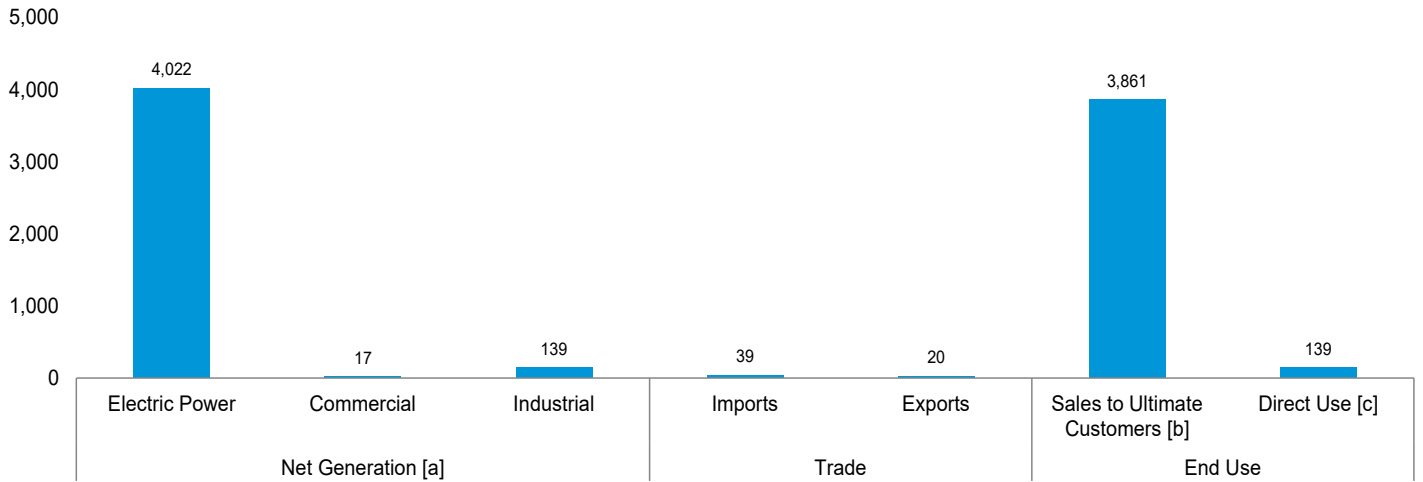


7. Electricity

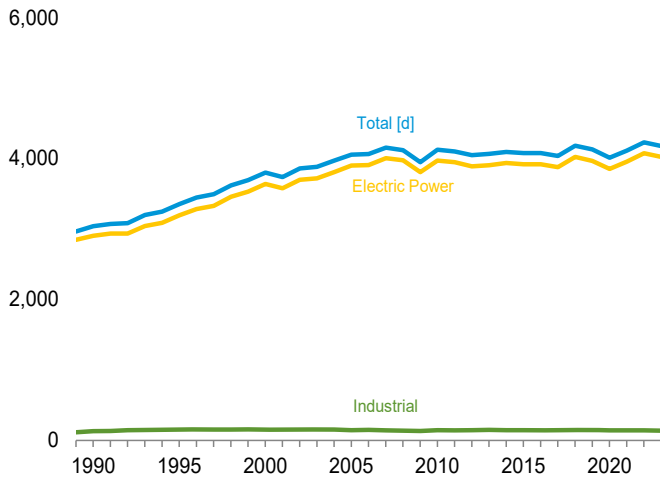
Figure 7.1 Electricity Overview

(Billion Kilowatthours)

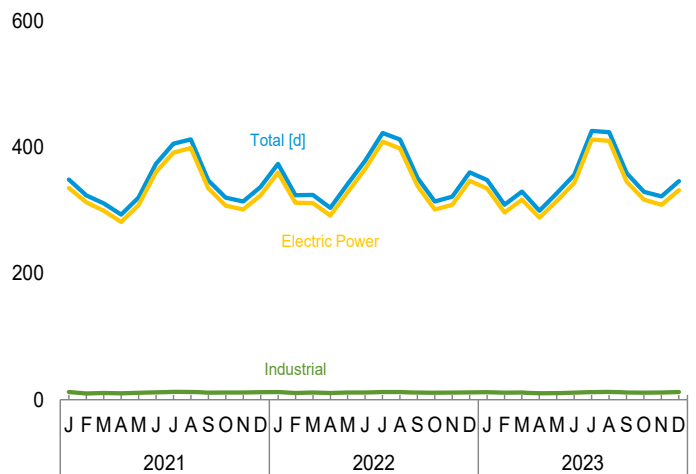
Overview, 2023



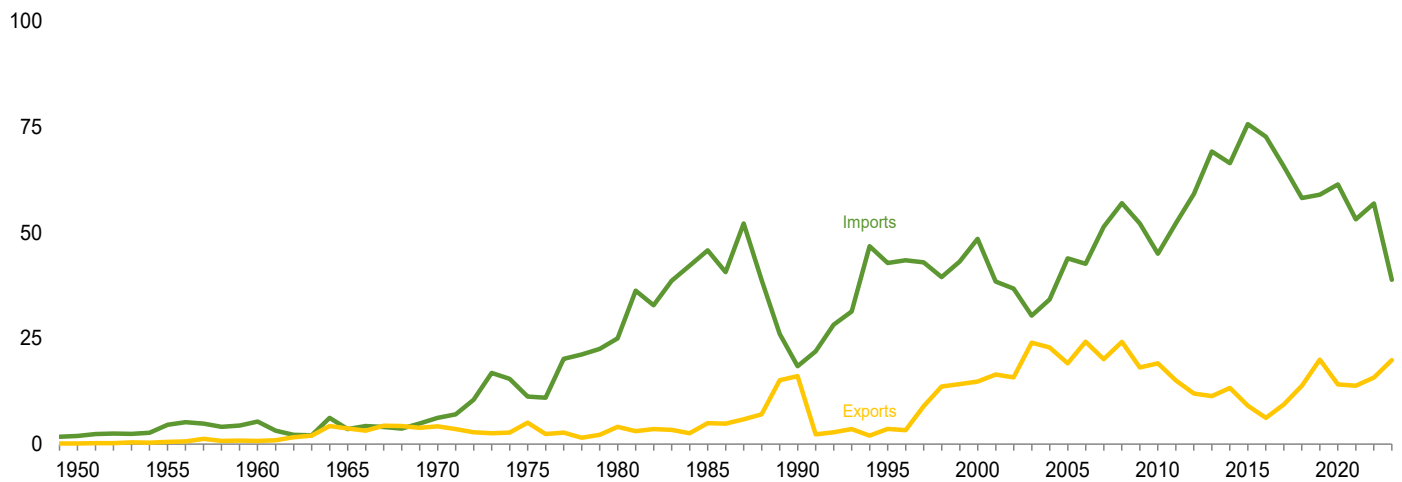
Net Generation [a] by Sector, 1989–2023



Net Generation [a] by Sector, Monthly



Trade, 1949–2023



[a] Data are for utility-scale facilities.

[b] Electricity sales to ultimate customers reported by electric utilities and other energy service providers.

[c] See “Direct Use” in Glossary.

[d] Includes commercial sector.

Web Page: <http://www.eia.gov/totalenergy/data/monthly/#electricity>.

Source: Table 7.1.

Table 7.1 Electricity Overview
(Billion Kilowatthours)

	Net Generation ^a				Trade			T&D Losses ^f and Unaccounted for ^g	End Use		
	Electric Power Sector ^b	Com- mercial Sector ^c	Indus- trial Sector ^d	Total	Imports ^e	Exports ^e	Net Imports ^e		Sales to Ultimate Customers ^h	Direct Use ⁱ	Total
1950 Total	329	NA	5	334	2	(s)	2	44	291	NA	291
1955 Total	547	NA	3	550	5	(s)	4	58	497	NA	497
1960 Total	756	NA	4	759	5	1	5	76	688	NA	688
1965 Total	1,055	NA	3	1,058	4	4	(s)	104	954	NA	954
1970 Total	1,532	NA	3	1,535	6	4	2	145	1,392	NA	1,392
1975 Total	1,918	NA	3	1,921	11	5	6	180	1,747	NA	1,747
1980 Total	2,286	NA	3	2,290	25	4	21	216	2,094	NA	2,094
1985 Total	2,470	NA	3	2,473	46	5	41	190	2,324	NA	2,324
1990 Total	2,901	6	^d 131	3,038	18	16	2	203	2,713	125	2,837
1995 Total	3,194	8	151	3,353	43	4	39	229	3,013	151	3,164
2000 Total	3,638	8	157	3,802	49	15	34	244	3,421	171	3,592
2005 Total	3,902	8	145	4,055	44	19	25	269	3,661	150	3,811
2006 Total	3,908	8	148	4,065	43	24	18	266	3,670	147	3,817
2007 Total	4,005	8	143	4,157	51	20	31	298	3,765	126	3,890
2008 Total	3,974	8	137	4,119	57	24	33	286	3,734	132	3,866
2009 Total	3,810	8	132	3,950	52	18	34	261	3,597	127	3,724
2010 Total	3,972	9	144	4,125	45	19	26	264	3,755	132	3,887
2011 Total	3,948	10	142	4,100	52	15	37	255	3,750	133	3,883
2012 Total	3,890	11	146	4,048	59	12	47	263	3,695	138	3,832
2013 Total	3,904	12	150	4,066	69	11	58	256	3,725	143	3,868
2014 Total	3,937	13	144	4,094	67	13	53	244	3,765	139	3,903
2015 Total	3,920	13	146	4,078	76	9	67	245	3,759	141	3,900
2016 Total	3,919	13	146	4,078	73	6	67	242	3,762	140	3,902
2017 Total	3,879	13	144	4,035	66	9	56	227	3,723	141	3,864
2018 Total	4,021	13	147	4,181	58	14	44	222	3,859	144	4,003
2019 Total	3,968	14	149	4,131	59	20	39	215	3,811	143	3,954
2020 Total	3,854	13	143	4,010	61	14	47	201	3,718	139	3,856
2021 January	336	1	13	349	5	1	4	19	321	^E 12	334
February	313	1	10	324	4	1	3	17	300	^E 10	310
March	299	1	11	311	5	1	4	9	295	^E 11	306
April	282	1	11	293	4	1	3	13	273	^E 11	283
May	308	1	11	320	5	1	4	23	290	^E 11	301
June	361	1	12	374	5	1	4	28	338	^E 12	350
July	392	1	13	406	6	1	4	23	374	^E 13	387
August	399	1	13	413	5	1	3	23	381	^E 13	394
September	335	1	11	348	4	1	3	3	336	^E 11	348
October	308	1	12	320	4	1	3	9	302	^E 11	314
November	301	1	12	314	3	2	1	17	287	^E 12	299
December	324	1	12	337	4	2	2	20	307	^E 12	320
Total	3,957	13	140	4,110	53	14	39	204	3,806	139	3,945
2022 January	360	1	13	374	4	1	3	26	339	^E 12	351
February	312	1	11	324	3	2	2	9	306	^E 11	317
March	312	1	12	325	4	2	2	11	304	^E 12	316
April	292	1	11	304	4	1	2	11	285	^E 11	296
May	329	1	11	342	4	2	3	24	310	^E 11	321
June	366	1	12	379	6	1	4	25	347	^E 12	359
July	409	2	13	423	7	1	5	27	389	^E 13	402
August	398	2	12	412	7	1	6	16	390	^E 13	402
September	339	1	11	352	5	1	4	4	341	^E 11	352
October	301	1	11	314	4	1	3	8	297	^E 11	308
November	309	1	12	322	4	1	3	21	292	^E 12	304
December	347	1	12	360	5	1	4	25	328	^E 12	340
Total	4,074	17	140	4,231	57	16	41	205	3,927	140	4,067
2023 January	^R 335	1	12	348	4	1	3	17	322	^E 12	334
February	297	1	11	309	4	2	2	10	291	^E 11	302
March	317	1	12	330	4	1	3	15	306	^E 12	317
April	288	1	10	300	4	2	2	11	280	^E 10	290
May	315	1	11	^R 327	4	1	3	21	298	^E 11	309
June	344	1	12	357	3	1	2	19	328	^E 12	340
July	412	2	12	426	3	2	1	^R 29	^R 386	^E 12	^R 399
August	410	2	12	424	3	2	1	^R 21	^R 392	^E 12	^R 404
September	^R 346	1	12	^R 359	2	2	(s)	^R 1	^R 346	^E 12	^R 358
October	317	1	11	329	^R 2	^R 2	^R (s)	^R 11	^R 308	^E 11	^R 319
November	309	1	12	322	^R 2	^R 2	^R 1	^R 18	^R 293	^E 12	^R 305
December	332	1	13	346	3	2	1	24	311	^E 12	323
Total	4,022	17	139	4,178	39	20	19	197	3,861	^E139	4,000

^a Electricity net generation at utility-scale facilities. Does not include small-scale solar photovoltaic (PV) generation shown on Table 10.6. See Note 1, "Coverage of Electricity Statistics," at end of section.

^b Electricity-only and combined-heat-and-power (CHP) plants within the NAICS 22 category whose primary business is to sell electricity, or electricity and heat, to the public. Through 1988, data are for electric utilities only; beginning in 1989, data are for electric utilities and independent power producers.

^c Commercial combined-heat-and-power (CHP) and commercial electricity-only plants.

^d Industrial combined-heat-and-power (CHP) and industrial electricity-only plants. Through 1988, data are for industrial hydroelectric power only.

^e Electricity transmitted across U.S. borders. Net imports equal imports minus exports.

^f Transmission and distribution losses (electricity losses that occur between the point of generation and delivery to the customer). See Note 1, "Electrical System Energy Losses," at end of Section 2.

^g Data collection frame differences and nonsampling error.

^h Electricity sales to ultimate customers by electric utilities and, beginning in

1996, other energy service providers.

ⁱ Use of electricity that is 1) self-generated, 2) produced by either the same entity that consumes the power or an affiliate, and 3) used in direct support of a service or industrial process located within the same facility or group of facilities that house the generating equipment. Direct use is exclusive of station use.

^R=Revised. ^E=Estimate. NA=Not available. (s)=Less than 0.5 billion kilowatthours.

Notes: • See Note 1, "Coverage of Electricity Statistics," and Note 2, "Classification of Power Plants Into Energy-Use Sectors," at end of section.

• Data values preceded by "F" are derived from the U.S. Energy Information Administration's Short-Term Integrated Forecasting System. See Note 3, "Electricity Forecast Values," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.

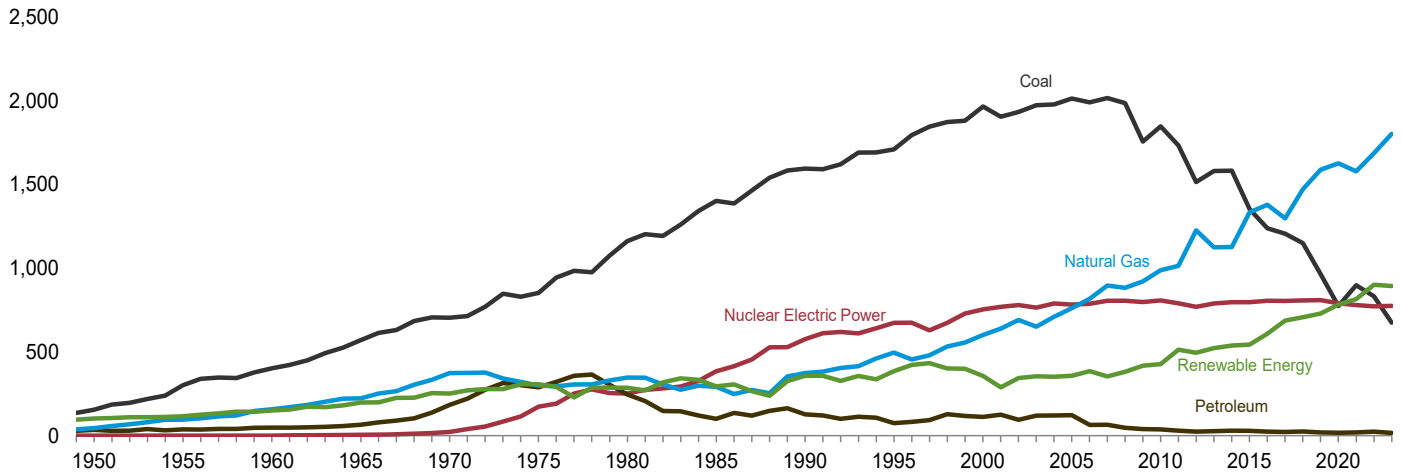
Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#electricity> (Excel and CSV files) for all available annual data beginning in 1949 and monthly data beginning in 1973.

Sources: See end of section.

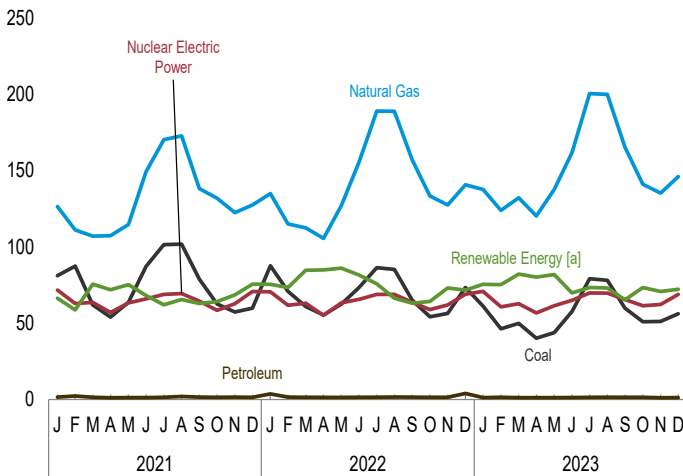
Figure 7.2 Electricity Net Generation

(Billion Kilowatthours)

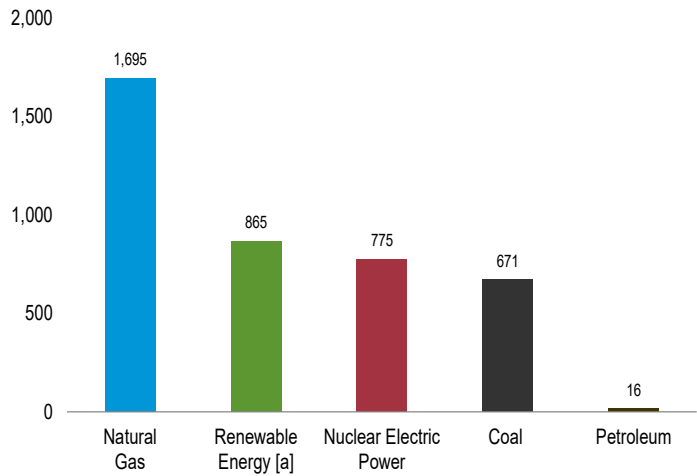
Total (All Sectors), Major Sources, 1949–2023



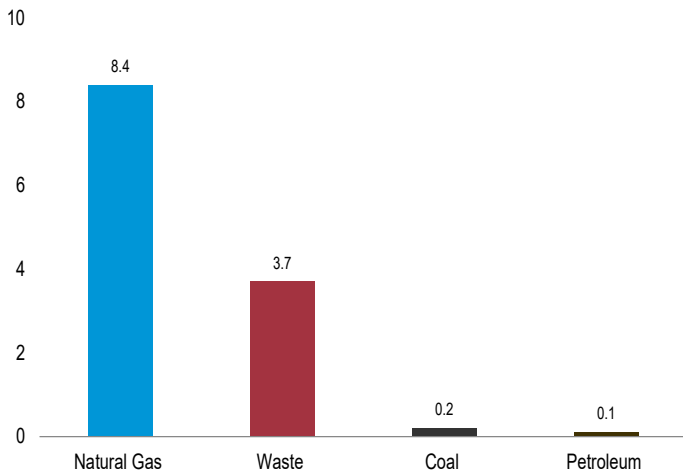
Total (All Sectors), Major Sources, Monthly



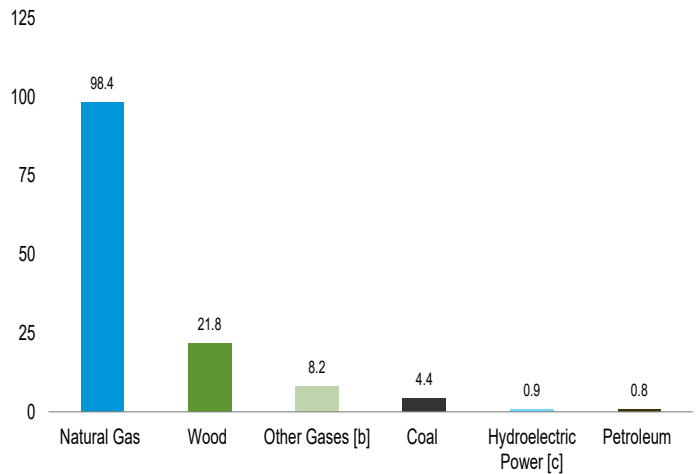
Electric Power Sector, Major Sources, 2023



Commercial Sector, Major Sources, 2023



Industrial Sector, Major Sources, 2023



[a] Conventional hydroelectric power, wood, waste, geothermal, solar, and wind.

