Table CT2. Primary energy consumption estimates, selected years, 1960-2024, Iowa

(trillion Btu)

Year	Fossil fuels										*Fossil fuels (as commingled)*		
			Petroleum										
	Coal	Natural gas excluding supplemental gaseous fuels [a]	Distillate fuel oil excluding biofuels [a]	HGL [b]	Jet fuel [c]	Motor gasoline excluding fuel ethanol [a]	Residual fuel oil	Other [d]	Total	Total	*Natural gas including supplemental gaseous fuels* [a]	*Distillate fuel oil including biofuels* [a]	*Motor gasoline including fuel ethanol* [a]
1960	115.9	193.7	65.0	19.2	1.0	154.8	6.7	38.2	285.0	594.6	*193.7*	*65.0*	*154.8*
1965	126.6	250.0	64.5	28.5	1.3	161.7	3.3	34.6	293.9	670.5	*250.0*	*64.5*	*161.7*
1970	130.9	351.8	79.7	41.8	4.1	187.5	2.5	31.0	346.6	829.2	*351.8*	*79.7*	*187.5*
1971	124.7	347.7	83.0	42.2	3.7	196.1	2.6	30.7	358.3	830.7	*347.7*	*83.0*	*196.1*
1972	144.9	347.6	87.0	47.2	4.1	201.7	3.2	30.8	374.1	866.6	*347.6*	*87.0*	*201.7*
1973	148.7	369.0	90.5	47.7	4.0	221.2	3.6	28.9	395.8	913.5	*369.0*	*90.5*	*221.2*
1974	128.2	371.6	86.4	49.9	4.2	204.1	4.4	28.1	377.0	876.8	*371.6*	*86.4*	*204.1*
1975	131.6	348.6	84.8	50.7	4.7	205.1	3.8	24.7	373.7	853.9	*348.6*	*84.8*	*205.1*
1976	169.5	313.9	87.9	68.2	5.4	214.0	5.9	29.0	410.4	893.8	*313.9*	*87.9*	*214.0*
1977	185.1	281.4	93.1	64.8	5.6	216.6	6.9	30.1	417.1	883.7	*281.4*	*93.1*	*216.6*
1978	201.3	238.8	98.5	57.0	6.3	215.0	5.8	32.1	414.7	854.8	*238.8*	*98.5*	*215.0*
1979	219.4	292.2	120.6	53.8	5.9	202.2	7.6	35.6	425.8	937.4	*292.2*	*120.6*	*202.2*
1980	234.4	270.3	92.8	40.8	4.6	185.9	2.6	23.3	350.0	854.8	*270.4*	*92.8*	*185.9*
1981	252.1	253.9	84.5	36.0	4.0	180.0	0.6	23.3	328.5	834.5	*254.0*	*84.5*	*180.0*
1982	243.9	238.9	94.6	42.9	3.6	173.5	2.1	22.4	339.0	821.8	*239.0*	*94.6*	*173.5*
1983	253.7	223.6	82.1	43.4	3.3	170.1	1.3	18.5	318.8	796.0	*223.6*	*82.1*	*170.1*
1984	251.5	238.3	91.5	26.6	3.4	169.3	0.9	20.9	312.6	802.5	*238.4*	*91.5*	*169.3*
1985	268.8	191.6	92.2	30.6	3.3	165.3	1.1	21.4	313.9	774.3	*228.4*	*92.2*	*165.3*
1986	262.1	163.6	94.4	32.0	3.3	164.7	3.2	20.6	318.2	744.0	*209.0*	*94.4*	*164.7*
1987	287.3	157.9	96.3	22.4	4.4	166.5	0.7	19.3	309.6	754.8	*204.7*	*96.3*	*166.5*
1988	306.1	196.3	95.1	24.4	4.0	170.8	1.6	22.0	317.9	820.4	*240.8*	*95.1*	*170.8*
1989	317.7	178.6	90.9	26.6	4.2	171.1	1.1	18.2	312.2	808.5	*228.2*	*90.9*	*171.1*
1990	335.0	172.1	91.9	23.2	5.0	166.4	0.8	17.2	304.5	811.7	*220.4*	*91.9*	*166.4*
