

Table CT2. Primary energy consumption estimates, selected years, 1960-2023, Minnesota
(trillion Btu)

Year	Fossil fuels										Fossil fuels (as commingled)			
	Coal	Natural gas excluding supplemental gaseous fuels ^a	Petroleum							Total	Total	Natural gas including supplemental gaseous fuels ^a	Distillate fuel oil including biofuels ^a	Motor gasoline including fuel ethanol ^a
			Distillate fuel oil excluding biofuels ^a	HGL ^b	Jet fuel ^c	Motor gasoline excluding fuel ethanol ^a	Residual fuel oil	Other ^d	Total					
1960	131.3	186.1	94.1	17.3	2.6	171.2	41.9	54.3	381.3	698.7	186.1	94.1	171.2	
1965	160.0	248.2	110.4	22.2	14.8	185.3	31.3	60.1	424.1	832.3	248.2	110.4	185.3	
1970	179.7	343.0	130.2	33.9	19.7	231.8	32.4	64.4	512.5	1,035.2	343.0	130.2	231.8	
1971	155.6	352.1	138.7	36.0	22.5	240.9	26.0	63.7	527.8	1,035.6	352.1	138.7	240.9	
1972	161.6	352.1	151.5	39.7	25.6	250.7	44.7	70.8	583.1	1,096.7	352.1	151.5	250.7	
1973	180.7	360.5	155.7	37.3	29.3	258.2	44.2	77.7	602.6	1,143.8	360.5	155.7	258.2	
1974	188.7	352.0	145.7	35.1	31.4	251.8	37.0	74.6	575.6	1,116.2	352.0	145.7	251.8	
1975	191.5	331.5	141.9	34.7	31.9	253.5	27.2	67.6	556.8	1,079.8	331.5	141.9	253.5	
1976	222.4	319.5	165.2	33.2	30.1	262.3	35.4	73.0	599.2	1,141.2	319.5	165.2	262.3	
1977	264.9	292.5	157.1	31.3	29.8	267.5	28.2	70.9	584.8	1,142.3	292.5	157.1	267.5	
1978	255.7	312.2	167.1	27.4	28.8	278.1	27.6	72.1	601.1	1,169.1	312.2	167.1	278.1	
1979	229.5	332.6	157.4	31.3	31.9	265.1	16.6	65.6	567.9	1,130.0	332.6	157.4	265.1	
1980	242.4	284.9	124.5	28.2	29.1	242.7	20.0	53.7	498.3	1,025.7	285.0	124.5	242.7	
1981	244.2	264.8	108.9	21.9	25.5	236.5	9.9	47.4	450.2	959.2	265.0	108.9	236.5	
1982	212.5	263.0	121.7	27.2	24.1	235.7	10.6	47.9	467.3	942.8	263.3	121.7	235.7	
1983	211.2	246.3	101.3	27.5	22.9	242.0	9.9	57.4	460.8	918.3	246.3	101.3	242.0	
1984	231.4	256.4	111.2	18.3	41.5	252.4	7.0	58.6	489.0	976.8	256.4	111.2	252.4	
1985	226.1	258.5	115.9	19.5	44.1	237.9	5.4	58.9	481.7	966.3	258.5	115.9	237.9	
1986	201.4	244.5	112.3	23.1	44.2	240.5	11.3	62.9	494.2	940.1	244.5	112.3	240.5	
1987	256.0	239.7	112.5	20.1	32.0	247.0	7.6	68.1	487.3	983.0	239.8	112.5	247.0	
1988	303.6	285.4	119.4	20.8	29.1	256.4	8.0	67.7	501.5	1,090.5	285.8	119.4	256.4	
1989	324.9	301.4	119.9	22.7	26.4	255.2	6.7	72.9	503.8	1,130.0	301.7	119.9	255.2	
1990	325.5	291.8	114.0	21.9	28.9	250.9	6.0	81.1	502.9	1,120.1	291.8	114.0	250.9	
1991	301.5	318.2	122.9	24.2	28.2	255.2	6.6	72.4	509.4	1,129.1	318.2	122.9	255.2	
1992	300.8	312.2	123.9	29.3	37.5	261.0	7.4	79.5	538.6	1,151.5	312.2	123.9	261.0	
1993	325.9	331.5	121.1	32.8	53.5	256.7	7.8	75.5	547.2	1,204.6	331.6	121.1	267.9	
