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Preface

The Electric Power Monthly (EPM) presents monthly electricity statistics for a wide audience including Congress, Federal and State agencies, the electric power industry, and the general public. The purpose of this publication is to provide energy decision makers with accurate and timely information that may be used in forming various perspectives on electric issues that lie ahead. In order to provide an integrated view of the electric power industry, data in this report have been separated into two major categories: electric power sector and combined heat and power producers. The U.S. Energy Information Administration (EIA) collected the information in this report to fulfill its data collection and dissemination responsibilities as specified in the Federal Energy Administration Act of 1974 (Public Law 93-275) as amended.

Background

The Office of Electricity, Renewables & Uranium Statistics, U.S. EIA, U.S. Department of Energy, prepares the EPM. This publication provides monthly statistics at the State (lowest level of aggregation), Census Division, and U.S. levels for net generation, fossil fuel consumption and stocks, cost, quantity, and quality of fossil fuels received, sales of electricity to ultimate consumers, associated revenue, and average price of electricity sold. In addition, the report contains rolling 12-month totals in the national overviews, as appropriate.

Data sources

The EPM contains information from the following data sources: Form EIA-923, "Power Plant Operations Report;" Form EIA-826, "Monthly Electric Sales and Revenue With State Distributions Report;" Form EIA-860, "Annual Electric Generator Report;" Form EIA-860M, "Monthly Update to the Annual Electric Generator Report;" and Form EIA-861, "Annual Electric Power Industry Report." Forms and their instructions may be obtained from: <http://www.eia.gov/survey/#electricity>. A detailed description of these forms and associated algorithms are found in Appendix C, "Technical Notes."

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Fuel	Facility Type	Total (All Sectors)			Electric Power Sector				Commercial		Industrial		Residential	
		November 2016	November 2015	Percentage Change	Electric Utilities		Independent Power Producers		November 2016	November 2015	November 2016	November 2015	November 2016	November 2015
					November 2016	November 2015	November 2016	November 2015						
Net Generation (Thousand Megawatthours)														
Coal	Utility Scale Facilities	87,000	87,227	-0.3%	64,946	64,191	21,420	22,171	39	35	595	830	0	0
Petroleum Liquids	Utility Scale Facilities	1,058	995	6.4%	673	718	338	235	NM	6	40	36	0	0
Petroleum Coke	Utility Scale Facilities	781	715	9.2%	596	490	116	140	0	1	69	85	0	0
Natural Gas	Utility Scale Facilities	94,586	102,236	-7.5%	43,773	47,590	42,440	46,542	591	583	7,782	7,521	0	0
Other Gas	Utility Scale Facilities	1,001	902	11.0%	22	1	338	233	0	0	641	668	0	0
Nuclear	Utility Scale Facilities	65,179	60,264	8.2%	33,082	30,751	32,097	29,513	0	0	0	0	0	0
Hydroelectric Conventional	Utility Scale Facilities	18,815	19,338	-2.7%	17,741	17,901	1,003	1,301	NM	3	68	133	0	0
Renewable Sources Excluding Hydroelectric	Utility Scale Facilities	28,516	28,065	1.6%	3,775	3,776	22,125	21,645	235	263	2,381	2,381	0	0
... Wind	Utility Scale Facilities	19,334	19,682	-1.8%	3,214	3,216	16,102	16,447	11	13	7	6	0	0
... Solar Thermal and Photovoltaic	Utility Scale Facilities	2,642	1,730	52.8%	145	103	2,458	1,599	38	27	NM	1	0	0
... Wood and Wood-Derived Fuels	Utility Scale Facilities	3,257	3,418	-4.7%	197	243	776	914	2	1	2,281	2,259	0	0
... Other Biomass	Utility Scale Facilities	1,777	1,902	-6.6%	126	121	1,376	1,444	184	222	91	115	0	0
... Geothermal	Utility Scale Facilities	1,507	1,334	13.0%	94	93	1,412	1,240	0	0	0	0	0	0
Hydroelectric Pumped Storage	Utility Scale Facilities	-607	-285	112.7%	-522	-218	-85	-67	0	0	0	0	0	0
Other Energy Sources	Utility Scale Facilities	1,093	1,197	-8.7%	24	48	576	591	84	102	407	456	0	0
All Energy Sources	Utility Scale Facilities	297,422	300,653	-1.1%	164,111	165,247	120,368	122,304	960	992	11,983	12,110	0	0
Estimated Distributed Solar Photovoltaic	Distributed Facilities	1,307	982	33.1%	0	0	0	0	467	367	123	100	717	515
Estimated Total Solar Photovoltaic	All Facilities	3,766	2,507	50.2%	140	99	2,278	1,398	505	394	NM	102	717	515
Estimated Total Solar	All Facilities	3,950	2,712	45.7%	145	103	2,458	1,599	505	394	NM	102	717	515
Consumption of Fossil Fuels for Electricity Generation														
Coal (1000 tons)	Utility Scale Facilities	48,126	48,943	-1.7%	35,274	35,427	12,624	13,209	13	12	215	295	0	0
Petroleum Liquids (1000 barrels)	Utility Scale Facilities	1,560	1,720	-9.3%	1,198	1,348	305	324	11	7	46	40	0	0
Petroleum Coke (1000 tons)	Utility Scale Facilities	304	260	17.0%	240	178	47	62	0	0	18	20	0	0
Natural Gas (1000 Mcf)	Utility Scale Facilities	700,215	767,336	-8.7%	332,389	366,510	307,969	342,625	5,332	5,470	54,526	52,732	0	0
Consumption of Fossil Fuels for Useful Thermal Output														
Coal (1000 tons)	Utility Scale Facilities	1,036	1,321	-21.6%	84	99	120	145	48	47	784	1,030	0	0
Petroleum Liquids (1000 barrels)	Utility Scale Facilities	184	203	-9.2%	0	1	78	85	8	7	97	110	0	0
Petroleum Coke (1000 tons)	Utility Scale Facilities	77	106	-27.0%	0	3	9	10	0	2	68	92	0	0
Natural Gas (1000 Mcf)	Utility Scale Facilities	77,456	77,684	-0.3%	875	713	21,756	22,566	3,798	3,845	51,027	50,561	0	0
Consumption of Fossil Fuels for Electricity Generation and Useful Thermal Output														
Coal (1000 tons)	Utility Scale Facilities	49,162	50,264	-2.2%	35,358	35,526	12,744	13,353	61	59	998	1,325	0	0
Petroleum Liquids (1000 barrels)	Utility Scale Facilities	1,744	1,923	-9.3%	1,198	1,349	384	409	19	14	143	150	0	0
Petroleum Coke (1000 tons)	Utility Scale Facilities	381	365	4.2%	240	181	56	72	0	2	85	111	0	0
Natural Gas (1000 Mcf)	Utility Scale Facilities	777,672	845,020	-8.0%	333,264	367,223	329,725	365,190	9,130	9,315	105,553	103,292	0	0
Fuel Stocks (end-of-month)														
Coal (1000 tons)	Utility Scale Facilities	173,744	191,343	-9.2%	139,080	149,168	33,059	39,427	141	261	1,464	2,487	0	0
Petroleum Liquids (1000 barrels)	Utility Scale Facilities	32,480	35,872	-9.5%	20,372	21,946	10,475	11,542	319	609	1,314	1,776	0	0
Petroleum Coke (1000 tons)	Utility Scale Facilities	985	1,719	-42.7%	W	W	W	W	W	W	W	W	0	0

Sales, Revenue, and Average Price of Electricity to Ultimate Customers for November															
Total U.S. Electric Power Industry															
		Sales of Electricity to Ultimate Customers (million kWh)			Revenue from Sales of Electricity to Ultimate Customers (million dollars)			Average Price of Electricity to Ultimate Customers (cents/kWh)							
Sector		November 2016	2015	Percentage Change	November 2016	November 2015	Percentage Change	November 2016	November 2015	Percentage Change					
Residential		92,797	92,678	0.1%	11,829	11,775	0.5%	12.75	12.71	0.3%					
Commercial		104,451	104,140	0.3%	10,707	10,722	-0.1%	10.25	10.30	-0.5%					
Industrial		75,092	78,495	-4.3%	4,985	5,185	-3.9%	6.64	6.61						

Table ES1.B. Total Electric Power Industry Summary Statistics, Year-to-Date 2016 and 2015

Net Generation and Consumption of Fuels for January through November														
Fuel	Facility Type	Total (All Sectors)			Electric Power Sector			Commercial		Industrial		Residential		
		November 2016 YTD	November 2015 YTD	Percentage Change	Electric Utilities	Independent Power Producers		November 2016 YTD	November 2015 YTD	November 2016 YTD	November 2015 YTD	November 2016 YTD	November 2015 YTD	
Net Generation (Thousand Megawatthours)														
Coal	Utility Scale Facilities	1,121,120	1,262,903	-11.2%	835,856	929,827	276,328	322,545	391	468	8,544	10,064	0	0
Petroleum Liquids	Utility Scale Facilities	11,528	16,424	-29.8%	7,913	9,736	3,060	5,987	96	176	459	525	0	0
Petroleum Coke	Utility Scale Facilities	10,366	10,128	2.3%	8,214	7,674	1,276	1,533	4	8	871	912	0	0
Natural Gas	Utility Scale Facilities	1,284,457	1,223,705	5.0%	608,453	565,471	584,558	571,163	7,148	6,853	84,298	80,218	0	0
Other Gas	Utility Scale Facilities	11,987	12,007	-0.2%	142	197	3,598	3,214	0	0	8,248	8,595	0	0
Nuclear	Utility Scale Facilities	733,632	727,544	0.8%	387,127	380,683	346,505	346,861	0	0	0	0	0	0
Hydroelectric Conventional	Utility Scale Facilities	243,220	225,915	7.7%	225,608	208,344	16,381	16,275	54	31	1,177	1,265	0	0
Renewable Sources Excluding Hydroelectric	Utility Scale Facilities	310,064	266,559	16.3%	38,277	33,811	243,087	203,619	2,921	2,954	25,779	26,175	0	0
... Wind	Utility Scale Facilities	203,453	170,620	19.2%	31,209	27,308	172,047	143,159	128	106	69	47	0	0
... Solar Thermal and Photovoltaic	Utility Scale Facilities	33,832	23,323	45.1%	2,033	1,396	31,237	21,514	534	393	28	20	0	0
... Wood and Wood-Derived Fuels	Utility Scale Facilities	36,842	38,341	-3.9%	2,697	2,759	9,487	10,550	65	45	24,593	24,987	0	0
... Other Biomass	Utility Scale Facilities	20,140	19,734	2.1%	1,341	1,357	15,517	14,846	2,193	2,411	1,089	1,121	0	0
... Geothermal	Utility Scale Facilities	15,797	14,541	8.6%	997	991	14,800	13,549	0	0	0	0	0	0
Hydroelectric Pumped Storage	Utility Scale Facilities	-5,933	-4,811	23.3%	-4,972	-3,895	-961	-916	0	0	0	0	0	0
Other Energy Sources	Utility Scale Facilities	12,550	12,800	-1.9%	288	509	6,494	6,231	993	1,072	4,776	4,988	0	0
All Energy Sources	Utility Scale Facilities	3,732,992	3,753,174	-0.5%	2,106,905	2,132,358	1,480,326	1,476,513	11,608	11,562	134,153	132,742	0	0
Estimated Distributed Solar Photovoltaic	Distributed Facilities	18,281	13,225	38.2%	0	0	0	0	6,710	5,340	1,720	1,358	9,851	6,527
Estimated Total Solar Photovoltaic	All Facilities	48,820	33,447	46.0%	1,960	1,292	28,017	18,517	7,244	5,733	1,748	1,378	9,851	6,527
Estimated Total Solar	All Facilities	52,113	36,548	42.6%	2,033	1,396	31,237	21,514	7,244	5,733	1,748	1,378	9,851	6,527
Consumption of Fossil Fuels for Electricity Generation														
Coal (1000 tons)	Utility Scale Facilities	613,093	689,370	-11.1%	450,965	501,628	158,865	183,886	133	149	3,130	3,707	0	0
Petroleum Liquids (1000 barrels)	Utility Scale Facilities	19,315	27,344	-29.4%	14,316	17,385	4,363	9,119	119	241	517	599	0	0
Petroleum Coke (1000 tons)	Utility Scale Facilities	3,939	3,768	4.5%	3,170	2,888	544	643	1	2	224	235	0	0
Natural Gas (1000 Mcf)	Utility Scale Facilities	9,698,844	9,209,356	5.3%	4,702,672	4,351,897	4,344,715	4,225,560	63,156	64,344	588,301	567,555	0	0
Consumption of Fossil Fuels for Useful Thermal Output														
Coal (1000 tons)	Utility Scale Facilities	13,016	15,269	-14.8%	919	937	1,594	1,829	488	577	10,016	11,927	0	0
Petroleum Liquids (1000 barrels)	Utility Scale Facilities	2,307	2,932	-21.3%	17	61	919	1,065	113	277	1,259	1,529	0	0
Petroleum Coke (1000 tons)	Utility Scale Facilities	923	1,058	-12.8%	2	9	95	99	7	15	818	935	0	0
Natural Gas (1000 Mcf)	Utility Scale Facilities	876,439	853,730	2.7%	10,063	7,317	262,056	259,989	43,852	42,266	560,468	544,157	0	0
Consumption of Fossil Fuels for Electricity Generation and Useful Thermal Output														
Coal (1000 tons)	Utility Scale Facilities	626,108	704,639	-11.1%	451,884	502,565	160,458	185,714	621	726	13,145	15,634	0	0
Petroleum Liquids (1000 barrels)	Utility Scale Facilities	21,622	30,277	-28.6%	14,333	17,446	5,281	10,184	232	518	1,776	2,128	0	0
Petroleum Coke (1000 tons)	Utility Scale Facilities	4,862	4,826	0.7%	3,172	2,896	639	742	9	17	1,042	1,171	0	0
Natural Gas (1000 Mcf)	Utility Scale Facilities	10,575,283	10,063,086	5.1%	4,712,735	4,359,214	4,606,771	4,485,550	107,008	106,611	1,148,769	1,111,712	0	0

Sales, Revenue, and Average Price of Electricity to Ultimate Customers for January through November													
Total U.S. Electric Power Industry													
Sector	Sales of Electricity to Ultimate Customers (million kWh)			Revenue from Sales of Electricity to Ultimate Customers (million dollars)			Average Price of Electricity to Ultimate Customers (cents/kWh)						
	November 2016 YTD	2015 YTD	Percentage Change	November 2016 YTD	November 2015 YTD	Percentage Change	November 2016 YTD	November 2015 YTD	Percentage Change				
Residential	1,286,581	1,292,426	-0.5%	161,836	163,864	-1.2%	12.58	12.68	-0.8%				
Commercial	1,250,159	1,253,922	-0.3%	129,903	133,956	-3.0%	10.39	10.68	-2.7%				
Industrial	861,283	908,283	-5.2%	58,213	63,123	-7.8%	6.76	6.95	-2.7%				
Transportation	6,845	7,017	-2.5%	649	710	-8.5%	9.49	10.11	-6.1%				
All Sectors	3,404,868	3,461,649	-1.6%	350,601	361,654	-3.1%	10.30	10.45	-1.4%				

NM = Not meaningful due to large relative standard error.

W = Withheld to avoid disclosure of individual company data.

Displayed values of zero may represent small values that round to zero. The Excel version of this table provides additional precision which may be accessed by selecting individual cells.

Coal generation and consumption includes anthracite, bituminous, subbituminous, lignite

Table ES2.A. Summary Statistics: Receipts and Cost of Fossil Fuels for the Electric Power Industry by Sector, Physical Units, 2016 and 2015

Total (All Sectors)										
Fuel	Receipts		Cost		Number of Plants		Receipts		Cost	
	(Physical Units)		(Dollars / Physical Unit)				(Physical Units)		(Dollars / Physical Unit)	
	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015
Coal (1000 tons)	56,396	61,257	40.03	41.17	279	340	581,589	724,360	40.97	42.97
Petroleum Liquids (1000 barrels)	1,551	2,306	61.25	55.05	161	194	15,286	22,664	56.06	70.98
Petroleum Coke (1000 tons)	333	429	63.60	44.93	9	12	3,803	4,504	45.12	52.80
Natural Gas (1000 Mcf)	697,714	758,502	3.12	2.74	744	763	9,534,590	9,050,883	2.89	3.40
Electric Utilities										
Fuel	Receipts		Cost		Number of Plants		Receipts		Cost	
	(Physical Units)		(Dollars / Physical Unit)				(Physical Units)		(Dollars / Physical Unit)	
	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015
Coal (1000 tons)	41,349	44,830	41.33	42.41	194	223	432,816	528,926	42.17	43.80
Petroleum Liquids (1000 barrels)	1,074	1,386	60.10	54.38	94	120	11,011	13,537	55.29	70.65
Petroleum Coke (1000 tons)	279	354	62.85	41.65	7	9	3,254	3,772	41.60	51.37
Natural Gas (1000 Mcf)	326,505	354,358	3.49	3.07	403	406	4,547,331	4,191,468	3.18	3.69
Independent Power Producers										
Fuel	Receipts		Cost		Number of Plants		Receipts		Cost	
	(Physical Units)		(Dollars / Physical Unit)				(Physical Units)		(Dollars / Physical Unit)	
	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015
Coal (1000 tons)	14,586	15,432	35.71	36.47	67	87	142,397	184,146	36.41	39.60
Petroleum Liquids (1000 barrels)	441	891	64.02	55.56	55	60	3,994	8,780	58.01	70.98
Petroleum Coke (1000 tons)	46	59	W	W	1	1	437	458	69.01	68.46
Natural Gas (1000 Mcf)	307,453	340,122	2.68	2.40	292	301	4,316,582	4,180,105	2.54	3.10
Commercial Sector										
Fuel	Receipts		Cost		Number of Plants		Receipts		Cost	
	(Physical Units)		(Dollars / Physical Unit)				(Physical Units)		(Dollars / Physical Unit)	
	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015
Coal (1000 tons)	10	8	W	W	1	1	47	100	W	64.22
Petroleum Liquids (1000 barrels)	0	0	--	--	0	0	0	0	--	--
Petroleum Coke (1000 tons)	0	0	--	--	0	0	0	0	--	--
Natural Gas (1000 Mcf)	589	749	W	W	3	3	7,217	5,863	W	W
Industrial Sector										
Fuel	Receipts		Cost		Number of Plants		Receipts		Cost	
	(Physical Units)		(Dollars / Physical Unit)				(Physical Units)		(Dollars / Physical Unit)	
	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015
Coal (1000 tons)	451	987	W	W	17	29	6,329	11,188	W	59.22
Petroleum Liquids (1000 barrels)	35	29	61.84	71.78	12	14	282	347	59.24	83.59
Petroleum Coke (1000 tons)	8	15	W	W	1	2	112	274	W	W
Natural Gas (1000 Mcf)	63,167	63,274	W	W	46	53	663,461	673,448	W	W

NM = Not meaningful due to large relative standard error.

W = Withheld to avoid disclosure of individual company data.

Number of Plants represents the number of plants for which receipts data were collected this month.

.... A plant using more than one fuel may be counted multiple times.

Coal includes anthracite, bituminous, subbituminous, lignite, waste coal, synthetic coal, and coal-derived synthesis gas.

Petroleum Liquids include distillate fuel oil, residual fuel oil, jet fuel, kerosene, propane, and waste oil.

Natural Gas includes a small amount of supplemental gaseous fuels that cannot be identified separately.

Table ES2.B. Summary Statistics: Receipts and Cost of Fossil Fuels for the Electric Power Industry by Sector, Btus, 2016 and 2015

Total (All Sectors)										
Fuel	Receipts				Cost				Year-to-Date	
	(Billion Btu)		(Dollars / Million Btu)		Number of Plants		(Billion Btu)		Cost	
	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015
Coal	1,082,182	1,170,593	2.09	2.15	279	340	11,242,072	13,961,955	2.12	2.23
Petroleum Liquids	9,430	14,148	10.07	8.96	161	194	92,662	137,610	9.24	11.68
Petroleum Coke	9,364	12,117	2.26	1.59	9	12	106,785	127,631	1.61	1.86
Natural Gas	721,028	783,337	3.02	2.65	744	763	9,856,886	9,354,902	2.79	3.29
Fossil Fuels	1,822,005	1,980,194	2.47	2.38	922	977	21,298,406	23,582,098	2.44	2.67

Electric Utilities										
Fuel	Receipts				Cost				Year-to-Date	
	(Billion Btu)		(Dollars / Million Btu)		Number of Plants		(Billion Btu)		Cost	
	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015
Coal	801,020	862,786	2.13	2.20	194	223	8,424,882	10,263,092	2.17	2.26
Petroleum Liquids	6,595	8,558	9.79	8.80	94	120	67,444	82,638	9.03	11.57
Petroleum Coke	7,871	10,082	2.22	1.46	7	9	91,688	107,437	1.48	1.80
Natural Gas	338,187	365,361	3.37	2.97	403	406	4,702,060	4,331,629	3.08	3.57
Fossil Fuels	1,153,673	1,246,786	2.54	2.47	528	543	13,286,075	14,784,797	2.52	2.69

Independent Power Producers										
Fuel	Receipts				Cost				Year-to-Date	
	(Billion Btu)		(Dollars / Million Btu)		Number of Plants		(Billion Btu)		(Dollars / Million Btu)	
	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015
Coal	270,974	286,023	1.92	1.97	67	87	2,676,066	3,453,390	1.94	2.11
Petroleum Liquids	2,625	5,410	10.76	9.13	55	60	23,506	52,848	9.85	11.78
Petroleum Coke	1,294	1,643	W	W	1	1	12,066	12,809	2.50	2.45
Natural Gas	317,208	351,912	2.60	2.31	292	301	4,462,966	4,320,981	2.45	3.00
Fossil Fuels	592,100	644,987	W	W	343	371	7,174,604	7,840,027	W	W

Commercial Sector										
Fuel	Receipts				Cost				Year-to-Date	
	(Billion Btu)		(Dollars / Million Btu)		Number of Plants		(Billion Btu)		Cost	
	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015
Coal	237	182	W	W	1	1	1,074	2,252	W	2.86
Petroleum Liquids	0	0	--	--	0	0	0	0	--	--
Petroleum Coke	0	0	--	--	0	0	0	0	--	--
Natural Gas	613	775	W	W	3	3	7,438	5,975	W	W
Fossil Fuels	850	957	W	W	3	3	8,512	8,226	W	W

Industrial Sector										
Fuel	Receipts				Cost				Year-to-Date	
	(Billion Btu)		(Dollars / Million Btu)		Number of Plants		(Billion Btu)		Cost	
	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015
Coal	9,951	21,602	W	W	17	29	140,050	243,222	W	2.72
Petroleum Liquids	210	180	10.40	11.49	12	14	1,712	2,124	9.74	13.64
Petroleum Coke	200	393	W	W	1	2	3,031	7,385	W	W
Natural Gas	65,021	65,289	W	W	46	53	684,423	696,317	W	W
Fossil Fuels	75,381	87,464	W	W	48	60	829,215	949,048	W	W

NM = Not meaningful due to large relative standard error.

W = Withheld to avoid disclosure of individual company data.

Number of Plants represents the number of plants for which receipts data were collected this month.

.... The total number of fossil fuel plants is not the sum of the figures above it because a plant that receives two or more different fuels is only counted once.

Coal includes anthracite, bituminous, subbituminous, lignite, waste coal, synthetic coal, and coal-derived synthesis gas.

Petroleum Liquids include distillate fuel oil, residual fuel oil, jet fuel, kerosene, propane, and waste oil.

Natural Gas includes a small amount of supplemental gaseous fuels that cannot be identified separately.

Table 1.1. Net Generation by Energy Source: Total (All Sectors), 2006-November 2016
 (Thousand Megawatthours)

Period	Generation at Utility Scale Facilities											Distributed Generation	Net Generation From Utility Scale Facilities and Distributed Generation	
	Coal	Petroleum Liquids	Petroleum Coke	Natural Gas	Other Gas	Nuclear	Hydroelectric Conventional	Solar	Renewable Sources Excluding Hydroelectric and Solar	Hydroelectric Pumped Storage	Other		Estimated Distributed Solar Photovoltaic Generation	Estimated Total Solar Photovoltaic Generation
Annual Totals														
2006	1,990,511	44,460	19,706	816,441	14,177	787,219	289,246	508	96,018	-6,558	12,974	4,064,702	N/A	N/A
2007	2,016,456	49,505	16,234	896,590	13,453	806,425	247,510	612	104,626	-6,896	12,231	4,156,745	N/A	N/A
2008	1,985,801	31,917	14,325	882,981	11,707	806,208	254,831	864	125,237	-6,288	11,804	4,119,388	N/A	N/A
2009	1,755,904	25,972	12,964	920,979	10,632	798,855	273,445	891	143,388	-4,627	11,928	3,950,331	N/A	N/A
2010	1,847,290	23,337	13,724	987,697	11,313	806,968	260,203	1,212	165,961	-5,501	12,855	4,125,060	N/A	N/A
2011	1,733,430	16,086	14,096	1,013,689	11,566	790,204	319,355	1,818	192,163	-6,421	14,154	4,100,141	N/A	N/A
2012	1,514,043	13,403	9,787	1,225,894	11,898	769,331	276,240	4,327	214,006	-4,950	13,787	4,047,765	N/A	N/A
2013	1,581,115	13,820	13,344	1,124,836	12,853	789,016	268,565	9,036	244,472	-4,681	13,588	4,065,964	N/A	N/A
2014	1,581,710	18,276	11,955	1,126,609	12,022	797,166	259,367	17,691	261,522	-6,174	13,461	4,093,606	11,233	26,482
2015	1,352,398	17,372	10,877	1,333,482	13,117	797,178	249,080	24,893	270,268	-5,091	14,028	4,077,601	14,139	35,805
Year 2014														
January	157,097	5,913	1,158	91,061	933	73,163	21,634	751	24,742	-290	1,092	377,255	624	1,321
February	143,294	1,847	916	75,942	817	62,639	17,396	835	20,166	-445	941	324,348	664	1,416
March	136,443	2,002	1,186	78,151	866	62,397	24,257	1,317	24,534	-421	1,093	331,823	907	2,042
April	109,281	911	842	76,782	854	56,385	25,440	1,487	24,989	-378	1,039	297,631	988	2,249
May	118,786	960	1,084	89,120	944	62,947	26,544	1,750	22,073	-601	1,118	324,724	1,092	2,549
June	137,577	889	1,131	98,468	969	68,138	25,744	1,923	22,541	-653	1,117	357,844	1,101	2,678
July	149,627	992	1,050	115,081	1,069	71,940	24,357	1,788	19,256	-545	1,163	385,780	1,149	2,936
August	148,452	1,014	1,036	122,348	1,135	71,129	19,807	1,879	17,141	-840	1,239	384,341	1,139	2,757
Sept	126,110	929	1,019	106,582	1,126	67,535	16,074	1,832	18,061	-542	1,159	339,887	1,046	2,621
October	111,296	908	609	97,683	1,082	62,391	17,159	1,717	21,002	-448	1,122	314,522	965	2,448
November	119,127	963	775	84,354	1,073	65,140	18,625	1,380	25,428	-531	1,161	317,495	792	2,024
December	124,620	947	1,149	91,038	1,153	73,363	22,329	1,032	21,590	-480	1,218	337,957	766	1,798
Year 2015														
January	132,451	1,927	1,046	101,687	1,246	74,270	24,138	1,155	21,966	-551	1,120	360,455	746	1,838
February	126,977	5,221	1,100	91,315	1,025	63,461	22,286	1,484	21,078	-456	985	334,476	816	2,138
March	108,488	1,061	717	99,423	1,091	64,547	24,281	2,072	21,871	-409	1,051	324,192	1,134	2,920
April	88,989	919	809	92,806	979	59,784	22,471	2,379	24,115	-214	1,096	294,133	1,264	3,271
May	104,585	1,017	922	101,516	1,099	65,827	20,125	2,504	23,678	-370	1,185	322,087	1,394	3,553
June	125,673	1,040	821	121,478	1,118	68,516	20,414	2,558	20,003	-398	1,187	362,409	1,408	3,586
July	139,100	1,201	1,103	141,119	1,235	71,412	21,014	2,627	20,827	-513	1,293	400,419	1,487	3,734
August	134,670	1,093	1,040	139,084	1,196	72,415	19,122	2,688	20,134	-626	1,300	392,116	1,468	3,763
Sept	117,986	1,006	1,028	123,036	1,210	66,476	16,094	2,217	20,430	-544	1,182	350,122	1,330	3,238
October	96,759	945	827	110,005	906	60,571	16,630	1,910	22,798	-443	1,204	312,112	1,198	2,897
November	87,227	995	715	102,236	902	60,264	19,338	1,730	26,335	-285	1,197	300,653	982	2,507
December	89,495	948	749	109,777	1,110	69,634	23,166	1,570	27,032	-281	1,228	324,427	914	2,358
Year 2016														
January	113,453	1,340	953	109,767	1,263	72,536	25,355	1,492	25,532	-312	1,144	352,523	1,021	2,428
February	92,709	1,236	904	98,226	1,169	65,638	24,150	2,404	26,675	-399	1,018	313,729	1,190	3,352
March	72,133	820	945	104,003	1,241	66,149	27,025	2,667	28,406	-384	1,100	304,104	1,583	3,992
April	71,946	794	1,037	99,770	1,143	62,365	25,475	2,897	26,619	-452	1,124	292,719	1,764	4,388
May	81,639	948	984	111,156	977	66,563	25,363	3,539	25,368	-321	1,218	317,433	1,946	5,097
June	116,220	936	1,008	131,904	1,085	67,175	22,902	3,544	22,906	-497	1,164	368,348	1,993	5,126
July	136,583	1,263	1,056	151,827	1,066	70,349	21,247	4,024	24,565	-784	1,212	412,408	2,068	5,621

Table 1.1.A. Net Generation from Renewable Sources: Total (All Sectors), 2006-November 2016
 (Thousand Megawatthours)

Period	Generation at Utility Scale Facilities										Distributed Generation	Net Generation From Utility Scale Facilities and Distributed Generation	
	Wind	Solar Photovoltaic	Solar Thermal	Wood and Wood-Derived Fuels	Landfill Gas	Biogenic Municipal Solid Waste	Other Waste Biomass	Geothermal	Conventional Hydroelectric	Total Renewable Generation at Utility Scale Facilities		Estimated Total Solar Photovoltaic Generation	Estimated Total Solar Generation
Annual Totals													
2006	26,589	15	493	38,762	5,677	8,478	1,944	14,568	289,246	385,772	N/A	N/A	N/A
2007	34,450	16	596	39,014	6,158	8,304	2,063	14,637	247,510	352,747	N/A	N/A	N/A
2008	55,363	76	788	37,300	7,156	8,097	2,481	14,840	254,831	380,932	N/A	N/A	N/A
2009	73,886	157	735	36,050	7,924	8,058	2,461	15,009	273,445	417,724	N/A	N/A	N/A
2010	94,652	423	789	37,172	8,377	7,927	2,613	15,219	260,203	427,376	N/A	N/A	N/A
2011	120,177	1,012	806	37,449	9,044	7,354	2,824	15,316	319,355	513,336	N/A	N/A	N/A
2012	140,822	3,451	876	37,799	9,803	7,320	2,700	15,562	276,240	494,573	N/A	N/A	N/A
2013	167,840	8,121	915	40,028	10,658	7,186	2,986	15,775	268,565	522,073	N/A	N/A	N/A
2014	181,655	15,250	2,441	42,340	11,220	7,228	3,202	15,877	259,367	538,579	11,233	26,482	28,924
2015	190,719	21,666	3,227	41,929	11,291	7,211	3,201	15,918	249,080	544,241	14,139	35,805	39,032
Year 2014													
January	17,911	697	54	3,626	967	584	299	1,355	21,634	47,127	624	1,321	1,375
February	14,009	752	83	3,265	930	490	267	1,206	17,396	38,397	664	1,416	1,499
March	17,736	1,135	182	3,609	961	599	291	1,338	24,257	50,108	907	2,042	2,224
April	18,636	1,261	226	3,230	957	586	267	1,314	25,440	51,916	988	2,249	2,476
May	15,601	1,457	292	3,290	944	635	270	1,332	26,544	50,366	1,092	2,549	2,842
June	15,799	1,578	345	3,622	943	613	271	1,293	25,744	50,208	1,101	2,678	3,024
July	12,187	1,525	262	3,807	1,035	646	261	1,320	24,357	45,402	1,149	2,674	2,936
August	10,171	1,618	261	3,761	988	647	245	1,329	19,807	38,828	1,139	2,757	3,019
Sept	11,520	1,574	258	3,462	932	606	234	1,308	16,074	35,968	1,046	2,621	2,879
October	14,508	1,484	233	3,422	854	603	269	1,345	17,159	39,878	965	2,448	2,682
November	18,867	1,232	148	3,508	820	612	258	1,362	18,625	45,432	792	2,024	2,171
December	14,711	936	95	3,737	890	609	268	1,375	22,329	44,950	766	1,703	1,798
Year 2015													
January	15,162	1,092	63	3,717	885	582	258	1,362	24,138	47,259	746	1,838	1,902
February	14,922	1,322	161	3,372	792	503	230	1,260	22,286	44,847	816	2,138	2,299
March	15,308	1,786	286	3,457	914	543	255	1,394	24,281	48,224	1,134	2,920	3,206
April	17,867	2,008	372	3,246	915	571	243	1,272	22,471	48,965	1,264	3,271	3,643
May	17,151	2,160	345	3,338	951	609	238	1,390	20,125	46,308	1,394	3,553	3,898
June	13,421	2,178	380	3,496	926	607	251	1,302	20,414	42,975	1,408	3,586	3,966
July	13,675	2,247	380	3,806	1,035	661	293	1,357	21,014	44,469	1,487	3,734	4,114
August	13,080	2,295	392	3,788	982	651	288	1,344	19,122	41,943	1,468	3,763	4,156
Sept	13,972	1,908	309	3,450	931	607	268	1,203	16,094	38,742	1,330	3,238	3,547
October	16,380	1,700	210	3,252	938	617	289	1,323	16,630	41,338	1,198	2,897	3,107
November	19,682	1,525	204	3,418	993	620	290	1,334	19,338	47,403	982	2,507	2,712
December	20,098	1,444	126	3,587	1,029	642	299	1,377	23,166	51,767	914	2,358	2,484
Year 2016													
January	18,527	1,406	86	3,604	1,007	628	295	1,471	25,355	52,379	1,021	2,428	2,514
February	20,199	2,163	241	3,391	892	547	274	1,372	24,150	53,228	1,190	3,352	3,593
March	21,761	2,410	257	3,375	938	588	285	1,460	27,025	58,098	1,583	3,992	4,250
April	20,566	2,624	273	2,895	937	602	280	1,340	25,475	54,992	1,764	4,388	4,661
May	18,792	3,151	388	3,171	1,002	661	267	1,476	25,363	54,270	1,946	5,097	5,485
June	16,314	3,133	412	3,400	976	620	233	1,364	22,902	49,353	1,993	5,126	5,537
July	17,591	3,553	471	3,640	1,007	642	261	1,424	21,247	49,836	2,068	5,621	6,092
August	13,558	3,509	368	3,637	1,005	645	257	1,444	19,359	43,782	2,008	5,517	5,885
Sept	16,435	3,249	363	3,367	942	600	221	1,451	16,281	42,909	1,792	5,042	5,405
October	20,376	2,883	249	3,105	919	592	244	1,489	17,249	47,106	1,609	4,492	4,741
November	19,334	2,458	184	3,257	927	600	250	1,507	18,815	47,331	1,307	3,766	3,950
Year to Date													
2014	166,944	14,313	2,346	38,603	10,330	6,619	2,934	14,502	237,038	493,629	10,467	24,780	27,126
2015	170,620	20,222	3,101	38,341	10,262	6,569	2,902</td						

Table 1.2.A. Net Generation by Energy Source: Electric Utilities, 2006-November 2016
 (Thousand Megawatthours)

Period	Generation at Utility Scale Facilities											
	Coal	Petroleum Liquids	Petroleum Coke	Natural Gas	Other Gas	Nuclear	Hydroelectric Conventional	Solar	Renewable Sources Excluding Hydroelectric and Solar	Hydroelectric Pumped Storage	Other	Total
Annual Totals												
2006	1,471,421	31,269	9,634	282,088	30	425,341	261,864	15	6,573	-5,281	700	2,483,656
2007	1,490,985	33,325	7,395	313,785	141	427,555	226,734	11	8,943	-5,328	586	2,504,131
2008	1,466,395	22,206	5,918	320,190	46	424,256	229,645	17	11,291	-5,143	545	2,475,367
2009	1,322,092	18,035	7,182	349,166	96	417,275	247,198	28	14,589	-3,369	483	2,372,776
2010	1,378,028	17,258	8,807	392,616	52	424,843	236,104	101	17,826	-4,466	462	2,471,632
2011	1,301,107	11,688	9,428	414,843	29	415,298	291,413	216	21,717	-5,492	604	2,460,851
2012	1,146,480	9,892	5,664	504,958	0	394,823	252,936	639	27,378	-4,202	603	2,339,172
2013	1,188,452	9,446	9,522	501,427	798	406,114	243,040	943	31,474	-3,773	615	2,388,058
2014	1,173,073	10,696	9,147	501,414	112	419,871	238,185	1,218	33,278	-5,144	622	2,382,473
2015	998,385	10,386	8,278	617,817	199	416,680	229,640	1,494	35,992	-4,105	558	2,315,323
Year 2014												
January	115,862	2,445	949	41,208	13	38,847	19,673	53	3,286	-218	47	222,165
February	104,638	1,051	706	33,600	7	32,937	15,973	61	2,698	-361	34	191,345
March	97,957	1,037	953	35,116	9	32,612	22,423	91	3,296	-355	57	193,194
April	77,724	711	572	34,890	20	30,312	22,977	98	3,274	-301	52	170,329
May	89,103	709	833	41,226	12	33,760	23,933	114	2,632	-506	49	191,866
June	104,523	650	894	44,315	5	35,898	23,790	127	2,613	-557	53	212,311
July	112,875	711	792	50,296	7	38,031	22,624	131	2,261	-445	62	227,343
August	112,568	711	778	54,553	6	37,182	18,251	130	1,894	-740	60	225,392
Sept	94,482	711	750	46,260	5	35,296	14,895	126	2,277	-461	50	194,390
October	82,991	652	457	42,360	4	32,017	15,863	124	2,826	-351	48	176,990
November	87,064	643	577	37,477	9	34,552	17,369	91	3,473	-441	55	180,869
December	93,287	666	887	40,114	15	38,428	20,415	72	2,749	-409	56	196,279
Year 2015												
January	94,835	1,147	813	46,573	26	39,377	22,523	68	3,130	-460	41	208,073
February	90,828	2,014	879	43,951	24	33,478	21,075	87	2,877	-387	45	194,871
March	78,606	696	502	45,972	21	33,328	22,523	126	3,123	-319	31	184,609
April	66,628	695	565	43,065	20	31,053	20,156	145	3,157	-153	47	165,379
May	79,341	701	691	46,882	20	35,089	18,481	156	3,043	-292	54	184,165
June	93,799	765	604	57,292	17	35,150	18,429	153	2,311	-300	50	208,270
July	104,128	834	898	64,971	15	37,055	19,004	155	2,514	-413	49	229,212
August	100,129	794	827	63,376	21	38,482	17,813	159	2,554	-513	53	223,696
Sept	85,932	690	797	56,266	20	35,034	15,062	130	2,771	-477	49	196,273
October	71,408	682	610	49,533	12	31,886	15,378	114	3,261	-364	42	172,561
November	64,191	718	490	47,590	1	30,751	17,901	103	3,673	-218	48	165,247
December	68,558	650	604	52,345	1	35,997	21,296	98	3,577	-210	49	182,965
Year 2016												
January	84,059	925	832	52,479	NM	37,985	23,120	100	3,317	-230	27	202,618
February	69,797	778	734	47,632	4	34,281	21,931	158	3,625	-332	26	178,636
March	56,899	584	724	49,819	6	34,445	24,916	172	3,693	-291	34	171,000
April	53,435	568	858	46,600	8	34,036	23,633	185	3,891	-367	28	162,874
May	62,119	654	763	52,953	NM	36,517	23,512	213	3,104	-257	27	179,615
June	86,708	687	793	64,052	17	37,000	21,477	221	3,034	-409	28	213,608
July	101,105	904	833	72,456	23	37,918	19,901	233	2,836	-678	23	235,556
August	100,319	887	856	72,696	15	37,927	18,054	224	2,429	-787	22	232,643
Sept	83,380	620	807	58,466	24	33,919	15,222	205	3,212	-626	22	195,250
October	73,088	633	418	47,527	6	30,016	16,101	177	3,472	-471	25	170,993
November	64,946	673	596	43,773	22	33,082	17,741	145	3,631	-522	24	164,111
Year to Date												
2014	1,079,786	10,029	8,260	461,300	97	381,444	217,771	1,146	30,529	-4,735	566	2,186,194
2015	929,827	9,736	7,674	565,471	197	380,683	208,344	1,396	32,415	-3,895	509	2,132,358
2016	835,856	7,913	8,214	608,453	142	387,127	225,608	2,033	36,244	-4,972	288	2,106,905
Rolling 12 Months Ending in November												
2015	1,023,113	10,403	8,562	605,586	212	419,110	228,759	1,468	35,163	-4,304	565	2,328,637
2016	904,414	8,562	8,818	660,798	NM	423,124	246,904	2,130	39,821	-5,182	336	2,289,870

Table 1.2.B Net Generation by Energy Source: Independent Power Producers, 2006-November 2016
 (Thousand Megawatthours)

Period	Generation at Utility Scale Facilities										Other	Total
	Coal	Petroleum Liquids	Petroleum Coke	Natural Gas	Other Gas	Nuclear	Hydroelectric Conventional	Solar	Renewable Sources Excluding Hydroelectric and Solar	Hydroelectric Pumped Storage		
Annual Totals												
2006	498,316	10,396	8,409	452,329	4,223	361,877	24,390	493	58,853	-1,277	6,412	1,424,421
2007	507,406	13,645	6,942	500,967	3,901	378,869	19,109	601	65,150	-1,569	6,191	1,501,212
2008	502,442	8,021	6,737	482,182	3,154	381,952	23,451	847	84,928	-1,145	6,414	1,498,982
2009	419,031	6,306	4,288	491,839	2,962	381,579	24,308	863	100,997	-1,259	6,146	1,437,061
2010	449,709	5,117	3,497	508,774	2,915	382,126	22,351	1,105	119,851	-1,035	6,345	1,500,754
2011	416,783	3,655	3,431	511,447	2,911	374,906	26,117	1,511	140,442	-928	7,059	1,487,335
2012	354,076	2,757	1,758	627,833	2,984	374,509	20,923	3,525	156,539	-748	7,030	1,551,186
2013	379,270	3,761	1,780	527,522	3,524	382,902	22,018	7,782	181,263	-908	6,742	1,515,657
2014	395,701	6,789	1,410	531,758	3,246	377,295	19,861	16,086	196,723	-1,030	6,690	1,554,530
2015	342,608	6,240	1,601	619,839	3,517	380,498	17,996	22,962	202,858	-987	6,838	1,603,971
Year 2014												
January	40,054	3,281	109	41,761	253	34,316	1,837	681	18,727	-72	533	141,480
February	37,580	698	123	35,129	204	29,702	1,316	753	15,039	-84	472	120,930
March	37,333	880	129	35,402	206	29,785	1,715	1,196	18,569	-66	571	125,720
April	30,554	160	141	34,693	211	26,072	2,332	1,355	19,166	-77	516	115,124
May	28,635	203	125	40,419	271	29,187	2,477	1,596	16,817	-95	569	120,205
June	31,947	193	108	46,588	252	32,240	1,850	1,755	17,275	-96	565	132,678
July	35,597	236	128	56,400	276	33,909	1,641	1,618	14,183	-100	584	144,474
August	34,761	261	123	59,357	309	33,946	1,458	1,709	12,495	-101	594	144,913
Sept	30,580	171	145	52,430	293	32,238	1,091	1,670	13,267	-81	562	132,366
October	27,332	209	51	47,693	331	30,374	1,200	1,556	15,642	-97	566	124,857
November	31,053	268	88	39,234	292	30,589	1,155	1,260	19,441	-90	578	123,869
December	30,274	228	139	42,652	349	34,935	1,787	939	16,102	-71	580	127,913
Year 2015												
January	36,595	701	128	46,877	368	34,893	1,491	1,066	16,096	-92	560	138,685
February	35,196	3,049	132	40,256	305	29,984	1,104	1,372	15,785	-69	489	127,602
March	28,865	306	141	46,138	306	31,218	1,625	1,911	16,184	-90	527	127,131
April	21,519	170	140	42,762	269	28,732	2,175	2,193	18,393	-62	528	116,818
May	24,330	257	144	47,242	318	30,737	1,515	2,300	18,059	-78	561	125,387
June	30,878	215	138	56,098	282	33,366	1,867	2,359	15,117	-98	574	140,797
July	33,932	314	140	67,295	295	34,357	1,892	2,425	15,512	-101	617	156,677
August	33,522	250	142	66,938	311	33,933	1,216	2,481	14,856	-113	624	154,160
Sept	31,074	273	140	58,525	311	31,442	954	2,047	15,075	-67	571	140,345
October	24,463	216	149	52,489	216	28,685	1,135	1,762	16,981	-79	589	126,607
November	22,171	235	140	46,542	233	29,513	1,301	1,599	20,046	-67	591	122,304
December	20,063	254	67	48,676	302	33,637	1,721	1,448	20,754	-71	607	127,458
Year 2016												
January	28,475	361	42	48,890	367	34,551	2,093	1,368	19,501	-82	606	136,171
February	22,049	401	99	42,844	336	31,357	2,083	2,199	20,548	-66	543	122,394
March	14,352	204	138	46,034	367	31,704	1,957	2,446	22,115	-93	556	119,779
April	17,769	193	97	45,293	321	28,329	1,706	2,667	20,353	-84	575	117,220
May	18,760	236	124	50,000	284	30,046	1,714	3,271	19,725	-64	637	124,733
June	28,660	207	131	59,426	347	30,175	1,314	3,259	17,321	-88	610	141,362
July	34,563	300	136	70,504	322	32,430	1,238	3,719	19,045	-106	618	162,769
August	34,586	324	140	73,299	331	33,599	1,213	3,591	15,483	-115	627	163,079
Sept	30,147	259	113	58,821	344	31,500	995	3,350	17,320	-89	580	143,342
October	25,547	236	141	47,008	239	30,717	1,065	2,908	20,772	-90	566	129,109
November	21,420	338	116	42,440	338	32,097	1,003	2,458	19,667	-85	576	120,368
Year to Date												
2014	365,427	6,561	1,271	489,106	2,898	342,360	18,074	15,147	180,622	-959	6,109	1,426,616
2015	322,545	5,987	1,533	571,163	3,214	346,861	16,275	21,514	182,104	-916	6,231	1,476,513
2016	276,328	3,060	1,276	584,558	3,598	346,505	16,381	31,237	211,850	-961	6,494	1,480,326
Rolling 12 Months Ending in November												
2015	352,819	6,215	1,672	613,815	3,563	381,796	18,0					

Table 1.2.C. Net Generation by Energy Source: Commercial Sector, 2006-November 2016
 (Thousand Megawatthours)

Period	Generation at Utility Scale Facilities											Distributed Generation	Net Generation From Utility Scale Facilities and Distributed Generation		
	Coal	Petroleum Liquids	Petroleum Coke	Natural Gas	Other Gas	Nuclear	Hydroelectric Conventional	Solar	Renewable Sources Excluding Hydroelectric and Solar	Hydroelectric Pumped Storage	Other		Estimated Distributed Solar Photovoltaic Generation	Estimated Total Solar Photovoltaic Generation	Estimated Total Solar Generation
Annual Totals															
2006	1,310	228	7	4,355	0	0	93	0	1,619	0	758	8,371	N/A	N/A	N/A
2007	1,371	180	9	4,257	0	0	77	0	1,614	0	764	8,273	N/A	N/A	N/A
2008	1,261	136	6	4,188	0	0	60	0	1,555	0	720	7,926	N/A	N/A	N/A
2009	1,096	157	5	4,225	0	0	71	0	1,769	0	842	8,165	N/A	N/A	N/A
2010	1,111	117	7	4,725	3	0	80	5	1,709	0	834	8,592	N/A	N/A	N/A
2011	1,049	86	3	5,487	3	0	26	84	2,392	0	950	10,080	N/A	N/A	N/A
2012	883	191	6	6,603	0	0	28	148	2,397	0	1,046	11,301	N/A	N/A	N/A
2013	839	118	5	7,154	0	0	44	294	2,662	0	1,118	12,234	N/A	N/A	N/A
2014	595	247	9	7,227	0	0	38	371	2,862	0	1,171	12,520	5,146	5,516	5,516
2015	509	183	8	7,471	0	0	35	416	2,803	0	1,170	12,595	5,689	6,106	6,106
Year 2014															
January	76	102	1	651	0	0	4	16	264	0	104	1,218	300	316	316
February	79	37	1	533	0	0	3	20	216	0	71	961	322	342	342
March	66	30	1	529	0	0	4	29	230	0	84	972	432	461	461
April	47	9	1	509	0	0	4	33	229	0	96	927	467	499	499
May	39	8	0	557	0	0	4	38	238	0	102	986	512	550	550
June	42	8	0	605	0	0	3	39	245	0	99	1,041	510	549	549
July	50	9	0	701	0	0	3	38	263	0	109	1,173	529	567	567
August	42	7	1	722	0	0	3	39	256	0	110	1,181	520	559	559
Sept	36	8	1	657	0	0	3	35	243	0	104	1,086	469	504	504
October	31	9	1	601	0	0	2	36	230	0	97	1,008	419	455	455
November	44	9	1	560	0	0	2	28	218	0	98	960	338	366	366
December	45	10	1	602	0	0	2	20	230	0	97	1,007	329	349	349
Year 2015															
January	56	22	1	564	0	0	3	20	225	0	88	981	327	347	347
February	59	72	1	499	0	0	3	23	198	0	77	932	356	379	379
March	52	11	1	560	0	0	3	33	227	0	91	977	479	512	512
April	38	8	1	513	0	0	3	39	231	0	98	931	525	564	564
May	32	10	0	583	0	0	3	46	237	0	101	1,013	574	619	619
June	45	10	0	662	0	0	4	43	232	0	102	1,098	571	614	614
July	44	12	0	769	0	0	3	45	256	0	108	1,238	596	641	641
August	39	12	1	760	0	0	2	46	243	0	104	1,206	575	621	621
Sept	33	7	1	716	0	0	2	37	242	0	106	1,145	515	553	553
October	34	6	1	643	0	0	3	32	234	0	95	1,049	455	488	488
November	35	6	1	583	0	0	3	27	236	0	102	992	367	394	394
December	41	7	1	617	0	0	4	24	242	0	98	1,033	349	373	373
Year 2016															
January	43	11	1	648	0	0	NM	23	235	0	91	1,057	407	430	430
February	47	13	1	550	0	0	NM	44	207	0	76	944	465	510	510
March	44	NM	1	596	0	0	NM	46	247	0	98	1,043	605	652	652
April	29	8	0	616	0	0	NM	44	223	0	97	1,023	657	701	701
May	26	8	0	650	0	0	NM	53	216	0	95	1,055	715	768	768
June	28	6	0	694	0	0	NM	61	201	0	82	1,079	719	780	780
July	30	9	1	764	0	0	NM	68	229	0	97	1,204	740	808	808
August	33	14	0	781	0	0	NM	58	224	0	96	1,212	714	772	772
Sept	34	7	0	675	0	0	NM	55	200	0	89	1,064	641	697	697
October	36	8	0	583	0	0	NM	45	207	0	87	968	578	622	622
November	39	NM	0	591	0	0	NM	38	197	0	84	960	467	505	505
Year to Date															
2014	551	236	8	6,625	0	0	36	350	2,632	0	1,074	11,512	4,817	5,167	5,167
2015	468	176	8	6,853	0	0	31	393	2,562	0	1,072	11,562	5,340	5,733	5,733
2016	391	96	4	7,148	0	0	54	534	2,387	0	993	11,608	6,710	7,244	7,244
Rolling 12 Months Ending in November															
2015	512	187	9	7,455	0	0	33	413	2,791	0	1,169	12,569	5,669	6,082	6,082
2016	432	NM	5	7,765	0	0	NM	558	2,629	0	1,091	12,641	7,059	7,617	7,617

Coal includes anthracite, bituminous, subbituminous, lignite, and waste coal; synthetic coal

Table 1.2.D. Net Generation by Energy Source: Industrial Sector, 2006-November 2016
 (Thousand Megawatthours)

Period	Generation at Utility Scale Facilities											Distributed Generation	Net Generation From Utility Scale Facilities and Distributed Generation		
	Coal	Petroleum Liquids	Petroleum Coke	Natural Gas	Other Gas	Nuclear	Hydroelectric Conventional	Solar	Renewable Sources Excluding Hydroelectric and Solar	Hydroelectric Pumped Storage	Other		Estimated Distributed Solar Photovoltaic Generation	Estimated Total Solar Photovoltaic Generation	Estimated Total Solar Generation
Annual Totals															
2006	19,464	2,567	1,656	77,669	9,923	0	2,899	0	28,972	0	5,103	148,254	N/A	N/A	N/A
2007	16,694	2,355	1,889	77,580	9,411	0	1,590	0	28,919	0	4,690	143,128	N/A	N/A	N/A
2008	15,703	1,555	1,664	76,421	8,507	0	1,676	0	27,462	0	4,125	137,113	N/A	N/A	N/A
2009	13,686	1,474	1,489	75,748	7,574	0	1,868	0	26,033	0	4,457	132,329	N/A	N/A	N/A
2010	18,441	844	1,414	81,583	8,343	0	1,668	2	26,574	0	5,214	144,082	N/A	N/A	N/A
2011	14,490	657	1,234	81,911	8,624	0	1,799	7	27,612	0	5,541	141,875	N/A	N/A	N/A
2012	12,603	563	2,359	86,500	8,913	0	2,353	14	27,693	0	5,108	146,107	N/A	N/A	N/A
2013	12,554	495	2,036	88,733	8,531	0	3,463	17	29,074	0	5,113	150,015	N/A	N/A	N/A
2014	12,341	544	1,389	86,209	8,664	0	1,282	16	28,659	0	4,978	144,083	1,139	1,156	1,156
2015	10,896	563	990	88,355	9,401	0	1,410	21	28,614	0	5,462	145,712	1,451	1,472	1,472
Year 2014															
January	1,105	85	100	7,441	667	0	120	1	2,466	0	408	12,391	62	62	62
February	998	61	86	6,680	606	0	104	1	2,212	0	363	11,112	65	66	66
March	1,087	56	103	7,105	651	0	114	1	2,439	0	382	11,937	93	94	94
April	955	32	128	6,690	624	0	127	2	2,319	0	375	11,251	101	103	103
May	1,009	40	126	6,918	662	0	130	2	2,385	0	397	11,667	111	113	113
June	1,065	37	130	6,960	711	0	100	2	2,409	0	400	11,814	113	114	114
July	1,105	37	129	7,685	786	0	89	2	2,549	0	408	12,790	117	119	119
August	1,081	35	134	7,716	820	0	96	2	2,496	0	476	12,856	116	118	118
Sept	1,013	39	123	7,234	828	0	86	2	2,275	0	444	12,044	106	107	107
October	942	39	101	7,028	748	0	93	1	2,303	0	411	11,667	100	102	102
November	966	42	108	7,083	772	0	99	1	2,297	0	429	11,797	81	82	82
December	1,015	42	121	7,670	790	0	125	1	2,510	0	484	12,757	74	75	75
Year 2015															
January	964	57	103	7,674	852	0	121	1	2,514	0	430	12,717	80	80	80
February	894	86	88	6,609	696	0	105	1	2,217	0	374	11,071	85	86	86
March	965	49	74	6,753	764	0	130	2	2,337	0	402	11,475	119	121	121
April	804	45	104	6,465	690	0	138	2	2,335	0	423	11,005	129	132	132
May	881	48	87	6,809	761	0	127	2	2,339	0	469	11,522	144	146	146
June	951	49	78	7,426	819	0	114	2	2,343	0	462	12,244	144	146	146
July	995	41	66	8,084	925	0	115	2	2,545	0	518	13,292	150	152	152
August	980	37	70	8,010	864	0	90	2	2,480	0	519	13,054	147	149	149
Sept	947	37	91	7,528	879	0	77	2	2,342	0	456	12,359	135	137	137
October	853	40	67	7,340	678	0	114	2	2,322	0	478	11,894	125	126	126
November	830	36	85	7,521	668	0	133	1	2,380	0	456	12,110	100	102	102
December	832	38	77	8,137	806	0	145	1	2,459	0	475	12,970	93	94	94
Year 2016															
January	875	43	79	7,751	893	0	136	NM	2,480	0	420	12,677	99	NM	NM
February	816	43	70	7,199	828	0	131	NM	2,293	0	372	11,755	109	NM	NM
March	838	27	81	7,555	868	0	147	NM	2,352	0	412	12,281	152	NM	NM
April	712	25	81	7,261	814	0	131	NM	2,152	0	424	11,603	165	NM	NM
May	734	49	97	7,553	681	0	130	NM	2,322	0	459	12,030	183	NM	NM
June	823	36	85	7,732	720	0	105	NM	2,350	0	444	12,299	184	NM	NM
July	884	49	87	8,104	721	0	101	NM	2,455	0	474	12,879	191	NM	NM
August	870	49	88	8,144	756	0	87	NM	2,409	0	486	12,892	188	NM	NM
Sept	718	35	83	7,699	681	0	60	3	2,283	0	473	12,035	170	173	173
October	677	64	NM	7,517	646	0	80	2	2,274	0	406	11,719	156	158	158
November	595	40	69	7,782	641	0	68	NM	2,379	0	407	11,983	123	NM	NM
Year to Date															
2014	11,326	503	1,268	78,540	7,874	0	1,157	16	26,149	0	4,494	131,326	1,065	1,081	1,081
2015	10,064	525	912	80,218	8,595	0	1,265	20	26,155	0	4,988	132,742	1,358	1,378	1,378
2016	8,544	459	87												

Table 1.2.E. Net Generation by Energy Source: Residential Sector, 2014-November 2016
(Thousand Megawatthours)

Period	Distributed Generation	
	Estimated Distributed Solar Photovoltaic Generation	
Annual Totals		
2014		4,947
2015		6,999
Year 2014		
January		263
February		277
March		382
April		421
May		468
June		478
July		502
August		503
Sept		472
October		445
November		373
December		363
Year 2015		
January		340
February		375
March		536
April		609
May		676
June		693
July		741
August		746
Sept		679
October		618
November		515
December		471
Year 2016		
January		515
February		615
March		826
April		942
May		1,048
June		1,089
July		1,137
August		1,106
Sept		981
October		875
November		717
Year to Date		
2014		4,585
2015		6,527
2016		9,851
Rolling 12 Months Ending in November		
2015		6,890
2016		10,323

See Glossary for definitions. Values for 2015 and prior years are final. Values for 2016 are preliminary.

