

Table CT2. Primary energy consumption estimates, selected years, 1960-2023, Pennsylvania
(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	1,530.5	540.1	269.4	8.9	5.7	420.8	270.1	145.9	1,120.9	3,191.5	540.1	269.4	420.8	
1965	1,751.3	652.9	317.2	11.6	19.2	450.3	271.8	175.8	1,245.9	3,650.1	652.9	317.2	450.3	
1970	1,699.0	797.9	369.8	17.8	51.4	534.3	380.0	175.7	1,528.9	4,025.8	797.9	369.8	534.3	
1971	1,619.6	828.6	368.0	18.3	48.4	563.8	381.8	177.9	1,558.2	4,006.4	828.6	368.0	563.8	
1972	1,662.3	856.3	403.6	20.7	49.0	610.1	378.2	188.9	1,650.5	4,169.1	856.3	403.6	610.1	
1973	1,798.6	811.5	420.2	21.5	52.2	603.3	372.5	185.8	1,655.5	4,265.6	811.5	420.2	603.3	
1974	1,661.4	732.7	419.5	21.0	50.7	571.6	356.1	183.8	1,602.6	3,996.7	732.7	419.5	571.6	
1975	1,646.7	670.1	396.2	22.3	48.4	571.3	261.7	169.4	1,469.3	3,786.1	670.1	396.2	571.3	
1976	1,682.8	731.4	437.5	23.4	47.7	618.3	316.3	180.0	1,623.3	4,037.4	731.4	437.5	618.3	
1977	1,578.0	682.4	454.5	24.9	48.1	631.7	377.0	180.8	1,717.0	3,977.3	682.4	454.5	631.7	
1978	1,572.5	688.3	439.1	26.4	50.7	640.7	366.9	189.8	1,713.6	3,974.4	688.3	439.1	640.7	
1979	1,756.3	756.1	446.9	30.6	56.0	610.2	292.1	185.6	1,621.4	4,133.7	756.1	446.9	610.2	
1980	1,636.1	789.6	399.6	26.2	57.4	566.9	220.7	165.6	1,436.4	3,862.0	789.6	399.6	566.9	
1981	1,495.9	791.2	348.8	27.4	51.0	547.1	187.8	135.5	1,297.7	3,584.8	802.0	348.8	547.1	
1982	1,291.5	708.3	308.4	25.6	48.8	536.5	131.2	141.1	1,191.6	3,191.4	714.1	308.4	536.5	
1983	1,337.5	658.7	308.0	25.8	51.8	539.4	151.5	150.7	1,227.1	3,223.3	662.6	308.0	539.4	
1984	1,462.3	699.6	343.4	31.3	59.2	536.6	144.4	161.1	1,276.0	3,438.0	699.7	343.4	536.6	
1985	1,409.1	646.7	337.2	27.2	57.3	535.7	111.9	153.9	1,223.1	3,278.9	646.9	337.2	535.7	
1986	1,318.4	631.7	335.7	30.2	56.1	546.9	148.5	164.2	1,281.5	3,231.6	631.9	335.7	546.9	
1987	1,381.1	658.8	365.7	30.4	59.6	560.1	150.1	174.6	1,340.5	3,380.4	659.1	365.7	560.1	
1988	1,466.2	692.5	370.4	22.4	66.2	581.7	138.5	182.4	1,361.5	3,520.2	692.7	370.4	581.7	
1989	1,490.9	714.7	377.6	25.6	54.6	572.1	146.1	187.1	1,363.2	3,568.8	715.0	377.6	572.1	
1990	1,469.7	680.5	347.5	23.0	68.2	564.5	118.0	189.9	1,311.1	3,461.3	680.7	347.5	564.5	
1991	1,425.2	666.9	335.1	27.5	64.3	562.5	105.1	172.2	1,266.7	3,358.9	667.2	335.1	562.5	
1992	1,473.2	717.2	346.5	33.2	61.9	564.2	98.2	179.8	1,283.8	3,474.1	717.3	346.5	564.2	
1993	1,487.0	731.7	365.5	21.2	66.7	573.0	119.1	168.9	1,314.3	3,533.0	731.8	365.5	573.0	
