23	286	21,764	9,116	352	1,565	119,839	36	152,958	[R] 947	4	– –	– –	– –
2000	0	27	205	21,915	7,214	266	1,542	116,941	48	148,131	[R] 2,243	4	– –	– –	– –
2001	0	22	79	21,472	6,219	151	1,412	117,204	71	146,608	[R] 1,368	5	– –	– –	– –
2002	0	27	167	22,514	6,016	183	1,396	119,567	47	149,891	[R] 2,900	5	– –	– –	– –
2003	0	27	89	22,480	2,695	196	1,290	116,798	198	143,747	[R] 3,637	3	– –	– –	– –
2004	0	28	80	23,993	3,733	397	1,307	116,468	251	146,228	[R] 3,758	3	– –	– –	– –
2005	0	28	84	23,256	3,431	509	1,300	117,139	197	145,916	[R] 4,947	5	– –	– –	– –
2006	0	26	67	23,767	4,124	231	1,267	115,637	232	145,325	6,557	4	– –	– –	– –
			Trillion Btu												
1960	5.5	2.7	6.6	14.4	18.2	0.1	7.7	327.3	4.6	378.9	0.0	(s)	387.2	0.1	387.3
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	71.8	36.7	1.0	8.2	480.9	0.6	600.3	[f R] 3.6	0.0	[f] 614.7	0.0	[f] 614.7
1990	0.0	18.7	1.1	76.9	56.6	1.0	9.2	515.7	0.6	661.0	[R] 4.2	0.0	[R] 683.9	0.0	[R] 683.9
1995	0.0	25.9	1.2	105.6	50.0	0.9	8.8	569.3	0.6	736.2	4.3	(s)	762.2	(s)	762.2
1996	0.0	26.9	1.1	110.3	51.3	0.8	8.5	568.7	0.8	741.4	1.8	(s)	768.3	(s)	768.4
1997	0.0	24.8	1.0	115.4	53.8	0.7	9.0	578.9	0.3	759.1	2.3	(s)	783.9	(s)	783.9
1998	0.0	21.9	0.8	123.2	51.2	2.9	9.4	592.1	0.5	780.1	3.0	(s)	802.0	(s)	802.1
1999	0.0	23.5	1.4	126.8	51.7	1.3	9.5	624.5	0.2	815.4	[R] 3.3	(s)	838.9	(s)	838.9
2000	0.0	27.5	1.0	127.7	40.9	1.0	9.3	609.3	0.3	789.5	[R] 7.9	(s)	817.0	(s)	817.1
2001	0.0	23.0	0.4	125.1	35.3	0.5	8.6	610.6	0.4	780.9	[R] 4.8	(s)	803.9	(s)	804.0
2002	0.0	26.9	0.8	131.1	34.1	0.7	8.5	622.7	0.3	798.2	[R] 10.3	(s)	825.2	(s)	825.2
2003	0.0	27.4	0.5	130.9	15.3	0.7	7.8	608.2	1.2	764.6	[R] 12.9	(s)	792.0	(s)	792.1
2004	0.0	27.5	0.4	139.8	21.2	1.4	7.9	607.4	1.6	779.6	[R] 13.3	(s)	807.2	(s)	807.2
2005	0.0	28.3	0.4	135.5	19.5	1.8	7.9	611.2	1.2	777.5	[R] 17.5	(s)	805.9	(s)	805.9
2006	0.0	26.1	0.3	138.4	23.4	0.8	7.7	603.4	1.5	775.5	23.2	(s)	801.7	(s)	801.7

[a] The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the Technical Notes for each type of energy.

[b] Transportation use of natural gas is gas consumed in the operation of pipelines, primarily in compressors, and, since 1990, is also natural gas consumed as vehicle fuel.

[c] Liquefied petroleum gases.

[d] Beginning in 1993, fuel ethanol blended into motor gasoline is included in motor gasoline. Fuel ethanol is also shown separately to display the use of renewable energy by the transportation sector. It is counted only once in the total.

[e] Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

[f] 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.

Where shown, R = Revised data and (s) = Physical unit value less than 0.5 or Btu value 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 Technical Notes.

Table 12. Electric Power Sector Consumption Estimates, Selected Years, 1960-2006, Michigan