Totals may not equal sum of components because of independent rounding. NM=Not meaningful due to large standard error. W=Withheld to avoid disclosure of individual company data.

Displayed values of zero may represent small values that round to zero. The Excel version of this table provides additional precision which may be accessed by selecting individual cells.

Sources:

Estimated distributed solar photovoltaic generation and distributed solar photovoltaic capacity are based on data from Form EIA-826, Form EIA-861 and from estimation methods described in the technical notes.

**Table 1.3.A. Utility Scale Facility Net Generation
by State, by Sector, November 2016 and 2015 (Thousand Megawatthours)**

Census Division and State	All Sectors			Electric Power Sector				Commercial Sector		Industrial Sector	
				Electric Utilities		Independent Power Producers					
	Generation at Utility Scale Facilities			Generation at Utility Scale Facilities							
November 2016	November 2015	Percentage Change	November 2016	November 2015	November 2016						
New England	7,903	7,906	0.0%	127	175	7,469	7,405	99	102	207	224
Connecticut	3,079	2,872	7.2%	NM	4	3,011	2,796	NM	32	NM	39
Maine	769	981	-21.6%	NM	0	594	794	17	18	158	169
Massachusetts	1,915	2,101	-8.9%	NM	39	1,841	2,007	43	41	NM	14
New Hampshire	1,581	1,266	24.9%	48	58	1,526	1,199	NM	5	NM	3
Rhode Island	439	529	-17.0%	1	0	434	524	NM	NM	0	0
Vermont	120	158	-24.0%	56	73	63	84	NM	0	0	0
Middle Atlantic	32,419	32,711	-0.9%	2,609	2,776	29,314	29,389	158	185	339	361
New Jersey	5,582	5,549	0.6%	0	3	5,488	5,436	51	52	43	59
New York	9,892	10,775	-8.2%	2,605	2,768	7,117	7,838	95	100	76	69
Pennsylvania	16,945	16,387	3.4%	NM	5	16,708	16,115	NM	34	220	233
East North Central	43,209	44,689	-3.3%	17,620	18,478	24,748	25,239	140	166	701	807
Illinois	13,699	15,241	-10.1%	273	290	13,212	14,693	20	37	194	221
Indiana	7,431	7,570	-1.6%	6,202	5,925	996	1,366	22	23	211	255
Michigan	8,228	8,982	-8.4%	5,332	6,731	2,694	2,062	78	85	125	105
Ohio	9,024	7,905	14.2%	2,141	1,694	6,820	6,128	NM	13	54	70
Wisconsin	4,828	4,992	-3.3%	3,672	3,838	1,026	990	NM	8	118	156
West North Central	24,324	24,430	-0.4%	19,664	19,781	4,304	4,254	54	40	303	355
Iowa	4,240	3,981	6.5%	2,938	2,568	1,132	1,219	NM	17	152	176
Kansas	3,278	3,254	0.7%	2,107	2,180	1,164	1,072	0	0	NM	2
Minnesota	4,812	4,582	5.0%	3,766	3,477	921	954	NM	15	106	136
Missouri	5,358	5,831	-8.1%	5,188	5,611	151	210	16	7	NM	3
Nebraska	2,706	3,028	-10.6%	2,368	2,706	314	296	NM	2	23	24
North Dakota	3,069	2,914	5.3%	2,634	2,561	424	340	NM	0	NM	13
South Dakota	862	840	2.6%	664	678	198	162	NM	0	0	0
South Atlantic	56,608	57,231	-1.1%	47,537	47,315	7,439	8,265	104	112	1,529	1,539
Delaware	557	422	31.9%	NM	3	449	329	NM	1	103	90
District of Columbia	NM	6	NM	0	0	0	5	NM	2	0	0
Florida	16,411	17,965	-8.6%	14,963	16,216	1,011	1,341	NM	7	430	401
Georgia	9,284	9,160	1.4%	8,247	7,667	612	1,057	NM	1	423	435
Maryland	2,224	2,494	-10.8%	2	1	2,163	2,435	NM	40	24	17
North Carolina	8,941	9,349	-4.4%	8,211	8,779	553	377	19	23	157	171
South Carolina	7,318	6,969	5.0%	6,660	6,614	526	242	NM	1	131	112
Virginia	6,522	5,557	17.4%	5,440	4,036	849	1,265	36	39	198	217
West Virginia	5,346	5,309	0.7%	4,010	3,999	1,275	1,215	0	0	61	95
East South Central	25,815	26,947	-4.2%	21,732	22,548	3,345	3,643	NM	12	726	745
Alabama	10,683	11,685	-8.6%	7,287	8,379	3,056	2,966	0	0	340	339
Kentucky	5,435	5,297	2.6%	5,364	5,236	20	1	0	0	51	60
Mississippi	3,424	4,987	-31.4%	3,012	4,164	254	657	NM	1	156	166
Tennessee	6,273	4,978	26.0%	6,068	4,769	15	18	NM	11	179	180
West South Central	50,684	48,974	3.5%	15,586	15,399	28,431	27,168	79	56	6,589	6,351
Arkansas	4,018	3,089	30.1%	2,587	2,189	1,287	745	NM	0	144	155
Louisiana	7,805	8,027	-2.8%	4,541	4,455	626	822	NM	16	2,624	2,735
Oklahoma	6,049	6,048	0.0%	3,284	3,401	2,702	2,569	NM	0	62	78
Texas	32,813	31,811	3.2%	5,174	5,355	23,816	23,033	64	40	3,759	3,383
Mountain	27,577	28,155	-2.1%	21,557	21,835	5,742	6,011	42	42	236	266
Arizona	7,075	7,957	-11.1%	6,177	6,685	886	1,261	12	11	0	0
Colorado	4,332	4,141	4.6%	3,230	3,296	1,095	837	NM	2	NM	6
Idaho	1,003	1,020	-1.6%	586	518	368	446	NM	3	48	53
Montana	2,708	2,402	12.8%	1,121	693	1,584	1,706	0	0	NM	2
Nevada	2,957	2,973	-0.5%	2,148	2,216	778	725	10	9	21	23
New Mexico	2,837	2,759	2.8%	2,312	2,129	516	621	10	9	NM	0
Utah	3,012	2,831	6.4%	2,706	2,651	248	121	7	8	50	52
Wyoming	3,653	4,071	-10.3%	3,275	3,649	268	293	0	0	110	129
Pacific Contiguous	27,634	28,181	-1.9%	16,881	15,978	9,216	10,555	228	233	1,308	1,416
California	14,306	14,126	1.3%	5,605	5,023	7,353	7,656	219	222	1,130	1,225
Oregon	4,458	5,105	-12.7%	3,446	3,559	959	1,481	NM	8	47	58
Washington	8,869	8,950	-0.9%	7,831	7,396	904	1,418	NM	3	131	133
Pacific Noncontiguous	1,248	1,429	-12.6%	798	963	360	375	45	45	46	46
Alaska	453	555	-18.4%	414	508	15	24	13	14	NM	9
Hawaii	796	874	-8.9%	384	455	345	351	32	30	35	37
U.S. Total	297,422	300,653	-1.1%	164,111	165,247	120,368	122,304	960	992	11,983	12,110

Displayed values of zero may represent small values that round to zero. The Excel version of this table provides additional precision which may be accessed by selecting individual cells.

NM = Not meaningful due to large relative standard error or excessive percentage change.

Notes: See Glossary for definitions. Values for 2016 are preliminary. Values for 2015 are final. See Technical Notes for a discussion of the sample design for the Form EIA-923.

Negative generation denotes that electric power consumed for plant use exceeds gross generation.

Totals may not

Table 1.3.B. Utility Scale Facility Net Generation

by State, by Sector, Year-to-Date through November 2016 and 2015 (Thousand Megawatthours)

Census Division and State	All Sectors			Electric Power Sector				Commercial Sector		Industrial Sector	
				Electric Utilities		Independent Power Producers					
	Generation at Utility Scale Facilities			Generation at Utility Scale Facilities							
November 2016 YTD	November 2015 YTD	Percentage Change	November 2016 YTD	November 2015 YTD	November 2016 YTD						
New England	99,324	-2.0%	2,212	3,130	93,427	94,381	1,164	1,197	2,520	2,667	
Connecticut	33,254	-2.5%	35	39	32,448	33,244	352	365	419	442	
Maine	10,744	-0.2%	NM	0	8,662	8,546	190	189	1,892	2,028	
Massachusetts	29,879	0.0%	510	664	28,681	28,557	506	503	182	168	
New Hampshire	17,551	-4.4%	858	1,611	16,613	16,648	54	69	27	30	
Rhode Island	6,158	-5.3%	10	11	6,087	6,423	61	69	0	0	
Vermont	1,737	-1.9%	799	805	936	963	NM	3	0	0	
Middle Atlantic	389,865	-1.0%	32,184	31,820	351,554	355,842	2,028	2,095	4,099	4,073	
New Jersey	71,064	4.0%	-2	-25	69,855	67,087	622	606	590	651	
New York	123,514	-3.4%	32,123	31,784	89,348	94,120	1,146	1,131	896	845	
Pennsylvania	195,286	-1.2%	63	61	192,351	194,635	259	258	2,613	2,577	
East North Central	533,922	-3.4%	226,120	234,822	297,305	307,099	1,782	1,812	8,716	9,044	
Illinois	170,022	-4.6%	4,905	4,087	162,451	171,287	355	443	2,310	2,399	
Indiana	92,245	-4.2%	78,386	81,752	10,784	11,333	251	226	2,825	3,025	
Michigan	103,863	0.1%	72,000	78,770	29,561	22,883	893	933	1,409	1,167	
Ohio	108,273	-4.8%	24,352	22,252	83,063	90,566	135	114	722	796	
Wisconsin	59,519	-6.0%	46,477	47,961	11,445	11,030	147	96	1,450	1,658	
West North Central	296,534	-2.0%	248,417	258,863	43,685	39,239	651	544	3,782	3,836	
Iowa	49,241	-5.4%	36,351	38,551	10,761	11,366	242	201	1,866	1,935	
Kansas	43,200	3.3%	30,912	32,742	12,194	9,039	0	0	94	34	
Minnesota	54,383	4.9%	43,460	41,647	9,431	8,717	208	172	1,284	1,330	
Missouri	72,171	-6.6%	69,284	74,757	2,654	2,302	185	154	48	40	
Nebraska	34,139	-6.4%	30,739	33,441	3,066	2,668	15	15	318	344	
North Dakota	33,973	-0.5%	30,161	30,390	3,661	3,590	NM	0	152	153	
South Dakota	9,428	6.0%	7,509	7,335	1,918	1,557	NM	0	0	0	
South Atlantic	747,533	2.3%	621,396	612,988	107,754	99,143	1,296	1,212	17,086	17,522	
Delaware	8,360	13.3%	NM	47	7,102	6,229	6	1,191	1,097		
District of Columbia	51	7.9%	0	0	0	26	51	21	0	0	
Florida	220,161	0.5%	199,511	201,278	15,778	12,855	94	72	4,778	4,880	
Georgia	122,855	3.1%	106,322	102,026	11,990	12,426	13	13	4,530	4,660	
Maryland	34,437	1.1%	19	19	33,685	33,324	484	472	248	254	
North Carolina	120,416	1.5%	108,870	110,206	9,605	6,456	238	201	1,704	1,824	
South Carolina	88,823	-0.2%	83,866	85,251	3,280	2,206	NM	4	1,664	1,540	
Virginia	84,224	9.5%	69,298	61,632	12,337	12,615	397	423	2,191	2,231	
West Virginia	68,205	2.5%	53,449	52,528	13,976	13,005	0	0	780	1,037	
East South Central	335,913	-3.3%	283,994	295,182	43,676	43,793	143	140	8,100	8,154	
Alabama	131,198	-6.3%	90,200	99,165	37,211	36,945	0	0	3,787	3,845	
Kentucky	73,139	-5.6%	72,090	76,349	511	588	0	0	538	542	
Mississippi	58,576	-2.2%	51,046	52,025	5,772	6,082	NM	7	1,748	1,762	
Tennessee	73,000	4.3%	70,657	67,643	183	178	134	133	2,026	2,005	
West South Central	643,838	1.3%	221,752	224,232	349,413	341,887	939	821	71,734	68,567	
Arkansas	55,197	6.7%	39,424	36,612	14,276	13,508	NM	6	1,492	1,605	
Louisiana	98,193	-0.7%	59,616	60,642	9,430	10,195	156	160	28,991	27,880	
Oklahoma	71,429	2.5%	41,194	44,800	29,411	24,094	NM	0	807	809	
Texas	419,019	0.9%	81,518	82,178	296,296	294,090	762	655	40,444	38,274	
Mountain	332,339	-2.5%	258,982	272,447	69,856	64,921	488	488	3,014	3,176	
Arizona	100,532	-3.6%	82,471	86,559	17,927	17,547	133	141	0	0	
Colorado	49,457	4.4%	38,370	38,225	10,996	9,077	33	25	59	63	
Idaho	14,746	2.4%	9,723	9,470	4,483	4,376	7	19	532	537	
Montana	25,354	-5.1%	9,888	9,752	15,440	16,926	0	0	27	25	
Nevada	36,583	2.6%	27,349	27,894	8,814	7,387	131	106	288	281	
New Mexico	29,831	0.7%	22,448	23,627	7,269	5,873	104	112	NM	1	
Utah	34,184	-10.6%	30,795	35,898	2,316	1,358	80	84	993	914	
Wyoming	41,652	-6.9%	37,937	41,022	2,612	2,377	0	0	1,103	1,355	
Pacific Contiguous	340,029	2.1%	202,902	188,628	119,899	126,497	2,600	2,759	14,628	15,198	
California	183,495	1.2%	74,410	65,558	93,898	99,851	2,489	2,657	12,698	13,173	
Oregon	54,315	4.0%	39,761	37,327	13,960	14,201	73	70	521	617	
Washington	102,219	2.6%	88,731	85,742	12,041	12,446	38	32	1,409	1,409	
Pacific Noncontiguous	13,695	-8.4%	8,946	10,245	3,757	3,709	517	494	475	505	
Alaska	4,917	-13.5%	4,484	5,196	179	229	146	150	109	112	
Hawaii	8,778	-5.3%	4,463	5,050	3,579	3,480	371	344	366	393	
U.S. Total	3,732,992	-0.5%	2,106,905	2,132,35							

**Table 1.4.A. Utility Scale Facility Net Generation from Coal
by State, by Sector, November 2016 and 2015 (Thousand Megawatthours)**

Census Division and State	All Sectors			Electric Power Sector				Commercial Sector		Industrial Sector	
				Electric Utilities		Independent Power Producers					
	Generation at Utility Scale Facilities			Generation at Utility Scale Facilities							
November 2016	November 2015	Percentage Change	November 2016	November 2015							
New England	59	218	-73.1%	2	8	54	209	0	0	NM	2
Connecticut	-1	0	--	0	0	-1	0	0	0	0	0
Maine	5	4	20.1%	0	0	4	4	0	0	1	1
Massachusetts	52	206	-74.7%	0	0	51	205	0	0	NM	1
New Hampshire	2	8	-72.3%	2	8	0	0	0	0	0	0
Rhode Island	0	0	--	0	0	0	0	0	0	0	0
Vermont	0	0	--	0	0	0	0	0	0	0	0
Middle Atlantic	3,819	4,414	-13.5%	0	0	3,772	4,353	0	0	46	60
New Jersey	86	105	-18.2%	0	0	86	105	0	0	0	0
New York	23	82	-72.2%	0	0	0	58	0	0	23	23
Pennsylvania	3,710	4,227	-12.2%	0	0	3,687	4,190	0	0	23	37
East North Central	18,652	20,402	-8.6%	12,187	12,458	6,297	7,723	8	5	160	216
Illinois	3,276	4,936	-33.6%	205	253	2,948	4,545	NM	1	120	137
Indiana	4,884	5,097	-4.6%	4,632	4,619	227	474	5	4	NM	0
Michigan	3,138	4,205	-25.4%	3,097	4,161	36	33	0	1	NM	10
Ohio	4,760	3,679	29.4%	1,671	991	3,086	2,671	0	0	NM	17
Wisconsin	2,613	2,486	5.1%	2,582	2,434	0	0	0	0	31	52
West North Central	13,383	12,989	3.0%	13,191	12,739	NM	2	18	14	172	234
Iowa	1,547	1,335	15.9%	1,434	1,180	0	0	NM	10	104	146
Kansas	1,666	1,162	43.4%	1,666	1,162	0	0	0	0	0	0
Minnesota	2,071	2,005	3.3%	2,034	1,952	0	0	NM	0	37	52
Missouri	4,053	4,462	-9.2%	4,040	4,456	NM	2	9	5	NM	0
Nebraska	1,750	1,648	6.2%	1,727	1,624	0	0	0	0	23	24
North Dakota	2,110	2,195	-3.8%	2,105	2,183	0	0	0	0	NM	11
South Dakota	187	182	2.7%	187	182	0	0	0	0	0	0
South Atlantic	14,414	14,344	0.5%	12,565	12,589	1,772	1,622	5	6	73	127
Delaware	-2	21	-109.9%	0	0	-2	21	0	0	0	0
District of Columbia	0	0	--	0	0	0	0	0	0	0	0
Florida	2,830	2,923	-3.2%	2,791	2,908	28	6	0	0	NM	10
Georgia	2,242	1,368	63.9%	2,227	1,350	0	0	0	0	15	18
Maryland	648	599	8.2%	0	0	641	592	0	0	7	6
North Carolina	1,864	1,876	-0.7%	1,844	1,852	NM	5	4	5	NM	14
South Carolina	1,169	1,341	-12.9%	1,164	1,332	0	0	0	0	5	9
Virginia	631	1,283	-50.8%	585	1,213	20	42	NM	1	25	27
West Virginia	5,034	4,932	2.1%	3,954	3,934	1,079	955	0	0	0	44
East South Central	9,897	8,810	12.3%	9,584	8,420	253	299	0	0	60	90
Alabama	2,723	2,608	4.4%	2,719	2,597	0	0	0	0	NM	11
Kentucky	4,636	4,261	8.8%	4,636	4,261	0	0	0	0	0	0
Mississippi	396	372	6.5%	143	72	253	299	0	0	0	0
Tennessee	2,142	1,569	36.5%	2,086	1,490	0	0	0	0	56	80
West South Central	12,779	11,534	10.8%	5,543	5,803	7,211	5,700	0	0	25	32
Arkansas	1,542	1,101	40.0%	1,109	815	429	282	0	0	4	4
Louisiana	585	1,006	-41.8%	370	694	215	312	0	0	0	0
Oklahoma	1,439	1,470	-2.1%	1,281	1,259	136	183	0	0	21	28
Texas	9,214	7,958	15.8%	2,783	3,035	6,431	4,922	0	0	0	0
Mountain	13,361	13,492	-1.0%	11,854	11,833	1,482	1,617	0	0	25	41
Arizona	2,180	2,522	-13.6%	2,180	2,522	0	0	0	0	0	0
Colorado	2,538	2,147	18.2%	2,535	2,138	NM	8	0	0	NM	1
Idaho	NM	6	NM	0	0	0	0	0	0	NM	6
Montana	1,338	1,448	-7.6%	NM	6	1,321	1,442	0	0	NM	1
Nevada	65	165	-60.3%	-4	95	69	70	0	0	0	0
New Mexico	1,885	1,779	6.0%	1,885	1,779	0	0	0	0	0	0
Utah	2,214	1,954	13.3%	2,182	1,917	NM	37	0	0	0	0
Wyoming	3,136	3,471	-9.6%	3,059	3,376	NM	61	0	0	20	34
Pacific Contiguous	469	833	-43.7%	0	302	440	504	0	0	29	27
California	25	24	7.6%	0	0	0	0	0	0	25	24
Oregon	0	302	-100.0%	0	302	0	0	0	0	0	0
Washington	443	508	-12.6%	0	0	440	504	0	0	4	4
Pacific Noncontiguous	167	192	-12.7%	20	39	137	142	9	10	NM	1
Alaska	39	66	-41.4%	20	39	NM	18	9	10	0	0
Hawaii	128	125	2.5%	0	0	127	124	0	0	NM	1
U.S. Total	87,000	87,227	-0.3%	64,946	64,191	21,420	22,171	39	35	595	830

Displayed values of zero may represent small values that round to zero. The Excel version of this table provides additional precision which may be accessed by selecting individual cells.

NM = Not meaningful due to large relative standard error or excessive percentage change.

Notes: See Glossary for definitions. Values for 2016 are preliminary. Values for 2015 are final. See Technical Notes for a discussion of the sample design for the Form EIA-923.

Negative generation denotes that electric power consumed for plant use exceeds gross generation.

Totals may not equal sum of components because of independent rounding. Percentage change is calculated before rounding.

Source: U.S. Energy Information Administration, Form EIA-923, Power Plant Operations Report.

Table 1.4.B. Utility Scale Facility Net Generation from Coal

by State, by Sector, Year-to-Date through November 2016 and 2015 (Thousand Megawatthours)

Census Division and State	All Sectors			Electric Power Sector		Commercial Sector		Industrial Sector	
				Electric Utilities		Independent Power Producers			
	Generation at Utility Scale Facilities			Generation at Utility Scale Facilities		Generation at Utility Scale Facilities		Generation at Utility Scale Facilities	
November 2016 YTD	November 2015 YTD	Percentage Change	November 2016 YTD	November 2015 YTD	November 2016 YTD	November 2015 YTD	November 2016 YTD	November 2015 YTD	November 2016 YTD
New England	1,995	3,698	-46.1%	267	919	1,703	2,737	0	0
Connecticut	89	604	-85.3%	0	0	89	604	0	0
Maine	61	86	-28.9%	0	0	52	60	0	9
Massachusetts	1,578	2,090	-24.5%	0	0	1,562	2,074	0	16
New Hampshire	267	919	-70.9%	267	919	0	0	0	0
Rhode Island	0	0	--	0	0	0	0	0	0
Vermont	0	0	--	0	0	0	0	0	0
Middle Atlantic	51,677	64,864	-20.3%	0	0	51,001	64,158	0	676
New Jersey	1,192	1,658	-28.1%	0	0	1,192	1,658	0	0
New York	1,684	2,293	-26.6%	0	0	1,377	2,012	0	307
Pennsylvania	48,802	60,913	-19.9%	0	0	48,432	60,488	0	370
East North Central	248,643	293,675	-15.3%	149,861	169,441	96,721	121,689	82	131
Illinois	53,498	69,282	-22.8%	3,145	3,443	48,991	64,340	28	33
Indiana	65,522	73,277	-10.6%	62,335	68,247	3,146	4,995	39	35
Michigan	37,040	48,891	-24.2%	36,524	48,346	406	362	15	62
Ohio	62,158	67,902	-8.5%	17,835	15,716	44,179	51,992	0	144
Wisconsin	30,426	34,323	-11.4%	30,022	33,688	0	0	0	404
West North Central	166,288	183,185	-9.2%	163,701	180,292	17	24	160	168
Iowa	23,183	27,869	-16.8%	21,530	26,080	0	0	113	115
Kansas	20,829	23,094	-9.8%	20,829	23,094	0	0	0	0
Minnesota	21,067	22,627	-6.9%	20,589	22,053	0	0	NM	1
Missouri	55,363	60,696	-8.8%	55,278	60,600	17	24	44	52
Nebraska	19,803	22,201	-10.8%	19,502	21,857	0	0	0	301
North Dakota	24,184	25,396	-4.8%	24,113	25,305	0	0	0	71
South Dakota	1,859	1,303	42.7%	1,859	1,303	0	0	0	0
South Atlantic	216,995	228,255	-4.9%	189,503	200,125	26,392	26,492	53	68
Delaware	469	598	-21.5%	0	0	469	598	0	0
District of Columbia	0	0	--	0	0	0	0	0	0
Florida	35,889	40,145	-10.6%	34,999	38,882	733	1,092	0	0
Georgia	34,969	35,464	-1.4%	34,775	35,261	0	0	0	194
Maryland	12,758	13,424	-5.0%	0	0	12,691	13,316	0	67
North Carolina	34,439	38,505	-10.6%	33,949	37,961	304	327	39	51
South Carolina	19,127	21,505	-11.1%	19,025	21,373	0	0	0	102
Virginia	14,929	15,953	-6.4%	14,068	14,796	580	857	NM	17
West Virginia	64,414	62,663	2.8%	52,687	51,852	11,616	10,302	0	112
East South Central	125,615	141,946	-11.5%	122,059	138,047	2,665	2,891	0	891
Alabama	31,481	38,922	-19.1%	31,409	38,830	0	0	0	72
Kentucky	60,792	67,535	-10.0%	60,792	67,535	0	0	0	0
Mississippi	4,926	6,229	-20.9%	2,261	3,338	2,665	2,891	0	0
Tennessee	28,417	29,260	-2.9%	27,597	28,344	0	0	0	820
West South Central	157,172	172,449	-8.9%	78,923	89,457	77,847	82,596	0	402
Arkansas	20,872	20,683	0.9%	16,715	16,836	4,111	3,796	0	45
Louisiana	10,696	14,233	-24.8%	7,176	8,404	3,521	5,829	0	0
Oklahoma	16,980	23,552	-27.9%	14,895	21,521	1,728	1,686	0	357
Texas	108,624	113,981	-4.7%	40,136	42,696	68,487	71,286	0	0
Mountain	145,138	166,425	-12.8%	129,741	149,236	14,629	16,293	0	769
Arizona	27,434	33,415	-17.9%	27,434	33,415	0	0	0	0
Colorado	27,038	28,712	-5.8%	26,981	28,650	51	55	0	NM
Idaho	56	70	-20.3%	0	0	0	0	0	56
Montana	13,022	14,624	-11.0%	187	195	12,827	14,423	0	NM
Nevada	2,094	2,475	-15.4%	1,285	1,713	810	762	0	0
New Mexico	16,417	18,649	-12.0%	16,417	18,649	0	0	0	0
Utah	23,260	28,948	-19.7%	22,506	28,145	316	379	0	437
Wyoming	35,817	39,531	-9.4%	34,930	38,468	625	674	0	262
Pacific Contiguous	5,706	6,601	-13.6%	1,530	2,002	3,856	4,299	0	320
California	291	267	8.8%	0	0	0	0	0	291
Oregon	1,530	2,002	-23.6%	1,530	2,002	0	0	0	267
Washington	3,885	4,332	-10.3%	0	0	3,856	4,299	0	29
Pacific Noncontiguous	1,890	1,804	4.8%	271	308	1,497	1,365	96	99
Alaska	496	586	-15.4%	271	308	129	180	96	99
Hawaii	1,394	1,218	14.4%	0	0	1,368	1,185	0	NM
U.S. Total	1,121,120	1,262,903	-11.2%	835,856	929,827	276,328	322,545	391	468
								8,544	10,064

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NM = Not meaningful due to large relative standard error or excessive percentage change.

Notes: See Glossary for definitions. Values for 2016 are preliminary. Values for 2015 are final. See Technical Notes for a discussion of the sample design for the Form EIA-923.

Negative generation denotes that electric power consumed for plant use exceeds gross generation.

Totals may not equal sum of components because of independent rounding. Percentage change is calculated before rounding.

Source: U.S. Energy Information Administration, Form EIA-923, Power Plant Operations Report.

Table 1.5.A. Utility Scale Facility Net Generation from Petroleum Liquids by State, by Sector, November 2016 and 2015 (Thousand Megawatthours)

Census Division and State	All Sectors			Electric Power Sector				Commercial Sector		Industrial Sector	
				Electric Utilities		Independent Power Producers					
	Generation at Utility Scale Facilities			Generation at Utility Scale Facilities		Generation at Utility Scale Facilities		Generation at Utility Scale Facilities		Generation at Utility Scale Facilities	
	November 2016	November 2015	Percentage Change	November 2016	November 2015						
New England	171	13	NM	2	2	163	8	NM	3	NM	NM
Connecticut	NM	-3	NM	1	0	NM	-3	NM	0	NM	0
Maine	NM	2	NM	NM	0	NM	1	NM	0	NM	NM
Massachusetts	157	4	NM	NM	0	154	3	NM	2	NM	0
New Hampshire	NM	4	NM	NM	2	1	2	NM	0	NM	0
Rhode Island	7	5	43.6%	1	0	6	5	NM	NM	0	0
Vermont	NM	0	NM	NM	0	0	0	NM	0	0	0
Middle Atlantic	37	32	15.7%	NM	2	24	27	NM	NM	7	2
New Jersey	NM	2	NM	NM	0	NM	1	NM	0	NM	0
New York	NM	6	NM	NM	2	NM	2	NM	NM	4	2
Pennsylvania	19	24	-21.8%	NM	0	16	24	NM	0	3	1
East North Central	44	39	12.9%	24	20	17	16	NM	1	2	2
Illinois	4	5	-19.1%	NM	1	4	4	NM	0	0	0
Indiana	8	9	-5.4%	7	7	0	0	NM	0	1	2
Michigan	9	6	51.3%	8	6	0	NM	NM	0	0	0
Ohio	22	17	28.7%	9	5	14	12	NM	0	NM	0
Wisconsin	0	2	-85.9%	0	2	0	0	NM	0	NM	0
West North Central	23	20	14.3%	22	20	NM	0	NM	0	NM	0
Iowa	5	3	76.6%	5	3	NM	0	NM	0	NM	0
Kansas	6	6	-10.3%	6	6	0	0	0	0	0	0
Minnesota	NM	2	NM	NM	2	NM	0	NM	0	NM	0
Missouri	8	5	41.6%	8	5	NM	0	NM	0	0	0
Nebraska	NM	1	NM	NM	1	0	0	0	0	0	0
North Dakota	3	2	23.6%	3	2	0	0	NM	0	NM	0
South Dakota	NM	1	NM	NM	1	NM	0	NM	0	0	0
South Atlantic	124	207	-40.0%	113	152	6	48	NM	0	NM	6
Delaware	NM	3	NM	NM	0	NM	3	0	0	0	0
District of Columbia	NM	0	NM	0	0	0	0	NM	0	0	0
Florida	76	105	-27.1%	76	102	NM	1	0	0	NM	1
Georgia	NM	1	NM	NM	-3	NM	1	NM	0	NM	3
Maryland	-3	5	-153.8%	1	0	-4	4	NM	0	NM	0
North Carolina	13	21	-38.3%	9	18	3	2	NM	0	NM	1
South Carolina	NM	12	NM	NM	11	NM	0	NM	0	2	1
Virginia	13	45	-71.3%	8	9	NM	36	NM	0	NM	0
West Virginia	9	15	-36.6%	9	15	0	0	0	0	0	0
East South Central	26	21	22.9%	24	18	NM	NM	NM	0	NM	3
Alabama	2	6	-60.3%	1	3	NM	NM	0	0	NM	2
Kentucky	9	11	-22.3%	9	11	0	0	0	0	0	0
Mississippi	NM	1	NM	NM	1	0	0	0	0	0	0
Tennessee	14	3	351.1%	14	3	NM	0	NM	0	NM	0
West South Central	14	11	32.7%	10	6	4	4	NM	0	NM	1
Arkansas	7	4	59.4%	6	2	1	2	0	0	0	1
Louisiana	1	2	-61.7%	1	1	0	1	0	0	0	0
Oklahoma	1	1	48.7%	1	1	0	0	NM	0	NM	0
Texas	5	3	55.5%	2	2	3	2	NM	0	NM	0
Mountain	17	19	-8.5%	16	18	1	1	NM	0	NM	0
Arizona	5	4	39.2%	5	4	0	0	NM	0	0	0
Colorado	NM	1	NM	NM	1	0	0	0	0	NM	0
Idaho	NM	0	NM	NM	0	0	0	0	0	0	0
Montana	NM	1	NM	NM	0	1	1	0	0	0	0
Nevada	0	1	-94.3%	0	1	0	0	0	0	0	0
New Mexico	NM	5	NM	NM	5	0	0	0	0	NM	0
Utah	2	3	-28.1%	2	3	NM	0	0	0	NM	0
Wyoming	6	5	2.0%	5	5	0	0	0	0	NM	0
Pacific Contiguous	4	7	-46.4%	3	4	NM	2	NM	0	NM	1
California	3	3	-15.5%	3	3	NM	1	NM	0	NM	0
Oregon	NM	1	NM	0	1	0	0	NM	0	0	0
Washington	NM	3	NM	NM	0	0	2	NM	0	NM	1
Pacific Noncontiguous	598	626	-4.5%	453	476	121	128	NM	1	NM	20
Alaska	83	48	71.5%	79	45	0	0	NM	1	4	3
Hawaii	515	577	-10.8%	374	432	121	128	0	0	NM	17
U.S. Total	1,058	995	6.4%	673	718	338	235	NM	6	40	36

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NM = Not meaningful due to large relative standard error or excessive percentage change.

Notes: See Glossary for definitions. Values for 2016 are preliminary. Values for 2015 are final. See Technical Notes for a discussion of the sample design for the Form EIA-923.

Negative generation denotes that electric power consumed for plant use exceeds gross generation.

Totals may not equal sum of components because of independent rounding. Percentage change is calculated before rounding.

Source: U.S. Energy Information Administration, Form EIA-923, Power Plant Operations Report.

Table 1.5.B. Utility Scale Facility Net Generation from Petroleum Liquids

by State, by Sector, Year-to-Date through November 2016 and 2015 (Thousand Megawatthours)

Census Division and State	All Sectors			Electric Power Sector		Commercial Sector		Industrial Sector	
				Electric Utilities		Independent Power Producers			
	Generation at Utility Scale Facilities			Generation at Utility Scale Facilities		Generation at Utility Scale Facilities		Generation at Utility Scale Facilities	
November 2016 YTD	November 2015 YTD	Percentage Change	November 2016 YTD	November 2015 YTD	November 2016 YTD	November 2015 YTD	November 2016 YTD	November 2015 YTD	November 2016 YTD
New England	642	2,042	-68.6%	51	184	524	1,736	44	81
Connecticut	85	435	-80.5%	7	8	68	409	NM	10
Maine	114	544	-79.0%	NM	0	95	509	NM	2
Massachusetts	385	771	-50.1%	16	57	347	677	22	36
New Hampshire	27	175	-84.5%	18	106	2	54	NM	15
Rhode Island	30	114	-73.9%	10	11	12	86	NM	NM
Vermont	NM	3	NM	NM	2	0	0	NM	1
Middle Atlantic	910	2,730	-66.7%	289	815	544	1,782	30	61
New Jersey	73	302	-75.8%	NM	4	68	293	NM	1
New York	595	1,876	-68.3%	286	811	248	953	28	58
Pennsylvania	242	552	-56.1%	NM	0	228	536	NM	2
East North Central	486	515	-5.5%	292	318	174	170	4	3
Illinois	59	50	19.0%	5	7	54	43	1	0
Indiana	102	148	-30.7%	92	132	NM	0	NM	0
Michigan	113	101	11.9%	109	97	0	NM	2	2
Ohio	185	191	-3.1%	64	62	118	124	NM	0
Wisconsin	27	25	5.8%	23	21	3	3	NM	0
West North Central	210	256	-17.9%	201	249	NM	5	1	1
Iowa	61	49	24.0%	60	49	1	0	NM	0
Kansas	24	43	-43.9%	24	43	0	0	0	0
Minnesota	26	26	1.0%	19	20	NM	4	1	1
Missouri	64	90	-28.7%	64	90	NM	0	NM	0
Nebraska	6	6	4.2%	6	6	0	0	0	0
North Dakota	25	24	4.1%	24	23	0	0	NM	0
South Dakota	3	17	-82.4%	3	17	NM	0	NM	0
South Atlantic	2,053	2,896	-29.1%	1,534	2,091	436	696	7	21
Delaware	51	147	-65.5%	NM	5	48	142	0	0
District of Columbia	NM	0	NM	0	0	0	NM	0	0
Florida	726	562	29.1%	703	543	NM	6	0	0
Georgia	116	147	-21.3%	57	56	22	48	4	3
Maryland	168	229	-26.3%	10	11	154	200	NM	16
North Carolina	252	418	-39.8%	190	352	55	53	NM	0
South Carolina	109	188	-42.1%	92	163	NM	11	NM	0
Virginia	522	1,073	-51.4%	373	844	143	222	NM	1
West Virginia	109	131	-16.8%	105	118	4	13	0	0
East South Central	272	309	-12.2%	246	278	5	10	NM	0
Alabama	45	75	-40.6%	23	47	5	10	0	0
Kentucky	97	101	-4.0%	97	101	0	0	0	0
Mississippi	16	14	13.7%	13	12	0	0	0	3
Tennessee	115	120	-4.3%	114	119	NM	0	NM	0
West South Central	137	232	-40.8%	89	138	41	82	NM	1
Arkansas	36	53	-31.9%	25	35	9	11	0	0
Louisiana	14	70	-80.6%	12	57	2	13	0	0
Oklahoma	17	9	87.7%	16	8	0	0	NM	0
Texas	70	99	-29.5%	37	39	31	58	NM	1
Mountain	199	195	2.1%	180	179	19	15	NM	NM
Arizona	49	45	8.5%	49	45	0	0	NM	0
Colorado	8	6	35.4%	8	6	0	0	NM	NM
Idaho	NM	0	NM	NM	0	0	0	0	0
Montana	16	12	33.2%	NM	0	15	12	0	0
Nevada	11	15	-28.3%	8	12	3	3	0	0
New Mexico	44	58	-24.8%	44	58	0	0	0	NM
Utah	28	19	52.5%	27	18	NM	1	0	0
Wyoming	44	41	7.7%	43	40	0	0	0	NM
Pacific Contiguous	108	102	5.5%	35	39	14	29	NM	1
California	87	79	10.7%	30	32	5	22	NM	0
Oregon	3	6	-54.2%	3	6	0	0	NM	0
Washington	18	17	2.5%	NM	1	9	7	NM	0
Pacific Noncontiguous	6,511	7,147	-8.9%	4,996	5,445	1,297	1,464	9	8
Alaska	677	700	-3.3%	636	652	0	0	5	5
Hawaii	5,833	6,447	-9.5%	4,361	4,792	1,297	1,464	3	3
U.S. Total	11,528	16,424	-29.8%	7,913	9,736	3,060	5,987	96	176
								459	525

Displayed values of zero may represent small values that round to zero. The Excel version of this table provides additional precision which may be accessed by selecting individual cells.

NM = Not meaningful due to large relative standard error or excessive percentage change.

Notes: See Glossary for definitions. Values for 2016 are preliminary. Values for 2015 are final. See Technical Notes for a discussion of the sample design for the Form EIA-923.

Negative generation denotes that electric power consumed for plant use exceeds gross generation.

Totals may not equal sum of components because of independent rounding. Percentage change is calculated before rounding.

Source: U.S. Energy Information Administration, Form EIA-923, Power Plant Operations Report.

**Table 1.6.A. Utility Scale Facility Net Generation from Petroleum Coke
by State, by Sector, November 2016 and 2015 (Thousand Megawatthours)**

Census Division and State	All Sectors			Electric Power Sector				Commercial Sector		Industrial Sector	
				Electric Utilities		Independent Power Producers					
	Generation at Utility Scale Facilities			Generation at Utility Scale Facilities		Generation at Utility Scale Facilities		Generation at Utility Scale Facilities		Generation at Utility Scale Facilities	
	November 2016	November 2015	Percentage Change	November 2016	November 2015						
New England	0	0	--	0	0	0	0	0	0	0	0
Connecticut	0	0	--	0	0	0	0	0	0	0	0
Maine	0	0	--	0	0	0	0	0	0	0	0
Massachusetts	0	0	--	0	0	0	0	0	0	0	0
New Hampshire	0	0	--	0	0	0	0	0	0	0	0
Rhode Island	0	0	--	0	0	0	0	0	0	0	0
Vermont	0	0	--	0	0	0	0	0	0	0	0
Middle Atlantic	NM	19	NM	0	0	0	0	0	NM	19	
New Jersey	NM	6	NM	0	0	0	0	0	NM	6	
New York	0	0	--	0	0	0	0	0	0	0	0
Pennsylvania	NM	13	NM	0	0	0	0	0	NM	13	
East North Central	135	317	-57.5%	45	196	76	100	0	0	NM	20
Illinois	0	0	--	0	0	0	0	0	0	0	0
Indiana	0	179	-100.0%	0	179	0	0	0	0	0	0
Michigan	48	25	91.0%	36	9	0	4	0	0	NM	12
Ohio	77	97	-21.0%	0	0	76	96	0	0	NM	1
Wisconsin	10	16	-36.5%	9	8	0	0	0	0	1	8
West North Central	NM	4	NM	0	0	0	0	0	1	NM	3
Iowa	NM	4	NM	0	0	0	0	0	1	NM	3
Kansas	0	0	--	0	0	0	0	0	0	0	0
Minnesota	0	0	--	0	0	0	0	0	0	0	0
Missouri	0	0	--	0	0	0	0	0	0	0	0
Nebraska	0	0	--	0	0	0	0	0	0	0	0
North Dakota	0	0	--	0	0	0	0	0	0	0	0
South Dakota	0	0	--	0	0	0	0	0	0	0	0
South Atlantic	42	108	-61.1%	35	94	0	0	0	7	14	
Delaware	0	0	--	0	0	0	0	0	0	0	0
District of Columbia	0	0	--	0	0	0	0	0	0	0	0
Florida	35	94	-62.8%	35	94	0	0	0	0	0	0
Georgia	7	14	-49.5%	0	0	0	0	0	0	7	14
Maryland	0	0	--	0	0	0	0	0	0	0	0
North Carolina	0	0	--	0	0	0	0	0	0	0	0
South Carolina	0	0	--	0	0	0	0	0	0	0	0
Virginia	0	0	--	0	0	0	0	0	0	0	0
West Virginia	0	0	--	0	0	0	0	0	0	0	0
East South Central	79	78	1.2%	79	78	0	0	0	0	0	0
Alabama	0	0	--	0	0	0	0	0	0	0	0
Kentucky	79	78	1.2%	79	78	0	0	0	0	0	0
Mississippi	0	0	--	0	0	0	0	0	0	0	0
Tennessee	0	0	--	0	0	0	0	0	0	0	0
West South Central	461	151	205.9%	437	121	0	0	0	0	NM	30
Arkansas	0	0	--	0	0	0	0	0	0	0	0
Louisiana	452	141	221.4%	437	121	0	0	0	0	NM	20
Oklahoma	0	0	--	0	0	0	0	0	0	0	0
Texas	NM	10	NM	0	0	0	0	0	0	NM	10
Mountain	40	40	1.8%	0	0	40	40	0	0	0	0
Arizona	0	0	--	0	0	0	0	0	0	0	0
Colorado	0	0	--	0	0	0	0	0	0	0	0
Idaho	0	0	--	0	0	0	0	0	0	0	0
Montana	40	40	1.8%	0	0	40	40	0	0	0	0
Nevada	0	0	--	0	0	0	0	0	0	0	0
New Mexico	0	0	--	0	0	0	0	0	0	0	0
Utah	0	0	--	0	0	0	0	0	0	0	0
Wyoming	0	0	--	0	0	0	0	0	0	0	0
Pacific Contiguous	0	0	--	0	0	0	0	0	0	0	0
California	0	0	--	0	0	0	0	0	0	0	0
Oregon	0	0	--	0	0	0	0	0	0	0	0
Washington	0	0	--	0	0	0	0	0	0	0	0
Pacific Noncontiguous	0	0	--	0	0	0	0	0	0	0	0
Alaska	0	0	--	0	0	0	0	0	0	0	0
Hawaii	0	0	--	0	0	0	0	0	0	0	0
U.S. Total	781	715	9.2%	596	490	116	140	0	1	69	85

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Negative generation denotes that electric power consumed for plant use exceeds gross generation.

Totals may not equal sum of components because of independent rounding. Percentage change is calculated before rounding.

Source: U.S. Energy Information Administration, Form EIA-923, Power Plant Operations Report.

Table 1.6.B. Utility Scale Facility Net Generation from Petroleum Coke

by State, by Sector, Year-to-Date through November 2016 and 2015 (Thousand Megawatthours)

Census Division and State	All Sectors			Electric Power Sector		Commercial Sector		Industrial Sector	
				Electric Utilities		Independent Power Producers			
	Generation at Utility Scale Facilities			Generation at Utility Scale Facilities		Generation at Utility Scale Facilities		Generation at Utility Scale Facilities	
November 2016 YTD	November 2015 YTD	Percentage Change	November 2016 YTD	November 2015 YTD	November 2016 YTD	November 2015 YTD	November 2016 YTD	November 2015 YTD	November 2016 YTD
New England	0	0	--	0	0	0	0	0	0
Connecticut	0	0	--	0	0	0	0	0	0
Maine	0	0	--	0	0	0	0	0	0
Massachusetts	0	0	--	0	0	0	0	0	0
New Hampshire	0	0	--	0	0	0	0	0	0
Rhode Island	0	0	--	0	0	0	0	0	0
Vermont	0	0	--	0	0	0	0	0	0
Middle Atlantic	241	211	14.0%	0	0	0	0	241	211
New Jersey	68	65	3.3%	0	0	0	0	68	65
New York	0	0	--	0	0	0	0	0	0
Pennsylvania	173	146	18.9%	0	0	0	0	173	146
East North Central	2,160	3,000	-28.0%	1,094	1,659	875	1,091	0	191
Illinois	0	0	--	0	0	0	0	0	0
Indiana	497	1,060	-53.1%	497	1,060	0	0	0	0
Michigan	664	703	-5.5%	519	542	3	25	0	142
Ohio	885	1,075	-17.6%	0	0	872	1,066	0	NM
Wisconsin	113	162	-30.1%	78	58	0	0	35	104
West North Central	57	43	31.9%	0	0	0	4	8	52
Iowa	57	43	31.9%	0	0	0	4	8	52
Kansas	0	0	--	0	0	0	0	0	0
Minnesota	0	0	--	0	0	0	0	0	0
Missouri	0	0	--	0	0	0	0	0	0
Nebraska	0	0	--	0	0	0	0	0	0
North Dakota	0	0	--	0	0	0	0	0	0
South Dakota	0	0	--	0	0	0	0	0	0
South Atlantic	2,049	1,570	30.5%	1,952	1,464	0	0	0	96
Delaware	0	0	--	0	0	0	0	0	0
District of Columbia	0	0	--	0	0	0	0	0	0
Florida	1,952	1,464	33.3%	1,952	1,464	0	0	0	0
Georgia	96	105	-8.5%	0	0	0	0	96	105
Maryland	0	0	--	0	0	0	0	0	0
North Carolina	0	0	--	0	0	0	0	0	0
South Carolina	0	0	--	0	0	0	0	0	0
Virginia	0	0	--	0	0	0	0	0	0
West Virginia	0	0	--	0	0	0	0	0	0
East South Central	1,051	906	16.0%	1,051	906	0	0	0	0
Alabama	0	0	--	0	0	0	0	0	0
Kentucky	1,051	906	16.0%	1,051	906	0	0	0	0
Mississippi	0	0	--	0	0	0	0	0	0
Tennessee	0	0	--	0	0	0	0	0	0
West South Central	4,407	3,955	11.4%	4,116	3,644	0	0	0	291
Arkansas	0	0	--	0	0	0	0	0	0
Louisiana	4,296	3,829	12.2%	4,116	3,644	0	0	0	180
Oklahoma	0	0	--	0	0	0	0	0	0
Texas	111	126	-11.9%	0	0	0	0	0	111
Mountain	401	442	-9.3%	0	0	401	442	0	0
Arizona	0	0	--	0	0	0	0	0	0
Colorado	0	0	--	0	0	0	0	0	0
Idaho	0	0	--	0	0	0	0	0	0
Montana	401	442	-9.3%	0	0	401	442	0	0
Nevada	0	0	--	0	0	0	0	0	0
New Mexico	0	0	--	0	0	0	0	0	0
Utah	0	0	--	0	0	0	0	0	0
Wyoming	0	0	--	0	0	0	0	0	0
Pacific Contiguous	0	0	--	0	0	0	0	0	0
California	0	0	--	0	0	0	0	0	0
Oregon	0	0	--	0	0	0	0	0	0
Washington	0	0	--	0	0	0	0	0	0
Pacific Noncontiguous	0	0	--	0	0	0	0	0	0
Alaska	0	0	--	0	0	0	0	0	0
Hawaii	0	0	--	0	0	0	0	0	0
U.S. Total	10,366	10,128	2.3%	8,214	7,674	1,276	1,533	4	8
								871	912

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NM = Not meaningful due to large relative standard error or excessive percentage change.

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Negative generation denotes that electric power consumed for plant use exceeds gross generation.

Totals may not equal sum of components because of independent rounding. Percentage change is calculated before rounding.

Source: U.S. Energy Information Administration, Form EIA-923, Power Plant Operations Report.

**Table 1.7.A. Utility Scale Facility Net Generation from Natural Gas
by State, by Sector, November 2016 and 2015 (Thousand Megawatthours)**

Census Division and State	All Sectors			Electric Power Sector				Commercial Sector		Industrial Sector	
				Electric Utilities		Independent Power Producers					
	Generation at Utility Scale Facilities			Generation at Utility Scale Facilities		Generation at Utility Scale Facilities		Generation at Utility Scale Facilities		Generation at Utility Scale Facilities	
Census Division and State	November 2016	November 2015	Percentage Change	November 2016	November 2015						
New England	3,463	3,927	-11.8%	3	20	3,307	3,735	74	76	78	96
Connecticut	1,438	1,460	-1.6%	1	3	1,373	1,387	NM	32	NM	39
Maine	194	296	-34.6%	0	0	161	251	NM	3	NM	42
Massachusetts	986	1,130	-12.7%	2	15	935	1,066	38	36	NM	13
New Hampshire	436	535	-18.6%	0	2	432	528	NM	2	NM	3
Rhode Island	410	506	-18.8%	0	0	407	502	NM	NM	0	0
Vermont	NM	0	NM	0	0	0	0	NM	0	0	0
Middle Atlantic	11,909	11,896	0.1%	698	855	10,974	10,804	83	88	154	148
New Jersey	2,777	3,184	-12.8%	NM	8	2,730	3,130	NM	18	NM	28
New York	3,669	3,918	-6.3%	692	847	2,888	2,989	59	61	30	22
Pennsylvania	5,463	4,794	14.0%	1	0	5,356	4,685	NM	10	98	98
East North Central	8,189	7,202	13.7%	3,301	3,300	4,618	3,630	100	116	171	157
Illinois	1,052	909	15.8%	62	29	934	793	16	35	NM	51
Indiana	1,823	1,429	27.5%	1,492	1,041	272	323	14	16	44	50
Michigan	2,146	1,690	27.0%	547	638	1,502	978	52	48	45	25
Ohio	2,301	2,168	6.1%	425	654	1,855	1,494	NM	12	13	8
Wisconsin	867	1,007	-13.9%	775	937	54	41	NM	5	28	23
West North Central	1,197	892	34.1%	1,030	757	84	87	23	13	59	36
Iowa	119	73	61.5%	74	48	NM	0	NM	5	38	21
Kansas	133	47	185.1%	126	45	0	0	0	0	NM	2
Minnesota	476	419	13.7%	408	390	49	13	NM	7	NM	10
Missouri	269	272	-0.9%	225	193	36	74	7	2	NM	3
Nebraska	74	14	442.1%	74	13	0	0	NM	0	NM	0
North Dakota	52	11	356.8%	50	11	0	0	0	0	NM	0
South Dakota	73	57	28.9%	73	57	0	0	0	0	0	0
South Atlantic	22,262	23,537	-5.4%	18,803	19,116	3,045	4,072	44	44	370	304
Delaware	531	363	46.0%	NM	2	443	297	0	0	84	64
District of Columbia	NM	2	NM	0	0	0	0	NM	2	0	0
Florida	10,406	12,157	-14.4%	9,626	11,035	659	1,002	NM	3	117	117
Georgia	3,509	3,980	-11.8%	2,991	2,946	466	982	0	0	51	51
Maryland	96	373	-74.2%	0	0	57	330	NM	39	NM	4
North Carolina	2,970	2,738	8.5%	2,743	2,605	211	118	1	1	NM	15
South Carolina	1,562	1,648	-5.2%	1,063	1,449	493	197	NM	0	NM	2
Virginia	3,105	2,199	41.2%	2,366	1,076	692	1,072	NM	0	46	50
West Virginia	78	77	1.9%	10	4	23	73	0	0	46	0
East South Central	8,236	9,243	-10.9%	5,012	5,777	3,040	3,297	NM	12	172	158
Alabama	4,311	4,393	-1.9%	1,213	1,374	3,021	2,941	0	0	77	78
Kentucky	479	635	-24.6%	442	611	19	0	0	0	NM	24
Mississippi	2,918	3,495	-16.5%	2,882	3,103	0	356	NM	1	35	35
Tennessee	528	721	-26.8%	475	689	0	0	NM	11	42	21
West South Central	24,309	25,711	-5.5%	6,997	7,419	11,495	12,765	73	49	5,745	5,478
Arkansas	1,522	721	111.0%	652	241	845	452	NM	0	25	28
Louisiana	4,743	5,804	-18.3%	2,200	3,077	347	456	NM	16	2,183	2,255
Oklahoma	2,825	2,827	-0.1%	1,807	1,867	1,003	939	NM	0	NM	20
Texas	15,219	16,358	-7.0%	2,338	2,233	9,300	10,917	58	33	3,523	3,175
Mountain	5,629	7,695	-26.9%	4,312	5,665	1,168	1,876	32	33	117	121
Arizona	1,463	2,355	-37.9%	839	1,367	614	979	10	9	0	0
Colorado	722	1,311	-44.9%	606	1,149	115	160	0	0	NM	2
Idaho	116	317	-63.4%	25	132	84	174	0	2	7	7
Montana	NM	54	NM	NM	48	NM	6	0	0	0	0
Nevada	2,176	2,170	0.2%	1,967	1,957	182	185	6	5	21	23
New Mexico	566	703	-19.4%	399	329	158	364	9	9	0	0
Utah	488	716	-31.9%	436	665	NM	7	6	7	34	37
Wyoming	61	69	-11.1%	NM	17	NM	0	0	0	54	52
Pacific Contiguous	9,215	11,885	-22.5%	3,446	4,439	4,709	6,277	151	152	909	1,017
California	7,494	8,830	-15.1%	2,348	2,924	4,105	4,759	145	144	896	1,003
Oregon	1,126	1,621	-30.5%	645	655	471	954	NM	5	NM	6
Washington	595	1,435	-58.5%	453	861	133	564	NM	2	7	8
Pacific Noncontiguous	177	247	-28.4%	170	242	0	0	NM	0	NM	6
Alaska	177	247	-28.4%	170	242	0	0	NM	0	NM	6
Hawaii	0	0	--	0	0	0	0	0	0	0	0
U.S. Total	94,586	102,236	-7.5%	43,773	47,590	42,440	46,542	591	583	7,782	7,521

Displayed values of zero may represent small values that round to zero. The Excel version of this table provides additional precision which may be accessed by selecting individual cells.

NM = Not meaningful due to large relative standard error or excessive percentage change.

Notes: See Glossary for definitions. Values for 2016 are preliminary. Values for 2015 are final. See Technical Notes for a discussion of the sample design for the Form EIA-923.

Negative generation denotes that electric power consumed for plant use exceeds gross generation.

Totals may not equal sum of components because of independent rounding. Percentage change is calculated before rounding.

Source: U.S. Energy Information Administration, Form EIA-923, Power Plant Operations Report.