1994	1,439.6	738.9	381.1	21.0	66.5	569.2	123.0	185.1	1,345.8	3,524.4	739.1	381.1	571.1	
1995	1,484.1	761.4	358.8	20.5	69.8	578.3	86.2	196.3	1,310.0	3,555.6	761.5	358.8	584.3	
1996	1,543.7	770.9	356.7	22.6	67.1	587.7	81.5	182.4	1,297.9	3,612.5	771.2	356.7	592.2	
1997	1,569.6	730.6	345.9	19.8	84.0	592.4	72.3	198.0	1,312.5	3,612.8	730.8	345.9	597.4	
1998	1,466.0	667.2	335.2	20.5	94.9	606.9	87.6	203.2	1,348.3	3,481.5	667.2	335.2	608.1	
1999	1,415.0	713.4	363.8	21.3	90.4	609.8	74.6	183.3	1,343.3	3,471.7	713.6	363.8	610.8	
2000	1,508.1	727.2	399.0	26.6	107.8	612.8	75.9	185.6	1,407.6	3,642.9	727.5	399.0	613.9	
2001	1,392.2	669.0	404.1	24.3	107.0	625.1	61.1	209.8	1,431.4	3,492.5	669.1	404.1	626.5	
2002	1,457.3	700.5	403.1	25.9	96.4	638.2	49.3	190.6	1,403.6	3,561.4	700.6	403.1	638.7	
2003	1,462.0	717.5	397.6	41.1	99.1	636.5	72.0	200.7	1,446.9	3,626.4	717.6	397.6	637.0	
2004	1,474.3	723.2	418.1	40.4	92.9	639.3	74.6	210.0	1,475.2	3,672.7	723.3	418.1	646.7	
2005	1,490.8	719.1	417.5	44.2	95.4	638.1	89.3	214.1	1,498.5	3,708.5	719.3	417.5	642.8	
2006	1,499.3	684.7	413.5	47.0	93.4	625.8	44.8	205.9	1,430.3	3,614.3	684.8	413.5	636.2	
2007	1,491.9	780.1	406.1	48.0	87.9	623.4	41.6	195.7	1,402.8	3,674.7	780.2	406.1	637.5	
2008	1,421.1	778.3	443.2	56.2	81.8	586.1	34.7	178.3	1,380.3	3,579.7	778.4	443.2	616.1	
2009	1,223.9	839.5	R 334.7	55.2	70.7	584.4	26.2	174.7	R 1,246.0	R 3,309.4	839.7	337.0	621.5	
2010	1,310.7	909.3	R 353.9	57.4	69.6	581.7	12.4	R 163.9	R 1,239.0	R 3,458.9	909.3	R 355.5	621.5	
2011	1,213.0	1,000.5	R 358.7	59.3	68.5	566.8	8.9	R 147.5	R 1,209.7	R 3,423.2	1,000.5	R 362.7	606.2	
2012	1,093.2	1,079.5	R 352.8	46.4	67.9	560.5	9.6	R 122.1	R 1,159.3	R 3,332.0	1,079.5	R 356.9	600.4	
2013	1,126.1	1,175.5	R 360.1	49.5	70.0	563.4	7.9	R 133.4	R 1,184.2	R 3,485.8	1,175.5	R 366.9	604.2	
2014	1,039.2	1,304.1	R 388.6	52.6	69.4	554.7	5.6	R 140.3	R 1,211.2	R 3,554.4	1,304.1	R 394.9	594.3	
2015	878.8	1,313.4	R 371.3	50.2	69.3	552.8	2.7	R 146.0	R 1,192.2	R 3,384.4	1,313.4	R 377.2	591.8	
2016	734.8	1,354.3	R 318.6	49.6	70.4	556.1	3.5	R 144.5	R 1,142.7	R 3,231.8	1,354.3	R 326.9	595.9	
2017	669.5	1,404.2	R 325.1	49.5	72.6	559.6	1.8	147.5	R 1,156.1	R 3,229.9	1,404.3	R 332.7	600.5	
2018	644.1	1,515.9	R 361.8	53.9	74.6	543.1	1.8	139.5	R 1,174.7	R 3,334.6	1,516.0	R 368.5	583.6	
2019	568.8	1,679.5	R 341.5	55.9	77.8	545.2	2.3	R 117.1	R 1,139.8	R 3,388.1	1,679.5	R 347.3	586.0	
2020	374.3	1,783.8	R 303.8	51.8	45.1	465.5	1.4	R 87.3	R 955.0	R 3,113.0	1,783.8	R 310.0	500.2	
