Table CT6. Industrial sector energy consumption estimates, selected years, 1960-2022, Michigan

Year	Coal	Natural gas [a]	Petroleum						Hydro-electric power [e,f]	Biomass		Geo-thermal [f]	Solar [f,i]	Electricity [j]	End use [f,k]	Electrical system energy losses [l]	Total [f,k]
			Distillate fuel oil	HGL [b]	Motor gasoline [c]	Residual fuel oil	Other [d]	Total		Wood and waste [f,g]	Losses and co-products [h]						
	Thousand short tons	Billion cubic feet	Thousand barrels						Million kWh				Million kWh				
1960	13,011	117	7,091	524	3,151	9,574	10,949	31,288	212	– –	– –	– –	NA	12,482	– –	– –	– –
1965	15,193	192	7,518	923	2,694	6,660	13,665	31,460	146	– –	– –	– –	NA	19,350	– –	– –	– –
1970	13,061	262	8,502	854	2,758	4,557	13,367	30,038	123	– –	– –	– –	NA	25,169	– –	– –	– –
1975	9,885	300	8,749	1,239	1,889	3,343	12,239	27,460	121	– –	– –	– –	NA	28,866	– –	– –	– –
1980	8,652	249	4,804	2,637	967	3,213	13,129	24,750	117	– –	– –	– –	NA	30,656	– –	– –	– –
1985	6,645	190	4,408	8,725	1,192	2,213	8,405	24,944	117	– –	– –	– –	NA	33,704	– –	– –	– –
1990	4,719	290	3,957	6,926	976	1,416	10,635	23,911	23	– –	– –	– –	0	35,062	– –	– –	– –
1995	4,383	254	3,457	4,826	1,310	402	11,392	21,387	27	– –	– –	– –	0	33,921	– –	– –	– –
2000	4,004	247	4,055	3,006	1,060	622	12,207	20,951	27	– –	– –	– –	0	37,268	– –	– –	– –
2005	3,017	222	3,475	6,279	2,237	909	10,913	23,813	29	– –	– –	– –	0	34,745	– –	– –	– –
2006	3,132	199	3,020	4,407	2,378	736	9,864	20,405	32	– –	– –	– –	0	34,093	– –	– –	– –
2007	2,922	156	3,154	4,112	2,218	967	10,317	20,768	26	– –	– –	– –	0	33,879	– –	– –	– –
2008	3,204	149	3,415	1,003	1,883	982	8,394	15,677	26	– –	– –	– –	0	32,505	– –	– –	– –
2009	1,850	137	3,091	988	1,442	342	8,371	14,234	25	– –	– –	– –	(s)	27,391	– –	– –	– –
2010	2,621	152	3,224	R 2,154	1,254	154	7,434	R 14,220	28	– –	– –	– –	(s)	30,841	– –	– –	– –
2011	2,636	158	3,208	R 2,399	1,206	218	6,823	R 13,854	29	– –	– –	– –	(s)	31,624	– –	– –	– –
2012	2,291	167	2,825	R 2,466	1,316	188	7,274	R 14,069	26	– –	– –	– –	(s)	31,836	– –	– –	– –
2013	2,588	179	3,322	R 2,687	1,385	138	8,435	R 15,966	29	– –	– –	– –	1	31,322	– –	– –	– –
2014	2,474	188	3,173	R 2,547	959	73	9,055	R 15,808	29	– –	– –	– –	1	32,446	– –	– –	– –
2015	2,391	178	3,803	1,561	1,559	72	9,332	16,327	30	– –	– –	– –	1	30,677	– –	– –	– –
2016	1,516	178	3,912	1,561	1,598	26	R 9,897	R 16,994	26	– –	– –	– –	1	30,934	– –	– –	– –
2017	1,974	176	3,500	1,317	1,612	18	R 9,974	R 16,422	29	– –	– –	– –	1	30,591	– –	– –	– –
2018	2,039	182	3,756	1,157	1,643	26	R 9,219	R 15,801	10	– –	– –	– –	2	30,806	– –	– –	– –
2019	1,918	179	3,737	1,410	1,626	24	R 9,743	R 16,540	10	– –	– –	– –	3	29,886	– –	– –	– –
2020	1,226	159	3,326	1,385	1,632	26	R 9,812	R 16,183	9	– –	– –	– –	3	25,654	– –	– –	– –
2021	1,753	164	3,704	1,391	1,568	24	R 9,900	R 16,587	11	– –	– –	– –	4	27,081	– –	– –	– –
2022	1,741	173	3,744	1,905	1,656	24	9,925	17,254	10	– –	– –	– –	5	28,486	– –	– –	– –
			Trillion Btu														
1960	332.0	121.3	41.3	2.0	16.5	60.2	66.3	186.3	R 0.7	14.8	NA	NA	NA	42.6	R 697.7	R 85.9	R 783.6
1965	385.6	195.1	43.8	3.5	14.2	41.9	80.4	183.7	R 0.5	18.8	NA	NA	NA	66.0	R 849.6	R 129.9	R 979.5
1970	320.9	265.7	49.5	3.1	14.5	28.7	80.2	176.0	R 0.4	19.5	NA	NA	NA	85.9	R 868.4	R 175.9	R 1,044.3
1975	246.7	307.7	51.0	4.4	9.9	21.0	74.1	160.4	R 0.4	19.7	NA	NA	NA	98.5	R 833.4	R 201.1	R 1,034.5
1980	219.4	253.7	28.0	9.3	5.1	20.2	78.2	140.8	R 0.4	47.2	NA	NA	NA	104.6	R 766.1	R 222.5	R 988.6
1985	169.9	194.2	25.7	29.8	6.3	13.9	51.1	126.8	R 0.4	55.3	0.0	NA	NA	115.0	R 660.9	R 233.7	R 894.5
1990	117.9	302.6	23.1	23.9	5.1	8.9	65.2	126.2	R 0.1	36.5	0.0	0.0	0.0	119.6	R 696.3	R 297.0	R 993.3
1995	109.2	264.4	20.1	16.7	6.8	2.5	70.9	117.1	R 0.1	44.7	0.0	0.0	0.0	115.7	R 645.4	R 247.5	R 892.9
2000	104.8	256.2	23.6	10.3	5.5	3.9	76.1	119.4	R 0.1	50.4	0.0	0.0	0.0	127.2	R 654.7	R 300.3	R 955.0
2005	77.5	225.4	20.2	21.6	11.6	5.7	68.9	128.0	R 0.1	36.3	2.7	0.0	0.0	118.5	R 588.5	R 279.7	R 868.2
2006	80.0	202.4	17.5	15.1	12.3	4.6	62.0	111.6	R 0.1	34.1	4.5	0.0	0.0	116.3	R 549.0	R 272.6	R 821.6
2007	75.6	159.7	18.2	13.9	11.4	6.1	64.0	113.7	R 0.1	34.7	10.5	0.0	0.0	115.6	R 509.9	R 264.1	R 774.0
2008	82.7	152.2	19.7	3.4	9.6	6.2	51.8	90.7	R 0.1	35.2	12.7	0.0	0.0	110.9	R 484.5	R 246.3	R 730.8
2009	47.1	140.0	17.9	3.3	7.3	2.1	52.1	82.8	R 0.1	32.5	11.8	0.0	(s)	93.5	R 407.7	R 199.3	R 607.0
2010	67.1	154.1	18.6	R 8.3	6.4	1.0	46.3	R 80.5	R 0.1	40.0	15.1	0.0	(s)	105.2	R 462.3	R 228.2	R 690.5
2011	66.7	160.4	18.5	R 9.2	6.1	1.4	42.3	R 77.5	R 0.1	51.2	15.0	0.0	(s)	107.9	R 478.8	R 233.4	R 712.2
2012	59.8	170.0	16.3	R 9.5	6.7	1.2	45.1	R 78.7	R 0.1	51.2	14.4	0.0	(s)	108.6	R 482.8	R 227.4	R 710.2
2013	67.6	182.9	19.1	R 10.3	7.0	0.9	51.4	R 88.8	R 0.1	52.7	14.9	0.0	(s)	106.9	R 513.8	R 221.0	R 734.8
2014	62.7	191.3	18.3	R 9.8	4.9	0.5	55.3	R 88.7	R 0.1	52.3	15.0	0.0	(s)	110.7	R 520.8	R 224.6	R 745.4
2015	61.1	184.3	21.9	6.0	7.9	0.5	57.3	93.6	R 0.1	50.1	15.0	0.0	(s)	104.7	R 508.8	R 198.8	R 707.6
2016	38.7	186.1	22.5	6.0	8.1	0.2	R 61.5	98.2	R 0.1	49.3	15.2	0.0	(s)	105.5	R 493.2	R 199.7	R 692.9
2017	53.5	184.3	20.2	5.1	8.1	0.1	R 62.1	R 95.5	R 0.1	44.4	18.2	0.0	(s)	104.4	R 500.3	R 199.3	R 699.6
2018	53.7	191.0	21.6	4.4	8.3	0.2	R 57.6	R 92.1	R (s)	45.7	19.1	0.0	(s)	105.1	R 506.8	R 198.8	R 705.6
2019	50.0	189.5	21.5	5.4	8.2	0.2	R 60.7	R 96.0	R (s)	44.9	18.1	0.0	(s)	102.0	R 500.6	R 193.8	R 694.3
2020	31.5	R 168.9	19.1	5.3	8.2	0.2	R 61.2	R 94.1	R (s)	42.9	16.3	0.0	(s)	87.5	R 441.2	R 167.7	R 608.9
2021	45.5	R 173.3	21.4	5.3	7.9	0.1	R 61.9	R 96.6	R (s)	44.0	16.9	0.0	(s)	92.4	R 468.7	R 176.2	R 644.9
2022	47.1	182.5	21.6	7.3	8.4	0.2	62.0	99.4	(s)	43.4	17.4	0.0	(s)	97.2	486.9	177.1	664.0