Table 1.7.B. Utility Scale Facility Net Generation from Natural Gas

by State, by Sector, Year-to-Date through November 2016 and 2015 (Thousand Megawatthours)

Census Division and State	All Sectors			Electric Power Sector		Commercial Sector		Industrial Sector			
				Electric Utilities		Independent Power Producers					
	Generation at Utility Scale Facilities			Generation at Utility Scale Facilities		Generation at Utility Scale Facilities		Generation at Utility Scale Facilities			
November 2016 YTD	November 2015 YTD	Percentage Change	November 2016 YTD	November 2015 YTD	November 2016 YTD	November 2015 YTD	November 2016 YTD	November 2015 YTD	November 2016 YTD	November 2015 YTD	
New England	50,235	50,027	0.4%	277	395	48,002	47,780	880	876	1,075	977
Connecticut	16,425	15,699	4.6%	3	9	15,662	14,908	346	348	414	433
Maine	3,545	2,708	30.9%	0	0	3,047	2,314	23	25	475	369
Massachusetts	19,929	19,773	0.8%	237	362	19,087	18,831	445	435	159	145
New Hampshire	4,436	5,675	-21.8%	36	22	4,354	5,602	NM	21	27	29
Rhode Island	5,898	6,172	-4.4%	0	0	5,851	6,125	46	46	0	0
Vermont	NM	1	NM	1	1	0	0	NM	0	0	0
Middle Atlantic	155,828	141,587	10.1%	11,167	11,179	141,895	127,741	1,037	997	1,729	1,670
New Jersey	40,676	34,021	19.6%	NM	71	40,099	33,446	189	190	308	314
New York	52,751	53,134	-0.7%	11,078	11,105	40,629	41,076	725	695	319	259
Pennsylvania	62,401	54,432	14.6%	NM	4	61,167	53,219	123	113	1,102	1,097
East North Central	104,322	80,091	30.3%	45,388	35,291	55,707	42,114	1,341	1,225	1,885	1,461
Illinois	16,464	9,764	68.6%	1,675	568	13,973	8,344	321	404	496	447
Indiana	18,413	14,520	26.8%	14,728	11,663	3,019	2,214	178	153	488	491
Michigan	27,929	18,044	54.8%	9,578	5,733	17,231	11,562	607	502	514	246
Ohio	26,648	25,695	3.7%	6,126	6,235	20,326	19,279	121	103	74	77
Wisconsin	14,867	12,068	23.2%	13,281	11,091	1,158	714	115	63	313	200
West North Central	21,782	15,846	37.5%	17,974	13,279	2,957	2,029	310	211	541	327
Iowa	2,967	2,140	38.6%	2,646	1,938	NM	0	90	41	231	162
Kansas	2,037	1,129	80.5%	1,951	1,095	0	0	0	0	86	34
Minnesota	8,630	6,537	32.0%	6,949	5,615	1,399	734	123	94	159	94
Missouri	5,666	4,239	33.7%	3,991	2,852	1,558	1,295	95	75	NM	16
Nebraska	695	419	65.6%	676	418	0	0	NM	1	18	0
North Dakota	827	692	19.5%	801	671	0	0	0	0	NM	21
South Dakota	960	690	39.2%	960	690	0	0	0	0	0	0
South Atlantic	299,434	280,540	6.7%	243,136	231,214	52,009	45,429	581	501	3,709	3,395
Delaware	7,460	6,303	18.4%	NM	36	6,485	5,397	0	0	925	870
District of Columbia	51	21	142.6%	0	0	0	0	51	21	0	0
Florida	147,527	143,731	2.6%	134,835	134,413	11,393	8,021	50	30	1,248	1,267
Georgia	49,140	46,377	6.0%	38,009	34,188	10,623	11,650	0	0	509	540
Maryland	5,367	4,258	26.1%	0	0	4,836	3,770	454	436	77	52
North Carolina	36,263	33,407	8.6%	31,374	29,749	4,699	3,492	10	7	180	159
South Carolina	15,194	15,147	0.3%	12,267	13,350	2,839	1,762	NM	1	78	33
Virginia	37,261	30,044	24.0%	26,463	19,360	10,302	10,204	NM	6	490	475
West Virginia	1,171	1,252	-6.5%	137	117	832	1,135	0	0	202	0
East South Central	117,497	106,605	10.2%	74,965	64,269	40,525	40,455	140	137	1,866	1,744
Alabama	53,307	51,152	4.2%	15,432	13,518	36,932	36,702	0	0	942	932
Kentucky	7,587	5,449	39.2%	6,881	4,654	497	574	0	0	209	222
Mississippi	46,349	41,534	11.6%	42,862	37,970	3,096	3,179	NM	7	383	378
Tennessee	10,254	8,470	21.1%	9,791	8,127	0	0	131	130	332	213
West South Central	326,368	324,466	0.6%	102,618	96,339	160,915	168,599	861	757	61,974	58,771
Arkansas	17,307	13,939	24.2%	7,049	4,066	9,993	9,579	NM	2	263	291
Louisiana	61,601	60,190	2.3%	32,765	34,220	4,782	3,388	156	160	23,899	22,422
Oklahoma	34,119	31,084	9.8%	22,747	19,826	11,196	11,100	NM	0	160	158
Texas	213,341	219,253	-2.7%	40,057	38,226	134,944	144,533	688	595	37,652	35,899
Mountain	92,668	88,790	4.4%	68,173	63,482	22,850	23,659	341	381	1,304	1,268
Arizona	32,800	31,312	4.8%	18,467	16,980	14,220	14,211	113	121	0	0
Colorado	11,737	10,541	11.4%	9,971	8,435	1,747	2,085	2	NM	NM	17
Idaho	3,054	3,390	-9.9%	1,716	1,904	1,261	1,426	0	12	77	48
Montana	657	527	24.6%	585	470	72	57	0	0	0	0
Nevada	26,606	26,429	0.7%	24,358	24,080	1,905	2,006	58	64	286	279
New Mexico	9,210	8,498	8.4%	5,613	4,683	3,486	3,704	101	110	NM	1
Utah	7,912	7,434	6.4%	7,292	6,797	159	170	68	71	393	396
Wyoming	693	659	5.1%	172	132	NM	1	0	0	520	527
Pacific Contiguous	114,171	132,937	-14.1%	42,671	47,273	59,697	73,356	1,654	1,768	10,148	10,541
California	89,543	106,684	-16.1%	29,886	34,022	48,110	60,512	1,575	1,704	9,972	10,445
Oregon	14,426	14,473	-0.3%	6,647	5,888	7,622	8,494	57	46	99	45
Washington	10,202	11,780	-13.4%	6,138	7,362	3,964	4,350	NM	17	78	51
Pacific Noncontiguous	2,153	2,816	-23.5%	2,083	2,751	0	0	2	0	68	64
Alaska	2,153	2,816	-23.5%	2,083	2,751	0	0	2	0	68	64
Hawaii	0	0	--	0	0	0	0	0	0	0	0
U.S. Total	1,284,457	1,223,705	5.0%	608,453	565,471	584,558	571,163	7,148	6,853	84,298	80,218

**Table 1.8.A. Utility Scale Facility Net Generation from Other Gases
by State, by Sector, November 2016 and 2015 (Thousand Megawatthours)**

Census Division and State	All Sectors			Electric Power Sector				Commercial Sector		Industrial Sector	
				Electric Utilities		Independent Power Producers					
	Generation at Utility Scale Facilities			Generation at Utility Scale Facilities		Generation at Utility Scale Facilities		Generation at Utility Scale Facilities		Generation at Utility Scale Facilities	
	November 2016	November 2015	Percentage Change	November 2016	November 2015						
New England	0	0	--	0	0	0	0	0	0	0	0
Connecticut	0	0	--	0	0	0	0	0	0	0	0
Maine	0	0	--	0	0	0	0	0	0	0	0
Massachusetts	0	0	--	0	0	0	0	0	0	0	0
New Hampshire	0	0	--	0	0	0	0	0	0	0	0
Rhode Island	0	0	--	0	0	0	0	0	0	0	0
Vermont	0	0	--	0	0	0	0	0	0	0	0
Middle Atlantic	50	50	-0.9%	0	0	NM	0	0	49	50	
New Jersey	NM	19	NM	0	0	0	0	0	NM	19	
New York	0	0	--	0	0	0	0	0	0	0	0
Pennsylvania	38	31	24.6%	0	0	NM	0	0	38	31	
East North Central	362	251	44.5%	22	1	175	63	0	0	165	186
Illinois	NM	14	NM	0	0	0	1	0	0	NM	13
Indiana	142	162	-12.3%	NM	1	0	0	0	0	141	161
Michigan	161	0	NM	21	0	140	0	0	0	0	0
Ohio	NM	75	NM	0	0	NM	62	0	0	NM	12
Wisconsin	0	0	--	0	0	0	0	0	0	0	0
West North Central	NM	1	NM	0	0	0	0	0	0	NM	1
Iowa	0	0	--	0	0	0	0	0	0	0	0
Kansas	0	0	--	0	0	0	0	0	0	0	0
Minnesota	0	0	--	0	0	0	0	0	0	0	0
Missouri	0	0	--	0	0	0	0	0	0	0	0
Nebraska	0	0	--	0	0	0	0	0	0	0	0
North Dakota	NM	1	NM	0	0	0	0	0	0	NM	1
South Dakota	0	0	--	0	0	0	0	0	0	0	0
South Atlantic	21	28	-25.7%	0	0	0	0	0	0	21	28
Delaware	18	24	-26.3%	0	0	0	0	0	0	18	24
District of Columbia	0	0	--	0	0	0	0	0	0	0	0
Florida	0	1	-63.0%	0	0	0	0	0	0	0	1
Georgia	0	0	--	0	0	0	0	0	0	0	0
Maryland	0	0	--	0	0	0	0	0	0	0	0
North Carolina	0	0	--	0	0	0	0	0	0	0	0
South Carolina	0	0	--	0	0	0	0	0	0	0	0
Virginia	0	0	--	0	0	0	0	0	0	0	0
West Virginia	3	3	-11.1%	0	0	0	0	0	0	3	3
East South Central	NM	1	NM	0	0	0	0	0	0	NM	1
Alabama	NM	0	NM	0	0	0	0	0	0	NM	0
Kentucky	0	0	--	0	0	0	0	0	0	0	0
Mississippi	0	0	--	0	0	0	0	0	0	0	0
Tennessee	1	1	58.0%	0	0	0	0	0	0	1	1
West South Central	386	382	0.9%	0	0	135	132	0	0	251	250
Arkansas	0	0	--	0	0	0	0	0	0	0	0
Louisiana	148	160	-7.4%	0	0	0	0	0	0	148	160
Oklahoma	0	0	--	0	0	0	0	0	0	0	0
Texas	238	222	6.9%	0	0	135	132	0	0	103	90
Mountain	37	40	-7.2%	0	0	1	2	0	0	36	38
Arizona	0	0	--	0	0	0	0	0	0	0	0
Colorado	0	0	--	0	0	0	0	0	0	0	0
Idaho	0	0	--	0	0	0	0	0	0	0	0
Montana	1	2	-45.2%	0	0	1	2	0	0	0	0
Nevada	0	0	-100.0%	0	0	0	0	0	0	0	0
New Mexico	0	0	--	0	0	0	0	0	0	0	0
Utah	NM	1	NM	0	0	0	0	0	0	NM	1
Wyoming	35	37	-4.1%	0	0	0	0	0	0	35	37
Pacific Contiguous	136	146	-6.5%	0	0	27	36	0	0	109	110
California	109	110	-0.3%	0	0	0	0	0	0	109	110
Oregon	0	0	--	0	0	0	0	0	0	0	0
Washington	27	36	-25.3%	0	0	27	36	0	0	0	0
Pacific Noncontiguous	NM	3	NM	0	0	0	0	0	0	NM	3
Alaska	0	0	--	0	0	0	0	0	0	0	0
Hawaii	NM	3	NM	0	0	0	0	0	0	NM	3
U.S. Total	1,001	902	11.0%	22	1	338	233	0	0	641	668

Displayed values of zero may represent small values that round to zero. The Excel version of this table provides additional precision which may be accessed by selecting individual cells.

NM = Not meaningful due to large relative standard error or excessive percentage change.

Notes: See Glossary for definitions. Values for 2016 are preliminary. Values for 2015 are final. See Technical Notes for a discussion of the sample design for the Form EIA-923.

Negative generation denotes that electric power consumed for plant use exceeds gross generation.

Totals may not equal sum of components because of independent rounding. Percentage change is calculated before rounding.

Source: U.S. Energy Information Administration, Form EIA-923, Power Plant Operations Report.

Table 1.8.B. Utility Scale Facility Net Generation from Other Gases

by State, by Sector, Year-to-Date through November 2016 and 2015 (Thousand Megawatthours)

Census Division and State	All Sectors			Electric Power Sector		Commercial Sector		Industrial Sector	
				Electric Utilities		Independent Power Producers			
	Generation at Utility Scale Facilities			Generation at Utility Scale Facilities		Generation at Utility Scale Facilities		Generation at Utility Scale Facilities	
November 2016 YTD	November 2015 YTD	Percentage Change	November 2016 YTD	November 2015 YTD	November 2016 YTD	November 2015 YTD	November 2016 YTD	November 2015 YTD	November 2016 YTD
New England	0	0	--	0	0	0	0	0	0
Connecticut	0	0	--	0	0	0	0	0	0
Maine	0	0	--	0	0	0	0	0	0
Massachusetts	0	0	--	0	0	0	0	0	0
New Hampshire	0	0	--	0	0	0	0	0	0
Rhode Island	0	0	--	0	0	0	0	0	0
Vermont	0	0	--	0	0	0	0	0	0
Middle Atlantic	672	593	13.3%	0	0	NM	0	0	671
New Jersey	210	204	3.0%	0	0	0	0	0	210
New York	0	0	--	0	0	0	0	0	0
Pennsylvania	461	389	18.7%	0	0	NM	0	0	460
East North Central	4,550	4,383	3.8%	142	197	2,018	1,685	0	2,390
Illinois	266	236	12.7%	0	0	6	2	0	261
Indiana	1,954	2,103	-7.1%	NM	19	0	0	0	1,935
Michigan	1,478	1,176	25.7%	123	178	1,355	997	0	0
Ohio	852	868	-1.9%	0	0	658	686	0	194
Wisconsin	0	0	--	0	0	0	0	0	0
West North Central	43	37	16.3%	0	0	0	0	0	43
Iowa	0	0	--	0	0	0	0	0	0
Kansas	0	0	--	0	0	0	0	0	0
Minnesota	0	0	--	0	0	0	0	0	0
Missouri	0	0	--	0	0	0	0	0	0
Nebraska	0	0	--	0	0	0	0	0	0
North Dakota	43	37	16.3%	0	0	0	0	0	43
South Dakota	0	0	--	0	0	0	0	0	0
South Atlantic	280	245	14.6%	0	0	0	0	0	280
Delaware	253	213	19.0%	0	0	0	0	0	253
District of Columbia	0	0	--	0	0	0	0	0	0
Florida	5	5	-0.6%	0	0	0	0	0	5
Georgia	0	0	--	0	0	0	0	0	0
Maryland	0	0	--	0	0	0	0	0	0
North Carolina	0	0	--	0	0	0	0	0	0
South Carolina	0	0	--	0	0	0	0	0	0
Virginia	0	0	--	0	0	0	0	0	0
West Virginia	22	27	-17.5%	0	0	0	0	0	22
East South Central	37	47	-20.4%	0	0	0	0	0	37
Alabama	23	36	-35.0%	0	0	0	0	0	23
Kentucky	0	0	--	0	0	0	0	0	0
Mississippi	0	0	--	0	0	0	0	0	0
Tennessee	14	11	27.1%	0	0	0	0	0	14
West South Central	4,330	4,496	-3.7%	0	0	1,206	1,149	0	3,124
Arkansas	0	0	--	0	0	0	0	0	0
Louisiana	1,922	2,181	-11.9%	0	0	0	0	0	1,922
Oklahoma	0	0	--	0	0	0	0	0	0
Texas	2,408	2,315	4.0%	0	0	1,206	1,149	0	1,202
Mountain	335	396	-15.3%	0	0	8	21	0	327
Arizona	0	0	--	0	0	0	0	0	0
Colorado	0	0	--	0	0	0	0	0	0
Idaho	0	0	--	0	0	0	0	0	0
Montana	7	16	-53.7%	0	0	7	16	0	0
Nevada	1	5	-86.2%	0	0	1	5	0	0
New Mexico	0	0	--	0	0	0	0	0	0
Utah	NM	8	NM	0	0	0	0	0	NM
Wyoming	321	368	-12.7%	0	0	0	0	0	321
Pacific Contiguous	1,700	1,764	-3.6%	0	0	364	359	0	1,336
California	1,336	1,405	-4.9%	0	0	0	0	0	1,336
Oregon	0	0	--	0	0	0	0	0	0
Washington	364	359	1.4%	0	0	364	359	0	0
Pacific Noncontiguous	39	46	-14.2%	0	0	0	0	0	39
Alaska	0	0	--	0	0	0	0	0	0
Hawaii	39	46	-14.2%	0	0	0	0	0	39
U.S. Total	11,987	12,007	-0.2%	142	197	3,598	3,214	0	8,248
								8,595	

Displayed values of zero may represent small values that round to zero. The Excel version of this table provides additional precision which may be accessed by selecting individual cells.

NM = Not meaningful due to large relative standard error or excessive percentage change.

Notes: See Glossary for definitions. Values for 2016 are preliminary. Values for 2015 are final. See Technical Notes for a discussion of the sample design for the Form EIA-923.

Negative generation denotes that electric power consumed for plant use exceeds gross generation.

Totals may not equal sum of components because of independent rounding. Percentage change is calculated before rounding.

Source: U.S. Energy Information Administration, Form EIA-923, Power Plant Operations Report.

Table 1.9.A. Utility Scale Facility Net Generation from Nuclear Energy by State, by Sector, November 2016 and 2015 (Thousand Megawatthours)

Census Division and State	All Sectors			Electric Power Sector				Commercial Sector		Industrial Sector	
				Electric Utilities		Independent Power Producers					
	Generation at Utility Scale Facilities			Generation at Utility Scale Facilities		Generation at Utility Scale Facilities		Generation at Utility Scale Facilities		Generation at Utility Scale Facilities	
Census Division and State	November 2016	November 2015	Percentage Change	November 2016	November 2015						
New England	2,892	2,233	29.5%	0	0	2,892	2,233	0	0	0	0
Connecticut	1,502	1,278	17.5%	0	0	1,502	1,278	0	0	0	0
Maine	0	0	--	0	0	0	0	0	0	0	0
Massachusetts	488	491	-0.5%	0	0	488	491	0	0	0	0
New Hampshire	901	464	94.1%	0	0	901	464	0	0	0	0
Rhode Island	0	0	--	0	0	0	0	0	0	0	0
Vermont	0	0	--	0	0	0	0	0	0	0	0
Middle Atlantic	12,970	12,375	4.8%	0	0	12,970	12,375	0	0	0	0
New Jersey	2,529	2,067	22.3%	0	0	2,529	2,067	0	0	0	0
New York	3,440	3,814	-9.8%	0	0	3,440	3,814	0	0	0	0
Pennsylvania	7,001	6,494	7.8%	0	0	7,001	6,494	0	0	0	0
East North Central	12,585	12,502	0.7%	1,350	1,590	11,234	10,912	0	0	0	0
Illinois	8,203	7,922	3.6%	0	0	8,203	7,922	0	0	0	0
Indiana	0	0	--	0	0	0	0	0	0	0	0
Michigan	1,930	2,174	-11.2%	1,350	1,590	580	584	0	0	0	0
Ohio	1,582	1,581	0.1%	0	0	1,582	1,581	0	0	0	0
Wisconsin	869	826	5.2%	0	0	869	826	0	0	0	0
West North Central	2,936	3,892	-24.6%	2,518	3,453	418	439	0	0	0	0
Iowa	418	439	-4.8%	0	0	418	439	0	0	0	0
Kansas	245	880	-72.1%	245	880	0	0	0	0	0	0
Minnesota	993	751	32.2%	993	751	0	0	0	0	0	0
Missouri	884	887	-0.4%	884	887	0	0	0	0	0	0
Nebraska	396	934	-57.6%	396	934	0	0	0	0	0	0
North Dakota	0	0	--	0	0	0	0	0	0	0	0
South Dakota	0	0	--	0	0	0	0	0	0	0	0
South Atlantic	16,898	14,923	13.2%	15,618	13,642	1,280	1,281	0	0	0	0
Delaware	0	0	--	0	0	0	0	0	0	0	0
District of Columbia	0	0	--	0	0	0	0	0	0	0	0
Florida	2,402	2,031	18.3%	2,402	2,031	0	0	0	0	0	0
Georgia	2,983	2,987	-0.1%	2,983	2,987	0	0	0	0	0	0
Maryland	1,280	1,281	-0.1%	0	0	1,280	1,281	0	0	0	0
North Carolina	3,447	3,645	-5.4%	3,447	3,645	0	0	0	0	0	0
South Carolina	4,349	3,327	30.7%	4,349	3,327	0	0	0	0	0	0
Virginia	2,437	1,653	47.4%	2,437	1,653	0	0	0	0	0	0
West Virginia	0	0	--	0	0	0	0	0	0	0	0
East South Central	6,252	6,044	3.4%	6,252	6,044	0	0	0	0	0	0
Alabama	3,086	3,381	-8.7%	3,086	3,381	0	0	0	0	0	0
Kentucky	0	0	--	0	0	0	0	0	0	0	0
Mississippi	-13	987	-101.3%	-13	987	0	0	0	0	0	0
Tennessee	3,179	1,676	89.7%	3,179	1,676	0	0	0	0	0	0
West South Central	5,545	3,783	46.6%	2,242	1,511	3,304	2,273	0	0	0	0
Arkansas	709	949	-25.4%	709	949	0	0	0	0	0	0
Louisiana	1,533	561	173.1%	1,533	561	0	0	0	0	0	0
Oklahoma	0	0	--	0	0	0	0	0	0	0	0
Texas	3,304	2,273	45.4%	0	0	3,304	2,273	0	0	0	0
Mountain	2,661	2,337	13.8%	2,661	2,337	0	0	0	0	0	0
Arizona	2,661	2,337	13.8%	2,661	2,337	0	0	0	0	0	0
Colorado	0	0	--	0	0	0	0	0	0	0	0
Idaho	0	0	--	0	0	0	0	0	0	0	0
Montana	0	0	--	0	0	0	0	0	0	0	0
Nevada	0	0	--	0	0	0	0	0	0	0	0
New Mexico	0	0	--	0	0	0	0	0	0	0	0
Utah	0	0	--	0	0	0	0	0	0	0	0
Wyoming	0	0	--	0	0	0	0	0	0	0	0
Pacific Contiguous	2,441	2,174	12.3%	2,441	2,174	0	0	0	0	0	0
California	1,622	1,370	18.4%	1,622	1,370	0	0	0	0	0	0
Oregon	0	0	--	0	0	0	0	0	0	0	0
Washington	819	804	1.9%	819	804	0	0	0	0	0	0
Pacific Noncontiguous	0	0	--	0	0	0	0	0	0	0	0
Alaska	0	0	--	0	0	0	0	0	0	0	0
Hawaii	0	0	--	0	0	0	0	0	0	0	0
U.S. Total	65,179	60,264	8.2%	33,082	30,751	32,097	29,513	0	0	0	0

Displayed values of zero may represent small values that round to zero. The Excel version of this table provides additional precision which may be accessed by selecting individual cells.

NN = Not meaningful due to large relative standard error or excessive percentage change.

Notes: See Glossary for definitions. Values for 2016 are preliminary. Values for 2015 are final. See Technical Notes for a discussion of the sample design for the Form EIA-923.

Negative generation denotes that electric power consumed for plant use exceeds gross generation.

Totals may not equal sum of components because of independent rounding. Percentage change is calculated before rounding.

Source: U.S. Energy Information Administration, Form EIA-923, Power Plant Operations Report.

Table 1.9.B. Utility Scale Facility Net Generation from Nuclear Energy

by State, by Sector, Year-to-Date through November 2016 and 2015 (Thousand Megawatthours)

Census Division and State	All Sectors			Electric Power Sector		Commercial Sector		Industrial Sector	
				Electric Utilities		Independent Power Producers			
	Generation at Utility Scale Facilities			Generation at Utility Scale Facilities		Generation at Utility Scale Facilities		Generation at Utility Scale Facilities	
November 2016 YTD	November 2015 YTD	Percentage Change	November 2016 YTD	November 2015 YTD	November 2016 YTD	November 2015 YTD	November 2016 YTD	November 2015 YTD	November 2016 YTD
New England	29,892	28,903	3.4%	0	0	29,892	28,903	0	0
Connecticut	15,022	15,854	-5.3%	0	0	15,022	15,854	0	0
Maine	0	0	--	0	0	0	0	0	0
Massachusetts	5,039	4,493	12.1%	0	0	5,039	4,493	0	0
New Hampshire	9,831	8,555	14.9%	0	0	9,831	8,555	0	0
Rhode Island	0	0	--	0	0	0	0	0	0
Vermont	0	0	--	0	0	0	0	0	0
Middle Atlantic	140,359	144,192	-2.7%	0	0	140,359	144,192	0	0
New Jersey	26,839	30,211	-11.2%	0	0	26,839	30,211	0	0
New York	38,017	40,729	-6.7%	0	0	38,017	40,729	0	0
Pennsylvania	75,504	73,251	3.1%	0	0	75,504	73,251	0	0
East North Central	143,113	140,516	1.8%	22,845	21,347	120,268	119,169	0	0
Illinois	89,380	88,569	0.9%	0	0	89,380	88,569	0	0
Indiana	0	0	--	0	0	0	0	0	0
Michigan	29,285	27,061	8.2%	22,845	21,347	6,440	5,714	0	0
Ohio	15,193	15,747	-3.5%	0	0	15,193	15,747	0	0
Wisconsin	9,255	9,137	1.3%	0	0	9,255	9,137	0	0
West North Central	41,372	42,460	-2.6%	37,128	37,673	4,243	4,787	0	0
Iowa	4,243	4,787	-11.4%	0	0	4,243	4,787	0	0
Kansas	7,333	7,720	-5.0%	7,333	7,720	0	0	0	0
Minnesota	12,539	11,072	13.3%	12,539	11,072	0	0	0	0
Missouri	8,506	9,521	-10.7%	8,506	9,521	0	0	0	0
Nebraska	8,749	9,361	-6.5%	8,749	9,361	0	0	0	0
North Dakota	0	0	--	0	0	0	0	0	0
South Dakota	0	0	--	0	0	0	0	0	0
South Atlantic	188,144	182,269	3.2%	174,679	168,839	13,465	13,431	0	0
Delaware	0	0	--	0	0	0	0	0	0
District of Columbia	0	0	--	0	0	0	0	0	0
Florida	26,573	25,501	4.2%	26,573	25,501	0	0	0	0
Georgia	31,402	30,777	2.0%	31,402	30,777	0	0	0	0
Maryland	13,465	13,431	0.3%	0	0	13,465	13,431	0	0
North Carolina	38,905	38,221	1.8%	38,905	38,221	0	0	0	0
South Carolina	50,803	48,760	4.2%	50,803	48,760	0	0	0	0
Virginia	26,996	25,580	5.5%	26,996	25,580	0	0	0	0
West Virginia	0	0	--	0	0	0	0	0	0
East South Central	68,974	72,214	-4.5%	68,974	72,214	0	0	0	0
Alabama	36,096	38,381	-6.0%	36,096	38,381	0	0	0	0
Kentucky	0	0	--	0	0	0	0	0	0
Mississippi	5,911	10,705	-44.8%	5,911	10,705	0	0	0	0
Tennessee	26,967	23,127	16.6%	26,967	23,127	0	0	0	0
West South Central	66,197	63,227	4.7%	27,920	26,847	38,277	36,380	0	0
Arkansas	12,372	12,530	-1.3%	12,372	12,530	0	0	0	0
Louisiana	15,548	14,317	8.6%	15,548	14,317	0	0	0	0
Oklahoma	0	0	--	0	0	0	0	0	0
Texas	38,277	36,380	5.2%	0	0	38,277	36,380	0	0
Mountain	29,394	29,540	-0.5%	29,394	29,540	0	0	0	0
Arizona	29,394	29,540	-0.5%	29,394	29,540	0	0	0	0
Colorado	0	0	--	0	0	0	0	0	0
Idaho	0	0	--	0	0	0	0	0	0
Montana	0	0	--	0	0	0	0	0	0
Nevada	0	0	--	0	0	0	0	0	0
New Mexico	0	0	--	0	0	0	0	0	0
Utah	0	0	--	0	0	0	0	0	0
Wyoming	0	0	--	0	0	0	0	0	0
Pacific Contiguous	26,187	24,223	8.1%	26,187	24,223	0	0	0	0
California	17,214	16,922	1.7%	17,214	16,922	0	0	0	0
Oregon	0	0	--	0	0	0	0	0	0
Washington	8,973	7,301	22.9%	8,973	7,301	0	0	0	0
Pacific Noncontiguous	0	0	--	0	0	0	0	0	0
Alaska	0	0	--	0	0	0	0	0	0
Hawaii	0	0	--	0	0	0	0	0	0
U.S. Total	733,632	727,544	0.8%	387,127	380,683	346,505	346,861	0	0

Displayed values of zero may represent small values that round to zero. The Excel version of this table provides additional precision which may be accessed by selecting individual cells.

NM = Not meaningful due to large relative standard error or excessive percentage change.

Notes: See Glossary for definitions. Values for 2016 are preliminary. Values for 2015 are final. See Technical Notes for a discussion of the sample design for the Form EIA-923.

Negative generation denotes that electric power consumed for plant use exceeds gross generation.

Totals may not equal sum of components because of independent rounding. Percentage change is calculated before rounding.

Source: U.S. Energy Information Administration, Form EIA-923, Power Plant Operations Report.

Table 1.10.A. Utility Scale Facility Net Generation from Hydroelectric (Conventional) Power by State, by Sector, November 2016 and 2015 (Thousand Megawatthours)

Census Division and State	All Sectors			Electric Power Sector		Commercial Sector		Industrial Sector			
				Electric Utilities		Independent Power Producers					
	Generation at Utility Scale Facilities			Generation at Utility Scale Facilities		Generation at Utility Scale Facilities		Generation at Utility Scale Facilities			
November 2016	November 2015	Percentage Change	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015	
New England	359	474	-24.2%	46	70	296	375	NM	0	18	29
Connecticut	NM	20	NM	NM	2	NM	19	0	0	0	0
Maine	186	224	-16.7%	0	0	168	195	0	0	18	28
Massachusetts	44	66	-34.2%	NM	16	34	49	NM	0	NM	0
New Hampshire	61	81	-25.3%	17	23	44	58	0	0	0	0
Rhode Island	NM	0	NM	0	0	NM	0	0	0	0	0
Vermont	57	82	-30.8%	NM	29	NM	53	0	0	0	0
Middle Atlantic	2,237	2,468	-9.4%	1,937	1,949	296	514	NM	0	NM	5
New Jersey	NM	1	NM	0	0	NM	1	0	0	0	0
New York	2,119	2,287	-7.3%	1,935	1,944	181	336	NM	0	NM	5
Pennsylvania	117	181	-35.5%	NM	4	114	176	0	0	0	0
East North Central	420	610	-31.2%	370	519	NM	65	0	0	NM	26
Illinois	NM	10	NM	NM	4	NM	7	0	0	0	0
Indiana	40	52	-24.2%	40	52	0	0	0	0	0	0
Michigan	124	135	-7.7%	115	125	NM	7	0	0	NM	3
Ohio	47	78	-40.0%	35	42	NM	36	0	0	0	0
Wisconsin	200	335	-40.3%	177	297	NM	15	0	0	NM	23
West North Central	762	788	-3.4%	734	754	NM	21	0	0	NM	13
Iowa	82	60	37.3%	82	60	NM	0	0	0	0	0
Kansas	NM	1	NM	0	0	NM	1	0	0	0	0
Minnesota	74	92	-20.0%	48	60	NM	20	0	0	NM	13
Missouri	31	63	-51.0%	31	63	0	0	0	0	0	0
Nebraska	144	105	37.2%	144	105	0	0	0	0	0	0
North Dakota	119	117	1.4%	119	117	0	0	0	0	0	0
South Dakota	310	349	-11.2%	310	349	0	0	0	0	0	0
South Atlantic	635	1,891	-66.4%	514	1,669	104	170	NM	2	16	51
Delaware	0	0	--	0	0	0	0	0	0	0	0
District of Columbia	0	0	--	0	0	0	0	0	0	0	0
Florida	NM	31	NM	NM	31	0	0	0	0	0	0
Georgia	166	383	-56.6%	164	379	NM	1	0	0	NM	3
Maryland	59	106	-44.5%	0	0	59	106	0	0	0	0
North Carolina	160	667	-76.0%	157	659	NM	6	NM	1	NM	0
South Carolina	100	517	-80.7%	97	504	NM	13	NM	0	0	0
Virginia	50	53	-6.1%	45	49	NM	3	0	0	NM	1
West Virginia	87	135	-35.8%	NM	47	37	40	0	0	13	48
East South Central	815	2,221	-63.3%	814	2,220	NM	1	0	0	0	0
Alabama	268	1,024	-73.8%	268	1,024	0	0	0	0	0	0
Kentucky	186	258	-27.8%	186	257	NM	1	0	0	0	0
Mississippi	0	0	--	0	0	0	0	0	0	0	0
Tennessee	360	939	-61.6%	360	939	0	0	0	0	0	0
West South Central	271	430	-36.0%	210	380	61	51	0	0	0	0
Arkansas	114	184	-37.9%	111	181	NM	NM	0	0	0	0
Louisiana	56	45	25.3%	0	0	56	45	0	0	0	0
Oklahoma	63	136	-53.8%	63	136	0	0	0	0	0	0
Texas	38	65	-41.7%	36	62	NM	3	0	0	0	0
Mountain	2,522	1,717	46.9%	2,452	1,682	69	35	NM	0	0	0
Arizona	467	419	11.5%	467	419	0	0	0	0	0	0
Colorado	100	14	634.9%	83	12	NM	2	NM	0	0	0
Idaho	599	407	47.4%	560	384	NM	22	0	0	0	0
Montana	1,064	627	69.7%	1,052	618	NM	9	0	0	0	0
Nevada	184	162	13.3%	183	161	NM	1	0	0	0	0
New Mexico	NM	6	NM	NM	6	0	0	0	0	0	0
Utah	64	45	40.8%	63	45	NM	1	0	0	0	0
Wyoming	34	37	-8.8%	33	37	NM	0	0	0	0	0
Pacific Contiguous	10,649	8,549	24.6%	10,526	8,485	121	63	NM	0	0	0
California	1,674	640	161.7%	1,601	616	71	24	NM	0	0	0
Oregon	2,772	2,533	9.4%	2,749	2,513	NM	20	0	0	0	0
Washington	6,203	5,376	15.4%	6,176	5,356	NM	20	0	0	0	0
Pacific Noncontiguous	146	189	-22.6%	137	174	4	6	0	0	NM	9
Alaska	135	170	-20.6%	135	170	0	0	0	0	0	0
Hawaii	NM	19	NM	NM	3	4	6	0	0	NM	9
U.S. Total	18,815	19,338	-2.7%	17,741	17,901	1,003	1,301	NM	3	68	133

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NM = Not meaningful due to large relative standard error or excessive percentage change.

Notes: See Glossary for definitions. Values for 2016 are preliminary. Values for 2015 are final. See Technical Notes for a discussion of the sample design for the Form EIA-923.

Negative generation denotes that electric power consumed for plant use exceeds gross generation.

Totals may not equal sum of components because of independent rounding. Percentage change is calculated before rounding.

Source: U.S. Energy Information Administration, Form EIA-923, Power Plant Operations Report.

Table 1.10.B. Utility Scale Facility Net Generation from Hydroelectric (Conventional) Power

by State, by Sector, Year-to-Date through November 2016 and 2015 (Thousand Megawatthours)

Census Division and State	All Sectors			Electric Power Sector				Commercial Sector		Industrial Sector	
				Electric Utilities		Independent Power Producers					
	Generation at Utility Scale Facilities			Generation at Utility Scale Facilities							
November 2016 YTD	November 2015 YTD	Percentage Change	November 2016 YTD	November 2015 YTD	November 2016 YTD						
New England	5,715	6,200	-7.8%	812	824	4,595	5,015	NM	5	303	356
Connecticut	268	273	-1.7%	NM	22	246	251	0	0	0	0
Maine	2,741	3,070	-10.7%	0	0	2,442	2,718	0	0	298	352
Massachusetts	708	724	-2.2%	186	176	513	539	NM	5	NM	4
New Hampshire	1,016	1,128	-9.9%	254	274	762	854	0	0	0	0
Rhode Island	NM	3	NM	0	0	NM	3	0	0	0	0
Vermont	979	1,003	-2.3%	351	353	629	650	0	0	0	0
Middle Atlantic	26,572	26,056	2.0%	21,237	20,315	5,279	5,681	NM	4	NM	56
New Jersey	NM	9	NM	0	0	NM	9	0	0	0	0
New York	24,400	23,691	3.0%	21,183	20,258	3,162	3,373	NM	4	NM	56
Pennsylvania	2,152	2,357	-8.7%	54	57	2,098	2,300	0	0	0	0
East North Central	4,655	4,230	7.7%	3,950	3,635	428	422	NM	1	175	172
Illinois	119	111	6.6%	NM	38	71	72	NM	1	0	0
Indiana	387	348	11.0%	387	348	0	0	0	0	0	0
Michigan	1,402	1,262	11.1%	1,291	1,168	84	70	0	0	NM	25
Ohio	478	404	18.4%	300	216	178	187	0	0	0	0
Wisconsin	2,170	2,104	3.1%	1,926	1,865	95	93	0	0	148	147
West North Central	9,997	11,042	-9.5%	9,683	10,761	198	182	0	0	116	99
Iowa	856	884	-3.1%	851	878	NM	6	0	0	0	0
Kansas	NM	17	NM	0	0	NM	17	0	0	0	0
Minnesota	796	733	8.6%	506	475	175	159	0	0	116	99
Missouri	1,199	1,332	-10.0%	1,199	1,332	0	0	0	0	0	0
Nebraska	1,554	1,552	0.1%	1,554	1,552	0	0	0	0	0	0
North Dakota	1,765	1,957	-9.8%	1,765	1,957	0	0	0	0	0	0
South Dakota	3,809	4,567	-16.6%	3,809	4,567	0	0	0	0	0	0
South Atlantic	13,604	12,576	8.2%	11,375	10,088	1,737	1,946	NM	11	478	530
Delaware	0	0	--	0	0	0	0	0	0	0	0
District of Columbia	0	0	--	0	0	0	0	0	0	0	0
Florida	203	210	-3.4%	203	210	0	0	0	0	0	0
Georgia	2,878	2,597	10.8%	2,850	2,570	NM	9	0	0	NM	19
Maryland	1,260	1,474	-14.5%	0	0	1,260	1,474	0	0	0	0
North Carolina	4,272	3,964	7.8%	4,216	3,918	NM	36	NM	9	NM	0
South Carolina	2,275	2,103	8.2%	2,215	2,047	58	54	NM	2	0	0
Virginia	1,444	975	48.1%	1,370	902	62	63	0	0	NM	10
West Virginia	1,273	1,252	1.7%	520	441	309	310	0	0	444	501
East South Central	17,231	19,836	-13.1%	17,224	19,828	NM	8	0	0	0	0
Alabama	7,239	8,389	-13.7%	7,239	8,389	0	0	0	0	0	0
Kentucky	3,140	3,039	3.4%	3,133	3,031	NM	8	0	0	0	0
Mississippi	0	0	--	0	0	0	0	0	0	0	0
Tennessee	6,851	8,408	-18.5%	6,851	8,408	0	0	0	0	0	0
West South Central	7,679	7,137	7.6%	6,563	6,176	1,116	961	0	0	0	0
Arkansas	3,269	3,160	3.5%	3,224	3,117	NM	43	0	0	0	0
Louisiana	1,040	883	17.8%	0	0	1,040	883	0	0	0	0
Oklahoma	2,309	2,221	4.0%	2,309	2,221	0	0	0	0	0	0
Texas	1,061	873	21.5%	1,030	838	NM	35	0	0	0	0
Mountain	29,658	28,452	4.2%	28,528	27,416	1,121	1,030	NM	6	0	0
Arizona	6,565	6,004	9.3%	6,565	6,004	0	0	0	0	0	0
Colorado	1,760	1,436	22.6%	1,568	1,267	183	163	NM	6	0	0
Idaho	8,766	8,259	6.1%	7,996	7,554	771	704	0	0	0	0
Montana	9,045	9,022	0.2%	8,912	8,892	132	131	0	0	0	0
Nevada	1,682	2,102	-20.0%	1,665	2,087	NM	14	0	0	0	0
New Mexico	136	92	47.8%	136	92	0	0	0	0	0	0
Utah	744	710	4.8%	735	702	NM	8	0	0	0	0
Wyoming	961	829	16.0%	951	819	NM	9	0	0	0	0
Pacific Contiguous	126,709	108,888	16.4%	124,820	107,890	1,868	995	NM	3	0	0
California	26,639	12,948	105.7%	25,276	12,421	1,341	524	NM	3	0	0
Oregon	30,552	28,429	7.5%	30,302	28,213	250	216	0	0	0	0
Washington	69,518	67,511	3.0%	69,241	67,256	277	255	0	0	0	0
Pacific Noncontiguous	1,501	1,498	0.2%	1,416	1,411	31	36	0	0	53	51
Alaska	1,397	1,392	0.4%	1,397	1,392	0	0	0	0	0	0
Hawaii	104	106	-1.8%	NM	19	31	36	0	0	53	51
U.S. Total	243,220	225,915	7.7%	225,608	208,344	16,381	16,275	54	31	1,177	1,265

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NM = Not meaningful due to large relative standard error or excessive percentage change.

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Negative generation denotes that electric power consumed for plant use exceeds gross generation.

Totals may not equal sum of components because of independent rounding. Percentage change is calculated before rounding.

Source: U.S. Energy Information Administration, Form EIA-923, Power Plant Operations Report.

Table 1.11.A. Utility Scale Facility Net Generation from Renewable Sources Excluding Hydroelectric by State, by Sector, November 2016 and 2015 (Thousand Megawatthours)

Census Division and State	All Sectors			Electric Power Sector		Commercial Sector		Industrial Sector	
				Electric Utilities		Independent Power Producers			
	Generation at Utility Scale Facilities			Generation at Utility Scale Facilities		Generation at Utility Scale Facilities		Generation at Utility Scale Facilities	
November 2016	November 2015	Percentage Change	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015	November 2016
New England	840	906	-7.3%	74	75	653	728	13	15
Connecticut	73	65	12.3%	NM	0	73	65	0	0
Maine	350	423	-17.2%	0	0	244	327	7	8
Massachusetts	158	155	1.6%	7	8	148	144	3	3
New Hampshire	175	169	3.2%	29	23	143	143	NM	3
Rhode Island	22	18	17.6%	0	0	21	18	NM	1
Vermont	63	75	-16.8%	38	44	25	31	NM	0
Middle Atlantic	1,279	1,318	-3.0%	7	4	1,167	1,188	45	56
New Jersey	140	123	13.9%	7	4	109	97	24	22
New York	575	613	-6.2%	0	0	542	577	17	20
Pennsylvania	564	582	-3.1%	0	0	516	514	4	15
East North Central	2,801	3,291	-14.9%	366	410	2,288	2,718	18	24
Illinois	1,121	1,426	-21.4%	NM	4	1,117	1,421	NM	1
Indiana	533	603	-11.6%	30	26	497	569	NM	2
Michigan	693	735	-5.7%	204	220	419	442	13	18
Ohio	189	211	-10.2%	NM	3	161	177	NM	1
Wisconsin	264	316	-16.6%	127	158	94	108	NM	3
West North Central	5,985	5,800	3.2%	2,153	2,035	3,771	3,692	9	9
Iowa	2,065	2,066	0.0%	1,344	1,278	714	780	NM	2
Kansas	1,227	1,158	6.0%	64	87	1,163	1,071	0	0
Minnesota	1,164	1,279	-9.0%	268	308	845	909	5	5
Missouri	118	137	-13.8%	NM	2	114	134	NM	0
Nebraska	340	325	4.7%	26	27	314	296	NM	2
North Dakota	779	584	33.4%	355	243	424	340	0	0
South Dakota	292	251	16.0%	94	90	198	162	0	0
South Atlantic	2,067	1,926	7.3%	122	145	1,028	873	38	42
Delaware	10	10	3.8%	NM	0	8	8	NM	1
District of Columbia	0	5	-100.0%	0	0	0	5	0	0
Florida	403	411	-1.9%	20	16	205	221	NM	4
Georgia	499	408	22.4%	14	0	144	72	NM	1
Maryland	115	103	11.3%	NM	1	101	94	NM	2
North Carolina	433	341	27.0%	10	1	300	210	13	16
South Carolina	184	170	8.2%	38	42	30	31	0	0
Virginia	286	331	-13.5%	38	86	104	86	18	20
West Virginia	136	147	-7.6%	0	0	136	147	0	0
East South Central	547	546	0.2%	8	9	52	46	NM	0
Alabama	290	273	6.5%	0	0	35	25	0	0
Kentucky	41	46	-10.0%	8	9	NM	1	0	0
Mississippi	122	133	-8.5%	0	0	NM	3	0	0
Tennessee	93	94	-0.8%	0	0	15	18	NM	0
West South Central	6,809	6,821	-0.2%	153	164	6,219	6,235	6	7
Arkansas	124	127	-3.0%	0	0	9	6	NM	0
Louisiana	230	225	2.4%	0	0	8	8	0	0
Oklahoma	1,725	1,617	6.6%	138	142	1,561	1,446	0	0
Texas	4,730	4,852	-2.5%	15	22	4,641	4,776	NM	6
Mountain	3,288	2,782	18.2%	289	320	2,957	2,419	9	9
Arizona	306	322	-4.8%	33	38	272	282	NM	2
Colorado	985	682	44.4%	24	14	960	667	NM	1
Idaho	278	284	-2.1%	NM	1	245	249	NM	1
Montana	205	211	-2.7%	21	21	183	187	0	0
Nevada	532	474	12.3%	NM	1	525	469	5	4
New Mexico	374	267	39.7%	16	10	358	257	NM	0
Utah	227	98	132.2%	23	21	204	76	NM	1
Wyoming	380	445	-14.5%	170	213	210	232	0	0
Pacific Contiguous	4,761	4,533	5.0%	585	595	3,892	3,649	76	81
California	3,428	3,108	10.3%	151	138	3,159	2,857	73	77
Oregon	557	645	-13.7%	51	89	462	503	NM	2
Washington	776	779	-0.5%	383	368	272	289	NM	1
Pacific Noncontiguous	141	142	-0.3%	18	17	98	97	20	19
Alaska	19	23	-18.1%	10	12	5	6	NM	4
Hawaii	122	119	3.1%	8	5	93	91	16	15
U.S. Total	28,516	28,065	1.6%	3,775	3,776	22,125	21,645	235	263
								2,381	2,381

Displayed values of zero may represent small values that round to zero. The Excel version of this table provides additional precision which may be accessed by selecting individual cells.

NM = Not meaningful due to large relative standard error or excessive percentage change.

Notes: See Glossary for definitions. Values for 2016 are preliminary. Values for 2015 are final. See Technical Notes for a discussion of the sample design for the Form EIA-923.

Negative generation denotes that electric power consumed for plant use exceeds gross generation.

Totals may not equal sum of components because of independent rounding. Percentage change is calculated before rounding.

Source: U.S. Energy Information Administration, Form EIA-923, Power Plant Operations Report.

Table 1.11.B. Utility Scale Facility Net Generation from Renewable Sources Excluding Hydroelectric

by State, by Sector, Year-to-Date through November 2016 and 2015 (Thousand Megawatthours)

	All Sectors			Electric Power Sector				Commercial Sector		Industrial Sector	
				Electric Utilities		Independent Power Producers					
	Generation at Utility Scale Facilities			Generation at Utility Scale Facilities							
Census Division and State	November 2016 YTD	November 2015 YTD	Percentage Change	November 2016 YTD	November 2015 YTD						
New England	9,570	9,294	3.0%	805	807	7,609	7,180	150	154	1,006	1,153
Connecticut	818	726	12.7%	NM	0	814	722	0	4	0	0
Maine	3,955	4,047	-2.3%	0	0	2,871	2,813	81	83	1,003	1,150
Massachusetts	1,891	1,683	12.4%	72	69	1,784	1,585	33	27	NM	3
New Hampshire	1,924	1,859	3.5%	283	289	1,613	1,537	27	33	0	0
Rhode Island	228	215	5.7%	0	0	221	209	7	6	0	0
Vermont	755	764	-1.2%	446	449	307	313	NM	2	0	0
Middle Atlantic	12,609	12,442	1.3%	104	61	11,230	11,048	592	627	682	706
New Jersey	1,680	1,483	13.3%	104	61	1,271	1,136	303	284	NM	1
New York	5,659	5,709	-0.9%	0	0	5,279	5,319	195	195	186	194
Pennsylvania	5,269	5,250	0.4%	0	0	4,680	4,593	94	147	495	510
East North Central	25,857	25,752	0.4%	3,214	3,329	20,970	20,624	203	255	1,470	1,545
Illinois	10,020	9,957	0.6%	34	31	9,981	9,921	NM	5	0	0
Indiana	5,029	4,492	11.9%	330	284	4,620	4,123	17	20	62	65
Michigan	6,348	6,588	-3.6%	1,693	1,778	3,906	4,006	135	187	614	617
Ohio	1,852	1,849	0.2%	27	24	1,528	1,491	14	10	283	323
Wisconsin	2,608	2,866	-9.0%	1,130	1,213	935	1,082	32	33	511	538
West North Central	56,168	48,891	14.9%	19,322	16,089	36,134	32,092	143	125	568	585
Iowa	17,868	16,279	9.8%	11,265	9,606	6,511	6,573	34	38	58	62
Kansas	12,959	9,812	32.1%	774	790	12,177	9,022	0	0	8	0
Minnesota	10,952	10,514	4.2%	2,691	2,253	7,722	7,700	50	45	489	517
Missouri	1,168	1,052	11.0%	40	39	1,079	983	45	28	3	2
Nebraska	3,333	2,930	13.8%	253	247	3,066	2,668	14	15	0	0
North Dakota	7,092	5,989	18.4%	3,421	2,396	3,661	3,590	0	0	11	3
South Dakota	2,797	2,315	20.8%	878	758	1,918	1,557	0	0	0	0
South Atlantic	23,449	20,929	12.0%	2,076	1,792	11,433	9,027	460	420	9,480	9,690
Delaware	126	118	6.5%	7	6	101	92	6	6	12	14
District of Columbia	0	26	-100.0%	0	0	0	26	0	0	0	0
Florida	4,377	4,713	-7.1%	246	264	2,266	2,491	44	42	1,821	1,916
Georgia	5,011	4,407	13.7%	81	1	1,335	719	9	10	3,566	3,677
Maryland	1,119	964	16.1%	9	8	979	843	29	20	101	92
North Carolina	5,662	3,549	59.6%	236	6	4,139	2,196	177	133	1,110	1,214
South Carolina	2,186	2,101	4.0%	378	405	377	376	0	0	1,431	1,320
Virginia	3,753	3,807	-1.4%	1,120	1,102	1,021	1,039	194	209	1,418	1,457
West Virginia	1,215	1,244	-2.4%	0	0	1,215	1,244	0	0	0	0
East South Central	5,832	5,821	0.2%	90	79	474	430	NM	3	5,264	5,309
Alabama	3,007	2,999	0.2%	0	0	273	233	0	0	2,734	2,767
Kentucky	426	406	4.8%	90	79	7	7	0	0	329	321
Mississippi	1,370	1,389	-1.3%	0	0	12	12	0	0	1,358	1,377
Tennessee	1,029	1,026	0.3%	0	0	182	178	NM	3	843	845
West South Central	76,281	58,184	31.1%	1,564	1,672	69,979	52,039	77	63	4,661	4,411
Arkansas	1,298	1,325	-2.0%	0	0	119	79	3	4	1,176	1,242
Louisiana	2,460	2,464	-0.2%	0	0	86	83	0	0	2,374	2,381
Oklahoma	18,048	12,896	40.0%	1,306	1,294	16,468	11,308	0	0	274	294
Texas	54,474	41,499	31.3%	257	378	53,306	40,569	74	59	837	494
Mountain	34,172	26,405	29.4%	3,166	2,774	30,513	23,162	138	101	355	369
Arizona	4,222	3,856	9.5%	495	500	3,707	3,336	20	20	0	0
Colorado	9,138	6,904	32.3%	111	123	9,002	6,763	22	15	NM	2
Idaho	2,800	2,609	7.3%	12	11	2,452	2,245	7	8	330	344
Montana	1,908	1,777	7.4%	204	195	1,685	1,563	0	0	20	19
Nevada	6,189	4,641	33.4%	34	1	6,079	4,596	74	42	NM	2
New Mexico	4,024	2,315	73.9%	238	144	3,783	2,168	NM	2	0	0
Utah	2,075	1,047	98.1%	234	237	1,828	797	12	13	0	0
Wyoming	3,817	3,256	17.2%	1,840	1,563	1,977	1,693	0	0	0	0
Pacific Contiguous	64,718	57,537	12.5%	7,757	7,039	53,824	47,180	924	988	2,213	2,329
California	47,753	42,072	13.5%	2,099	2,037	44,265	38,605	893	949	496	481
Oregon	7,761	7,266	6.8%	1,278	1,218	6,045	5,452	16	23	422	572
Washington	9,204	8,198	12.3%	4,380	3,784	3,514	3,123	15	15	1,295	1,276
Pacific Noncontiguous	1,410	1,304	8.1%	179	167	922	837	230	221	79	79
Alaska	193	194	-0.6%	97	94	49	49	42	47	5	4
Hawaii	1,216	1,109	9.6%	83	73	872	788	188	174	74	75
U.S. Total	310,064	266,559	16.3%	38,277	33,811	243,087	203,619	2,921	2,954	25,779	26,175

Displayed values of zero may represent small values that round to zero. The Excel version of this table provides additional precision which may be accessed by selecting individual cells.

NM = Not meaningful due to large relative standard error or excessive percentage change.

Notes: See Glossary for definitions. Values for 2016 are preliminary. Values for 2015 are final. See Technical Notes for a discussion of the sample design for the Form EIA-923.

Negative generation denotes that electric power consumed for plant use exceeds gross generation.

Totals may not equal sum of components because of independent rounding. Percentage change is calculated before rounding.

Table 1.12.A. Utility Scale Facility Net Generation from Hydroelectric (Pumped Storage) Power by State, by Sector, November 2016 and 2015 (Thousand Megawatthours)

Census Division and State	All Sectors			Electric Power Sector		Commercial Sector		Industrial Sector		
				Electric Utilities		Independent Power Producers				
	Generation at Utility Scale Facilities			Generation at Utility Scale Facilities		Generation at Utility Scale Facilities		Generation at Utility Scale Facilities		
November 2016	November 2015	Percentage Change	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015
New England	-37	-25	48.4%	0	0	-37	-25	0	0	0
Connecticut	1	0	NM	0	0	1	0	0	0	0
Maine	0	0	--	0	0	0	0	0	0	0
Massachusetts	-38	-25	53.1%	0	0	-38	-25	0	0	0
New Hampshire	0	0	--	0	0	0	0	0	0	0
Rhode Island	0	0	--	0	0	0	0	0	0	0
Vermont	0	0	--	0	0	0	0	0	0	0
Middle Atlantic	-88	-76	15.9%	-40	-34	-48	-42	0	0	0
New Jersey	-13	-9	40.6%	-13	-9	0	0	0	0	0
New York	-26	-24	8.8%	-26	-24	0	0	0	0	0
Pennsylvania	-48	-42	14.5%	0	0	-48	-42	0	0	0
East North Central	-48	-21	126.4%	-48	-21	0	0	0	0	0
Illinois	0	0	--	0	0	0	0	0	0	0
Indiana	0	0	--	0	0	0	0	0	0	0
Michigan	-48	-21	126.4%	-48	-21	0	0	0	0	0
Ohio	0	0	--	0	0	0	0	0	0	0
Wisconsin	0	0	--	0	0	0	0	0	0	0
West North Central	-4	1	-548.2%	-4	1	0	0	0	0	0
Iowa	0	0	--	0	0	0	0	0	0	0
Kansas	0	0	--	0	0	0	0	0	0	0
Minnesota	0	0	--	0	0	0	0	0	0	0
Missouri	-4	1	-548.2%	-4	1	0	0	0	0	0
Nebraska	0	0	--	0	0	0	0	0	0	0
North Dakota	0	0	--	0	0	0	0	0	0	0
South Dakota	0	0	--	0	0	0	0	0	0	0
South Atlantic	-233	-92	152.3%	-233	-92	0	0	0	0	0
Delaware	0	0	--	0	0	0	0	0	0	0
District of Columbia	0	0	--	0	0	0	0	0	0	0
Florida	0	0	--	0	0	0	0	0	0	0
Georgia	-135	8	NM	-135	8	0	0	0	0	0
Maryland	0	0	--	0	0	0	0	0	0	0
North Carolina	0	0	--	0	0	0	0	0	0	0
South Carolina	-58	-50	14.3%	-58	-50	0	0	0	0	0
Virginia	-40	-50	-20.3%	-40	-50	0	0	0	0	0
West Virginia	0	0	--	0	0	0	0	0	0	0
East South Central	-45	-27	70.5%	-45	-27	0	0	0	0	0
Alabama	0	0	--	0	0	0	0	0	0	0
Kentucky	0	0	--	0	0	0	0	0	0	0
Mississippi	0	0	--	0	0	0	0	0	0	0
Tennessee	-45	-27	70.5%	-45	-27	0	0	0	0	0
West South Central	-6	-4	31.2%	-6	-4	0	0	0	0	0
Arkansas	0	0	-21.9%	0	0	0	0	0	0	0
Louisiana	0	0	--	0	0	0	0	0	0	0
Oklahoma	-6	-5	27.8%	-6	-5	0	0	0	0	0
Texas	0	0	--	0	0	0	0	0	0	0
Mountain	-26	-20	31.9%	-26	-20	0	0	0	0	0
Arizona	-8	-2	239.7%	-8	-2	0	0	0	0	0
Colorado	-18	-18	5.0%	-18	-18	0	0	0	0	0
Idaho	0	0	--	0	0	0	0	0	0	0
Montana	0	0	--	0	0	0	0	0	0	0
Nevada	0	0	--	0	0	0	0	0	0	0
New Mexico	0	0	--	0	0	0	0	0	0	0
Utah	0	0	--	0	0	0	0	0	0	0
Wyoming	0	0	--	0	0	0	0	0	0	0
Pacific Contiguous	-120	-22	455.3%	-120	-22	0	0	0	0	0
California	-120	-27	338.3%	-120	-27	0	0	0	0	0
Oregon	0	0	--	0	0	0	0	0	0	0
Washington	0	6	-105.6%	0	6	0	0	0	0	0
Pacific Noncontiguous	0	0	--	0	0	0	0	0	0	0
Alaska	0	0	--	0	0	0	0	0	0	0
Hawaii	0	0	--	0	0	0	0	0	0	0
U.S. Total	-607	-285	112.7%	-522	-218	-85	-67	0	0	0

Displayed values of zero may represent small values that round to zero. The Excel version of this table provides additional precision which may be accessed by selecting individual cells.

