

M I C H I G A N Table CT3. Total End-Use Energy Consumption Estimates, Selected Years, 1960-2020, Michigan

Year	Coal Thousand Short Tons	Natural Gas ^a Billion Cubic Feet	Petroleum							Hydro-electric Power ^{g,h} Million Kilowatt-hours	Biomass		Geo-thermal ^h	Solar ^{h,k}	Electricity Retail Sales	Net Energy ^{h,l}	Electrical System Energy Losses ^m	Total ^{h,j}
			Distillate Fuel Oil ^b	HGL ^c	Jet Fuel ^d	Motor Gasoline ^e	Residual Fuel Oil	Other ^f	Total		Wood and Waste ^{h,i}	Losses and Co-products ^j			Million Kilowatt-hours			
			Thousand Barrels															
1960	15,631	365	30,158	2,827	3,369	65,782	11,477	14,867	128,481	212	--	--	--	27,599	--	--	--	
1970	13,942	745	37,176	6,202	7,365	96,831	5,543	16,357	169,473	123	--	--	--	55,292	--	--	--	
1980	8,960	839	26,864	6,736	6,646	97,025	3,669	15,192	156,130	117	--	--	--	69,681	--	--	--	
1990	4,987	794	24,016	14,901	10,057	99,913	1,579	12,598	163,063	23	--	--	--	82,367	--	--	--	
2000	4,018	828	30,450	16,308	7,214	118,160	675	14,343	187,148	27	--	--	--	104,772	--	--	--	
2001	3,802	773	29,145	18,876	6,219	119,472	440	12,137	186,290	26	--	--	--	102,409	--	--	--	
2002	3,047	820	28,460	21,039	6,016	121,745	455	11,946	189,661	29	--	--	--	104,714	--	--	--	
2003	2,872	822	29,859	20,578	2,695	119,019	1,001	12,740	185,892	75	--	--	--	108,877	--	--	--	
2004	3,191	783	30,746	20,826	3,733	118,967	987	13,034	188,293	30	--	--	--	106,606	--	--	--	
2005	3,170	783	29,943	23,157	3,431	119,584	1,110	12,545	189,770	29	--	--	--	110,445	--	--	--	
2006	3,141	694	29,627	15,036	4,124	118,106	970	11,377	179,240	32	--	--	--	108,018	--	--	--	
2007	3,095	674	29,076	16,217	5,270	116,059	1,255	11,804	179,681	26	--	--	--	109,297	--	--	--	
2008	3,394	686	26,426	12,506	4,641	111,410	1,256	9,739	165,978	26	--	--	--	105,781	--	--	--	
2009	2,095	652	25,366	11,829	4,270	109,703	488	9,605	161,260	25	--	--	--	98,121	--	--	--	
2010	2,799	634	26,187	10,936	R 8,583	108,436	476	R 8,309	R 162,925	28	--	--	--	103,649	--	--	--	
2011	2,799	664	26,371	10,675	R 8,797	105,871	644	R 7,639	R 159,997	29	--	--	--	105,054	--	--	--	
2012	2,381	609	25,453	9,221	R 8,656	105,052	461	R 7,992	R 156,834	26	--	--	--	104,818	--	--	--	
2013	2,662	704	28,368	12,190	R 8,751	109,078	378	R 9,213	R 167,978	29	--	--	--	103,038	--	--	--	
2014	2,543	750	28,781	12,823	R 8,760	109,118	258	R 9,831	R 169,571	29	--	--	--	103,314	--	--	--	
2015	2,439	679	29,762	10,949	R 9,796	111,408	235	R 10,182	R 172,331	30	--	--	--	102,480	--	--	--	
2016	1,530	648	29,566	11,635	R 10,013	113,495	484	R 10,710	R 175,902	26	--	--	--	104,468	--	--	--	
2017	1,974	657	27,451	11,648	R 10,289	112,289	696	R 10,634	R 173,007	29	--	--	--	101,899	--	--	--	
2018	2,039	711	31,070	13,549	R 10,049	112,532	815	R 9,894	R 177,908	10	--	--	--	104,869	--	--	--	
2019	1,918	R 722	29,934	13,968	R 9,992	110,975	912	R 10,390	R 176,171	10	--	--	--	101,249	--	--	--	
2020	1,226	647	27,026	12,744	5,204	94,915	652	10,352	150,893	9	--	--	--	97,012	--	--	--	

