

Table ET1. Primary energy, electricity, and total energy price and expenditure estimates, selected years, 1970-2022, Michigan

Year	Primary energy													Nuclear fuel	Biomass Wood and waste g,h	Total h,i,j,k	Electric power sector i,k,l	Electricity m	Total energy h,i,j
	Coal			Natural gas a	Petroleum						Total								
	Coking coal	Steam coal	Total		Distillate fuel oil b	HGL c	Jet fuel d	Motor gasoline e	Residual fuel oil	Other f									
Prices in dollars per million Btu																			
1970	0.55	0.42	0.44	0.77	1.09	1.91	0.74	2.71	0.59	2.10	2.04	0.36	1.01	1.13	0.39	5.55	1.71		
1975	2.07	1.04	1.23	1.42	2.49	3.89	2.08	4.72	1.96	3.85	3.75	0.28	1.29	2.23	1.04	9.78	3.34		
1980	2.27	1.61	1.71	3.05	6.76	6.85	6.38	10.09	3.90	8.74	8.57	0.49	2.16	4.35	1.71	15.40	6.57		
1985	2.08	1.90	1.92	5.70	7.69	9.29	6.09	9.10	4.45	10.98	8.76	0.80	2.30	5.18	1.74	19.88	8.46		
1990	1.80	1.62	1.63	4.16	7.40	10.78	5.65	8.78	3.00	9.88	8.45	0.79	1.52	4.46	1.45	20.85	8.08		
1995	1.57	1.48	1.48	3.93	6.90	8.98	3.93	8.47	2.61	9.31	7.99	0.65	1.20	4.21	1.40	20.72	7.96		
2000	1.66	1.32	1.35	4.44	9.90	12.00	6.51	11.90	3.41	10.45	11.09	0.61	1.26	5.52	1.56	20.89	9.74		
2005	3.37	1.63	1.70	8.99	16.53	17.69	13.03	17.69	6.78	14.29	17.00	0.43	3.15	8.60	1.80	21.25	14.53		
2006	3.76	1.72	1.81	10.20	18.69	19.67	14.94	19.99	7.67	19.92	19.50	0.40	3.20	9.78	1.79	23.90	16.66		
2007	3.70	1.77	1.85	9.62	20.02	21.71	16.47	22.32	8.16	20.93	21.41	0.47	3.40	10.10	1.99	25.04	17.57		
2008	4.56	2.03	2.17	10.69	26.39	25.63	22.76	25.57	11.84	26.63	25.55	0.51	4.02	11.50	2.42	26.24	19.53		
2009	5.67	2.13	2.26	9.53	16.60	22.98	12.60	18.58	7.79	24.32	18.59	0.66	3.08	9.47	2.20	27.63	16.80		
2010	6.18	2.18	2.39	9.24	21.14	R 23.13	16.23	22.04	9.61	21.04	R 21.50	0.78	3.32	R 10.09	2.25	29.05	R 18.33		
2011	7.32	2.74	3.00	8.76	27.34	R 26.05	22.39	28.03	13.26	25.49	R 27.27	0.76	3.51	R 11.83	2.44	30.57	R 20.77		
2012	6.96	2.85	3.09	7.38	28.00	R 22.65	22.99	28.62	14.67	25.31	R 27.67	0.79	3.31	R 11.88	2.42	32.29	R 21.35		
2013	5.52	2.73	2.89	7.56	27.98	R 22.61	21.97	27.92	13.60	23.45	R 27.00	0.80	3.50	R 11.80	2.51	32.89	R 20.34		
2014	5.10	2.66	2.81	8.27	27.16	R 26.61	20.70	26.69	12.74	19.89	R 25.97	0.70	3.89	R 11.72	2.67	32.38	R 19.87		
2015	4.75	2.43	2.58	6.73	18.50	18.26	11.88	19.16	7.37	18.21	18.45	0.78	3.85	8.90	2.28	31.57	16.43		
2016	3.94	2.29	2.37	5.74	15.73	16.46	9.72	17.04	4.66	R 15.16	16.14	0.73	3.30	8.01	2.06	32.44	15.57		
2017	4.75	2.22	2.40	6.09	18.19	R 19.58	12.27	19.13	6.44	R 14.18	R 18.12	0.68	3.36	R 8.69	2.04	33.12	R 16.51		
2018	5.14	2.17	2.39	5.95	21.92	R 20.80	15.64	21.21	8.02	R 16.64	R 20.60	0.63	3.48	R 9.49	2.15	33.46	R 17.48		
2019	5.89	2.15	2.46	5.62	20.69	R 17.76	14.37	20.21	7.53	R 17.44	R 19.53	0.58	3.66	R 8.99	1.90	33.93	R 16.90		
2020	5.13	2.07	2.30	5.29	16.75	R 15.83	9.10	16.59	5.54	R 15.12	R 16.11	0.51	R 2.79	R 7.64	1.66	35.85	R 16.01		