NM = Not meaningful due to large relative standard error or excessive percentage change.

Notes: See Glossary for definitions. Values for 2016 are preliminary. Values for 2015 are final. See Technical Notes for a discussion of the sample design for the Form EIA-923.

Negative generation denotes that electric power consumed for plant use exceeds gross generation.

Totals may not equal sum of components because of independent rounding. Percentage change is calculated before rounding.

Source: U.S. Energy Information Administration, Form EIA-923, Power Plant Operations Report.

Table 1.12.B. Utility Scale Facility Net Generation from Hydroelectric (Pumped Storage) Power

by State, by Sector, Year-to-Date through November 2016 and 2015 (Thousand Megawatthours)

Census Division and State	All Sectors			Electric Power Sector		Commercial Sector		Industrial Sector	
				Electric Utilities		Independent Power Producers			
	Generation at Utility Scale Facilities			Generation at Utility Scale Facilities		Generation at Utility Scale Facilities		Generation at Utility Scale Facilities	
November 2016 YTD	November 2015 YTD	Percentage Change	November 2016 YTD	November 2015 YTD	November 2016 YTD	November 2015 YTD	November 2016 YTD	November 2015 YTD	November 2016 YTD
New England	-453	-441	2.7%	0	0	-453	-441	0	0
Connecticut	3	-4	-174.8%	0	0	3	-4	0	0
Maine	0	0	--	0	0	0	0	0	0
Massachusetts	-456	-436	4.4%	0	0	-456	-436	0	0
New Hampshire	0	0	--	0	0	0	0	0	0
Rhode Island	0	0	--	0	0	0	0	0	0
Vermont	0	0	--	0	0	0	0	0	0
Middle Atlantic	-1,121	-1,025	9.4%	-612	-550	-508	-475	0	0
New Jersey	-189	-160	17.8%	-189	-160	0	0	0	0
New York	-424	-389	8.8%	-424	-389	0	0	0	0
Pennsylvania	-508	-475	7.1%	0	0	-508	-475	0	0
East North Central	-694	-449	54.5%	-694	-449	0	0	0	0
Illinois	0	0	--	0	0	0	0	0	0
Indiana	0	0	--	0	0	0	0	0	0
Michigan	-694	-449	54.5%	-694	-449	0	0	0	0
Ohio	0	0	--	0	0	0	0	0	0
Wisconsin	0	0	--	0	0	0	0	0	0
West North Central	195	271	-27.8%	195	271	0	0	0	0
Iowa	0	0	--	0	0	0	0	0	0
Kansas	0	0	--	0	0	0	0	0	0
Minnesota	0	0	--	0	0	0	0	0	0
Missouri	195	271	-27.8%	195	271	0	0	0	0
Nebraska	0	0	--	0	0	0	0	0	0
North Dakota	0	0	--	0	0	0	0	0	0
South Dakota	0	0	--	0	0	0	0	0	0
South Atlantic	-2,859	-2,626	8.8%	-2,859	-2,626	0	0	0	0
Delaware	0	0	--	0	0	0	0	0	0
District of Columbia	0	0	--	0	0	0	0	0	0
Florida	0	0	--	0	0	0	0	0	0
Georgia	-851	-826	3.1%	-851	-826	0	0	0	0
Maryland	0	0	--	0	0	0	0	0	0
North Carolina	0	0	-100.0%	0	0	0	0	0	0
South Carolina	-913	-848	7.7%	-913	-848	0	0	0	0
Virginia	-1,094	-953	14.8%	-1,094	-953	0	0	0	0
West Virginia	0	0	--	0	0	0	0	0	0
East South Central	-662	-483	37.1%	-662	-483	0	0	0	0
Alabama	0	0	--	0	0	0	0	0	0
Kentucky	0	0	--	0	0	0	0	0	0
Mississippi	0	0	--	0	0	0	0	0	0
Tennessee	-662	-483	37.1%	-662	-483	0	0	0	0
West South Central	-40	-41	-1.5%	-40	-41	0	0	0	0
Arkansas	39	29	33.0%	39	29	0	0	0	0
Louisiana	0	0	--	0	0	0	0	0	0
Oklahoma	-79	-70	12.8%	-79	-70	0	0	0	0
Texas	0	0	--	0	0	0	0	0	0
Mountain	-202	-181	11.6%	-202	-181	0	0	0	0
Arizona	68	75	-9.0%	68	75	0	0	0	0
Colorado	-270	-256	5.6%	-270	-256	0	0	0	0
Idaho	0	0	--	0	0	0	0	0	0
Montana	0	0	--	0	0	0	0	0	0
Nevada	0	0	--	0	0	0	0	0	0
New Mexico	0	0	--	0	0	0	0	0	0
Utah	0	0	--	0	0	0	0	0	0
Wyoming	0	0	--	0	0	0	0	0	0
Pacific Contiguous	-99	163	-160.6%	-99	163	0	0	0	0
California	-97	126	-177.5%	-97	126	0	0	0	0
Oregon	0	0	--	0	0	0	0	0	0
Washington	-2	38	-104.6%	-2	38	0	0	0	0
Pacific Noncontiguous	0	0	--	0	0	0	0	0	0
Alaska	0	0	--	0	0	0	0	0	0
Hawaii	0	0	--	0	0	0	0	0	0
U.S. Total	-5,933	-4,811	23.3%	-4,972	-3,895	-961	-916	0	0

Displayed values of zero may represent small values that round to zero. The Excel version of this table provides additional precision which may be accessed by selecting individual cells.

NM = Not meaningful due to large relative standard error or excessive percentage change.

Notes: See Glossary for definitions. Values for 2016 are preliminary. Values for 2015 are final. See Technical Notes for a discussion of the sample design for the Form EIA-923.

Negative generation denotes that electric power consumed for plant use exceeds gross generation.

Totals may not equal sum of components because of independent rounding. Percentage change is calculated before rounding.

Source: U.S. Energy Information Administration, Form EIA-923, Power Plant Operations Report.

Table 1.13.A. Utility Scale Facility Net Generation from Other Energy Sources by State, by Sector, November 2016 and 2015 (Thousand Megawatthours)

Census Division and State	All Sectors			Electric Power Sector				Commercial Sector		Industrial Sector	
				Electric Utilities		Independent Power Producers					
	Generation at Utility Scale Facilities			Generation at Utility Scale Facilities							
November 2016	November 2015	Percentage Change	November 2016	November 2015	November 2016						
New England	155	159	-2.2%	0	0	140	142	7	7	8	9
Connecticut	50	50	-0.9%	0	0	50	50	0	0	0	0
Maine	33	31	4.1%	0	0	17	15	7	7	8	9
Massachusetts	69	73	-6.2%	0	0	69	73	0	0	0	0
New Hampshire	4	4	3.0%	0	0	4	4	0	0	0	0
Rhode Island	0	0	--	0	0	0	0	0	0	0	0
Vermont	0	0	--	0	0	0	0	0	0	0	0
Middle Atlantic	187	215	-13.2%	0	0	158	169	28	40	0	6
New Jersey	44	52	-14.6%	0	0	33	34	11	12	0	6
New York	76	79	-4.3%	0	0	59	61	17	18	0	0
Pennsylvania	66	84	-20.7%	0	0	66	74	0	10	0	0
East North Central	70	96	-26.9%	2	4	10	11	14	19	44	61
Illinois	19	19	0.5%	0	0	0	-1	0	0	19	20
Indiana	21	39	-46.4%	0	0	0	0	NM	2	19	37
Michigan	24	35	-29.3%	0	3	11	13	12	18	1	1
Ohio	1	0	-412.0%	0	0	NM	-1	0	0	1	1
Wisconsin	5	4	23.6%	2	2	0	0	0	0	NM	2
West North Central	37	43	-14.0%	19	21	11	13	NM	3	NM	6
Iowa	NM	1	NM	0	0	0	0	0	0	NM	1
Kansas	0	0	--	0	0	0	0	0	0	0	0
Minnesota	33	34	-4.6%	15	14	11	13	NM	3	NM	4
Missouri	0	4	-90.2%	0	4	0	0	0	0	0	0
Nebraska	0	0	--	0	0	0	0	0	0	0	0
North Dakota	NM	4	NM	NM	4	0	0	0	0	0	0
South Dakota	0	0	--	0	0	0	0	0	0	0	0
South Atlantic	379	361	5.1%	0	0	204	199	17	18	159	144
Delaware	0	0	--	0	0	0	0	0	0	0	0
District of Columbia	0	0	--	0	0	0	0	0	0	0	0
Florida	244	213	14.7%	0	0	118	111	0	0	127	102
Georgia	7	12	-42.0%	0	0	0	0	0	0	7	12
Maryland	29	27	8.4%	0	0	29	27	0	0	0	0
North Carolina	54	62	-13.2%	0	0	32	35	0	0	22	27
South Carolina	4	3	7.5%	0	0	NM	0	0	0	3	3
Virginia	41	44	-5.6%	0	0	25	26	17	18	0	0
West Virginia	0	0	--	0	0	0	0	0	0	0	0
East South Central	5	10	-47.6%	4	8	0	0	0	0	NM	2
Alabama	0	0	--	0	0	0	0	0	0	0	0
Kentucky	4	8	-45.8%	4	8	0	0	0	0	0	0
Mississippi	NM	0	NM	0	0	0	0	0	0	NM	0
Tennessee	1	2	-69.5%	0	0	0	0	0	0	1	2
West South Central	116	155	-25.3%	0	0	2	10	0	0	114	145
Arkansas	0	1	-78.3%	0	0	0	0	0	0	0	1
Louisiana	56	83	-32.8%	0	0	0	0	0	0	56	83
Oklahoma	2	1	146.5%	0	0	1	0	0	0	NM	1
Texas	57	70	-18.0%	0	0	NM	10	0	0	56	60
Mountain	49	53	-6.7%	NM	0	24	22	0	0	25	31
Arizona	0	0	--	0	0	0	0	0	0	0	0
Colorado	NM	4	NM	0	0	NM	1	0	0	NM	3
Idaho	6	7	-10.8%	0	0	0	0	0	0	6	7
Montana	23	20	13.0%	0	0	23	20	0	0	0	0
Nevada	0	0	-100.0%	0	0	0	0	0	0	0	0
New Mexico	NM	0	NM	NM	0	0	0	0	0	0	0
Utah	16	14	14.1%	0	0	NM	0	0	0	16	14
Wyoming	0	7	-100.0%	0	0	0	0	0	0	0	7
Pacific Contiguous	79	76	3.8%	0	0	26	24	0	0	53	52
California	70	69	2.3%	0	0	17	16	0	0	53	52
Oregon	4	4	1.3%	0	0	4	4	0	0	0	0
Washington	5	4	34.4%	0	0	5	4	0	0	0	0
Pacific Noncontiguous	16	30	-48.2%	0	15	0	1	16	15	0	0
Alaska	0	0	-100.0%	0	0	0	0	0	0	0	0
Hawaii	16	30	-48.5%	0	15	0	1	16	15	0	0
U.S. Total	1,093	1,197	-8.7%	24	48	576	591	84	102	407	456

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NM = Not meaningful due to large relative standard error or excessive percentage change.

Notes: See Glossary for definitions. Values for 2016 are preliminary. Values for 2015 are final. See Technical Notes for a discussion of the sample design for the Form EIA-923.

Negative generation denotes that electric power consumed for plant use exceeds gross generation.

Totals may not equal sum of components because of independent rounding. Percentage change is calculated before rounding.

Source: U.S. Energy Information Administration, Form EIA-923, Power Plant Operations Report.

Table 1.13.B. Utility Scale Facility Net Generation from Other Energy Sources

by State, by Sector, Year-to-Date through November 2016 and 2015 (Thousand Megawatthours)

Census Division and State	All Sectors			Electric Power Sector		Commercial Sector		Industrial Sector	
				Electric Utilities		Independent Power Producers			
	Generation at Utility Scale Facilities			Generation at Utility Scale Facilities		Generation at Utility Scale Facilities		Generation at Utility Scale Facilities	
November 2016 YTD	November 2015 YTD	Percentage Change	November 2016 YTD	November 2015 YTD	November 2016 YTD	November 2015 YTD	November 2016 YTD	November 2015 YTD	November 2016 YTD
New England	1,727	1,652	4.6%	0	0	1,553	1,472	84	82
Connecticut	544	505	7.9%	0	0	544	501	0	3
Maine	328	308	6.5%	0	0	154	132	84	78
Massachusetts	805	794	1.4%	0	0	805	794	0	0
New Hampshire	50	46	8.7%	0	0	50	46	0	0
Rhode Island	0	0	--	0	0	0	0	0	0
Vermont	0	0	--	0	0	0	0	0	0
Middle Atlantic	2,118	2,180	-2.8%	0	0	1,754	1,715	364	405
New Jersey	496	526	-5.7%	0	0	367	334	129	131
New York	832	837	-0.7%	0	0	637	657	194	180
Pennsylvania	790	817	-3.2%	0	0	750	724	41	93
East North Central	930	1,065	-12.7%	28	53	142	136	150	197
Illinois	214	248	-13.7%	0	0	-5	-4	0	0
Indiana	343	387	-11.3%	0	0	0	0	17	18
Michigan	297	374	-20.6%	11	30	136	147	133	179
Ohio	21	-3	-896.5%	0	-2	11	-7	0	0
Wisconsin	54	58	-7.2%	16	26	0	0	0	0
West North Central	423	450	-6.0%	212	250	130	120	31	31
Iowa	5	3	70.1%	0	0	0	0	0	5
Kansas	0	0	--	0	0	0	0	0	0
Minnesota	372	357	4.1%	166	160	130	120	31	31
Missouri	9	52	-83.1%	9	52	0	0	0	0
Nebraska	0	0	--	0	0	0	0	0	0
North Dakota	37	38	-2.6%	37	38	0	0	0	0
South Dakota	0	0	--	0	0	0	0	0	0
South Atlantic	4,383	4,212	4.1%	0	0	2,282	2,122	182	190
Delaware	0	0	--	0	0	0	0	0	0
District of Columbia	0	0	--	0	0	0	0	0	0
Florida	2,910	2,754	5.7%	0	0	1,379	1,245	0	0
Georgia	95	77	23.5%	0	0	0	0	0	95
Maryland	300	290	3.3%	0	0	300	290	NM	0
North Carolina	624	623	0.1%	0	0	369	351	0	0
South Carolina	42	45	-6.2%	0	0	5	4	0	37
Virginia	412	422	-2.3%	0	0	230	232	182	190
West Virginia	0	0	--	0	0	0	0	0	0
East South Central	66	68	-1.8%	46	43	0	0	0	21
Alabama	0	0	--	0	0	0	0	0	0
Kentucky	46	43	6.0%	46	43	0	0	0	0
Mississippi	5	5	-6.2%	0	0	0	0	0	5
Tennessee	15	19	-18.4%	0	0	0	0	0	15
West South Central	1,307	1,401	-6.7%	0	0	31	82	0	0
Arkansas	4	11	-61.6%	0	0	0	0	0	4
Louisiana	616	710	-13.3%	0	0	0	0	0	616
Oklahoma	34	10	232.0%	0	0	20	0	0	15
Texas	653	670	-2.5%	0	0	12	82	0	0
Mountain	575	567	1.4%	NM	2	315	298	0	0
Arizona	0	0	--	0	0	0	0	0	0
Colorado	46	48	-4.3%	0	0	12	11	0	33
Idaho	70	74	-5.5%	0	0	0	0	0	70
Montana	299	284	5.4%	0	0	299	284	0	0
Nevada	NM	1	NM	NM	1	0	0	0	0
New Mexico	NM	1	NM	NM	1	0	0	0	0
Utah	159	89	79.1%	0	0	NM	3	0	0
Wyoming	0	71	-100.0%	0	0	0	0	0	0
Pacific Contiguous	829	867	-4.3%	NM	-2	275	279	0	0
California	729	737	-1.0%	NM	-1	176	188	0	0
Oregon	43	38	11.6%	NM	0	43	39	0	0
Washington	57	91	-37.6%	0	0	57	52	0	0
Pacific Noncontiguous	191	338	-43.3%	NM	163	11	8	180	167
Alaska	NM	-2	NM	NM	-2	0	0	0	0
Hawaii	191	340	-43.8%	0	165	11	8	180	167
U.S. Total	12,550	12,800	-1.9%	288	509	6,494	6,231	993	1,072
						4,776	4,988		

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NM = Not meaningful due to large relative standard error or excessive percentage change.

Notes: See Glossary for definitions. Values for 2016 are preliminary. Values for 2015 are final. See Technical Notes for a discussion of the sample design for the Form EIA-923.

Negative generation denotes that electric power consumed for plant use exceeds gross generation.

Totals may not equal sum of components because of independent rounding. Percentage change is calculated before rounding.

Source: U.S. Energy Information Administration, Form EIA-923, Power Plant Operations Report.

**Table 1.14.A. Utility Scale Facility Net Generation from Wind
by State, by Sector, November 2016 and 2015 (Thousand Megawatthours)**

Census Division and State	All Sectors			Electric Power Sector				Commercial Sector		Industrial Sector	
				Electric Utilities		Independent Power Producers					
	Generation at Utility Scale Facilities			Generation at Utility Scale Facilities							
November 2016	November 2015	Percentage Change	November 2016	November 2015							
New England	226	266	-15.1%	18	27	205	236	NM	4	NM	0
Connecticut	0	0	--	0	0	0	0	0	0	0	0
Maine	143	167	-14.6%	0	0	143	167	0	0	0	0
Massachusetts	21	23	-11.5%	6	7	12	13	NM	3	NM	0
New Hampshire	37	43	-13.0%	0	0	37	43	0	0	0	0
Rhode Island	NM	1	NM	0	0	NM	0	NM	1	0	0
Vermont	21	32	-33.9%	12	20	9	12	0	0	0	0
Middle Atlantic	740	780	-5.1%	0	0	740	780	0	0	NM	0
New Jersey	NM	2	NM	0	0	NM	2	0	0	0	0
New York	371	415	-10.4%	0	0	371	414	0	0	NM	0
Pennsylvania	367	363	1.0%	0	0	367	363	0	0	0	0
East North Central	2,315	2,801	-17.4%	298	348	2,010	2,447	NM	1	NM	5
Illinois	1,071	1,372	-22.0%	NM	2	1,069	1,370	NM	1	0	0
Indiana	477	554	-13.9%	0	0	477	554	NM	0	0	0
Michigan	497	536	-7.4%	202	220	294	316	0	0	0	0
Ohio	123	140	-12.3%	NM	2	116	135	NM	0	NM	4
Wisconsin	147	198	-25.6%	93	125	53	72	0	0	NM	1
West North Central	5,795	5,581	3.8%	2,111	1,988	3,682	3,589	NM	4	0	0
Iowa	2,045	2,044	0.0%	1,341	1,275	703	769	NM	0	0	0
Kansas	1,222	1,152	6.1%	64	87	1,158	1,065	0	0	0	0
Minnesota	1,017	1,103	-7.8%	236	273	778	827	NM	3	0	0
Missouri	108	130	-16.8%	0	0	108	130	0	0	0	0
Nebraska	334	316	5.5%	21	20	313	296	0	0	0	0
North Dakota	779	583	33.5%	355	243	424	340	0	0	0	0
South Dakota	292	251	16.0%	94	90	198	162	0	0	0	0
South Atlantic	190	200	-5.0%	0	0	190	200	NM	1	0	0
Delaware	NM	1	NM	0	0	0	0	NM	1	0	0
District of Columbia	0	0	--	0	0	0	0	0	0	0	0
Florida	0	0	--	0	0	0	0	0	0	0	0
Georgia	0	0	--	0	0	0	0	0	0	0	0
Maryland	54	53	2.5%	0	0	54	53	0	0	0	0
North Carolina	0	0	--	0	0	0	0	0	0	0	0
South Carolina	0	0	--	0	0	0	0	0	0	0	0
Virginia	0	0	--	0	0	0	0	0	0	0	0
West Virginia	135	147	-7.6%	0	0	135	147	0	0	0	0
East South Central	3	5	-37.6%	0	0	3	5	0	0	0	0
Alabama	0	0	--	0	0	0	0	0	0	0	0
Kentucky	0	0	--	0	0	0	0	0	0	0	0
Mississippi	0	0	--	0	0	0	0	0	0	0	0
Tennessee	3	5	-37.6%	0	0	3	5	0	0	0	0
West South Central	6,211	6,309	-1.6%	153	164	6,055	6,142	NM	3	0	0
Arkansas	0	0	--	0	0	0	0	0	0	0	0
Louisiana	0	0	--	0	0	0	0	0	0	0	0
Oklahoma	1,699	1,587	7.0%	138	142	1,560	1,445	0	0	0	0
Texas	4,513	4,722	-4.4%	15	22	4,495	4,697	NM	3	0	0
Mountain	2,159	1,898	13.7%	214	248	1,945	1,649	NM	1	NM	0
Arizona	44	56	-20.7%	0	0	44	56	0	0	0	0
Colorado	927	657	41.1%	24	14	903	643	0	0	NM	0
Idaho	217	225	-3.6%	0	0	217	225	0	0	0	0
Montana	203	209	-2.7%	21	21	183	187	0	0	0	0
Nevada	23	30	-21.7%	0	0	23	30	0	0	0	0
New Mexico	304	224	35.5%	0	0	304	224	NM	0	0	0
Utah	60	53	13.7%	0	0	60	53	0	0	0	0
Wyoming	380	445	-14.5%	170	213	210	232	0	0	0	0
Pacific Contiguous	1,616	1,752	-7.8%	411	429	1,204	1,323	NM	0	NM	0
California	564	619	-8.9%	24	20	540	598	NM	0	NM	0
Oregon	446	525	-15.1%	43	82	402	443	0	0	0	0
Washington	606	608	-0.3%	344	327	262	281	0	0	0	0
Pacific Noncontiguous	79	89	-12.1%	10	12	69	77	0	0	0	0
Alaska	15	18	-19.1%	10	12	5	6	0	0	0	0
Hawaii	64	71	-10.3%	0	0	64	71	0	0	0	0
U.S. Total	19,334	19,682	-1.8%	3,214	3,216	16,102	16,447	11	13	7	6

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Negative generation denotes that electric power consumed for plant use exceeds gross generation.

Totals may not equal sum of components because of independent rounding. Percentage change is calculated before rounding.

Source: U.S. Energy Information Administration, Form EIA-923, Power Plant Operations Report.

Table 1.14.B. Utility Scale Facility Net Generation from Wind

by State, by Sector, Year-to-Date through November 2016 and 2015 (Thousand Megawatthours)

Census Division and State	All Sectors			Electric Power Sector		Commercial Sector		Industrial Sector	
				Electric Utilities		Independent Power Producers			
	Generation at Utility Scale Facilities			Generation at Utility Scale Facilities		Generation at Utility Scale Facilities		Generation at Utility Scale Facilities	
November 2016 YTD	November 2015 YTD	Percentage Change	November 2016 YTD	November 2015 YTD	November 2016 YTD	November 2015 YTD	November 2016 YTD	November 2015 YTD	November 2016 YTD
New England	2,289	2,050	11.7%	222	245	2,032	1,772	32	30
Connecticut	0	0	--	0	0	0	0	0	0
Maine	1,405	1,160	21.2%	0	0	1,405	1,160	0	0
Massachusetts	200	195	2.6%	56	56	116	113	25	23
New Hampshire	397	387	2.6%	0	0	397	387	0	0
Rhode Island	21	9	135.8%	0	0	14	3	7	6
Vermont	266	299	-11.3%	166	189	100	111	0	0
Middle Atlantic	6,446	6,587	-2.1%	0	0	6,443	6,584	0	NM
New Jersey	20	19	2.6%	0	0	20	19	0	0
New York	3,410	3,576	-4.7%	0	0	3,407	3,574	0	NM
Pennsylvania	3,017	2,991	0.9%	0	0	3,017	2,991	0	0
East North Central	20,262	20,138	0.6%	2,543	2,741	17,653	17,355	10	5
Illinois	9,442	9,432	0.1%	13	12	9,424	9,415	NM	5
Indiana	4,363	3,936	10.9%	0	0	4,362	3,935	NM	1
Michigan	4,057	4,301	-5.7%	1,678	1,777	2,379	2,524	0	0
Ohio	1,079	1,055	2.3%	13	11	1,014	1,014	NM	0
Wisconsin	1,321	1,415	-6.6%	840	941	475	467	0	7
West North Central	53,953	46,744	15.4%	18,828	15,627	35,097	31,088	28	29
Iowa	17,634	16,035	10.0%	11,239	9,579	6,393	6,454	NM	2
Kansas	12,891	9,754	32.2%	774	790	12,117	8,964	0	0
Minnesota	9,301	8,871	4.8%	2,337	1,905	6,938	6,940	26	26
Missouri	1,008	916	10.1%	0	0	1,008	916	0	0
Nebraska	3,241	2,868	13.0%	180	200	3,061	2,668	0	0
North Dakota	7,081	5,986	18.3%	3,421	2,396	3,661	3,590	0	0
South Dakota	2,797	2,315	20.8%	878	758	1,918	1,557	0	0
South Atlantic	1,666	1,624	2.6%	0	0	1,661	1,619	NM	5
Delaware	NM	5	NM	0	0	0	0	NM	5
District of Columbia	0	0	--	0	0	0	0	0	0
Florida	0	0	--	0	0	0	0	0	0
Georgia	0	0	--	0	0	0	0	0	0
Maryland	451	379	18.9%	0	0	451	379	0	0
North Carolina	0	0	--	0	0	0	0	0	0
South Carolina	0	0	--	0	0	0	0	0	0
Virginia	0	0	--	0	0	0	0	0	0
West Virginia	1,210	1,240	-2.4%	0	0	1,210	1,240	0	0
East South Central	34	38	-10.8%	0	0	34	38	0	0
Alabama	0	0	--	0	0	0	0	0	0
Kentucky	0	0	--	0	0	0	0	0	0
Mississippi	0	0	--	0	0	0	0	0	0
Tennessee	34	38	-10.8%	0	0	34	38	0	0
West South Central	69,941	52,438	33.4%	1,540	1,546	68,363	50,865	39	27
Arkansas	0	0	--	0	0	0	0	0	0
Louisiana	0	0	--	0	0	0	0	0	0
Oklahoma	17,757	12,589	41.1%	1,301	1,292	16,456	11,297	0	0
Texas	52,184	39,849	31.0%	239	254	51,907	39,568	39	27
Mountain	21,186	16,562	27.9%	2,154	1,881	19,019	14,673	10	6
Arizona	494	397	24.5%	0	0	494	397	0	0
Colorado	8,552	6,604	29.5%	111	123	8,432	6,475	7	3
Idaho	2,156	1,992	8.2%	0	0	2,156	1,992	0	0
Montana	1,888	1,757	7.4%	204	195	1,685	1,563	0	0
Nevada	309	277	11.4%	0	0	309	277	0	0
New Mexico	3,241	1,715	89.0%	0	0	3,238	1,712	NM	2
Utah	728	564	29.2%	0	0	728	564	0	0
Wyoming	3,817	3,256	17.2%	1,840	1,563	1,977	1,693	0	0
Pacific Contiguous	26,930	23,746	13.4%	5,825	5,173	21,095	18,565	NM	5
California	12,899	11,313	14.0%	664	668	12,226	10,636	NM	5
Oregon	6,663	6,064	9.9%	1,193	1,150	5,469	4,914	0	0
Washington	7,368	6,369	15.7%	3,968	3,355	3,400	3,014	0	0
Pacific Noncontiguous	746	694	7.5%	97	94	649	599	0	0
Alaska	146	143	1.7%	97	94	49	49	0	0
Hawaii	600	550	9.0%	0	0	600	550	0	0
U.S. Total	203,453	170,620	19.2%	31,209	27,308	172,047	143,159	128	106
								69	47

Displayed values of zero may represent small values that round to zero. The Excel version of this table provides additional precision which may be accessed by selecting individual cells.

NM = Not meaningful due to large relative standard error or excessive percentage change.

Notes: See Glossary for definitions. Values for 2016 are preliminary. Values for 2015 are final. See Technical Notes for a discussion of the sample design for the Form EIA-923.

Negative generation denotes that electric power consumed for plant use exceeds gross generation.

Totals may not equal sum of components because of independent rounding. Percentage change is calculated before rounding.

Source: U.S. Energy Information Administration, Form EIA-923, Power Plant Operations Report.

Table 1.15.A. Utility Scale Facility Net Generation from Biomass by State, by Sector, November 2016 and 2015 (Thousand Megawatthours)

Census Division and State	All Sectors			Electric Power Sector				Commercial Sector		Industrial Sector	
				Electric Utilities		Independent Power Producers					
	Generation at Utility Scale Facilities			Generation at Utility Scale Facilities							
November 2016	November 2015	Percentage Change	November 2016	November 2015	November 2016						
New England	561	602	-6.7%	55	48	397	455	10	11	99	88
Connecticut	71	64	11.9%	0	0	71	64	0	0	0	0
Maine	207	255	-18.9%	0	0	101	160	7	8	99	88
Massachusetts	92	100	-7.9%	0	0	92	99	NM	0	0	0
New Hampshire	138	127	8.7%	29	23	106	100	NM	3	0	0
Rhode Island	16	16	-1.2%	0	0	16	16	0	0	0	0
Vermont	38	41	-7.2%	26	24	NM	16	NM	0	0	0
Middle Atlantic	461	489	-5.6%	0	0	369	371	34	48	59	69
New Jersey	78	82	-5.0%	0	0	65	68	13	14	0	0
New York	192	192	0.0%	0	0	159	155	17	19	16	17
Pennsylvania	192	215	-10.8%	0	0	145	148	NM	15	43	52
East North Central	454	471	-3.5%	60	60	255	254	17	23	122	134
Illinois	46	50	-7.6%	NM	2	44	48	0	0	0	0
Indiana	36	37	-3.6%	25	25	4	5	NM	2	5	6
Michigan	195	199	-1.9%	0	0	125	126	13	18	57	55
Ohio	61	67	-8.8%	NM	0	40	40	NM	1	19	26
Wisconsin	117	119	-1.7%	34	33	41	36	NM	3	40	47
West North Central	186	217	-14.4%	42	47	86	101	6	5	52	63
Iowa	20	21	-5.2%	NM	3	10	10	NM	2	5	6
Kansas	5	6	13.7%	0	0	5	6	0	0	0	0
Minnesota	146	175	-16.5%	32	35	66	82	2	2	46	57
Missouri	8	6	44.7%	NM	2	4	3	0	0	NM	0
Nebraska	6	9	-30.5%	5	7	0	0	NM	2	0	0
North Dakota	0	0	-60.8%	0	0	0	0	0	0	0	0
South Dakota	0	0	--	0	0	0	0	0	0	0	0
South Atlantic	1,490	1,620	-8.0%	84	136	498	582	28	37	880	865
Delaware	6	7	-13.3%	0	0	5	6	0	0	NM	1
District of Columbia	0	5	-100.0%	0	0	0	5	0	0	0	0
Florida	385	400	-3.7%	8	7	199	218	NM	4	175	170
Georgia	401	400	0.2%	0	0	60	65	NM	0	341	335
Maryland	49	42	17.5%	0	0	36	34	NM	1	11	7
North Carolina	189	265	-28.9%	0	0	74	138	5	12	110	115
South Carolina	184	170	8.1%	38	42	29	31	0	0	116	97
Virginia	276	331	-16.4%	38	86	95	86	18	20	126	139
West Virginia	NM	NM	NM	0	0	NM	NM	0	0	0	0
East South Central	524	536	-2.3%	7	9	30	36	0	0	487	491
Alabama	277	273	1.7%	0	0	22	25	0	0	255	248
Kentucky	40	46	-12.7%	7	9	NM	1	0	0	33	36
Mississippi	122	133	-8.5%	0	0	NM	3	0	0	121	131
Tennessee	84	84	0.5%	0	0	6	8	0	0	78	76
West South Central	517	489	5.7%	0	0	84	71	NM	3	431	415
Arkansas	122	127	-4.3%	0	0	7	6	NM	0	115	121
Louisiana	230	225	2.4%	0	0	8	8	0	0	223	217
Oklahoma	26	30	-14.7%	0	0	NM	1	0	0	25	29
Texas	139	107	30.3%	0	0	68	56	NM	3	68	48
Mountain	86	92	-6.1%	NM	1	51	54	NM	2	33	34
Arizona	19	20	-4.2%	0	0	19	20	0	0	0	0
Colorado	6	7	-10.3%	0	0	6	7	0	0	0	0
Idaho	49	52	-5.7%	NM	1	16	17	NM	1	31	33
Montana	NM	2	NM	0	0	0	0	0	0	NM	2
Nevada	NM	2	NM	0	0	NM	2	0	0	0	0
New Mexico	NM	2	NM	0	0	NM	2	0	0	0	0
Utah	7	7	-8.2%	0	0	6	6	NM	1	0	0
Wyoming	0	0	--	0	0	0	0	0	0	0	0
Pacific Contiguous	724	775	-6.6%	68	60	382	434	67	74	206	207
California	473	504	-6.1%	24	13	341	386	65	70	45	35
Oregon	81	100	-19.0%	5	6	31	40	NM	2	43	51
Washington	170	172	-1.2%	39	42	10	8	NM	1	119	121
Pacific Noncontiguous	30	30	0.5%	4	3	0	0	20	19	6	8
Alaska	NM	4	NM	0	0	0	0	NM	4	NM	0
Hawaii	26	25	3.1%	4	3	0	0	16	15	5	7
U.S. Total	5,033	5,320	-5.4%	323	364	2,152	2,358	186	224	2,373	2,374

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NM = Not meaningful due to large relative standard error or excessive percentage change.

Notes: See Glossary for definitions. Values for 2016 are preliminary. Values for 2015 are final. See Technical Notes for a discussion of the sample design for the Form EIA-923.

Negative generation denotes that electric power consumed for plant use exceeds gross generation.

Totals may not equal sum of components because of independent rounding. Percentage change is calculated before rounding.

Source: U.S. Energy Information Administration, Form EIA-923, Power Plant Operations Report.

Table 1.15.B. Utility Scale Facility Net Generation from Biomass

by State, by Sector, Year-to-Date through November 2016 and 2015 (Thousand Megawatthours)

Census Division and State	All Sectors			Electric Power Sector		Commercial Sector		Industrial Sector	
				Electric Utilities		Independent Power Producers			
	Generation at Utility Scale Facilities			Generation at Utility Scale Facilities		Generation at Utility Scale Facilities		Generation at Utility Scale Facilities	
November 2016 YTD	November 2015 YTD	Percentage Change	November 2016 YTD	November 2015 YTD	November 2016 YTD	November 2015 YTD	November 2016 YTD	November 2015 YTD	November 2016 YTD
New England	6,578	-2.5%	564	550	4,900	4,926	111	121	1,003
Connecticut	796	12.2%	0	0	796	706	0	4	0
Maine	2,550	-11.7%	0	0	1,465	1,654	81	83	1,003
Massachusetts	1,085	1.8%	0	0	1,084	1,066	NM	1	0
New Hampshire	1,527	3.7%	283	289	1,217	1,151	27	33	0
Rhode Island	188	-2.7%	0	0	188	193	0	0	0
Vermont	433	3.4%	281	260	151	157	NM	2	0
Middle Atlantic	5,144	1.0%	0	0	4,038	3,904	438	493	668
New Jersey	881	2.7%	0	0	725	701	156	156	0
New York	2,085	2.4%	0	0	1,709	1,652	192	193	183
Pennsylvania	2,179	-0.8%	0	0	1,604	1,551	89	144	485
East North Central	5,189	-3.3%	593	570	2,996	3,045	190	246	1,409
Illinois	522	9.2%	18	18	504	461	0	0	0
Indiana	408	-0.7%	281	276	49	50	16	19	62
Michigan	2,276	-0.4%	NM	0	1,527	1,481	135	187	614
Ohio	697	-6.0%	4	4	457	438	7	7	229
Wisconsin	1,285	-11.4%	290	272	458	614	32	33	504
West North Central	2,174	2.2%	491	462	1,002	985	112	96	568
Iowa	233	-4.4%	26	27	118	119	32	35	58
Kansas	65	56	15.9%	0	0	57	56	0	8
Minnesota	1,643	0.1%	354	347	776	757	24	19	489
Missouri	134	121	11.1%	38	39	51	52	43	27
Nebraska	87	62	40.1%	73	47	0	0	14	15
North Dakota	11	3	230.2%	0	0	0	0	0	11
South Dakota	0	0	--	0	0	0	0	0	0
South Atlantic	17,058	-2.9%	1,574	1,603	5,679	5,951	325	332	9,480
Delaware	68	69	-1.4%	0	0	56	55	0	12
District of Columbia	0	26	-100.0%	0	0	0	26	0	0
Florida	4,135	4,496	-8.0%	81	96	2,191	2,445	42	40
Georgia	4,229	4,295	-1.5%	0	0	638	610	5	7
Maryland	502	471	6.7%	0	0	378	365	22	13
North Carolina	2,199	2,311	-4.8%	0	0	1,028	1,035	61	62
South Carolina	2,182	2,097	4.0%	378	405	373	372	0	0
Virginia	3,738	3,807	-1.6%	1,115	1,102	1,011	1,039	194	209
West Virginia	5	5	-0.3%	0	0	5	5	0	0
East South Central	5,681	5,711	-0.5%	79	79	338	323	0	0
Alabama	2,982	2,999	-0.6%	0	0	249	233	0	0
Kentucky	415	406	2.1%	79	79	7	7	0	0
Mississippi	1,370	1,389	-1.3%	0	0	12	12	0	0
Tennessee	914	916	-0.3%	0	0	71	71	0	0
West South Central	5,615	5,389	4.2%	19	125	899	820	36	34
Arkansas	1,272	1,325	-4.0%	0	0	92	79	3	4
Louisiana	2,460	2,464	-0.2%	0	0	86	83	0	0
Oklahoma	286	306	-6.5%	0	0	12	11	0	0
Texas	1,598	1,295	23.4%	19	125	709	647	33	30
Mountain	951	966	-1.6%	12	19	571	563	19	21
Arizona	199	207	-3.6%	0	7	199	199	0	0
Colorado	82	73	13.6%	0	0	82	73	0	0
Idaho	533	549	-3.0%	12	11	184	185	7	8
Montana	20	19	0.7%	0	0	0	0	0	20
Nevada	24	23	0.6%	0	0	24	23	0	0
New Mexico	16	18	-8.9%	0	0	16	18	0	0
Utah	77	77	-0.9%	0	0	65	64	12	13
Wyoming	0	0	--	0	0	0	0	0	0
Pacific Contiguous	8,247	8,750	-5.7%	671	659	4,580	4,880	797	892
California	5,547	5,901	-6.0%	198	169	4,103	4,408	766	853
Oregon	864	1,020	-15.2%	62	61	364	364	16	23
Washington	1,835	1,829	0.4%	411	429	114	109	15	15
Pacific Noncontiguous	345	350	-1.3%	36	50	0	0	230	221
Alaska	47	51	-7.1%	0	0	0	0	42	47
Hawaii	298	299	-0.3%	36	50	0	0	188	174
U.S. Total	56,982	58,075	-1.9%	4,038	4,116	25,003	25,396	2,258	2,455
								25,682	26,108

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NM = Not meaningful due to large relative standard error or excessive percentage change.

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Negative generation denotes that electric power consumed for plant use exceeds gross generation.

Totals may not equal sum of components because of independent rounding. Percentage change is calculated before rounding.

Source: U.S. Energy Information Administration, Form EIA-923, Power Plant Operations Report.

Table 1.16.A. Utility Scale Facility Net Generation from Geothermal by State, by Sector, November 2016 and 2015 (Thousand Megawatthours)

Census Division and State	All Sectors			Electric Power Sector				Commercial Sector		Industrial Sector	
				Electric Utilities		Independent Power Producers					
	Generation at Utility Scale Facilities			Generation at Utility Scale Facilities		Generation at Utility Scale Facilities		Generation at Utility Scale Facilities		Generation at Utility Scale Facilities	
	November 2016	November 2015	Percentage Change	November 2016	November 2015						
New England	0	0	--	0	0	0	0	0	0	0	0
Connecticut	0	0	--	0	0	0	0	0	0	0	0
Maine	0	0	--	0	0	0	0	0	0	0	0
Massachusetts	0	0	--	0	0	0	0	0	0	0	0
New Hampshire	0	0	--	0	0	0	0	0	0	0	0
Rhode Island	0	0	--	0	0	0	0	0	0	0	0
Vermont	0	0	--	0	0	0	0	0	0	0	0
Middle Atlantic	0	0	--	0	0	0	0	0	0	0	0
New Jersey	0	0	--	0	0	0	0	0	0	0	0
New York	0	0	--	0	0	0	0	0	0	0	0
Pennsylvania	0	0	--	0	0	0	0	0	0	0	0
East North Central	0	0	--	0	0	0	0	0	0	0	0
Illinois	0	0	--	0	0	0	0	0	0	0	0
Indiana	0	0	--	0	0	0	0	0	0	0	0
Michigan	0	0	--	0	0	0	0	0	0	0	0
Ohio	0	0	--	0	0	0	0	0	0	0	0
Wisconsin	0	0	--	0	0	0	0	0	0	0	0
West North Central	0	0	--	0	0	0	0	0	0	0	0
Iowa	0	0	--	0	0	0	0	0	0	0	0
Kansas	0	0	--	0	0	0	0	0	0	0	0
Minnesota	0	0	--	0	0	0	0	0	0	0	0
Missouri	0	0	--	0	0	0	0	0	0	0	0
Nebraska	0	0	--	0	0	0	0	0	0	0	0
North Dakota	0	0	--	0	0	0	0	0	0	0	0
South Dakota	0	0	--	0	0	0	0	0	0	0	0
South Atlantic	0	0	--	0	0	0	0	0	0	0	0
Delaware	0	0	--	0	0	0	0	0	0	0	0
District of Columbia	0	0	--	0	0	0	0	0	0	0	0
Florida	0	0	--	0	0	0	0	0	0	0	0
Georgia	0	0	--	0	0	0	0	0	0	0	0
Maryland	0	0	--	0	0	0	0	0	0	0	0
North Carolina	0	0	--	0	0	0	0	0	0	0	0
South Carolina	0	0	--	0	0	0	0	0	0	0	0
Virginia	0	0	--	0	0	0	0	0	0	0	0
West Virginia	0	0	--	0	0	0	0	0	0	0	0
East South Central	0	0	--	0	0	0	0	0	0	0	0
Alabama	0	0	--	0	0	0	0	0	0	0	0
Kentucky	0	0	--	0	0	0	0	0	0	0	0
Mississippi	0	0	--	0	0	0	0	0	0	0	0
Tennessee	0	0	--	0	0	0	0	0	0	0	0
West South Central	0	0	--	0	0	0	0	0	0	0	0
Arkansas	0	0	--	0	0	0	0	0	0	0	0
Louisiana	0	0	--	0	0	0	0	0	0	0	0
Oklahoma	0	0	--	0	0	0	0	0	0	0	0
Texas	0	0	--	0	0	0	0	0	0	0	0
Mountain	397	362	9.6%	23	21	374	341	0	0	0	0
Arizona	0	0	--	0	0	0	0	0	0	0	0
Colorado	0	0	--	0	0	0	0	0	0	0	0
Idaho	8	7	14.3%	0	0	8	7	0	0	0	0
Montana	0	0	--	0	0	0	0	0	0	0	0
Nevada	339	319	6.3%	0	0	339	319	0	0	0	0
New Mexico	NM	1	NM	0	0	NM	1	0	0	0	0
Utah	48	35	38.2%	23	21	25	14	0	0	0	0
Wyoming	0	0	--	0	0	0	0	0	0	0	0
Pacific Contiguous	1,084	954	13.7%	72	73	1,013	881	0	0	0	0
California	1,064	935	13.8%	70	72	994	863	0	0	0	0
Oregon	20	19	6.4%	NM	1	18	18	0	0	0	0
Washington	0	0	--	0	0	0	0	0	0	0	0
Pacific Noncontiguous	26	18	44.9%	0	0	26	18	0	0	0	0
Alaska	0	0	--	0	0	0	0	0	0	0	0
Hawaii	26	18	44.9%	0	0	26	18	0	0	0	0
U.S. Total	1,507	1,334	13.0%	94	93	1,412	1,240	0	0	0	0

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Negative generation denotes that electric power consumed for plant use exceeds gross generation.

Totals may not equal sum of components because of independent rounding. Percentage change is calculated before rounding.

Source: U.S. Energy Information Administration, Form EIA-923, Power Plant Operations Report.

Table 1.16.B. Utility Scale Facility Net Generation from Geothermal

by State, by Sector, Year-to-Date through November 2016 and 2015 (Thousand Megawatthours)

Census Division and State	All Sectors			Electric Power Sector		Commercial Sector		Industrial Sector	
				Electric Utilities		Independent Power Producers			
	Generation at Utility Scale Facilities			Generation at Utility Scale Facilities		Generation at Utility Scale Facilities		Generation at Utility Scale Facilities	
November 2016 YTD	November 2015 YTD	Percentage Change	November 2016 YTD	November 2015 YTD	November 2016 YTD	November 2015 YTD	November 2016 YTD	November 2015 YTD	November 2016 YTD
New England	0	0	--	0	0	0	0	0	0
Connecticut	0	0	--	0	0	0	0	0	0
Maine	0	0	--	0	0	0	0	0	0
Massachusetts	0	0	--	0	0	0	0	0	0
New Hampshire	0	0	--	0	0	0	0	0	0
Rhode Island	0	0	--	0	0	0	0	0	0
Vermont	0	0	--	0	0	0	0	0	0
Middle Atlantic	0	0	--	0	0	0	0	0	0
New Jersey	0	0	--	0	0	0	0	0	0
New York	0	0	--	0	0	0	0	0	0
Pennsylvania	0	0	--	0	0	0	0	0	0
East North Central	0	0	--	0	0	0	0	0	0
Illinois	0	0	--	0	0	0	0	0	0
Indiana	0	0	--	0	0	0	0	0	0
Michigan	0	0	--	0	0	0	0	0	0
Ohio	0	0	--	0	0	0	0	0	0
Wisconsin	0	0	--	0	0	0	0	0	0
West North Central	0	0	--	0	0	0	0	0	0
Iowa	0	0	--	0	0	0	0	0	0
Kansas	0	0	--	0	0	0	0	0	0
Minnesota	0	0	--	0	0	0	0	0	0
Missouri	0	0	--	0	0	0	0	0	0
Nebraska	0	0	--	0	0	0	0	0	0
North Dakota	0	0	--	0	0	0	0	0	0
South Dakota	0	0	--	0	0	0	0	0	0
South Atlantic	0	0	--	0	0	0	0	0	0
Delaware	0	0	--	0	0	0	0	0	0
District of Columbia	0	0	--	0	0	0	0	0	0
Florida	0	0	--	0	0	0	0	0	0
Georgia	0	0	--	0	0	0	0	0	0
Maryland	0	0	--	0	0	0	0	0	0
North Carolina	0	0	--	0	0	0	0	0	0
South Carolina	0	0	--	0	0	0	0	0	0
Virginia	0	0	--	0	0	0	0	0	0
West Virginia	0	0	--	0	0	0	0	0	0
East South Central	0	0	--	0	0	0	0	0	0
Alabama	0	0	--	0	0	0	0	0	0
Kentucky	0	0	--	0	0	0	0	0	0
Mississippi	0	0	--	0	0	0	0	0	0
Tennessee	0	0	--	0	0	0	0	0	0
West South Central	0	0	--	0	0	0	0	0	0
Arkansas	0	0	--	0	0	0	0	0	0
Louisiana	0	0	--	0	0	0	0	0	0
Oklahoma	0	0	--	0	0	0	0	0	0
Texas	0	0	--	0	0	0	0	0	0
Mountain	4,064	3,252	25.0%	234	237	3,830	3,015	0	0
Arizona	0	0	--	0	0	0	0	0	0
Colorado	0	0	--	0	0	0	0	0	0
Idaho	88	68	29.6%	0	0	88	68	0	0
Montana	0	0	--	0	0	0	0	0	0
Nevada	3,482	2,784	25.1%	0	0	3,482	2,784	0	0
New Mexico	14	9	65.6%	0	0	14	9	0	0
Utah	480	391	22.8%	234	237	245	154	0	0
Wyoming	0	0	--	0	0	0	0	0	0
Pacific Contiguous	11,501	11,079	3.8%	763	754	10,738	10,325	0	0
California	11,327	10,920	3.7%	747	753	10,580	10,167	0	0
Oregon	174	159	9.5%	NM	1	158	158	0	0
Washington	0	0	--	0	0	0	0	0	0
Pacific Noncontiguous	231	210	10.2%	0	0	231	210	0	0
Alaska	0	0	--	0	0	0	0	0	0
Hawaii	231	210	10.2%	0	0	231	210	0	0
U.S. Total	15,797	14,541	8.6%	997	991	14,800	13,549	0	0

Displayed values of zero may represent small values that round to zero. The Excel version of this table provides additional precision which may be accessed by selecting individual cells.

NM = Not meaningful due to large relative standard error or excessive percentage change.

Notes: See Glossary for definitions. Values for 2016 are preliminary. Values for 2015 are final. See Technical Notes for a discussion of the sample design for the Form EIA-923.

Negative generation denotes that electric power consumed for plant use exceeds gross generation.

Totals may not equal sum of components because of independent rounding. Percentage change is calculated before rounding.

Source: U.S. Energy Information Administration, Form EIA-923, Power Plant Operations Report.

**Table 1.17.A. Net Generation from Solar Photovoltaic
by State, by Sector, November 2016 and 2015 (Thousand Megawatthours)**

Census Division and State	All Sectors						Electric Power Sector				Commercial Sector						Industrial Sector						Residential Sector				
	Estimated Net Generation From Utility Scale Facilities and Distributed Solar Photovoltaic Generation			Generation at Utility Scale Facilities		Estimated Distributed Solar Photovoltaic Generation		Electric Utilities		Independent Power Producers		Estimated Net Generation From Utility Scale Facilities and Distributed Solar Photovoltaic Generation			Generation at Utility Scale Facilities		Estimated Distributed Solar Photovoltaic Generation			Estimated Net Generation From Utility Scale Facilities and Distributed Solar Photovoltaic Generation			Generation at Utility Scale Facilities		Estimated Distributed Solar Photovoltaic Generation		
	November 2016	November 2015	Percentage Change	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015		
New England	150	111	34.9%	53	38	98	73	NM	1	51	37	NM	0	55	43	5	3	0	0	5	3	38	26				
Connecticut	NM	14	NM	NM	1	19	13	NM	0	NM	1	8	6	0	0	8	6	1	1	0	0	1	1	11	7		
Maine	2	1	35.7%	0	0	2	1	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1	1	1		
Massachusetts	114	86	32.9%	46	32	68	53	NM	1	44	31	NM	0	43	35	3	3	0	0	3	3	22	16				
New Hampshire	3	2	105.4%	0	0	3	2	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	2	1			
Rhode Island	NM	2	NM	NM	1	1	1	0	0	NM	1	1	0	0	1	1	0	0	0	0	0	0	1	NM			
Vermont	8	6	25.3%	4	3	4	3	0	0	4	3	1	1	0	0	1	1	0	0	0	0	0	0	2	2		
Middle Atlantic	249	183	36.1%	78	49	172	134	7	4	58	37	104	87	12	8	92	78	NM	10	NM	1	10	9	70	46		
New Jersey	165	123	33.9%	60	38	105	85	7	4	42	27	78	67	11	8	67	59	NM	5	NM	0	6	5	32	21		
New York	62	42	47.7%	12	7	50	35	0	0	12	7	NM	14	NM	0	18	14	1	1	0	0	1	1	31	20		
Pennsylvania	23	18	24.7%	6	4	17	15	0	0	4	3	NM	6	NM	0	7	6	NM	4	NM	1	3	3	7	5		
East North Central	45	30	48.7%	32	20	13	10	8	2	24	17	NM	8	NM	0	8	7	NM	0	NM	0	4	3				
Illinois	6	5	23.8%	4	3	2	2	NM	0	4	3	1	1	0	0	1	1	0	NM	0	0	0	NM	1	0		
Indiana	21	13	69.4%	21	12	1	1	5	1	15	11	0	0	0	0	0	0	NM	NM	0	0	NM	NM	1	0		
Michigan	NM	2	NM	NM	0	2	2	NM	0	0	0	1	0	0	1	1	1	NM	0	0	0	NM	0	1			
Ohio	11	9	25.3%	5	4	6	5	NM	1	4	3	NM	4	NM	0	4	4	NM	0	NM	0	0	1	1			
Wisconsin	NM	2	NM	NM	0	2	1	0	0	NM	0	1	1	0	0	1	1	NM	NM	0	0	NM	NM	1	1		
West North Central	20	15	31.8%	3	2	17	14	0	0	3	2	NM	8	NM	0	9	8	0	0	0	0	0	0	7	6		
Iowa	3	2	34.6%	0	0	3	2	0	0	0	0	2	2	0	0	2	2	0	0	0	0	0	0	1	1		
Kansas	NM	0	NM	NM	0	1	0	0	NM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Minnesota	NM	2	NM	NM	0	2	2	0	NM	0	1	1	0	0	1	1	0	0	0	0	0	0	1	1			
Missouri	13	11	17.9%	2	1	11	9	0	0	NM	1	NM	6	NM	0	6	5	0	0	0	0	0	0	5	4		
Nebraska	NM	0	NM	NM	0	0	0	0	NM	0	NM	0	0	0	0	NM	0	NM	0	0	0	NM	0	0			
North Dakota	0	0	9.4%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
South Dakota	0	0	80.5%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
South Atlantic	485	162	200.4%	382	102	103	59	34	6	339	91	66	38	9	5	57	34	3	2	0	0	3	2	43	23		
Delaware	11	7	52.7%	4	2	8	5	NM	0	3	2	NM	3	NM	0	5	3	0	0	0	0	0	3	2			
District of Columbia	4	2	102.9%	0	0	4	2	0	0	0	0	3	1	0	0	3	1	0	0	0	0	0	1	1			
Florida	33	20	63.9%	14	7	19	13	8	4	6	3	NM	6	NM	0	9	6	0	0	0	0	0	0	10	7		
Georgia	NM	15	NM	NM	9	8	NM	NM	14	0	84	8	NM	NM	0	NM	NM	0	0	0	NM	NM	NM				
Maryland	54	32	68.9%	12	8	42	23	NM	1	10	7	NM	12	NM	0	18	12	2	1	0	0	2	1	22	10		
North Carolina	256	82	213.2%	245	76	12	6	10	1	226	71	17	8	4	9	4	0	0	0	0	0	0	3	2			
South Carolina	NM	1	NM	NM	0	3	1	0	0	NM	0	1	0	0	0	1	0	NM	0	0	0	NM	0	2			
Virginia	13	2	463.3%	9	0	3	2	NM	0	9	0	1	1	0	0	1	1	NM	NM	0	0	NM	NM	2	1		
West Virginia	0	0	36.2%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
East South Central	26	10	153.8%	20	5	6	5	1	0	19	5	NM	5	NM	0	5	5	0	0	0	0	0	0	0			
Alabama	13	0	NM	NM	0	0	0	0	0	13	0	0	0														

**Table 1.17.B. Net Generation from Solar Photovoltaic
by State, by Sector, Year-to-Date through November 2016 and 2015 (Thousand Megawatthours)**

Census Division and State	All Sectors						Electric Power Sector				Commercial Sector						Industrial Sector						Residential Sector				
	Estimated Net Generation From Utility Scale Facilities and Distributed Solar Photovoltaic Generation			Generation at Utility Scale Facilities		Estimated Distributed Solar Photovoltaic Generation		Electric Utilities		Independent Power Producers		Estimated Net Generation From Utility Scale Facilities and Distributed Solar Photovoltaic Generation			Generation at Utility Scale Facilities		Estimated Distributed Solar Photovoltaic Generation			Estimated Net Generation From Utility Scale Facilities and Distributed Solar Photovoltaic Generation			Generation at Utility Scale Facilities		Estimated Distributed Solar Photovoltaic Generation		
	November 2016 YTD	November 2015 YTD	Percentage Change	November 2016 YTD	November 2015 YTD	November 2016 YTD	November 2015 YTD	November 2016 YTD	November 2015 YTD	November 2016 YTD	November 2015 YTD	November 2016 YTD	November 2015 YTD	November 2016 YTD	November 2015 YTD	November 2016 YTD	November 2015 YTD	November 2016 YTD	November 2015 YTD	November 2016 YTD	November 2015 YTD	November 2016 YTD	November 2015 YTD	November 2016 YTD	November 2015 YTD		
New England	2,356	1,596	47.7%	703	497	1,653	1,098	19	13	676	482	917	701	7	3	910	699	77	48	0	0	77	48	667	352		
Connecticut	323	203	59.3%	22	16	301	186	NM	0	18	16	121	85	0	0	121	85	15	9	0	0	0	0	15	9	165	92
Maine	28	18	55.8%	0	0	28	18	0	0	0	0	10	6	0	0	10	6	0	0	0	0	0	0	0	0	18	12
Massachusetts	1,783	1,232	44.8%	607	422	1,177	809	16	13	584	407	729	577	7	3	722	574	60	38	0	0	60	38	395	198		
New Hampshire	51	22	131.0%	0	0	51	22	0	0	0	0	15	7	0	0	15	7	2	1	0	0	0	0	2	1	34	14
Rhode Island	38	26	49.2%	19	13	20	12	0	0	19	13	14	10	0	0	14	10	0	0	0	0	0	0	0	0	6	2
Vermont	134	96	39.1%	56	45	78	51	0	0	56	45	28	17	0	0	28	17	0	0	0	0	0	0	0	0	50	33
Middle Atlantic	3,769	2,917	29.2%	1,018	764	2,751	2,154	104	61	748	559	1,671	1,440	155	134	1,516	1,307	164	151	11	9	153	141	1,081	706		
New Jersey	2,399	1,959	22.5%	780	606	1,619	1,353	104	61	527	416	1,222	1,087	147	128	1,074	959	86	77	NM	1	84	76	461	318		
New York	1,013	650	55.8%	165	96	848	554	0	0	163	93	321	247	NM	2	318	244	12	9	0	0	12	9	517	301		
Pennsylvania	357	309	15.7%	73	62	284	247	0	0	59	51	129	107	5	3	124	103	66	64	9	8	57	56	103	87		
East North Central	630	437	44.2%	406	247	224	190	77	18	320	225	159	143	NM	3	156	140	11	7	NM	2	6	5	63	45		
Illinois	90	72	25.0%	56	46	34	26	NM	1	53	46	23	18	0	0	23	18	0	0	0	0	0	0	0	10	7	
Indiana	270	157	72.0%	257	146	13	12	48	7	209	138	6	6	0	0	6	6	0	0	0	0	0	0	0	7	5	
Michigan	57	37	53.4%	15	1	42	36	15	1	0	29	26	0	0	29	26	1	1	0	0	0	1	1	12	10		
Ohio	179	143	25.0%	75	53	104	91	10	8	57	39	84	76	NM	3	81	73	9	6	NM	2	4	4	19	13		
Wisconsin	34	27	22.5%	NM	1	32	26	0	0	NM	1	17	16	0	0	17	16	1	0	0	0	0	1	0	13	10	
West North Central	294	226	30.1%	41	20	254	206	3	0	36	20	146	122	NM	0	144	122	4	3	0	0	0	4	3	106	81	
Iowa	50	39	29.5%	0	0	50	39	0	0	0	0	34	25	0	0	34	25	1	1	0	0	0	1	1	1	13	
Kansas	11	6	82.9%	NM	2	9	4	0	0	NM	2	5	2	0	0	5	2	0	0	0	0	0	0	0	4	2	
Minnesota	42	27	55.0%	8	3	34	24	0	0	8	3	16	13	0	0	16	13	2	2	0	0	0	2	2	15	10	
Missouri	183	152	20.2%	25	16	158	137	3	0	20	15	90	81	NM	0	88	81	1	1	0	0	0	1	1	69	55	
Nebraska	7	1	454.0%	NM	0	2	1	0	0	NM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	
North Dakota	0	0	3.2%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
South Dakota	1	1	74.1%	0	0	1	1	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	
South Atlantic	6,060	2,402	152.3%	4,653	1,625	1,407	777	430	85	4,093	1,457	940	555	130	83	810	472	53	23	0	0	53	23	545	282		
Delaware	163	119	36.5%	53	45	110	75	7	6	45	38	70	51	NM	1	69	50	3	4	0	0	0	3	4	37	20	
District of Columbia	51	31	65.4%	0	0	51	31	0	0	0	0	35	22	0	0	35	22	0	0	0	0	0	0	0	0	15	9
Florida	408	256	59.6%	169	112	239	144	92	64	75	47	123	69	NM	2	122	68	6	3	0	0	0	6	3	111	73	
Georgia	950	206	361.1%	782	112	169	94	81	1	698	109	159	89	NM	3	155	86	4	2	0	0	0	4	2	10	6	
Maryland	782	429	82.1%	166	114	616	316	9	8	150	99	295	177	7	7	289	170	37	11	0	0	37	11	290	134		
North Carolina	3,614	1,318																									

**Table 1.18.A. Utility Scale Facility Net Generation from Solar Thermal
by State, by Sector, November 2016 and 2015 (Thousand Megawatthours)**

Census Division and State	All Sectors			Electric Power Sector				Commercial Sector		Industrial Sector	
				Electric Utilities		Independent Power Producers					
	Generation at Utility Scale Facilities			Generation at Utility Scale Facilities		Generation at Utility Scale Facilities		Generation at Utility Scale Facilities		Generation at Utility Scale Facilities	
	November 2016	November 2015	Percentage Change	November 2016	November 2015						
New England	0	0	--	0	0	0	0	0	0	0	0
Connecticut	0	0	--	0	0	0	0	0	0	0	0
Maine	0	0	--	0	0	0	0	0	0	0	0
Massachusetts	0	0	--	0	0	0	0	0	0	0	0
New Hampshire	0	0	--	0	0	0	0	0	0	0	0
Rhode Island	0	0	--	0	0	0	0	0	0	0	0
Vermont	0	0	--	0	0	0	0	0	0	0	0
Middle Atlantic	0	0	--	0	0	0	0	0	0	0	0
New Jersey	0	0	--	0	0	0	0	0	0	0	0
New York	0	0	--	0	0	0	0	0	0	0	0
Pennsylvania	0	0	--	0	0	0	0	0	0	0	0
East North Central	0	0	--	0	0	0	0	0	0	0	0
Illinois	0	0	--	0	0	0	0	0	0	0	0
Indiana	0	0	--	0	0	0	0	0	0	0	0
Michigan	0	0	--	0	0	0	0	0	0	0	0
Ohio	0	0	--	0	0	0	0	0	0	0	0
Wisconsin	0	0	--	0	0	0	0	0	0	0	0
West North Central	0	0	--	0	0	0	0	0	0	0	0
Iowa	0	0	--	0	0	0	0	0	0	0	0
Kansas	0	0	--	0	0	0	0	0	0	0	0
Minnesota	0	0	--	0	0	0	0	0	0	0	0
Missouri	0	0	--	0	0	0	0	0	0	0	0
Nebraska	0	0	--	0	0	0	0	0	0	0	0
North Dakota	0	0	--	0	0	0	0	0	0	0	0
South Dakota	0	0	--	0	0	0	0	0	0	0	0
South Atlantic	4	4	14.0%	4	4	0	0	0	0	0	0
Delaware	0	0	--	0	0	0	0	0	0	0	0
District of Columbia	0	0	--	0	0	0	0	0	0	0	0
Florida	4	4	14.0%	4	4	0	0	0	0	0	0
Georgia	0	0	--	0	0	0	0	0	0	0	0
Maryland	0	0	--	0	0	0	0	0	0	0	0
North Carolina	0	0	--	0	0	0	0	0	0	0	0
South Carolina	0	0	--	0	0	0	0	0	0	0	0
Virginia	0	0	--	0	0	0	0	0	0	0	0
West Virginia	0	0	--	0	0	0	0	0	0	0	0
East South Central	0	0	--	0	0	0	0	0	0	0	0
Alabama	0	0	--	0	0	0	0	0	0	0	0
Kentucky	0	0	--	0	0	0	0	0	0	0	0
Mississippi	0	0	--	0	0	0	0	0	0	0	0
Tennessee	0	0	--	0	0	0	0	0	0	0	0
West South Central	0	0	--	0	0	0	0	0	0	0	0
Arkansas	0	0	--	0	0	0	0	0	0	0	0
Louisiana	0	0	--	0	0	0	0	0	0	0	0
Oklahoma	0	0	--	0	0	0	0	0	0	0	0
Texas	0	0	--	0	0	0	0	0	0	0	0
Mountain	40	54	-25.5%	0	0	40	54	0	0	0	0
Arizona	35	46	-24.2%	0	0	35	46	0	0	0	0
Colorado	0	0	--	0	0	0	0	0	0	0	0
Idaho	0	0	--	0	0	0	0	0	0	0	0
Montana	0	0	--	0	0	0	0	0	0	0	0
Nevada	5	7	-34.0%	0	0	5	7	0	0	0	0
New Mexico	0	0	--	0	0	0	0	0	0	0	0
Utah	0	0	--	0	0	0	0	0	0	0	0
Wyoming	0	0	--	0	0	0	0	0	0	0	0
Pacific Contiguous	140	147	-4.8%	0	0	140	147	0	0	0	0
California	140	147	-4.8%	0	0	140	147	0	0	0	0
Oregon	0	0	--	0	0	0	0	0	0	0	0
Washington	0	0	--	0	0	0	0	0	0	0	0
Pacific Noncontiguous	0	0	--	0	0	0	0	0	0	0	0
Alaska	0	0	--	0	0	0	0	0	0	0	0
Hawaii	0	0	--	0	0	0	0	0	0	0	0
U.S. Total	184	204	-9.9%	4	4	180	201	0	0	0	0

Displayed values of zero may represent small values that round to zero. The Excel version of this table provides additional precision which may be accessed by selecting individual cells.

