

Electric Power Annual 2011

Released: January 2012

Revised: March 2012

Next Update: November 2012

Table ES1. Summary Statistics for the United States, 1999 through 2010

Description	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000	1999
<b>Net Generation (thousand megawatthours)</b>												
Coal[1]	1,847,290	1,755,904	1,985,801	2,016,456	1,990,511	2,012,873	1,978,301	1,973,737	1,933,130	1,903,956	1,966,265	1,881,087
Petroleum[2]	37,061	38,937	46,243	65,739	64,166	122,225	121,145	119,406	94,567	124,880	111,221	118,061
Natural Gas[3]	987,697	920,979	882,981	896,590	816,441	760,960	710,100	649,908	691,006	639,129	601,038	556,396
Other Gases[4]	11,313	10,632	11,707	13,453	14,177	13,464	15,252	15,600	11,463	9,039	13,955	14,126
Nuclear	806,968	798,855	806,208	806,425	787,219	781,986	788,528	763,733	780,064	768,826	753,893	728,254
Hydroelectric												
Conventional[5]	260,203	273,445	254,831	247,510	289,246	270,321	268,417	275,806	264,329	216,961	275,573	319,536
Other Renewables[6]	167,173	144,279	126,101[R]	105,238	96,525	87,329	83,067	79,487	79,109	70,769	80,906	79,423
Wind	94,652	73,886	55,363	34,450	26,589	17,811	14,144	11,187	10,354	6,737	5,593	4,488
Solar Thermal and Photovoltaic	1,212	891	864	612	508	550	575	534	555	543	493	495
Wood and Wood Derived Fuels[7]	37,172	36,050	37,300	39,014	38,762	38,856	38,117	37,529	38,665	35,200	37,595	37,041
Geothermal	15,219	15,009	14,840[R]	14,637	14,568	14,692	14,811	14,424	14,491	13,741	14,093	14,827
Other Biomass[8]	18,917	18,443	17,734	16,525	16,099	15,420	15,421	15,812	15,044	14,548	23,131	22,572
Pumped Storage[9]	-5,501	-4,627	-6,288	-6,896	-6,558	-6,558	-8,488	-8,535	-8,743	-8,823	-5,539	-6,097
Other[10]	12,855	11,928	11,804[R]	12,231	12,974	12,821	14,232	14,045	13,527	11,906	4,794	4,024
<b>All Energy Sources</b>	<b>4,125,060</b>	<b>3,950,331</b>	<b>4,119,388</b>	<b>4,156,745</b>	<b>4,064,702</b>	<b>4,055,423</b>	<b>3,970,555</b>	<b>3,883,185</b>	<b>3,858,452</b>	<b>3,736,644</b>	<b>3,802,105</b>	<b>3,694,810</b>
<b>Net Summer Generating Capacity (megawatts)</b>												
Coal[1]	316,800	314,294	313,322	312,738	312,956	313,380	313,020	313,019	315,350	314,230	315,114	315,496
Petroleum[2]	55,647	56,781	57,445	56,068	58,097	58,548	59,119	60,730	59,651	66,162	61,837	60,069
Natural Gas[3]	407,028	401,272	397,460[R]	392,876	388,294	383,061	371,011	355,442	312,512	252,832	219,590	195,119
Other Gases[4]	2,700	1,932	1,995	2,313	2,256	2,063	2,296	1,994	2,008	1,670	2,342	1,909
Nuclear	101,167	101,004	100,755	100,266	100,334	99,988	99,628	99,209	98,657	98,159	97,860	97,411
Hydroelectric												
Conventional[5]	78,825	78,518	77,930	77,885	77,821	77,541	77,641	78,694	79,356	78,916	79,359	79,393
Other Renewables[6]	53,886	48,552	38,466[R]	30,069	24,113	21,205	18,717	18,153	16,710	16,101	15,572	15,942
Wind	39,135	34,296	24,651	16,515	11,329	8,706	6,456	5,995	4,417	3,864	2,377	2,252
Solar Thermal and Photovoltaic	941	619	536	502	411	411	398	397	397	392	386	389
Wood and Wood Derived Fuels[7]	7,037	6,939	6,864	6,704	6,372	6,193	6,182	5,871	5,844	5,882	6,147	6,795
Geothermal	2,405	2,382	2,229[R]	2,214	2,274	2,285	2,152	2,133	2,252	2,216	2,793	2,846