2021	5.09	2.09	2.35	6.68	R 22.33	R 21.52	13.82	23.43	8.33	R 16.54	R 22.06	0.56	R 3.30	R 10.00	R 2.24	37.98	R 19.39		
2022	7.63	2.42	2.91	8.77	34.43	24.13	25.27	30.85	14.24	19.78	29.84	0.54	4.41	13.66	3.54	38.76	23.41		

Expenditures in million dollars																	
1970	73.4	294.1	367.5	620.2	240.6	44.8	30.4	1,378.2	33.7	176.9	1,904.7	1.5	6.3	2,906.9	-230.3	1,041.7	3,718.3
1975	290.3	634.0	924.3	1,235.6	610.6	109.7	66.8	2,686.4	217.0	273.1	3,963.6	22.2	7.9	6,178.5	-757.9	2,139.6	7,560.3
1980	250.1	1,047.1	1,297.2	2,596.2	1,087.9	171.3	236.9	5,144.7	315.1	681.2	7,637.1	85.1	33.4	11,787.9	-1,385.2	3,647.5	14,050.2
1985	149.7	1,348.3	1,498.1	3,954.1	1,164.6	465.9	223.6	4,466.4	56.0	597.7	6,974.3	115.0	39.1	12,628.5	-1,325.6	4,993.3	16,296.2
1990	51.3	1,233.5	1,284.8	3,569.5	1,050.2	575.4	319.7	4,608.3	43.8	630.7	7,228.1	179.7	58.4	12,358.4	-1,421.6	5,797.5	16,734.2
1995	59.1	1,107.3	1,166.3	3,708.4	1,101.7	479.3	196.3	4,875.1	23.1	650.9	7,326.3	167.9	70.8	12,562.6	-1,514.3	6,636.2	17,684.5
2000	91.0	987.1	1,078.1	4,143.6	1,776.1	734.5	266.3	7,310.1	44.9	850.5	10,982.4	119.6	77.7	16,477.5	-1,658.1	7,400.3	22,219.7
2005	106.9	1,252.6	1,359.5	7,867.7	2,915.6	1,523.0	253.5	10,984.2	93.2	969.4	16,738.9	146.7	198.3	26,406.0	-2,213.4	7,934.7	32,127.3
2006	133.2	1,268.9	1,402.1	7,832.7	3,246.2	1,096.7	349.4	12,242.4	56.6	1,200.9	18,192.1	122.2	193.5	27,763.6	-2,031.2	8,724.5	34,457.0
2007	116.9	1,362.5	1,479.5	7,384.5	3,401.4	1,307.5	492.3	13,317.1	89.5	1,307.7	19,915.5	154.0	206.2	29,244.3	-2,407.0	9,251.2	36,088.5
2008	188.6	1,543.4	1,732.0	8,066.1	4,074.3	1,216.9	598.8	14,543.0	107.3	1,346.0	21,886.3	166.9	254.5	32,499.2	-2,872.4	9,378.2	39,005.0
2009	144.7	1,515.3	1,660.0	6,736.4	2,456.9	1,029.3	305.0	10,376.1	29.2	1,211.1	15,407.7	150.3	162.1	24,429.4	-2,306.2	9,158.8	31,281.9
2010	243.3	1,550.0	1,793.3	6,595.8	3,227.9	R 1,063.8	789.8	12,109.9	35.4	859.4	R 18,086.2	242.0	202.2	R 27,197.2	-2,586.7	10,171.9	R 34,782.5
2011	291.7	1,782.7	2,074.4	6,520.7	4,210.1	R 1,174.1	1,116.9	15,027.2	57.0	916.0	R 22,501.3	260.4	228.9	R 31,763.8	-2,731.9	10,846.5	R 39,878.4
2012	246.4	1,671.4	1,917.8	5,628.3	4,145.1	R 894.3	1,128.4	15,219.1	46.9	919.3	R 22,353.1	231.8	215.5	R 30,494.9	-2,606.0	11,422.9	R 39,311.8
2013	209.9	1,691.7	1,901.6	6,047.9	4,609.4	R 1,151.9	1,090.1	15,407.8	34.7	1,075.8	R 23,369.7	243.2	237.4	R 32,036.2	-2,642.6	11,520.6	R 40,914.2
2014	183.1	1,552.1	1,735.2	6,985.8	4,546.0	R 1,407.8	1,028.3	14,733.8	21.9	1,138.3	R 22,876.1	227.6	268.7	R 32,373.8	-2,815.7	11,364.3	R 40,922.3
2015	183.1	1,408.5	1,591.6	5,649.7	3,193.1	763.4	659.9	10,794.2	11.8	1,039.1	16,461.6	240.5	R 268.1	R 24,516.4	-2,490.5	10,992.2	R 33,018.2
2016	84.4	1,030.6	1,115.0	5,157.2	2,697.0	734.7	551.8	9,774.1	15.0	R 907.4	R 14,679.9	241.2	R 223.8	R 21,650.8	-2,211.0	11,512.6	R 30,952.3