NN = Not meaningful due to large relative standard error or excessive percentage change.

Notes: See Glossary for definitions. Values for 2016 are preliminary. Values for 2015 are final. See Technical Notes for a discussion of the sample design for the Form EIA-923.

Negative generation denotes that electric power consumed for plant use exceeds gross generation.

Totals may not equal sum of components because of independent rounding. Percentage change is calculated before rounding.

Source: U.S. Energy Information Administration, Form EIA-923, Power Plant Operations Report.

Table 1.18.B. Utility Scale Facility Net Generation from Solar Thermal

by State, by Sector, Year-to-Date through November 2016 and 2015 (Thousand Megawatthours)

Census Division and State	All Sectors			Electric Power Sector		Commercial Sector		Industrial Sector		
				Electric Utilities		Independent Power Producers				
	Generation at Utility Scale Facilities			Generation at Utility Scale Facilities		Generation at Utility Scale Facilities		Generation at Utility Scale Facilities		
November 2016 YTD	November 2015 YTD	Percentage Change	November 2016 YTD	November 2015 YTD	November 2016 YTD	November 2015 YTD	November 2016 YTD	November 2015 YTD	November 2016 YTD	November 2015 YTD
New England	0	0	--	0	0	0	0	0	0	0
Connecticut	0	0	--	0	0	0	0	0	0	0
Maine	0	0	--	0	0	0	0	0	0	0
Massachusetts	0	0	--	0	0	0	0	0	0	0
New Hampshire	0	0	--	0	0	0	0	0	0	0
Rhode Island	0	0	--	0	0	0	0	0	0	0
Vermont	0	0	--	0	0	0	0	0	0	0
Middle Atlantic	0	0	--	0	0	0	0	0	0	0
New Jersey	0	0	--	0	0	0	0	0	0	0
New York	0	0	--	0	0	0	0	0	0	0
Pennsylvania	0	0	--	0	0	0	0	0	0	0
East North Central	0	0	--	0	0	0	0	0	0	0
Illinois	0	0	--	0	0	0	0	0	0	0
Indiana	0	0	--	0	0	0	0	0	0	0
Michigan	0	0	--	0	0	0	0	0	0	0
Ohio	0	0	--	0	0	0	0	0	0	0
Wisconsin	0	0	--	0	0	0	0	0	0	0
West North Central	0	0	--	0	0	0	0	0	0	0
Iowa	0	0	--	0	0	0	0	0	0	0
Kansas	0	0	--	0	0	0	0	0	0	0
Minnesota	0	0	--	0	0	0	0	0	0	0
Missouri	0	0	--	0	0	0	0	0	0	0
Nebraska	0	0	--	0	0	0	0	0	0	0
North Dakota	0	0	--	0	0	0	0	0	0	0
South Dakota	0	0	--	0	0	0	0	0	0	0
South Atlantic	73	104	-30.2%	73	104	0	0	0	0	0
Delaware	0	0	--	0	0	0	0	0	0	0
District of Columbia	0	0	--	0	0	0	0	0	0	0
Florida	73	104	-30.2%	73	104	0	0	0	0	0
Georgia	0	0	--	0	0	0	0	0	0	0
Maryland	0	0	--	0	0	0	0	0	0	0
North Carolina	0	0	--	0	0	0	0	0	0	0
South Carolina	0	0	--	0	0	0	0	0	0	0
Virginia	0	0	--	0	0	0	0	0	0	0
West Virginia	0	0	--	0	0	0	0	0	0	0
East South Central	0	0	--	0	0	0	0	0	0	0
Alabama	0	0	--	0	0	0	0	0	0	0
Kentucky	0	0	--	0	0	0	0	0	0	0
Mississippi	0	0	--	0	0	0	0	0	0	0
Tennessee	0	0	--	0	0	0	0	0	0	0
West South Central	0	0	--	0	0	0	0	0	0	0
Arkansas	0	0	--	0	0	0	0	0	0	0
Louisiana	0	0	--	0	0	0	0	0	0	0
Oklahoma	0	0	--	0	0	0	0	0	0	0
Texas	0	0	--	0	0	0	0	0	0	0
Mountain	864	796	8.6%	0	0	864	796	0	0	0
Arizona	622	689	-9.8%	0	0	622	689	0	0	0
Colorado	0	0	--	0	0	0	0	0	0	0
Idaho	0	0	--	0	0	0	0	0	0	0
Montana	0	0	--	0	0	0	0	0	0	0
Nevada	242	107	127.2%	0	0	242	107	0	0	0
New Mexico	0	0	--	0	0	0	0	0	0	0
Utah	0	0	--	0	0	0	0	0	0	0
Wyoming	0	0	--	0	0	0	0	0	0	0
Pacific Contiguous	2,356	2,201	7.0%	0	0	2,356	2,201	0	0	0
California	2,356	2,201	7.0%	0	0	2,356	2,201	0	0	0
Oregon	0	0	--	0	0	0	0	0	0	0
Washington	0	0	--	0	0	0	0	0	0	0
Pacific Noncontiguous	0	0	--	0	0	0	0	0	0	0
Alaska	0	0	--	0	0	0	0	0	0	0
Hawaii	0	0	--	0	0	0	0	0	0	0
U.S. Total	3,293	3,101	6.2%	73	104	3,220	2,997	0	0	0

Displayed values of zero may represent small values that round to zero. The Excel version of this table provides additional precision which may be accessed by selecting individual cells.

NM = Not meaningful due to large relative standard error or excessive percentage change.

Notes: See Glossary for definitions. Values for 2016 are preliminary. Values for 2015 are final. See Technical Notes for a discussion of the sample design for the Form EIA-923.

Negative generation denotes that electric power consumed for plant use exceeds gross generation.

Totals may not equal sum of components because of independent rounding. Percentage change is calculated before rounding.

Source: U.S. Energy Information Administration, Form EIA-923, Power Plant Operations Report.

Table 2.1.A. Coal: Consumption for Electricity Generation, by Sector, 2006-November 2016 (Thousand Tons)

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
Annual Totals					
2006	1,030,556	753,390	269,412	347	7,408
2007	1,046,795	764,765	276,581	361	5,089
2008	1,042,335	760,326	276,565	369	5,075
2009	934,683	695,615	234,077	317	4,674
2010	979,684	721,431	249,814	314	8,125
2011	934,938	689,316	239,541	347	5,735
2012	825,734	615,467	205,295	307	4,665
2013	860,729	638,327	217,219	513	4,670
2014	853,634	624,235	224,568	202	4,629
2015	739,594	539,506	195,927	163	3,999
Year 2014					
January	83,647	61,084	22,129	27	407
February	76,160	55,073	20,699	27	362
March	72,124	51,559	20,147	22	396
April	58,065	41,151	16,541	16	357
May	64,033	47,114	16,521	12	385
June	74,328	55,542	18,365	15	406
July	81,495	60,238	20,821	16	420
August	81,074	60,222	20,422	14	417
Sept	69,127	50,728	17,998	12	389
October	61,129	44,987	15,772	11	359
November	64,651	46,561	17,720	14	356
December	67,799	49,976	17,434	16	373
Year 2015					
January	71,384	50,757	20,271	18	338
February	67,136	47,845	18,954	19	318
March	58,367	42,202	15,797	17	351
April	48,543	36,037	12,193	12	302
May	57,153	42,814	14,005	10	323
June	68,982	50,592	18,017	14	359
July	76,570	56,202	19,977	14	376
August	73,810	54,023	19,408	12	368
Sept	64,823	46,706	17,746	10	360
October	53,659	39,023	14,309	11	317
November	48,943	35,427	13,209	12	295
December	50,224	37,878	12,041	14	292
Year 2016					
January	62,032	45,569	16,131	14	319
February	50,570	37,655	12,605	15	296
March	39,852	31,038	8,496	14	304
April	38,965	28,674	10,027	11	254
May	44,998	33,836	10,894	9	259
June	63,328	46,364	16,644	10	310
July	74,282	54,238	19,705	11	328
August	73,871	53,929	19,600	12	330
Sept	62,430	44,871	17,280	12	267
October	54,638	39,517	14,860	13	248
November	48,126	35,274	12,624	13	215
Year to Date					
2014	785,834	574,259	207,134	185	4,255
2015	689,370	501,628	183,886	149	3,707
2016	613,093	450,965	158,865	133	3,130
Rolling 12 Months Ending in November					
2015	757,169	551,604	201,320	165	4,081
2016	663,317	488,843	170,906	147	3,421

Notes: Beginning with the collection of Form EIA-923 in January 2008, the methodology to allocate total fuel consumption for electricity generation and consumption for useful thermal output was changed.

The new methodology was retroactively applied to 2004-2007 data. See the Technical Notes (Appendix C) for further information. See Glossary for definitions.

Values for 2015 and prior years are final. Values for 2016 are preliminary. See Technical Notes for a discussion of the sample design for the Form EIA-923 and predecessor forms.

Coal includes anthracite, bituminous, subbituminous, lignite, and waste coal; synthetic coal and refined coal; and beginning in 2011, coal-derived synthesis gas. Prior to 2011 coal-derived synthesis gas was included in Other Gases.

See the Technical Notes for fuel conversion factors.

Totals may not equal sum of components because of independent rounding.

Sources: U.S. Energy Information Administration, Form EIA-906, Power Plant Report; U.S. Energy Information Administration, Form EIA-920 Combined Heat and Power Plant Report, and predecessor forms.

Beginning with 2008 data, the Form EIA-923, Power Plant Operations Report, replaced the following: Form EIA-906, Power Plant Report; Form EIA-920, Combined Heat and Power Plant Report.

Table 2.1.B. Coal: Consumption for Useful Thermal Output, by Sector, 2006-November 2016 (Thousand Tons)

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
Annual Totals					
2006	23,227	0	3,834	1,539	17,854
2007	22,810	0	3,795	1,566	17,449
2008	22,168	0	3,689	1,652	16,827
2009	20,507	0	3,935	1,481	15,091
2010	21,727	0	3,808	1,406	16,513
2011	21,532	0	3,628	1,321	16,584
2012	19,333	0	2,790	1,143	15,400
2013	18,350	0	2,416	843	15,090
2014	18,107	978	1,821	861	14,448
2015	16,632	1,032	1,980	635	12,985
Year 2014					
January	1,773	114	171	105	1,384
February	1,641	97	167	105	1,271
March	1,722	95	199	96	1,332
April	1,425	81	162	66	1,115
May	1,450	81	146	59	1,164
June	1,413	63	153	63	1,134
July	1,466	78	150	70	1,169
August	1,451	70	149	58	1,175
Sept	1,355	70	121	52	1,113
October	1,359	66	122	47	1,123
November	1,480	76	138	68	1,198
December	1,573	86	142	74	1,271
Year 2015					
January	1,649	99	197	79	1,275
February	1,505	96	166	78	1,165
March	1,494	94	178	67	1,155
April	1,296	76	144	43	1,034
May	1,335	75	165	40	1,055
June	1,327	87	172	47	1,022
July	1,451	86	187	50	1,129
August	1,345	71	176	45	1,052
Sept	1,301	75	155	40	1,031
October	1,245	81	145	41	979
November	1,321	99	145	47	1,030
December	1,363	95	151	58	1,059
Year 2016					
January	1,498	100	152	62	1,185
February	1,390	87	141	63	1,099
March	1,362	94	142	61	1,065
April	1,039	78	170	39	752
May	1,132	78	135	31	887
June	1,172	78	155	36	902
July	1,173	81	151	35	906
August	1,171	87	141	39	904
Sept	1,038	75	140	37	786
October	1,006	76	148	37	745
November	1,036	84	120	48	784
Year to Date					
2014	16,534	891	1,679	787	13,177
2015	15,269	937	1,829	577	11,927
2016	13,016	919	1,594	488	10,016
Rolling 12 Months Ending in November					
2015	16,842	1,023	1,971	650	13,197
2016	14,379	1,014	1,745	546	11,074

Notes: Beginning with the collection of Form EIA-923 in January 2008, the methodology to allocate total fuel consumption for electricity generation and consumption for useful thermal output was changed.

The new methodology was retroactively applied to 2004-2007 data. See the Technical Notes (Appendix C) for further information. See Glossary for definitions.

Values for 2015 and prior years are final. Values for 2016 are preliminary. See Technical Notes for a discussion of the sample design for the Form EIA-923 and predecessor forms.

Coal includes anthracite, bituminous, subbituminous, lignite, and waste coal; synthetic coal and refined coal; and beginning in 2011, coal-derived synthesis gas. Prior to 2011 coal-derived synthesis gas was included in Other Gases.

See the Technical Notes for fuel conversion factors.

Totals may not equal sum of components because of independent rounding.

Sources: U.S. Energy Information Administration, Form EIA-906, Power Plant Report; U.S. Energy Information Administration, Form EIA-920 Combined Heat and Power Plant Report, and predecessor forms.

Beginning with 2008 data, the Form EIA-923, Power Plant Operations Report, replaced the following: Form EIA-906, Power Plant Report; Form EIA-920, Combined Heat and Power Plant Report.

Table 2.1.C. Coal: Consumption for Electricity Generation and Useful Thermal Output, by Sector, 2006–November 2016 (Thousand Tons)

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
Annual Totals					
2006	1,053,783	753,390	273,246	1,886	25,262
2007	1,069,606	764,765	280,377	1,927	22,537
2008	1,064,503	760,326	280,254	2,021	21,902
2009	955,190	695,615	238,012	1,798	19,766
2010	1,001,411	721,431	253,621	1,720	24,638
2011	956,470	689,316	243,168	1,668	22,319
2012	845,066	615,467	208,085	1,450	20,065
2013	879,078	638,327	219,635	1,356	19,761
2014	871,741	625,212	226,389	1,063	19,076
2015	756,226	540,538	197,906	798	16,984
Year 2014					
January	85,420	61,198	22,300	132	1,791
February	77,801	55,170	20,866	131	1,633
March	73,846	51,654	20,346	118	1,729
April	59,489	41,232	16,703	82	1,472
May	65,483	47,195	16,667	72	1,549
June	75,741	55,606	18,518	78	1,540
July	82,961	60,316	20,970	85	1,589
August	82,526	60,292	20,571	72	1,591
Sept	70,482	50,798	18,118	64	1,502
October	62,488	45,053	15,895	58	1,482
November	66,131	46,637	17,858	82	1,554
December	69,372	50,062	17,576	90	1,644
Year 2015					
January	73,033	50,856	20,467	97	1,613
February	68,640	47,941	19,120	97	1,483
March	59,861	42,297	15,975	83	1,506
April	49,840	36,112	12,337	54	1,336
May	58,488	42,889	14,171	50	1,378
June	70,309	50,678	18,189	61	1,381
July	78,021	56,288	20,164	64	1,505
August	75,156	54,094	19,584	58	1,420
Sept	66,124	46,780	17,901	51	1,391
October	54,904	39,104	14,453	52	1,296
November	50,264	35,526	13,353	59	1,325
December	51,587	37,973	12,192	72	1,350
Year 2016					
January	63,530	45,669	16,282	76	1,503
February	51,961	37,742	12,746	78	1,395
March	41,214	31,132	8,637	75	1,370
April	40,004	28,752	10,196	49	1,006
May	46,129	33,914	11,029	40	1,147
June	64,500	46,442	16,800	46	1,212
July	75,455	54,319	19,856	46	1,234
August	75,041	54,017	19,740	50	1,234
Sept	63,469	44,946	17,420	49	1,053
October	55,643	39,594	15,007	50	993
November	49,162	35,358	12,744	61	998
Year to Date					
2014	802,369	575,150	208,813	973	17,432
2015	704,639	502,565	185,714	726	15,634
2016	626,108	451,884	160,458	621	13,145
Rolling 12 Months Ending in November					
2015	774,011	552,627	203,291	816	17,278
2016	677,695	489,857	172,650	693	14,496

Notes: Beginning with the collection of Form EIA-923 in January 2008, the methodology to allocate total fuel consumption for electricity generation and consumption for useful thermal output was changed.

The new methodology was retroactively applied to 2004–2007 data. See the Technical Notes (Appendix C) for further information. See Glossary for definitions.

Values for 2015 and prior years are final. Values for 2016 are preliminary. See Technical Notes for a discussion of the sample design for the Form EIA-923 and predecessor forms.

Coal includes anthracite, bituminous, subbituminous, lignite, and waste coal; synthetic coal and refined coal; and beginning in 2011, coal-derived synthesis gas. Prior to 2011 coal-derived synthesis gas was included in Other Gases.

See the Technical Notes for fuel conversion factors.

Totals may not equal sum of components because of independent rounding.

Sources: U.S. Energy Information Administration, Form EIA-906, Power Plant Report; U.S. Energy Information Administration, Form EIA-920

Combined Heat and Power Plant Report, and predecessor forms.

Beginning with 2008 data, the Form EIA-923, Power Plant Operations Report, replaced the following: Form EIA-906, Power Plant Report; Form EIA-920, Combined Heat and Power Plant Report.

Table 2.2.A. Petroleum Liquids: Consumption for Electricity Generation, by Sector, 2006–November 2016 (Thousand Barrels)

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
Annual Totals					
2006	73,821	53,529	17,179	327	2,786
2007	82,433	56,910	22,793	250	2,480
2008	53,846	38,995	13,152	160	1,538
2009	43,562	31,847	9,880	184	1,652
2010	40,103	30,806	8,278	164	855
2011	27,326	20,844	5,633	133	716
2012	22,604	17,521	4,110	272	702
2013	23,231	16,827	5,494	328	582
2014	31,531	19,652	10,689	451	739
2015	28,925	18,562	9,473	249	641
Year 2014					
January	10,190	4,468	5,487	112	122
February	3,117	1,879	1,099	58	81
March	3,476	1,917	1,443	43	72
April	1,556	1,283	200	31	42
May	1,647	1,296	274	22	56
June	1,502	1,179	246	27	50
July	1,696	1,308	311	24	53
August	1,751	1,310	372	23	45
Sept	1,645	1,296	274	24	50
October	1,550	1,218	251	28	53
November	1,681	1,230	362	28	60
December	1,721	1,268	368	30	54
Year 2015					
January	3,293	2,061	1,135	33	64
February	8,589	3,547	4,845	93	103
March	1,785	1,243	472	18	53
April	1,522	1,232	222	14	54
May	1,697	1,251	376	15	55
June	1,745	1,380	296	14	56
July	1,995	1,480	453	16	45
August	1,801	1,398	344	17	42
Sept	1,656	1,230	378	7	41
October	1,541	1,215	273	7	46
November	1,720	1,348	324	7	40
December	1,581	1,177	354	8	42
Year 2016					
January	2,326	1,681	584	12	48
February	2,111	1,405	645	14	47
March	1,366	1,044	284	NM	31
April	1,318	1,016	262	10	31
May	1,560	1,173	320	11	56
June	1,577	1,242	281	9	44
July	2,207	1,679	461	11	57
August	2,192	1,627	498	15	52
Sept	1,532	1,111	370	10	41
October	1,566	1,140	352	11	64
November	1,560	1,198	305	11	46
Year to Date					
2014	29,810	18,385	10,321	421	684
2015	27,344	17,385	9,119	241	599
2016	19,315	14,316	4,363	119	517
Rolling 12 Months Ending in November					
2015	29,065	18,653	9,487	272	653
2016	20,895	15,493	4,717	NM	559

Notes: Beginning with the collection of Form EIA-923 in January 2008, the methodology to allocate total fuel consumption for electricity generation and consumption for useful thermal output was changed.

The new methodology was retroactively applied to 2004–2007 data. See the Technical Notes (Appendix C) for further information. See Glossary for definitions.

Values for 2015 and prior years are final. Values for 2016 are preliminary. See Technical Notes for a discussion of the sample design for the Form EIA-923 and predecessor forms.

Petroleum Liquids includes distillate and residual fuel oils, jet fuel, kerosene, waste oil, and beginning in 2011, propane. Prior to 2011 propane was included in Other Gases.

See the Technical Notes for fuel conversion factors.

Totals may not equal sum of components because of independent rounding.

Sources: U.S. Energy Information Administration, Form EIA-906, Power Plant Report; U.S. Energy Information Administration, Form EIA-920

Combined Heat and Power Plant Report, and predecessor forms.

Beginning with 2008 data, the Form EIA-923, Power Plant Operations Report, replaced the following: Form EIA-906, Power Plant Report; Form EIA-920, Combined Heat and Power Plant Report.

Table 2.2.B. Petroleum Liquids: Consumption for Useful Thermal Output, by Sector, 2006-November 2016 (Thousand Barrels)

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
Annual Totals					
2006	14,077	0	1,153	559	12,365
2007	13,462	0	1,303	441	11,718
2008	7,533	0	1,311	461	5,762
2009	8,128	0	1,301	293	6,534
2010	4,866	0	1,086	212	3,567
2011	3,826	0	1,004	168	2,654
2012	3,097	0	992	122	1,984
2013	3,456	0	1,050	498	1,908
2014	3,099	64	1,170	216	1,650
2015	3,142	62	1,155	282	1,643
Year 2014					
January	643	45	189	115	294
February	336	5	88	44	199
March	301	7	101	27	165
April	203	0	86	4	114
May	211	1	89	5	116
June	208	1	90	3	114
July	195	1	93	4	97
August	201	1	108	3	89
Sept	173	1	62	2	109
October	208	0	92	2	114
November	220	0	90	4	125
December	200	1	80	4	114
Year 2015					
January	324	7	99	43	175
February	595	46	175	116	259
March	261	1	89	25	146
April	239	0	80	17	142
May	232	0	82	18	132
June	218	1	79	14	123
July	231	1	102	15	113
August	203	1	88	16	98
Sept	199	1	90	2	106
October	225	1	98	3	124
November	203	1	85	7	110
December	210	1	90	5	114
Year 2016					
January	244	4	84	16	140
February	223	7	68	16	132
March	183	0	89	NM	87
April	180	1	79	10	91
May	208	0	86	9	113
June	197	2	78	8	109
July	239	0	87	11	140
August	233	0	94	10	128
Sept	186	1	88	9	89
October	231	0	89	9	133
November	184	0	78	8	97
Year to Date					
2014	2,899	63	1,089	212	1,536
2015	2,932	61	1,065	277	1,529
2016	2,307	17	919	113	1,259
Rolling 12 Months Ending in November					
2015	3,132	62	1,146	281	1,643
2016	2,517	18	1,009	NM	1,372

Notes: Beginning with the collection of Form EIA-923 in January 2008, the methodology to allocate total fuel consumption for electricity generation and consumption for useful thermal output was changed.

The new methodology was retroactively applied to 2004-2007 data. See the Technical Notes (Appendix C) for further information. See Glossary for definitions.

Values for 2015 and prior years are final. Values for 2016 are preliminary. See Technical Notes for a discussion of the sample design for the Form EIA-923 and predecessor forms.

Petroleum Liquids includes distillate and residual fuel oils, jet fuel, kerosene, waste oil, and beginning in 2011, propane. Prior to 2011 propane was included in Other Gases.

See the Technical Notes for fuel conversion factors.

Totals may not equal sum of components because of independent rounding.

Sources: U.S. Energy Information Administration, Form EIA-906, Power Plant Report; U.S. Energy Information Administration, Form EIA-920 Combined Heat and Power Plant Report, and predecessor forms.

Beginning with 2008 data, the Form EIA-923, Power Plant Operations Report, replaced the following: Form EIA-906, Power Plant Report; Form EIA-920, Combined Heat and Power Plant Report.

Table 2.2.C. Petroleum Liquids: Consumption for Electricity Generation and Useful Thermal Output, by Sector, 2006–November 2016 (Thousand Barrels)

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
Annual Totals					
2006	87,898	53,529	18,332	886	15,150
2007	95,895	56,910	24,097	691	14,198
2008	61,379	38,995	14,463	621	7,300
2009	51,690	31,847	11,181	477	8,185
2010	44,968	30,806	9,364	376	4,422
2011	31,152	20,844	6,637	301	3,370
2012	25,702	17,521	5,102	394	2,685
2013	26,687	16,827	6,544	826	2,490
2014	34,630	19,716	11,859	667	2,389
2015	32,067	18,624	10,629	531	2,283
Year 2014					
January	10,833	4,513	5,677	227	416
February	3,453	1,885	1,187	101	280
March	3,776	1,924	1,545	70	237
April	1,760	1,283	286	35	156
May	1,858	1,296	363	27	172
June	1,711	1,180	336	30	164
July	1,890	1,309	404	28	150
August	1,952	1,311	481	26	134
Sept	1,818	1,297	336	26	159
October	1,758	1,219	343	30	166
November	1,900	1,230	453	32	186
December	1,921	1,269	449	34	169
Year 2015					
January	3,617	2,069	1,234	76	239
February	9,184	3,593	5,020	209	362
March	2,046	1,244	560	43	199
April	1,761	1,233	301	31	196
May	1,930	1,251	458	34	187
June	1,963	1,381	375	28	179
July	2,226	1,481	555	32	159
August	2,004	1,399	432	33	140
Sept	1,856	1,230	468	10	147
October	1,766	1,216	371	9	170
November	1,923	1,349	409	14	150
December	1,791	1,178	444	13	155
Year 2016					
January	2,569	1,685	668	28	188
February	2,334	1,412	713	30	179
March	1,549	1,045	372	NM	118
April	1,499	1,016	341	20	121
May	1,768	1,173	406	20	169
June	1,774	1,245	359	17	153
July	2,446	1,679	548	22	197
August	2,425	1,628	592	25	181
Sept	1,718	1,112	458	18	130
October	1,797	1,140	441	20	196
November	1,744	1,198	384	19	143
Year to Date					
2014	32,709	18,447	11,410	632	2,220
2015	30,277	17,446	10,184	518	2,128
2016	21,622	14,333	5,281	232	1,776
Rolling 12 Months Ending in November					
2015	32,197	18,715	10,633	553	2,297
2016	23,413	15,511	5,726	NM	1,931

Notes: Beginning with the collection of Form EIA-923 in January 2008, the methodology to allocate total fuel consumption for electricity generation and consumption for useful thermal output was changed.

The new methodology was retroactively applied to 2004–2007 data. See the Technical Notes (Appendix C) for further information. See Glossary for definitions.

Values for 2015 and prior years are final. Values for 2016 are preliminary. See Technical Notes for a discussion of the sample design for the Form EIA-923 and predecessor forms.

Petroleum Liquids includes distillate and residual fuel oils, jet fuel, kerosene, waste oil, and beginning in 2011, propane. Prior to 2011 propane was included in Other Gases.

See the Technical Notes for fuel conversion factors.

Totals may not equal sum of components because of independent rounding.

Sources: U.S. Energy Information Administration, Form EIA-906, Power Plant Report; U.S. Energy Information Administration, Form EIA-920

Combined Heat and Power Plant Report, and predecessor forms.

Beginning with 2008 data, the Form EIA-923, Power Plant Operations Report, replaced the following: Form EIA-906, Power Plant Report; Form EIA-920, Combined Heat and Power Plant Report.

Table 2.3.A. Petroleum Coke: Consumption for Electricity Generation, by Sector, 2006–November 2016 (Thousand Tons)

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
Annual Totals					
2006	7,363	3,619	3,286	1	456
2007	6,036	2,808	2,715	2	512
2008	5,417	2,296	2,704	1	416
2009	4,821	2,761	1,724	1	335
2010	4,994	3,325	1,354	2	313
2011	5,012	3,449	1,277	1	286
2012	3,675	2,105	756	1	812
2013	4,852	3,409	779	1	662
2014	4,412	3,440	599	2	371
2015	4,044	3,120	669	2	253
Year 2014					
January	436	349	55	0	32
February	361	275	56	0	30
March	421	332	57	0	31
April	303	212	55	0	36
May	393	314	49	0	30
June	418	339	46	0	33
July	385	299	54	0	33
August	382	298	51	0	33
Sept	372	281	62	0	29
October	230	178	23	0	29
November	288	228	33	0	27
December	424	335	60	0	29
Year 2015					
January	402	312	56	0	33
February	413	332	56	0	25
March	275	195	60	0	20
April	300	213	59	0	28
May	339	260	59	0	20
June	306	233	55	0	18
July	409	333	59	0	17
August	388	311	58	0	18
Sept	376	294	61	0	21
October	300	227	57	0	16
November	260	178	62	0	20
December	276	232	26	0	18
Year 2016					
January	341	302	17	0	22
February	329	272	39	0	17
March	366	283	63	0	20
April	390	326	43	0	21
May	372	296	52	0	24
June	382	308	52	0	22
July	403	325	56	0	22
August	422	337	62	0	23
Sept	383	311	50	0	22
October	246	172	62	0	13
November	304	240	47	0	18
Year to Date					
2014	3,989	3,105	539	2	342
2015	3,768	2,888	643	2	235
2016	3,939	3,170	544	1	224
Rolling 12 Months Ending in November					
2015	4,192	3,222	703	2	264
2016	4,215	3,402	570	1	242

Notes: Beginning with the collection of Form EIA-923 in January 2008, the methodology to allocate total fuel consumption for electricity generation and consumption for useful thermal output was changed.

The new methodology was retroactively applied to 2004–2007 data. See the Technical Notes (Appendix C) for further information. See Glossary for definitions.

Values for 2015 and prior years are final. Values for 2016 are preliminary. See Technical Notes for a discussion of the sample design for the Form EIA-923 and predecessor forms.

Petroleum Coke includes petroleum coke-derived synthesis gas. Prior to 2011, petroleum coke-derived synthesis gas was included in Other Gases.

See the Technical Notes for fuel conversion factors.

Totals may not equal sum of components because of independent rounding.

Sources: U.S. Energy Information Administration, Form EIA-906, Power Plant Report; U.S. Energy Information Administration, Form EIA-920

Combined Heat and Power Plant Report, and predecessor forms.

Beginning with 2008 data, the Form EIA-923, Power Plant Operations Report, replaced the following: Form EIA-906, Power Plant Report; Form EIA-920, Combined Heat and Power Plant Report.

Table 2.3.B. Petroleum Coke: Consumption for Useful Thermal Output, by Sector, 2006–November 2016 (Thousand Tons)

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
Annual Totals					
2006	1,259	0	195	9	1,055
2007	1,262	0	162	11	1,090
2008	897	0	119	9	769
2009	1,007	0	126	8	873
2010	1,059	0	98	11	950
2011	1,080	0	112	6	962
2012	1,346	0	113	11	1,222
2013	1,486	0	96	11	1,379
2014	1,283	3	90	16	1,174
2015	1,144	9	109	16	1,010
Year 2014					
January	105	0	9	2	95
February	93	1	7	1	84
March	106	0	8	2	96
April	116	0	9	2	105
May	110	0	8	1	102
June	109	0	0	0	109
July	114	0	5	0	109
August	112	0	9	2	101
Sept	113	0	9	2	102
October	86	0	9	1	75
November	104	1	9	2	92
December	114	0	9	2	103
Year 2015					
January	109	0	10	2	96
February	99	1	9	2	88
March	101	1	9	2	89
April	106	1	9	1	95
May	96	1	10	0	86
June	91	2	9	0	81
July	81	1	9	0	71
August	87	0	9	2	77
Sept	98	0	8	2	88
October	84	0	8	2	73
November	106	3	10	2	92
December	86	0	10	1	75
Year 2016					
January	79	0	10	2	66
February	87	0	9	2	76
March	108	0	10	2	96
April	71	0	6	0	64
May	76	0	6	0	69
June	79	0	8	0	71
July	85	0	8	1	76
August	84	0	9	0	75
Sept	65	0	9	0	56
October	112	0	10	0	102
November	77	0	9	0	68
Year to Date					
2014	1,168	3	80	14	1,071
2015	1,058	9	99	15	935
2016	923	2	95	7	818
Rolling 12 Months Ending in November					
2015	1,172	9	108	17	1,038
2016	1,009	2	106	9	893

Notes: Beginning with the collection of Form EIA-923 in January 2008, the methodology to allocate total fuel consumption for electricity generation and consumption for useful thermal output was changed.

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Values for 2015 and prior years are final. Values for 2016 are preliminary. See Technical Notes for a discussion of the sample design for the Form EIA-923 and predecessor forms.

Petroleum Coke includes petroleum coke-derived synthesis gas. Prior to 2011, petroleum coke-derived synthesis gas was included in Other Gases.

See the Technical Notes for fuel conversion factors.

Totals may not equal sum of components because of independent rounding.

Sources: U.S. Energy Information Administration, Form EIA-906, Power Plant Report; U.S. Energy Information Administration, Form EIA-920

Combined Heat and Power Plant Report, and predecessor forms.

Beginning with 2008 data, the Form EIA-923, Power Plant Operations Report, replaced the following: Form EIA-906, Power Plant Report; Form EIA-920, Combined Heat and Power Plant Report.

Table 2.3.C. Petroleum Coke: Consumption for Electricity Generation and Useful Thermal Output, by Sector, 2006–November 2016 (Thousand Tons)

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
Annual Totals					
2006	8,622	3,619	3,482	10	1,511
2007	7,299	2,808	2,877	12	1,602
2008	6,314	2,296	2,823	10	1,184
2009	5,828	2,761	1,850	9	1,209
2010	6,053	3,325	1,452	12	1,264
2011	6,092	3,449	1,388	6	1,248
2012	5,021	2,105	869	13	2,034
2013	6,338	3,409	875	12	2,041
2014	5,695	3,443	689	18	1,545
2015	5,188	3,128	779	18	1,263
Year 2014					
January	541	349	63	2	127
February	454	276	63	2	113
March	527	332	65	2	128
April	418	212	64	2	141
May	504	314	57	1	132
June	527	339	46	0	141
July	499	299	58	0	142
August	494	298	59	2	134
Sept	485	281	70	2	131
October	316	178	32	2	104
November	393	229	42	2	120
December	538	335	69	2	132
Year 2015					
January	510	313	66	3	129
February	513	332	65	2	113
March	376	196	69	2	109
April	406	213	68	2	123
May	435	261	69	0	105
June	398	235	63	0	99
July	490	334	68	0	88
August	475	311	67	2	95
Sept	475	294	69	2	109
October	384	227	65	2	89
November	365	181	72	2	111
December	362	232	36	2	93
Year 2016					
January	420	302	27	3	89
February	416	272	49	2	93
March	474	283	74	2	116
April	461	326	50	0	85
May	448	296	58	0	93
June	461	308	60	0	93
July	488	325	65	1	98
August	506	337	71	0	98
Sept	448	311	59	0	78
October	359	172	72	0	115
November	381	240	56	0	85
Year to Date					
2014	5,157	3,108	619	16	1,413
2015	4,826	2,896	742	17	1,171
2016	4,862	3,172	639	9	1,042
Rolling 12 Months Ending in November					
2015	5,364	3,232	811	19	1,303
2016	5,224	3,404	676	10	1,135

Notes: Beginning with the collection of Form EIA-923 in January 2008, the methodology to allocate total fuel consumption for electricity generation and consumption for useful thermal output was changed.

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Values for 2015 and prior years are final. Values for 2016 are preliminary. See Technical Notes for a discussion of the sample design for the Form EIA-923 and predecessor forms.

Petroleum Coke includes petroleum coke-derived synthesis gas. Prior to 2011, petroleum coke-derived synthesis gas was included in Other Gases.

See the Technical Notes for fuel conversion factors.

Totals may not equal sum of components because of independent rounding.

Sources: U.S. Energy Information Administration, Form EIA-906, Power Plant Report; U.S. Energy Information Administration, Form EIA-920 Combined Heat and Power Plant Report, and predecessor forms.

Beginning with 2008 data, the Form EIA-923, Power Plant Operations Report, replaced the following: Form EIA-906, Power Plant Report; Form EIA-920, Combined Heat and Power Plant Report.

Table 2.4.A. Natural Gas: Consumption for Electricity Generation, by Sector, 2006-November 2016 (Million Cubic Feet)

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
Annual Totals					
2006	6,461,615	2,478,396	3,412,826	34,623	535,770
2007	7,089,342	2,736,418	3,765,194	34,087	553,643
2008	6,895,843	2,730,134	3,612,197	33,403	520,109
2009	7,121,069	2,911,279	3,655,712	34,279	519,799
2010	7,680,185	3,290,993	3,794,423	39,462	555,307
2011	7,883,865	3,446,087	3,819,107	47,170	571,501
2012	9,484,710	4,101,927	4,686,260	63,116	633,407
2013	8,596,299	3,970,447	3,917,131	66,570	642,152
2014	8,544,387	3,895,008	3,954,032	71,957	623,390
2015	10,016,576	4,745,255	4,576,683	70,092	624,545
Year 2014					
January	694,661	324,657	309,522	6,411	54,071
February	579,819	265,645	261,103	5,180	47,892
March	591,101	271,638	263,442	5,292	50,729
April	579,336	270,132	256,256	4,967	47,981
May	680,193	323,448	300,470	5,761	50,513
June	754,126	348,327	349,049	6,119	50,630
July	880,805	393,011	425,395	6,966	55,433
August	935,170	426,346	445,556	7,430	55,839
Sept	805,960	355,962	391,332	6,396	52,270
October	736,039	323,456	356,020	5,939	50,625
November	633,279	288,760	287,096	5,496	51,927
December	673,898	303,627	308,792	5,999	55,480
Year 2015					
January	745,235	347,151	338,575	5,254	54,254
February	676,139	331,550	293,466	4,643	46,480
March	736,500	348,019	335,606	5,168	47,707
April	692,199	329,693	312,160	4,864	45,483
May	765,715	361,501	350,073	5,514	48,627
June	922,461	447,079	416,030	6,221	53,131
July	1,084,120	510,084	509,399	7,336	57,301
August	1,064,683	496,826	503,679	7,235	56,943
Sept	930,090	432,653	437,222	6,696	53,518
October	824,878	380,830	386,725	5,943	51,380
November	767,336	366,510	342,625	5,470	52,732
December	807,219	393,358	351,123	5,748	56,990
Year 2016					
January	803,536	390,262	353,893	5,851	53,529
February	717,097	352,615	309,377	5,032	50,073
March	776,605	379,759	339,039	5,416	52,392
April	755,518	364,499	335,359	5,313	50,348
May	841,299	409,783	373,032	5,602	52,882
June	1,007,072	501,227	445,303	6,081	54,460
July	1,178,919	576,292	538,877	6,668	57,083
August	1,191,890	573,066	554,800	6,754	57,270
Sept	951,179	454,346	436,593	5,963	54,278
October	775,514	368,436	350,473	5,144	51,461
November	700,215	332,389	307,969	5,332	54,526
Year to Date					
2014	7,870,489	3,591,381	3,645,240	65,957	567,910
2015	9,209,356	4,351,897	4,225,560	64,344	567,555
2016	9,698,844	4,702,672	4,344,715	63,156	588,301
Rolling 12 Months Ending in November					
2015	9,883,254	4,655,524	4,534,352	70,344	623,035
2016	10,506,063	5,096,030	4,695,838	68,904	645,291

Notes: Beginning with the collection of Form EIA-923 in January 2008, the methodology to allocate total fuel consumption for electricity generation and consumption for useful thermal output was changed.

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Values for 2015 and prior years are final. Values for 2016 are preliminary. See Technical Notes for a discussion of the sample design for the Form EIA-923 and predecessor forms.

Totals may not equal sum of components because of independent rounding.

Sources: U.S. Energy Information Administration, Form EIA-906, Power Plant Report; U.S. Energy Information Administration, Form EIA-920 Combined Heat and Power Plant Report, and predecessor forms.

Beginning with 2008 data, the Form EIA-923, Power Plant Operations Report, replaced the following: Form EIA-906, Power Plant Report; Form EIA-920, Combined Heat and Power Plant Report.

Table 2.4.B. Natural Gas: Consumption for Useful Thermal Output, by Sector, 2006-November 2016 (Million Cubic Feet)

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
Annual Totals					
2006	942,817	0	330,878	33,112	578,828
2007	872,579	0	339,796	35,987	496,796
2008	793,537	0	326,048	32,813	434,676
2009	816,787	0	305,542	41,275	469,970
2010	821,775	0	301,769	46,324	473,683
2011	839,681	0	308,669	39,856	491,155
2012	886,103	0	322,607	47,883	515,613
2013	882,385	0	303,177	51,057	528,151
2014	865,146	4,926	292,016	46,635	521,569
2015	935,098	8,060	283,372	46,287	597,379
Year 2014					
January	87,362	527	28,175	7,205	51,455
February	68,875	539	23,822	3,527	40,988
March	72,690	476	25,252	3,245	43,717
April	67,023	286	22,224	3,085	41,428
May	67,861	224	22,787	3,272	41,578
June	67,490	274	23,101	3,460	40,656
July	72,370	267	24,630	3,749	43,724
August	74,882	441	25,464	4,031	44,946
Sept	69,772	367	23,285	3,731	42,390
October	71,722	431	23,484	3,776	44,032
November	70,483	534	24,002	3,672	42,274
December	74,615	561	25,790	3,883	44,381
Year 2015					
January	79,075	582	25,015	4,250	49,227
February	73,005	615	22,712	3,906	45,772
March	80,319	512	24,594	4,013	51,201
April	73,041	598	21,826	3,220	47,398
May	72,919	629	22,283	3,475	46,532
June	74,850	589	22,777	3,582	47,901
July	82,339	727	25,332	4,138	52,143
August	83,543	935	25,150	3,973	53,485
Sept	78,210	731	24,437	4,076	48,965
October	78,745	688	23,297	3,788	50,972
November	77,684	713	22,566	3,845	50,561
December	81,369	743	23,382	4,021	53,223
Year 2016					
January	85,479	1,184	25,629	4,561	54,106
February	78,301	1,070	23,422	4,217	49,592
March	80,284	948	24,328	4,163	50,844
April	77,752	711	22,367	4,054	50,620
May	77,815	875	23,998	3,652	49,290
June	78,230	909	24,030	3,692	49,598
July	82,796	981	25,489	4,171	52,156
August	84,263	952	26,221	4,188	52,901
Sept	77,918	865	23,164	3,758	50,131
October	76,146	695	21,651	3,598	50,201
November	77,456	875	21,756	3,798	51,027
Year to Date					
2014	790,531	4,365	266,226	42,751	477,188
2015	853,730	7,317	259,989	42,266	544,157
2016	876,439	10,063	262,056	43,852	560,468
Rolling 12 Months Ending in November					
2015	928,345	7,878	285,779	46,150	588,538
2016	957,808	10,806	285,439	47,873	613,690

Notes: Beginning with the collection of Form EIA-923 in January 2008, the methodology to allocate total fuel consumption for electricity generation and consumption for useful thermal output was changed.

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Totals may not equal sum of components because of independent rounding.

Sources: U.S. Energy Information Administration, Form EIA-906, Power Plant Report; U.S. Energy Information Administration, Form EIA-920 Combined Heat and Power Plant Report, and predecessor forms.

Beginning with 2008 data, the Form EIA-923, Power Plant Operations Report, replaced the following: Form EIA-906, Power Plant Report; Form EIA-920, Combined Heat and Power Plant Report.

Table 2.4.C. Natural Gas: Consumption for Electricity Generation and Useful Thermal Output, by Sector, 2006-November 2016 (Million Cubic Feet)

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
Annual Totals					
2006	7,404,432	2,478,396	3,743,704	67,735	1,114,597
2007	7,961,922	2,736,418	4,104,991	70,074	1,050,439
2008	7,689,380	2,730,134	3,938,245	66,216	954,785
2009	7,937,856	2,911,279	3,961,254	75,555	989,769
2010	8,501,960	3,290,993	4,096,192	85,786	1,028,990
2011	8,723,546	3,446,087	4,127,777	87,026	1,062,657
2012	10,370,812	4,101,927	5,008,867	110,999	1,149,020
2013	9,478,685	3,970,447	4,220,309	117,626	1,170,303
2014	9,409,532	3,899,934	4,246,048	118,591	1,144,959
2015	10,951,674	4,753,315	4,860,055	116,380	1,221,924
Year 2014					
January	782,023	325,184	337,697	13,616	105,526
February	648,695	266,184	284,925	8,706	88,880
March	663,791	272,114	288,694	8,537	94,446
April	646,360	270,418	278,481	8,052	89,409
May	748,053	323,672	323,257	9,033	92,091
June	821,616	348,601	372,150	9,580	91,286
July	953,174	393,278	450,025	10,715	99,157
August	1,010,052	426,786	471,019	11,461	100,785
Sept	875,732	356,329	414,618	10,126	94,659
October	807,761	323,887	379,503	9,715	94,657
November	703,762	289,294	311,098	9,169	94,202
December	748,513	304,188	334,581	9,883	99,861
Year 2015					
January	824,310	347,733	363,591	9,504	103,482
February	749,144	332,165	316,178	8,549	92,252
March	816,819	348,531	360,200	9,180	98,908
April	765,240	330,291	333,985	8,084	92,881
May	838,634	362,129	372,356	8,989	95,159
June	997,311	447,668	438,807	9,804	101,032
July	1,166,459	510,811	534,731	11,474	109,444
August	1,148,226	497,761	528,829	11,208	110,428
Sept	1,008,300	433,385	461,659	10,772	102,484
October	903,623	381,518	410,022	9,731	102,351
November	845,020	367,223	365,190	9,315	103,292
December	888,588	394,101	374,505	9,769	110,212
Year 2016					
January	889,015	391,446	379,522	10,412	107,635
February	795,397	353,684	332,799	9,249	99,665
March	856,889	380,706	363,368	9,579	103,236
April	833,271	365,210	357,726	9,367	100,968
May	919,114	410,658	397,030	9,254	102,173
June	1,085,302	502,136	469,334	9,774	104,058
July	1,261,715	577,273	564,366	10,838	109,238
August	1,276,152	574,018	581,022	10,942	110,171
Sept	1,029,097	455,210	459,756	9,721	104,409
October	851,659	369,130	372,124	8,742	101,663
November	777,672	333,264	329,725	9,130	105,553
Year to Date					
2014	8,661,019	3,595,746	3,911,467	108,709	1,045,098
2015	10,063,086	4,359,214	4,485,550	106,611	1,111,712
2016	10,575,283	4,712,735	4,606,771	107,008	1,148,769
Rolling 12 Months Ending in November					
2015	10,811,599	4,663,402	4,820,131	116,493	1,211,573
2016	11,463,871	5,106,836	4,981,277	116,777	1,258,981

Notes: Beginning with the collection of Form EIA-923 in January 2008, the methodology to allocate total fuel consumption for electricity generation and consumption for useful thermal output was changed.

The new methodology was retroactively applied to 2004-2007 data. See the Technical Notes (Appendix C) for further information. See Glossary for definitions.

Values for 2015 and prior years are final. Values for 2016 are preliminary. See Technical Notes for a discussion of the sample design for the Form EIA-923 and predecessor forms.

Totals may not equal sum of components because of independent rounding.

Sources: U.S. Energy Information Administration, Form EIA-906, Power Plant Report; U.S. Energy Information Administration, Form EIA-920 Combined Heat and Power Plant Report, and predecessor forms.

Beginning with 2008 data, the Form EIA-923, Power Plant Operations Report, replaced the following: Form EIA-906, Power Plant Report; Form EIA-920, Combined Heat and Power Plant Report.

Table 2.5.A. Landfill Gas: Consumption for Electricity Generation, by Sector, 2006-November 2016 (Million Cubic Feet)

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
Annual Totals					
2006	160,033	16,617	136,108	6,644	664
2007	166,774	17,442	144,104	4,598	630
2008	195,777	20,465	169,547	5,235	530
2009	206,792	19,583	180,689	5,931	589
2010	218,331	19,975	192,428	5,535	393
2011	232,795	22,086	180,856	29,469	384
2012	256,376	25,193	201,965	26,672	2,545
2013	271,967	27,259	211,942	28,143	4,623
2014	285,982	25,819	228,447	27,038	4,678
2015	282,530	25,257	227,381	25,250	4,642
Year 2014					
January	24,810	2,187	19,717	2,506	401
February	23,764	1,997	19,121	2,289	357
March	24,623	2,107	19,714	2,388	414
April	24,489	2,133	19,679	2,260	416
May	24,111	2,136	19,380	2,190	404
June	24,096	2,173	19,233	2,294	396
July	26,390	2,372	21,117	2,498	404
August	25,163	2,332	20,037	2,403	391
Sept	23,690	2,143	18,898	2,290	359
October	21,697	2,148	17,099	2,092	358
November	20,698	2,030	16,561	1,723	385
December	22,451	2,062	17,892	2,105	393
Year 2015					
January	22,341	2,166	17,669	2,131	375
February	19,907	1,894	15,857	1,843	313
March	22,993	2,187	18,282	2,152	372
April	23,039	2,153	18,422	2,078	386
May	23,827	2,070	19,235	2,148	374
June	23,305	2,066	18,720	2,146	372
July	25,727	2,228	20,794	2,293	413
August	24,507	2,120	19,753	2,227	407
Sept	23,326	2,004	18,828	2,108	387
October	23,435	2,081	18,967	1,989	398
November	24,602	2,123	20,052	2,020	408
December	25,520	2,165	20,803	2,115	438
Year 2016					
January	28,779	2,572	23,258	2,481	467
February	26,323	2,469	21,262	2,183	410
March	26,918	2,473	21,197	2,724	524
April	27,153	2,585	22,247	1,867	454
May	27,948	2,606	22,797	2,071	473
June	26,392	2,389	21,901	1,729	372
July	27,016	2,395	22,290	1,916	415
August	28,815	2,711	23,771	1,923	410
Sept	26,512	2,506	21,856	1,769	382
October	29,081	2,862	23,356	2,417	447
November	26,480	2,417	21,537	2,091	436
Year to Date					
2014	263,531	23,757	210,555	24,934	4,285
2015	257,009	23,092	206,578	23,135	4,204
2016	301,417	27,984	245,471	23,173	4,789
Rolling 12 Months Ending in November					
2015	279,461	25,154	224,470	25,240	4,597
2016	326,937	30,150	266,273	25,288	5,227

Notes: Beginning with the collection of Form EIA-923 in January 2008, the methodology to allocate total fuel consumption for electricity generation and consumption for useful thermal output was changed.