2021	485.2	1,868.1	R 343.0	53.3	52.7	504.2	2.0	R 95.4	R 1,047.7	R 3,401.0	1,868.1	R 345.2	542.2	
2022	435.5	R 1,937.0	R 353.9	101.9	56.7	495.4	2.2	R 100.8	R 1,108.1	R 3,480.6	R 1,938.3	R 355.9	533.0	
2023	307.6	1,937.0	339.2	145.2	62.8	494.2	1.7	94.0	1,133.0	3,377.6	1,943.1	341.6	531.4	

^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, Pennsylvania (continued)
(trillion Btu)

Year	Nuclear electric power	Renewable energy											Net interstate flow of electricity ^l	Electricity net imports ^m	Total ^{fj}
		Hydro-electric power ^{e,f}	Biomass						Geo-thermal ^f	Solar ^{f,k}	Wind	Total ^{fj}			
			Wood and waste ^{f,g}	Fuel ethanol ^h	Biodiesel	Renewable diesel	Losses and co-products ⁱ	Total ^{fj}							
1960	2.7	6.2	46.5	NA	NA	NA	NA	46.5	0.0	NA	NA	52.7	-54.8	0.0	3,192.0
1965	3.7	4.5	47.4	NA	NA	NA	NA	47.4	0.0	NA	NA	51.9	-50.6	0.0	3,655.1
1970	5.1	4.7	53.2	NA	NA	NA	NA	53.2	0.0	NA	NA	57.9	-77.6	0.0	4,011.2
1975	174.8	5.4	57.5	NA	NA	NA	NA	57.5	0.0	NA	NA	62.8	-216.7	0.0	3,807.0
1976	181.4	4.8	66.5	NA	NA	NA	NA	66.5	0.0	NA	NA	71.3	-225.6	0.0	4,064.6
1977	191.9	4.1	71.7	NA	NA	NA	NA	71.7	0.0	NA	NA	75.9	-195.2	0.0	4,049.9
1978	244.3	2.6	82.7	NA	NA	NA	NA	82.7	0.0	NA	NA	85.3	-270.9	0.0	4,033.0
1979	204.5	4.2	94.2	NA	NA	NA	NA	94.2	0.0	NA	NA	98.4	-282.7	0.0	4,153.8
1980	131.9	2.5	129.2	NA	NA	NA	NA	129.2	0.0	NA	NA	131.7	-222.9	0.0	3,902.7
1981	157.5	2.3	140.8	NA	NA	NA	NA	140.8	0.0	NA	NA	143.0	-163.8	0.0	3,721.5
1982	182.4	6.2	130.5	NA	NA	NA	NA	130.5	0.0	NA	NA	136.7	-247.7	0.0	3,262.8
1983	160.5	4.0	154.8	NA	NA	NA	NA	154.8	0.0	NA	NA	158.8	-273.8	0.0	3,268.9
1984	233.8	4.9	136.9	NA	NA	NA	NA	136.9	0.0	NA	NA	141.8	-311.8	0.0	3,501.8
1985	278.6	3.3	138.1	0.0	NA	NA	0.0	138.1	0.0	NA	NA	141.4	-353.1	0.0	3,345.8
1986	421.3	5.0	102.0	0.0	NA	NA	0.0	102.0	0.0	NA	NA	107.0	-473.5	0.0	3,286.4
1987	365.3	3.9	96.2	0.0	NA	NA	0.0	96.2	0.0	NA	0.0	100.1	-373.4	0.0	3,472.3
1988	401.4	2.4	100.9	0.0	NA	NA	0.0	100.9	0.0	0.0	0.0	103.3	-381.6	0.0	3,643.3
1989	414.5	4.9	82.5	0.0	NA	NA	0.0	82.5	0.2	0.4	0.0	88.0	-419.0	0.0	3,652.3
1990	611.5	9.8	61.4	0.0	NA	NA	0.0	61.4	0.2	0.4	0.0	71.8	-511.7	0.0	3,632.9
1991	602.6	6.6	69.5	0.0	NA	NA	0.0	69.5	0.2	0.5	0.0	76.8	-463.4	0.0	3,574.8
1992	629.6	8.8	80.2	0.0	NA	NA	0.0	80.2	0.3	0.5	0.0	89.7	-521.3	0.0	3,672.2
1993	623.2	8.1	79.5	0.8	NA	NA	0.0	80.3	0.3	0.5	0.0	89.1	-501.6	0.0	3,743.7
1994	702.4	9.4	83.0	1.9	NA	NA	0.0	84.9	0.3	0.5	0.0	95.1	-506.5	0.5	3,815.8
1995	698.3	6.9	91.5	6.0	NA	NA	0.0	97.5	0.3	0.5	0.0	105.3	-481.2	0.1	3,878.0