Other Biomass[11]	4,369	4,317	4,186	4,134	3,727	3,609	3,529	3,758	3,800	3,748	3,869	3,660
Pumped Storage[9]	22,199	22,160	21,858	21,886	21,461	21,347	20,764	20,522	20,371	19,664	19,522	19,565
Other[12]	884	888	942	788	882	887	746	684	686	519	523	1,023
<b>All Energy Sources</b>	<b>1,039,137</b>	<b>1,025,400</b>	<b>1,010,171</b>	<b>994,888</b>	<b>986,215</b>	<b>978,020</b>	<b>962,942</b>	<b>948,446</b>	<b>905,301</b>	<b>848,254</b>	<b>811,719</b>	<b>785,927</b>
<b>Demand, Capacity Resources, and Capacity Margins – Summer</b>												
<b>Net Internal Demand (megawatts)</b>												
	747,836	713,106	744,151[R]	766,786[R]	776,479	746,470	692,908	696,752	696,376	674,833	680,941	653,857
<b>Capacity Resources (megawatts)</b>												
	924,922	916,449	909,504[R]	914,397[R]	891,226	882,125	875,870	856,131	833,380	788,990	808,054	765,744
<b>Capacity Margins (percent)</b>												
	19.2	22.2	18.2	16.1	12.9	15.4	20.9	18.6	16.4	14.5	15.7	14.6
<b>Fuel Consumption of Fossil Fuels for Electricity Generation</b>												
<b>Coal (thousand tons)[1]</b>												
	1,046,795	934,683	1,042,335	1,046,795	1,030,556	1,041,448	1,020,523	1,014,058	987,583	972,691	994,933	949,802
<b>Petroleum (thousand barrels)[2]</b>												
	112,615	67,668	80,932	112,615	110,634	206,785	203,494	206,653	168,597	216,672	195,228	207,871
<b>Natural Gas (millions of cubic feet)[3]</b>												
	7,089,342	7,121,069	6,895,843	7,089,342	6,461,615	6,036,370	5,674,580	5,616,135	6,126,062	5,832,305	5,691,481	5,321,984
<b>Other Gases (millions of Btu)[4]</b>												
	114,904	83,593	96,757	114,904	114,665	109,916	135,144	156,306	131,230	97,308	125,971	126,387
<b>Consumption of Fossil Fuels for Thermal Output in Combined Heat and Power Facilities</b>												
<b>Coal (thousand tons)[1]</b>												
	22,810	20,507	22,168	22,810	23,227	23,833	24,275	17,720	17,561	18,944	20,466	20,373
<b>Petroleum (thousand barrels)[2]</b>												
	19,775	13,161	12,016	19,775	20,371	24,408	25,870	17,939	14,811	18,268	22,266	26,822
<b>Natural Gas (millions of cubic feet)[3]</b>												
	872,579	816,787	793,537	872,579	942,817	984,340	1,052,100	721,267	860,019	898,286	985,263	982,958
<b>Other Gases (millions of Btu)[4]</b>												
	214,321	175,671	203,236	214,321	226,464	238,396	218,295	137,837	146,882	166,161	230,082	223,713
<b>Consumption of Fossil Fuels for Electricity Generation and Useful Thermal Output</b>												
<b>Coal (thousand tons)[1]</b>												
	1,069,606	955,190	1,064,503	1,069,606	1,053,783	1,065,281	1,044,798	1,031,778	1,005,144	991,635	1,015,398	970,175
<b>Petroleum (thousand barrels)[2]</b>												
	132,389	80,830	92,948	132,389	131,005	231,193	229,364	224,593	183,408	234,940	217,494	234,694
<b>Natural Gas (millions of cubic feet)[3]</b>												
	7,961,922	7,937,856	7,689,380	7,961,922	7,404,432	7,020,709	6,726,679	6,337,402	6,986,081	6,730,591	6,676,744	6,304,942
<b>Other Gases (millions of Btu)[4]</b>												
	329,225	259,265	299,993	329,225	341,129	348,312	353,438	294,143	278,111	263,469	356,053	350,100