The new methodology was retroactively applied to 2004-2007 data. See the Technical Notes (Appendix C) for further information. See Glossary for definitions.

Values for 2015 and prior years are final. Values for 2016 are preliminary. See Technical Notes for a discussion of the sample design for the Form EIA-923 and predecessor forms.

Totals may not equal sum of components because of independent rounding.

Sources: U.S. Energy Information Administration, Form EIA-906, Power Plant Report; U.S. Energy Information Administration, Form EIA-920 Combined Heat and Power Plant Report, and predecessor forms.

Beginning with 2008 data, the Form EIA-923, Power Plant Operations Report, replaced the following: Form EIA-906, Power Plant Report; Form EIA-920, Combined Heat and Power Plant Report.

Table 2.5.B. Landfill Gas: Consumption for Useful Thermal Output, by Sector, 2006-November 2016 (Million Cubic Feet)

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
Annual Totals					
2006	2,051	0	525	1,094	433
2007	1,988	0	386	1,102	501
2008	1,025	0	454	433	138
2009	793	0	545	176	72
2010	1,623	0	1,195	370	58
2011	3,195	0	2,753	351	91
2012	3,189	0	2,788	340	61
2013	831	0	261	423	147
2014	1,710	176	525	674	335
2015	1,522	2	644	515	362
Year 2014					
January	169	20	62	61	25
February	148	18	64	44	23
March	132	19	41	44	27
April	137	19	28	60	30
May	144	19	33	64	29
June	154	17	54	54	29
July	179	14	70	64	30
August	161	15	62	55	30
Sept	140	14	47	51	28
October	101	2	21	53	25
November	112	3	17	64	29
December	132	15	26	61	30
Year 2015					
January	105	0	34	42	29
February	102	0	40	37	24
March	131	0	54	47	30
April	128	0	50	47	31
May	125	0	49	45	31
June	119	0	42	46	30
July	151	0	72	47	32
August	123	0	60	31	32
Sept	132	0	54	47	31
October	111	0	45	36	30
November	143	0	68	45	30
December	152	0	76	45	31
Year 2016					
January	400	0	221	98	81
February	406	1	231	90	85
March	597	0	335	133	129
April	471	1	268	100	103
May	289	0	155	71	63
June	161	0	108	30	22
July	242	0	150	50	42
August	207	1	121	50	36
Sept	148	0	85	39	23
October	499	2	264	124	109
November	395	0	214	90	90
Year to Date					
2014	1,577	161	499	613	305
2015	1,370	2	568	470	330
2016	3,814	5	2,152	875	783
Rolling 12 Months Ending in November					
2015	1,503	17	594	531	361
2016	3,966	5	2,227	919	815

Notes: Beginning with the collection of Form EIA-923 in January 2008, the methodology to allocate total fuel consumption for electricity generation and consumption for useful thermal output was changed.

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Values for 2015 and prior years are final. Values for 2016 are preliminary. See Technical Notes for a discussion of the sample design for the Form EIA-923 and predecessor forms.

Totals may not equal sum of components because of independent rounding.

Sources: U.S. Energy Information Administration, Form EIA-906, Power Plant Report; U.S. Energy Information Administration, Form EIA-920 Combined Heat and Power Plant Report, and predecessor forms.

Beginning with 2008 data, the Form EIA-923, Power Plant Operations Report, replaced the following: Form EIA-906, Power Plant Report; Form EIA-920, Combined Heat and Power Plant Report.

Table 2.5.C. Landfill Gas: Consumption for Electricity Generation and Useful Thermal Output, by Sector, 2006-November 2016 (Million Cubic Feet)

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
Annual Totals					
2006	162,084	16,617	136,632	7,738	1,096
2007	168,762	17,442	144,490	5,699	1,131
2008	196,802	20,465	170,001	5,668	668
2009	207,585	19,583	181,234	6,106	661
2010	219,954	19,975	193,623	5,905	451
2011	235,990	22,086	183,609	29,820	474
2012	259,564	25,193	204,753	27,012	2,606
2013	272,798	27,259	212,203	28,566	4,770
2014	287,692	25,995	228,971	27,713	5,013
2015	284,052	25,259	228,024	25,765	5,004
Year 2014					
January	24,980	2,207	19,779	2,567	426
February	23,912	2,014	19,185	2,334	379
March	24,755	2,126	19,755	2,432	442
April	24,625	2,152	19,708	2,320	446
May	24,255	2,155	19,413	2,254	433
June	24,250	2,190	19,287	2,348	425
July	26,569	2,386	21,187	2,561	434
August	25,324	2,347	20,099	2,458	421
Sept	23,830	2,158	18,944	2,341	387
October	21,798	2,150	17,119	2,145	383
November	20,811	2,033	16,578	1,786	414
December	22,584	2,077	17,918	2,166	423
Year 2015					
January	22,445	2,166	17,702	2,173	404
February	20,009	1,894	15,897	1,881	337
March	23,125	2,187	18,336	2,199	401
April	23,167	2,153	18,473	2,125	417
May	23,952	2,070	19,283	2,193	405
June	23,424	2,066	18,763	2,192	403
July	25,877	2,228	20,865	2,340	445
August	24,630	2,120	19,813	2,258	439
Sept	23,458	2,004	18,881	2,155	418
October	23,546	2,081	19,012	2,025	428
November	24,746	2,124	20,120	2,064	438
December	25,672	2,165	20,878	2,160	469
Year 2016					
January	29,179	2,573	23,479	2,579	548
February	26,729	2,469	21,493	2,273	494
March	27,515	2,473	21,532	2,858	652
April	27,624	2,586	22,514	1,967	557
May	28,236	2,606	22,952	2,142	536
June	26,553	2,390	22,009	1,759	395
July	27,258	2,395	22,439	1,966	457
August	29,022	2,711	23,891	1,973	446
Sept	26,660	2,506	21,941	1,808	405
October	29,581	2,864	23,620	2,541	556
November	26,875	2,417	21,751	2,181	525
Year to Date					
2014	265,108	23,918	211,054	25,547	4,590
2015	258,380	23,094	207,146	23,605	4,534
2016	305,231	27,989	247,622	24,047	5,572
Rolling 12 Months Ending in November					
2015	280,963	25,171	225,064	25,771	4,957
2016	330,904	30,155	268,501	26,207	6,042

Notes: Beginning with the collection of Form EIA-923 in January 2008, the methodology to allocate total fuel consumption for electricity generation and consumption for useful thermal output was changed.

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Values for 2015 and prior years are final. Values for 2016 are preliminary. See Technical Notes for a discussion of the sample design for the Form EIA-923 and predecessor forms.

Totals may not equal sum of components because of independent rounding.

Sources: U.S. Energy Information Administration, Form EIA-906, Power Plant Report; U.S. Energy Information Administration, Form EIA-920 Combined Heat and Power Plant Report, and predecessor forms.

Beginning with 2008 data, the Form EIA-923, Power Plant Operations Report, replaced the following: Form EIA-906, Power Plant Report; Form EIA-920, Combined Heat and Power Plant Report.

Table 2.6.A. Biogenic Municipal Solid Waste: Consumption for Electricity Generation, by Sector, 2006-November 2016 (Thousand Tons)

Period	Total (all sectors)	Electric Power Sector			
		Electric Utilities	Independent Power Producers	Commercial Sector	Industrial Sector
Annual Totals					
2006	19,629	500	17,343	1,761	25
2007	19,576	553	17,116	1,785	122
2008	19,805	509	17,487	1,809	0
2009	19,669	465	17,048	2,155	0
2010	19,437	402	16,802	2,233	0
2011	16,972	388	14,625	1,955	4
2012	16,968	418	14,235	2,304	12
2013	17,007	456	14,057	2,485	8
2014	16,706	444	13,809	2,447	6
2015	16,631	452	13,797	2,375	8
Year 2014					
January	1,381	28	1,131	221	0
February	1,205	24	1,014	166	0
March	1,390	38	1,165	187	0
April	1,371	44	1,127	200	0
May	1,455	42	1,200	214	1
June	1,418	40	1,170	207	1
July	1,489	44	1,224	220	1
August	1,469	38	1,210	220	1
Sept	1,384	38	1,141	205	1
October	1,374	40	1,133	200	0
November	1,373	32	1,139	201	0
December	1,397	36	1,155	205	1
Year 2015					
January	1,335	31	1,114	190	0
February	1,212	24	1,020	168	0
March	1,310	28	1,088	194	0
April	1,315	41	1,077	196	1
May	1,380	45	1,136	199	1
June	1,417	44	1,168	205	1
July	1,540	46	1,274	219	1
August	1,491	43	1,239	208	1
Sept	1,388	43	1,139	206	1
October	1,383	38	1,157	187	1
November	1,389	34	1,153	202	1
December	1,471	36	1,232	202	1
Year 2016					
January	1,341	34	1,123	183	1
February	1,215	27	1,030	157	1
March	1,270	41	1,018	209	1
April	1,370	40	1,133	196	1
May	1,382	44	1,157	182	1
June	1,384	40	1,157	186	0
July	1,404	37	1,163	203	1
August	1,427	42	1,190	195	0
Sept	1,311	43	1,093	175	0
October	1,260	37	1,043	179	1
November	1,294	39	1,069	184	0
Year to Date					
2014	15,309	408	12,654	2,242	5
2015	15,160	415	12,565	2,173	7
2016	14,658	425	12,176	2,050	7
Rolling 12 Months Ending in November					
2015	16,556	451	13,720	2,378	7
2016	16,129	462	13,408	2,252	8

Notes: Beginning with the collection of Form EIA-923 in January 2008, the methodology to allocate total fuel consumption for electricity generation and consumption for useful thermal output was changed.

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Values for 2015 and prior years are final. Values for 2016 are preliminary. See Technical Notes for a discussion of the sample design for the Form EIA-923 and predecessor forms.

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Beginning with 2008 data, the Form EIA-923, Power Plant Operations Report, replaced the following: Form EIA-906, Power Plant Report; Form EIA-920, Combined Heat and Power Plant Report.

Table 2.6.B. Biogenic Municipal Solid Waste: Consumption for Useful Thermal Output, by Sector, 2006-November 2016 (Thousand Tons)

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
Annual Totals					
2006	2,840	0	725	1,595	520
2007	2,219	0	768	1,136	315
2008	2,328	0	806	1,514	8
2009	2,426	0	823	1,466	137
2010	2,287	0	819	1,316	152
2011	2,044	0	742	1,148	154
2012	1,986	0	522	1,273	190
2013	1,865	0	517	1,160	187
2014	1,955	0	650	1,104	200
2015	1,986	0	655	1,127	203
Year 2014					
January	203	0	59	126	17
February	140	0	49	76	15
March	154	0	52	86	15
April	155	0	58	82	15
May	166	0	57	92	18
June	163	0	57	90	16
July	164	0	54	93	17
August	161	0	47	92	22
Sept	157	0	48	92	18
October	165	0	56	93	17
November	158	0	55	88	15
December	169	0	59	93	17
Year 2015					
January	180	0	67	95	19
February	147	0	48	83	16
March	172	0	59	96	17
April	162	0	53	92	17
May	164	0	49	99	16
June	154	0	47	90	17
July	170	0	55	99	17
August	164	0	55	91	18
Sept	162	0	49	95	18
October	169	0	57	94	17
November	166	0	56	96	14
December	174	0	61	96	17
Year 2016					
January	164	0	62	89	13
February	169	0	72	84	13
March	198	0	80	103	15
April	165	0	51	100	14
May	157	0	48	95	14
June	160	0	51	94	16
July	175	0	53	106	16
August	163	0	49	100	14
Sept	151	0	45	94	13
October	142	0	46	86	10
November	161	0	51	96	14
Year to Date					
2014	1,786	0	591	1,011	184
2015	1,812	0	595	1,030	186
2016	1,805	0	606	1,046	152
Rolling 12 Months Ending in November					
2015	1,981	0	654	1,124	203
2016	1,979	0	667	1,143	169

Notes: Beginning with the collection of Form EIA-923 in January 2008, the methodology to allocate total fuel consumption for electricity generation and consumption for useful thermal output was changed.

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Totals may not equal sum of components because of independent rounding.

Sources: U.S. Energy Information Administration, Form EIA-906, Power Plant Report; U.S. Energy Information Administration, Form EIA-920 Combined Heat and Power Plant Report, and predecessor forms.

Beginning with 2008 data, the Form EIA-923, Power Plant Operations Report, replaced the following: Form EIA-906, Power Plant Report; Form EIA-920, Combined Heat and Power Plant Report.

Table 2.6.C. Biogenic Municipal Solid Waste: Consumption for Electricity Generation and

Useful Thermal Output, by Sector, 2006-November 2016 (Thousand Tons)

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
Annual Totals					
2006	22,469	500	18,068	3,356	545
2007	21,796	553	17,885	2,921	437
2008	22,134	509	18,294	3,323	8
2009	22,095	465	17,872	3,622	137
2010	21,725	402	17,621	3,549	152
2011	19,016	388	15,367	3,103	158
2012	18,954	418	14,757	3,577	203
2013	18,871	456	14,574	3,646	195
2014	18,661	444	14,459	3,551	206
2015	18,617	452	14,452	3,502	211
Year 2014					
January	1,584	28	1,190	347	18
February	1,345	24	1,063	242	15
March	1,544	38	1,217	273	16
April	1,526	44	1,184	283	15
May	1,622	42	1,256	306	18
June	1,581	40	1,227	297	17
July	1,653	44	1,279	313	18
August	1,629	38	1,257	312	22
Sept	1,541	38	1,188	297	18
October	1,540	40	1,189	293	17
November	1,531	32	1,194	289	15
December	1,566	36	1,214	299	17
Year 2015					
January	1,515	31	1,181	284	19
February	1,359	24	1,068	250	16
March	1,482	28	1,147	290	18
April	1,477	41	1,130	289	17
May	1,544	45	1,185	298	17
June	1,571	44	1,214	296	18
July	1,710	46	1,329	318	18
August	1,655	43	1,294	299	19
Sept	1,551	43	1,188	301	19
October	1,551	38	1,215	281	18
November	1,555	34	1,209	297	15
December	1,645	36	1,293	298	18
Year 2016					
January	1,505	34	1,185	272	14
February	1,383	27	1,102	241	14
March	1,468	41	1,098	312	16
April	1,536	40	1,184	297	15
May	1,539	44	1,205	277	14
June	1,544	40	1,207	280	16
July	1,579	37	1,216	309	17
August	1,590	42	1,239	294	15
Sept	1,462	43	1,138	269	13
October	1,402	37	1,089	265	11
November	1,455	39	1,120	281	15
Year to Date					
2014	17,095	408	13,245	3,253	189
2015	16,971	415	13,159	3,203	193
2016	16,463	425	12,782	3,096	159
Rolling 12 Months Ending in November					
2015	18,537	451	14,373	3,502	211
2016	18,108	462	14,075	3,395	177

Notes: Beginning with the collection of Form EIA-923 in January 2008, the methodology to allocate total fuel consumption for electricity generation and consumption for useful thermal output was changed.

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Values for 2015 and prior years are final. Values for 2016 are preliminary. See Technical Notes for a discussion of the sample design for the Form EIA-923 and predecessor forms.

Totals may not equal sum of components because of independent rounding.

Sources: U.S. Energy Information Administration, Form EIA-906, Power Plant Report; U.S. Energy Information Administration, Form EIA-920 Combined Heat and Power Plant Report, and predecessor forms.

Beginning with 2008 data, the Form EIA-923, Power Plant Operations Report, replaced the following: Form EIA-906, Power Plant Report; Form EIA-920, Combined Heat and Power Plant Report.

Table 2.7.A. Wood / Wood Waste Biomass: Consumption for Electricity Generation, by Sector, 2006-November 2016 (Billion Btus)

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
Annual Totals					
2006	350,074	27,455	135,546	269	186,803
2007	353,025	31,568	132,953	284	188,220
2008	338,786	29,150	130,122	287	179,227
2009	320,444	29,565	130,894	274	159,712
2010	349,530	40,167	137,072	274	172,016
2011	347,623	35,474	130,108	482	181,559
2012	390,342	32,723	138,217	478	218,924
2013	397,929	43,363	143,721	536	210,308
2014	431,285	45,643	174,513	961	210,167
2015	406,650	43,919	171,387	504	190,840
Year 2014					
January	37,135	4,268	14,488	150	18,228
February	33,670	3,805	13,442	125	16,298
March	36,751	4,396	14,837	87	17,430
April	31,558	2,624	12,884	43	16,007
May	32,416	2,959	12,100	67	17,290
June	37,105	3,977	15,346	124	17,658
July	39,028	4,052	16,069	81	18,827
August	38,477	4,275	15,672	69	18,461
Sept	35,553	3,720	14,839	54	16,940
October	35,086	3,777	13,871	64	17,375
November	36,209	3,715	15,424	46	17,025
December	38,296	4,075	15,542	51	18,628
Year 2015					
January	36,170	4,203	15,139	53	16,775
February	33,328	3,574	14,696	51	15,007
March	33,569	3,459	14,639	41	15,430
April	31,142	2,361	13,300	48	15,433
May	32,373	3,394	13,359	54	15,567
June	33,871	3,817	14,521	25	15,508
July	36,954	4,615	15,335	62	16,942
August	37,027	4,529	15,927	30	16,541
Sept	33,522	3,464	14,011	42	16,005
October	30,952	3,269	12,065	42	15,577
November	32,840	3,484	13,457	20	15,880
December	34,900	3,750	14,939	35	16,176
Year 2016					
January	34,215	4,250	13,941	62	15,962
February	32,736	3,992	13,891	58	14,794
March	32,600	3,528	13,929	26	15,117
April	27,015	2,672	10,221	42	14,081
May	29,050	2,739	10,907	19	15,386
June	32,098	3,928	12,641	80	15,449
July	34,361	4,286	14,094	69	15,912
August	34,805	4,290	14,538	120	15,857
Sept	31,800	3,558	13,057	67	15,119
October	28,597	2,676	10,881	37	15,003
November	29,901	2,839	11,531	30	15,500
Year to Date					
2014	392,989	41,568	158,971	910	191,539
2015	371,750	40,169	156,449	469	174,664
2016	347,179	38,758	139,632	610	168,179
Rolling 12 Months Ending in November					
2015	410,046	44,244	171,990	520	193,292
2016	382,080	42,508	154,570	646	184,356

Notes: Beginning with the collection of Form EIA-923 in January 2008, the methodology to allocate total fuel consumption for electricity generation and consumption for useful thermal output was changed.

The new methodology was retroactively applied to 2004-2007 data. See the Technical Notes (Appendix C) for further information. See Glossary for definitions.

Values for 2015 and prior years are final. Values for 2016 are preliminary. See Technical Notes for a discussion of the sample design for the Form EIA-923 and predecessor forms.

Totals may not equal sum of components because of independent rounding.

Sources: U.S. Energy Information Administration, Form EIA-906, Power Plant Report; U.S. Energy Information Administration, Form EIA-920 Combined Heat and Power Plant Report, and predecessor forms.

Beginning with 2008 data, the Form EIA-923, Power Plant Operations Report, replaced the following: Form EIA-906, Power Plant Report; Form EIA-920, Combined Heat and Power Plant Report.

Table 2.7.B. Wood / Wood Waste Biomass: Consumption for Useful Thermal Output, by Sector, 2006-November 2016 (Billion Btus)

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
Annual Totals					
2006	1,049,161	0	18,814	1,045	1,029,303
2007	982,486	0	21,435	1,756	959,296
2008	923,889	0	18,075	1,123	904,690
2009	816,285	0	19,587	1,135	795,563
2010	876,041	0	18,357	1,064	856,620
2011	893,314	0	16,577	1,022	875,716
2012	883,158	0	19,251	949	862,958
2013	919,631	0	20,342	950	898,339
2014	946,344	8,835	22,262	3,766	911,481
2015	943,962	9,351	19,200	3,714	911,697
Year 2014					
January	80,405	649	1,975	311	77,469
February	73,581	733	1,988	271	70,589
March	80,081	875	2,027	342	76,837
April	77,233	678	1,914	246	74,395
May	76,839	773	1,454	338	74,274
June	79,101	683	1,848	400	76,170
July	80,733	767	1,876	351	77,739
August	82,539	722	1,908	346	79,564
Sept	76,170	573	1,706	296	73,596
October	78,477	737	1,894	285	75,561
November	78,316	728	1,738	271	75,578
December	82,869	916	1,935	309	79,709
Year 2015					
January	84,431	912	1,877	388	81,254
February	75,501	897	1,754	371	72,478
March	77,437	822	1,688	320	74,607
April	77,369	538	1,622	300	74,909
May	79,154	742	936	146	77,329
June	77,486	796	1,477	273	74,940
July	80,499	768	1,635	384	77,711
August	81,262	782	1,727	295	78,459
Sept	77,136	694	1,765	327	74,350
October	75,247	739	1,386	273	72,849
November	77,481	741	1,513	295	74,932
December	80,959	919	1,819	342	77,880
Year 2016					
January	82,459	864	1,755	471	79,369
February	75,184	893	1,746	412	72,133
March	75,784	871	1,367	274	73,272
April	73,377	710	1,407	344	70,917
May	75,986	659	1,338	271	73,717
June	76,995	563	1,373	375	74,684
July	78,055	689	1,276	363	75,726
August	77,875	709	1,284	423	75,459
Sept	73,432	411	1,429	363	71,228
October	73,927	349	1,084	328	72,167
November	78,622	789	1,415	321	76,098
Year to Date					
2014	863,475	7,918	20,327	3,457	831,772
2015	863,003	8,432	17,381	3,373	833,817
2016	841,695	7,508	15,474	3,944	814,770
Rolling 12 Months Ending in November					
2015	945,872	9,348	19,316	3,682	913,526
2016	922,654	8,426	17,293	4,286	892,649

Notes: Beginning with the collection of Form EIA-923 in January 2008, the methodology to allocate total fuel consumption for electricity generation and consumption for useful thermal output was changed.

The new methodology was retroactively applied to 2004-2007 data. See the Technical Notes (Appendix C) for further information. See Glossary for definitions.

Values for 2015 and prior years are final. Values for 2016 are preliminary. See Technical Notes for a discussion of the sample design for the Form EIA-923 and predecessor forms.

Totals may not equal sum of components because of independent rounding.

Sources: U.S. Energy Information Administration, Form EIA-906, Power Plant Report; U.S. Energy Information Administration, Form EIA-920 Combined Heat and Power Plant Report, and predecessor forms.

Beginning with 2008 data, the Form EIA-923, Power Plant Operations Report, replaced the following: Form EIA-906, Power Plant Report; Form EIA-920, Combined Heat and Power Plant Report.

Table 2.8.A. Consumption of Coal for Electricity Generation by State, by Sector, November 2016 and November 2015 (Thousand Tons)

Census Division and State	All Sectors			Electric Power Sector				Commercial Sector		Industrial Sector	
	November 2016	November 2015	Percentage Change	Electric Utilities		Independent Power Producers		November 2016	November 2015	November 2016	November 2015
				November 2016	November 2015	November 2016	November 2015				
New England	31	102	-70.0%	1	4	29	97	0	0	NM	1
Connecticut	1	0	--	0	0	1	0	0	0	0	0
Maine	1	1	16.0%	0	0	1	1	0	0	0	0
Massachusetts	28	97	-72.0%	0	0	27	96	0	0	NM	0
New Hampshire	1	4	-71.0%	1	4	0	0	0	0	0	0
Rhode Island	0	0	--	0	0	0	0	0	0	0	0
Vermont	0	0	--	0	0	0	0	0	0	0	0
Middle Atlantic	1,770	2,233	-21.0%	0	0	1,758	2,214	0	0	13	19
New Jersey	35	44	-20.0%	0	0	35	44	0	0	0	0
New York	5	42	-89.0%	0	0	0	37	0	0	5	5
Pennsylvania	1,730	2,147	-19.0%	0	0	1,722	2,133	0	0	8	14
East North Central	9,737	10,855	-10.0%	6,439	6,635	3,239	4,150	2	2	57	68
Illinois	2,016	2,925	-31.0%	111	140	1,860	2,739	NM	1	44	45
Indiana	2,446	2,491	-1.8%	2,325	2,250	120	240	1	1	NM	0
Michigan	1,822	2,343	-22.0%	1,799	2,320	19	18	0	0	NM	5
Ohio	1,974	1,628	21.0%	734	471	1,240	1,153	0	0	NM	5
Wisconsin	1,479	1,468	0.7%	1,470	1,455	0	0	0	0	8	13
West North Central	8,486	8,326	1.9%	8,393	8,198	NM	1	6	5	86	123
Iowa	931	781	19.0%	884	716	0	0	NM	3	44	62
Kansas	1,036	786	32.0%	1,036	786	0	0	0	0	0	0
Minnesota	1,218	1,181	3.1%	1,201	1,153	0	0	NM	0	17	28
Missouri	2,389	2,636	-9.4%	2,385	2,634	NM	1	3	2	NM	0
Nebraska	1,064	1,009	5.5%	1,044	985	0	0	0	0	20	24
North Dakota	1,720	1,809	-4.9%	1,716	1,799	0	0	0	0	NM	9
South Dakota	128	124	2.9%	128	124	0	0	0	0	0	0
South Atlantic	6,230	6,231	0.0%	5,444	5,492	768	707	1	2	17	29
Delaware	0	11	-100.0%	0	0	0	11	0	0	0	0
District of Columbia	0	0	--	0	0	0	0	0	0	0	0
Florida	1,244	1,314	-5.3%	1,232	1,310	10	2	0	0	2	2
Georgia	1,136	827	37.0%	1,133	823	0	0	0	0	3	4
Maryland	287	254	13.0%	0	0	285	252	0	0	2	2
North Carolina	723	735	-1.6%	718	728	NM	3	1	1	2	3
South Carolina	480	555	-13.0%	478	551	0	0	0	0	2	4
Virginia	292	510	-43.0%	276	484	11	20	NM	1	5	5
West Virginia	2,067	2,025	2.1%	1,608	1,596	460	420	0	0	0	10
East South Central	5,078	4,588	11.0%	4,804	4,267	261	303	0	0	12	19
Alabama	1,390	1,393	-0.2%	1,389	1,391	0	0	0	0	1	2
Kentucky	2,216	2,066	7.3%	2,216	2,066	0	0	0	0	0	0
Mississippi	339	352	-3.6%	78	49	261	303	0	0	0	0
Tennessee	1,132	777	46.0%	1,121	761	0	0	0	0	11	16
West South Central	8,795	8,254	6.6%	3,575	3,986	5,210	4,254	0	0	10	14
Arkansas	896	683	31.0%	661	523	234	159	0	0	1	1
Louisiana	393	763	-49.0%	250	554	143	209	0	0	0	0
Oklahoma	914	953	-4.1%	820	822	85	118	0	0	9	13
Texas	6,593	5,854	13.0%	1,843	2,086	4,749	3,768	0	0	0	0
Mountain	7,587	7,699	-1.5%	6,602	6,633	974	1,051	0	0	11	15
Arizona	1,196	1,404	-15.0%	1,196	1,404	0	0	0	0	0	0
Colorado	1,432	1,205	19.0%	1,431	1,203	NM	2	0	0	NM	0
Idaho	NM	1	NM	0	0	0	0	0	0	NM	1
Montana	884	930	-4.9%	NM	7	867	922	0	0	NM	0
Nevada	41	95	-57.0%	0	53	41	42	0	0	0	0
New Mexico	1,043	1,018	2.4%	1,043	1,018	0	0	0	0	0	0
Utah	1,038	931	11.0%	1,008	891	NM	40	0	0	0	0
Wyoming	1,953	2,115	-7.7%	1,907	2,057	NM	45	0	0	10	13
Pacific Contiguous	318	539	-41.0%	0	181	312	351	0	0	7	6
California	6	5	9.9%	0	0	0	0	0	0	6	5
Oregon	0	181	-100.0%	0	181	0	0	0	0	0	0
Washington	312	352	-11.0%	0	0	312	351	0	0	1	1
Pacific Noncontiguous	94	115	-19.0%	16	31	73	80	3	4	NM	0
Alaska	31	54	-44.0%	16	31	NM	20	3	4	0	0
Hawaii	63	61	3.8%	0	0	62	61	0	0	NM	0
U.S. Total	48,126	48,943	-1.7%	35,274	35,427	12,624	13,209	13	12	215	295

Displayed values of zero may represent small values that round to zero. The Excel version of this table provides additional precision which may be accessed by selecting individual cells.

Notes: See Glossary for definitions. Values for 2016 are preliminary. Values for 2015 are final. See Technical Notes for a discussion of the sample design for the Form EIA-923.

Totals may not equal sum of components because of independent rounding. Percentage change is calculated before rounding.

Source: U.S. Energy Information Administration, Form EIA-923, Power Plant Operations Report.

Table 2.8.B. Consumption of Coal for Electricity Generation by State, by Sector, Year-to-Date through November 2016 and November 2015 (Thousand Tons)

Census Division and State	All Sectors			Electric Power Sector				Commercial Sector		Industrial Sector	
	November 2016 YTD	November 2015 YTD	Percentage Change	Electric Utilities		Independent Power Producers		November 2016 YTD	November 2015 YTD	November 2016 YTD	November 2015 YTD
				November 2016 YTD	November 2015 YTD	November 2016 YTD	November 2015 YTD				
New England	973	1,709	-43.0%	124	398	843	1,300	0	0	7	11
Connecticut	74	359	-79.0%	0	0	74	359	0	0	0	0
Maine	14	20	-30.0%	0	0	11	12	0	0	3	8
Massachusetts	762	932	-18.0%	0	0	759	929	0	0	3	3
New Hampshire	124	398	-69.0%	124	398	0	0	0	0	0	0
Rhode Island	0	0	--	0	0	0	0	0	0	0	0
Vermont	0	0	--	0	0	0	0	0	0	0	0
Middle Atlantic	24,351	30,697	-21.0%	0	0	24,158	30,478	0	1	193	218
New Jersey	504	711	-29.0%	0	0	504	711	0	0	0	0
New York	691	1,056	-35.0%	0	0	627	995	0	0	64	61
Pennsylvania	23,156	28,931	-20.0%	0	0	23,027	28,773	0	1	129	157
East North Central	130,080	154,291	-16.0%	78,820	90,009	50,525	63,448	25	36	709	797
Illinois	32,549	41,385	-21.0%	1,759	1,882	30,278	38,971	11	12	501	521
Indiana	32,578	36,669	-11.0%	30,930	34,118	1,636	2,542	11	9	1	0
Michigan	21,160	27,321	-23.0%	20,871	27,032	228	209	4	15	57	65
Ohio	26,310	28,919	-9.0%	7,887	7,140	18,383	21,726	0	0	40	53
Wisconsin	17,482	19,996	-13.0%	17,373	19,838	0	0	0	0	109	158
West North Central	104,888	115,636	-9.3%	103,663	114,146	9	12	52	51	1,164	1,427
Iowa	13,537	16,520	-18.0%	12,885	15,764	0	0	33	30	620	726
Kansas	13,163	14,862	-11.0%	13,163	14,862	0	0	0	0	0	0
Minnesota	12,520	13,428	-6.8%	12,290	13,121	0	0	6	4	224	302
Missouri	32,588	35,541	-8.3%	32,552	35,500	9	12	14	17	13	12
Nebraska	12,031	13,646	-12.0%	11,780	13,325	0	0	0	0	251	320
North Dakota	19,797	20,782	-4.7%	19,741	20,716	0	0	0	0	56	67
South Dakota	1,252	858	46.0%	1,252	858	0	0	0	0	0	0
South Atlantic	94,370	99,272	-4.9%	82,725	87,239	11,380	11,649	17	21	247	363
Delaware	220	274	-20.0%	0	0	220	274	0	0	0	0
District of Columbia	0	0	--	0	0	0	0	0	0	0	0
Florida	16,120	17,849	-9.7%	15,813	17,394	274	423	0	0	33	32
Georgia	17,784	18,455	-3.6%	17,740	18,410	0	0	0	0	44	45
Maryland	5,511	5,820	-5.3%	0	0	5,492	5,791	0	0	19	29
North Carolina	13,618	15,063	-9.6%	13,453	14,874	123	145	10	13	31	30
South Carolina	7,876	8,771	-10.0%	7,836	8,721	0	0	0	0	40	50
Virginia	6,758	7,053	-4.2%	6,434	6,605	263	385	7	7	53	56
West Virginia	26,482	25,986	1.9%	21,449	21,236	5,007	4,630	0	0	27	121
East South Central	63,512	70,495	-9.9%	60,522	67,293	2,807	2,995	0	0	182	207
Alabama	16,008	19,725	-19.0%	15,990	19,703	0	0	0	0	18	22
Kentucky	29,199	31,926	-8.5%	29,199	31,926	0	0	0	0	0	0
Mississippi	4,159	4,672	-11.0%	1,352	1,677	2,807	2,995	0	0	0	0
Tennessee	14,145	14,172	-0.2%	13,981	13,988	0	0	0	0	164	185
West South Central	108,272	118,335	-8.5%	51,905	58,397	56,209	59,758	0	0	159	180
Arkansas	12,311	12,180	1.1%	10,045	10,054	2,256	2,114	0	0	11	13
Louisiana	7,665	10,081	-24.0%	5,242	6,135	2,423	3,945	0	0	0	0
Oklahoma	10,932	14,964	-27.0%	9,693	13,698	1,091	1,098	0	0	148	168
Texas	77,363	81,110	-4.6%	26,925	28,509	50,439	52,601	0	0	0	0
Mountain	81,992	93,688	-12.0%	72,082	82,721	9,526	10,547	0	0	383	420
Arizona	15,025	18,318	-18.0%	15,025	18,318	0	0	0	0	0	0
Colorado	14,994	15,883	-5.6%	14,978	15,864	13	14	0	0	4	5
Idaho	12	15	-18.0%	0	0	0	0	0	0	12	15
Montana	8,550	9,399	-9.0%	183	195	8,360	9,199	0	0	7	5
Nevada	1,144	1,404	-19.0%	674	959	470	445	0	0	0	0
New Mexico	9,441	10,844	-13.0%	9,441	10,844	0	0	0	0	0	0
Utah	10,932	13,532	-19.0%	10,416	12,897	281	401	0	0	235	234
Wyoming	21,893	24,293	-9.9%	21,365	23,644	402	488	0	0	126	162
Pacific Contiguous	3,580	4,163	-14.0%	905	1,175	2,602	2,919	0	0	74	69
California	66	61	9.0%	0	0	0	0	0	0	66	61
Oregon	905	1,175	-23.0%	905	1,175	0	0	0	0	0	0
Washington	2,609	2,927	-11.0%	0	0	2,602	2,919	0	0	8	8
Pacific Noncontiguous	1,074	1,084	-0.9%	219	249	806	780	38	40	12	15
Alaska	398	488	-18.0%	219	249	141	199	38	40	0	0
Hawaii	676	596	13.0%	0	0	665	582	0	0	12	15
U.S. Total	613,093	689,370	-11.0%	450,965	501,628	158,865	183,886	133	149	3,130	3,707

Displayed values of zero may represent small values that round to zero. The Excel version of this table provides additional precision which may be accessed by selecting individual cells.

Notes: See Glossary for definitions. Values for 2016 are preliminary. Values for 2015 are final. See Technical Notes for a discussion of the sample design for the Form EIA-923.

Totals may not equal sum of components because of independent rounding. Percentage change is calculated before rounding.

Source: U.S. Energy Information Administration, Form EIA-923, Power Plant Operations Report.

Table 2.9.A. Consumption of Petroleum Liquids for Electricity Generation by State, by Sector, November 2016 and November 2015 (Thousand Barrels)

Census Division and State	All Sectors			Electric Power Sector							
				Electric Utilities		Independent Power Producers		Commercial Sector		Industrial Sector	
	November 2016	November 2015	Percentage Change	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015
New England	97	37	163.0%	4	5	87	28	NM	2	NM	1
Connecticut	11	3	217.0%	1	0	8	3	NM	0	NM	0
Maine	6	10	-45.0%	NM	0	5	9	NM	1	NM	1
Massachusetts	67	8	743.0%	NM	1	63	6	NM	1	NM	0
New Hampshire	NM	7	NM	NM	5	2	2	NM	0	NM	0
Rhode Island	12	8	38.0%	2	0	9	8	NM	NM	0	0
Vermont	NM	0	NM	NM	0	0	0	NM	0	0	0
Middle Atlantic	66	62	6.4%	10	5	45	54	NM	NM	9	3
New Jersey	NM	3	NM	NM	0	NM	3	NM	0	NM	0
New York	26	11	126.0%	9	5	NM	5	NM	NM	4	2
Pennsylvania	37	48	-22.0%	NM	0	31	46	NM	0	5	1
East North Central	88	77	14.0%	50	43	36	31	NM	1	2	3
Illinois	10	10	-0.9%	NM	2	9	8	NM	0	0	0
Indiana	15	15	-0.6%	13	12	NM	0	NM	0	1	2
Michigan	18	14	30.0%	17	14	0	0	0	0	1	0
Ohio	43	33	29.0%	16	10	27	23	NM	1	NM	0
Wisconsin	2	5	-50.0%	2	5	0	0	NM	0	NM	0
West North Central	48	45	7.9%	46	44	NM	0	NM	0	NM	0
Iowa	7	4	70.0%	7	4	NM	0	NM	0	NM	0
Kansas	15	17	-14.0%	15	17	0	0	0	0	0	0
Minnesota	NM	4	NM	NM	3	NM	0	NM	0	NM	0
Missouri	15	11	33.0%	15	11	NM	0	NM	0	0	0
Nebraska	NM	3	NM	NM	3	0	0	0	0	0	0
North Dakota	6	5	23.0%	6	5	0	0	NM	0	NM	0
South Dakota	NM	1	NM	NM	1	NM	0	NM	0	0	0
South Atlantic	244	416	-41.0%	212	324	25	85	NM	1	6	7
Delaware	NM	5	NM	NM	1	NM	4	0	0	0	0
District of Columbia	NM	0	NM	0	0	0	0	NM	0	0	0
Florida	137	208	-34.0%	136	202	NM	6	0	0	NM	1
Georgia	NM	16	NM	NM	11	NM	3	NM	0	1	2
Maryland	11	9	23.0%	2	1	9	9	NM	0	NM	0
North Carolina	NM	50	NM	NM	48	NM	1	NM	0	NM	1
South Carolina	NM	23	NM	NM	21	NM	0	NM	0	4	2
Virginia	25	77	-68.0%	16	15	NM	62	NM	0	NM	0
West Virginia	16	26	-38.0%	16	26	0	0	0	0	0	0
East South Central	50	50	0.5%	49	45	NM	NM	NM	0	1	3
Alabama	4	11	-64.0%	2	6	NM	NM	0	0	NM	3
Kentucky	20	24	-19.0%	20	24	0	0	0	0	0	0
Mississippi	NM	1	NM	NM	1	0	0	0	0	0	0
Tennessee	26	14	91.0%	26	13	NM	0	NM	0	NM	0
West South Central	27	20	31.0%	18	12	8	7	NM	0	NM	1
Arkansas	12	7	65.0%	11	4	1	3	0	0	0	1
Louisiana	2	5	-62.0%	2	3	0	1	0	0	0	0
Oklahoma	2	1	41.0%	2	1	0	0	NM	0	NM	0
Texas	11	7	54.0%	4	3	6	3	NM	0	NM	0
Mountain	33	39	-16.0%	31	38	2	2	NM	0	NM	0
Arizona	10	7	39.0%	10	7	0	0	NM	0	0	0
Colorado	NM	4	NM	NM	4	0	0	0	0	NM	0
Idaho	NM	0	NM	NM	0	0	0	0	0	0	0
Montana	NM	1	NM	NM	0	2	1	0	0	0	0
Nevada	0	2	-93.0%	0	2	0	0	0	0	0	0
New Mexico	NM	10	NM	NM	10	0	0	0	0	NM	0
Utah	NM	5	NM	3	5	NM	0	0	0	NM	0
Wyoming	10	10	-3.8%	10	10	0	0	0	0	NM	0
Pacific Contiguous	8	14	-46.0%	6	7	NM	5	NM	0	1	2
California	6	7	-20.0%	5	5	NM	2	NM	0	NM	0
Oregon	NM	1	NM	0	1	0	0	NM	0	0	0
Washington	2	6	-63.0%	NM	1	1	3	NM	0	1	2
Pacific Noncontiguous	898	959	-6.3%	773	825	100	111	NM	2	NM	21
Alaska	151	96	58.0%	144	90	0	0	NM	1	7	5
Hawaii	747	863	-13.0%	630	735	100	111	1	1	NM	16
U.S. Total	1,560	1,720	-9.3%	1,198	1,348	305	324	11	7	46	40

Displayed values of zero may represent small values that round to zero. The Excel version of this table provides additional precision which may be accessed by selecting individual cells.

Notes: See Glossary for definitions. Values for 2016 are preliminary. Values for 2015 are final. See Technical Notes for a discussion of the sample design for the Form EIA-923.

Totals may not equal sum of components because of independent rounding. Percentage change is calculated before rounding.

Source: U.S. Energy Information Administration, Form EIA-923, Power Plant Operations Report.

Table 2.9.B. Consumption of Petroleum Liquids for Electricity Generation by State, by Sector, Year-to-Date through November 2016 and November 2015 (Thousand Barrels)

Census Division and State	All Sectors			Electric Power Sector							
				Electric Utilities		Independent Power Producers		Commercial Sector		Industrial Sector	
	November 2016 YTD	November 2015 YTD	Percentage Change	November 2016 YTD	November 2015 YTD	November 2016 YTD	November 2015 YTD	November 2016 YTD	November 2015 YTD	November 2016 YTD	November 2015 YTD
New England	1,045	3,412	-69.0%	100	343	873	2,924	48	99	24	47
Connecticut	195	733	-73.0%	10	12	166	688	NM	20	8	13
Maine	224	915	-76.0%	NM	0	204	874	NM	7	16	34
Massachusetts	529	1,313	-60.0%	29	94	479	1,171	21	48	NM	0
New Hampshire	51	291	-82.0%	41	207	NM	70	7	14	NM	0
Rhode Island	42	151	-72.0%	17	23	20	120	NM	9	0	0
Vermont	NM	8	NM	NM	7	0	0	NM	2	0	0
Middle Atlantic	1,704	4,606	-63.0%	576	1,407	1,034	3,043	34	70	61	86
New Jersey	127	492	-74.0%	NM	7	119	477	NM	1	3	7
New York	1,069	3,073	-65.0%	570	1,399	442	1,558	26	64	31	52
Pennsylvania	507	1,041	-51.0%	NM	1	473	1,008	8	5	26	27
East North Central	959	1,001	-4.1%	584	644	348	323	5	4	22	30
Illinois	118	95	24.0%	10	15	107	79	1	0	0	0
Indiana	187	267	-30.0%	174	246	NM	0	NM	1	13	20
Michigan	228	207	10.0%	221	201	0	0	3	2	4	4
Ohio	361	369	-2.0%	119	124	238	239	NM	1	3	5
Wisconsin	65	63	2.8%	60	57	4	5	NM	0	1	1
West North Central	454	526	-14.0%	435	506	NM	14	3	4	2	2
Iowa	103	74	40.0%	101	72	2	2	NM	0	NM	0
Kansas	91	95	-4.5%	91	95	0	0	0	0	0	0
Minnesota	54	64	-17.0%	38	48	NM	12	3	4	1	1
Missouri	135	192	-30.0%	135	191	NM	0	NM	0	0	0
Nebraska	15	15	-0.7%	15	15	0	0	0	0	0	0
North Dakota	48	48	0.7%	47	47	0	0	NM	0	1	1
South Dakota	8	38	-79.0%	8	38	NM	0	NM	0	0	0
South Atlantic	3,796	5,280	-28.0%	2,891	3,915	809	1,221	NM	48	86	96
Delaware	93	245	-62.0%	NM	8	88	236	0	0	0	0
District of Columbia	NM	0	NM	0	0	0	0	NM	0	0	0
Florida	1,358	1,068	27.0%	1,322	1,036	NM	21	0	0	13	11
Georgia	198	269	-26.0%	129	144	38	86	3	4	28	35
Maryland	352	474	-26.0%	18	23	329	410	NM	40	2	2
North Carolina	442	771	-43.0%	367	702	66	54	NM	1	9	15
South Carolina	205	376	-46.0%	172	334	NM	13	NM	0	30	28
Virginia	954	1,844	-48.0%	695	1,458	253	378	NM	2	4	5
West Virginia	193	232	-17.0%	184	209	9	23	0	0	0	0
East South Central	533	619	-14.0%	495	571	12	21	NM	0	26	27
Alabama	80	136	-41.0%	46	91	12	21	0	0	22	24
Kentucky	199	217	-8.5%	199	217	0	0	0	0	0	0
Mississippi	31	30	4.4%	29	28	0	0	0	0	2	1
Tennessee	223	236	-5.3%	222	234	NM	0	NM	0	1	1
West South Central	260	418	-38.0%	172	244	79	159	NM	1	8	14
Arkansas	66	94	-30.0%	48	67	15	18	0	0	3	9
Louisiana	29	113	-75.0%	25	88	3	25	0	0	0	0
Oklahoma	32	17	89.0%	29	14	0	0	NM	0	2	2
Texas	134	194	-31.0%	69	75	61	115	NM	1	NM	2
Mountain	385	389	-1.2%	343	353	40	35	NM	0	NM	1
Arizona	93	86	7.6%	93	86	0	0	NM	0	0	0
Colorado	19	20	-5.1%	19	20	0	0	0	0	NM	0
Idaho	NM	0	NM	NM	0	0	0	0	0	0	0
Montana	35	28	25.0%	NM	1	34	27	0	0	0	0
Nevada	21	29	-28.0%	16	23	5	NM	0	0	0	0
New Mexico	86	117	-26.0%	86	117	0	0	0	0	NM	0
Utah	49	32	52.0%	47	30	NM	1	0	0	NM	1
Wyoming	82	77	6.4%	82	77	0	0	0	0	NM	0
Pacific Contiguous	173	192	-10.0%	65	75	31	70	NM	1	75	45
California	137	152	-9.5%	57	61	15	58	NM	1	64	31
Oregon	5	10	-54.0%	5	10	0	0	NM	0	0	0
Washington	31	30	3.3%	NM	3	16	12	NM	0	11	14
Pacific Noncontiguous	10,006	10,903	-8.2%	8,654	9,328	1,122	1,308	17	15	213	251
Alaska	1,240	1,252	-1.0%	1,166	1,172	0	0	7	6	67	74
Hawaii	8,766	9,650	-9.2%	7,487	8,156	1,122	1,308	10	9	146	177
U.S. Total	19,315	27,344	-29.0%	14,316	17,385	4,363	9,119	119	241	517	599

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Totals may not equal sum of components because of independent rounding. Percentage change is calculated before rounding.

Source: U.S. Energy Information Administration, Form EIA-923, Power Plant Operations Report.

Table 2.10.A. Consumption of Petroleum Coke for Electricity Generation by State, by Sector, November 2016 and November 2015 (Thousand Tons)

Census Division and State	All Sectors			Electric Power Sector							
	November 2016	November 2015	Percentage Change	Electric Utilities		Independent Power Producers		Commercial Sector		Industrial Sector	
				November 2016	November 2015	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015
New England	0	0	--	0	0	0	0	0	0	0	0
Connecticut	0	0	--	0	0	0	0	0	0	0	0
Maine	0	0	--	0	0	0	0	0	0	0	0
Massachusetts	0	0	--	0	0	0	0	0	0	0	0
New Hampshire	0	0	--	0	0	0	0	0	0	0	0
Rhode Island	0	0	--	0	0	0	0	0	0	0	0
Vermont	0	0	--	0	0	0	0	0	0	0	0
Middle Atlantic	NM	4	NM	0	0	0	0	0	0	NM	4
New Jersey	NM	1	NM	0	0	0	0	0	0	NM	1
New York	0	0	--	0	0	0	0	0	0	0	0
Pennsylvania	NM	4	NM	0	0	0	0	0	0	NM	4
East North Central	59	115	-49.0%	24	64	31	47	0	0	4	4
Illinois	0	0	--	0	0	0	0	0	0	0	0
Indiana	0	55	-100.0%	0	55	0	0	0	0	0	0
Michigan	23	9	165.0%	20	5	0	2	0	0	NM	2
Ohio	31	45	-31.0%	0	0	31	45	0	0	NM	0
Wisconsin	4	6	-22.0%	4	4	0	0	0	0	0	2
West North Central	NM	1	NM	0	0	0	0	0	0	NM	1
Iowa	NM	1	NM	0	0	0	0	0	0	NM	1
Kansas	0	0	--	0	0	0	0	0	0	0	0
Minnesota	0	0	--	0	0	0	0	0	0	0	0
Missouri	0	0	--	0	0	0	0	0	0	0	0
Nebraska	0	0	--	0	0	0	0	0	0	0	0
North Dakota	0	0	--	0	0	0	0	0	0	0	0
South Dakota	0	0	--	0	0	0	0	0	0	0	0
South Atlantic	18	35	-49.0%	16	32	0	0	0	0	2	3
Delaware	0	0	--	0	0	0	0	0	0	0	0
District of Columbia	0	0	--	0	0	0	0	0	0	0	0
Florida	16	32	-50.0%	16	32	0	0	0	0	0	0
Georgia	2	3	-42.0%	0	0	0	0	0	0	2	3
Maryland	0	0	--	0	0	0	0	0	0	0	0
North Carolina	0	0	--	0	0	0	0	0	0	0	0
South Carolina	0	0	--	0	0	0	0	0	0	0	0
Virginia	0	0	--	0	0	0	0	0	0	0	0
West Virginia	0	0	--	0	0	0	0	0	0	0	0
East South Central	31	30	2.0%	31	30	0	0	0	0	0	0
Alabama	0	0	--	0	0	0	0	0	0	0	0
Kentucky	31	30	2.0%	31	30	0	0	0	0	0	0
Mississippi	0	0	--	0	0	0	0	0	0	0	0
Tennessee	0	0	--	0	0	0	0	0	0	0	0
West South Central	175	59	196.0%	169	52	0	0	0	0	6	7
Arkansas	0	0	--	0	0	0	0	0	0	0	0
Louisiana	172	55	212.0%	169	52	0	0	0	0	NM	3
Oklahoma	0	0	--	0	0	0	0	0	0	0	0
Texas	NM	4	NM	0	0	0	0	0	0	NM	4
Mountain	15	15	3.9%	0	0	15	15	0	0	0	0
Arizona	0	0	--	0	0	0	0	0	0	0	0
Colorado	0	0	--	0	0	0	0	0	0	0	0
Idaho	0	0	--	0	0	0	0	0	0	0	0
Montana	15	15	3.9%	0	0	15	15	0	0	0	0
Nevada	0	0	--	0	0	0	0	0	0	0	0
New Mexico	0	0	--	0	0	0	0	0	0	0	0
Utah	0	0	--	0	0	0	0	0	0	0	0
Wyoming	0	0	--	0	0	0	0	0	0	0	0
Pacific Contiguous	0	0	--	0	0	0	0	0	0	0	0
California	0	0	--	0	0	0	0	0	0	0	0
Oregon	0	0	--	0	0	0	0	0	0	0	0
Washington	0	0	--	0	0	0	0	0	0	0	0
Pacific Noncontiguous	0	0	--	0	0	0	0	0	0	0	0
Alaska	0	0	--	0	0	0	0	0	0	0	0
Hawaii	0	0	--	0	0	0	0	0	0	0	0
U.S. Total	304	260	17.0%	240	178	47	62	0	0	18	20

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Totals may not equal sum of components because of independent rounding. Percentage change is calculated before rounding.

Source: U.S. Energy Information Administration, Form EIA-923, Power Plant Operations Report.

Table 2.10.B. Consumption of Petroleum Coke for Electricity Generation by State, by Sector, Year-to-Date through November 2016 and November 2015 (Thousand Tons)

Census Division and State	All Sectors			Electric Power Sector				Commercial Sector				Industrial Sector	
				Electric Utilities		Independent Power Producers							
	November 2016 YTD	November 2015 YTD	Percentage Change	November 2016 YTD	November 2015 YTD	November 2016 YTD	November 2015 YTD	November 2016 YTD	November 2015 YTD	November 2016 YTD	November 2015 YTD	November 2016 YTD	November 2015 YTD
New England	0	0	--	0	0	0	0	0	0	0	0	0	0
Connecticut	0	0	--	0	0	0	0	0	0	0	0	0	0
Maine	0	0	--	0	0	0	0	0	0	0	0	0	0
Massachusetts	0	0	--	0	0	0	0	0	0	0	0	0	0
New Hampshire	0	0	--	0	0	0	0	0	0	0	0	0	0
Rhode Island	0	0	--	0	0	0	0	0	0	0	0	0	0
Vermont	0	0	--	0	0	0	0	0	0	0	0	0	0
Middle Atlantic	56	51	11.0%	0	0	0	0	0	0	0	56	51	
New Jersey	14	6	124.0%	0	0	0	0	0	0	0	14	6	
New York	0	0	--	0	0	0	0	0	0	0	0	0	
Pennsylvania	43	44	-4.1%	0	0	0	0	0	0	0	43	44	
East North Central	899	1,180	-24.0%	461	656	391	475	0	0	46	48		
Illinois	0	0	--	0	0	0	0	0	0	0	0	0	
Indiana	159	348	-54.0%	159	348	0	0	0	0	0	0	0	
Michigan	302	317	-4.9%	264	280	1	13	0	0	36	25		
Ohio	392	464	-16.0%	0	0	390	463	0	0	2	1		
Wisconsin	46	50	-8.4%	38	28	0	0	0	0	8	22		
West North Central	24	17	43.0%	0	0	0	0	1	2	23	15		
Iowa	24	17	43.0%	0	0	0	0	1	2	23	15		
Kansas	0	0	--	0	0	0	0	0	0	0	0		
Minnesota	0	0	--	0	0	0	0	0	0	0	0		
Missouri	0	0	--	0	0	0	0	0	0	0	0		
Nebraska	0	0	--	0	0	0	0	0	0	0	0		
North Dakota	0	0	--	0	0	0	0	0	0	0	0		
South Dakota	0	0	--	0	0	0	0	0	0	0	0		
South Atlantic	727	555	31.0%	703	527	0	0	0	0	24	28		
Delaware	0	0	--	0	0	0	0	0	0	0	0		
District of Columbia	0	0	--	0	0	0	0	0	0	0	0		
Florida	703	527	33.0%	703	527	0	0	0	0	0	0		
Georgia	24	28	-14.0%	0	0	0	0	0	0	24	28		
Maryland	0	0	--	0	0	0	0	0	0	0	0		
North Carolina	0	0	--	0	0	0	0	0	0	0	0		
South Carolina	0	0	--	0	0	0	0	0	0	0	0		
Virginia	0	0	--	0	0	0	0	0	0	0	0		
West Virginia	0	0	--	0	0	0	0	0	0	0	0		
East South Central	408	345	18.0%	408	345	0	0	0	0	0	0		
Alabama	0	0	--	0	0	0	0	0	0	0	0		
Kentucky	408	345	18.0%	408	345	0	0	0	0	0	0		
Mississippi	0	0	--	0	0	0	0	0	0	0	0		
Tennessee	0	0	--	0	0	0	0	0	0	0	0		
West South Central	1,671	1,453	15.0%	1,598	1,359	0	0	0	0	74	93		
Arkansas	0	0	--	0	0	0	0	0	0	0	0		
Louisiana	1,631	1,389	17.0%	1,598	1,359	0	0	0	0	33	29		
Oklahoma	0	0	--	0	0	0	0	0	0	0	0		
Texas	41	64	-37.0%	0	0	0	0	0	0	41	64		
Mountain	153	168	-8.9%	0	0	153	168	0	0	0	0		
Arizona	0	0	--	0	0	0	0	0	0	0	0		
Colorado	0	0	--	0	0	0	0	0	0	0	0		
Idaho	0	0	--	0	0	0	0	0	0	0	0		
Montana	153	168	-8.9%	0	0	153	168	0	0	0	0		
Nevada	0	0	--	0	0	0	0	0	0	0	0		
New Mexico	0	0	--	0	0	0	0	0	0	0	0		
Utah	0	0	--	0	0	0	0	0	0	0	0		
Wyoming	0	0	--	0	0	0	0	0	0	0	0		
Pacific Contiguous	0	0	--	0	0	0	0	0	0	0	0		
California	0	0	--	0	0	0	0	0	0	0	0		
Oregon	0	0	--	0	0	0	0	0	0	0	0		
Washington	0	0	--	0	0	0	0	0	0	0	0		
Pacific Noncontiguous	0	0	--	0	0	0	0	0	0	0	0		
Alaska	0	0	--	0	0	0	0	0	0	0	0		
Hawaii	0	0	--	0	0	0	0	0	0	0	0		
U.S. Total	3,939	3,768	4.5%	3,170	2,888	544	643	1	2	224	235		

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Totals may not equal sum of components because of independent rounding. Percentage change is calculated before rounding.

Source: U.S. Energy Information Administration, Form EIA-923, Power Plant Operations Report.