[b] Blast furnace gas, and other manufactured and waste derived from fossil fuels.

[c] Conventional hydroelectric power.

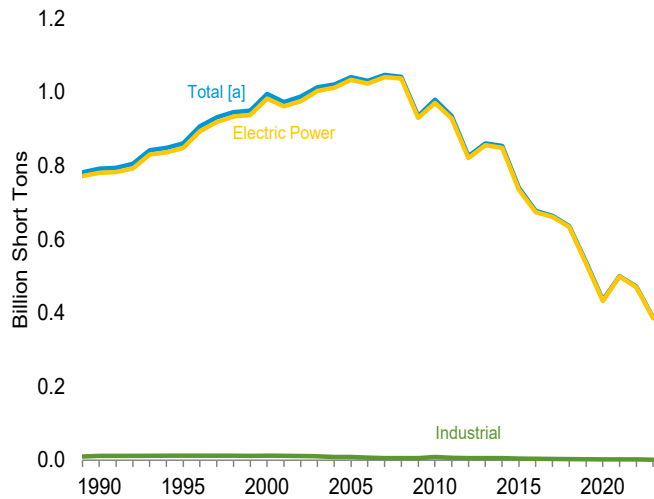
Note: Data are for utility-scale facilities.

Web Page: <http://www.eia.gov/totalenergy/data/monthly/#electricity>.

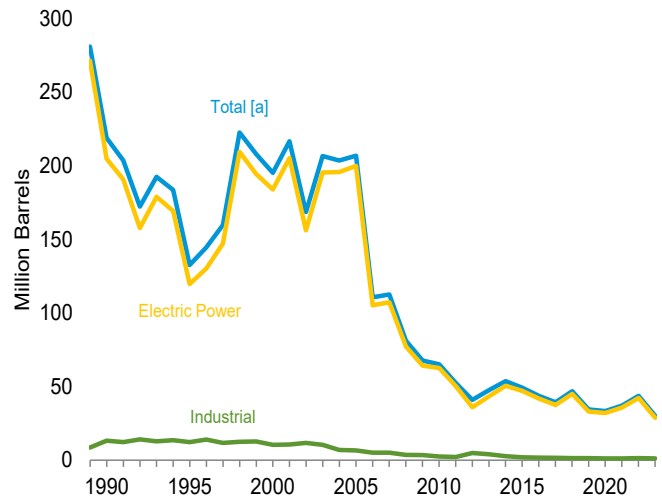
Sources: Tables 7.2a-7.2c.

Figure 7.3 Consumption of Selected Combustible Fuels for Electricity Generation

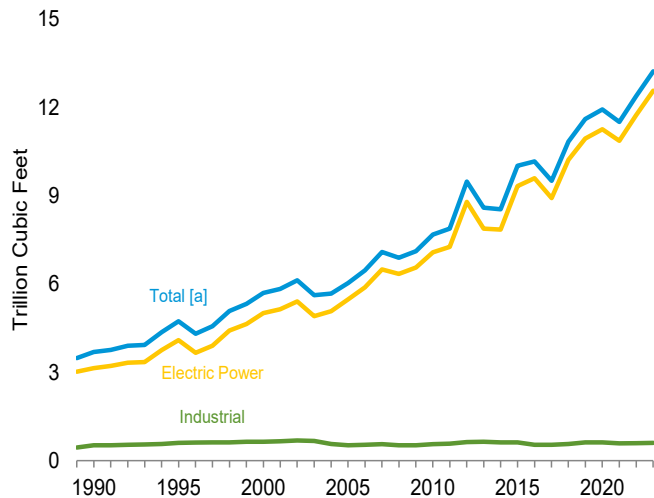
Coal by Sector, 1989–2023



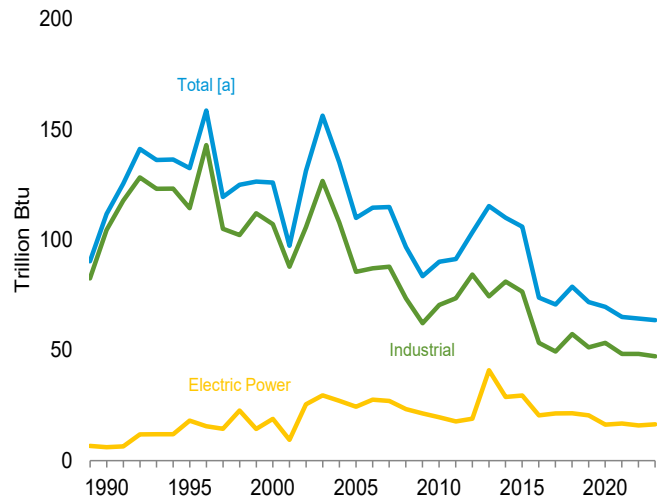
Petroleum by Sector, 1989–2023



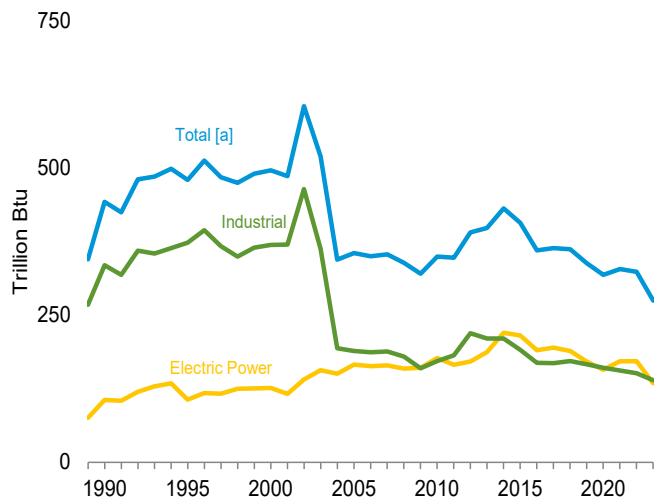
Natural Gas by Sector, 1989–2023



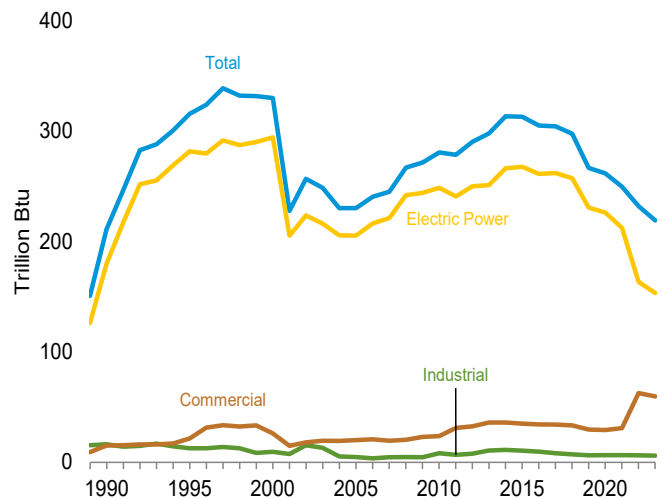
Other Gases [b] by Sector, 1989–2023



Wood by Sector, 1989–2023



Waste by Sector, 1989–2023



[a] Includes commercial sector.

[b] Blast furnace gas, and other manufactured and waste gases derived from fossil fuels. Through 2010, also includes propane gas.

Note: Data are for utility-scale facilities.

Web Page: <http://www.eia.gov/totalenergy/data/monthly/#electricity>.

Sources: Tables 7.3a-7.3c.

Table 7.3a Consumption of Combustible Fuels for Electricity Generation: Total (All Sectors) (Sum of Tables 7.3b and 7.3c)

	Coal ^a	Petroleum					Natural Gas ^f	Other Gases ^g	Biomass		Other ^j
		Distillate Fuel Oil ^b	Residual Fuel Oil ^c	Other Liquids ^d	Petroleum Coke ^e	Total ^e			Wood ^h	Waste ⁱ	
	Thousand Short Tons	Thousand Barrels			Thousand Short Tons	Thousand Barrels	Billion Cubic Feet	Trillion Btu			
1950 Total	91,871	5,423	69,998	NA	NA	75,421	629	NA	5	NA	NA
1955 Total	143,759	5,412	69,862	NA	NA	75,274	1,153	NA	3	NA	NA
1960 Total	176,685	3,824	84,371	NA	NA	88,195	1,725	NA	2	NA	NA
1965 Total	244,788	4,928	110,274	NA	NA	115,203	2,321	NA	3	NA	NA
1970 Total	320,182	24,123	311,381	NA	636	338,686	3,932	NA	1	2	NA
1975 Total	405,962	38,907	467,221	NA	70	506,479	3,158	NA	(s)	2	NA
1980 Total	569,274	29,051	391,163	NA	179	421,110	3,682	NA	3	2	NA
1985 Total	693,841	14,635	558,779	NA	231	574,571	3,044	NA	8	7	NA
1990 Total ^k	792,457	18,143	680,652	437	1,914	682,600	3,692	112	442	211	36
1995 Total	860,594	19,615	730,507	680	3,355	733,862	4,738	133	480	316	42
2000 Total	994,933	31,675	963,258	1,450	3,744	964,702	5,691	126	496	330	46
2005 Total	1,041,448	20,651	1,020,797	2,968	8,330	1,029,127	6,036	110	355	230	173
2006 Total	1,030,556	13,174	1,017,382	2,174	7,363	1,024,545	6,462	115	350	241	172
2007 Total	1,046,795	15,683	1,031,112	2,917	6,036	1,037,149	7,089	115	353	245	168
2008 Total	1,042,335	12,832	1,029,503	2,822	5,417	1,034,920	6,896	97	339	267	172
2009 Total	934,683	12,658	922,025	2,328	4,821	926,846	7,121	84	320	272	170
2010 Total	979,684	14,050	965,634	2,056	4,994	970,628	7,680	90	350	281	184
2011 Total	934,938	11,231	923,707	1,844	5,012	928,719	7,884	91	348	279	205
2012 Total	825,734	9,285	816,449	1,565	3,675	820,124	9,485	103	390	290	204
2013 Total	860,729	9,784	850,945	1,681	4,852	855,797	8,596	115	398	298	200
2014 Total	853,634	14,465	839,169	2,363	4,412	843,581	8,544	110	431	314	200
2015 Total	739,594	12,438	727,156	2,363	4,044	731,200	10,017	106	407	313	204
2016 Total	677,371	9,662	667,709	1,548	4,253	671,962	10,170	74	360	305	199
2017 Total	663,911	9,707	654,204	1,547	3,490	657,694	9,508	71	364	304	190
2018 Total	636,213	14,223	622,000	1,985	3,623	625,623	10,842	79	362	298	190
2019 Total	537,620	9,620	528,000	1,965	2,724	530,724	11,613	72	338	267	199
2020 Total	435,351	7,991	427,360	1,719	3,077	430,437	11,928	70	318	262	193
2021 January	45,095	739	44,356	160	282	45,637	889	6	29	22	16
February	47,821	1,899	45,922	246	274	46,196	801	5	26	19	14
March	34,416	710	33,706	137	260	34,276	761	5	27	22	16
April	29,995	780	29,215	134	173	29,388	779	5	24	20	15
May	35,613	779	34,834	106	220	35,054	835	5	27	21	15
June	47,913	845	47,068	175	195	47,263	1,111	5	28	21	16
July	56,262	734	55,528	171	278	56,206	1,267	6	30	21	16
August	56,131	891	55,240	235	299	55,539	1,289	6	30	21	16
September	44,291	714	43,577	165	255	43,832	1,011	6	27	21	16
October	35,574	770	34,804	159	262	35,066	963	6	25	20	15
November	32,788	820	32,000	162	325	32,325	892	5	26	20	15
December	34,469	942	33,527	162	247	33,774	904	5	28	21	16
Total	500,367	10,623	489,744	2,012	3,070	492,814	11,503	65	328	250	187
2022 January	48,671	2,591	46,080	234	240	46,545	973	5	29	20	14
February	39,951	1,063	38,888	147	248	39,136	824	5	27	19	12
March	34,396	862	33,534	142	216	33,750	800	5	27	20	13
April	30,904	694	29,210	123	225	29,435	768	5	24	19	13
May	35,210	834	34,376	76	248	34,624	947	6	26	19	13
June	41,748	928	40,820	153	281	41,101	1,169	6	28	20	13
July	49,433	949	48,484	190	219	48,643	1,431	6	30	20	14
August	48,356	890	47,466	195	241	47,707	1,408	5	30	20	13
September	37,302	714	36,588	163	280	36,868	1,150	5	26	19	12
October	31,458	751	30,707	164	263	30,970	972	5	24	19	13
November	32,398	783	31,615	139	227	31,842	928	5	26	19	13
December	41,750	3,679	38,071	387	296	38,367	1,016	5	28	19	13
Total	471,576	14,738	456,838	2,112	2,985	460,023	12,384	64	324	232	157
2023 January	R 35,469	773	34,696	190	163	34,859	R 992	5	27	19	12
February	R 26,887	742	26,145	144	135	26,281	R 892	5	23	17	11
March	R 28,612	738	27,874	159	115	28,023	R 956	5	23	18	11
April	22,864	677	22,187	141	107	22,294	888	4	20	17	11
May	R 25,567	R 758	24,809	R 179	117	R 25,926	R 1,020	5	24	19	12
June	R 33,457	693	32,764	153	147	32,911	R 1,202	5	24	18	12
July	R 44,484	649	43,835	121	252	44,087	1,496	6	26	19	13
August	R 43,865	772	43,093	129	254	43,347	1,488	6	26	19	13
September	R 34,207	R 581	33,626	R 135	226	R 33,852	R 1,217	5	22	18	12
October	R 29,616	670	28,946	164	121	29,067	1,041	5	18	18	12
November	29,605	R 746	28,859	135	87	28,946	R 989	5	21	17	12
December	31,968	824	31,144	135	123	31,267	1,043	6	22	20	12
Total	386,601	8,623	378,000	1,785	1,848	379,848	13,223	64	274	219	143

^a Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and coal synfuel.

^b Fuel oil nos. 1, 2, and 4. For 1949–1979, data are for gas turbine and internal combustion plant use of petroleum. For 1980–2000, electric utility data also include small amounts of kerosene and jet fuel.

^c Fuel oil nos. 5 and 6. For 1949–1979, data are for steam plant use of petroleum. For 1980–2000, electric utility data also include a small amount of fuel oil no. 4.

^d Jet fuel, kerosene, other petroleum liquids, waste oil, and, beginning in 2011, propane.

^e Petroleum coke is converted from short tons to barrels by multiplying by 5.

^f Natural gas, plus a small amount of supplemental gaseous fuels.

^g Blast furnace gas, and other manufactured and waste gases derived from fossil fuels. Through 2010, also includes propane gas.

^h Wood and wood-derived fuels.

ⁱ Municipal solid waste from biogenic sources, landfill gas, sludge waste, agricultural byproducts, and other biomass. Through 2000, also includes non-renewable waste (municipal solid waste from non-biogenic sources, and

tire-derived fuels).

^j Batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, miscellaneous technologies, and, beginning in 2001, non-renewable waste (municipal solid waste from non-biogenic sources, and tire-derived fuels).

^k Through 1988, data are for electric utilities only. Beginning in 1989, data are for electric utilities, independent power producers, commercial plants, and industrial plants.

R=Revised. NA=Not available. (s)=Less than 0.5 trillion Btu.

Notes: • Data are for utility-scale facilities. See Note 1, "Coverage of Electricity Statistics," at end of section. • Data are for fuels consumed to produce electricity. Data also include fuels consumed to produce useful thermal output at a small number of electric utility combined-heat-and-power (CHP) plants. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.

Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#electricity> (Excel and CSV files) for all available annual data beginning in 1949 and monthly data beginning in 1973.

Sources: Tables 7.3b and 7.3c.

Table 7.3b Consumption of Combustible Fuels for Electricity Generation: Electric Power Sector (Subset of Table 7.3a)

	Coal ^a	Petroleum					Natural Gas ^f	Other Gases ^g	Biomass		Other ^j
		Distillate Fuel Oil ^b	Residual Fuel Oil ^c	Other Liquids ^d	Petroleum Coke ^e	Total ^e			Wood ^h	Waste ⁱ	
1950 Total	91,871	5,423	69,998	NA	NA	75,421	629	NA	5	NA	NA
1955 Total	143,759	5,412	69,862	NA	NA	75,274	1,153	NA	3	NA	NA
1960 Total	176,685	3,824	84,371	NA	NA	88,195	1,725	NA	2	NA	NA
1965 Total	244,788	4,928	110,274	NA	NA	115,203	2,321	NA	3	NA	NA
1970 Total	320,182	24,123	311,381	NA	636	338,686	3,932	NA	1	2	NA
1975 Total	405,962	38,907	467,221	NA	70	506,479	3,158	NA	(s)	2	NA
1980 Total	569,274	29,051	391,163	NA	179	421,110	3,682	NA	3	2	NA
1985 Total	693,841	14,635	158,779	NA	231	174,571	3,044	NA	8	7	NA
1990 Total ^k	781,301	16,394	183,285	25	1,008	204,745	3,147	6	106	180	(s)
1995 Total	847,854	18,066	88,895	441	2,452	119,663	4,094	18	106	282	2
2000 Total	982,717	29,722	138,047	403	3,155	183,946	5,014	19	126	294	1
2005 Total	1,033,567	19,450	138,337	2,591	7,877	199,760	5,485	24	166	205	116
2006 Total	1,022,802	12,578	56,347	1,783	6,905	105,235	5,891	28	163	216	117
2007 Total	1,041,346	15,135	62,072	2,496	5,523	107,316	6,502	27	165	221	117
2008 Total	1,036,891	12,318	37,222	2,608	5,000	77,149	6,342	23	159	242	122
2009 Total	929,692	11,848	27,768	2,110	4,485	64,151	6,567	21	160	244	115
2010 Total	971,245	13,677	23,560	1,848	4,679	62,477	7,085	20	177	249	116
2011 Total	928,857	10,961	13,861	1,655	4,726	50,105	7,265	18	166	241	133
2012 Total	820,762	9,000	11,292	1,339	2,861	35,937	8,788	19	171	250	132
2013 Total	855,546	9,511	11,322	1,488	4,189	43,265	7,888	41	187	251	130
2014 Total	848,803	14,052	14,132	2,157	4,039	50,537	7,849	29	220	266	127
2015 Total	735,433	12,056	13,893	2,086	3,789	46,978	9,322	29	215	268	127
2016 Total	674,239	9,421	11,056	1,284	4,018	41,853	9,590	20	191	261	126
2017 Total	661,033	9,398	10,299	1,332	3,273	37,394	8,917	21	195	262	121
2018 Total	633,593	13,795	12,259	1,757	3,444	45,030	10,224	21	189	257	125
2019 Total	535,382	9,254	9,163	1,724	2,545	32,868	10,939	21	171	231	133
2020 Total	433,477	7,609	8,228	1,523	2,917	31,947	11,258	16	157	226	132
2021 January	44,948	704	820	147	270	3,022	832	2	15	19	11
February	47,682	1,865	834	202	264	4,223	756	1	15	17	9
March	34,282	674	635	119	248	2,667	713	1	14	19	11
April	29,868	744	581	118	163	2,259	732	1	11	17	10
May	35,469	752	634	85	208	2,508	786	1	13	18	10
June	47,763	816	700	159	185	2,600	1,057	1	14	18	10
July	56,110	702	722	155	267	2,917	1,208	2	17	18	11
August	55,979	859	1,060	218	290	3,585	1,230	2	16	18	11
September	44,131	686	852	156	246	2,924	960	2	14	18	10
October	35,427	736	716	145	252	2,855	911	2	13	17	10
November	32,630	795	657	147	313	3,163	838	1	13	16	10
December	34,324	912	696	147	237	2,938	848	1	15	18	11
Total	498,614	10,246	8,908	1,798	2,942	35,660	10,872	17	171	212	124
2022 January	48,518	2,527	2,374	218	229	6,266	916	1	15	14	7
February	39,807	1,034	839	135	235	3,181	775	1	15	13	6
March	34,239	831	707	131	205	2,695	747	1	14	15	7
April	30,777	667	574	108	215	2,423	718	1	12	13	6
May	35,059	804	661	61	235	2,701	895	2	13	14	6
June	41,592	894	606	137	271	2,991	1,115	1	15	14	6
July	49,282	914	864	173	208	2,992	1,372	2	16	14	6
August	48,204	861	798	179	230	2,988	1,348	1	16	14	6
September	37,163	690	843	143	270	3,027	1,097	1	14	13	6
October	31,323	726	882	150	252	3,015	920	1	12	13	6
November	32,267	758	760	125	214	2,713	875	1	13	13	6
December	41,602	3,619	1,778	277	286	7,103	962	1	15	13	6
Total	469,833	14,325	11,687	1,836	2,849	42,096	11,740	16	171	163	75
2023 January	^R 35,327	739	808	161	153	2,473	^R 937	1	14	14	6
February	26,763	712	1,100	130	127	2,579	841	1	11	12	5
March	^R 28,490	704	798	143	NM	NM	^R 902	1	11	13	6
April	22,743	650	745	126	NM	NM	^R 841	1	^R 9	12	5
May	^R 25,440	^R 728	750	^R 163	110	^R 2,190	^R 969	1	12	13	6
June	^R 33,330	668	751	130	140	2,247	^R 1,147	1	12	13	6
July	^R 44,344	^R 621	906	100	240	2,829	1,438	1	14	13	6
August	^R 43,734	742	842	111	244	2,915	1,429	2	14	13	6
September	^R 34,080	^R 557	^R 915	120	217	^R 2,677	^R 1,161	1	11	13	6
October	^R 29,485	643	890	146	114	2,250	987	1	7	12	6
November	29,480	^R 716	829	120	81	2,069	934	1	9	11	5
December	31,835	793	803	120	115	2,292	983	2	10	14	6
Total	385,051	8,276	10,136	1,570	1,744	28,701	12,569	16	134	153	70

^a Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and coal syñfuel.