1996	721.3	10.3	99.0	4.5	NA	NA	0.0	103.6	0.4	0.5	0.0	114.7	-540.7	0.7	3,908.5
1997	710.0	7.7	90.8	5.0	NA	NA	0.0	95.7	0.4	0.5	0.0	104.3	-548.9	0.4	3,878.6
1998	641.5	8.1	85.3	1.1	NA	NA	0.0	86.4	0.5	0.5	0.0	95.5	-499.0	-0.6	3,718.9
1999	743.3	6.6	88.4	1.0	NA	NA	0.0	89.3	0.5	0.5	0.0	97.0	-550.6	-0.1	3,761.3
2000	769.4	7.8	89.2	1.1	NA	NA	0.0	90.3	0.5	0.4	(s)	99.1	-580.6	0.0	3,930.8
2001	770.0	5.6	77.6	1.4	NA	NA	(s)	79.1	0.5	0.4	(s)	85.7	-507.1	0.0	3,841.1
2002	794.5	7.5	72.5	0.5	NA	NA	(s)	73.1	0.6	0.4	0.2	R 81.8	-537.7	-0.3	R 3,899.6
2003	775.0	11.4	73.8	0.6	NA	NA	(s)	74.4	0.8	0.4	0.4	R 87.4	-544.5	-0.3	R 3,943.9
2004	807.7	10.8	74.4	7.5	NA	NA	(s)	R 82.0	0.9	0.4	1.0	R 95.1	-583.3	-0.6	R 3,991.6
2005	796.2	7.6	77.6	4.7	R 0.4	NA	(s)	R 82.7	1.0	0.4	1.0	R 92.8	-573.6	-1.0	R 4,022.9
2006	785.7	9.7	73.8	10.5	R 1.2	NA	(s)	R 85.4	1.1	0.5	1.2	R 98.0	-604.7	-0.3	R 3,893.0
2007	811.6	7.6	76.6	14.0	R 1.6	NA	(s)	R 92.3	1.3	0.5	1.6	R 103.3	-640.4	0.2	R 3,949.4
2008	822.1	8.7	80.5	30.0	R 1.4	NA	(s)	R 111.9	1.5	0.6	2.5	R 125.2	-602.7	1.8	R 3,926.1
2009	808.8	9.2	87.1	37.1	R 1.5	NA	(s)	R 125.7	1.8	0.7	3.7	R 141.0	-651.6	0.6	R 3,608.1
2010	813.5	8.0	99.6	39.8	R 1.2	NA	5.4	R 145.9	2.0	0.9	6.3	R 163.1	-700.9	1.4	R 3,736.1
2011	796.8	11.0	111.3	39.4	R 4.0	NA	4.7	R 159.4	2.2	1.3	6.1	R 180.0	-673.8	1.5	R 3,727.7
2012	787.8	7.6	105.8	40.0	R 4.1	NA	4.7	R 154.5	2.2	1.5	7.3	R 173.1	-673.6	4.6	R 3,623.8
2013	822.5	8.6	120.0	40.8	6.8	NA	5.7	173.4	2.2	1.7	11.4	197.4	-677.3	3.8	R 3,832.1
2014	823.3	9.0	R 115.3	39.6	R 6.3	NA	5.3	R 166.5	2.2	1.8	12.2	R 191.6	-613.1	1.9	R 3,958.1
2015	842.0	8.9	R 122.3	39.0	R 6.0	0.0	5.1	R 172.5	2.2	1.8	11.4	R 196.8	-551.4	1.8	R 3,873.6
2016	867.3	8.1	R 117.0	39.8	R 8.3	0.0	5.6	R 170.7	2.2	2.0	11.9	R 194.8	-555.9	1.1	R 3,739.1
2017	870.2	10.7	R 116.8	40.9	R 7.6	0.0	5.2	R 170.5	2.2	2.2	12.3	R 197.8	-558.2	0.1	R 3,739.8
2018	872.7	14.5	R 120.4	40.5	R 6.7	0.0	5.0	R 172.7	2.2	2.4	12.2	R 203.9	-510.4	0.2	R 3,901.1
2019	869.1	12.0	R 112.8	40.8	R 5.8	0.0	5.7	R 165.2	2.2	2.7	11.1	R 193.1	-655.9	0.0	R 3,794.4
2020	799.3	9.1	R 104.3	34.7	R 6.2	0.0	5.1	R 150.3	2.2	3.2	12.8	R 177.6	-700.5	0.0	R 3,389.4
2021	791.6	10.7	R 101.7	38.0	R 5.1	0.0	6.3	R 151.2	2.2	3.8	11.8	R 179.6	-756.6	0.0	R 3,615.5
2022	R 795.8	9.1	R 105.7	37.5	R 4.8	0.0	6.3	R 154.3	2.2	4.3	12.2	R 182.1	R -719.5	0.0	R 3,738.9
2023	787.1	9.5	99.6	37.3	6.5	0.0	6.4	149.8	2.2	5.5	11.1	178.0	-735.2	0.0	3,607.5

^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/>