Table 2.11.A. Consumption of Natural Gas for Electricity Generation by State, by Sector, November 2016 and November 2015 (Million Cubic Feet)

Census Division and State	All Sectors			Electric Power Sector				Commercial Sector				Industrial Sector	
				Electric Utilities		Independent Power Producers							
	November 2016	November 2015	Percentage Change	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015
New England	26,140	29,532	-11.0%	32	264	24,792	27,807	694	734	623	726		
Connecticut	10,400	10,545	-1.4%	12	64	9,729	9,737	NM	328	NM	416		
Maine	1,302	2,056	-37.0%	0	0	1,122	1,811	NM	36	154	208		
Massachusetts	8,377	8,783	-4.6%	18	167	7,951	8,215	320	312	NM	89		
New Hampshire	3,108	3,830	-19.0%	0	32	3,078	3,762	NM	22	NM	12		
Rhode Island	2,951	4,317	-32.0%	0	0	2,912	4,282	NM	35	0	0		
Vermont	NM	1	NM	2	1	0	0	NM	0	0	0		
Middle Atlantic	87,215	91,476	-4.7%	6,570	8,144	78,835	81,530	824	865	986	937		
New Jersey	19,437	23,252	-16.0%	NM	78	19,020	22,752	NM	156	NM	266		
New York	28,704	32,084	-11.0%	6,520	8,063	21,383	23,272	603	606	197	142		
Pennsylvania	39,074	36,140	8.1%	3	3	38,432	35,506	NM	103	550	529		
East North Central	61,123	56,017	9.1%	24,738	26,192	34,064	27,317	688	893	1,634	1,616		
Illinois	8,493	7,550	12.0%	462	251	7,622	6,635	143	326	266	339		
Indiana	13,742	11,631	18.0%	10,989	8,297	2,345	2,834	86	93	322	407		
Michigan	16,766	13,527	24.0%	4,441	5,268	11,191	7,287	322	301	812	671		
Ohio	15,581	15,823	-1.5%	2,958	5,342	12,462	10,277	NM	132	74	72		
Wisconsin	6,542	7,487	-13.0%	5,888	7,034	444	285	NM	41	160	126		
West North Central	9,690	7,413	31.0%	8,243	6,177	593	673	284	226	570	337		
Iowa	1,051	693	52.0%	575	435	NM	0	NM	35	427	224		
Kansas	1,314	688	91.0%	1,259	664	0	0	0	0	NM	24		
Minnesota	3,422	3,133	9.2%	2,861	2,789	347	127	NM	171	NM	45		
Missouri	2,166	2,178	-0.6%	1,824	1,576	245	546	81	20	NM	37		
Nebraska	677	154	339.0%	674	149	0	0	NM	0	NM	5		
North Dakota	548	103	431.0%	537	102	0	0	0	0	NM	1		
South Dakota	513	463	11.0%	513	463	0	0	0	0	0	0		
South Atlantic	166,153	180,110	-7.7%	138,530	144,469	24,362	32,805	549	621	2,712	2,215		
Delaware	4,618	3,096	49.0%	NM	20	3,551	2,297	0	0	1,041	778		
District of Columbia	NM	50	NM	0	0	0	0	NM	50	0	0		
Florida	77,278	92,086	-16.0%	71,137	82,791	5,366	8,537	NM	16	756	743		
Georgia	24,268	27,825	-13.0%	20,493	20,316	3,458	7,200	0	0	318	309		
Maryland	975	3,582	-73.0%	0	0	471	3,016	NM	542	36	24		
North Carolina	23,888	22,337	6.9%	22,187	21,036	1,623	1,218	8	6	70	77		
South Carolina	13,483	13,704	-1.6%	8,878	12,130	4,567	1,558	NM	2	36	14		
Virginia	20,995	16,676	26.0%	15,705	8,138	5,069	8,262	NM	5	215	271		
West Virginia	603	754	-20.0%	105	37	259	717	0	0	239	0		
East South Central	60,762	68,861	-12.0%	38,429	44,557	21,143	23,089	NM	97	1,094	1,118		
Alabama	30,894	31,865	-3.0%	9,388	10,518	20,956	20,709	0	0	550	639		
Kentucky	4,364	5,490	-20.0%	4,052	5,309	182	0	0	0	NM	180		
Mississippi	21,515	25,867	-17.0%	21,307	23,289	4	2,381	NM	3	200	195		
Tennessee	3,989	5,640	-29.0%	3,682	5,442	0	0	NM	94	213	104		
West South Central	177,499	189,543	-6.4%	55,318	59,724	81,109	90,721	605	423	40,468	38,675		
Arkansas	10,468	5,039	108.0%	4,510	1,771	5,814	3,097	NM	1	142	169		
Louisiana	36,580	46,058	-21.0%	16,812	25,221	2,364	3,448	NM	148	17,272	17,242		
Oklahoma	20,971	20,586	1.9%	14,075	13,955	6,808	6,507	NM	0	81	124		
Texas	109,481	117,860	-7.1%	19,920	18,777	66,124	77,669	464	274	22,973	21,140		
Mountain	43,138	56,953	-24.0%	33,309	42,020	8,551	13,612	342	365	936	957		
Arizona	11,469	17,750	-35.0%	6,889	10,533	4,479	7,114	101	103	0	0		
Colorado	5,455	9,582	-43.0%	4,508	8,219	929	1,332	0	3	NM	28		
Idaho	870	2,302	-62.0%	268	1,023	530	1,182	0	26	72	70		
Montana	NM	591	NM	NM	538	NM	53	0	0	0	0		
Nevada	15,674	15,449	1.5%	14,041	13,821	1,367	1,379	60	53	205	196		
New Mexico	5,169	5,519	-6.3%	3,960	2,916	1,101	2,498	108	103	0	3		
Utah	3,699	5,292	-30.0%	3,204	4,820	NM	53	73	76	315	343		
Wyoming	405	466	-13.0%	NM	150	NM	0	0	0	326	316		
Pacific Contiguous	66,649	84,859	-21.0%	25,456	32,465	34,520	45,070	1,250	1,247	5,424	6,078		
California	54,430	63,381	-14.0%	17,912	21,812	29,987	34,392	1,189	1,180	5,341	5,997		
Oregon	7,719	11,074	-30.0%	4,280	4,427	3,352	6,548	NM	58	34	41		
Washington	4,500	10,404	-57.0%	3,264	6,225	1,180	4,131	NM	9	49	40		
Pacific Noncontiguous	1,845	2,571	-28.0%	1,763	2,498	0	0	NM	0	NM	74		
Alaska	1,845	2,571	-28.0%	1,763	2,498	0	0	NM	0	NM	74</td		

Table 2.11.B. Consumption of Natural Gas for Electricity Generation by State, by Sector, Year-to-Date through November 2016 and November 2015 (Million Cubic Feet)

Census Division and State	All Sectors			Electric Power Sector				Commercial Sector		Industrial Sector	
	November 2016 YTD	November 2015 YTD	Percentage Change	Electric Utilities		Independent Power Producers					
				November 2016 YTD	November 2015 YTD	November 2016 YTD	November 2015 YTD	November 2016 YTD	November 2015 YTD	November 2016 YTD	November 2015 YTD
New England	374,422	375,426	-0.3%	2,910	4,140	355,130	355,014	8,302	8,673	8,081	7,599
Connecticut	120,378	116,307	3.5%	41	192	112,331	107,970	3,553	3,539	4,453	4,606
Maine	24,141	18,614	30.0%	0	0	21,538	16,461	282	326	2,321	1,826
Massachusetts	153,214	152,717	0.3%	2,405	3,623	145,925	143,997	3,700	4,062	1,184	1,035
New Hampshire	31,979	40,335	-21.0%	451	307	31,190	39,660	NM	237	NM	131
Rhode Island	44,696	47,433	-5.8%	0	0	44,145	46,926	550	506	0	0
Vermont	NM	20	NM	12	19	0	0	NM	1	0	0
Middle Atlantic	1,200,455	1,093,502	9.8%	110,811	107,110	1,068,919	966,024	9,791	9,733	10,934	10,636
New Jersey	298,266	253,996	17.0%	NM	664	293,118	248,757	1,588	1,671	2,814	2,904
New York	439,595	436,952	0.6%	109,985	106,415	320,387	321,834	7,101	6,872	2,122	1,831
Pennsylvania	462,594	402,553	15.0%	NM	31	455,414	395,433	1,102	1,190	5,998	5,900
East North Central	819,866	619,586	32.0%	364,938	275,804	427,565	318,689	9,505	9,424	17,858	15,669
Illinois	141,370	78,899	79.0%	13,684	4,964	121,718	67,212	2,863	3,696	3,105	3,027
Indiana	144,932	111,646	30.0%	113,967	86,745	26,294	20,210	1,056	907	3,614	3,784
Michigan	225,494	148,326	52.0%	84,480	49,722	128,350	88,391	3,692	3,172	8,973	7,041
Ohio	196,055	191,246	2.5%	51,861	51,754	142,526	137,652	1,246	1,155	422	686
Wisconsin	112,016	89,468	25.0%	100,945	82,618	8,677	5,225	648	494	1,745	1,131
West North Central	176,339	130,773	35.0%	145,414	109,927	22,715	14,991	3,426	2,768	4,784	3,087
Iowa	22,737	16,854	35.0%	19,504	14,633	NM	0	621	490	2,610	1,730
Kansas	20,142	14,512	39.0%	19,452	13,976	0	0	0	0	690	536
Minnesota	64,289	48,395	33.0%	50,603	40,676	10,969	5,756	1,733	1,436	984	527
Missouri	47,272	35,106	35.0%	34,196	24,835	11,744	9,235	1,065	838	266	198
Nebraska	6,284	4,137	52.0%	6,156	4,126	0	0	NM	3	NM	7
North Dakota	8,321	6,263	33.0%	8,207	6,174	0	0	0	0	114	88
South Dakota	7,295	5,506	32.0%	7,295	5,506	0	0	0	0	0	0
South Atlantic	2,262,274	2,106,878	7.4%	1,809,637	1,713,466	418,449	360,437	6,704	7,046	27,484	25,930
Delaware	62,754	53,823	17.0%	NM	345	51,208	42,839	0	0	11,078	10,639
District of Columbia	559	597	-6.3%	0	0	0	0	559	597	0	0
Florida	1,110,507	1,073,668	3.4%	1,007,722	1,001,237	94,346	64,089	254	192	8,185	8,150
Georgia	355,715	331,078	7.4%	273,073	241,183	79,545	86,588	0	0	3,097	3,308
Maryland	52,609	41,870	26.0%	0	0	46,445	35,467	5,721	6,129	443	274
North Carolina	272,920	247,784	10.0%	235,736	219,329	36,225	27,584	67	46	892	824
South Carolina	124,596	123,687	0.7%	99,629	108,963	24,468	14,492	NM	19	460	213
Virginia	271,515	221,660	22.0%	191,528	141,087	77,650	77,988	NM	63	2,273	2,522
West Virginia	11,098	12,710	-13.0%	1,480	1,320	8,563	11,390	0	0	1,055	0
East South Central	876,049	793,155	10.0%	575,591	492,004	287,057	286,987	1,190	1,141	12,211	13,024
Alabama	388,758	370,369	5.0%	121,048	102,519	260,895	259,626	0	0	6,814	8,223
Kentucky	63,062	50,026	26.0%	56,286	42,455	5,250	5,935	0	0	1,526	1,636
Mississippi	341,855	307,199	11.0%	318,708	283,633	20,911	21,425	NM	31	2,191	2,109
Tennessee	82,374	65,562	26.0%	79,548	63,396	0	0	1,145	1,110	1,680	1,056
West South Central	2,448,536	2,425,476	1.0%	842,521	793,073	1,162,943	1,207,403	7,139	6,694	435,933	418,306
Arkansas	125,148	98,744	27.0%	53,844	31,858	69,762	65,084	NM	23	1,521	1,779
Louisiana	495,094	483,147	2.5%	265,020	280,371	40,507	24,264	1,523	1,525	188,044	176,987
Oklahoma	258,929	232,261	11.0%	180,818	153,155	77,112	78,188	88	0	911	917
Texas	1,569,365	1,611,324	-2.6%	342,838	327,688	975,563	1,039,866	5,506	5,146	245,458	238,623
Mountain	693,374	666,041	4.1%	514,098	478,284	165,321	173,504	3,675	4,177	10,279	10,076
Arizona	245,729	232,206	5.8%	142,986	127,928	101,643	102,908	1,100	1,370	0	0
Colorado	85,840	81,460	5.4%	71,240	63,436	14,359	17,796	14	3	227	225
Idaho	22,514	25,086	-10.0%	13,280	14,829	8,479	9,669	0	128	756	460
Montana	6,904	5,769	20.0%	6,238	5,240	665	529	0	0	0	0
Nevada	193,282	191,359	1.0%	176,062	173,471	14,294	14,850	627	645	2,299	2,393
New Mexico	75,836	70,093	8.2%	50,389	42,638	24,286	26,206	1,143	1,237	NM	13
Utah	58,278	55,629	4.8%	52,180	49,589	1,586	1,538	790	794	3,722	3,708
Wyoming	4,992	4,438	12.0%	1,724	1,153	NM	7	0	0	3,258	3,278
Pacific Contiguous	826,019	970,096	-15.0%	316,178	350,518	436,617	542,513	13,409	14,688	59,816	62,377
California	650,079	783,088	-17.0%	224,924	256,047	353,785	451,150	12,751	14,105	58,618	61,786
Oregon	100,318	101,071	-0.7%	45,897	41,367	53,142	58,869	NM	511	708	324

Table 2.12.A. Consumption of Landfill Gas for Electricity Generation by State, by Sector, November 2016 and November 2015 (Million Cubic Feet)

Census Division and State	All Sectors			Electric Power Sector				Commercial Sector				Industrial Sector	
				Electric Utilities		Independent Power Producers							
	November 2016	November 2015	Percentage Change	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015
New England	1,000	934	7.0%	0	0	932	888	68	47	0	0	0	0
Connecticut	NM	44	NM	0	0	NM	44	0	0	0	0	0	0
Maine	NM	74	NM	0	0	NM	74	0	0	0	0	0	0
Massachusetts	359	320	12.0%	0	0	359	320	0	0	0	0	0	0
New Hampshire	172	139	23.0%	0	0	NM	92	68	47	0	0	0	0
Rhode Island	309	311	-0.8%	0	0	309	311	0	0	0	0	0	0
Vermont	NM	46	NM	0	0	NM	46	0	0	0	0	0	0
Middle Atlantic	5,068	4,805	5.5%	0	0	4,828	4,588	103	72	138	145		
New Jersey	832	757	9.9%	0	0	794	731	NM	26	0	0		
New York	1,499	1,389	7.9%	0	0	1,499	1,389	0	0	0	0		
Pennsylvania	2,738	2,659	3.0%	0	0	2,535	2,468	65	46	138	145		
East North Central	6,359	5,256	21.0%	751	593	5,529	4,586	18	17	60	60		
Illinois	1,347	1,281	5.2%	NM	35	1,308	1,246	0	0	0	0		
Indiana	821	655	25.0%	693	543	NM	89	0	0	NM	23		
Michigan	1,926	1,510	28.0%	0	0	1,926	1,510	0	0	0	0		
Ohio	1,097	935	17.0%	0	0	1,097	935	0	0	0	0		
Wisconsin	1,167	874	34.0%	NM	15	1,093	805	18	17	NM	37		
West North Central	1,086	965	13.0%	288	287	798	678	0	0	0	0		
Iowa	273	215	27.0%	0	0	273	215	0	0	0	0		
Kansas	NM	131	NM	0	0	NM	131	0	0	0	0		
Minnesota	352	343	2.4%	NM	69	274	274	0	0	0	0		
Missouri	194	107	81.0%	NM	49	NM	58	0	0	0	0		
Nebraska	125	169	-26.0%	125	169	0	0	0	0	0	0		
North Dakota	0	0	--	0	0	0	0	0	0	0	0		
South Dakota	0	0	--	0	0	0	0	0	0	0	0		
South Atlantic	4,524	5,113	-12.0%	465	466	3,572	4,180	250	265	238	202		
Delaware	152	146	4.5%	0	0	NM	131	0	0	NM	15		
District of Columbia	0	0	--	0	0	0	0	0	0	0	0		
Florida	613	754	-19.0%	150	149	460	601	NM	1	NM	3		
Georgia	432	415	4.1%	0	0	382	372	0	0	NM	43		
Maryland	227	205	11.0%	0	0	NM	140	73	64	0	0		
North Carolina	1,108	1,762	-37.0%	0	0	961	1,587	147	175	0	0		
South Carolina	508	483	5.1%	308	310	NM	32	0	0	165	141		
Virginia	1,472	1,335	10.0%	NM	7	1,435	1,304	NM	24	0	0		
West Virginia	NM	NM	NM	0	0	NM	NM	0	0	0	0		
East South Central	501	551	-9.1%	197	219	304	332	0	0	0	0		
Alabama	NM	110	NM	0	0	NM	110	0	0	0	0		
Kentucky	213	235	-9.6%	197	219	NM	16	0	0	0	0		
Mississippi	NM	45	NM	0	0	NM	45	0	0	0	0		
Tennessee	NM	160	NM	0	0	NM	160	0	0	0	0		
West South Central	1,735	1,524	14.0%	0	0	1,660	1,467	75	57	0	0		
Arkansas	NM	129	NM	0	0	NM	129	0	0	0	0		
Louisiana	0	0	--	0	0	0	0	0	0	0	0		
Oklahoma	NM	27	NM	0	0	NM	27	0	0	0	0		
Texas	1,541	1,368	13.0%	0	0	1,466	1,311	75	57	0	0		
Mountain	516	476	8.5%	NM	24	433	407	NM	45	0	0		
Arizona	NM	86	NM	0	0	NM	86	0	0	0	0		
Colorado	NM	110	NM	0	0	NM	110	0	0	0	0		
Idaho	NM	86	NM	NM	24	NM	47	NM	14	0	0		
Montana	0	0	--	0	0	0	0	0	0	0	0		
Nevada	NM	47	NM	0	0	NM	47	0	0	0	0		
New Mexico	0	0	--	0	0	0	0	0	0	0	0		
Utah	169	146	16.0%	0	0	NM	116	NM	31	0	0		
Wyoming	0	0	--	0	0	0	0	0	0	0	0		
Pacific Contiguous	5,560	4,890	14.0%	688	535	3,481	2,927	1,391	1,429	0	0		
California	4,558	4,091	11.0%	226	181	2,989	2,520	1,343	1,390	0	0		
Oregon	551	482	14.0%	NM	129	373	313	NM	39	0	0		
Washington	451	318	42.0%	332	224	NM	94	0	0	0	0		
Pacific Noncontiguous	130	88	48.0%	0	0	0	0	130	88	0	0		
Alaska	130	88	48.0%	0	0	0	0	130	88	0	0		
Hawaii	0	0	--	0	0	0	0	0	0	0	0		
U.S. Total	26,480	24,602	7.6%	2,417	2,123	21,537	20,052	2,091	2,020	436	408		

Displayed values of zero may represent small values that round to zero. The Excel version of this table provides additional precision which may be accessed by selecting individual cells.

Notes: See Glossary for definitions. Values for 2016 are preliminary. Values for 2015 are final. See Technical Notes for a discussion of the sample design for the Form EIA-923.

Totals may not equal sum of components because of independent rounding. Percentage change is calculated before rounding.

Source: U.S. Energy Information Administration, Form EIA-923, Power Plant Operations Report.

Table 2.12.B. Consumption of Landfill Gas for Electricity Generation by State, by Sector, Year-to-Date through November 2016 and November 2015 (Million Cubic Feet)

Census Division and State	All Sectors			Electric Power Sector				Commercial Sector		Industrial Sector	
	November 2016 YTD	November 2015 YTD	Percentage Change	Electric Utilities		Independent Power Producers					
				November 2016 YTD	November 2015 YTD	November 2016 YTD	November 2015 YTD	November 2016 YTD	November 2015 YTD	November 2016 YTD	November 2015 YTD
New England	11,680	10,508	11.0%	0	0	10,934	10,006	746	502	0	0
Connecticut	493	445	11.0%	0	0	493	445	0	0	0	0
Maine	867	773	12.0%	0	0	867	773	0	0	0	0
Massachusetts	4,113	3,477	18.0%	0	0	4,113	3,477	0	0	0	0
New Hampshire	1,937	1,493	30.0%	0	0	1,190	992	746	502	0	0
Rhode Island	3,783	3,827	-1.1%	0	0	3,783	3,827	0	0	0	0
Vermont	487	493	-1.2%	0	0	487	493	0	0	0	0
Middle Atlantic	56,582	50,424	12.0%	0	0	53,998	48,160	1,058	749	1,526	1,515
New Jersey	9,575	8,250	16.0%	0	0	9,176	7,976	400	274	0	0
New York	17,187	14,650	17.0%	0	0	17,187	14,650	0	0	0	0
Pennsylvania	29,819	27,524	8.3%	0	0	27,635	25,534	659	475	1,526	1,515
East North Central	72,736	59,088	23.0%	8,610	6,546	63,145	51,616	250	208	732	719
Illinois	15,451	12,373	25.0%	455	337	14,997	12,036	0	0	0	0
Indiana	9,436	7,265	30.0%	7,932	6,022	1,204	986	0	0	300	257
Michigan	22,078	18,224	21.0%	0	0	22,078	18,224	0	0	0	0
Ohio	12,527	10,359	21.0%	0	0	12,527	10,359	0	0	0	0
Wisconsin	13,244	10,868	22.0%	223	187	12,339	10,011	250	208	432	462
West North Central	12,768	9,939	28.0%	3,664	2,692	9,105	7,247	0	0	0	0
Iowa	3,097	2,460	26.0%	0	0	3,097	2,460	0	0	0	0
Kansas	1,626	1,258	29.0%	0	0	1,626	1,258	0	0	0	0
Minnesota	4,059	3,212	26.0%	932	668	3,127	2,544	0	0	0	0
Missouri	2,316	1,815	28.0%	1,060	829	1,255	986	0	0	0	0
Nebraska	1,671	1,194	40.0%	1,671	1,194	0	0	0	0	0	0
North Dakota	0	0	--	0	0	0	0	0	0	0	0
South Dakota	0	0	--	0	0	0	0	0	0	0	0
South Atlantic	51,326	42,633	20.0%	5,237	5,038	40,898	33,714	2,659	1,911	2,531	1,970
Delaware	1,721	1,439	20.0%	0	0	1,513	1,295	0	0	208	144
District of Columbia	0	0	--	0	0	0	0	0	0	0	0
Florida	6,816	7,985	-15.0%	1,574	1,906	5,205	6,044	NM	7	NM	28
Georgia	4,893	3,927	25.0%	0	0	4,355	3,448	0	77	538	402
Maryland	2,575	2,200	17.0%	0	0	1,793	1,506	782	693	0	0
North Carolina	12,532	8,979	40.0%	0	0	10,978	8,086	1,555	893	0	0
South Carolina	5,745	4,774	20.0%	3,578	3,065	409	314	0	0	1,758	1,396
Virginia	16,888	13,194	28.0%	NM	66	16,490	12,886	312	241	0	0
West Virginia	156	136	15.0%	0	0	156	136	0	0	0	0
East South Central	5,740	4,709	22.0%	2,265	1,899	3,475	2,810	0	0	0	0
Alabama	1,133	958	18.0%	0	0	1,133	958	0	0	0	0
Kentucky	2,442	2,042	20.0%	2,265	1,899	177	142	0	0	0	0
Mississippi	277	210	32.0%	0	0	277	210	0	0	0	0
Tennessee	1,889	1,499	26.0%	0	0	1,889	1,499	0	0	0	0
West South Central	19,742	15,555	27.0%	0	0	18,945	14,975	797	580	0	0
Arkansas	1,858	1,436	29.0%	0	0	1,858	1,436	0	0	0	0
Louisiana	0	0	--	0	0	0	0	0	0	0	0
Oklahoma	350	269	30.0%	0	0	350	269	0	0	0	0
Texas	17,535	13,850	27.0%	0	0	16,738	13,270	797	580	0	0
Mountain	5,839	5,291	10.0%	319	535	4,922	4,283	599	473	0	0
Arizona	1,080	1,190	-9.3%	0	281	1,080	909	0	0	0	0
Colorado	1,208	1,160	4.2%	0	0	1,208	1,160	0	0	0	0
Idaho	1,035	905	14.0%	319	254	498	500	218	151	0	0
Montana	0	0	--	0	0	0	0	0	0	0	0
Nevada	620	495	25.0%	0	0	620	495	0	0	0	0
New Mexico	0	0	--	0	0	0	0	0	0	0	0
Utah	1,897	1,540	23.0%	0	0	1,517	1,219	380	322	0	0
Wyoming	0	0	--	0	0	0	0	0	0	0	0
Pacific Contiguous	63,621	57,848	10.0%	7,890	6,382	40,049	33,768	15,683	17,698	0	0
California	52,231	48,864	6.9%	2,627	2,368	34,432	29,218	15,172	17,277	0	0
Oregon	6,252	5,186	21.0%	1,486	1,391	4,256	3,374	511	421	0	0
Washington	5,138	3,799	35.0%	3,777	2,623	1,361	1,176	0	0	0	0
Pacific Noncontiguous	1,381	1,014	36.0%	0	0	0	0	1,381	1,014	0	0
Alaska	1,381	1,014	36.0%	0	0	0	0	1,381	1,014	0	0
Hawaii	0	0	--	0	0	0	0	0	0	0	0
U.S. Total	301,417	257,009	17.0%	27,984	23,092	245,471	206,578	23,173	23,135	4,789	4,204

Displayed values of zero may represent small values that round to zero. The Excel version of this table provides additional precision which may be accessed by selecting individual cells.

Notes: See Glossary for definitions. Values for 2016 are preliminary. Values for 2015 are final. See Technical Notes for a discussion of the sample design for the Form EIA-923.

Totals may not equal sum of components because of independent rounding. Percentage change is calculated before rounding.

Source: U.S. Energy Information Administration, Form EIA-923, Power Plant Operations Report.

Table 2.13.A. Consumption of Biogenic Municipal Solid Waste for Electricity Generation by State, by Sector, November 2016 and November 2015 (Thousand Tons)

Census Division and State	All Sectors			Electric Power Sector				Commercial Sector				Industrial Sector	
				Electric Utilities		Independent Power Producers							
	November 2016	November 2015	Percentage Change	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015
New England	287	316	-9.2%	0	0	271	301	16	16	0	0	0	0
Connecticut	104	112	-6.9%	0	0	104	112	0	0	0	0	0	0
Maine	23	26	-12.0%	0	0	NM	10	16	16	0	0	0	0
Massachusetts	152	168	-9.7%	0	0	152	168	0	0	0	0	0	0
New Hampshire	9	11	-18.0%	0	0	9	11	0	0	0	0	0	0
Rhode Island	0	0	--	0	0	0	0	0	0	0	0	0	0
Vermont	0	0	--	0	0	0	0	0	0	0	0	0	0
Middle Atlantic	413	450	-8.3%	0	0	330	355	83	95	0	0	0	0
New Jersey	107	117	-8.3%	0	0	82	90	26	28	0	0	0	0
New York	153	170	-9.9%	0	0	118	127	36	43	0	0	0	0
Pennsylvania	152	163	-6.6%	0	0	130	139	22	24	0	0	0	0
East North Central	20	23	-14.0%	3	3	0	0	16	20	0	0	0	0
Illinois	0	0	--	0	0	0	0	0	0	0	0	0	0
Indiana	1	1	-21.0%	0	0	0	0	1	1	0	0	0	0
Michigan	16	19	-16.0%	0	0	0	0	16	19	0	0	0	0
Ohio	0	0	--	0	0	0	0	0	0	0	0	0	0
Wisconsin	3	3	3.0%	3	3	0	0	0	0	0	0	0	0
West North Central	52	54	-3.1%	36	31	15	21	1	2	0	0	0	0
Iowa	0	0	--	0	0	0	0	0	0	0	0	0	0
Kansas	0	0	--	0	0	0	0	0	0	0	0	0	0
Minnesota	52	54	-3.1%	36	31	15	21	1	2	0	0	0	0
Missouri	0	0	--	0	0	0	0	0	0	0	0	0	0
Nebraska	0	0	--	0	0	0	0	0	0	0	0	0	0
North Dakota	0	0	--	0	0	0	0	0	0	0	0	0	0
South Dakota	0	0	--	0	0	0	0	0	0	0	0	0	0
South Atlantic	426	444	-4.0%	0	0	394	410	31	34	0	0	0	0
Delaware	0	0	--	0	0	0	0	0	0	0	0	0	0
District of Columbia	0	0	--	0	0	0	0	0	0	0	0	0	0
Florida	274	284	-3.6%	0	0	274	284	0	0	0	0	0	0
Georgia	0	0	--	0	0	0	0	0	0	0	0	0	0
Maryland	67	69	-2.8%	0	0	67	69	0	0	0	0	0	0
North Carolina	0	0	--	0	0	0	0	0	0	0	0	0	0
South Carolina	0	0	--	0	0	0	0	0	0	0	0	0	0
Virginia	85	91	-6.4%	0	0	54	57	31	34	0	0	0	0
West Virginia	0	0	--	0	0	0	0	0	0	0	0	0	0
East South Central	0	0	--	0	0	0	0	0	0	0	0	0	0
Alabama	0	0	--	0	0	0	0	0	0	0	0	0	0
Kentucky	0	0	--	0	0	0	0	0	0	0	0	0	0
Mississippi	0	0	--	0	0	0	0	0	0	0	0	0	0
Tennessee	0	0	--	0	0	0	0	0	0	0	0	0	0
West South Central	0	1	-52.0%	0	0	0	0	0	0	0	0	0	1
Arkansas	0	0	--	0	0	0	0	0	0	0	0	0	0
Louisiana	0	0	--	0	0	0	0	0	0	0	0	0	0
Oklahoma	0	1	-52.0%	0	0	0	0	0	0	0	0	0	1
Texas	0	0	--	0	0	0	0	0	0	0	0	0	0
Mountain	0	0	-27.0%	0	0	0	0	0	0	0	0	0	0
Arizona	0	0	--	0	0	0	0	0	0	0	0	0	0
Colorado	0	0	--	0	0	0	0	0	0	0	0	0	0
Idaho	0	0	--	0	0	0	0	0	0	0	0	0	0
Montana	0	0	--	0	0	0	0	0	0	0	0	0	0
Nevada	0	0	--	0	0	0	0	0	0	0	0	0	0
New Mexico	0	0	--	0	0	0	0	0	0	0	0	0	0
Utah	0	0	-27.0%	0	0	0	0	0	0	0	0	0	0
Wyoming	0	0	--	0	0	0	0	0	0	0	0	0	0
Pacific Contiguous	59	66	-11.0%	0	0	59	66	0	0	0	0	0	0
California	41	43	-6.4%	0	0	41	43	0	0	0	0	0	0
Oregon	NM	11	NM	0	0	NM	11	0	0	0	0	0	0
Washington	11	12	-7.1%	0	0	11	12	0	0	0	0	0	0
Pacific Noncontiguous	36	35	4.7%	0	0	0	0	36	35	0	0	0	0
Alaska	0	0	--	0	0	0	0	0	0	0	0	0	0
Hawaii	36	35	4.7%	0	0	0	0	36	35	0	0	0	0
U.S. Total	1,294	1,389	-6.9%	39	34	1,069	1,153	184	202	0	0	1	

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Totals may not equal sum of components because of independent rounding. Percentage change is calculated before rounding.

Source: U.S. Energy Information Administration, Form EIA-923, Power Plant Operations Report.

Table 2.13.B. Consumption of Biogenic Municipal Solid Waste for Electricity Generation by State, by Sector, Year-to-Date through November 2016 and November 2015 (Thousand Tons)

Census Division and State	All Sectors			Electric Power Sector							
				Electric Utilities		Independent Power Producers		Commercial Sector		Industrial Sector	
	November 2016 YTD	November 2015 YTD	Percentage Change	November 2016 YTD	November 2015 YTD	November 2016 YTD	November 2015 YTD	November 2016 YTD	November 2015 YTD	November 2016 YTD	November 2015 YTD
New England	3,253	3,440	-5.4%	0	0	3,084	3,246	170	195	0	0
Connecticut	1,146	1,180	-2.9%	0	0	1,146	1,165	0	15	0	0
Maine	251	271	-7.4%	0	0	81	91	170	180	0	0
Massachusetts	1,759	1,877	-6.3%	0	0	1,759	1,877	0	0	0	0
New Hampshire	97	112	-13.0%	0	0	97	112	0	0	0	0
Rhode Island	0	0	--	0	0	0	0	0	0	0	0
Vermont	0	0	--	0	0	0	0	0	0	0	0
Middle Atlantic	4,613	4,860	-5.1%	0	0	3,691	3,835	922	1,025	0	0
New Jersey	1,219	1,253	-2.7%	0	0	905	937	314	316	0	0
New York	1,696	1,839	-7.8%	0	0	1,311	1,373	385	466	0	0
Pennsylvania	1,698	1,767	-3.9%	0	0	1,475	1,525	223	243	0	0
East North Central	226	237	-4.4%	36	36	0	0	191	201	0	0
Illinois	0	0	--	0	0	0	0	0	0	0	0
Indiana	8	10	-19.0%	0	0	0	0	8	10	0	0
Michigan	183	191	-4.1%	0	0	0	0	183	191	0	0
Ohio	0	0	--	0	0	0	0	0	0	0	0
Wisconsin	36	36	-2.1%	36	36	0	0	0	0	0	0
West North Central	577	593	-2.8%	390	379	169	192	18	22	0	0
Iowa	0	0	--	0	0	0	0	0	0	0	0
Kansas	0	0	--	0	0	0	0	0	0	0	0
Minnesota	577	593	-2.8%	390	379	169	192	18	22	0	0
Missouri	0	0	--	0	0	0	0	0	0	0	0
Nebraska	0	0	--	0	0	0	0	0	0	0	0
North Dakota	0	0	--	0	0	0	0	0	0	0	0
South Dakota	0	0	--	0	0	0	0	0	0	0	0
South Atlantic	4,984	4,952	0.7%	0	0	4,643	4,572	341	380	0	0
Delaware	0	0	--	0	0	0	0	0	0	0	0
District of Columbia	0	0	--	0	0	0	0	0	0	0	0
Florida	3,374	3,299	2.3%	0	0	3,374	3,299	0	0	0	0
Georgia	0	0	--	0	0	0	0	0	0	0	0
Maryland	732	738	-0.9%	0	0	732	738	NM	0	0	0
North Carolina	0	0	--	0	0	0	0	0	0	0	0
South Carolina	0	0	--	0	0	0	0	0	0	0	0
Virginia	878	914	-3.9%	0	0	537	534	341	380	0	0
West Virginia	0	0	--	0	0	0	0	0	0	0	0
East South Central	0	0	--	0	0	0	0	0	0	0	0
Alabama	0	0	--	0	0	0	0	0	0	0	0
Kentucky	0	0	--	0	0	0	0	0	0	0	0
Mississippi	0	0	--	0	0	0	0	0	0	0	0
Tennessee	0	0	--	0	0	0	0	0	0	0	0
West South Central	7	7	3.0%	0	0	0	0	0	0	7	7
Arkansas	0	0	--	0	0	0	0	0	0	0	0
Louisiana	0	0	--	0	0	0	0	0	0	0	0
Oklahoma	7	7	3.0%	0	0	0	0	0	0	7	7
Texas	0	0	--	0	0	0	0	0	0	0	0
Mountain	2	2	-17.0%	0	0	2	2	0	0	0	0
Arizona	0	0	--	0	0	0	0	0	0	0	0
Colorado	0	0	--	0	0	0	0	0	0	0	0
Idaho	0	0	--	0	0	0	0	0	0	0	0
Montana	0	0	--	0	0	0	0	0	0	0	0
Nevada	0	0	--	0	0	0	0	0	0	0	0
New Mexico	0	0	--	0	0	0	0	0	0	0	0
Utah	2	2	-17.0%	0	0	2	2	0	0	0	0
Wyoming	0	0	--	0	0	0	0	0	0	0	0
Pacific Contiguous	588	718	-18.0%	0	0	588	718	0	0	0	0
California	384	472	-19.0%	0	0	384	472	0	0	0	0
Oregon	81	106	-23.0%	0	0	81	106	0	0	0	0
Washington	123	141	-13.0%	0	0	123	141	0	0	0	0
Pacific Noncontiguous	408	350	17.0%	0	0	0	0	408	350	0	0
Alaska	0	0	--	0	0	0	0	0	0	0	0
Hawaii	408	350	17.0%	0	0	0	0	408	350	0	0
U.S. Total	14,658	15,160	-3.3%	425	415	12,176	12,565	2,050	2,173	7	7

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Totals may not equal sum of components because of independent rounding. Percentage change is calculated before rounding.

Source: U.S. Energy Information Administration, Form EIA-923, Power Plant Operations Report.

Table 2.14.A. Consumption of Wood / Wood Waste Biomass for Electricity Generation by State, by Sector, November 2016 and November 2015 (Billion Btus)

Census Division and State	All Sectors			Electric Power Sector				Commercial Sector				Industrial Sector	
				Electric Utilities		Independent Power Producers							
	November 2016	November 2015	Percentage Change	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015
New England	4,496	4,963	-9.4%	857	724	3,106	3,663	NM	2	532	574		
Connecticut	338	97	248.0%	0	0	338	97	0	0	0	0		
Maine	1,536	2,404	-36.0%	0	0	1,004	1,830	0	0	532	574		
Massachusetts	NM	189	NM	0	0	NM	189	0	0	0	0		
New Hampshire	1,972	1,719	15.0%	497	370	1,475	1,349	0	0	0	0		
Rhode Island	0	0	--	0	0	0	0	0	0	0	0		
Vermont	508	554	-8.4%	360	354	NM	198	NM	2	0	0		
Middle Atlantic	1,086	1,046	3.9%	0	0	650	538	0	0	436	508		
New Jersey	0	0	--	0	0	0	0	0	0	0	0		
New York	738	631	17.0%	0	0	650	538	0	0	88	93		
Pennsylvania	348	415	-16.0%	0	0	0	0	0	0	348	414		
East North Central	2,327	2,461	-5.5%	540	534	888	966	0	0	899	961		
Illinois	0	0	--	0	0	0	0	0	0	0	0		
Indiana	0	0	--	0	0	0	0	0	0	0	0		
Michigan	1,428	1,464	-2.5%	0	0	832	910	0	0	595	553		
Ohio	176	237	-26.0%	0	0	56	56	0	0	120	181		
Wisconsin	724	761	-4.8%	540	534	0	0	0	0	184	226		
West North Central	920	1,131	-19.0%	169	210	493	627	11	1	248	292		
Iowa	NM	1	NM	0	0	0	0	NM	1	0	0		
Kansas	0	0	--	0	0	0	0	0	0	0	0		
Minnesota	920	1,130	-19.0%	169	210	493	627	11	0	248	292		
Missouri	0	0	--	0	0	0	0	0	0	0	0		
Nebraska	0	0	--	0	0	0	0	0	0	0	0		
North Dakota	0	0	--	0	0	0	0	0	0	0	0		
South Dakota	0	0	--	0	0	0	0	0	0	0	0		
South Atlantic	8,746	9,788	-11.0%	848	1,567	2,554	3,015	17	17	5,327	5,189		
Delaware	0	0	--	0	0	0	0	0	0	0	0		
District of Columbia	0	0	--	0	0	0	0	0	0	0	0		
Florida	1,581	1,620	-2.4%	0	0	821	911	0	0	760	709		
Georgia	2,608	2,612	-0.1%	0	0	593	681	0	0	2,015	1,931		
Maryland	82	60	36.0%	0	0	0	0	17	17	64	43		
North Carolina	1,040	1,479	-30.0%	0	0	420	836	0	0	619	643		
South Carolina	2,096	2,093	0.1%	368	383	472	529	0	0	1,256	1,182		
Virginia	1,339	1,924	-30.0%	479	1,184	249	58	0	0	611	681		
West Virginia	0	0	--	0	0	0	0	0	0	0	0		
East South Central	3,182	3,246	-2.0%	0	0	192	207	0	0	2,990	3,039		
Alabama	1,949	1,963	-0.7%	0	0	192	207	0	0	1,757	1,757		
Kentucky	155	173	-10.0%	0	0	0	0	0	0	155	173		
Mississippi	671	713	-5.9%	0	0	0	0	0	0	671	713		
Tennessee	407	397	2.6%	0	0	0	0	0	0	407	397		
West South Central	3,239	3,109	4.2%	0	0	176	0	0	0	3,063	3,108		
Arkansas	665	722	-7.9%	0	0	0	0	0	0	665	722		
Louisiana	1,733	1,605	8.0%	0	0	0	0	0	0	1,733	1,605		
Oklahoma	102	108	-5.9%	0	0	0	0	0	0	102	108		
Texas	739	673	9.7%	0	0	176	0	0	0	563	673		
Mountain	777	763	1.9%	0	0	365	330	0	0	412	433		
Arizona	302	269	12.0%	0	0	302	269	0	0	0	0		
Colorado	0	1	-100.0%	0	0	0	1	0	0	0	0		
Idaho	429	445	-3.6%	0	0	63	61	0	0	366	384		
Montana	NM	48	NM	0	0	0	0	0	0	NM	48		
Nevada	0	0	--	0	0	0	0	0	0	0	0		
New Mexico	0	0	--	0	0	0	0	0	0	0	0		
Utah	0	0	--	0	0	0	0	0	0	0	0		
Wyoming	0	0	--	0	0	0	0	0	0	0	0		
Pacific Contiguous	5,127	6,333	-19.0%	426	448	3,107	4,110	0	0	1,594	1,776		
California	3,196	4,070	-21.0%	0	0	2,920	3,764	0	0	276	306		
Oregon	512	808	-37.0%	0	0	NM	347	0	0	325	461		
Washington	1,419	1,456	-2.5%	426	448	0	0	0	0	993	1,008		
Pacific Noncontiguous	0	0	--	0	0	0	0	0	0	0	0		
Alaska	0	0	--	0	0	0	0	0	0	0	0		
Hawaii	0	0	--	0	0	0	0	0	0	0	0		
U.S. Total	29,901	32,840	-9.0%	2,839	3,484	11,531	13,457	30	20	15,500	15,880		

Displayed values of zero may represent small values that round to zero. The Excel version of this table provides additional precision which may be accessed by selecting individual cells.

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Totals may not equal sum of components because of independent rounding. Percentage change is calculated before rounding.

Source: U.S. Energy Information Administration, Form EIA-923, Power Plant Operations Report.

Table 2.14.B. Consumption of Wood / Wood Waste Biomass for Electricity Generation by State, by Sector, Year-to-Date through November 2016 and November 2015 (Billion Btus)

Census Division and State	All Sectors			Electric Power Sector							
				Electric Utilities		Independent Power Producers		Commercial Sector		Industrial Sector	
	November 2016 YTD	November 2015 YTD	Percentage Change	November 2016 YTD	November 2015 YTD	November 2016 YTD	November 2015 YTD	November 2016 YTD	November 2015 YTD	November 2016 YTD	November 2015 YTD
New England	54,708	57,324	-4.6%	8,520	8,265	40,697	41,814	22	48	5,468	7,197
Connecticut	4,062	2,337	74.0%	0	0	4,062	2,336	0	2	0	0
Maine	22,142	26,651	-17.0%	0	0	16,668	19,429	NM	25	5,468	7,197
Massachusetts	1,741	1,836	-5.2%	0	0	1,741	1,836	0	0	0	0
New Hampshire	20,972	20,803	0.8%	4,512	4,496	16,460	16,307	0	0	0	0
Rhode Island	0	0	--	0	0	0	0	0	0	0	0
Vermont	5,791	5,696	1.7%	4,008	3,770	1,766	1,906	17	21	0	0
Middle Atlantic	11,586	11,021	5.1%	0	0	6,617	6,018	0	0	4,969	5,003
New Jersey	0	0	--	0	0	0	0	0	0	0	0
New York	7,634	7,056	8.2%	0	0	6,613	5,985	0	0	1,021	1,070
Pennsylvania	3,952	3,965	-0.3%	0	0	NM	32	0	0	3,948	3,933
East North Central	26,011	29,187	-11.0%	4,757	4,798	11,064	13,311	0	7	10,190	11,071
Illinois	0	0	-100.0%	0	0	0	0	0	0	0	0
Indiana	0	0	--	0	0	0	0	0	0	0	0
Michigan	16,818	16,622	1.2%	NM	0	10,457	10,238	0	7	6,360	6,377
Ohio	2,008	2,751	-27.0%	0	0	606	624	0	0	1,402	2,127
Wisconsin	7,185	9,814	-27.0%	4,757	4,798	0	2,449	0	0	2,428	2,567
West North Central	10,672	10,987	-2.9%	1,908	1,873	5,761	6,174	400	218	2,603	2,722
Iowa	NM	9	NM	0	0	0	0	NM	9	0	0
Kansas	0	0	--	0	0	0	0	0	0	0	0
Minnesota	10,354	10,782	-4.0%	1,908	1,873	5,761	6,174	82	13	2,603	2,722
Missouri	315	196	61.0%	0	0	0	0	315	196	0	0
Nebraska	0	0	--	0	0	0	0	0	0	0	0
North Dakota	0	0	--	0	0	0	0	0	0	0	0
South Dakota	0	0	--	0	0	0	0	0	0	0	0
South Atlantic	105,963	114,793	-7.7%	18,814	19,208	28,973	36,660	188	196	57,989	58,729
Delaware	0	0	--	0	0	0	0	0	0	0	0
District of Columbia	0	0	--	0	0	0	0	0	0	0	0
Florida	14,656	20,395	-28.0%	0	0	6,730	12,072	0	0	7,926	8,323
Georgia	27,650	28,037	-1.4%	0	0	6,623	6,535	0	0	21,027	21,501
Maryland	800	742	7.8%	0	0	0	0	188	196	612	546
North Carolina	13,651	15,580	-12.0%	0	0	7,402	8,789	0	0	6,249	6,790
South Carolina	24,223	24,027	0.8%	3,408	3,698	5,493	5,899	0	0	15,322	14,430
Virginia	24,983	26,012	-4.0%	15,406	15,509	2,724	3,364	0	0	6,853	7,139
West Virginia	0	0	--	0	0	0	0	0	0	0	0
East South Central	34,418	34,377	0.1%	0	1	2,191	2,043	0	0	32,227	32,333
Alabama	20,926	20,818	0.5%	0	0	2,191	2,043	0	0	18,735	18,775
Kentucky	1,572	1,536	2.4%	0	0	0	0	0	0	1,572	1,536
Mississippi	7,520	7,614	-1.2%	0	1	0	0	0	0	7,520	7,613
Tennessee	4,399	4,410	-0.2%	0	0	0	0	0	0	4,399	4,410
West South Central	34,975	36,098	-3.1%	337	1,820	1,625	1,132	0	0	33,013	33,145
Arkansas	6,794	7,384	-8.0%	0	0	0	0	0	0	6,794	7,384
Louisiana	18,562	18,086	2.6%	0	0	0	0	0	0	18,562	18,086
Oklahoma	1,096	1,083	1.2%	0	0	0	0	0	0	1,096	1,083
Texas	8,523	9,545	-11.0%	337	1,820	1,625	1,132	0	0	6,561	6,592
Mountain	8,272	8,255	0.2%	0	0	3,867	3,680	0	0	4,405	4,575
Arizona	3,112	2,967	4.9%	0	0	3,112	2,967	0	0	0	0
Colorado	NM	1	NM	0	0	NM	1	0	0	0	0
Idaho	4,614	4,785	-3.6%	0	0	707	712	0	0	3,907	4,073
Montana	497	502	-0.9%	0	0	0	0	0	0	497	502
Nevada	0	0	--	0	0	0	0	0	0	0	0
New Mexico	0	0	--	0	0	0	0	0	0	0	0
Utah	0	0	--	0	0	0	0	0	0	0	0
Wyoming	0	0	--	0	0	0	0	0	0	0	0
Pacific Contiguous	60,574	69,708	-13.0%	4,422	4,203	38,837	45,616	0	0	17,315	19,888
California	39,478	46,598	-15.0%	0	0	36,496	43,147	0	0	2,982	3,452
Oregon	5,528	8,134	-32.0%	0	0	2,340	2,470	0	0	3,188	5,664
Washington	15,568	14,976	4.0%	4,422	4,203	0	0	0	0	11,146	10,773
Pacific Noncontiguous	0	0	--	0	0	0	0	0	0	0	0
Alaska	0	0	--	0	0	0	0	0	0	0	0
Hawaii	0	0	--	0	0	0	0	0	0	0	0
U.S. Total	347,179	371,750	-6.6%	38,758	40,169	139,632	156,449	610	469	168,179	174,664

Displayed values of zero may represent small values that round to zero. The Excel version of this table provides additional precision which may be accessed by selecting individual cells.

Notes: See Glossary for definitions. Values for 2016 are preliminary. Values for 2015 are final. See Technical Notes for a discussion of the sample design for the Form EIA-923.

Totals may not equal sum of components because of independent rounding. Percentage change is calculated before rounding.

Source: U.S. Energy Information Administration, Form EIA-923, Power Plant Operations Report.

Table 3.1. Stocks of Coal, Petroleum Liquids, and Petroleum Coke: Electric Power Sector, 2006 - November 2016

Period	Electric Power Sector			Electric Utilities			Independent Power Producers		
	Coal (Thousand Tons)	Petroleum Liquids (Thousand Barrels)	Petroleum Coke (Thousand Tons)	Coal (Thousand Tons)	Petroleum Liquids (Thousand Barrels)	Petroleum Coke (Thousand Tons)	Coal (Thousand Tons)	Petroleum Liquids (Thousand Barrels)	Petroleum Coke (Thousand Tons)
End of Year Stocks									
2006	140,964	48,216	674	110,277	29,799	456	30,688	18,416	217
2007	151,221	44,433	554	120,504	28,032	253	30,717	16,401	301
2008	161,589	40,804	739	127,463	26,108	468	34,126	14,696	270
2009	189,467	39,210	1,394	154,815	25,811	1,194	34,652	13,399	201
2010	174,917	35,706	1,019	143,744	24,798	850	31,173	10,908	168
2011	172,387	34,847	508	142,103	25,648	404	30,284	9,198	104
2012	185,116	32,224	495	150,942	23,875	414	34,174	8,349	81
2013	147,884	31,673	390	120,792	22,494	303	27,092	9,179	86
2014	151,548	33,505	827	116,684	22,487	686	34,864	11,018	142
2015	195,548	32,884	1,340	153,226	21,443	1,163	42,322	11,441	177
Year 2014, End of Month Stocks									
January	133,705	27,553	298	108,249	20,649	216	25,456	6,904	83
February	119,904	29,158	277	97,363	20,964	202	22,541	8,195	74
March	118,260	29,197	350	96,029	21,341	282	22,231	7,855	67
April	128,925	29,568	515	103,431	21,583	451	25,494	7,985	64
May	136,921	29,376	458	108,064	21,446	374	28,856	7,930	84
June	133,479	29,738	397	103,948	21,568	343	29,531	8,170	54
July	125,870	29,120	381	97,829	20,967	300	28,041	8,152	81
August	121,369	29,346	388	93,552	21,205	289	27,817	8,141	99
Sept	124,546	29,789	389	96,266	21,338	297	28,280	8,451	92
October	136,964	30,883	510	105,094	21,741	394	31,870	9,142	117
November	142,595	32,829	633	110,221	22,103	502	32,374	10,726	131
December	151,548	33,505	827	116,684	22,487	686	34,864	11,018	142
Year 2015, End of Month Stocks									
January	154,390	32,896	892	118,239	22,177	742	36,151	10,718	150
February	149,071	28,446	850	115,271	20,328	723	33,800	8,118	127
March	154,347	29,536	818	120,635	21,165	698	33,712	8,371	120
April	167,063	29,614	912	130,078	21,218	776	36,985	8,396	136
May	172,809	30,184	999	134,499	21,504	856	38,310	8,680	143
June	166,437	30,441	1,031	130,716	21,634	883	35,720	8,807	149
July	157,938	30,119	1,064	124,301	21,365	909	33,638	8,754	156
August	155,952	30,143	1,029	123,296	21,138	891	32,656	9,005	138
Sept	162,109	31,390	1,102	128,351	21,450	973	33,757	9,941	129
October	175,588	32,462	1,151	138,712	21,540	1,026	36,876	10,922	125
November	188,595	33,487	1,290	149,168	21,946	1,159	39,427	11,542	131
December	195,548	32,884	1,340	153,226	21,443	1,163	42,322	11,441	177
Year 2016, End of Month Stocks									
January	187,570	32,397	1,320	146,460	20,980	1,089	41,110	11,417	231
February	187,571	31,637	1,323	146,225	20,670	1,064	41,346	10,967	259
March	192,248	31,486	1,240	149,115	20,603	974	43,133	10,884	266
April	194,004	31,603	1,181	151,375	20,816	901	42,629	10,787	280
May	193,412	31,836	1,071	151,240	21,021	825	42,172	10,816	246
June	183,115	31,593	905	144,848	20,871	689	38,267	10,721	216
July	169,441	31,092	858	135,112	20,555	678	34,329	10,538	180
August	160,428	34,725	780	129,112	20,304	589	31,316	14,421	190
Sept	158,169	34,668	768	128,420	20,279	566	29,749	14,390	201
October	163,474	34,605	812	133,257	20,157	606	30,217	14,448	207
November	172,139	30,847	833	139,080	20,372	606	33,059	10,475	227

Notes: See Glossary for definitions. Values for 2015 and prior years are final. Values for 2016 are preliminary.

See Technical Notes for a discussion of the sample design for the Form EIA-923 and predecessor forms. Totals may not equal sum of components because of independent rounding.

Sources: U.S. Energy Information Administration, Form EIA-906, Power Plant Report; U.S. Energy Information Administration, Form EIA-920 Combined Heat and Power Plant Report, and predecessor forms.

Beginning with 2008 data, the Form EIA-923, Power Plant Operations Report, replaced the following: 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 Federal Energy Regulatory Commission, FERC Form 423, Monthly Report of Cost and Quality of Fuels for Electric Plants.

**Table 3.2 Stocks of Coal, Petroleum Liquids, and Petroleum Coke:
Electric Power Sector, by State, November 2016 and 2015**

Census Division and State	Coal (Thousand Tons)			Petroleum Liquids (Thousand Barrels)			Petroleum Coke (Thousand Tons)		
	November 2016	November 2015	Percentage Change	November 2016	November 2015	Percentage Change	November 2016	November 2015	Percentage Change
New England	1,913	1,687	13.4%	4,505	4,989	-9.7%	0	0	--
Connecticut	W	W	W	1,590	1,681	-5.4%	0	0	--
Maine	0	0	--	W	W	W	0	0	--
Massachusetts	W	W	W	1,882	1,988	-5.3%	0	0	--
New Hampshire	W	W	W	W	W	W	0	0	--
Rhode Island	W	0	W	W	W	W	0	0	--
Vermont	0	0	--	NM	52	NM	0	0	--
Middle Atlantic	5,064	8,160	-37.9%	5,485	6,029	-9.0%	0	W	W
New Jersey	797	954	-16.4%	672	800	-16.0%	0	0	--
New York	W	517	W	3,511	3,805	-7.7%	0	0	--
Pennsylvania	W	6,690	W	1,302	1,424	-8.6%	0	W	W
East North Central	38,345	41,305	-7.2%	1,077	1,169	-7.9%	W	136	W
Illinois	7,998	9,679	-17.4%	71	87	-18.3%	0	0	--
Indiana	10,388	11,023	-5.8%	107	115	-7.3%	0	0	--
Michigan	6,137	8,075	-24.0%	314	336	-6.4%	W	W	W
Ohio	9,124	7,471	22.1%	368	380	-3.2%	W	W	W
Wisconsin	4,698	5,057	-7.1%	217	251	-13.6%	W	W	W
West North Central	32,437	30,205	7.4%	947	1,760	-46.2%	0	0	--
Iowa	8,788	6,690	31.4%	121	169	-28.6%	0	0	--
Kansas	4,783	4,523	5.8%	123	694	-82.3%	0	0	--
Minnesota	4,305	5,060	-14.9%	134	154	-12.9%	0	0	--
Missouri	9,556	9,080	5.2%	386	416	-7.2%	0	0	--
Nebraska	3,246	2,918	11.2%	96	231	-58.7%	0	0	--
North Dakota	W	W	W	37	40	-7.2%	0	0	--
South Dakota	W	W	W	51	57	-10.2%	0	0	--
South Atlantic	28,012	33,370	-16.1%	11,888	12,119	-1.9%	W	W	W
Delaware	W	W	W	418	474	-11.8%	0	0	--
District of Columbia	0	0	--	0	0	--	0	0	--
Florida	4,878	6,357	-23.3%	4,837	5,506	-12.2%	W	181	W
Georgia	4,770	6,119	-22.0%	908	851	6.7%	0	0	--
Maryland	1,253	1,897	-33.9%	882	991	-11.1%	0	0	--
North Carolina	5,500	7,143	-23.0%	1,230	1,265	-2.7%	0	0	--
South Carolina	5,271	5,525	-4.6%	711	725	-1.9%	0	0	--
Virginia	W	1,444	W	2,755	2,168	27.1%	0	0	--
West Virginia	4,902	W	W	148	139	6.3%	W	W	W
East South Central	16,531	18,732	-11.7%	1,989	1,809	10.0%	W	W	W
Alabama	3,674	4,150	-11.5%	339	264	28.4%	0	0	--
Kentucky	8,231	9,030	-8.8%	237	250	-5.2%	W	W	W
Mississippi	1,308	1,639	-20.2%	571	576	-0.9%	0	0	--
Tennessee	3,318	3,912	-15.2%	843	719	17.2%	0	0	--
West South Central	26,098	31,670	-17.6%	1,791	1,921	-6.8%	W	W	W
Arkansas	4,326	4,836	-10.5%	W	W	W	0	0	--
Louisiana	2,692	3,502	-23.1%	420	425	-1.1%	W	W	W
Oklahoma	4,892	5,023	-2.6%	W	W	W	0	0	--
Texas	14,189	18,308	-22.5%	1,075	1,192	-9.8%	0	0	--
Mountain	22,051	21,784	1.2%	387	432	-10.4%	W	W	W
Arizona	4,030	5,198	-22.5%	142	136	4.3%	0	0	--
Colorado	5,325	5,813	-8.4%	117	136	-13.5%	0	0	--
Idaho	0	0	--	W	W	W	0	0	--
Montana	W	W	W	18	19	-7.7%	W	W	W
Nevada	W	1,089	W	W	W	W	0	0	--
New Mexico	W	W	W	37	51	-28.4%	0	0	--
Utah	5,371	4,087	31.4%	33	44	-24.2%	0	0	--
Wyoming	4,417	3,407	29.6%	26	33	-21.4%	0	0	--
Pacific Contiguous	W	W	W	451	502	-10.1%	0	0	--
California	0	0	--	W	W	W	0	0	--
Oregon	W	W	W	W	W	W	0	0	--
Washington	W	W	W	212	254	-16.4%	0	0	--
Pacific Noncontiguous	W	W	W	2,327	2,758	-15.6%	0	0	--
Alaska	W	W	W	98	297	-66.9%	0	0	--
Hawaii	W	W	W	2,229	2,461	-9.4%	0	0	--
U.S. Total	172,139	188,595	-8.7%	30,847	33,487	-7.9%	833	1,290	-35.4%

Displayed values of zero may represent small values that round to zero. The Excel version of this table provides additional precision which may be accessed by selecting individual cells.