[a] Includes supplemental gaseous fuels that are commingled with natural gas.
[b] Hydrocarbon gas liquids, include natural gas liquids and refinery olefins.
[c] Beginning in 1993, includes fuel ethanol blended into motor gasoline. There is a discontinuity in this time series between 2014 and 2015 because of coverage. See Technical Notes, Section 4.
[d] Includes asphalt and road oil, kerosene, lubricants, petroleum coke, and the "other petroleum products" category. See Technical Notes, Section 4.
[e] Conventional hydroelectric power. For 1960 through 1989, includes hydroelectric pumped-storage, which cannot be separately identified.
[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.
[g] Wood, wood-derived fuels, and biomass waste. Prior to 2001, includes non-biomass waste.
[h] Losses and co-products from the production of biodiesel and fuel ethanol.
[i] Solar thermal and photovoltaic energy. Excludes a small amount of solar thermal energy consumed as heat that is included in the residential sector.
[j] Electricity sales to ultimate customers reported by electric utilities and, beginning in 1996, other energy service providers.
[k] 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 End Use 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 industrial utility-scale facilities.
[l] 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.

kWh = Kilowatthours. – – = 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: · Totals may not equal sum of components due to independent rounding. · The industrial sector includes industrial combined-heat-and-power (CHP) and industrial electricity-only plants. · The continuity of these data series estimates may be affected by the 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.
Data Source: U.S. Energy Information Administration, State Energy Data System. See Technical Notes. http://www.eia.gov/state/seds/