^b Fuel oil nos. 1, 2, and 4. For 1949–1979, data are for gas turbine and internal combustion plant use of petroleum. For 1980–2000, electric utility data also include small amounts of kerosene and jet fuel.

^c Fuel oil nos. 5 and 6. For 1949–1979, data are for steam plant use of petroleum. For 1980–2000, electric utility data also include a small amount of fuel oil no. 4.

^d Jet fuel, kerosene, other petroleum liquids, waste oil, and, beginning in 2011, propane.

^e Petroleum coke is converted from short tons to barrels by multiplying by 5.

^f Natural gas, plus a small amount of supplemental gaseous fuels.

^g Blast furnace gas, and other manufactured and waste gases derived from fossil fuels. Through 2010, also includes propane gas.

^h Wood and wood-derived fuels.

ⁱ Municipal solid waste from biogenic sources, landfill gas, sludge waste, agricultural byproducts, and other biomass. Through 2000, also includes non-renewable waste (municipal solid waste from non-biogenic sources, and tire-derived fuels).

^j Batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, miscellaneous

technologies, and, beginning in 2001, non-renewable waste (municipal solid waste from non-biogenic sources, and tire-derived fuels).

^k Through 1988, data are for electric utilities only. Beginning in 1989, data are for electric utilities and independent power producers.

^R=Revised. NA=Not available. NM=Not meaningful. (s)=Less than 0.5 trillion Btu.

Notes: • Data are for utility-scale facilities. See Note 1, "Coverage of Electricity Statistics," at end of section. • Data are for fuels consumed to produce electricity. Data also include fuels consumed to produce useful thermal output at a small number of electric utility combined-heat-and-power (CHP) plants. • The electric power sector comprises electricity-only and combined-heat-and-power (CHP) plants within the NAICS 22 category whose primary business is to sell electricity, or electricity and heat, to the public. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.

Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#electricity> (Excel and CSV files) for all available annual data beginning in 1949 and monthly data beginning in 1973.

Sources: See end of section.

Table 7.3c Consumption of Selected Combustible Fuels for Electricity Generation: Commercial and Industrial Sectors (Subset of Table 7.3a)

	Commercial Sector ^a				Industrial Sector ^b						
	Coal ^c	Petroleum ^d	Natural Gas ^e	Biomass	Coal ^c	Petroleum ^d	Natural Gas ^e	Other Gases ^g	Biomass		Other ⁱ
				Waste ^f					Wood ^h	Waste ^f	
Thousand Short Tons	Thousand Barrels	Billion Cubic Feet	Trillion Btu	Thousand Short Tons	Thousand Barrels	Billion Cubic Feet	Trillion Btu				
1990 Total	417	953	28	15	10,740	13,103	517	104	335	16	36
1995 Total	569	649	43	21	12,171	12,265	601	114	373	13	40
2000 Total	514	823	37	26	11,706	10,459	640	107	369	10	45
2005 Total	377	585	34	20	7,504	6,440	518	85	189	5	46
2006 Total	347	333	35	21	7,408	5,066	536	87	187	3	45
2007 Total	361	258	34	19	5,089	5,041	554	88	188	4	41
2008 Total	369	166	33	20	5,075	3,617	520	73	179	5	39
2009 Total	317	190	34	23	4,674	3,328	520	62	160	4	42
2010 Total	314	172	39	24	8,125	2,422	555	70	172	8	55
2011 Total	347	137	47	31	5,735	2,145	572	74	182	7	57
2012 Total	307	279	63	33	4,665	4,761	633	84	219	8	54
2013 Total	513	335	67	36	4,670	3,892	642	74	210	11	50
2014 Total	202	462	72	36	4,629	2,594	623	81	210	11	54
2015 Total	163	260	70	35	3,999	1,907	625	77	191	10	58
2016 Total	111	116	46	34	3,021	1,701	534	53	169	10	53
2017 Total	95	204	50	34	2,783	1,545	541	49	169	8	49
2018 Total	87	279	53	33	2,534	1,418	565	57	172	7	46
2019 Total	76	257	56	30	2,161	1,329	618	51	167	6	45
2020 Total	72	242	52	29	1,802	1,202	619	53	160	6	40
2021 January	8	22	4	3	139	93	53	4	14	1	4
February	11	21	3	2	128	114	42	4	12	1	3
March	7	23	3	3	127	98	45	4	13	1	3
April	6	24	3	3	121	83	44	4	13	1	3
May	4	20	3	3	140	96	46	4	13	1	3
June	6	20	4	3	144	83	50	4	13	(s)	3
July	7	23	4	3	145	82	55	4	14	(s)	3
August	7	20	5	3	145	83	54	4	13	(s)	3
September	8	16	4	3	153	76	47	4	13	(s)	3
October	9	25	4	2	138	87	48	4	13	1	3
November	8	19	4	3	149	89	50	4	13	1	3
December	7	23	4	3	138	83	52	4	13	1	4
Total	87	256	46	31	1,666	1,066	585	48	156	6	39
2022 January	8	46	4	5	145	107	52	4	13	1	2
February	7	18	4	5	137	105	45	4	12	1	2
March	5	16	4	5	151	98	49	4	13	1	2
April	4	18	4	5	124	93	46	4	12	1	1
May	3	22	4	5	148	104	48	4	13	1	2
June	9	22	4	5	147	95	50	4	13	(s)	2
July	8	22	5	5	143	102	54	4	14	(s)	2
August	9	19	5	5	142	96	54	4	13	(s)	1
September	9	13	4	5	130	100	49	4	12	(s)	1
October	8	14	4	5	126	101	48	4	11	1	1
November	8	15	4	5	122	107	49	4	12	1	1
December	9	43	4	5	139	210	49	4	13	1	1
Total	87	269	49	63	1,655	1,319	595	48	151	6	18
2023 January	R 7	23	4	5	134	107	52	4	13	1	1
February	6	17	4	5	118	84	47	4	11	1	1
March	5	16	4	5	117	113	50	4	12	1	1
April	6	NM	4	5	115	81	42	3	11	(s)	1
May	6	16	4	5	121	79	47	4	12	1	1
June	3	12	4	5	124	87	R 51	4	11	(s)	1
July	4	14	5	5	136	102	53	4	11	(s)	1
August	4	15	5	5	127	95	54	5	12	(s)	1
September	5	13	5	5	122	82	51	4	11	(s)	1
October	7	14	4	5	124	77	50	4	11	1	1
November	6	16	4	5	119	74	51	4	12	1	1
December	7	22	4	5	126	81	56	4	12	1	1
Average	66	188	51	60	1,484	1,061	603	47	139	6	12

^a Commercial combined-heat-and-power (CHP) and commercial electricity-only plants.

^b Industrial combined-heat-and-power (CHP) and industrial electricity-only plants.

^c Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and coal synfuel.

^d Distillate fuel oil, residual fuel oil, petroleum coke, jet fuel, kerosene, other petroleum, waste oil, and, beginning in 2011, propane.

^e Natural gas, plus a small amount of supplemental gaseous fuels.

^f Municipal solid waste from biogenic sources, landfill gas, sludge waste, agricultural byproducts, and other biomass. Through 2000, also includes non-renewable waste (municipal solid waste from non-biogenic sources, and tire-derived fuels).

^g Blast furnace gas, and other manufactured and waste gases derived from fossil fuels. Through 2010, also includes propane gas.

^h Wood and wood-derived fuels.

ⁱ Batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, miscellaneous

technologies, and, beginning in 2001, non-renewable waste (municipal solid waste from non-biogenic sources, and tire-derived fuels).

R=Revised. NM=Not meaningful. (s)=Less than 0.5 trillion Btu.

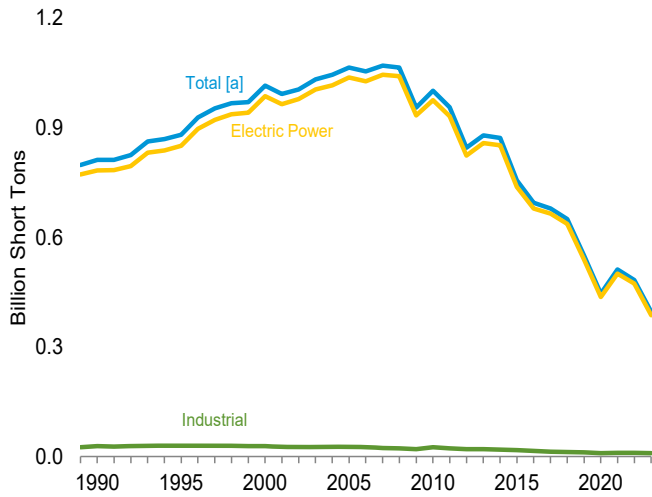
Notes: • Data are for utility-scale facilities. See Note 1, "Coverage of Electricity Statistics," at end of section. • See Note 2, "Classification of Power Plants Into Energy-Use Sectors," at end of section. • Data are for fuels consumed to produce electricity. Through 1988, data are not available. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.

Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#electricity> (Excel and CSV files) for all available annual and monthly data beginning in 1989.

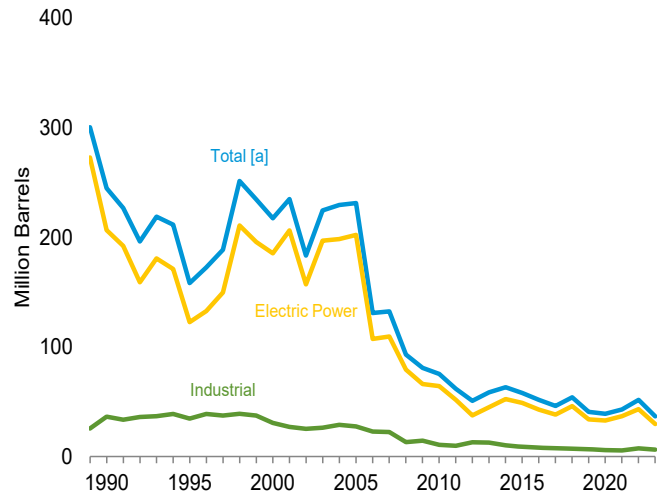
Sources: • **1989–1997**: U.S. Energy Information Administration (EIA), Form EIA-867, "Annual Nonutility Power Producer Report." • **1998–2000**: EIA, Form EIA-860B, "Annual Electric Generator Report—Nonutility." • **2001–2003**: EIA, Form EIA-906, "Power Plant Report." • **2004–2007**: EIA, Form EIA-906, "Power Plant Report," and Form EIA-920, "Combined Heat and Power Plant Report." • **2008 forward**: EIA, Form EIA-923, "Power Plant Operations Report."

Figure 7.4 Consumption of Selected Combustible Fuels for Electricity Generation and Useful Thermal Output

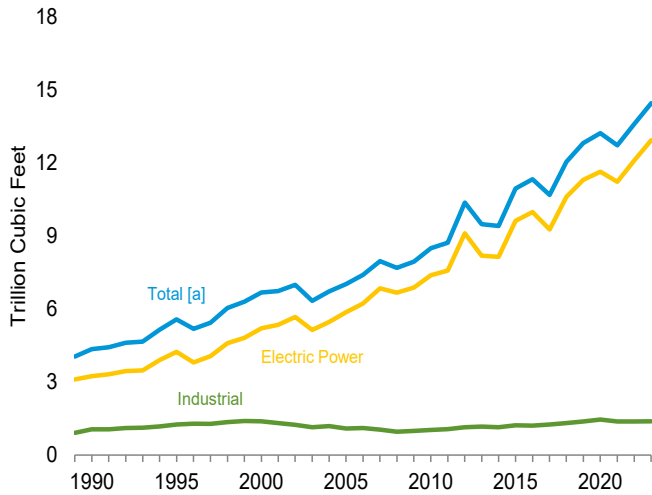
Coal by Sector, 1989–2023



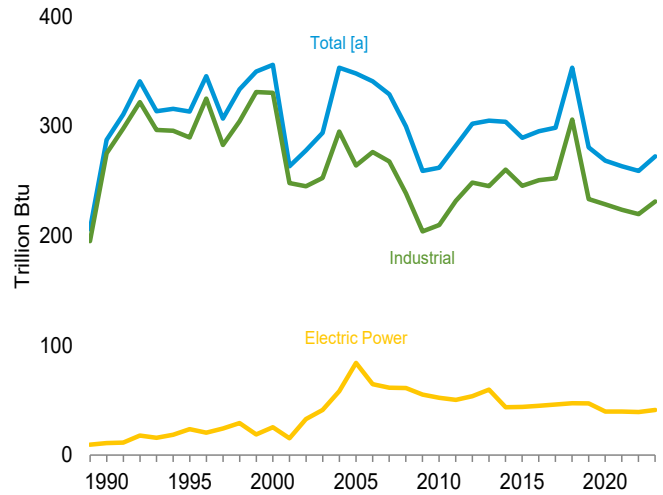
Petroleum by Sector, 1989–2023



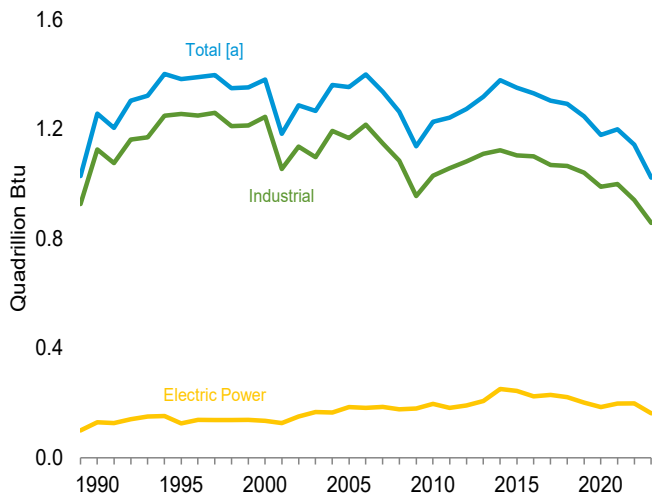
Natural Gas by Sector, 1989–2023



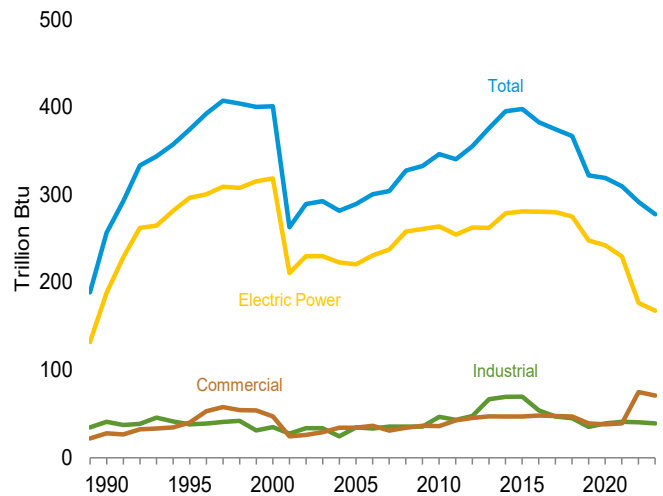
Other Gases [b] by Sector, 1989–2023



Wood by Sector, 1989–2023



Waste by Sector, 1989–2023



[a] Includes commercial sector.

[b] Blast furnace gas, and other manufactured and waste gases derived from fossil fuels. Through 2010, also includes propane gas.

Note: Data are for utility-scale facilities.

Web Page: <http://www.eia.gov/totalenergy/data/monthly/#electricity>.

Sources: Tables 7.4a-7.4c.