1991	349.3	188.1	84.5	26.5	5.0	170.6	0.6	17.3	304.5	841.9	*235.8*	*84.5*	*170.6*
1992	329.3	179.6	93.6	32.6	4.5	166.6	0.7	16.6	314.5	823.4	*232.5*	*93.6*	*166.6*
1993	344.1	196.7	97.3	55.6	4.1	165.0	1.0	16.6	339.5	880.2	*248.8*	*97.3*	*170.6*
1994	348.9	198.5	100.6	56.2	5.1	170.3	1.1	20.3	353.6	901.1	*250.5*	*100.6*	*176.7*
1995	372.3	210.5	103.3	60.6	5.9	172.8	0.6	17.9	361.1	943.9	*262.5*	*103.3*	*179.1*
1996	383.7	223.1	115.2	41.6	4.6	183.1	0.6	20.9	366.0	972.8	*274.0*	*115.2*	*187.1*
1997	391.7	208.4	114.4	37.8	4.5	180.3	0.4	25.0	362.4	962.5	*256.8*	*114.4*	*185.2*
1998	424.9	184.9	116.7	53.2	6.7	186.3	0.6	22.8	386.3	996.1	*234.6*	*116.7*	*192.4*
1999	432.0	201.5	114.0	67.0	5.0	185.9	0.6	28.7	401.2	1,034.6	*235.1*	*114.0*	*192.4*
2000	445.9	203.0	112.1	69.7	4.4	183.5	0.9	24.7	395.3	1,044.2	*233.7*	*112.1*	*191.2*
2001	443.9	193.4	117.0	57.0	4.4	183.1	0.3	19.5	381.2	1,018.6	*225.2*	*117.0*	*191.2*
2002	441.5	194.0	114.7	65.0	4.4	189.3	0.4	22.8	396.6	1,032.2	*227.1*	*114.7*	*197.6*
2003	444.6	197.6	110.2	48.1	4.5	189.9	0.9	21.6	375.2	1,017.4	*230.9*	*110.2*	*198.8*
2004	443.2	198.0	118.7	67.1	5.2	195.6	1.8	26.4	414.8	1,056.0	*227.5*	*118.7*	*205.0*
2005	429.8	210.7	119.6	73.7	5.6	200.7	1.2	27.6	428.5	1,069.0	*242.8*	*119.6*	*203.6*
2006	435.2	207.2	123.7	74.5	5.9	207.0	0.3	24.4	435.7	1,078.0	*241.3*	*123.7*	*209.6*
2007	465.2	264.2	132.3	59.5	5.1	202.4	0.3	21.3	420.9	1,150.3	*296.2*	*132.3*	*207.0*
2008	485.2	297.4	133.1	72.2	4.5	192.4	1.1	20.6	423.8	1,206.4	*329.0*	*133.1*	*200.6*
2009	444.6	284.0	127.4	74.4	3.0	193.6	0.4	17.7	416.4	1,145.0	*317.4*	*128.4*	*201.5*
2010	493.8	278.8	136.6	66.7	R 5.7	193.3	0.1	14.9	R 417.5	R 1,190.0	*312.9*	*137.3*	*206.8*
2011	463.1	277.6	137.2	64.7	5.8	193.6	0.2	14.2	R 415.8	R 1,156.5	*309.7*	*139.0*	*207.7*
2012	422.6	266.3	134.9	52.8	R 6.1	181.9	0.1	15.3	R 391.0	R 1,079.9	*299.3*	*137.9*	*195.0*
2013	402.4	306.4	134.9	69.9	R 5.6	185.0	(s)	19.6	R 415.0	R 1,123.8	*335.6*	*138.6*	*197.9*
2014	401.2	311.4	140.8	70.7	R 5.5	186.9	(s)	19.6	R 423.5	R 1,136.0	*342.6*	*145.1*	*201.1*
2015	348.3	302.9	143.1	63.0	R 6.1	183.8	0.0	18.0	R 414.0	R 1,065.2	*334.7*	*147.8*	*199.6*
2016	298.0	317.1	143.8	63.6	R 6.0	192.0	(s)	18.5	R 423.9	R 1,039.1	*348.6*	*149.6*	*208.2*
2017	300.3	376.3	141.5	63.9	R 6.6	175.0	0.1	19.1	R 406.2	R 1,082.8	*413.0*	*148.8*	*190.1*