Trillion Btu

1960	396.8	377.6	175.7	10.8	18.2	345.6	72.2	88.2	710.6	2.3	37.3	NA	NA	NA	94.2	1,618.8	232.9	1,851.6
1970	341.8	756.0	216.6	23.7	41.0	508.7	34.8	97.2	921.9	1.3	36.4	NA	NA	NA	188.7	2,246.1	456.4	2,702.5
1980	226.9	855.2	156.5	25.0	37.1	509.7	23.1	90.2	841.6	1.2	90.6	NA	NA	NA	237.8	2,253.3	571.2	2,824.4
1990	124.5	829.7	139.9	54.5	56.6	524.8	9.9	76.8	862.6	0.2	71.2	0.0	0.6	0.2	281.0	2,156.3	710.3	2,866.6
2000	105.1	858.4	177.2	61.4	40.9	614.5	4.2	88.7	986.9	0.3	68.9	0.0	1.2	0.2	357.5	2,367.5	857.5	3,225.0
2001	99.2	796.9	169.6	71.5	35.3	621.4	2.8	75.7	976.2	0.3	51.5	0.0	1.2	0.2	349.4	2,271.4	832.9	3,104.3
2002	79.1	837.4	165.6	79.4	34.1	633.0	2.9	74.1	989.0	0.3	45.8	0.0	1.4	0.2	357.3	2,310.6	850.8	3,161.4
2003	75.4	846.1	173.8	77.9	15.3	618.5	6.3	79.1	970.8	0.8	56.3	2.6	1.8	0.2	371.5	2,325.5	876.8	3,202.2
2004	82.6	803.2	178.9	77.9	21.2	618.2	6.2	81.3	983.6	0.3	59.0	2.9	1.9	0.2	363.7	2,297.6	867.4	3,165.0
2005	81.2	794.9	174.2	86.4	19.5	620.9	7.0	78.6	986.5	0.3	69.9	2.7	2.2	0.3	376.8	2,315.2	900.0	3,215.2
2006	80.2	706.6	171.9	55.9	23.4	612.4	6.1	71.1	940.7	0.3	64.9	4.5	2.6	0.3	368.6	2,169.6	877.0	3,046.6
2007	79.8	689.4	168.2	60.4	29.9	596.8	7.9	72.9	936.1	0.3	68.2	10.5	3.0	0.4	372.9	2,161.8	861.0	3,022.8
2008	87.6	702.7	152.7	47.6	26.3	568.9	7.9	59.9	863.3	0.3	72.1	12.7	3.5	0.4	360.9	2,104.4	811.0	2,915.4
2009	53.4	665.7	146.5	44.9	24.2	558.4	3.1	59.5	836.7	0.2	58.5	11.8	4.3	0.4	334.8	1,965.9	724.5	2,690.3
2010	71.7	643.9	151.2	42.0	R 48.7	549.4	3.0	51.5	R 845.8	0.3	67.5	15.1	4.9	0.5	353.7	R 2,003.3	776.8	R 2,780.1
2011	70.8	672.8	152.2	41.0	R 49.9	536.0	4.1	47.2	R 830.3	0.3	78.1	15.0	5.1	0.6	358.4	R 2,031.3	787.2	R 2,818.5
2012	61.9	619.7	146.8	35.4	R 49.1	531.8	2.9	49.3	R 815.3	0.2	75.3	14.4	5.2	0.8	357.6	R 1,950.4	764.5	R 2,714.8
2013	69.3	718.7	163.5	46.8	R 49.6	551.9	2.4	R 56.0	R 870.3	0.3	81.1	R 14.9	5.2	0.8	351.6	R 2,112.0	753.5	R 2,865.5
2014	64.3	763.8	165.9	49.3	R 49.7	552.0	1.6	59.9	R 878.3	0.3	81.2	R 15.0	5.2	0.8	352.5	R 2,161.5	748.2	R 2,909.8
2015	62.3	701.1	171.5	42.1	R 55.5	563.4	1.5	62.4	R 896.3	0.3	98.3	R 15.0	5.2	0.8	349.7	R 2,129.0	697.7	R 2,826.7
2016	39.0	675.2	170.2	44.7	R 56.8	573.7	3.0	R 66.3	R 914.7	0.2	90.6	R 15.2	5.2	1.0	356.4	R 2,097.7	708.5	R 2,806.2
2017	53.5	687.3	158.0	44.7	R 58.3	567.4	4.4	R 66.0	R 898.9	0.3	85.2	R 18.2	5.2	1.1	347.7	R 2,097.2	700.8	R 2,798.1
2018	53.7	744.9	178.9	52.0	R 57.0	568.7	5.1	R 61.6	R 923.4	0.1	R 92.5	R 19.1	5.2	1.2	357.8	R 2,197.9	713.5	R 2,911.4
2019	50.0	R 763.4	172.4	53.7	R 56.7	560.6	5.7	R 64.5	R 913.6	0.1	R 89.3	R 18.1	5.2	1.5	345.5	R 2,186.6	693.5	R 2,880.2
2020	31.5	685.8	155.6	49.0	29.5	479.5	4.1	64.4	782.0	0.1	79.3	16.3	5.2	1.9	331.0	1,932.9	677.7	2,610.6

^a Includes supplemental gaseous fuels that are commingled with natural gas.

^b Beginning in 2009, includes biodiesel blended into distillate fuel oil.

^c Hydrocarbon gas liquids, include natural gas liquids and refinery olefins.

^d Through 2004, includes kerosene-type and naphtha-type jet fuel. Beginning in 2005, includes kerosene-type jet fuel only; naphtha-type jet fuel is included in "Other Petroleum."

^e Beginning in 1993, includes fuel ethanol blended into motor gasoline.

^f Includes asphalt and road oil, aviation gasoline, kerosene, lubricants, petroleum coke, and the "other petroleum products" category. See Technical Notes, Section 4.

^g Conventional hydroelectric power. For 1960 through 1989, includes pumped-storage hydroelectricity, which cannot be separately identified.

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

ⁱ Wood, wood-derived fuels, and biomass waste. Prior to 2001, includes non-biomass waste.

^j Losses and co-products from the production of biodiesel and fuel ethanol.

^k Solar thermal and photovoltaic energy.

^l Beginning in 1980, adjusted for the double-counting of supplemental gaseous fuels, which are included in both natural gas and the other fossil fuels from which they are mostly derived, but should be counted only once in net energy and total. For 1981 through 1992, includes fuel ethanol blended into motor gasoline that is not included in the motor gasoline column. Beginning in 2009, includes a small amount of wind energy consumed by the commercial and industrial sectors.

^m Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses. Pre-1990 estimates are not comparable to those for later years. See Section 6 of Technical Notes for an explanation of changes in methodology.

-- = Not applicable. NA = Not available.

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

Notes: Total end-use consumption estimates are the sum of the consumption estimates for the residential, commercial, industrial, and transportation sectors. Totals may not equal sum of components due to independent rounding. 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.

Web Page: All data are available at <https://www.eia.gov/state/seds/seds-data-complete.php>.

Sources: Data sources, estimation procedures, and assumptions are described in the Technical Notes.