Table ES1. Summary Statistics for the United States, 1999 through 2010

Description	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000	1999
<b>Stocks at Electric Power Sector Facilities (year end)</b>												
Coal (thousand tons)[13]	151,221	189,467	161,589	151,221	140,964	101,137	106,669	121,567	141,714	138,496	102,296	141,604
Petroleum (thousand barrels)[14]	47,203	46,181	44,498	47,203	51,583	50,062	51,434	53,170	52,490	57,031	40,932	54,109
<b>Receipts of Fuel at Electricity Generators[15]</b>												
Coal (thousand tons)[1]	1,079,943	981,477	1,069,709	1,054,664	1,079,943	1,021,437	1,002,032	986,026	884,287	762,815	790,274	908,232
Petroleum (thousand barrels)[2]	100,965	88,951	96,341	88,347	100,965	194,733	186,655	185,567	120,851	124,618	108,272	145,939
Natural Gas (millions of cubic feet)[16]	6,675,246	8,118,550	7,879,046	7,200,316	6,675,246	6,181,717	5,734,054	5,500,704	5,607,737	2,148,924	2,629,986	2,809,455
<b>Cost of Fuel at Electricity Generators (cents per million Btu)[15]</b>												
Coal[1]	1	221	207	177	169	154	136	128	125	123	120	122
Petroleum[2]	2	702	1,087	717	623	644	429	433	334	369	418	236
Natural Gas[16]	694	474	902	711	694	821	596	539	356	449	430	257
<b>Emissions (thousand metric tons)</b>												
Carbon Dioxide (CO2)	2,388,662	2,269,508	2,484,012[R]	2,547,032[R]	2,488,918[R]	2,543,838[R]	2,486,982[R]	2,445,094[R]	2,423,963[R]	2,418,607[R]	2,470,834[R]	2,366,302[R]
Sulfur Dioxide (SO2)	5,401	5,970	7,830	9,042	9,524	10,340	10,309	10,646	10,881	11,174	11,963	12,843
Nitrogen Oxides (NOX)	2,491	2,395	3,330	3,650	3,799	3,961	4,143	4,532	5,194	5,290	5,638	5,955
<b>Trade (million megawatthours)</b>												
Purchases	5,750	5,029	5,613	5,411	5,503	6,092	6,999	6,980	8,755	7,555	2,346	2,040
Sales for Resale	5,929	5,065	5,681	5,479	5,493	6,072	6,759	6,921	8,569	7,345	2,355	1,998
<b>Electricity Imports and Exports (thousand megawatthours)</b>												
Imports	45,083	52,191	57,019[R]	51,396	42,691	43,929[R]	34,210	30,395	36,779	38,500	48,592	43,215
Exports	19,106	18,138	24,198[R]	20,144	24,271	19,151[R]	22,898	23,975	15,796	16,473	14,829	14,222
<b>Retail Sales and Revenue Data – Bundled and Unbundled</b>												
<b>Number of Ultimate Customers (thousands)</b>												
Residential	125,718	125,177	124,937	123,950	122,471	120,761	118,764	117,280	116,622	114,890	111,718	110,383
Commercial	17,674	17,562	17,563	17,377	17,172	16,872	16,607	16,550	15,334	14,867	14,349	14,074
Industrial	748	758	775	794	760	734	748	713	602	571	527	553
Transportation	0	1	1	1	1	1	1	1	NA	NA	NA	NA
Other	NA	NA	NA	NA	NA	NA	NA	NA	1,067	1,030	974	935
All Sectors	144,140	143,497	143,276	142,122	140,404	138,367	136,119	134,544	133,624	131,359	127,568	125,945
<b>Sales to Ultimate Customers (thousand megawatthours)</b>												
Residential	1,445,708	1,364,474	1,379,981	1,392,241	1,351,520	1,359,227	1,291,982	1,275,824	1,265,180	1,201,607	1,192,446	1,144,923
Commercial	1,330,199	1,307,168	1,335,981	1,336,315	1,299,744	1,275,079	1,230,425	1,198,728	1,104,497	1,083,069	1,055,232	1,001,996
Industrial	970,873	917,442	1,009,300	1,027,832	1,011,298	1,019,156	1,017,850	1,012,373	990,238	996,609	1,064,239	1,058,217
Transportation	7,712	7,781	7,700	8,173	7,358	7,506	7,224	6,810	NA	NA	NA	NA
Other	NA	NA	NA	NA	NA	NA	NA	NA	105,552	113,174	109,496	106,952
All Sectors	3,754,493	3,596,865	3,732,962	3,764,561	3,669,919	3,660,969	3,547,479	3,493,734	3,465,466	3,394,458	3,421,414	3,312,087
Direct Use	131,910	126,938	132,197[R]	125,670[R]	146,927	150,016	168,470	168,295	166,184	162,649	170,943	171,629
Total Disposition	3,886,403	3,723,803	3,865,159[R]	3,890,231[R]	3,816,845	3,810,984	3,715,949	3,662,029	3,631,650	3,557,107	3,592,357	3,483,716
<b>Revenue From Ultimate Customers (million dollars)</b>												
Residential	166,782	157,008	155,433	148,295	140,582	128,393	115,577	111,249	106,834	103,158	98,209	93,483
Commercial	135,559	132,940	138,469	128,903	122,914	110,522	100,546	96,263	87,117	85,741	78,405	72,771
Industrial	65,750	62,504	68,920	65,712	62,308	58,445	53,477	51,741	48,336	50,293	49,369	46,846
Transportation	815	828	827	792	702	643	519	514	NA	NA	NA	NA
Other	NA	NA	NA	NA	NA	NA	NA	NA	7,124	8,151	7,179	6,796
All Sectors	368,906	353,280	363,650	343,703	326,506	298,003	270,119	259,767	249,411	247,343	233,163	219,896
<b>Average Retail Price (cents per kilowatthour)</b>												
Residential	11.54	11.51	11.26	10.65	10.4	9.45	8.95	8.72	8.44	8.58	8.24	8.16
Commercial	10.19	10.17	10.36	9.65	9.46	8.67	8.17	8.03	7.89	7.92	7.43	7.26
Industrial	6.77	6.81	6.83	6.39	6.16	5.73	5.25	5.11	4.88	5.05	4.64	4.43
Transportation	10.57	10.65	10.74	9.7	9.54	8.57	7.18	7.54	NA	NA	NA	NA
Other	NA	NA	NA	NA	NA	NA	NA	NA	6.75	7.2	6.56	6.35
All Sectors	9.83	9.82	9.74	9.13	8.9	8.14	7.61	7.44	7.2	7.29	6.81	6.64
<b>Revenue and Expense Statistics (million dollars)</b>												
<b>Major Investor Owned</b>												
Utility Operating Revenues	284,373	276,124	298,962	270,964	275,501	265,652	238,759	230,151	219,609	267,276	233,915	213,090
Utility Operating Expenses	250,122	244,243	267,263	241,198	245,589	236,786	206,960	201,057	189,062	234,910	210,250	180,467
Net Utility Operating Income	34,251	31,881	31,699	29,766	29,912	28,866	31,799	29,094	30,548	32,366	23,665	32,623
<b>Major Publicly Owned (with Generation Facilities)</b>												