1994	332.8	327.1	128.2	34.7	55.4	261.1	6.8	78.6	565.0	1,224.9	327.4	128.2	273.9	
1995	338.0	357.5	134.1	35.8	56.5	268.8	4.1	86.6	585.9	1,281.4	357.7	134.1	282.6	
1996	354.6	374.3	139.8	44.2	60.2	275.4	4.9	97.0	621.5	1,350.4	375.0	139.8	285.9	
1997	341.6	360.3	138.3	38.1	61.8	274.5	4.4	97.9	614.8	1,316.7	360.4	138.3	290.2	
1998	357.0	337.1	143.2	27.4	60.7	284.8	3.2	94.0	613.3	1,307.4	337.1	143.2	302.3	
1999	341.5	351.1	139.2	32.2	71.4	292.5	3.5	102.2	641.0	1,333.6	351.1	139.2	311.6	
2000	373.8	367.4	144.6	36.4	75.4	298.5	5.8	96.8	657.5	1,398.6	367.5	144.6	317.9	
2001	353.3	344.9	145.4	33.1	65.7	303.9	7.2	96.8	652.1	1,350.3	345.0	145.4	323.7	
2002	360.8	374.2	143.4	41.0	62.7	308.7	6.2	88.6	650.6	1,385.6	374.2	143.4	330.2	
2003	390.7	374.2	147.4	40.2	67.9	312.6	6.7	96.5	671.2	1,436.1	374.2	147.4	335.9	
2004	378.8	362.3	153.9	42.6	70.9	314.5	9.2	96.9	688.0	1,429.1	362.4	153.9	336.7	
2005	379.1	372.1	153.8	40.8	71.8	318.5	10.7	105.3	700.9	1,452.1	372.2	153.8	335.9	
2006	370.8	358.2	151.1	37.8	66.8	318.1	5.3	101.9	680.9	1,410.0	358.2	151.1	334.1	
2007	366.2	395.7	158.1	37.9	63.9	312.0	8.5	98.5	679.0	1,440.8	395.7	158.1	332.3	
2008	359.4	435.1	153.5	35.7	58.1	299.6	12.9	83.8	643.5	1,438.0	435.1	153.5	321.2	
2009	328.7	405.5	R 129.9	38.4	52.2	290.5	4.3	75.6	R 590.9	R 1,325.1	405.6	R 133.6	311.7	
2010	315.4	427.2	R 142.9	31.2	47.5	284.9	3.7	R 77.4	R 587.5	R 1,330.1	427.2	R 145.5	312.1	
2011	315.6	425.0	R 145.8	30.6	46.1	273.0	3.3	R 76.8	R 575.5	R 1,316.1	425.0	R 152.3	297.4	
2012	257.9	430.3	R 146.6	28.2	45.1	282.0	0.8	R 77.7	R 580.5	R 1,268.6	430.3	R 153.2	307.3	
2013	267.7	478.6	R 149.9	37.2	51.5	280.8	0.6	R 78.0	R 598.0	R 1,344.3	478.6	R 156.6	306.5	
2014	313.1	490.1	R 151.2	43.4	48.2	281.1	0.4	R 73.1	R 597.4	R 1,400.6	490.2	R 159.8	306.7	
2015	271.6	448.6	R 137.8	34.7	50.6	288.2	0.6	R 77.2	R 589.2	R 1,309.3	448.6	R 147.4	315.3	
2016	261.2	466.4	R 149.1	34.7	52.2	295.9	0.8	R 80.4	R 613.0	R 1,340.6	466.4	R 159.5	323.5	
2017	257.6	466.9	R 149.5	40.6	53.8	293.3	0.1	R 68.7	R 606.2	R 1,330.7	466.9	R 160.0	320.9	
2018	261.5	514.2	R 156.5	45.5	52.2	286.9	0.1	R 72.5	R 613.8	R 1,389.5	514.2	R 171.7	313.7	
2019	205.1	549.5	R 158.2	51.1	R 54.5	284.9	0.3	R 624.9	R 624.9	R 1,379.6	549.6	R 177.4	312.0	
2020	162.7	496.0	R 134.3	46.8	26.2	247.2	0.1	R 78.1	R 532.9	R 1,191.6	496.0	R 150.7	270.8	
2021	179.1	523.8	R 144.4	44.3	36.6	262.2	0.2	R 83.2	R 561.7	R 1,264.6	523.8	R 151.1	287.0	
2022	184.5	R 535.0	R 146.0	45.9	R 41.6	262.1	0.2	R 82.6	R 568.9	R 1,288.4	R 535.0	R 152.6	287.3	
2023	149.0	536.8	143.2	41.2	47.8	263.8	0.1	80.8	567.1	1,252.8	537.1	149.0	289.4	