2018	325.7	431.5	143.4	74.2	R 6.6	173.6	0.1	17.4	R 415.2	R 1,172.4	*470.2*	*150.8*	*188.3*
2019	266.4	433.4	148.8	81.4	R 6.6	172.0	0.1	16.9	R 425.8	R 1,125.6	*466.9*	*157.2*	*186.9*
2020	183.0	396.3	147.6	74.5	4.6	151.9	0.0	21.0	R 399.6	R 979.0	*431.1*	*156.1*	*165.0*
2021	264.4	383.4	146.1	69.1	R 5.8	169.1	0.1	22.9	408.4	R 1,056.3	*417.8*	*149.5*	*183.8*
2022	227.9	434.4	149.5	72.8	6.4	178.2	0.1	21.7	423.6	R 1,085.9	*468.1*	*153.0*	*193.8*
2023	201.3	R 446.3	R 142.1	66.4	6.5	167.3	0.1	23.9	R 400.9	R 1,048.4	R *472.4*	R *145.3*	*182.0*
2024	180.7	433.6	142.9	63.0	6.1	170.6	0.1	24.9	400.8	1,015.2	*463.4*	*146.5*	*185.4*

[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, 1960-2024, Iowa (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	6.4	NA	NA	NA	NA	6.4	0.0	NA	NA	9.4	-14.8	0.0	589.2
1965	0.0	3.2	5.5	NA	NA	NA	NA	5.5	0.0	NA	NA	8.6	1.0	0.0	680.1
1970	0.0	3.2	6.3	NA	NA	NA	NA	6.3	0.0	NA	NA	9.5	-7.7	0.0	831.0
1975	25.2	3.0	7.9	NA	NA	NA	NA	7.9	0.0	NA	NA	10.9	27.6	0.0	917.6
1976	27.4	2.2	8.5	NA	NA	NA	NA	8.5	0.0	NA	NA	10.7	24.5	0.0	956.3
1977	31.1	2.7	9.0	NA	NA	NA	NA	9.0	0.0	NA	NA	11.6	35.5	0.0	961.8
1978	13.2	3.2	9.6	NA	NA	NA	NA	9.6	0.0	NA	NA	12.8	57.8	0.0	938.6
1979	31.4	3.1	9.7	NA	NA	NA	NA	9.7	0.0	NA	NA	12.7	34.2	0.0	1,015.7
1980	28.0	3.2	48.7	NA	NA	NA	NA	48.7	0.0	NA	NA	52.0	25.3	0.0	960.0
1981	24.3	3.3	49.6	NA	NA	NA	NA	53.9	0.0	NA	NA	57.3	29.5	0.0	945.6
1982	25.1	3.1	50.2	NA	NA	NA	NA	57.3	0.0	NA	NA	60.4	33.7	0.0	941.1
1983	25.2	3.1	54.7	NA	NA	NA	NA	62.4	0.0	NA	NA	65.6	35.2	0.0	922.0
1984	29.3	3.1	57.8	NA	NA	NA	NA	66.0	0.0	NA	NA	69.1	9.9	0.0	910.8
1985	20.5	3.4	58.1	2.8	NA	NA	4.6	65.6	0.0	NA	NA	69.0	7.9	3.6	875.3
1986	31.7	3.3	78.6	2.9	NA	NA	8.5	90.0	0.0	NA	NA	93.3	9.4	0.0	878.4
1987	26.3	3.3	82.4	3.4	NA	NA	11.8	97.5	0.0	NA	0.0	100.9	4.8	0.0	886.8
1988	33.5	2.4	89.2	3.4	NA	NA	11.7	104.3	0.0	0.0	0.0	106.7	0.1	0.0	960.7
1989	33.2	2.3	52.6	3.9	NA	NA	14.1	70.6	0.1	(s)	0.0	72.9	4.3	0.0	919.0
1990	31.9	3.0	47.8	3.1	NA	NA	14.0	64.9	0.1	(s)	0.0	67.9	30.4	0.0	941.9
1991	43.5	3.1	47.3	3.8	NA	NA	15.5	66.6	0.1	(s)	0.0	69.8	22.8	0.0	978.0
1992	35.7	3.4	45.7	4.7	NA	NA	19.4	69.8	0.1	(s)	0.0	73.3	36.4	0.0	968.8
1993	34.0	2.5	43.5	5.6	NA	NA	24.0	73.1	0.1	(s)	0.0	75.7	43.4	0.0	1,033.4
1994	42.9	3.7	40.8	6.4	NA	NA	27.0	74.2	0.2	(s)	(s)	78.0	40.5	0.0	1,062.5
1995	39.2	3.4	40.8	6.3	NA	NA	26.7	73.8	0.2	(s)	(s)	77.5	40.4	0.0	1,101.0
1996	41.2	3.2	48.3	4.0	NA	NA	26.5	78.8	0.2	(s)	(s)	82.2	46.0	0.0	1,142.3