Table 7.4a Consumption of Combustible Fuels for Electricity Generation and Useful Thermal Output: Total (All Sectors) (Sum of Tables 7.4b and 7.4c)

	Coal ^a Thousand Short Tons	Petroleum					Natural Gas ^f Billion Cubic Feet	Other Gases ^g	Biomass		
		Distillate Fuel Oil ^b Thousand Barrels	Residual Fuel Oil ^c Thousand Barrels	Other Liquids ^d	Petroleum Coke ^e Thousand Short Tons	Total ^e Thousand Barrels			Wood ^h	Waste ⁱ	Other ^j
1950 Total	91,871	5,423	69,998	NA	NA	75,421	629	NA	5	NA	NA
1955 Total	143,759	5,412	69,862	NA	NA	75,274	1,153	NA	3	NA	NA
1960 Total	176,685	3,824	84,371	NA	NA	88,195	1,725	NA	2	NA	NA
1965 Total	244,788	4,928	110,274	NA	NA	115,203	2,321	NA	3	NA	NA
1970 Total	320,182	24,123	311,381	NA	636	338,686	3,932	NA	1	2	NA
1975 Total	405,962	38,907	467,221	NA	70	506,479	3,158	NA	(s)	2	NA
1980 Total	569,274	29,051	391,163	NA	179	421,110	3,682	NA	3	2	NA
1985 Total	693,841	14,635	158,779	NA	231	174,571	3,044	NA	8	7	NA
1990 Total ^k	811,538	20,194	209,081	1,332	2,832	244,765	4,346	288	1,256	257	86
1995 Total	881,012	21,697	112,168	1,322	4,590	158,140	5,572	313	1,382	374	97
2000 Total	1,015,398	34,572	156,673	2,904	4,669	217,494	6,677	356	1,380	401	109
2005 Total	1,065,281	24,446	156,915	4,270	9,113	231,193	7,021	348	1,353	289	237
2006 Total	1,053,783	14,655	69,846	3,396	8,622	131,005	7,404	341	1,399	300	247
2007 Total	1,069,606	17,042	74,616	4,237	7,299	132,389	7,962	329	1,336	304	239
2008 Total	1,064,503	14,137	43,477	3,765	6,314	92,948	7,689	300	1,263	328	212
2009 Total	955,190	14,800	33,672	3,218	5,828	80,830	7,938	259	1,137	333	228
2010 Total	1,001,411	15,247	26,944	2,777	6,053	75,231	8,502	262	1,226	346	237
2011 Total	956,470	11,735	16,877	2,540	6,092	61,610	8,724	282	1,241	340	261
2012 Total	845,066	9,945	13,571	2,185	5,021	50,805	10,371	302	1,273	355	252
2013 Total	879,078	10,277	14,199	2,212	6,338	58,378	9,479	305	1,318	376	236
2014 Total	871,741	15,107	16,615	2,908	5,695	63,106	9,410	304	1,378	395	236
2015 Total	756,226	12,924	16,136	3,008	5,188	58,009	10,952	290	1,351	398	237
2016 Total	693,958	10,278	12,231	2,173	5,352	51,441	11,322	296	1,330	383	238
2017 Total	678,578	10,168	11,508	2,033	4,467	46,043	10,677	299	1,303	375	226
2018 Total	650,027	15,066	13,584	2,578	4,552	53,988	12,048	353	1,291	367	226
2019 Total	550,017	10,369	10,049	2,580	3,563	40,811	12,809	281	1,246	322	234
2020 Total	445,753	8,604	8,974	2,160	3,856	39,020	13,221	269	1,178	319	226
2021 January	46,122	825	933	202	356	3,738	1,000	23	104	28	19
February	48,815	2,051	932	322	339	4,998	896	19	93	25	16
March	35,365	796	712	170	326	3,309	860	22	100	28	19
April	30,852	841	646	164	235	2,827	876	21	97	26	17
May	36,448	823	698	141	288	3,101	932	21	100	26	18
June	48,810	880	752	212	254	3,116	1,213	22	99	24	18
July	57,256	777	786	203	341	3,471	1,374	23	106	25	19
August	57,086	932	1,138	273	360	4,145	1,396	23	104	25	19
September	45,253	755	932	188	317	3,460	1,109	22	99	25	18
October	36,462	816	820	192	321	3,432	1,062	23	97	25	18
November	33,764	860	751	198	382	3,718	994	22	96	25	18
December	35,436	984	793	205	311	3,539	1,011	22	104	28	19
Total	511,669	11,340	9,895	2,470	3,830	42,855	12,724	264	1,199	310	218
2022 January	49,742	2,776	2,582	284	295	7,119	1,085	23	101	26	16
February	40,880	1,115	1,011	180	315	3,879	922	20	93	24	15
March	35,381	912	985	171	275	3,445	902	22	95	27	16
April	31,802	733	847	162	282	3,150	860	21	93	24	15
May	36,114	882	908	107	315	3,475	1,043	23	96	24	16
June	42,640	968	894	187	333	3,716	1,266	22	97	23	16
July	50,387	1,012	1,138	231	270	3,730	1,537	23	101	24	17
August	49,318	932	979	229	310	3,691	1,514	22	100	24	16
September	38,207	744	1,099	197	330	3,689	1,246	21	91	22	15
October	32,391	798	1,134	199	325	3,754	1,067	21	89	24	15
November	33,301	832	1,010	169	298	3,499	1,026	20	93	24	15
December	42,768	3,895	2,128	512	355	8,307	1,120	21	96	25	15
Total	482,931	15,599	14,715	2,626	3,702	51,452	13,590	259	1,143	292	187
2023 January	^R 36,421	867	1,068	241	206	3,205	^R 1,101	23	98	26	15
February	27,698	808	1,309	174	184	3,210	990	21	85	23	13
March	^R 29,462	811	1,057	194	173	^R 2,928	^R 1,062	22	89	24	14
April	23,614	726	954	175	157	2,640	982	20	78	^R 24	13
May	^R 26,353	^R 798	910	^R 215	173	^R 2,789	^R 1,115	22	^R 88	24	14
June	^R 34,220	723	907	198	198	^R 2,816	^R 1,300	22	83	22	14
July	^R 45,286	684	1,055	158	306	3,427	1,600	22	86	23	15
August	^R 44,618	810	999	167	315	3,550	1,591	24	87	22	15
September	^R 34,973	620	^R 1,077	169	278	^R 3,258	^R 1,317	28	79	22	14
October	^R 30,374	711	1,061	201	177	2,859	1,140	26	78	23	14
November	30,386	^R 804	1,017	169	136	^R 2,670	^R 1,094	20	85	22	15
December	32,784	944	1,056	177	176	3,058	1,154	22	86	26	16
Total	396,188	9,308	12,471	2,238	2,479	36,410	14,446	273	1,022	278	171

^a Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and coal synfuel.

^b Fuel oil nos. 1, 2, and 4. For 1949–1979, data are for gas turbine and internal combustion plant use of petroleum. For 1980–2000, electric utility data also include small amounts of kerosene and jet fuel.

^c Fuel oil nos. 5 and 6. For 1949–1979, data are for steam plant use of petroleum. For 1980–2000, electric utility data also include a small amount of fuel oil no. 4.

^d Jet fuel, kerosene, other petroleum liquids, waste oil, and, beginning in 2011, propane.

^e Petroleum coke is converted from short tons to barrels by multiplying by 5.

^f Natural gas, plus a small amount of supplemental gaseous fuels.

^g Blast furnace gas, and other manufactured and waste gases derived from fossil fuels. Through 2010, also includes propane gas.

^h Wood and wood-derived fuels.

ⁱ Municipal solid waste from biogenic sources, landfill gas, sludge waste, agricultural byproducts, and other biomass. Through 2000, also includes

non-renewable waste (municipal solid waste from non-biogenic sources, and tire-derived fuels).

^j Batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, miscellaneous technologies, and, beginning in 2001, non-renewable waste (municipal solid waste from non-biogenic sources, and tire-derived fuels).

^k Through 1988, data are for electric utilities only. Beginning in 1989, data are for electric utilities, independent power producers, commercial plants, and industrial plants.

^R = Revised. NA = Not available. (s) = Less than 0.5 trillion Btu.

Notes: • Data are for utility-scale facilities. See Note 1, "Coverage of Electricity Statistics," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.

Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#electricity> (Excel and CSV files) for all available annual data beginning in 1949 and monthly data beginning in 1973.

Sources: Tables 7.4b and 7.4c.

Table 7.4b Consumption of Combustible Fuels for Electricity Generation and Useful Thermal Output: Electric Power Sector (Subset of Table 7.4a)

	Coal ^a	Petroleum					Natural Gas ^f	Other Gases ^g	Biomass		Other ^j
		Distillate Fuel Oil ^b	Residual Fuel Oil ^c	Other Liquids ^d	Petroleum Coke ^e	Total ^e			Wood ^h	Waste ⁱ	
	Thousand Short Tons	Thousand Barrels				Thousand Short Tons	Thousand Barrels	Billion Cubic Feet	Trillion Btu		
1950 Total	91,871	5,423	69,998	NA	NA	75,421	629	NA	5	NA	NA
1955 Total	143,759	5,412	69,862	NA	NA	75,274	1,153	NA	3	NA	NA
1960 Total	176,685	3,824	84,371	NA	NA	88,195	1,725	NA	2	NA	NA
1965 Total	244,788	4,928	110,274	NA	NA	115,203	2,321	NA	3	NA	NA
1970 Total	320,182	24,123	311,381	NA	636	338,686	3,932	NA	1	2	NA
1975 Total	405,962	38,907	467,221	NA	70	506,479	3,158	NA	(s)	2	NA
1980 Total	569,274	29,051	391,163	NA	179	421,110	3,682	NA	3	2	NA
1985 Total	693,841	14,635	158,779	NA	231	174,571	3,044	NA	8	7	NA
1990 Total ^k	782,567	16,567	184,915	26	1,008	206,550	3,245	11	129	188	(s)
1995 Total	850,230	18,553	90,023	499	2,674	122,447	4,237	24	125	296	2
2000 Total	985,821	30,016	138,513	454	3,275	185,358	5,206	25	134	318	1
2005 Total	1,037,485	19,675	139,409	2,685	8,083	202,184	5,869	84	185	221	123
2006 Total	1,026,636	12,646	57,345	1,870	7,101	107,365	6,222	65	182	231	125
2007 Total	1,045,141	15,327	63,086	2,594	5,685	109,431	6,841	61	186	237	124
2008 Total	1,040,580	12,547	38,241	2,670	5,119	79,056	6,668	61	177	258	131
2009 Total	933,627	12,035	28,782	2,210	4,611	66,081	6,873	55	180	261	124
2010 Total	975,052	13,790	24,503	1,877	4,777	64,055	7,387	52	196	264	124
2011 Total	932,484	11,021	14,803	1,658	4,837	51,667	7,574	50	182	255	143
2012 Total	823,551	9,080	12,203	1,339	2,974	37,495	9,111	54	190	262	143
2013 Total	857,962	9,598	12,283	1,489	4,285	44,794	8,191	60	207	262	139
2014 Total	851,602	14,235	15,132	2,208	4,132	52,235	8,146	44	251	279	137
2015 Total	738,444	12,193	14,929	2,131	3,907	48,787	9,613	44	244	281	136
2016 Total	678,554	9,510	11,242	1,322	4,138	42,763	9,985	45	224	281	139
2017 Total	664,993	9,481	10,464	1,375	3,399	38,318	9,266	46	229	280	132
2018 Total	637,217	13,967	12,446	1,855	3,549	46,013	10,599	47	221	275	136
2019 Total	535,606	9,336	9,352	1,750	2,655	33,712	11,299	47	201	248	145
2020 Total	435,827	7,673	8,382	1,543	3,057	32,885	11,632	40	185	242	144
2021 January	45,196	708	841	151	286	3,131	864	4	18	20	12
February	47,938	1,915	854	216	276	4,364	785	2	17	18	10
March	34,514	681	654	121	259	2,750	742	2	16	20	12
April	30,056	751	599	121	173	2,333	761	3	13	19	11
May	35,651	758	646	86	217	2,573	814	3	15	20	11
June	48,002	822	711	160	195	2,668	1,087	4	17	19	11
July	56,375	706	739	157	279	2,995	1,238	4	19	19	12
August	56,256	863	1,077	220	306	3,691	1,262	4	19	19	12
September	44,390	691	866	159	256	2,994	989	4	16	19	11
October	35,615	742	732	147	258	2,910	939	4	14	18	11
November	32,849	801	681	149	323	3,245	868	3	15	18	11
December	34,593	921	714	149	249	3,032	879	3	17	20	12
Total	501,435	10,359	9,115	1,835	3,075	36,686	11,229	40	197	229	134
2022 January	48,805	2,563	2,425	228	239	6,410	949	3	18	16	7
February	40,063	1,044	859	136	254	3,307	804	3	17	15	6
March	34,498	840	738	133	216	2,788	777	3	16	16	7
April	31,012	672	598	109	223	2,495	743	4	14	14	7
May	35,264	810	686	63	244	2,778	923	4	15	14	7
June	41,817	900	631	139	278	3,060	1,145	3	17	15	7
July	49,556	921	886	174	211	3,034	1,405	4	19	15	7
August	48,469	865	821	183	239	3,062	1,380	3	19	15	7
September	37,409	695	870	144	279	3,102	1,125	3	16	14	6
October	31,554	731	912	151	260	3,096	946	3	14	14	6
November	32,503	763	791	126	228	2,821	902	3	15	14	6
December	41,883	3,658	1,815	278	295	7,226	992	3	17	15	7
Total	472,834	14,463	12,031	1,864	2,965	43,181	12,092	39	198	176	81
2023 January	^R 35,549	750	836	162	162	2,558	^R 967	3	16	15	7
February	26,934	724	1,124	132	151	2,737	870	3	^R 13	14	6
March	^R 28,692	712	819	145	NM	NM	^R 932	3	14	14	6
April	^R 22,873	660	768	128	NM	NM	869	3	11	13	6
May	^R 25,601	^R 736	775	^R 165	118	^R 2,266	^R 996	3	14	14	6
June	^R 33,496	^R 674	774	132	146	2,312	^R 1,176	3	15	13	6
July	^R 44,548	626	929	101	249	2,902	1,471	3	16	14	7
August	^R 43,926	746	864	113	254	2,990	1,462	4	16	14	7
September	^R 34,263	561	^R 939	121	224	^R 2,742	^R 1,191	4	13	14	6
October	^R 29,646	649	921	148	122	2,331	1,016	4	10	13	6
November	29,639	^R 721	852	^R 122	89	2,139	965	3	^R 12	13	6
December	32,005	797	831	123	124	2,369	1,014	4	12	15	7
Total	387,170	8,357	10,433	1,592	1,863	29,699	12,930	41	162	167	76

^a Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and coal syntfuel.
^b Fuel oil nos. 1, 2, and 4. For 1949–1979, data are for gas turbine and internal combustion plant use of petroleum. For 1980–2000, electric utility data also include small amounts of kerosene and jet fuel.
^c Fuel oil nos. 5 and 6. For 1949–1979, data are for steam plant use of petroleum. For 1980–2000, electric utility data also include a small amount of fuel oil no. 4.
^d Jet fuel, kerosene, other petroleum liquids, waste oil, and, beginning in 2011, propane.
^e Petroleum coke is converted from short tons to barrels by multiplying by 5.
^f Natural gas, plus a small amount of supplemental gaseous fuels.
^g Blast furnace gas, and other manufactured and waste gases derived from fossil fuels. Through 2010, also includes propane gas.
^h Wood and wood-derived fuels.
ⁱ Municipal solid waste from biogenic sources, landfill gas, sludge waste, agricultural byproducts, and other biomass. Through 2000, also includes non-renewable waste (municipal solid waste from non-biogenic sources, and

tire-derived fuels).
^j Batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, miscellaneous technologies, and, beginning in 2001, non-renewable waste (municipal solid waste from non-biogenic sources, and tire-derived fuels).
^k Through 1988, data are for electric utilities only. Beginning in 1989, data are for electric utilities and independent power producers.
^R Revised. NA=Not available. NM=Not meaningful. (s)=Less than 0.5 trillion Btu.
Notes: • Data are for utility-scale facilities. See Note 1, "Coverage of Electricity Statistics," at end of section. • The electric power sector comprises electricity-only and combined-heat-and-power (CHP) plants within the NAICS 22 category whose primary business is to sell electricity, or electricity and heat, to the public. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.
Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#electricity> (Excel and CSV files) for all available annual data beginning in 1949 and monthly data beginning in 1973.
Sources: See end of section.

Table 7.4c Consumption of Selected Combustible Fuels for Electricity Generation and Useful Thermal Output: Commercial and Industrial Sectors (Subset of Table 7.4a)

	Commercial Sector ^a				Industrial Sector ^b						
	Coal ^c	Petroleum ^d	Natural Gas ^e	Biomass	Coal ^c	Petroleum ^d	Natural Gas ^e	Other Gases ^g	Biomass		Other ⁱ
				Waste ^f					Wood ^h	Waste ^f	
Thousand Short Tons	Thousand Barrels	Billion Cubic Feet	Trillion Btu	Thousand Short Tons	Thousand Barrels	Billion Cubic Feet	Trillion Btu				
1990 Total	1,191	2,056	46	28	27,781	36,159	1,055	275	1,125	41	86
1995 Total	1,419	1,245	78	40	29,363	34,448	1,258	290	1,255	38	95
2000 Total	1,547	1,615	85	47	28,031	30,520	1,386	331	1,244	35	108
2005 Total	1,922	1,630	68	34	25,875	27,380	1,084	264	1,166	34	94
2006 Total	1,886	935	68	36	25,262	22,706	1,115	277	1,216	33	102
2007 Total	1,927	752	70	31	22,537	22,207	1,050	268	1,148	36	98
2008 Total	2,021	671	66	34	21,902	13,222	955	239	1,084	35	60
2009 Total	1,798	521	76	36	19,766	14,228	990	204	955	35	82
2010 Total	1,720	437	86	36	24,638	10,740	1,029	210	1,029	47	91
2011 Total	1,668	333	87	43	22,319	9,610	1,063	232	1,057	43	94
2012 Total	1,450	457	111	45	20,065	12,853	1,149	249	1,082	47	81
2013 Total	1,356	887	118	47	19,761	12,697	1,170	246	1,109	67	69
2014 Total	1,063	758	119	47	19,076	10,112	1,145	260	1,122	70	72
2015 Total	798	622	116	47	16,984	8,600	1,222	246	1,103	70	73
2016 Total	683	404	127	48	14,720	8,273	1,209	251	1,100	54	70
2017 Total	610	516	154	48	12,975	7,209	1,257	253	1,069	47	65
2018 Total	577	681	135	47	12,233	7,294	1,314	306	1,065	45	62
2019 Total	519	707	135	39	10,892	6,393	1,374	234	1,040	35	61
2020 Total	473	527	131	38	9,453	5,609	1,458	229	989	39	55
2021											
January	52	56	11	3	874	551	125	20	86	4	5
February	65	76	10	3	811	558	102	17	76	4	4
March	50	56	9	3	801	503	109	19	84	4	5
April	39	52	8	3	758	442	107	17	83	4	4
May	31	48	8	3	767	481	110	18	85	3	4
June	34	39	10	3	774	410	116	18	82	2	5
July	35	47	11	4	845	428	125	19	87	3	5
August	40	41	11	3	791	413	122	19	85	3	5
September	43	34	10	3	820	433	111	19	82	3	4
October	46	55	9	3	800	466	114	19	82	4	5
November	50	48	9	3	865	425	116	19	80	4	5
December	49	62	10	3	795	445	122	19	86	4	5
Total	534	614	117	39	9,700	5,555	1,379	224	999	41	55
2022											
January	56	168	11	6	881	540	124	19	83	4	3
February	55	57	10	6	762	515	108	17	75	4	3
March	37	57	10	6	845	599	115	19	78	4	3
April	25	52	9	6	765	603	108	17	78	4	2
May	27	65	9	6	824	632	111	19	80	4	3
June	42	48	10	6	781	608	112	18	79	2	3
July	44	66	12	7	787	630	121	19	83	2	3
August	46	48	12	6	803	581	122	19	81	3	3
September	47	25	10	6	751	562	111	18	74	2	2
October	46	28	9	6	791	630	112	18	74	3	2
November	52	35	10	6	746	642	115	18	77	4	3
December	57	181	11	6	828	900	117	18	78	4	2
Total	535	830	123	75	9,563	7,441	1,375	220	941	40	32
2023											
January	R 46	87	11	6	826	561	123	20	81	4	2
February	40	44	10	5	724	428	110	18	72	4	2
March	37	44	11	6	734	638	R 120	19	75	4	2
April	36	NM	9	6	R 704	513	104	18	67	4	2
May	R 31	28	9	6	R 720	496	110	18	73	4	2
June	25	30	10	6	R 699	475	114	18	68	2	2
July	27	32	11	6	R 711	493	R 118	19	70	2	2
August	28	32	11	6	R 663	527	R 117	20	71	2	2
September	30	34	10	6	680	482	R 116	24	66	2	2
October	33	33	10	6	695	495	113	23	68	3	2
November	35	54	10	6	712	R 477	118	17	73	4	3
December	40	137	11	6	738	551	129	18	73	4	3
Average	409	576	123	71	8,608	6,136	1,392	231	857	39	24

^a Commercial combined-heat-and-power (CHP) and commercial electricity-only plants.

^b Industrial combined-heat-and-power (CHP) and industrial electricity-only plants.

^c Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and coal synfuel.

^d Distillate fuel oil, residual fuel oil, petroleum coke, jet fuel, kerosene, other petroleum, waste oil, and, beginning in 2011, propane.

^e Natural gas, plus a small amount of supplemental gaseous fuels.

^f Municipal solid waste from biogenic sources, landfill gas, sludge waste, agricultural byproducts, and other biomass. Through 2000, also includes non-renewable waste (municipal solid waste from non-biogenic sources, and tire-derived fuels).

^g Blast furnace gas, and other manufactured and waste gases derived from fossil fuels. Through 2010, also includes propane gas.

^h Wood and wood-derived fuels.

ⁱ Batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, miscellaneous

technologies, and, beginning in 2001, non-renewable waste (municipal solid waste from non-biogenic sources, and tire-derived fuels).

R=Revised. NM=Not meaningful.