^a Supplemental gaseous fuels (SGF) and biofuels are consumed with natural gas and petroleum products. In this table, SGF and biofuels are removed from natural gas and petroleum so that a fossil fuel total can be calculated without double-counting. Biofuels are included in "Renewable energy."

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

^c 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 this time series between 2009 and 2010 because of data source and methodology changes, see technical notes.

^d Includes asphalt and road oil, aviation gasoline, kerosene, lubricants, petroleum coke, and the "other petroleum

products" category. See technical notes, Section 4.

Where shown, R = Revised data and (s) = Value less than +0.05 and greater than -0.05 trillion Btu.

Notes: - 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>.

Data source: U.S. Energy Information Administration, State Energy Data System. See technical notes. <https://www.eia.gov/state/seds/>

Table CT2. Primary energy consumption estimates, selected years, 1960-2023, Minnesota (continued)
(trillion Btu)

Year	Nuclear electric power	Renewable energy											Net interstate flow of electricity ^l	Electricity net imports ^m	Total ^{f,j}	
		Hydro-electric power ^{e,f}	Biomass						Geo-thermal ^f	Solar ^{f,k}	Wind	Total ^{f,j}				
			Wood and waste ^{f,g}	Fuel ethanol ^h	Biodiesel	Renewable diesel	Losses and co-products ⁱ	Total ^{f,j}								
1960	0.0	3.0	25.4	NA	NA	NA	NA	25.4	0.0	NA	NA	NA	28.4	-19.3	0.3	708.1
1965	1.7	3.7	23.4	NA	NA	NA	NA	23.4	0.0	NA	NA	NA	27.1	-15.8	0.4	845.7
1970	0.0	3.0	23.4	NA	NA	NA	NA	23.4	0.0	NA	NA	NA	26.5	18.4	0.4	1,080.5
1975	107.4	3.1	27.4	NA	NA	NA	NA	27.4	0.0	NA	NA	NA	30.5	-5.7	0.6	1,212.7
1976	109.5	2.0	29.5	NA	NA	NA	NA	29.5	0.0	NA	NA	NA	31.5	-20.3	0.7	1,262.6
1977	120.2	2.3	29.7	NA	NA	NA	NA	29.7	0.0	NA	NA	NA	32.0	-61.4	0.6	1,233.7
1978	126.8	3.7	39.0	NA	NA	NA	NA	39.0	0.0	NA	NA	NA	42.7	-24.4	4.4	1,318.6
1979	125.1	3.1	44.5	NA	NA	NA	NA	44.5	0.0	NA	NA	NA	47.6	8.7	6.2	1,317.7
1980	109.4	2.7	46.6	NA	NA	NA	NA	46.6	0.0	NA	NA	NA	49.3	4.6	3.3	1,192.3
1981	112.4	3.2	46.8	NA	NA	NA	NA	46.8	0.0	NA	NA	NA	50.0	23.2	0.3	1,145.1
1982	112.9	3.4	48.4	NA	NA	NA	NA	48.5	0.0	NA	NA	NA	51.9	41.8	0.9	1,150.2
1983	128.2	3.7	51.4	NA	NA	NA	NA	51.4	0.0	NA	NA	NA	55.0	46.1	1.4	1,149.0
1984	90.3	3.3	55.9	NA	NA	NA	NA	55.9	0.0	NA	NA	NA	59.2	82.3	3.4	1,211.9