2017	169.0	1,030.7	1,199.7	5,336.7	2,893.4	R 875.0	715.6	10,852.6	29.6	R 904.3	R 16,270.6	231.7	225.3	R 23,443.7	-2,172.1	11,462.3	R 32,733.9
2018	196.2	1,015.3	1,211.5	5,812.4	3,948.2	R 1,081.6	891.0	12,060.9	41.9	R 1,018.2	R 19,041.7	201.6	249.1	R 26,756.0	-2,359.0	11,921.5	R 36,318.5
2019	213.5	886.6	1,100.2	5,694.2	3,585.5	R 952.3	816.2	11,332.1	43.8	R 1,032.7	R 17,762.6	200.0	R 247.4	R 25,194.3	-2,062.3	11,670.1	R 34,802.1
2020	127.3	641.0	768.3	5,124.1	2,622.3	R 774.7	279.0	7,952.8	23.3	R 898.7	R 12,550.7	162.3	R 163.8	R 18,934.7	-1,644.9	11,816.1	R 29,106.0
2021	195.0	830.8	1,025.7	R 6,092.2	R 3,591.4	R 1,025.5	535.5	12,273.6	44.7	R 1,036.4	R 18,507.1	199.2	R 205.1	R 26,260.3	R -2,396.3	12,876.4	R 36,740.4
2022	302.0	928.6	1,230.6	9,194.5	5,639.4	1,170.4	1,104.6	15,897.1	77.5	1,390.5	25,279.7	145.5	278.0	36,482.9	-3,700.5	13,250.0	46,032.4

a Includes supplemental gaseous fuels that are commingled with natural gas.
b Beginning in 2009, includes biodiesel blended into distillate fuel oil. Beginning in 2011, includes renewable diesel blended into distillate fuel oil. Beginning in 2021, includes biodiesel and renewable diesel product supplied.
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." There is a discontinuity in expenditures time series between 2009 and 2010 because of consumption data source and methodology changes, see technical notes.
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 Wood, wood-derived fuels, and biomass waste. Prior to 2001, includes non-biomass waste.
h There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of the use of wood and biomass waste beginning in 1989.
i There are no direct fuel costs for hydroelectric, geothermal, solar, or wind energy.
j For 1981 through 1992, includes fuel ethanol blended into motor gasoline that is not included in the motor gasoline column.
k Electricity imports are included in total primary energy and electric power sector but are not shown separately.
l Expenditures for fuels purchased for electric power generation, included in the expenditure columns for the primary energy sources, are shown as negative expenditures because they need to be removed from total energy expenditures, to avoid double counting.
m Electricity sales to ultimate customers reported by electric utilities and, beginning in 1996, other energy service providers. Where shown, R = Revised data and (s) = Value less than 0.05 million dollars.
n Where shown, — = No consumption, including cases where adjustments were made. See explanation of adjustments in Section 7 of the Technical Notes.
o Note: Expenditure totals may not equal sum of components due to independent rounding.
p Web Page: All data are available at <https://www.eia.gov/state/seds/seds-data-complete.php>.
q Data Source: U.S. Energy Information Administration, State Energy Data System. See Technical Notes. <http://www.eia.gov/state/seds/>