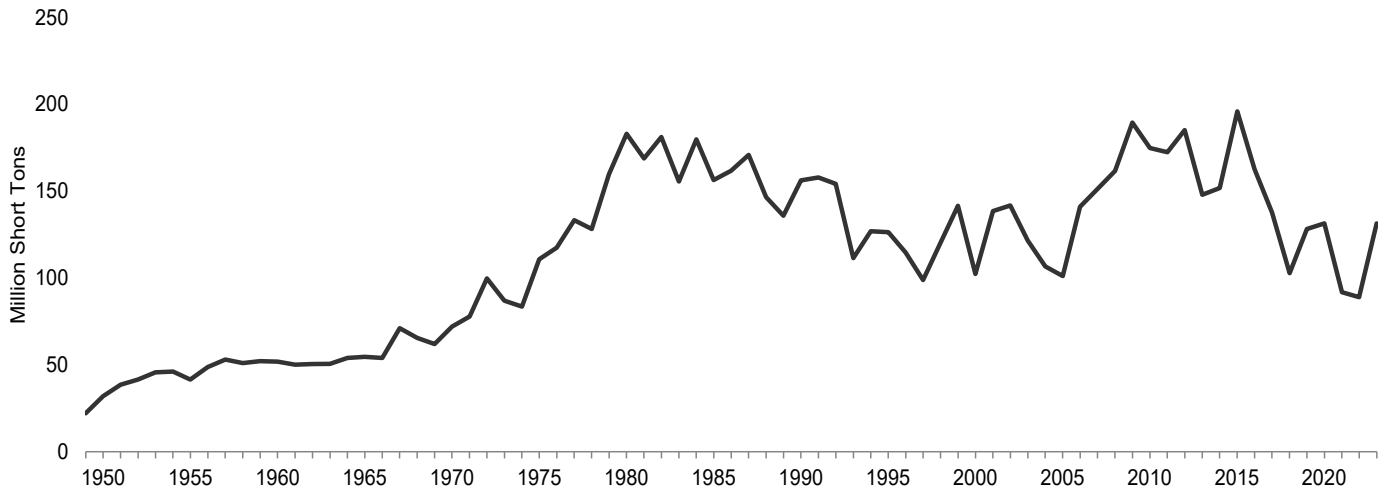
Notes: • Data are for utility-scale facilities. See Note 1, "Coverage of Electricity Statistics," at end of section. • See Note 2, "Classification of Power Plants Into Energy-Use Sectors," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.

Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#electricity> (Excel and CSV files) for all available annual and monthly data beginning in 1989.

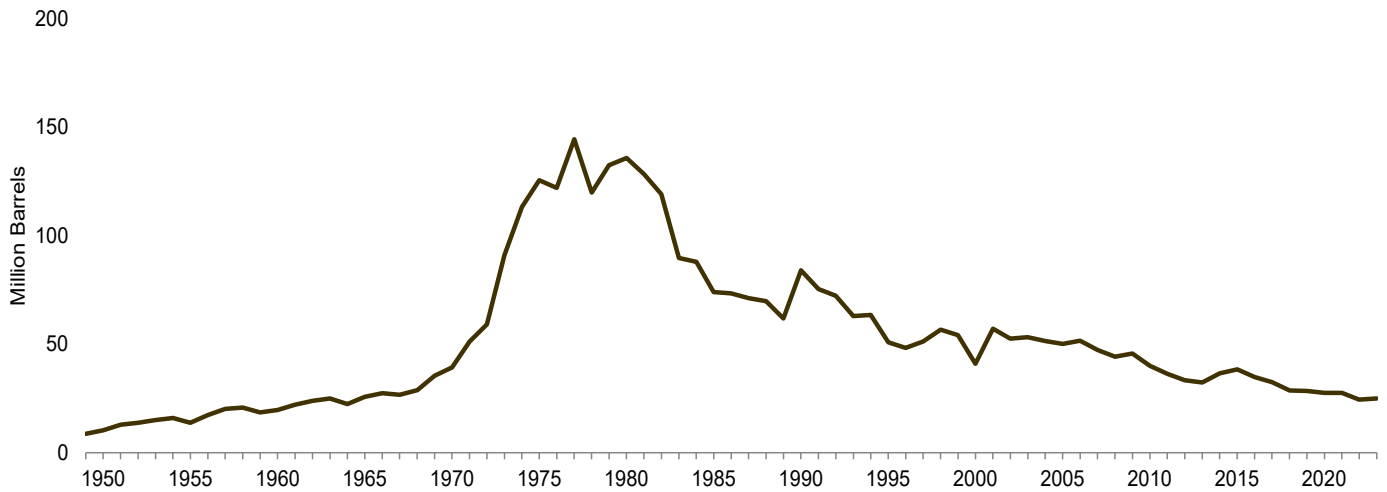
Sources: • **1989–1997**: U.S. Energy Information Administration (EIA), Form EIA-867, "Annual Nonutility Power Producer Report." • **1998–2000**: EIA, Form EIA-860B, "Annual Electric Generator Report—Nonutility." • **2001–2003**: EIA, Form EIA-906, "Power Plant Report." • **2004–2007**: EIA, Form EIA-906, "Power Plant Report," and Form EIA-920, "Combined Heat and Power Plant Report." • **2008 forward**: EIA, Form EIA-923, "Power Plant Operations Report."

Figure 7.5 Stocks of Coal and Petroleum: Electric Power Sector

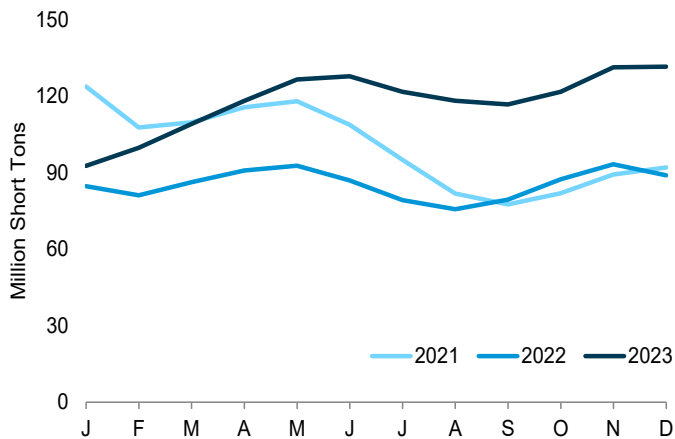
Coal, 1949–2023



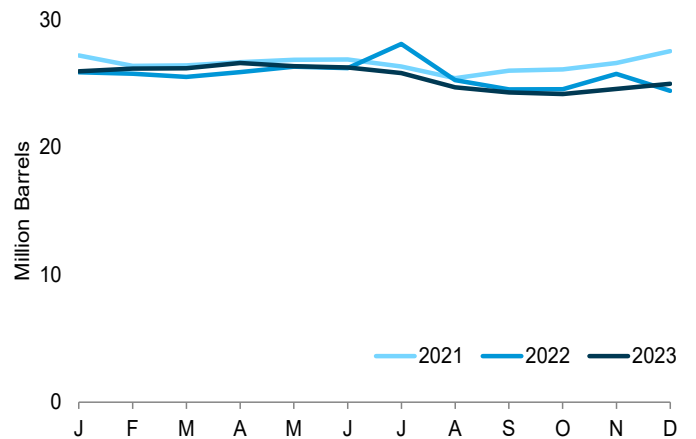
Total Petroleum, 1949–2023



Coal, Monthly



Total Petroleum, Monthly



Note: Data are for utility-sale facilities.

Web Page: <http://www.eia.gov/totalenergy/data/monthly/#electricity>.

Source: Table 7.5.

Table 7.5 Stocks of Coal and Petroleum: Electric Power Sector

	Coal ^a	Petroleum				Total ^{e,f}
		Distillate Fuel Oil ^b	Residual Fuel Oil ^c	Other Liquids ^d	Petroleum Coke ^e	
	Thousand Short Tons	Thousand Barrels			Thousand Short Tons	Thousand Barrels
1950 Year	31,842	NA	NA	NA	NA	10,201
1955 Year	41,391	NA	NA	NA	NA	13,671
1960 Year	51,735	NA	NA	NA	NA	19,572
1965 Year	54,525	NA	NA	NA	NA	25,647
1970 Year	71,908	NA	NA	NA	239	39,151
1975 Year	110,724	16,432	108,825	NA	31	125,413
1980 Year	183,010	30,023	105,351	NA	52	135,635
1985 Year	156,376	16,386	57,304	NA	49	73,933
1990 Year	156,166	16,471	67,030	NA	94	83,970
1995 Year	126,304	15,392	35,102	NA	65	50,821
2000 Year ^g	102,296	15,127	24,748	NA	211	40,932
2005 Year	101,137	18,778	27,624	NA	530	50,062
2006 Year	140,964	18,013	28,823	1,380	674	51,583
2007 Year	151,221	18,395	24,136	1,902	554	47,203
2008 Year	161,589	17,761	21,088	1,634	739	44,178
2009 Year	189,467	17,886	19,068	1,651	1,394	45,575
2010 Year	174,917	16,758	16,629	1,454	1,019	39,936
2011 Year	172,387	16,649	15,491	1,603	508	36,282
2012 Year	185,116	16,433	12,999	1,430	495	33,336
2013 Year	147,884	16,068	12,926	1,393	390	32,336
2014 Year	151,792	18,309	12,764	1,249	827	36,459
2015 Year	195,912	17,955	12,566	1,173	1,340	38,396
2016 Year	162,476	17,855	11,789	949	845	34,818
2017 Year	137,721	16,342	10,930	816	864	32,407
2018 Year	102,793	16,436	8,785	756	539	28,674
2019 Year	128,102	16,733	8,549	678	471	28,317
2020 Year	131,431	17,116	8,269	678	298	27,552
2021 January	123,705	17,226	8,014	673	253	27,177
February	107,698	16,792	7,819	695	207	26,342
March	109,614	16,734	7,815	700	230	26,400
April	115,505	16,538	7,628	711	353	26,644
May	117,932	16,649	7,465	727	397	26,827
June	108,678	16,584	7,281	718	454	26,855
July	94,974	16,486	6,850	713	453	26,316
August	81,762	16,506	6,429	653	360	25,389
September	77,476	16,620	6,819	661	375	25,977
October	81,880	16,880	6,828	670	339	26,073
November	89,192	17,231	6,951	698	340	26,580
December	91,884	18,220	7,038	744	302	27,513
2022 January	84,541	17,370	6,108	688	336	25,848
February	81,034	17,448	6,106	697	299	25,745
March	86,143	17,332	5,772	652	350	25,503
April	90,746	17,185	5,920	654	424	25,877
May	92,692	17,530	5,816	680	454	26,295
June	86,869	17,297	6,119	662	423	26,195
July	79,172	19,050	6,070	587	474	28,075
August	75,570	16,460	5,834	501	490	25,243
September	79,354	16,218	5,775	490	405	24,508
October	87,342	16,263	6,014	494	351	24,524
November	93,203	16,970	6,192	517	408	25,718
December	88,861	16,521	5,777	513	318	24,404
2023 January	R 92,604	R 17,382	6,127	545	374	25,923
February	R 99,700	R 17,523	R 6,236	537	368	R 26,135
March	R 109,004	R 16,959	R 6,138	496	513	R 26,159
April	R 118,035	R 16,806	R 6,240	500	607	R 26,579
May	R 126,414	R 16,692	R 6,193	R 441	600	R 26,326
June	R 127,710	R 16,881	R 6,248	R 427	533	R 26,221
July	R 121,590	R 16,714	R 6,442	R 418	441	R 25,777
August	R 118,144	R 16,115	R 6,384	R 405	356	R 24,684
September	R 116,635	R 16,087	R 6,393	R 397	279	R 24,271
October	R 121,621	R 15,995	R 6,353	R 388	284	R 24,157
November	R 131,266	R 16,040	R 6,325	R 385	362	R 24,557
December	131,426	16,141	6,291	381	428	24,951

^a Anthracite, bituminous coal, subbituminous coal, and lignite; excludes waste coal.

^b Fuel oil nos. 1, 2 and 4. For 1973–1979, data are for gas turbine and internal combustion plant stocks of petroleum. For 1980–2000, electric utility data also include small amounts of kerosene and jet fuel.

^c Fuel oil nos. 5 and 6. For 1973–1979, data are for steam plant stocks of petroleum. For 1980–2000, electric utility data also include a small amount of fuel oil no. 4.

^d Jet fuel and kerosene. Through 2003, data also include a small amount of waste oil.

^e Petroleum coke is converted from short tons to barrels by multiplying by 5.

^f Distillate fuel oil and residual fuel oil. Beginning in 1970, also includes petroleum coke. Beginning in 2002, also includes other liquids.

^g Through 1998, data are for electric utilities only. Beginning in 1999, data are for electric utilities and independent power producers.

R=Revised, NA=Not available.

Notes: • Data are for utility-scale facilities. See Note 1, "Coverage of Electricity Statistics," at end of section. • The electric power sector comprises electricity-only and combined-heat-and-power (CHP) plants within the NAICS 22 category whose

primary business is to sell electricity, or electricity and heat, to the public. • Stocks are at end of period. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.

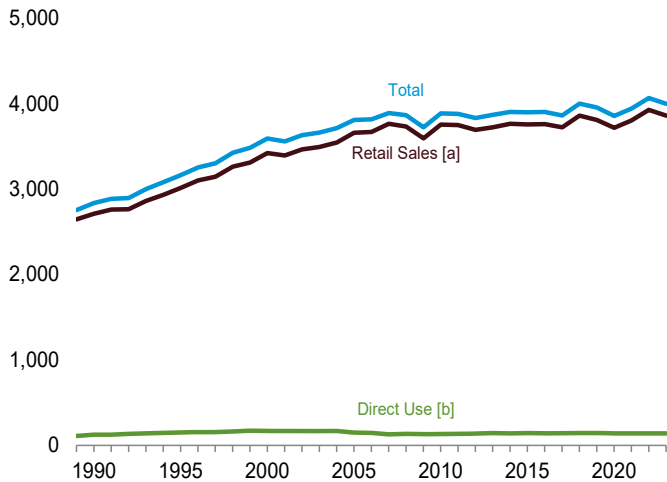
Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#electricity> (Excel and CSV files) for all available annual data beginning in 1949 and monthly data beginning in 1973.

Sources: • 1949–September 1977: Federal Power Commission, Form FPC-4, "Monthly Power Plant Report." • October 1977–1981: Federal Energy Regulatory Commission, Form FPC-4, "Monthly Power Plant Report." • 1982–1988: U.S. Energy Information Administration (EIA), Form EIA-759, "Monthly Power Plant Report." • 1989–1997: EIA, Form EIA-759, "Monthly Power Plant Report," and Form EIA-867, "Annual Nonutility Power Producer Report." • 1998–2000: EIA, Form EIA-759, "Monthly Power Plant Report," and Form EIA-860B, "Annual Electric Generator Report—Nonutility." • 2001–2003: EIA, Form EIA-906, "Power Plant Report." • 2004–2007: EIA, Form EIA-906, "Power Plant Report," and Form EIA-920, "Combined Heat and Power Plant Report." • 2008 forward: EIA, Form EIA-923, "Power Plant Operations Report."

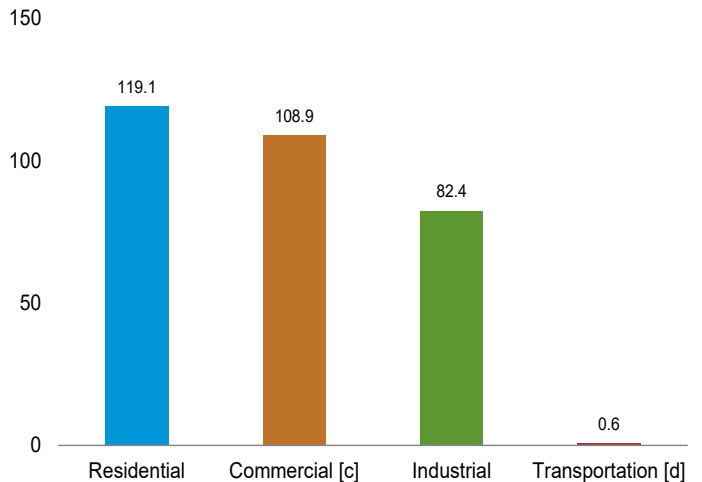
Figure 7.6 Electricity End Use

(Billion Kilowatthours)

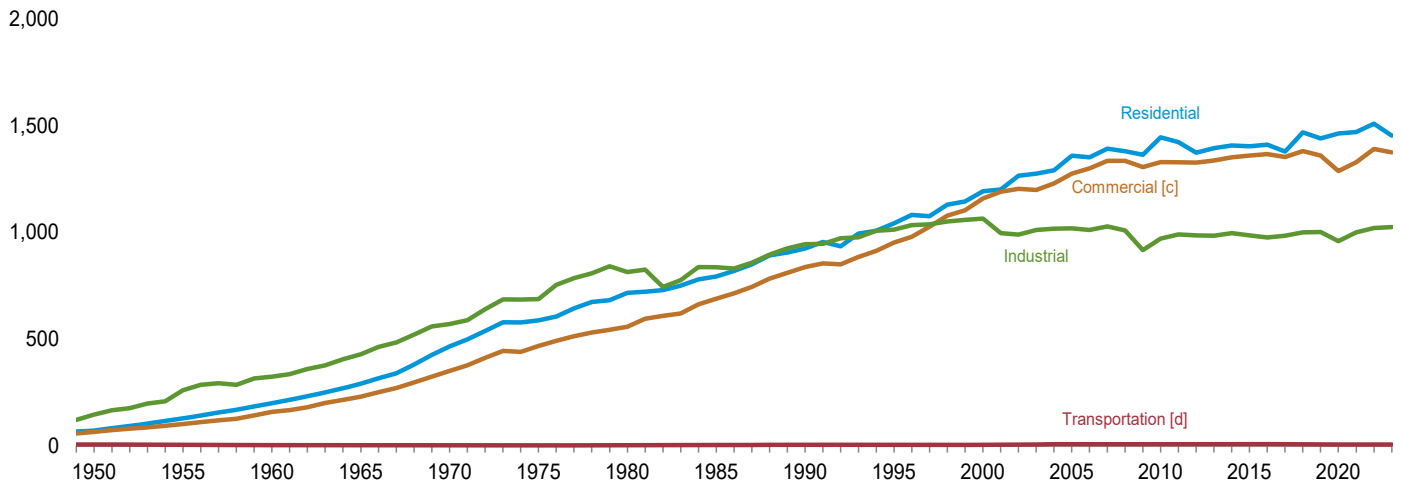
Electricity End Use Overview, 1989–2023



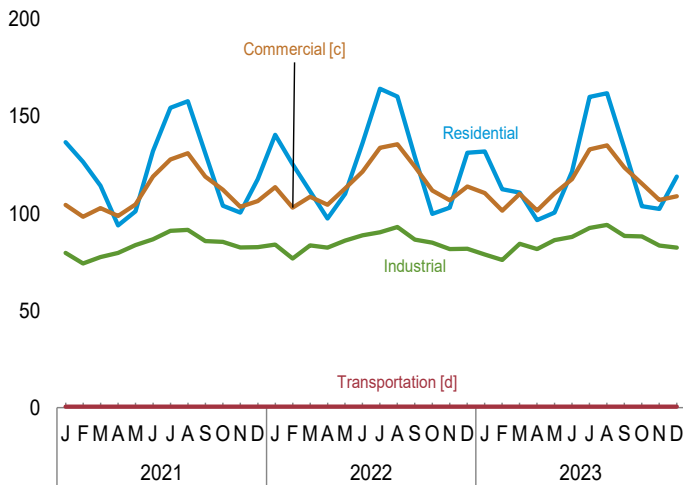
Sales to Ultimate Customers [a] by Sector, December 2023



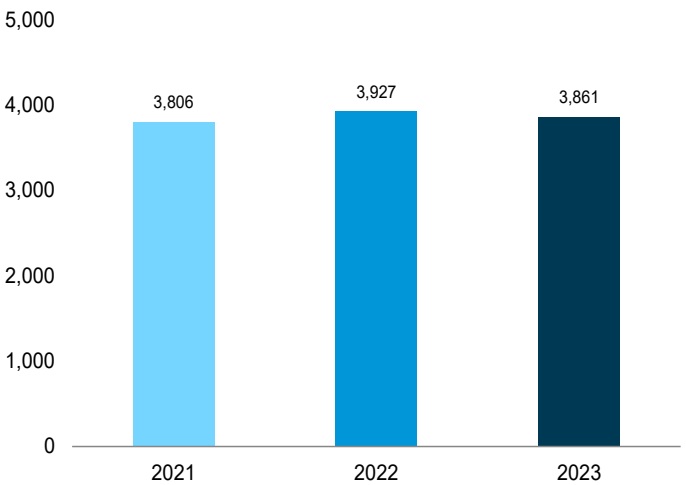
Sales to Ultimate Customers [a] by Sector, 1949–2023



Sales to Ultimate Customers [a] by Sector, Monthly



Sales to Ultimate Customers [a] Total, January–December



[a] Electricity sales to ultimate customers reported by utilities and other energy service providers.