1985	122.9	3.3	56.3	2.3	NA	NA	NA	58.6	0.0	NA	NA	NA	61.9	62.9	9.1	1,223.2
1986	116.9	3.7	52.2	2.8	NA	NA	NA	55.2	0.0	NA	NA	NA	58.8	70.9	23.4	1,210.2
1987	120.6	3.0	49.5	1.8	NA	NA	NA	51.5	0.0	NA	0.0	0.0	54.4	54.6	6.6	1,219.3
1988	130.3	2.3	52.8	1.4	NA	NA	NA	54.5	0.0	0.0	(s)	(s)	56.8	53.7	-5.7	1,325.6
1989	115.6	2.8	52.9	1.7	NA	NA	NA	55.4	0.1	0.3	(s)	(s)	58.6	53.9	-1.5	1,356.7
1990	128.5	2.9	48.8	2.0	NA	NA	NA	51.6	0.1	0.3	(s)	(s)	55.0	93.7	2.5	1,399.7
1991	126.4	3.5	49.4	3.8	NA	NA	NA	54.3	0.2	0.3	(s)	(s)	58.4	99.5	9.7	1,423.1
1992	116.9	3.6	52.8	6.0	NA	NA	NA	61.1	0.2	0.3	(s)	(s)	65.2	79.9	18.5	1,432.2
1993	125.9	3.9	52.1	11.2	NA	NA	NA	65.8	0.2	0.3	(s)	(s)	70.2	54.5	21.3	1,476.4
1994	127.8	3.9	53.4	12.8	NA	NA	NA	68.9	0.2	0.3	0.1	0.1	73.4	59.7	26.4	1,512.2
1995	139.1	3.7	56.2	13.8	NA	NA	NA	73.2	0.2	0.4	0.2	0.2	77.7	74.6	28.8	1,601.6
1996	127.0	4.1	57.1	10.5	NA	NA	NA	72.0	0.2	0.4	0.2	0.2	76.7	85.1	30.2	1,669.4
1997	113.5	3.5	55.6	15.7	NA	NA	NA	78.3	0.2	0.4	0.2	0.2	82.5	91.5	33.7	1,638.0
1998	122.2	3.3	50.9	17.6	NA	NA	NA	76.1	0.2	0.3	0.5	0.5	80.4	76.9	27.1	1,613.9
1999	139.1	4.0	50.5	19.1	NA	NA	NA	81.2	0.2	0.3	1.7	1.7	87.5	102.3	20.5	1,683.0
2000	135.2	3.2	54.4	19.4	NA	NA	NA	87.2	0.2	0.3	2.5	2.5	93.4	81.6	26.9	1,735.8
2001	123.1	2.8	54.4	19.8	NA	NA	NA	89.7	0.3	0.3	3.1	3.1	96.1	108.6	28.2	1,706.3
2002	142.9	2.8	46.3	21.5	NA	NA	NA	86.1	0.3	0.2	3.1	3.1	92.4	132.3	14.2	1,767.5
2003	139.8	2.8	43.9	23.4	NA	NA	NA	88.9	0.4	0.2	3.3	3.3	95.5	181.1	-8.6	1,844.0
2004	138.6	2.5	52.8	22.2	NA	NA	NA	98.8	0.4	0.2	2.8	2.8	104.6	165.3	8.9	1,846.6
2005	133.9	2.6	57.1	17.4	0.7	NA	NA	99.7	0.4	0.1	5.4	5.4	108.3	130.5	26.7	1,851.4
2006	137.6	2.0	53.5	16.0	1.9	NA	NA	103.1	0.5	0.1	7.0	7.0	112.7	134.2	27.0	1,821.5
2007	137.4	2.2	63.5	20.3	2.6	NA	NA	119.9	0.6	0.1	9.0	9.0	131.9	136.2	23.4	1,869.8
2008	135.8	2.5	64.7	21.6	2.2	NA	NA	128.6	0.7	0.2	14.9	14.9	146.8	127.2	26.5	1,874.4
2009	129.6	2.8	69.5	21.3	2.4	NA	NA	145.5	0.9	0.2	17.2	17.2	166.6	95.0	26.6	1,742.9
2010	140.9	2.9	79.4	27.2	1.9	NA	NA	168.8	1.0	0.2	16.3	16.3	189.2	128.9	24.2	1,813.4
2011	125.1	2.5	74.4	24.4	6.5	NA	NA	167.8	1.0	0.2	22.9	22.9	194.5	130.8	26.3	1,792.8
2012	125.2	1.9	73.3	25.3	6.6	NA	NA	162.1	1.1	0.2	27.9	27.9	193.2	138.7	22.2	1,747.9
2013	111.9	1.7	73.0	25.7	6.7	NA	NA	160.5	1.1	0.3	28.2	28.2	191.8	146.1	27.0	1,821.1
2014	132.9	1.9	R 80.7	25.6	8.6	NA	NA	175.1	1.1	0.3	33.1	33.1	211.4	100.8	23.0	1,868.6