Table ES1. Summary Statistics for the United States, 1999 through 2010

Description	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000	1999
Operating Revenues	NA	NA	NA	NA	NA	NA	NA	33,906	32,776	38,028	31,843	26,767
Operating Expenses	NA	NA	NA	NA	NA	NA	NA	29,637	28,638	32,789	26,244	21,274
Net Electric Operating Income	NA	NA	NA	NA	NA	NA	NA	4,268	4,138	5,238	5,598	5,493
<b>Major Publicly Owned (without Generation Facilities)</b>												
Operating Revenues	NA	NA	NA	NA	NA	NA	NA	12,454	11,546	10,417	9,904	9,354
Operating Expenses	NA	NA	NA	NA	NA	NA	NA	11,481	10,703	9,820	9,355	8,737
Net Electric Operating Income	NA	NA	NA	NA	NA	NA	NA	974	843	597	549	617
<b>Major Federally Owned</b>												
Operating Revenues	NA	NA	NA	NA	NA	NA	NA	11,798	11,470	12,458	10,685	10,186
Operating Expenses	NA	NA	NA	NA	NA	NA	NA	8,763	8,665	10,013	8,139	7,775
Net Electric Operating Income	NA	NA	NA	NA	NA	NA	NA	3,035	2,805	2,445	2,546	2,411
<b>Major Cooperative Borrower Owned</b>												
Operating Revenues	NA	42,189	42,087	38,208	36,723	34,088	30,650	29,228	27,458	26,458	25,629	23,824
Operating Expenses	NA	38,337	38,511	34,843	33,550	31,209	27,828	26,361	24,561	23,763	22,982	21,283
Net Electric Operating Income	NA	3,852	3,576	3,365	3,173	2,879	2,822	2,867	2,897	2,696	2,647	2,541

[Demand-Side Management \(DSM\) Data\[17\]](#)

#### Actual Peak Load

##### Reductions (megawatts)

Total Actual Peak Load Reduction	33,283	31,682	31,735	30,253	27,240	25,710	23,532	22,904	22,936	24,955	22,901	26,455
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##### DSM Energy Savings

###### (thousand megawatthours)

Energy Efficiency	86,926	76,891	74,861	67,134	62,951	58,891	52,662	48,245	52,285	52,946	52,827	49,691
Load Management	913	1,015	1,813	1,857	865	1,006	2,047	2,020	1,790	990	875	872

##### DSM Cost (million dollars)

Total Cost	4,220	3,594	3,175	2,523	2,051	1,921	1,557	1,297	1,626	1,630	1,565	1,424
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[1] Includes anthracite, bituminous, subbituminous and lignite coal. Waste and synthetic coal are included starting in 2002.