[b] See “Direct Use” in Glossary.

[c] Commercial sector, including public street and highway lighting, inter-

departmental sales, and other sales to public authorities.

[d] Transportation sector, including sales to railroads and railways.

Web Page: <http://www.eia.gov/totalenergy/data/monthly/#electricity>.

Source: Table 7.6.

Table 7.7c Electric Net Summer Capacity: Commercial Sector
(Subset of Table 7.7a; Million Kilowatts)

	Fossil Fuels				Nuclear Electric Power	Hydro-electric Pumped Storage	Renewable Energy							Battery Storage	Total ^h
	Coal ^a	Petroleum ^b	Natural Gas ^c	Total ^d			Conventional Hydro-electric Power	Biomass		Geo-thermal	Solar ^g	Wind	Total		
								Wood ^e	Waste ^f						
1990 Year	0.3	0.2	0.7	1.2	-	-	(s)	(s)	0.2	-	-	-	0.2	-	1.4
1995 Year	.3	.2	1.2	1.8	-	-	(s)	(s)	.3	-	-	-	.3	-	2.1
2000 Year	.3	.3	1.2	1.8	-	-	(s)	(s)	.4	-	-	-	.4	-	2.2
2005 Year	.4	.3	1.0	1.8	-	-	(s)	(s)	.4	-	-	-	.5	-	2.2
2006 Year	.4	.3	1.0	1.8	-	-	(s)	(s)	.4	-	-	-	.5	-	2.3
2007 Year	.4	.3	1.1	1.8	-	-	(s)	(s)	.4	-	-	-	.5	-	2.3
2008 Year	.4	.4	1.1	1.8	-	-	(s)	(s)	.4	-	-	-	.5	-	2.3
2009 Year	.4	.3	1.1	1.9	-	-	(s)	(s)	.5	-	-	(s)	.5	-	2.4
2010 Year	.4	.4	1.2	1.9	-	-	(s)	(s)	.5	-	(s)	(s)	.5	-	2.5
2011 Year	.4	.4	1.3	2.1	-	-	(s)	(s)	.6	-	.1	(s)	.7	-	2.8
2012 Year	.4	.4	1.5	2.4	-	-	(s)	(s)	.6	-	.1	(s)	.8	-	3.2
2013 Year	.3	.5	1.8	2.6	-	-	(s)	(s)	.7	-	.2	(s)	1.0	-	3.6
2014 Year	.3	.5	1.8	2.6	-	-	(s)	(s)	.7	-	.2	.1	1.1	-	3.7
2015 Year	.2	.5	1.9	2.6	-	-	(s)	.1	.7	-	.3	.1	1.2	(s)	3.8
2016 Year	.2	.5	2.0	2.7	-	-	.1	.1	.7	-	.3	.1	1.2	(s)	3.9
2017 Year	.2	.6	2.0	2.8	-	-	.1	.1	.7	-	.3	.1	1.2	(s)	4.1
2018 Year	.1	.8	2.2	3.1	-	-	.1	.1	.7	(s)	.3	.1	1.3	(s)	4.5
2019 Year	.1	.9	2.2	3.2	-	-	.1	.1	.7	(s)	.4	.1	1.3	(s)	4.6
2020 Year	.1	.9	2.3	3.3	-	-	.1	.1	.7	(s)	.4	.1	1.3	(s)	4.6
2021 January	.1	.9	2.2	3.2	-	-	.1	.1	.7	(s)	.4	.1	1.4	(s)	4.7
February	.1	.9	2.2	3.2	-	-	.1	.1	.7	(s)	.4	.1	1.4	(s)	4.7
March	.1	.9	2.2	3.2	-	-	.1	.1	.7	(s)	.4	.1	1.4	(s)	4.7
April	.1	.9	2.2	3.2	-	-	.1	.1	.7	.1	.4	.1	1.5	(s)	4.7
May	.1	.9	2.2	3.2	-	-	.1	.1	.7	.1	.4	.1	1.5	(s)	4.7
June	.1	.9	2.2	3.2	-	-	.1	.1	.7	.1	.4	.1	1.5	(s)	4.7
July	.1	.9	2.2	3.2	-	-	.1	.1	.7	.1	.4	.1	1.5	(s)	4.7
August	.1	.9	2.2	3.2	-	-	.1	.1	.7	.1	.4	.1	1.5	(s)	4.7
September	.1	.9	2.3	3.2	-	-	.1	.1	.7	.1	.4	.1	1.5	(s)	4.8
October	.1	.9	2.3	3.3	-	-	.1	.1	.7	.1	.4	.1	1.5	(s)	4.8
November	.1	.9	2.3	3.3	-	-	.1	.1	.7	.1	.4	.1	1.5	(s)	4.8
December	.1	.9	2.3	3.3	-	-	.1	.1	.7	.1	.4	.1	1.5	(s)	4.8
2022 January	(s)	1.0	2.3	3.3	-	-	.1	.1	1.3	-	.4	.1	2.0	(s)	5.4
February	(s)	1.0	2.3	3.4	-	-	.1	.1	1.3	-	.4	.1	2.0	(s)	5.4
March	(s)	1.0	2.4	3.4	-	-	.1	.1	1.3	-	.4	.1	2.0	(s)	5.4
April	(s)	1.0	2.4	3.4	-	-	.1	.1	1.3	-	.4	.1	2.0	(s)	5.4
May	(s)	1.0	2.4	3.4	-	-	.1	.1	1.3	-	.4	.1	2.0	(s)	5.4
June	(s)	1.0	2.4	3.4	-	-	.1	.1	1.3	-	.4	.1	2.0	(s)	5.4
July	(s)	1.0	2.4	3.4	-	-	.1	.1	1.3	-	.4	.1	2.0	(s)	5.4
August	(s)	1.0	2.4	3.4	-	-	.1	.1	1.3	-	.4	.1	2.0	(s)	5.4
September	(s)	1.0	2.4	3.4	-	-	.1	.1	1.3	-	.4	.1	2.0	(s)	5.4
October	(s)	1.0	2.4	3.4	-	-	.1	.1	1.3	-	.4	.1	2.0	(s)	5.4
November	(s)	1.0	2.4	3.4	-	-	.1	.1	1.3	-	.4	.1	2.0	(s)	5.4
December	(s)	1.0	2.4	3.4	-	-	.1	.1	1.3	-	.4	.1	2.0	(s)	5.4
2023 January	(s)	1.0	2.4	3.4	-	-	.1	.1	1.3	-	.4	.1	2.0	(s)	5.5
February	(s)	1.0	2.4	3.4	-	-	.1	.1	1.3	-	.4	.1	2.0	(s)	5.5
March	(s)	1.0	2.4	3.4	-	-	.1	.1	1.3	-	.4	.1	2.0	(s)	5.4
April	(s)	1.0	2.4	3.4	-	-	.1	.1	1.3	-	.4	.1	2.0	(s)	5.4
May	(s)	1.0	2.4	3.4	-	-	.1	.1	1.3	-	.4	.1	2.0	(s)	5.4
June	(s)	1.0	2.4	3.4	-	-	.1	.1	1.3	-	.4	.1	2.0	(s)	5.5
July	(s)	1.0	2.4	3.4	-	-	.1	.1	1.3	-	.4	.1	2.0	(s)	5.5
August	(s)	1.0	2.4	3.4	-	-	.1	.1	1.3	-	.4	.1	2.0	(s)	5.4
September	(s)	1.0	2.4	3.4	-	-	.1	.1	1.3	-	.4	.1	2.0	(s)	5.4
October	(s)	1.0	2.4	3.4	-	-	.1	.1	1.3	-	.5	.1	2.1	(s)	5.5
November	(s)	1.0	2.4	3.4	-	-	.1	.1	1.3	-	.5	.1	2.1	(s)	5.5
December	(s)	1.0	2.4	3.4	-	-	.1	.1	1.3	-	.5	.1	2.1	(s)	5.5

^a Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and coal synfuel.

^b Distillate fuel oil, residual fuel oil, petroleum coke, jet fuel, kerosene, other petroleum, waste oil, and, beginning in 2011, propane.

^c Natural gas, plus a small amount of supplemental gaseous fuels.

^d Includes other gases (blast furnace gas, other manufactured and waste gases derived from fossil fuels, and, through 2010, propane gas), which are not separately shown.

^e Wood and wood-derived fuels.

^f Municipal solid waste from biogenic sources, landfill gas, sludge waste, agricultural byproducts, and other biomass. Through 2000, also includes non-renewable waste (municipal solid waste from non-biogenic sources, and tire-derived fuels).

^g Electric net summer capacity from solar thermal and photovoltaic (PV) energy at utility-scale facilities. Does not include small-scale solar photovoltaic capacity.

^h Includes chemicals, hydrogen, pitch, purchased steam, sulfur, miscellaneous technologies, flywheels, and, beginning in 2001, non-renewable waste (municipal solid waste from non-biogenic sources, and tire-derived fuels), which are not

separately shown.

—=No data reported. (s)=Less than 0.05 million kilowatts.

Notes: • Data are at end of period. • For plants that use multiple sources of energy, capacity is assigned to the energy source reported as the predominant one. • Data are for utility-scale facilities. See Note 1, "Coverage of Electricity Statistics," at end of section. • See "Net summer capacity" in Glossary. • See Note 2, "Classification of Power Plants Into Energy-Use Sectors," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.

Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#electricity> (Excel and CSV files) for all available annual data beginning in 1989 and monthly data beginning in 2008.

Sources: • 1989–1997: U.S. Energy Information Administration (EIA), Form EIA-867, "Annual Nonutility Power Producer Report." • 1998–2000: EIA, Form EIA-860B, "Annual Electric Generator Report—Nonutility." • 2001–2007: EIA, Form EIA-860, "Annual Electric Generator Report." • 2008 forward: EIA, Form EIA-860, "Annual Electric Generator Report," and Form EIA-860M, "Monthly Update to the Annual Electric Generator Report."

Table 7.7d Electric Net Summer Capacity: Industrial Sector
(Subset of Table 7.7a; Million Kilowatts)

	Fossil Fuels				Nuclear Electric Power	Hydro-electric Pumped Storage	Renewable Energy							Battery Storage	Total ^h
	Coal ^a	Petroleum ^b	Natural Gas ^c	Total ^d			Conventional Hydro-electric Power	Biomass		Geo-thermal	Solar ^g	Wind	Total		
								Wood ^e	Waste ^f						
1990 Year	4.8	0.9	10.3	17.3	-	-	0.6	4.3	0.2	-	-	-	5.1	-	22.9
1995 Year	5.0	1.0	11.3	18.7	-	-	1.1	4.9	.2	-	-	-	6.3	-	25.5
2000 Year	4.6	.8	13.7	21.2	-	-	1.1	4.4	.2	-	-	-	5.7	-	27.3
2005 Year	4.0	.8	14.5	21.0	-	-	.7	4.5	.2	-	-	-	5.4	-	27.2
2006 Year	3.3	1.0	15.3	21.4	-	-	.7	4.7	.2	-	-	-	5.6	-	27.8
2007 Year	3.2	.9	14.7	20.6	-	-	.3	5.0	.2	-	(s)	-	5.5	-	26.8
2008 Year	3.2	.7	14.3	20.0	-	-	.3	5.0	.1	-	(s)	-	5.4	-	26.6
2009 Year	3.4	.7	14.4	20.2	-	-	.3	5.0	.1	-	(s)	-	5.5	-	26.8
2010 Year	4.0	.7	14.2	20.8	-	-	.3	4.9	.2	-	(s)	(s)	5.5	-	27.4
2011 Year	3.5	.7	14.3	20.4	-	-	.3	5.0	.2	-	(s)	(s)	5.6	-	27.1
2012 Year	3.3	1.0	14.3	20.5	-	-	.6	5.2	.2	-	(s)	(s)	6.1	-	27.8
2013 Year	3.0	.7	14.4	20.0	-	-	.7	5.5	.2	-	(s)	(s)	6.4	-	27.5
2014 Year	2.9	.6	14.7	20.0	-	-	.3	5.4	.2	-	(s)	(s)	5.9	-	27.2
2015 Year	2.5	.7	14.5	19.8	-	-	.3	5.8	.2	-	(s)	(s)	6.4	-	27.4
2016 Year	2.1	.7	14.5	19.4	-	-	.3	5.7	.2	-	(s)	(s)	6.2	-	26.8
2017 Year	2.0	.6	14.5	19.1	-	-	.3	5.7	.2	-	(s)	(s)	6.3	(s)	26.7
2018 Year	2.0	.6	14.4	19.1	-	-	.2	5.8	.1	-	(s)	(s)	6.2	(s)	26.6
2019 Year	1.7	.5	14.8	19.2	-	-	.2	5.6	.1	-	.1	(s)	6.0	(s)	26.5
2020 Year	1.5	.5	15.3	19.3	-	-	.2	5.6	.1	-	.1	(s)	6.3	(s)	26.8
2021 January	1.4	.5	15.9	19.4	-	-	.2	5.4	.1	-	.1	(s)	5.8	(s)	26.6
February	1.4	.5	15.9	19.4	-	-	.2	5.4	.1	-	.1	(s)	5.8	(s)	26.6
March	1.4	.5	15.9	19.4	-	-	.2	5.4	.1	-	.1	(s)	5.8	(s)	26.6
April	1.4	.5	15.9	19.4	-	-	.2	5.4	.1	-	.1	(s)	5.8	(s)	26.5
May	1.4	.5	15.9	19.4	-	-	.2	5.4	.1	-	.1	(s)	5.8	(s)	26.5
June	1.4	.5	16.0	19.4	-	-	.2	5.4	.1	-	.1	.1	5.8	(s)	26.6
July	1.4	.5	16.1	19.6	-	-	.2	5.4	.1	-	.1	.1	5.8	(s)	26.7
August	1.4	.5	16.1	19.5	-	-	.2	5.4	.1	-	.1	.1	5.9	(s)	26.7
September	1.4	.5	16.1	19.5	-	-	.2	5.4	.1	-	.1	.1	5.9	(s)	26.7
October	1.4	.5	16.1	19.6	-	-	.2	5.4	.1	-	.1	.1	5.9	(s)	26.8
November	1.4	.5	16.1	19.6	-	-	.2	5.4	.1	-	.1	.1	5.9	(s)	26.8
December	1.4	.5	16.1	19.6	-	-	.2	5.4	.1	-	.1	.1	5.9	(s)	26.8
2022 January	1.4	.6	16.4	19.7	-	-	.2	5.2	.1	-	.1	.1	5.8	(s)	26.7
February	1.4	.6	16.4	19.7	-	-	.2	5.2	.1	-	.1	.1	5.8	(s)	26.7
March	1.4	.6	16.4	19.8	-	-	.2	5.2	.1	-	.1	.1	5.8	(s)	26.8
April	1.4	.6	16.4	19.8	-	-	.2	5.2	.1	-	.1	.1	5.8	(s)	26.8
May	1.4	.6	16.4	19.8	-	-	.2	5.2	.1	-	.1	.1	5.8	(s)	26.8
June	1.4	.6	16.4	19.8	-	-	.2	5.2	.1	-	.2	.1	5.8	(s)	26.8
July	1.4	.6	16.4	19.8	-	-	.2	5.3	.1	-	.2	.1	5.8	(s)	26.8
August	1.4	.6	16.4	19.8	-	-	.2	5.3	.1	-	.2	.1	5.8	(s)	26.8
September	1.4	.6	16.4	19.8	-	-	.2	5.3	.1	-	.2	.1	5.8	(s)	26.8
October	1.4	.6	16.4	19.7	-	-	.2	5.3	.1	-	.2	.1	5.8	(s)	26.8
November	1.4	.6	16.4	19.7	-	-	.2	5.3	.1	-	.2	.1	5.8	(s)	26.8
December	1.4	.6	16.4	19.7	-	-	.2	5.3	.1	-	.2	.1	5.8	(s)	26.8
2023 January	1.4	.5	16.6	19.9	-	-	.2	5.3	.1	-	.2	.1	5.8	(s)	27.0
February	1.4	.5	16.6	19.9	-	-	.2	5.3	.1	-	.2	.1	5.8	(s)	27.0
March	1.4	.5	16.4	19.7	-	-	.2	5.3	.1	-	.2	.1	5.8	(s)	26.8
April	1.4	.5	16.4	19.7	-	-	.2	5.3	.1	-	.2	.1	5.8	(s)	26.8
May	1.4	.5	16.4	19.7	-	-	.2	5.2	.1	-	.2	.1	5.8	(s)	26.8
June	1.4	.5	16.4	19.7	-	-	.2	5.2	.1	-	.2	.1	5.8	(s)	26.8
July	1.4	.5	16.4	19.7	-	-	.2	5.2	.1	-	.2	.1	5.8	(s)	26.8
August	1.4	.5	16.4	19.7	-	-	.2	5.2	.1	-	.2	.1	5.8	(s)	26.8
September	1.4	.5	16.4	19.7	-	-	.2	5.2	.1	-	.2	.1	5.8	(s)	26.8
October	1.4	.5	16.4	19.7	-	-	.2	5.2	.1	-	.2	.1	5.8	(s)	26.8
November	1.4	.5	16.4	19.7	-	-	.2	5.2	.1	-	.2	.1	5.7	(s)	26.7
December	1.4	.5	16.4	19.7	-	-	.2	5.2	.1	-	.2	.1	5.8	(s)	26.7

^a Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and coal synfuel.

^b Distillate fuel oil, residual fuel oil, petroleum coke, jet fuel, kerosene, other petroleum, waste oil, and, beginning in 2011, propane.

^c Natural gas, plus a small amount of supplemental gaseous fuels.

^d Includes other gases (blast furnace gas, other manufactured and waste gases derived from fossil fuels, and, through 2010, propane gas), which are not separately shown.

^e Wood and wood-derived fuels.

^f Municipal solid waste from biogenic sources, landfill gas, sludge waste, agricultural byproducts, and other biomass. Through 2000, also includes non-renewable waste (municipal solid waste from non-biogenic sources, and tire-derived fuels).

^g Electric net summer capacity from solar thermal and photovoltaic (PV) energy at utility-scale facilities. Does not include small-scale solar photovoltaic capacity.

^h Includes chemicals, hydrogen, pitch, purchased steam, sulfur, miscellaneous technologies, flywheels, and, beginning in 2001, non-renewable waste (municipal solid waste from non-biogenic sources, and tire-derived fuels), which are not

separately shown.

-=No data reported. (s)=Less than 0.05 million kilowatts.

Notes: • Data are at end of period. • For plants that use multiple sources of energy, capacity is assigned to the energy source reported as the predominant one. • Data are for utility-scale facilities. See Note 1, "Coverage of Electricity Statistics," at end of section. • See "Net summer capacity" in Glossary. • See Note 2, "Classification of Power Plants Into Energy-Use Sectors," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.

Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#electricity> (Excel and CSV files) for all available annual data beginning in 1989 and monthly data beginning in 2008.

Sources: • 1989–1997: U.S. Energy Information Administration (EIA), Form EIA-867, "Annual Nonutility Power Producer Report." • 1998–2000: EIA, Form EIA-860B, "Annual Electric Generator Report—Nonutility." • 2001–2007: EIA, Form EIA-860, "Annual Electric Generator Report." • 2008 forward: EIA, Form EIA-860, "Annual Electric Generator Report," and Form EIA-860M, "Monthly Update to the Annual Electric Generator Report."