1997	43.5	2.7	40.4	4.9	NA	NA	26.3	71.6	0.2	(s)	(s)	74.6	48.7	0.6	1,129.8
1998	39.5	3.1	37.3	6.0	NA	NA	26.1	69.4	0.3	(s)	(s)	72.8	32.8	0.2	1,141.4
1999	38.0	3.2	37.5	6.5	NA	NA	27.0	71.1	0.3	(s)	1.1	75.7	40.2	0.1	1,188.7
2000	46.4	3.1	31.6	7.7	NA	NA	26.9	66.1	0.3	(s)	1.7	71.2	24.2	(s)	1,186.0
2001	40.2	2.9	27.7	8.1	NA	NA	26.8	62.6	0.3	(s)	1.7	67.5	31.3	(s)	1,157.6
2002	47.8	3.2	30.8	8.3	NA	NA	26.7	65.9	0.4	(s)	3.1	72.6	30.5	0.0	1,183.0
2003	41.6	2.7	30.5	8.9	NA	NA	35.8	75.2	0.5	(s)	3.4	81.8	38.5	(s)	1,179.3
2004	51.4	3.2	30.6	9.4	NA	NA	50.7	90.7	0.6	(s)	3.6	98.1	27.4	(s)	1,232.9
2005	47.4	3.3	31.0	2.9	0.2	NA	64.0	98.1	0.6	(s)	5.6	107.7	35.8	(s)	1,259.8
2006	53.2	3.1	20.9	2.7	0.5	NA	86.1	110.1	0.7	(s)	7.9	121.8	28.0	(s)	1,281.0
2007	47.4	3.3	23.5	4.6	0.7	NA	110.5	139.3	0.8	(s)	9.4	152.8	3.9	(s)	1,354.4
2008	55.2	2.8	23.9	8.2	0.6	NA	131.3	164.0	0.9	(s)	13.9	181.6	-31.1	0.0	1,412.1
2009	48.9	3.3	26.7	7.9	0.7	NA	171.1	206.4	1.0	(s)	25.3	236.1	-31.6	0.0	1,398.4
2010	46.5	3.2	28.3	13.5	0.5	NA	192.9	235.1	1.2	(s)	31.3	270.9	-65.4	0.0	R 1,442.0
2011	54.6	3.2	19.8	14.1	1.8	NA	203.4	239.0	1.4	(s)	36.5	280.1	-49.8	(s)	1,441.4
2012	45.6	2.6	17.6	13.1	3.0	NA	194.7	228.4	1.3	(s)	47.9	280.2	-47.6	(s)	R 1,358.1
2013	55.6	2.6	19.6	12.9	3.7	NA	196.4	232.7	1.3	0.1	53.1	289.7	-38.6	0.0	1,430.5
2014	43.4	3.0	22.9	14.2	4.3	NA	200.4	241.8	1.3	0.1	55.6	301.8	-37.1	0.0	R 1,444.2
2015	54.8	3.3	21.4	15.8	4.8	0.0	210.7	252.7	1.3	0.2	61.0	318.4	-33.5	0.0	R 1,405.0
2016	49.2	3.1	20.4	16.3	5.8	0.0	214.5	257.0	1.3	0.2	68.5	330.2	-4.6	0.0	R 1,413.8
2017	54.5	3.5	18.0	15.0	7.3	0.0	224.3	264.6	1.3	0.4	72.9	342.7	-29.1	0.0	R 1,450.9
2018	51.2	3.2	19.3	14.8	7.4	0.0	232.0	273.5	1.3	0.5	72.8	351.2	-53.7	0.0	R 1,521.1
2019	54.7	2.7	20.2	14.9	8.4	0.0	231.2	274.8	1.3	0.6	89.8	369.1	-46.1	0.0	R 1,503.2
2020	30.3	3.5	18.4	13.1	8.5	0.0	203.8	243.8	1.3	0.8	116.6	366.0	-25.4	0.0	R 1,349.9
2021	0.0	3.3	19.4	14.7	8.0	0.0	214.9	256.9	1.3	1.6	126.6	389.8	-60.1	0.0	R 1,386.0
2022	0.0	3.4	R 25.0	15.6	8.6	0.0	211.0	R 260.2	1.3	2.4	156.1	R 423.5	-80.7	0.0	R 1,428.6
2023	0.0	3.2	R 24.1	14.7	8.7	0.0	220.0	R 267.5	1.3	3.1	141.4	R 416.5	-61.6	0.0	R 1,403.3
2024	0.0	3.5	23.9	14.9	10.3	0.0	231.6	280.6	1.3	3.9	151.1	440.4	-57.0	0.0	1,398.6

[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 kilowatthours by 3,412 Btu per kilowatthour.

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/