[2] Distillate fuel oil (all diesel and No. 1, No. 2, and No. 4 fuel oils), residual fuel oil (No. 5 and No. 6 fuel oils and bunker C fuel oil), jet fuel, kerosene, petroleum coke (converted to liquid petroleum, see Technical Notes for conversion methodology) and waste oil.

[3] Includes a small number of generators for which waste heat is the primary energy source.

[4] Blast furnace gas, propane gas, and other manufactured and waste gases derived from fossil fuels.

[5] Conventional hydroelectric power excluding pumped storage facilities.

[6] Other renewables represents the summation of the sub-categories of Wind, Solar Thermal and Photovoltaic, Wood and Wood Derived Fuels, Geothermal, and Other Biomass.

[7] Wood/wood waste solids (including paper pellets, railroad ties, utility poles, wood chips, bark, and wood waste solids), wood waste liquids (red liquor, sludge wood, spent sulfite liquor, and other wood-based liquids), and black liquor.

[8] Biogenic municipal solid waste, landfill gas, sludge waste, agricultural byproducts, other biomass solids, other biomass liquids, and other biomass gases (including digester gases, methane, and other biomass gases).

[9] Pumped storage is the capacity to generate electricity from water previously pumped to an elevated reservoir and then released through a conduit to turbine generators located at a lower level. The generation from a hydroelectric pumped storage facility is the net value of production minus the energy used for pumping.

[10] Non-biogenic municipal solid waste, batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, tire-derived fuels and miscellaneous technologies.

[11] Municipal solid waste, landfill gas, sludge waste, agricultural byproducts, other biomass solids, other biomass liquids, and other biomass gases (including digester gases, methane, and other biomass gases).

[12] Batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, tire-derived fuels and miscellaneous technologies.

[13] Anthracite, bituminous, subbituminous, lignite, and synthetic coal; excludes waste coal.

[14] Methodology. Data prior to 2004 includes small quantities of waste oil.

[15] For 2002 through 2007, includes data from the Form EIA-423 for independent power producers, and commercial and industrial power-producing facilities. Beginning in 2008, data are collected on the Form EIA-923 for utilities, independent power producers, and commercial and industrial power-producing facilities. Receipts, cost, and quality data are collected from plants above a 50 MW threshold, and imputed for plants between 1 and 50 MW. Therefore, there may be a notable increase in fuel receipts beginning with 2008 data. Receipts of coal include imported coal.

[16] Natural gas, including a small amount of supplemental gaseous fuels that cannot be identified separately.

[17] Data presented are reflective of large utilities.

NA = Not available.

R = Revised.

**Note:** -See Glossary reference for definitions. -See Technical Notes Table A5 for conversion to different units of measure. -Capacity by energy source is based on the capacity associated with the energy source reported as the most predominant (primary) one, where more than one energy source is associated with a generator. -Dual-fired capacity returned to respective fuel categories for current and all historical years. New fuel switchable capacity tables have replaced dual-fired breakouts. -Totals may not equal sum of components because of independent rounding.

**Sources:** U.S. Energy Information Administration Form EIA-411, "Coordinated Bulk Power Supply Program Report;" Form EIA-412, "Annual Electric Industry Financial Report;" The Form EIA-412 was terminated in 2003; Form EIA-767, "Steam-Electric Plant Operation and Design Report" was suspended; Form EIA-860, "Annual Electric Generator Report;" Form EIA-861, "Annual Electric Power Industry Report;" Form EIA-923, "Power Plant Operations Report" replaces several form(s) including: Form EIA-906, "Power Plant Report," Form EIA-920 "Combined Heat and Power Plant Report;" Form EIA-423, "Monthly Cost and Quality of Fuels for Electric Plants Report; and FERC Form 423, "Monthly Report of Cost and Quality of Fuels for Electric Plants," and their predecessor forms. Federal Energy Regulatory Commission, FERC Form 1, "Annual Report of Major Utilities, Licensees and Others;" FERC Form 1-F, "Annual Report for Nonmajor Public Utilities and Licensees;" Rural Utilities Service (RUS) Form 7, "Operating Report;" RUS Form 12, "Operating Report;" Imports and Exports: DOE, Office of Electricity Delivery and Energy Reliability, Form OE-781R, "Annual Report of International Electric Export/Import Data," predecessor forms, and National Energy Board of Canada. For 2001 forward, data from the California Independent System Operator are used in combination with the Form OE-781R values to estimate electricity trade with Mexico.