Table 7.8a Capacity Factors and Usage Factors at Electric Generators: Total (All Sectors)
(Percent)

	Capacity Factors ^a											Usage Factors ^b		
	Coal ^{c,d}	Petroleum ^{c,e}	Natural Gas ^f			Nuclear Electric Power ^g	Conventional Hydroelectric Power	Bio-mass ^{c,h}	Geothermal	Solar		Wind ⁱ	Hydroelectric Pumped Storage	Battery Storage
			Combined Cycle	Gas Turbine	Steam Turbine					Photo-voltaic ^l	Thermal			
2008 Year	72.4	9.7	40.3	7.6	12.1	91.1	37.1	64.0	74.3	19.2	19.5	31.7	--	--
2009 Year	64.2	9.3	43.9	6.8	10.9	90.3	39.6	62.9	73.0	20.0	23.6	28.1	--	--
2010 Year	67.1	8.4	44.3	7.8	11.1	91.1	37.5	62.5	71.6	20.2	24.5	29.7	--	--
2011 Year	62.8	7.4	44.3	7.9	11.7	89.1	45.8	61.4	71.5	19.0	23.9	32.1	--	--
2012 Year	56.2	7.6	52.2	8.9	13.3	86.1	39.6	62.1	68.3	20.4	23.6	32.4	--	--
2013 Year	59.4	6.6	48.8	8.3	11.2	90.8	38.8	60.3	71.8	24.5	17.4	32.4	9.8	7
2014 Year	60.5	6.7	48.6	8.3	10.3	91.7	37.2	61.0	72.0	25.6	18.3	34.0	10.2	1.7
2015 Year	54.3	6.7	55.8	9.8	11.3	92.3	35.7	60.5	71.9	25.5	21.7	32.2	10.2	3.6
2016 Year	52.8	5.9	55.4	11.0	12.3	92.3	38.2	59.9	71.6	25.0	22.1	34.5	11.2	3.8
2017 Year	53.1	6.3	51.2	9.6	10.7	92.3	43.0	60.8	73.2	25.6	21.8	34.6	11.4	6.8
2018 Year	53.6	6.6	55.1	11.9	12.6	92.5	41.9	61.1	76.0	25.1	23.6	34.6	10.8	5.2
2019 Year	47.5	5.5	57.4	11.4	14.1	93.5	41.2	60.3	69.6	24.3	21.2	34.8	10.4	5.4
2020 Year	40.5	5.2	57.1	11.6	14.2	92.5	40.7	59.5	69.1	24.2	20.6	35.4	10.5	5.2
2021 January	51.5	5.7	54.7	8.2	7.7	99.9	41.3	63.9	69.8	15.5	6.3	33.6	8.1	4.2
February	61.1	6.1	51.3	10.3	11.9	97.0	37.5	62.1	73.9	19.2	11.5	32.8	9.0	5.6
March	39.5	5.2	45.3	8.0	7.6	88.7	35.7	62.1	64.2	25.0	19.9	43.0	7.4	5.5
April	35.7	3.8	45.5	10.4	10.0	82.1	33.7	59.1	68.3	29.4	26.7	40.7	7.2	5.1
May	40.9	4.5	47.6	9.7	10.2	89.2	39.2	59.5	68.5	31.8	30.2	36.5	8.7	6.1
June	58.1	4.4	61.8	15.0	18.0	96.0	40.8	62.2	67.9	31.9	25.8	29.5	12.4	6.4
July	65.4	6.0	67.9	16.4	20.0	96.8	37.2	62.2	69.5	30.5	22.3	23.1	15.2	6.5
August	65.6	6.8	68.4	17.0	21.3	97.7	34.3	62.5	68.8	29.0	29.6	28.8	15.9	7.4
September	52.8	5.9	58.5	11.1	14.5	93.8	29.6	60.9	71.4	27.5	26.8	31.7	12.8	7.1
October	40.7	6.0	53.2	12.4	12.7	82.2	28.8	57.0	67.7	21.6	19.9	33.8	9.7	6.0
November	39.2	5.9	51.6	11.6	8.9	91.2	33.7	59.0	72.4	18.5	17.9	38.2	7.7	6.2
December	39.6	5.1	53.6	9.6	7.4	99.5	39.6	62.5	76.2	13.4	8.5	40.8	8.6	5.8
Average	49.1	5.5	55.0	11.7	12.5	92.8	36.0	61.1	69.8	24.4	20.5	34.4	10.2	6.1
2022 January	57.4	7.4	55.6	11.3	14.8	99.4	40.6	60.8	75.1	16.8	11.3	37.5	9.5	5.5
February	52.2	5.7	52.4	9.6	11.7	96.5	39.6	61.9	70.3	21.2	15.9	41.6	8.9	6.6
March	41.0	3.9	46.6	8.3	8.5	89.0	41.0	58.3	65.7	24.4	23.1	42.7	9.1	5.7
April	38.5	4.0	44.2	9.6	9.6	80.5	34.8	56.7	67.1	28.5	30.1	46.6	7.3	6.0
May	42.1	4.9	49.6	12.5	14.6	89.3	39.2	56.8	67.4	30.9	33.5	41.1	10.9	6.4
June	52.5	5.2	61.2	16.9	20.2	96.4	45.1	60.3	67.0	33.2	34.9	33.9	14.8	7.1
July	59.6	4.9	70.5	20.2	28.1	97.8	41.2	61.6	67.1	31.2	26.2	28.6	15.9	6.9
August	59.2	5.2	72.4	18.6	22.4	97.8	35.5	60.4	67.9	28.4	25.3	24.0	16.4	6.6
September	47.3	5.4	63.9	13.9	16.3	93.5	29.5	57.5	68.6	26.5	26.7	27.3	13.2	6.1
October	38.7	5.1	53.0	10.3	13.3	83.7	24.1	53.8	65.3	22.9	26.4	31.6	8.4	6.7
November	40.9	5.2	52.0	11.3	13.7	91.0	31.0	57.8	72.6	16.5	14.1	40.8	9.2	6.7
December	51.4	7.7	56.8	12.5	14.1	98.1	34.3	59.3	74.1	12.5	9.0	36.8	9.6	6.5
Average	48.4	5.4	56.6	12.9	15.6	92.7	36.3	58.7	69.0	24.4	23.1	35.9	11.1	6.4
2023 January	44.3	R 3.8	R 56.8	9.3	R 9.9	R 100.7	37.4	60.1	78.4	14.6	7.7	37.1	9.2	R 5.6
February	R 37.1	4.2	56.6	8.9	R 10.0	95.6	34.7	58.5	72.6	18.3	11.0	R 43.9	9.6	R 5.2
March	35.9	R 4.0	R 52.8	R 10.4	11.5	89.2	R 33.9	R 54.1	69.4	21.5	14.0	41.4	9.2	5.9
April	R 30.4	R 4.1	R 47.4	R 12.2	R 13.4	R 83.2	R 30.3	R 50.0	69.6	26.6	27.9	R 41.5	8.8	R 5.7
May	R 32.4	R 3.9	R 52.2	R 13.7	R 15.5	87.3	R 46.0	R 56.2	68.5	29.2	27.5	R 29.8	11.0	5.2
June	R 44.1	5.0	R 62.7	17.0	R 21.0	95.3	R 33.8	56.3	65.7	30.8	34.6	26.3	13.8	R 5.1
July	R 58.0	R 6.9	R 72.5	23.2	R 30.6	99.1	R 35.6	56.7	65.2	31.1	35.0	R 25.9	15.8	5.5
August	R 57.7	R 6.8	R 72.8	22.5	R 29.6	97.9	R 35.4	R 57.5	67.1	29.0	28.4	26.4	15.6	R 5.7
September	R 46.1	R 6.3	R 64.9	R 15.2	R 21.6	95.1	28.6	52.7	69.8	25.7	27.7	27.0	13.3	R 5.5
October	R 38.3	R 4.5	R 52.6	14.2	R 16.4	86.2	R 30.3	R 48.7	70.7	22.1	26.2	33.6	8.7	6.3
November	39.4	R 3.6	R 54.0	R 12.3	R 14.2	90.3	31.4	55.7	72.8	16.6	15.7	R 35.3	8.3	R 6.0
December	41.7	3.4	59.1	9.9	10.8	96.7	32.4	56.4	70.5	13.7	9.9	34.9	8.1	5.7
Average	42.1	4.7	58.8	14.1	17.1	93.1	34.2	55.2	70.0	23.3	22.2	33.5	11.0	5.7

^a Capacity factors are a measure of how often electric generators operate over a specific period of time, using a ratio of actual output (net generation) to the maximum possible output over that same time period (using time-adjusted capacity).
^b Usage factors are a measure of how often electric generators operate over a specific period of time, using a ratio of actual output (gross generation) to the maximum possible output over that same time period (using time-adjusted capacity).
^c Steam turbine, gas turbine, internal combustion engine, combined-cycle, and other plants.
^d Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and coal synfuel.
^e Distillate fuel oil, residual fuel oil, petroleum coke, jet fuel, kerosene, other petroleum, waste oil, and, beginning in 2011, propane.
^f Natural gas, plus a small amount of supplemental gaseous fuels. Capacity factors for natural gas internal combustion engine, energy storage, fuel cell, and other plants are not displayed.
^g See Table 8.1 for nuclear capacity factors for 1957–2007.
^h Wood and wood-derived fuels, municipal solid waste from biogenic sources, landfill gas, sludge waste, agricultural byproducts, and other biomass. Through

2000, also includes non-renewable waste (municipal solid waste from non-biogenic sources, and tire-derived fuels).
ⁱ Solar photovoltaic (PV) energy at utility-scale facilities. Does not include small-scale solar photovoltaic generators.
^j Onshore wind plants, and, beginning in 2017, offshore wind plants.
R=Revised. --=No data reported.
Notes: • Data are for utility-scale facilities. See Note 1, "Coverage of Electricity Statistics," at end of section. • Monthly factors are based on a time-adjusted total net summer capacity of generators in operation for the entire month. Annual factors are based on a time-weighted average of the monthly time-adjusted capacity. • For plants that use multiple energy sources or technologies, capacity is assigned to the reported combination of predominant energy source and technology. • See EIA's *Electric Power Annual*, "Technical notes," for further information. • See "Capacity factor" in Glossary. • Geographic coverage is the 50 states and the District of Columbia.
Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#electricity> (Excel and CSV files) for all available annual and monthly data beginning in 2008.
Sources: U.S. Energy Information Administration (EIA), Form EIA-860, "Annual Electric Generator Report"; Form EIA-860M, "Monthly Update to the Annual Electric Generator Report"; and Form EIA-923, "Power Plant Operations Report."

Table 7.8c Capacity Factors and Usage Factors at Electric Generators: Commercial Sector
(Percent)

	Capacity Factors ^a											Usage Factors ^b		
	Coal ^{c,d}	Petroleum ^{c,e}	Natural Gas ^f			Nuclear Electric Power	Conventional Hydro-electric Power	Bio-mass ^{c,g}	Geo-thermal	Solar			Hydro-electric Pumped Storage	Battery Storage
			Combined Cycle	Gas Turbine	Steam Turbine					Photo-voltaic ^h	Thermal	Wind ⁱ		
2008 Year	36.5	3.6	52.2	43.9	36.8	-	31.6	56.2	-	9.9	-	-	-	-
2009 Year	28.1	3.6	53.6	43.1	33.6	-	38.0	57.3	-	4.8	-	2.0	-	-
2010 Year	34.5	3.2	54.6	53.8	32.2	-	42.7	55.7	-	11.1	-	17.6	-	-
2011 Year	32.1	2.3	50.9	58.8	33.4	-	17.0	60.1	-	18.7	-	24.2	-	-
2012 Year	31.8	1.9	54.5	52.2	26.7	-	17.0	60.0	-	19.5	-	22.4	-	-
2013 Year	31.7	1.9	52.8	51.9	33.7	-	28.2	60.3	-	20.6	-	22.4	-	-
2014 Year	30.2	2.4	48.6	55.1	31.5	-	20.5	57.4	-	19.9	-	25.5	-	-
2015 Year	35.0	2.6	51.7	53.2	28.6	-	18.6	56.0	-	18.7	-	24.4	-	-
2016 Year	29.4	1.5	53.3	49.7	32.1	-	33.3	52.5	-	20.5	-	26.3	-	4.8
2017 Year	29.8	1.3	53.4	54.0	29.5	-	36.5	52.2	-	19.5	-	26.8	-	5.4
2018 Year	31.4	.7	51.5	56.2	32.0	-	34.7	50.1	-	18.7	-	27.5	-	5.2
2019 Year	30.2	.7	51.0	52.6	35.1	-	28.7	52.3	102.1	18.2	-	27.8	-	1.0
2020 Year	27.4	.4	43.3	50.1	32.2	-	32.8	52.0	103.5	17.4	-	28.3	-	4.4
2021 January	39.1	.4	38.1	60.0	26.2	-	38.2	51.1	119.6	10.3	-	27.3	-	(s)
February	40.0	.6	38.8	57.1	28.1	-	37.0	47.9	118.7	11.6	-	27.6	-	.5
March	32.1	.4	35.8	49.5	24.6	-	34.8	47.4	46.7	17.9	-	38.2	-	.5
April	29.0	.4	32.4	43.9	21.6	-	34.2	50.0	69.8	21.5	-	33.4	-	(s)
May	16.8	.3	32.9	42.7	21.7	-	35.5	46.9	92.4	22.5	-	27.7	-	(s)
June	28.5	.3	42.6	59.0	23.8	-	38.1	48.7	75.4	22.5	-	23.5	-	1.3
July	28.7	.4	49.6	61.8	26.2	-	34.9	51.4	71.3	21.5	-	16.3	-	1.2
August	32.5	.4	50.3	65.6	28.4	-	33.8	51.5	75.1	20.2	-	23.1	-	1.4
September	34.0	.3	47.1	56.1	27.2	-	30.3	50.7	80.1	18.8	-	27.3	-	.8
October	32.5	.3	39.6	51.2	26.7	-	27.5	45.8	87.4	14.8	-	29.0	-	.6
November	29.6	.4	41.3	51.3	24.9	-	29.7	49.8	82.3	12.8	-	34.0	-	(s)
December	27.4	.5	40.0	52.1	27.0	-	35.3	50.5	102.7	9.5	-	31.6	-	.4
Average	30.8	.4	40.7	54.2	25.5	-	34.1	49.3	84.6	17.0	-	28.3	-	.7
2022 January	21.3	1.1	41.8	56.8	29.7	-	38.2	59.4	-	11.4	-	33.8	-	.7
February	20.6	.7	42.2	51.1	25.2	-	37.5	59.8	-	14.8	-	36.6	-	.9
March	18.9	.6	41.9	48.4	26.1	-	38.4	57.3	-	17.1	-	35.8	-	1.0
April	17.9	.5	40.0	44.9	22.3	-	33.5	62.5	-	21.0	-	38.4	-	1.1
May	17.8	.5	44.5	47.6	18.9	-	40.3	62.5	-	21.5	-	30.2	-	1.1
June	36.7	.8	50.0	55.2	22.9	-	43.2	63.2	-	23.2	-	25.3	-	1.3
July	36.4	.6	53.7	68.8	23.6	-	40.1	62.2	-	21.9	-	17.6	-	2.1
August	32.4	.5	52.7	72.6	24.6	-	34.2	62.1	-	21.0	-	14.1	-	1.6
September	35.6	.5	50.5	59.5	23.2	-	28.7	59.5	-	19.1	-	19.1	-	1.1
October	35.6	.4	40.1	45.7	21.2	-	23.6	59.6	-	15.7	-	24.1	-	.9
November	44.1	.7	38.6	52.2	25.4	-	28.3	61.5	-	12.5	-	35.0	-	.9
December	40.0	.9	39.3	58.0	30.7	-	30.8	59.8	-	8.9	-	28.4	-	.7
Average	29.7	.6	44.6	55.1	24.5	-	34.7	60.8	-	17.4	-	28.1	-	1.1
2023 January	38.9	.7	41.3	57.7	R 24.6	-	R 35.8	57.3	-	R 10.7	-	31.2	-	.4
February	39.7	.7	R 44.5	57.0	R 26.3	-	R 33.2	54.0	-	R 13.0	-	R 37.3	-	.4
March	R 29.9	.8	44.0	53.9	22.3	-	R 30.1	51.3	-	R 16.9	-	R 36.1	-	.3
April	R 36.9	.7	40.5	48.2	24.6	-	R 27.4	51.7	-	R 18.7	-	R 33.4	-	.3
May	R 34.0	R .5	40.4	50.6	20.8	-	R 48.8	R 56.4	-	R 21.3	-	26.0	-	.5
June	R 17.7	.7	52.5	R 58.8	R 22.4	-	R 32.9	60.1	-	R 21.4	-	19.7	-	.9
July	R 31.6	.8	55.4	R 61.9	R 26.6	-	R 30.8	60.3	-	R 22.4	-	R 13.3	-	1.3
August	R 30.8	.7	57.1	R 62.5	R 24.7	-	R 31.7	58.2	-	R 21.4	-	14.7	-	R .9
September	R 34.4	.6	55.8	R 61.2	R 23.3	-	R 23.4	55.7	-	R 18.8	-	15.3	-	.8
October	35.9	.5	46.8	52.7	R 20.0	-	22.4	R 57.4	-	R 15.8	-	R 19.0	-	.2
November	39.6	.6	44.6	R 59.8	R 22.7	-	27.4	59.9	-	R 15.1	-	R 23.1	-	.2
December	36.5	.6	47.2	61.2	24.6	-	29.1	60.3	-	11.4	-	20.8	-	.2
Average	33.8	.7	47.5	57.1	23.6	-	31.1	56.9	-	17.1	-	24.1	-	.5

^a Capacity factors are a measure of how often electric generators operate over a specific period of time, using a ratio of actual output (net generation) to the maximum possible output over that same time period (using time-adjusted capacity).

^b Usage factors are a measure of how often electric generators operate over a specific period of time, using a ratio of actual output (gross generation) to the maximum possible output over that same time period (using time-adjusted capacity).

^c Steam turbine, gas turbine, internal combustion engine, combined-cycle, and other plants.

^d Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and coal synfuel.

^e Distillate fuel oil, residual fuel oil, petroleum coke, jet fuel, kerosene, other petroleum, waste oil, and, beginning in 2011, propane.

^f Natural gas, plus a small amount of supplemental gaseous fuels. Capacity factors for natural gas internal combustion engine, energy storage, fuel cell, and other plants are not displayed.

^g Wood and wood-derived fuels, municipal solid waste from biogenic sources, landfill gas, sludge waste, agricultural byproducts, and other biomass. Through 2000, also includes non-renewable waste (municipal solid waste from non-biogenic

sources, and tire-derived fuels).

^h Solar photovoltaic (PV) energy at utility-scale facilities. Does not include small-scale solar photovoltaic generators.

ⁱ Onshore wind plants, and, beginning in 2017, offshore wind plants.

R=Revised. - =No data reported. (s)=Less than 0.5 percent.

Notes: • Data are for utility-scale facilities. See Note 1, "Coverage of Electricity Statistics," at end of section. • Monthly factors are based on a time-adjusted total net summer capacity of generators in operation for the entire month. Annual factors are based on a time-weighted average of the monthly time-adjusted capacity. • For plants that use multiple energy sources or technologies, capacity is assigned to the reported combination of predominant energy source and technology. • See EIA's *Electric Power Annual*, "Technical notes," for further information. • See "Capacity factor" in Glossary. • See Note 2, "Classification of Power Plants Into Energy-Use Sectors," at end of section. • Geographic coverage is the 50 states and the District of Columbia.

Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#electricity> (Excel and CSV files) for all available annual and monthly data beginning in 2008.

Sources: U.S. Energy Information Administration (EIA), Form EIA-860, "Annual Electric Generator Report"; Form EIA-860M, "Monthly Update to the Annual Electric Generator Report"; and Form EIA-923, "Power Plant Operations Report."