Year	Coal	Natural Gas [a]	Petroleum				Nuclear Electric Power	Hydroelectric Power [e]	Biomass [f]	Geothermal	Solar/PV [g]	Wind	Electricity Net Imports [h]	Total
			Residual Fuel Oil [b,c]	Distillate Fuel Oil [b,d]	Petroleum Coke [b]	Total								
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels				Million Kilowatthours			Million Kilowatthours				
1960	10,300	5	362	77	0	440	0	1,817	– –	0	0	0	1,250	– –
1965	16,123	3	316	68	0	384	181	1,667	– –	0	0	0	-413	– –
1970	20,124	64	4,514	965	0	5,479	375	1,581	– –	0	0	0	-400	– –
1975	20,914	57	14,136	1,538	0	15,674	7,176	989	– –	0	0	0	320	– –
1980	22,150	26	9,621	780	0	10,400	15,891	1,083	– –	0	0	0	5,685	– –
1985	25,896	10	522	646	0	1,168	13,452	881	– –	0	0	0	391	– –
1990	29,830	85	1,149	341	0	1,490	21,611	1,605	– –	[i] 0	[i] 0	[i] 0	-10,918	– –
1995	31,400	123	1,101	410	0	1,512	24,448	1,570	– –	0	0	0	5,760	– –
1996	32,405	140	1,235	300	3	1,539	26,829	1,755	– –	0	0	0	1,907	– –
1997	32,158	143	1,031	312	0	1,343	21,914	1,686	– –	0	0	0	1,380	– –
1998	34,253	148	1,630	468	103	2,201	12,494	1,372	– –	0	0	0	-1,534	– –
1999	33,854	150	2,120	505	65	2,690	14,591	1,432	– –	0	0	0	-219	– –
2000	33,277	135	1,683	374	9	2,066	18,882	1,401	– –	0	0	0	-327	– –
2001	33,928	133	1,150	369	2	1,522	26,711	1,536	– –	0	0	(s)	-2,102	– –
2002	33,367	146	1,537	535	73	2,145	31,087	1,640	– –	0	0	(s)	-2,234	– –
2003	34,101	103	1,152	484	60	1,697	27,954	1,310	– –	0	0	3	-3,564	– –
2004	35,312	133	1,112	393	17	1,522	30,562	1,509	– –	0	0	2	-3,204	– –
2005	36,273	131	1,099	372	170	1,641	32,872	1,433	– –	0	0	2	-2,699	– –
2006	34,926	109	231	302	218	751	29,066	1,488	– –	0	0	2	-2,117	– –
			Trillion Btu											
1960	256.3	5.4	2.3	0.5	0.0	2.7	0.0	19.6	0.0	0.0	0.0	0.0	4.3	288.2
1965	399.9	3.0	2.0	0.4	0.0	2.4	2.1	17.4	0.0	0.0	0.0	0.0	-1.4	423.5
1970	487.0	65.2	28.4	5.6	0.0	34.0	4.1	16.6	0.0	0.0	0.0	0.0	-1.4	605.6
1975	494.9	47.3	88.9	8.9	0.0	97.8	79.0	10.3	0.0	0.0	0.0	0.0	1.1	730.4
1980	532.2	19.4	60.5	4.5	0.0	65.0	173.3	11.3	0.0	0.0	0.0	0.0	19.4	820.6
1985	605.8	[R] 4.6	3.3	3.8	0.0	7.0	142.9	9.2	0.0	0.0	0.0	0.0	1.3	770.9
1990	663.5	[R] 67.6	7.2	2.0	0.0	9.2	228.7	16.7	[i] 9.0	[i] 0.0	[i] 0.0	[i] 0.0	-37.3	[i R] 957.4
1995	671.2	[R] 102.7	6.9	2.4	0.0	9.3	256.9	16.2	19.7	0.0	0.0	0.0	19.7	[R] 1,095.6
1996	682.1	[R] 119.4	7.8	1.7	(s)	9.5	281.8	18.1	23.4	0.0	0.0	0.0	6.5	[R] 1,140.8
1997	681.4	[R] 121.7	6.5	1.8	0.0	8.3	230.0	17.2	22.6	0.0	0.0	0.0	4.7	[R] 1,085.8
1998	725.3	[R] 128.0	10.2	2.7	0.6	13.6	131.1	14.0	22.5	0.0	0.0	0.0	-5.2	[R] 1,029.2
1999	712.2	[R] 131.1	13.3	2.9	0.4	16.7	152.5	14.6	21.7	0.0	0.0	0.0	-0.7	[R] 1,047.9
2000	694.7	[R] 124.3	10.6	2.2	0.1	12.8	196.9	14.3	25.6	0.0	0.0	0.0	-1.1	[R] 1,067.5
2001	690.5	[R] 131.1	7.2	2.2	(s)	9.4	279.1	15.9	[R] 25.0	0.0	0.0	(s)	-7.2	[R] 1,143.8
2002	660.8	147.3	9.7	3.1	0.4	13.2	324.5	16.7	[R] 24.8	0.0	0.0	(s)	-7.6	[R] 1,179.7
2003	672.6	104.6	7.2	2.8	0.4	10.4	291.3	13.4	[R] 24.8	0.0	0.0	(s)	-12.2	[R] 1,105.0
2004	691.2	135.5	7.0	2.3	0.1	9.4	318.7	15.1	[R] 25.3	0.0	0.0	(s)	-10.9	[R] 1,184.3
2005	718.2	132.6	6.9	2.2	1.0	10.1	[R] 343.0	14.3	[R] 23.2	0.0	0.0	(s)	-9.2	[R] 1,232.3
2006	693.4	110.4	1.5	1.8	1.3	4.5	303.3	14.8	23.2	0.0	0.0	(s)	-7.2	1,142.3

[a] Physical unit data include supplemental gaseous fuels (SGF) for all years; Btu data exclude SGF for 1980 forward.

[b] The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the Technical Notes for each type of energy.

[c] Prior to 1980, based on oil used in steam plants. For 1980 through 2000, residual fuel oil includes fuel oil nos. 4, 5, and 6.

[d] Prior to 1980, based on oil used in internal combustion and gas turbine engine plants. For 1980 through 2000, distillate fuel oil includes fuel oil nos. 1 and 2, and small amounts of kerosene and jet fuel.

[e] Conventional hydroelectric power. Includes pumped-storage hydroelectricity, which cannot be separately identified, from 1960 through 1989.

[f] Wood and waste. Prior to 2001, includes non-biomass waste.

[g] Solar thermal and photovoltaic energy.

[h] Electricity traded with Canada and Mexico.

[i] There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

– – = Not applicable.

Where shown, R = Revised data and (s) = Physical unit value less than +0.5 and greater than -0.5 or Btu value less than +0.05 and greater 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 Technical Notes.