2015	125.9	2.9	R 79.1	27.1	9.6	0.0	0.0	177.9	1.1	0.3	33.4	33.4	R 215.5	67.8	27.0	R 1,745.5
2016	145.0	4.1	R 77.6	27.6	10.4	0.0	0.0	178.1	1.1	0.4	33.9	33.9	R 217.5	38.1	28.9	R 1,770.1
2017	145.4	4.3	R 70.1	27.6	10.5	0.0	0.0	171.8	1.1	2.4	38.0	38.0	R 217.6	61.5	24.6	R 1,779.8
2018	152.7	3.6	R 71.1	26.8	15.2	0.0	0.0	178.1	1.1	4.0	36.6	36.6	R 223.4	78.9	13.1	R 1,857.6
2019	147.3	3.6	R 64.8	27.1	19.2	0.0	0.0	177.9	1.1	4.8	37.4	37.4	R 224.9	44.1	26.9	R 1,822.7
2020	153.3	3.4	R 54.8	23.6	16.4	0.0	0.0	155.1	1.1	6.3	40.4	40.4	R 206.3	80.0	9.7	R 1,640.9
2021	147.3	2.3	R 55.7	24.9	15.9	0.0	0.0	163.5	1.1	7.3	41.9	41.9	R 216.1	87.3	7.4	R 1,722.7
2022	R 153.5	3.2	R 56.2	25.2	R 16.0	0.0	0.0	166.4	1.1	7.5	51.5	51.5	R 229.8	69.2	15.5	R 1,756.5
2023	124.6	2.6	50.6	25.6	15.6	0.0	0.0	162.6	1.1	8.5	49.1	49.1	223.9	67.7	20.3	1,689.4

^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. Beginning in 2006, includes small amount of other biomass liquids that are biodiesel.

^h Excludes denaturant. Because of differences in data sources and estimation methods, the ratio of fuel ethanol consumption and motor gasoline consumption should not be interpreted as the average ethanol blend rate. Pre-2005 estimates are not comparable to those for later years. See Section 5 of technical notes.

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

^j Beginning in 2006, adjusted for the double-counting of other biomass liquids that are biodiesel, which are included in both wood & waste and biodiesel, but should be counted only once in Total.

^k Solar thermal and photovoltaic energy.

^l Includes the energy losses associated with the generation, transmission, and distribution of the electricity flowing across

state lines. A positive number indicates that more electricity came into the state than went out of the state during the year. Pre-1990 estimates are not comparable to those for later years. See Section 6 of technical notes for an explanation of changes in methodology.

^m Electricity traded with Canada and Mexico. Calculated by converting net imports in kilowatt-hours by 3,412 Btu per kilowatt-hour.

NA = Not available.

Where shown, R = Revised data and (s) = Value less than +0.05 and greater than -0.05 trillion Btu.

Notes: · 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>.
Data source: U.S. Energy Information Administration, State Energy Data System. See technical notes. <https://www.eia.gov/state/seds/>