Table 7.8d Capacity Factors and Usage Factors at Electric Generators: Industrial Sector
(Percent)

	Capacity Factors ^a											Usage Factors ^b		
	Coal ^{c,d}	Petroleum ^{c,e}	Natural Gas ^f			Nuclear Electric Power	Conventional Hydroelectric Power	Bio-mass ^{c,g}	Geo-thermal	Solar			Hydro-electric Pumped Storage	Battery Storage
			Combined Cycle	Gas Turbine	Steam Turbine					Photo-voltaic ^h	Thermal	Wind ⁱ		
2008 Year	51.8	32.6	55.2	53.1	45.2	-	54.9	63.1	-	-	-	-	-	-
2009 Year	46.6	33.4	52.9	54.3	46.9	-	61.6	61.7	-	-	-	-	-	-
2010 Year	54.3	33.9	62.4	69.6	54.3	-	55.9	62.2	-	19.3	-	-	-	-
2011 Year	50.6	29.5	61.1	69.7	56.8	-	61.0	60.2	-	30.3	-	11.6	-	-
2012 Year	48.8	38.2	64.5	71.0	57.0	-	43.4	60.9	-	25.2	-	25.6	-	-
2013 Year	49.8	30.0	70.7	75.1	50.2	-	61.1	60.7	-	25.6	-	25.6	-	-
2014 Year	49.9	27.5	67.5	71.0	48.8	-	52.4	60.9	-	24.3	-	26.4	-	-
2015 Year	48.2	28.1	66.1	72.7	41.2	-	57.6	62.2	-	20.6	-	25.1	-	-
2016 Year	46.3	25.2	69.7	73.0	40.3	-	51.4	61.7	-	16.7	-	25.3	-	-
2017 Year	46.7	24.4	68.9	74.9	37.7	-	55.9	62.7	-	14.8	-	27.0	-	.9
2018 Year	45.6	26.2	71.8	75.3	40.8	-	62.8	63.6	-	12.1	-	25.8	-	.8
2019 Year	41.6	26.3	73.4	75.9	44.2	-	55.0	62.2	-	17.2	-	25.3	-	15.3
2020 Year	41.9	23.2	67.0	74.5	44.0	-	53.2	61.2	-	16.3	-	39.7	-	2.4
2021														
2021 January	39.8	20.9	73.1	75.7	46.0	-	54.2	65.7	-	9.9	-	21.5	-	(s)
February	39.4	22.0	57.9	71.6	40.1	-	43.0	62.1	-	12.1	-	27.2	-	.4
March	38.2	21.1	52.6	67.6	43.5	-	64.6	64.2	-	17.6	-	32.2	-	.4
April	39.1	20.8	54.8	70.3	41.7	-	57.8	62.4	-	21.1	-	26.6	-	(s)
May	43.2	22.7	60.3	67.8	42.0	-	53.0	60.5	-	22.0	-	20.7	-	(s)
June	46.2	18.9	64.1	81.1	44.2	-	39.0	61.6	-	22.2	-	22.0	-	.4
July	44.4	18.6	71.1	81.3	46.7	-	47.9	61.5	-	20.4	-	14.3	-	.4
August	42.5	19.0	68.1	81.3	48.5	-	43.8	62.4	-	20.1	-	12.7	-	.4
September	44.1	16.7	59.3	76.4	46.5	-	48.9	61.7	-	19.9	-	23.3	-	.5
October	39.8	17.4	63.7	71.9	46.2	-	47.9	58.2	-	14.5	-	20.5	-	.4
November	44.4	20.4	69.0	72.5	46.8	-	53.8	61.3	-	12.4	-	27.5	-	(s)
December	42.8	17.3	70.1	71.4	48.4	-	44.2	63.2	-	8.6	-	30.5	-	.7
Average	42.0	19.6	63.8	74.1	45.1	-	49.9	62.1	-	16.3	-	23.2	-	.4
2022														
2022 January	42.5	26.9	72.7	74.0	45.7	-	49.3	63.0	-	12.8	-	29.6	-	2.9
February	42.5	30.4	66.5	74.3	39.2	-	59.0	63.2	-	16.8	-	36.4	-	2.8
March	42.4	21.8	65.2	68.5	41.4	-	71.2	60.0	-	19.7	-	34.7	-	2.5
April	38.6	26.0	61.9	65.4	43.8	-	68.1	58.7	-	22.8	-	33.8	-	3.1
May	44.0	28.3	62.6	70.2	41.3	-	54.4	57.7	-	25.5	-	27.9	-	3.0
June	45.2	26.6	64.2	77.1	43.2	-	42.1	59.6	-	27.1	-	20.3	-	2.5
July	44.8	25.2	68.2	81.8	43.8	-	33.9	60.4	-	26.0	-	17.3	-	2.3
August	44.4	26.4	69.0	82.4	44.2	-	39.1	58.8	-	24.0	-	12.3	-	2.3
September	40.6	25.3	64.3	75.5	39.7	-	40.2	56.2	-	21.4	-	15.3	-	2.4
October	38.4	25.5	67.6	68.0	38.3	-	33.1	52.7	-	19.0	-	26.8	-	2.4
November	38.3	28.7	72.5	70.4	41.9	-	41.1	58.4	-	14.3	-	33.3	-	2.4
December	41.8	24.7	69.1	70.5	37.4	-	58.9	59.0	-	9.9	-	27.9	-	2.4
Average	42.0	26.3	67.0	73.2	41.7	-	49.1	59.0	-	19.9	-	26.2	-	2.6
2023														
2023 January	R 39.3	21.8	66.2	74.2	43.9	-	58.2	61.0	-	13.0	-	26.0	-	-
February	38.6	22.5	68.2	75.6	44.9	-	54.9	60.3	-	16.3	-	R 34.5	-	-
March	34.6	26.1	63.8	R 74.1	45.9	-	54.9	56.1	-	19.7	-	31.7	-	-
April	35.4	R 21.3	52.5	65.5	42.9	-	47.0	R 53.5	-	23.6	-	31.9	-	-
May	35.7	R 19.3	57.4	71.0	R 43.2	-	51.2	R 57.7	-	26.3	-	R 23.8	-	-
June	39.6	R 21.2	66.9	77.6	R 48.4	-	R 42.1	56.4	-	27.5	-	19.8	-	-
July	39.8	22.5	68.6	75.8	50.5	-	47.3	R 54.4	-	28.0	-	R 16.9	-	-
August	37.2	22.5	69.4	R 78.3	50.1	-	47.9	57.0	-	26.2	-	R 19.6	-	-
September	37.2	R 20.6	68.7	77.8	51.4	-	43.6	53.0	-	23.2	-	19.5	-	-
October	35.5	R 16.7	64.4	R 71.4	46.0	-	48.6	R 51.3	-	20.1	-	24.4	-	-
November	35.3	18.3	R 67.7	R 76.5	49.4	-	47.7	59.4	-	15.1	-	R 28.5	-	-
December	36.9	19.5	70.6	79.8	52.1	-	51.3	60.7	-	12.1	-	27.2	-	-
Average	37.1	21.0	65.4	74.8	47.4	-	49.6	56.7	-	20.9	-	25.2	-	-

^a Capacity factors are a measure of how often electric generators operate over a specific period of time, using a ratio of actual output (net generation) to the maximum possible output over that same time period (using time-adjusted capacity).

^b Usage factors are a measure of how often electric generators operate over a specific period of time, using a ratio of actual output (gross generation) to the maximum possible output over that same time period (using time-adjusted capacity).

^c Steam turbine, gas turbine, internal combustion engine, combined-cycle, and other plants.

^d Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and coal synfuel.

^e Distillate fuel oil, residual fuel oil, petroleum coke, jet fuel, kerosene, other petroleum, waste oil, and, beginning in 2011, propane.

^f Natural gas, plus a small amount of supplemental gaseous fuels. Capacity factors for natural gas internal combustion engine, energy storage, fuel cell, and other plants are not displayed.

^g Wood and wood-derived fuels, municipal solid waste from biogenic sources, landfill gas, sludge waste, agricultural byproducts, and other biomass. Through 2000, also includes non-renewable waste (municipal solid waste from non-biogenic

sources, and tire-derived fuels).

^h Solar photovoltaic (PV) energy at utility-scale facilities. Does not include small-scale solar photovoltaic generators.

ⁱ Onshore wind plants, and, beginning in 2017, offshore wind plants.

R=Revised. - =No data reported. (s)=Less than 0.5 percent.

Notes: • Data are for utility-scale facilities. See Note 1, "Coverage of Electricity Statistics," at end of section. • Monthly factors are based on a time-adjusted total net summer capacity of generators in operation for the entire month. Annual factors are based on a time-weighted average of the monthly time-adjusted capacity. • For plants that use multiple energy sources or technologies, capacity is assigned to the reported combination of predominant energy source and technology. • See EIA's *Electric Power Annual*, "Technical notes," for further information. • See "Capacity factor" in Glossary. • See Note 2, "Classification of Power Plants Into Energy-Use Sectors," at end of section. • Geographic coverage is the 50 states and the District of Columbia.

Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#electricity> (Excel and CSV files) for all available annual and monthly data beginning in 2008.

Sources: U.S. Energy Information Administration (EIA), Form EIA-860, "Annual Electric Generator Report"; Form EIA-860M, "Monthly Update to the Annual Electric Generator Report"; and Form EIA-923, "Power Plant Operations Report."

Note 1. Coverage of Electricity Statistics. Data in Section 7 cover the following:

Through 1984, data for electric utilities also include institutions (such as universities) and military facilities that generated electricity primarily for their own use; beginning in 1985, data for electric utilities exclude institutions and military facilities. Beginning in 1989, data for the commercial sector include institutions and military facilities.

The generation, consumption, and stocks data in Section 7 are for utility-scale facilities—those with a combined generation nameplate capacity of 1 megawatt or more. Data exclude small-scale facilities—those with a combined generator nameplate capacity of less than 1 megawatt. For data on small-scale solar photovoltaic (PV) generation in the residential, commercial, and industrial sectors, see Table 10.6.

Note 2. Classification of Power Plants into Energy-Use Sectors. The U.S. Energy Information Administration (EIA) classifies power plants (both electricity-only and combined-heat-and-power plants) into energy-use sectors based on the North American Industry Classification System (NAICS), which replaced the Standard Industrial Classification (SIC) system in 1997. Plants with a NAICS code of 22 are assigned to the Electric Power Sector. Those with NAICS codes beginning with 11 (agriculture, forestry, fishing, and hunting); 21 (mining, including oil and gas extraction); 23 (construction); 31–33 (manufacturing); 2212 (natural gas distribution); and 22131 (water supply and irrigation systems) are assigned to the Industrial Sector. Those with all other codes are assigned to the Commercial Sector. Form EIA-860, "Annual Electric Generator Report," asks respondents to indicate the primary purpose of the facility by assigning a NAICS code from the list at http://www.eia.gov/survey/form/eia_860/instructions.pdf.

Note 3. Electricity Forecast Values. Data values preceded by "F" in this section are forecast values. They are derived from EIA's Short-Term Integrated Forecasting System (STIFS). STIFS is driven primarily by data and assumptions about key macroeconomic variables, energy prices, and weather. The electricity forecast relies on additional variables such as alternative fuel prices (natural gas and oil) and power generation by sources other than fossil fuels, including nuclear, renewables, and hydroelectric power. Each month, EIA staff review the model output and make adjustments, if appropriate, based on their knowledge of developments in the electricity industry.

The STIFS model results are published monthly in EIA's Short-Term Energy Outlook, which is accessible on the Web at <http://www.eia.gov/forecasts/steo/>.

Note 4. Experimental Estimates of Electric Vehicle Use. These are experimental estimates of on-road light-duty electric vehicle (EV) electricity consumption to operate and move the vehicle. These estimates are based on models and are subject to model error. The electricity consumed by light-duty EVs is not identified as a separate class of service by electric utilities. Instead, the electricity consumption by light-duty EVs is accounted for based on the location of where the vehicle is charged. This results in electric utilities reporting light-duty EV consumption as part of the Residential, Commercial, and Industrial Sales to Ultimate Customers. Estimates are for light-duty Battery Electric Vehicles and Plug-in Hybrid Electric Vehicles that weigh less than or equal to 8,500 pounds. Estimates exclude plug-in hybrid motor gasoline consumption, on-road medium- and heavy-duty EVs, and off-road EVs such as golf carts and forklifts. For more information, see the detailed estimation methodology at <https://www.eia.gov/electricity/monthly/pdf/technotes-appendix-d.pdf/>.

Table 7.1 Sources

Net Generation, Electric Power Sector

1949 forward: Table 7.2b.

Net Generation, Commercial and Industrial Sectors

1949 forward: Table 7.2c.

Trade

1949–September 1977: Unpublished Federal Power Commission data.

October 1977–1980: Unpublished Economic Regulatory Administration (ERA) data.

1981: U.S. Department of Energy (DOE), Office of Energy Emergency Operations, "Report on Electric Energy Exchanges with Canada and Mexico for Calendar Year 1981," April 1982 (revised June 1982).

1982 and 1983: DOE, ERA, *Electricity Exchanges Across International Borders*.

1984–1986: DOE, ERA, *Electricity Transactions Across International Borders*.

1987 and 1988: DOE, ERA, Form ERA-781R, "Annual Report of International Electrical Export/Import Data."

1989: DOE, Fossil Energy, Form FE-781R, "Annual Report of International Electrical Export/Import Data."

1990–2000: National Energy Board of Canada; and DOE, Office of Electricity Delivery and Energy Reliability, Form FE-781R, "Annual Report of International Electrical Export/Import Data."

2001–May 2011: National Energy Board of Canada; DOE, Office of Electricity Delivery and Energy Reliability, Form OE-781R, "Monthly Electricity Imports and Exports Report," and predecessor form; and California Independent System Operator.

June 2011–2015: National Energy Board of Canada; California Independent System Operator; and EIA estimates for Texas transfers.

2016 forward: EIA, Form EIA-111, "Quarterly Electricity Imports and Exports Report"; and for forecast values, EIA Short-Term Integrated Forecasting System (STIFS).

T&D Losses and Unaccounted for

1949 forward: Calculated as the sum of total net generation and imports minus end use and exports.

End Use

1949 forward: Table 7.6.

Table 7.2b Sources

1949–September 1977: Federal Power Commission, Form FPC-4, "Monthly Power Plant Report."

October 1977–1981: Federal Energy Regulatory Commission, Form FPC-4, "Monthly Power Plant Report."

1982–1988: U.S. Energy Information Administration (EIA), Form EIA-759, "Monthly Power Plant Report."

1989–1997: EIA, Form EIA-759, "Monthly Power Plant Report," and Form EIA-867, "Annual Nonutility Power Producer Report."

1998–2000: EIA, Form EIA-759, "Monthly Power Plant Report," and Form EIA-860B, "Annual Electric Generator Report—Nonutility."

2001–2003: EIA, Form EIA-906, "Power Plant Report."

2004–2007: EIA, Form EIA-906, "Power Plant Report," and Form EIA-920, "Combined Heat and Power Plant Report."

2008 forward: EIA, Form EIA-923, "Power Plant Operations Report".

Table 7.2c Sources

Industrial Sector, Hydroelectric Power, 1949–1988

1949–September 1977: Federal Power Commission (FPC), Form FPC-4, "Monthly Power Plant Report," for plants with generating capacity exceeding 10 megawatts, and FPC, Form FPC-12C, "Industrial Electric Generating Capacity," for all other plants.

October 1977–1978: Federal Energy Regulatory Commission (FERC), Form FPC-4, "Monthly Power Plant Report," for plants with generating capacity exceeding 10 megawatts, and FERC, Form FPC-12C, "Industrial Electric Generating Capacity," for all other plants.

1979: FERC, Form FPC-4, "Monthly Power Plant Report," for plants with generating capacity exceeding 10 megawatts, and U.S. Energy Information Administration (EIA) estimates for all other plants.

1980–1988: Estimated by EIA as the average generation over the 6-year period of 1974–1979.

All Data, 1989 Forward

1989–1997: EIA, Form EIA-867, "Annual Nonutility Power Producer Report."

1998–2000: EIA, Form EIA-860B, "Annual Electric Generator Report—Nonutility."

2001–2003: EIA, Form EIA-906, "Power Plant Report."

2004–2007: EIA, Form EIA-906, "Power Plant Report," and Form EIA-920, "Combined Heat and Power Plant Report."

2008 forward: EIA, Form EIA-923, "Power Plant Operations Report".

Table 7.3b Sources

1949–September 1977: Federal Power Commission, Form FPC-4, "Monthly Power Plant Report."

October 1977–1981: Federal Energy Regulatory Commission, Form FPC-4, "Monthly Power Plant Report."

1982–1988: U.S. Energy Information Administration (EIA), Form EIA-759, "Monthly Power Plant Report."

1989–1997: EIA, Form EIA-759, "Monthly Power Plant Report," and Form EIA-867, "Annual Nonutility Power Producer Report."

1998–2000: EIA, Form EIA-759, "Monthly Power Plant Report," and Form EIA-860B, "Annual Electric Generator Report—Nonutility."

2001–2003: EIA, Form EIA-906, "Power Plant Report."

2004–2007: EIA, Form EIA-906, "Power Plant Report," and Form EIA-920, "Combined Heat and Power Plant Report."

2008 forward: EIA, Form EIA-923, "Power Plant Operations Report".

Table 7.4b Sources

1949–September 1977: Federal Power Commission, Form FPC-4, "Monthly Power Plant Report."

October 1977–1981: Federal Energy Regulatory Commission, Form FPC-4, "Monthly Power Plant Report."

1982–1988: U.S. Energy Information Administration (EIA), Form EIA-759, "Monthly Power Plant Report."

1989–1997: EIA, Form EIA-759, "Monthly Power Plant Report," and Form EIA-867, "Annual Nonutility Power Producer Report."

1998–2000: EIA, Form EIA-759, "Monthly Power Plant Report," and Form EIA-860B, "Annual Electric Generator Report—Nonutility."

2001–2003: EIA, Form EIA-906, "Power Plant Report."

2004–2007: EIA, Form EIA-906, "Power Plant Report," and Form EIA-920, "Combined Heat and Power Plant Report."

2008 forward: EIA, Form EIA-923, "Power Plant Operations Report".

Table 7.6 Sources

Sales to Ultimate Customers, Residential and Industrial

1949–September 1977: Federal Power Commission, Form FPC-5, "Monthly Statement of Electric Operating Revenue and Income."

October 1977–February 1980: Federal Energy Regulatory Commission (FERC), Form FPC-5, "Monthly Statement of Electric Operating Revenue and Income."

March 1980–1982: FERC, Form FPC-5, "Electric Utility Company Monthly Statement."

1983: U.S. Energy Information Administration (EIA), Form EIA-826, "Electric Utility Company Monthly Statement."

1984–2003: EIA, Form EIA-861, "Annual Electric Utility Report."

2004 forward: EIA, *Electric Power Monthly (EPM)* February 2024, Table 5.1.

Sales to Ultimate Customers, Commercial

1949–2002: Data are estimates. See estimation methodology at http://www.eia.gov/state/seds/sep_use/notes/use_elec.pdf.

2003: EIA, Form EIA-861, "Annual Electric Utility Report."

2004 forward: EIA, EPM, February 2024, Table 5.1.

Sales to Ultimate Customers, Transportation

1949–2002: Data are estimates. See estimation methodology at http://www.eia.gov/state/seds/sep_use/notes/use_elec.pdf.

2003: EIA, Form EIA-861, "Annual Electric Utility Report."

2004 forward: EIA, EPM February 2024, Table 5.1.

Direct Use, Annual

1989–1997: EIA, Form EIA-867, "Annual Nonutility Power Producer Report."

1998–2000: EIA, Form EIA-860B, "Annual Electric Generator Report—Nonutility."

2001–2022: EIA, *Electric Power Annual 2023*, October 2023, Table 2.2.

Direct Use, Monthly

1989 forward: Annual shares are calculated as annual direct use divided by annual commercial and industrial net generation (on Table 7.1). Then monthly direct use estimates are calculated as the annual share multiplied by the monthly commercial and industrial net generation values. For 2021, the 2020 annual share is used.

Electric Vehicle Use

2018 forward: EIA, EPM, February 2024, Table D1.

Table 7.7b Sources

Net Summer Capacity, Nuclear Power

1949 forward: Table 8.1.

All Other Data

1949–1984: U.S. Energy Information Administration (EIA) estimates.

1985–1988: EIA, Form EIA-860, "Annual Electric Generator Report."

1989–1997: EIA, Form EIA-860, "Annual Electric Generator Report," and Form EIA-867, "Annual Nonutility Power Producer Report."

1998–2000: EIA, Form EIA-860A, "Annual Electric Generator Report—Utility," and Form EIA-860B, "Annual Electric Generator Report—Nonutility."

2001–2007: EIA, Form EIA-860, "Annual Electric Generator Report."

2008 forward: EIA, Form EIA-860, "Annual Electric Generator Report," and Form EIA-860M, "Monthly Update to the Annual Electric Generator Report."