NM = Not meaningful due to large relative standard error or excessive percentage change.

Notes: See Glossary for definitions. Values for 2016 are preliminary. Values for 2015 are final. See Technical Notes for a discussion of the sample design for the Form EIA-923.

Negative generation denotes that electric power consumed for plant use exceeds gross generation.

Totals may not equal sum of components because of independent rounding. Percentage change is calculated before rounding.

Source: U.S. Energy Information Administration, Form EIA-923, Power Plant Operations Report.

**Table 3.3 Stocks of Coal, Petroleum Liquids, and Petroleum Coke:
Electric Power Sector, by Census Division, November 2016 and 2015**

Census Division	Electric Power Sector			Electric Utilities		Independent Power Producers	
	November 2016	November 2015	Percentage Change	November 2016	November 2015	November 2016	November 2015
Coal (Thousand Tons)							
New England	1,913	1,687	13.4%	W	W	W	W
Middle Atlantic	5,064	8,160	-37.9%	0	0	5,064	8,160
East North Central	38,345	41,305	-7.2%	23,998	27,419	14,347	13,886
West North Central	32,437	30,205	7.4%	32,437	W	0	W
South Atlantic	28,012	33,370	-16.1%	25,940	30,552	2,072	2,818
East South Central	16,531	18,732	-11.7%	16,531	18,732	0	0
West South Central	26,098	31,670	-17.6%	17,552	19,988	8,547	11,681
Mountain	22,051	21,784	1.2%	W	W	W	W
Pacific Contiguous	W	W	W	W	W	W	W
Pacific Noncontiguous	W	W	W	W	W	W	W
U.S. Total	172,139	188,595	-8.7%	139,080	149,168	33,059	39,427
Petroleum Liquids (Thousand Barrels)							
New England	4,505	4,989	-9.7%	673	715	3,831	4,274
Middle Atlantic	5,485	6,029	-9.0%	2,135	2,308	3,350	3,721
East North Central	1,077	1,169	-7.9%	752	858	325	311
West North Central	947	1,760	-46.2%	923	1,733	24	27
South Atlantic	11,888	12,119	-1.9%	9,591	W	2,298	W
East South Central	1,989	1,809	10.0%	W	1,737	W	72
West South Central	1,791	1,921	-6.8%	1,383	1,433	408	488
Mountain	387	432	-10.4%	354	W	33	W
Pacific Contiguous	451	502	-10.1%	W	398	W	103
Pacific Noncontiguous	2,327	2,758	-15.6%	W	W	W	W
U.S. Total	30,847	33,487	-7.9%	20,372	21,946	10,475	11,542
Petroleum Coke (Thousand Tons)							
New England	0	0	--	0	0	0	0
Middle Atlantic	0	W	W	0	0	0	W
East North Central	W	136	W	W	W	W	W
West North Central	0	0	--	0	0	0	0
South Atlantic	W	W	W	W	181	W	W
East South Central	W	W	W	W	W	0	0
West South Central	W	W	W	W	W	0	0
Mountain	W	W	W	0	0	W	W
Pacific Contiguous	0	0	--	0	0	0	0
Pacific Noncontiguous	0	0	--	0	0	0	0
U.S. Total	833	1,290	-35.4%	W	W	W	W

W = Withheld to avoid disclosure of individual company data.

Notes: See Glossary for definitions. Values for 2016 are preliminary. Values for 2015 are final. See Technical Notes for a discussion of the sample design for the Form-923.

Totals may not equal sum of components because of independent rounding. Percentage change is calculated before rounding.

Source: U.S. Energy Information Administration, Form-923, 'Power Plant Operations Report.'

Table 3.4. Stocks of Coal by Coal Rank: Electric Power Sector, 2006 - November 2016

Period	Electric Power Sector				Total
	Bituminous Coal	Subbituminous Coal	Lignite Coal		
End of Year Stocks					
2006	67,760	68,408	4,797		140,964
2007	63,964	82,692	4,565		151,221
2008	65,818	91,214	4,556		161,589
2009	91,922	92,448	5,097		189,467
2010	81,108	86,915	6,894		174,917
2011	82,056	85,151	5,179		172,387
2012	86,437	93,833	4,846		185,116
2013	73,113	69,720	5,051		147,884
2014	72,771	72,552	6,225		151,548
2015	82,004	108,614	4,931		195,548
Year 2014, End of Month Stocks					
January	63,618	64,709	5,378		133,705
February	56,041	58,418	5,445		119,904
March	55,150	57,657	5,453		118,260
April	60,602	62,266	6,056		128,925
May	63,782	66,827	6,311		136,921
June	62,679	64,378	6,423		133,479
July	60,134	59,514	6,222		125,870
August	60,128	54,787	6,453		121,369
Sept	63,031	55,432	6,082		124,546
October	69,246	61,368	6,350		136,964
November	70,666	66,105	5,824		142,595
December	72,771	72,552	6,225		151,548
Year 2015, End of Month Stocks					
January	70,423	78,424	5,542		154,390
February	64,396	79,411	5,264		149,071
March	65,421	84,013	4,912		154,347
April	70,985	90,919	5,159		167,063
May	74,195	93,538	5,077		172,809
June	72,921	88,835	4,681		166,437
July	68,197	84,988	4,753		157,938
August	67,777	83,691	4,484		155,952
Sept	70,365	87,185	4,559		162,109
October	76,243	94,720	4,626		175,588
November	80,254	103,602	4,738		188,595
December	82,004	108,614	4,931		195,548
Year 2016, End of Month Stocks					
January	77,181	105,749	4,640		187,570
February	76,699	106,337	4,536		187,571
March	80,086	107,365	4,797		192,248
April	81,877	107,059	5,068		194,004
May	82,800	104,651	5,960		193,412
June	78,967	99,102	5,046		183,115
July	72,139	92,579	4,724		169,441
August	68,448	87,594	4,386		160,428
Sept	67,000	87,007	4,163		158,169
October	68,358	91,142	3,974		163,474
November	71,758	96,098	4,283		172,139

Notes: See Glossary for definitions.

Values for 2015 and prior years are final. Values for 2016 are preliminary. See Technical Notes for a discussion of the sample design for the Form EIA-923 and predecessor forms. Totals may not equal sum of components because of independent rounding.

Sources: U.S. Energy Information Administration, Form EIA-906, Power Plant Report; U.S. Energy Information Administration, Form EIA-920 Combined Heat and Power Plant Report, and predecessor forms. Beginning with 2008 data, the Form EIA-923, Power Plant Operations Report, replaced the following:

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 Federal Energy Regulatory Commission, FERC Form 423, Monthly Report of Cost and Quality of Fuels for Electric Plants.

Table 4.1. Receipts, Average Cost, and Quality of Fossil Fuels: Total (All Sectors), 2006 - November 2016

Period	Coal						Petroleum Liquids					
	Receipts		Average Cost		Average Sulfur Percent by Weight	Percentage of Consumption	Receipts		Average Cost		Average Sulfur Percent by Weight	Percentage of Consumption
Period	(Billion Btu)	(Thousand Tons)	(Dollars per MMBtu)	(Dollars per Ton)			(Billion Btu)	(Thousand Barrels)	(Dollars per MMBtu)	(Dollars per Barrel)		
Annual Totals												
2006	21,735,101	1,079,943	1.69	34.09	0.97	102.5	406,869	65,002	8.68	54.35	0.73	74.0
2007	21,152,358	1,054,664	1.77	35.48	0.96	98.6	375,260	60,068	9.59	59.93	0.71	62.6
2008	21,280,258	1,069,709	2.07	41.14	0.97	100.5	375,684	61,139	15.52	95.38	0.61	99.6
2009	19,437,966	981,477	2.21	43.74	1.01	102.8	330,043	54,181	10.25	62.47	0.54	104.8
2010	19,289,661	979,918	2.27	44.64	1.16	97.9	275,058	45,472	14.02	84.80	0.51	101.1
2011	18,675,843	956,538	2.39	46.65	1.19	100.0	216,752	36,158	19.94	119.54	0.60	116.1
2012	16,265,578	841,183	2.38	46.09	1.25	99.5	116,937	19,464	21.85	131.28	0.51	75.7
2013	15,906,809	823,222	2.34	45.33	1.29	93.7	123,964	20,413	20.56	124.90	0.46	76.5
2014	16,594,722	854,560	2.37	45.96	1.32	98.0	172,421	28,514	19.87	120.26	0.46	82.3
2015	15,086,208	782,929	2.22	42.86	1.29	103.5	147,647	24,320	11.49	69.79	0.48	75.8
Year 2014												
January	1,319,894	69,313	2.29	43.69	1.25	81.1	27,209	4,554	21.85	130.73	0.43	42.0
February	1,217,895	62,838	2.32	45.04	1.34	80.8	26,164	4,306	21.60	131.42	0.45	124.7
March	1,400,614	71,444	2.36	46.35	1.35	96.8	15,224	2,519	21.94	132.68	0.45	66.7
April	1,339,967	68,102	2.39	46.96	1.33	114.5	8,983	1,487	21.71	131.18	0.42	84.5
May	1,383,924	70,623	2.40	46.93	1.37	107.9	8,655	1,437	21.18	127.58	0.46	77.4
June	1,366,947	70,055	2.38	46.50	1.35	92.5	9,334	1,546	21.41	129.29	0.45	90.4
July	1,431,182	73,973	2.38	45.96	1.27	89.2	8,455	1,399	21.29	128.62	0.50	74.0
August	1,488,018	76,671	2.37	45.95	1.32	92.9	9,182	1,509	20.62	125.46	0.52	77.3
Sept	1,403,234	72,158	2.37	46.16	1.33	102.4	10,222	1,686	19.67	119.51	0.51	92.8
October	1,416,761	72,959	2.31	44.84	1.29	116.8	12,851	2,134	18.49	111.46	0.48	121.4
November	1,372,572	71,000	2.30	44.54	1.29	107.4	17,787	2,959	16.53	99.41	0.43	155.7
December	1,453,713	75,424	2.51	48.34	1.29	108.7	18,356	2,977	13.87	85.54	0.49	155.0
Year 2015												
January	1,417,725	73,633	2.29	44.01	1.28	100.8	13,274	2,193	12.76	77.28	0.57	60.6
February	1,175,859	61,197	2.26	43.43	1.29	89.2	20,116	3,305	12.61	76.83	0.51	36.0
March	1,237,697	63,691	2.26	43.97	1.28	106.4	14,354	2,373	12.54	76.00	0.54	116.0
April	1,183,833	61,120	2.23	43.29	1.32	122.6	9,153	1,520	13.18	79.55	0.43	86.3
May	1,228,784	63,030	2.26	44.13	1.35	107.8	11,636	1,923	12.71	77.02	0.45	99.6
June	1,201,874	62,061	2.25	43.65	1.36	88.3	9,858	1,630	13.57	82.13	0.49	83.0
July	1,302,808	68,352	2.21	42.10	1.25	87.6	8,538	1,410	12.57	76.20	0.44	63.4
August	1,395,614	72,257	2.23	43.11	1.30	96.1	9,362	1,552	12.08	72.92	0.47	77.4
Sept	1,361,468	70,737	2.22	42.67	1.30	107.0	14,105	2,316	9.67	58.83	0.43	124.8
October	1,285,699	67,027	2.15	41.16	1.26	122.1	13,066	2,137	9.10	55.68	0.44	121.0
November	1,170,593	61,257	2.15	41.17	1.25	121.9	14,148	2,306	8.96	55.05	0.54	119.9
December	1,124,253	58,569	2.16	41.43	1.28	113.5	10,037	1,657	8.83	53.52	0.42	92.5
Year 2016												
January	1,017,163	53,248	2.12	40.53	1.32	83.8	8,940	1,494	7.92	47.44	0.46	58.1
February	965,792	49,873	2.11	40.90	1.40	96.0	7,927	1,307	6.98	42.32	0.46	56.0
March	884,181	44,893	2.18	42.88	1.46	108.9	6,862	1,132	6.90	41.82	0.44	73.1
April	791,605	40,051	2.16	42.71	1.46	100.1	8,518	1,402	8.35	50.74	0.41	93.6
May	853,047	43,439	2.17	42.52	1.45	94.2	9,122	1,519	9.79	58.87	0.44	85.9
June	1,008,277	52,327	2.10	40.47	1.35	81.1	7,503	1,245	10.38	62.57	0.49	70.2
July	1,138,678	59,400	2.11	40.53	1.28	78.7	8,993	1,460	11.82	72.81	0.51	59.7
August	1,235,488	63,867	2.11	40.85	1.32	85.1	9,012	1,475	9.43	57.62	0.51	60.8
Sept	1,140,035	59,344	2.12	40.79	1.30	93.5	8,092	1,332	9.40	57.12	0.50	77.6
October	1,125,624	58,752	2.07	39.76	1.28	105.6	8,262	1,370	9.98	60.24	0.53	76.2
November	1,082,182	56,396	2.09	40.03	1.29	114.7	9,430	1,551	10.07	61.25	0.49	88.9
Year to Date												
2014	15,141,009	779,135	2.35	45.73	1.32	97.1	154,066	25,537	20.60	124.39	0.46	78.1
2015	13,961,955	724,360	2.23	42.97	1.29	102.8	137					

Table 4.1. Receipts, Average Cost, and Quality of Fossil Fuels: Total (All Sectors), 2006 - November 2016 (continued)

	Petroleum Coke						Natural Gas					All Fossil Fuels
	Receipts		Average Cost		Average Sulfur Percent by Weight	Percentage of Consumption	Receipts		Average Cost		Average Cost	
Period	(Billion Btu)	(Thousand Tons)	(Dollars per MMBtu)	(Dollars per Ton)			(Billion Btu)	(Thousand Mcf)	(Dollars per MMBtu)	(Dollars per Mcf)		
Annual Totals												
2006	203,270	7,193	1.33	37.46	5.15	83.4	6,855,680	6,675,246	6.94	7.13	90.2	3.02
2007	161,091	5,656	1.51	43.02	5.07	77.5	7,396,233	7,200,316	7.11	7.30	90.4	3.23
2008	199,724	7,040	2.11	59.72	4.98	111.5	8,089,467	7,879,046	9.01	9.26	102.5	4.12
2009	197,921	6,954	1.61	45.89	4.63	119.3	8,319,329	8,118,550	4.74	4.86	102.3	3.04
2010	169,508	5,963	2.28	64.85	4.79	98.5	8,867,396	8,673,070	5.09	5.20	102.0	3.26
2011	171,100	5,980	3.03	86.78	5.01	98.2	9,250,652	9,056,164	4.72	4.83	103.8	3.29
2012	119,667	4,180	2.24	64.14	5.55	83.3	9,746,691	9,531,389	3.42	3.50	91.9	2.83
2013	132,474	4,660	2.18	61.95	5.41	73.5	8,721,114	8,503,424	4.33	4.44	89.7	3.09
2014	147,310	5,195	1.98	56.23	5.56	91.2	8,679,286	8,431,423	5.00	5.14	89.6	3.31
2015	138,668	4,897	1.84	52.11	5.25	94.4	10,173,502	9,842,581	3.23	3.34	89.9	2.65
Year 2014												
January	10,073	357	1.82	51.28	5.26	66.1	708,775	691,024	7.02	7.20	88.4	4.07
February	10,261	363	W	W	5.47	79.9	588,885	573,618	7.40	7.59	88.4	W
March	13,196	468	2.02	57.09	5.81	88.8	607,103	591,486	6.00	6.16	89.1	3.52
April	12,986	459	2.13	60.37	5.94	109.7	594,114	578,726	5.07	5.20	89.5	3.23
May	12,640	448	2.19	61.62	5.55	89.0	690,306	671,336	4.93	5.07	89.7	3.25
June	11,659	409	2.07	59.14	5.77	77.7	760,055	738,843	4.84	4.98	89.9	3.27
July	11,616	407	1.90	54.16	5.69	81.6	887,618	861,696	4.43	4.57	90.4	3.17
August	12,764	448	1.97	56.12	5.52	90.8	945,250	916,932	4.12	4.24	90.8	3.06
Sept	11,787	414	1.92	54.55	5.43	85.5	813,131	788,357	4.20	4.33	90.0	3.06
October	11,011	390	1.79	50.65	5.31	123.3	745,276	722,544	4.10	4.23	89.5	2.96
November	12,217	431	1.86	52.74	5.45	109.7	648,562	628,693	4.48	4.62	89.3	3.06
December	17,100	600	2.00	57.09	5.41	111.5	690,212	668,170	4.36	4.50	89.3	3.14
Year 2015												
January	14,001	495	2.00	56.58	5.22	96.9	751,373	727,845	4.11	4.24	88.3	2.92
February	9,854	345	1.76	50.27	5.29	67.4	687,566	665,945	4.70	4.85	88.9	3.19
March	9,700	346	2.00	56.19	5.16	91.9	755,061	731,417	3.55	3.66	89.5	2.78
April	11,283	401	1.96	55.27	5.00	98.8	717,016	693,722	3.10	3.21	90.7	2.58
May	12,122	428	2.02	57.16	5.23	98.3	787,887	762,232	3.14	3.25	90.9	2.64
June	9,569	337	1.87	53.03	5.55	84.8	934,171	902,955	3.12	3.23	90.5	2.66
July	13,055	461	1.90	53.83	5.07	94.1	1,093,897	1,057,630	3.11	3.22	90.7	2.63
August	11,554	405	1.82	52.03	5.01	85.3	1,073,001	1,038,464	3.11	3.22	90.4	2.62
Sept	13,295	468	1.74	49.40	5.12	98.6	938,261	907,211	3.06	3.17	90.0	2.57
October	11,080	390	1.83	52.05	5.08	101.6	833,330	804,958	2.92	3.02	89.1	2.47
November	12,117	429	1.59	44.93	5.59	117.3	783,337	758,502	2.65	2.74	89.8	2.38
December	11,037	393	1.57	44.13	5.73	108.4	818,600	791,698	2.59	2.68	89.1	2.36
Year 2016												
January	9,639	341	1.38	38.93	5.68	81.2	818,708	791,024	3.01	3.12	89.0	2.52
February	11,272	408	1.30	35.80	5.53	98.1	731,668	707,054	2.70	2.79	88.9	2.37
March	10,312	363	1.41	40.14	5.33	76.5	794,734	769,140	2.23	2.31	89.8	2.22
April	10,307	369	1.35	37.75	5.56	80.0	773,392	748,603	2.42	2.50	89.8	2.31
May	8,347	299	W	W	5.34	66.8	856,126	829,445	2.40	2.47	90.2	W
June	6,894	240	1.41	40.48	4.67	52.1	1,019,031	987,362	2.67	2.76	91.0	2.40
July	10,031	355	1.47	41.45	5.14	72.8	1,185,292	1,147,427	2.97	3.07	90.9	2.56
August	11,032	398	1.75	48.48	5.42	78.7	1,195,594	1,154,173	2.96	3.06	90.4	2.53
Sept	10,740	381	2.04	57.51	5.17	85.0	967,740	934,760	3.08	3.19	90.8	2.56
October	8,843	317	1.98	55.43	5.69	88.3	793,575	767,888	3.13	3.24	90.2	2.51
November	9,364	333	2.26	63.60	5.69	87.4	721,028	697,714	3.02	3.12	89.7	2.47
Year to Date												
2014	130,210	4,595	1.98	56.11	5.58	89.1	7,989,074	7,763,254	5.05	5.20	89.6	3.32
2015	127,631	4,504	1.86	52.80	5.21	93.3	9,354,902	9,050,883	3.29	3.40	89.9	2.67
2016	106,785	3,803	1.61	45.12	5.40	78.2	9,856,886	9,534,590	2.79	2.89	90.2	2.44
Rolling 12 Months Ending in November												

Table 4.2. Receipts, Average Cost, and Quality of Fossil Fuels: Electric Utilities, 2006 - November 2016

Period	Coal						Petroleum Liquids					
	Receipts		Average Cost		Average Sulfur Percent by Weight	Percentage of Consumption	Receipts		Average Cost		Average Sulfur Percent by Weight	Percentage of Consumption
Period	(Billion Btu)	(Thousand Tons)	(Dollars per MMBtu)	(Dollars per Ton)			(Billion Btu)	(Thousand Barrels)	(Dollars per MMBtu)	(Dollars per Barrel)		
Annual Totals												
2006	16,197,852	797,361	1.69	34.26	0.92	105.8	269,033	42,415	8.33	52.80	0.82	79.2
2007	15,561,395	767,377	1.78	36.06	0.92	100.3	216,349	34,026	9.24	58.73	0.77	59.8
2008	15,347,396	764,399	2.06	41.32	0.93	100.5	240,937	38,891	15.83	98.09	0.60	99.7
2009	14,402,019	719,253	2.22	44.47	0.99	103.4	202,598	32,959	10.44	64.18	0.51	103.5
2010	14,226,995	713,094	2.27	45.33	1.14	98.8	189,790	31,099	13.94	85.07	0.48	101.0
2011	13,871,559	699,353	2.40	47.67	1.16	101.5	144,255	23,859	20.30	122.72	0.53	114.5
2012	11,939,543	609,445	2.43	47.51	1.18	99.0	86,030	14,252	22.11	133.44	0.41	81.3
2013	11,595,328	592,772	2.38	46.51	1.23	92.9	78,101	12,814	21.09	128.57	0.43	76.2
2014	12,064,810	614,728	2.39	46.95	1.21	98.3	98,357	16,161	19.90	121.14	0.44	82.0
2015	11,088,631	571,707	2.25	43.71	1.17	105.8	90,041	14,747	11.32	69.13	0.46	79.2
Year 2014												
January	939,850	48,843	2.30	44.18	1.13	79.8	12,001	2,011	21.72	129.64	0.32	44.6
February	870,977	44,490	2.31	45.27	1.23	80.6	12,180	2,005	21.72	131.94	0.49	106.4
March	991,708	50,353	2.37	46.61	1.23	97.5	8,992	1,474	21.53	131.41	0.39	76.6
April	948,645	47,838	2.41	47.72	1.23	116.0	6,691	1,099	21.74	132.35	0.36	85.6
May	1,003,354	50,694	2.42	47.83	1.27	107.4	5,313	885	21.88	131.42	0.34	68.2
June	998,236	50,508	2.40	47.48	1.25	90.8	6,271	1,037	21.65	130.91	0.34	87.9
July	1,059,989	53,961	2.41	47.22	1.19	89.5	5,979	985	21.28	129.22	0.47	75.2
August	1,096,270	55,759	2.40	47.18	1.22	92.5	6,800	1,108	20.61	126.44	0.50	84.5
Sept	1,037,230	52,716	2.41	47.40	1.21	103.8	6,921	1,137	19.90	121.13	0.48	87.7
October	1,047,018	53,419	2.34	45.74	1.20	118.6	6,939	1,148	19.33	117.03	0.48	94.2
November	1,010,559	51,705	2.33	45.51	1.20	110.9	7,512	1,237	17.71	107.56	0.50	100.6
December	1,060,973	54,441	2.60	50.75	1.20	108.8	12,760	2,035	13.22	82.91	0.46	160.4
Year 2015												
January	1,022,724	52,840	2.31	44.72	1.17	103.9	8,679	1,427	11.79	71.76	0.57	69.0
February	853,788	44,181	2.26	43.70	1.17	92.2	8,590	1,404	11.71	71.63	0.47	39.1
March	915,194	47,024	2.26	44.08	1.17	111.2	10,166	1,669	12.11	73.85	0.52	134.1
April	872,141	44,828	2.26	43.98	1.20	124.1	6,581	1,083	13.26	80.57	0.39	87.9
May	918,188	46,827	2.29	44.97	1.21	109.2	7,705	1,259	12.50	76.54	0.46	100.6
June	897,838	45,934	2.28	44.49	1.23	90.6	7,498	1,234	13.66	82.97	0.46	89.4
July	959,033	49,930	2.24	42.94	1.11	88.7	6,138	1,004	12.47	76.21	0.40	67.8
August	1,026,500	52,727	2.26	44.04	1.17	97.5	5,716	944	11.75	71.16	0.42	67.5
Sept	993,558	51,091	2.26	44.03	1.16	109.2	7,097	1,157	9.75	59.76	0.38	94.1
October	941,342	48,715	2.19	42.30	1.13	124.6	5,909	970	9.43	57.50	0.44	79.8
November	862,786	44,830	2.20	42.41	1.14	126.2	8,558	1,386	8.80	54.38	0.57	102.8
December	825,539	42,781	2.21	42.64	1.16	112.7	7,402	1,209	8.52	52.14	0.37	102.7
Year 2016												
January	746,616	38,805	2.17	41.79	1.18	85.0	6,186	1,021	7.88	47.73	0.44	60.6
February	717,946	36,885	2.16	42.04	1.23	97.7	5,810	954	6.92	42.15	0.41	67.6
March	681,849	34,396	2.20	43.57	1.34	110.5	5,220	851	6.69	41.06	0.40	81.4
April	607,488	30,664	2.19	43.47	1.30	106.7	6,891	1,125	8.35	51.19	0.37	110.6
May	651,230	33,180	2.17	42.66	1.26	97.8	6,738	1,114	9.12	55.15	0.40	94.9
June	771,022	39,635	2.15	41.85	1.24	85.3	5,494	905	10.51	63.77	0.44	72.7
July	843,774	43,673	2.18	42.06	1.15	80.4	7,114	1,142	11.54	71.92	0.52	68.0
August	919,918	47,289	2.17	42.27	1.19	87.5	6,713	1,086	9.14	56.53	0.51	66.7
Sept	846,033	43,523	2.18	42.41	1.18	96.8	5,507	895	9.03	55.59	0.49	80.5
October	837,987	43,418	2.13	41.05	1.17	109.7	5,174	845	9.75	59.67	0.52	74.1
November	801,020	41,349	2.13	41.33	1.21	116.9	6,595	1,074	9.79	60.10	0.48	89.6
Year to Date												
2014	11,003,837	560,287	2.37	46.58	1.21	97.4	85,597	14,126	20.90	126.68	0.43	76.6
2015	10,263,092	528,926	2.26	43.80	1.17	105.3	82,638	13,537	11.57	70.65	0.47	77.6
2016	8,424,882	43										

Table 4.2. Receipts, Average Cost, and Quality of Fossil Fuels: Electric Utilities, 2006 - November 2016 (continued)

	Petroleum Coke						Natural Gas						All Fossil Fuels
	Receipts		Average Cost		Average Sulfur Percent by Weight	Percentage of Consumption	Receipts		Average Cost		(Dollars per Mcf)	Percentage of Consumption	(Dollars per MMBtu)
Period	(Billion Btu)	(Thousand Tons)	(Dollars per MMBtu)	(Dollars per Ton)			(Billion Btu)	(Thousand Mcf)	(Dollars per MMBtu)	(Dollars per Mcf)			
Annual Totals													
2006	99,471	3,516	1.49	42.21	5.11	97.2	2,222,289	2,163,113	7.36	7.56	87.3	2.45	
2007	84,812	2,964	1.73	49.57	5.09	105.6	2,378,104	2,315,637	7.47	7.67	84.6	2.61	
2008	80,987	2,843	2.13	60.51	5.36	123.8	2,856,354	2,784,642	9.15	9.39	102.0	3.33	
2009	109,126	3,833	1.68	47.84	5.02	138.8	3,033,133	2,962,640	5.50	5.63	101.8	2.87	
2010	103,152	3,628	2.38	67.65	5.03	109.1	3,395,962	3,327,919	5.43	5.54	101.1	2.99	
2011	99,208	3,445	3.08	88.73	5.17	99.9	3,571,348	3,507,613	5.00	5.09	101.8	3.08	
2012	72,782	2,521	2.30	66.40	5.46	119.8	4,083,579	4,003,457	3.74	3.81	97.6	2.86	
2013	99,088	3,463	2.11	60.30	5.34	101.6	3,939,408	3,851,241	4.49	4.59	97.0	2.99	
2014	123,793	4,349	1.89	53.77	5.56	126.3	3,876,549	3,772,596	5.17	5.31	96.7	3.16	
2015	115,929	4,069	1.77	50.44	5.23	130.1	4,717,748	4,565,040	3.52	3.64	96.0	2.67	
Year 2014													
January	8,753	309	1.79	50.66	5.22	88.7	322,118	314,783	6.23	6.37	96.8	3.45	
February	8,883	312	2.01	57.15	5.47	113.1	261,721	255,665	7.00	7.16	96.1	3.56	
March	11,235	396	1.94	54.97	5.85	119.1	269,374	263,288	5.93	6.06	96.8	3.24	
April	11,184	394	2.07	58.69	5.98	186.0	270,455	264,009	5.34	5.47	97.6	3.14	
May	10,813	383	2.13	60.11	5.57	121.8	324,319	316,054	5.26	5.40	97.7	3.18	
June	9,321	325	1.97	56.35	5.85	95.9	346,749	337,837	5.17	5.31	96.9	3.19	
July	9,697	339	1.79	51.25	5.70	113.6	390,076	379,146	4.84	4.98	96.4	3.12	
August	10,451	365	1.85	52.89	5.51	122.5	424,307	412,297	4.47	4.60	96.6	3.05	
Sept	9,844	345	1.81	51.54	5.40	122.6	353,112	342,647	4.63	4.77	96.2	3.05	
October	9,240	326	1.65	46.75	5.25	182.8	323,101	313,490	4.55	4.69	96.8	2.93	
November	10,079	354	1.70	48.51	5.43	154.6	288,185	279,556	4.75	4.90	96.6	2.94	
December	14,294	499	1.90	54.38	5.40	149.0	303,034	293,825	4.61	4.76	96.6	3.13	
Year 2015													
January	11,509	404	1.94	55.36	5.21	129.1	345,262	334,921	4.24	4.37	96.3	2.84	
February	8,617	301	1.72	49.17	5.31	90.5	325,811	315,866	4.57	4.72	95.1	2.95	
March	7,949	283	1.95	54.67	5.16	144.7	343,696	333,075	3.78	3.90	95.6	2.74	
April	8,845	313	1.95	55.11	4.92	146.8	331,639	321,268	3.48	3.60	97.3	2.65	
May	10,125	357	1.98	56.26	5.21	136.5	364,935	353,283	3.50	3.61	97.6	2.69	
June	7,485	262	1.73	49.60	5.62	111.4	444,769	429,988	3.47	3.59	96.1	2.72	
July	11,256	395	1.86	52.91	5.04	118.3	509,115	491,495	3.46	3.59	96.2	2.69	
August	9,787	342	1.76	50.54	4.92	109.8	492,323	476,327	3.46	3.57	95.7	2.67	
Sept	12,216	429	1.72	49.08	5.09	145.7	428,044	413,887	3.40	3.52	95.5	2.63	
October	9,567	334	1.77	50.64	5.05	147.2	380,675	367,001	3.25	3.37	96.2	2.52	
November	10,082	354	1.46	41.65	5.64	196.4	365,361	354,358	2.97	3.07	96.5	2.47	
December	8,492	297	1.35	38.62	5.76	128.1	386,119	373,572	2.93	3.03	94.8	2.47	
Year 2016													
January	7,935	278	1.15	32.96	5.67	91.8	394,006	381,192	3.27	3.38	97.4	2.57	
February	9,837	356	1.13	31.18	5.53	131.0	355,300	343,232	2.96	3.07	97.0	2.44	
March	8,402	294	1.21	34.47	5.28	103.8	382,382	370,058	2.53	2.61	97.2	2.33	
April	8,436	300	1.14	31.95	5.58	92.1	367,443	355,843	2.72	2.80	97.4	2.42	
May	7,842	281	1.22	34.16	5.35	94.9	411,449	398,370	2.68	2.77	97.0	2.40	
June	6,325	220	1.33	38.34	4.59	71.4	500,006	484,203	2.88	2.97	96.4	2.47	
July	9,587	340	1.43	40.50	5.10	104.6	567,863	549,774	3.20	3.31	95.2	2.63	
August	9,306	335	1.62	45.01	5.45	99.4	560,293	540,714	3.23	3.35	94.2	2.59	
Sept	9,059	320	1.96	55.58	5.12	102.8	456,568	440,900	3.43	3.55	96.9	2.64	
October	7,088	253	1.87	52.47	5.71	146.9	368,564	356,539	3.54	3.66	96.6	2.58	
November	7,871	279	2.22	62.85	5.74	116.3	338,187	326,505	3.37	3.49	98.0	2.54	
Year to Date													
2014	109,499	3,849	1.89	53.69	5.58	123.8	3,573,515	3,478,771	5.22	5.36	96.8	3.16	
2015	107,437	3,772	1.80	51.37	5.19	130.2	4,331,629	4,191,468	3.57	3.69	96.2	2.69	
2016	91,688	3,254	1.48</td										

Table 4.3. Receipts, Average Cost, and Quality of Fossil Fuels: Independent Power Producers, 2006 - November 2016

Period	Coal						Petroleum Liquids					
	Receipts		Average Cost		Average Sulfur Percent by Weight	Percentage of Consumption	Receipts		Average Cost		Average Sulfur Percent by Weight	Percentage of Consumption
Period	(Billion Btu)	(Thousand Tons)	(Dollars per MMBtu)	(Dollars per Ton)			(Billion Btu)	(Thousand Barrels)	(Dollars per MMBtu)	(Dollars per Barrel)		
Annual Totals												
2006	5,204,402	266,856	1.69	33.04	1.09	97.7	117,524	19,236	9.65	58.98	0.45	104.9
2007	5,275,454	273,216	1.71	33.11	1.06	97.5	125,025	20,486	10.49	64.01	0.45	85.0
2008	5,395,142	281,258	2.03	38.98	1.04	100.4	82,124	13,657	16.30	98.03	0.41	94.4
2009	4,563,080	240,687	2.11	39.94	1.06	101.1	68,030	11,408	10.02	59.76	0.37	102.0
2010	4,555,898	243,585	2.20	41.15	1.21	96.0	49,598	8,420	14.80	87.19	0.35	89.9
2011	4,292,284	233,295	2.28	41.95	1.25	95.9	41,599	7,096	20.30	119.01	0.50	106.9
2012	4,036,436	218,341	2.21	40.92	1.42	104.9	23,922	4,073	22.34	131.28	0.44	79.8
2013	4,032,431	217,572	2.20	40.95	1.48	99.1	43,432	7,205	19.71	118.88	0.45	110.1
2014	4,243,949	226,600	2.25	42.20	1.61	100.1	71,774	11,980	19.90	119.36	0.45	101.0
2015	3,731,508	198,982	2.10	39.39	1.66	100.5	55,248	9,189	11.69	70.36	0.46	86.5
Year 2014												
January	356,260	19,360	2.25	41.46	1.56	86.8	14,823	2,481	22.05	132.09	0.46	43.7
February	324,520	17,309	2.31	43.39	1.62	83.0	13,652	2,247	21.53	131.09	0.39	189.3
March	383,238	19,906	2.32	44.67	1.66	97.8	6,096	1,023	22.59	134.69	0.52	66.2
April	368,214	19,193	2.29	44.00	1.60	114.9	2,150	365	21.88	129.00	0.48	127.7
May	358,005	18,880	2.30	43.62	1.65	113.3	3,198	529	20.19	121.99	0.52	145.8
June	346,608	18,528	2.29	42.89	1.64	100.1	2,867	477	21.11	126.96	0.51	141.6
July	346,695	18,879	2.24	41.19	1.53	90.0	2,327	391	21.59	128.64	0.50	96.7
August	366,331	19,740	2.22	41.23	1.63	96.0	2,265	382	W	W	0.49	79.5
Sept	342,392	18,355	2.21	41.35	1.70	101.3	3,161	526	19.20	115.97	0.50	156.6
October	345,463	18,416	2.18	40.98	1.57	115.9	5,762	961	17.58	105.43	0.44	279.8
November	338,083	18,186	2.19	40.72	1.58	101.8	10,107	1,695	15.62	93.26	0.38	374.5
December	368,141	19,847	2.20	40.90	1.54	112.9	5,366	904	15.41	91.46	0.53	201.5
Year 2015												
January	370,545	19,679	2.19	41.18	1.57	96.2	4,385	732	15.01	89.69	0.49	59.4
February	302,474	16,111	2.22	41.77	1.63	84.3	11,250	1,857	13.25	80.43	0.51	37.0
March	298,086	15,549	2.21	42.43	1.63	97.3	3,976	670	13.58	80.81	0.49	119.6
April	290,324	15,310	2.11	40.15	1.67	124.1	2,315	394	12.90	76.13	0.46	130.6
May	289,053	15,209	2.13	40.54	1.77	107.3	3,836	648	13.09	77.69	0.41	141.4
June	282,635	15,143	2.14	40.04	1.77	83.3	2,120	356	13.32	79.32	0.48	95.0
July	319,704	17,307	2.09	38.62	1.66	85.8	2,277	386	12.82	75.72	0.47	69.7
August	345,979	18,463	2.11	39.54	1.69	94.3	3,485	581	12.58	75.51	0.48	134.5
Sept	345,305	18,605	2.05	38.03	1.69	103.9	6,857	1,134	9.47	57.12	0.47	242.0
October	323,263	17,340	1.99	37.04	1.62	120.0	6,936	1,131	8.70	53.42	0.41	304.8
November	286,023	15,432	1.97	36.47	1.57	115.6	5,410	891	9.13	55.56	0.45	217.6
December	278,119	14,836	1.96	36.85	1.64	121.7	2,401	409	9.61	56.22	0.45	92.1
Year 2016												
January	256,112	13,800	1.94	35.92	1.72	84.8	2,612	450	7.85	45.69	0.42	67.3
February	235,185	12,416	1.93	36.54	1.93	97.4	1,842	308	6.92	41.44	0.47	43.3
March	187,520	9,832	2.05	39.03	1.91	113.8	1,471	254	7.48	43.40	0.47	68.1
April	171,642	8,833	2.00	38.80	2.01	86.6	1,449	248	W	0.50	72.8	
May	189,415	9,696	2.10	40.99	2.12	87.9	2,302	391	11.84	69.80	0.48	96.4
June	223,442	12,073	1.88	34.83	1.74	71.9	1,819	308	10.07	59.42	0.47	85.8
July	281,765	15,130	1.90	35.31	1.68	76.2	1,819	309	12.97	76.45	0.45	56.4
August	301,966	15,952	1.90	35.92	1.73	80.8	2,242	380	10.26	60.55	0.48	64.2
Sept	283,296	15,336	1.92	35.53	1.66	88.0	2,465	418	10.16	59.95	0.49	91.2
October	274,749	14,743	1.89	35.14	1.63	98.2	2,860	487	10.39	61.10	0.49	110.6
November	270,974	14,586	1.92	35.71	1.54	114.5	2,625	441	10.76	64.02	0.47	115.1
Year to Date												
2014	3,875,808	206,753	2.26	42.33	1.61	99.0	66,408	11,076	20.27	121.73	0.45	97.1
2015	3,453,390	184,146	2.11	39.60	1.66	99.2	52,848	8,780	11.78	70.98	0.46	86.2
2016	2,676,066	142,397	1.94	36.41	1.76	88.7	23,506	3,994	9.85	58.01	0.4	

Table 4.3. Receipts, Average Cost, and Quality of Fossil Fuels: Independent Power Producers, 2006 - November 2016 (continued)

	Petroleum Coke						Natural Gas						All Fossil Fuels
	Receipts		Average Cost				Receipts		Average Cost				Average Cost
Period	(Billion Btu)	(Thousand Tons)	(Dollars per MMBtu)	(Dollars per Ton)	Average Sulfur Percent by Weight	Percentage of Consumption	(Billion Btu)	(Thousand Mcf)	(Dollars per MMBtu)	(Dollars per Mcf)	Percentage of Consumption	(Dollars per MMBtu)	
Annual Totals													
2006	85,924	3,031	1.07	30.34	5.13	87.1	3,742,865	3,647,102	6.66	6.84	97.4	3.82	
2007	56,580	1,994	1.02	28.95	4.88	69.3	4,097,825	3,990,546	6.92	7.11	97.2	4.06	
2008	79,122	2,788	1.47	41.85	4.63	98.8	4,061,830	3,956,155	8.93	9.17	100.5	5.07	
2009	49,619	1,732	1.31	37.63	3.87	93.6	4,087,573	3,987,721	4.30	4.41	100.7	3.18	
2010	30,079	1,050	1.74	49.80	3.84	72.3	4,212,611	4,119,103	4.94	5.05	100.6	3.57	
2011	33,643	1,175	2.54	72.85	4.55	84.6	4,252,040	4,158,617	4.62	4.72	100.8	3.52	
2012	23,024	801	0.82	23.98	5.49	92.1	4,810,553	4,696,637	3.17	3.25	93.8	2.74	
2013	16,150	575	W	W	5.39	65.6	4,025,263	3,917,898	4.25	4.36	92.8	W	
2014	13,781	488	2.48	70.31	5.33	70.9	4,054,540	3,934,672	4.90	5.05	92.7	W	
2015	14,550	524	2.45	68.22	5.26	67.3	4,683,291	4,530,195	2.94	3.04	93.2	W	
Year 2014													
January	922	33	W	W	5.35	52.4	320,157	311,751	8.58	8.81	92.3	W	
February	1,039	38	0.00	0.00	5.27	60.8	267,558	260,190	8.33	8.57	91.3	5.10	
March	1,127	41	W	W	5.47	62.5	271,937	264,409	6.38	6.56	91.6	W	
April	1,047	37	W	W	5.53	57.9	264,781	257,569	4.83	4.96	92.5	W	
May	1,419	50	W	W	5.35	88.8	305,484	296,701	4.51	4.65	91.8	W	
June	1,349	47	W	W	5.24	102.9	352,539	342,158	4.45	4.58	91.9	W	
July	1,124	39	W	W	5.55	67.8	432,673	419,753	3.98	4.10	93.3	W	
August	1,401	49	W	W	5.39	83.2	455,652	441,523	3.71	3.83	93.7	W	
Sept	946	33	W	W	5.29	47.3	400,187	387,887	3.72	3.84	93.6	W	
October	821	29	W	W	5.26	91.2	363,367	352,206	3.58	3.69	92.8	W	
November	1,066	36	W	W	5.29	87.9	298,147	289,008	4.27	4.41	92.9	W	
December	1,520	53	W	W	5.10	76.9	322,057	311,517	4.04	4.18	93.1	W	
Year 2015													
January	1,427	52	W	W	5.10	77.7	341,822	330,761	4.08	4.22	91.0	W	
February	562	20	W	W	4.53	30.3	301,145	291,394	5.27	5.45	92.2	W	
March	956	34	W	W	4.81	48.8	347,024	336,090	3.37	3.49	93.3	W	
April	1,501	54	W	W	4.95	79.8	324,962	313,969	2.65	2.75	94.0	W	
May	1,348	48	W	W	5.17	69.5	359,864	347,963	2.75	2.85	93.5	W	
June	1,237	44	W	W	5.22	69.1	425,118	410,985	2.68	2.78	93.7	W	
July	1,119	40	W	W	5.30	58.9	516,995	500,696	2.71	2.79	93.6	W	
August	1,289	45	W	W	5.62	67.7	511,789	495,450	2.71	2.80	93.7	W	
Sept	432	16	W	W	5.44	22.4	445,913	431,110	2.69	2.79	93.4	W	
October	1,295	47	W	W	5.38	71.8	394,437	381,566	2.55	2.64	93.1	W	
November	1,643	59	W	W	5.35	82.8	351,912	340,122	2.31	2.40	93.1	W	
December	1,742	65	W	W	5.70	179.6	362,309	350,090	2.21	2.29	93.5	W	
Year 2016													
January	1,304	49	W	W	5.70	184.5	359,666	346,896	2.78	2.88	91.4	W	
February	1,313	47	W	W	5.44	97.1	318,977	308,255	2.43	2.51	92.6	W	
March	1,337	48	W	W	5.37	65.2	350,946	339,456	1.90	1.96	93.4	W	
April	1,203	44	W	W	5.30	88.4	344,658	333,290	2.07	2.14	93.2	W	
May	505	18	W	W	5.28	30.6	383,827	371,944	2.05	2.11	93.7	W	
June	348	12	W	W	5.32	20.5	456,763	442,672	2.42	2.50	94.3	W	
July	223	8	W	W	5.67	12.1	551,548	533,794	2.67	2.76	94.6	W	
August	1,509	55	W	W	5.24	77.2	568,935	549,400	2.63	2.72	94.6	W	
Sept	1,482	53	W	W	5.43	90.6	448,557	433,304	2.63	2.72	94.3	W	
October	1,548	56	W	W	5.59	78.5	361,881	350,117	2.62	2.71	94.1	W	
November	1,294	46	W	W	5.43	83.4	317,208	307,453	2.60	2.68	93.3	W	
Year to Date													
2014	12,261	435	2.48	70.34	5.36	70.2	3,732,483	3,623,155	4.97	5.12	92.6	W	
2015	12,809	458	2.45	68.46	5.20	61.7	4,320,981	4,180,105	3.00	3.10	93.2	W	
2016	12,066	437	2.50	69.01	5.43	68.4	4,462,966	4,316,582	2.45	2.54	93.7	W	
Rolling 12 Months Ending in November													
2015	14,329	511	W	W	5.19	63.0	4,643,038	4,491,621	3.07	3.18	93.2	W	
2016	13,807	503	W	W	5.47	74.4	4,825,275	4,666,672	2.44	2.52	93.7	W	

Displayed values of zero may represent small values that round to zero.

NM = Not meaningful due to

Table 4.4. Receipts, Average Cost, and Quality of Fossil Fuels: Commercial Sector, 2006 - November 2016

Period	Coal						Petroleum Liquids					
	Receipts		Average Cost		Average Sulfur Percent by Weight	Percentage of Consumption	Receipts		Average Cost		Average Sulfur Percent by Weight	Percentage of Consumption
Period	(Billion Btu)	(Thousand Tons)	(Dollars per MMBtu)	(Dollars per Ton)			(Billion Btu)	(Thousand Barrels)	(Dollars per MMBtu)	(Dollars per Barrel)		
Annual Totals												
2006	12,207	518	2.63	61.95	2.51	27.5	798	137	13.50	78.70	0.17	15.5
2007	12,419	531	2.67	62.46	2.58	27.6	249	43	14.04	81.93	0.17	6.2
2008	43,997	2,009	2.65	58.12	1.73	99.4	3,800	633	17.84	107.10	0.37	102.0
2009	41,182	1,876	2.90	63.68	1.67	104.3	3,517	583	10.82	65.26	0.45	122.1
2010	37,778	1,747	2.82	61.06	1.77	101.6	2,395	400	15.24	91.25	0.38	106.3
2011	35,892	1,686	2.92	62.24	1.78	101.1	1,959	325	19.67	118.66	0.55	108.0
2012	4,427	192	3.41	78.71	2.75	13.2	247	43	W	W	0.00	11.0
2013	3,507	151	W	W	3.05	11.2	0	0	--	--	--	0.0
2014	4,096	182	W	W	2.50	17.1	0	0	--	--	--	0.0
2015	2,439	109	W	W	2.55	13.6	0	0	--	--	--	0.0
Year 2014												
January	400	18	W	W	3.06	13.3	0	0	--	--	--	0.0
February	407	18	W	W	2.91	13.7	0	0	--	--	--	0.0
March	526	24	2.98	66.22	2.39	20.1	0	0	--	--	--	0.0
April	640	30	2.70	58.40	1.24	36.2	0	0	--	--	--	0.0
May	475	21	W	W	2.54	29.1	0	0	--	--	--	0.0
June	116	5	W	W	2.88	6.3	0	0	--	--	--	0.0
July	261	11	W	W	2.52	13.2	0	0	--	--	--	0.0
August	159	7	W	W	2.96	9.4	0	0	--	--	--	0.0
Sept	306	13	W	W	2.56	21.1	0	0	--	--	--	0.0
October	313	14	W	W	2.72	23.9	0	0	--	--	--	0.0
November	229	10	W	W	3.00	12.3	0	0	--	--	--	0.0
December	264	12	W	W	2.96	13.0	0	0	--	--	--	0.0
Year 2015												
January	309	14	W	W	2.65	14.4	0	0	--	--	--	0.0
February	479	23	2.14	44.32	1.71	23.9	0	0	--	--	--	0.0
March	177	8	W	W	2.93	9.3	0	0	--	--	--	0.0
April	298	13	W	W	2.72	23.8	0	0	--	--	--	0.0
May	102	5	W	W	2.90	9.0	0	0	--	--	--	0.0
June	213	9	W	W	2.30	15.1	0	0	--	--	--	0.0
July	124	5	W	W	2.93	8.3	0	0	--	--	--	0.0
August	187	8	W	W	2.46	13.3	0	0	--	--	--	0.0
Sept	49	2	W	W	3.01	4.3	0	0	--	--	--	0.0
October	130	6	W	W	3.08	11.1	0	0	--	--	--	0.0
November	182	8	W	W	3.00	13.6	0	0	--	--	--	0.0
December	188	8	W	W	2.86	11.5	0	0	--	--	--	0.0
Year 2016												
January	139	6	W	W	2.87	8.1	0	0	--	--	--	0.0
February	124	5	W	W	2.84	7.0	0	0	--	--	--	0.0
March	163	7	W	W	3.03	9.6	0	0	--	--	--	0.0
April	9	0	W	W	2.98	0.8	0	0	--	--	--	0.0
May	0	0	--	--	--	0.0	0	0	--	--	--	0.0
June	0	0	--	--	--	0.0	0	0	--	--	--	0.0
July	0	0	--	--	--	0.0	0	0	--	--	--	0.0
August	92	4	W	W	3.09	8.0	0	0	--	--	--	0.0
Sept	153	7	W	W	3.14	13.7	0	0	--	--	--	0.0
October	159	7	W	W	3.15	14.1	0	0	--	--	--	0.0
November	237	10	W	W	3.04	17.1	0	0	--	--	--	0.0
Year to Date												
2014	3,832	170	W	W	2.47	17.5	0	0	--	--	--	0.0
2015	2,252	100	2.86	64.22	2.52	13.8	0	0	--	--	--	0.0
2016	1,074	47	W	W	3.03	7.6	0	0	--	--	--	0.0
Rolling 12 Months Ending in November												
2015	2,516	112	W	W	2.55	13.7	0	0	--	--	--	0.0
2016	1,262	56	W	W	3.00	8.0	0	0	--	--	--	0.0

Displayed values of zero may represent small values that round to zero.

NM = Not meaningful due to large relative standard error or excessive percentage change.

W = Withheld to avoid disclosure of individual company data.

Notes:

Beginning in January 2013, the threshold for reporting fuel receipts data was changed from 50 megawatts to 200 megawatts of nameplate capacity for plants primarily fueled by natural gas, petroleum coke, distillate fuel oil, and residual fuel oil. In addition, the requirement to report self-produced and minor fuels, i.e., blast furnace gas, other manufactured gases, kerosene, jet fuel, propane, and waste oils was eliminated. The threshold for coal plants remained at 50 megawatts. The following caveats for each fuel type should be noted:

COAL - includes anthracite, bituminous, subbituminous, lignite, waste coal, and coal-derived synthesis gas. Prior to 2011, synthesis gas was included in the category of Other Gases.

PETROLEUM LIQUIDS - includes distillate fuel oil and residual fuel oil. Prior to 2013, petroleum liquids included distillate fuel oil, residual fuel oil, kerosene, jet fuel, waste oil, and, beginning in 2011, propane. Prior to 2011, propane was included in the category of Other Gases.

- Values for 2015 and prior years are final. Values for 2016 are preliminary.

- See Glossary for definitions.

- Starting in January 2013, there may have been a shift in the continuity of Chapter 4 tables due to changes in the sample design of Form EIA-923 and the imputation process.

- See the EIA-923 section of the Technical Notes for a discussion of the sample design for the Form EIA-923 and predecessor forms.

- See the Technical Notes for fuel conversion factors.

- Totals may not equal the sum of components because of independent rounding.

Sources: U.S. Energy Information Administration (EIA), Form EIA-923, "Power Plant Operations Report" and predecessor forms including Form EIA-423, "Monthly Cost and Quality of Fuels for Electric Plants Report" and Federal Energy Regulatory Commission (FERC), FERC Form 423, "Monthly Report of Cost and Quality of Fuels for Electric Plants."

Table 4.4. Receipts, Average Cost, and Quality of Fossil Fuels: Commercial Sector, 2006 - November 2016 (continued)

Period	Petroleum Coke						Natural Gas						All Fossil Fuels
	Receipts		Average Cost				Receipts		Average Cost				Average Cost
(Billion Btu)	(Thousand Tons)	(Dollars per MMBtu)	(Dollars per Ton)	Average Sulfur Percent by Weight	Percentage of Consumption	(Billion Btu)	(Thousand Mcf)	(Dollars per MMBtu)	(Dollars per Mcf)	Percentage of Consumption	(Dollars per MMBtu)		
Annual Totals													
2006	0	0	--	--	0.0	21,369	20,819	8.33	8.55	30.7	6.42		
2007	0	0	--	--	0.0	23,502	22,955	7.99	8.18	32.8	6.20		
2008	370	14	2.14	58.36	5.53	135.3	71,670	69,877	9.01	9.24	105.5	6.94	
2009	252	9	1.65	46.54	5.11	102.8	81,134	79,308	5.18	5.30	105.0	4.58	
2010	410	15	2.19	60.59	5.67	122.5	92,055	90,130	5.39	5.51	105.1	4.83	
2011	268	9	W	W	5.46	147.4	95,287	93,306	5.20	5.31	107.2	W	
2012	0	0	--	--	0.0	18,315	18,008	5.88	5.98	16.2	W		
2013	0	0	--	--	0.0	5,497	5,450	W	W	4.6	W		
2014	0	0	--	--	0.0	5,849	5,795	W	W	4.9	W		
2015	0	0	--	--	0.0	6,499	6,371	W	W	5.5	W		
Year 2014													
January	0	0	--	--	--	0.0	423	418	W	W	3.1	W	
February	0	0	--	--	--	0.0	314	310	W	W	3.6	W	
March	0	0	--	--	--	0.0	359	355	W	W	4.2	W	
April	0	0	--	--	--	0.0	439	435	W	W	5.4	W	
May	0	0	--	--	--	0.0	491	486	W	W	5.4	W	
June	0	0	--	--	--	0.0	440	437	W	W	4.6	W	
July	0	0	--	--	--	0.0	476	472	W	W	4.4	W	
August	0	0	--	--	--	0.0	625	619	W	W	5.4	W	
Sept	0	0	--	--	--	0.0	555	551	W	W	5.4	W	
October	0	0	--	--	--	0.0	580	575	W	W	5.9	W	
November	0	0	--	--	--	0.0	476	472	W	W	5.1	W	
December	0	0	--	--	--	0.0	672	666	W	W	6.7	W	
Year 2015													
January	0	0	--	--	--	0.0	552	545	W	W	5.7	W	
February	0	0	--	--	--	0.0	378	372	W	W	4.4	W	
March	0	0	--	--	--	0.0	438	432	W	W	4.7	W	
April	0	0	--	--	--	0.0	420	413	W	W	5.1	W	
May	0	0	--	--	--	0.0	494	488	W	W	5.4	W	
June	0	0	--	--	--	0.0	522	513	W	W	5.2	W	
July	0	0	--	--	--	0.0	540	528	W	W	4.6	W	
August	0	0	--	--	--	0.0	694	680	W	W	6.1	W	
Sept	0	0	--	--	--	0.0	632	620	W	W	5.8	W	
October	0	0	--	--	--	0.0	530	523	W	W	5.4	W	
November	0	0	--	--	--	0.0	775	749	W	W	8.0	W	
December	0	0	--	--	--	0.0	524	507	W	W	5.2	W	
Year 2016													
January	0	0	--	--	--	0.0	1,241	1,203	W	W	11.6	W	
February	0	0	--	--	--	0.0	488	477	W	W	5.2	W	
March	0	0	--	--	--	0.0	620	610	W	W	6.4	W	
April	0	0	--	--	--	0.0	578	567	W	W	6.1	W	
May	0	0	--	--	--	0.0	599	587	W	W	6.4	W	
June	0	0	--	--	--	0.0	599	585	W	W	6.0	W	
July	0	0	--	--	--	0.0	691	667	W	W	6.2	W	
August	0	0	--	--	--	0.0	802	765	W	W	7.0	W	
Sept	0	0	--	--	--	0.0	610	591	W	W	6.1	W	
October	0	0	--	--	--	0.0	598	575	W	W	6.6	W	
November	0	0	--	--	--	0.0	613	589	W	W	6.5	W	
Year to Date													
2014	0	0	--	--	--	0.0	5,177	5,130	W	W	4.7	W	
2015	0	0	--	--	--	0.0	5,975	5,863	W	W	5.5	W	
2016	0	0	--	--	--	0.0	7,438	7,217	W	W	6.7	W	
Rolling 12 Months Ending in November													
2015	0	0	--	--	--	0.0	6,647	6,529	W	W	5.6	W	
2016	0	0	--	--	--	0.0	7,962	7,724	W	W	6.6	W	

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W = Withheld to avoid disclosure of individual company data.

Notes:

Beginning in January 2013, the threshold for reporting fuel receipts data was changed from 50 megawatts to 200 megawatts of nameplate capacity for plants primarily fueled by natural gas, petroleum coke, distillate fuel oil, and residual fuel oil. In addition, the requirement to report self-produced and minor fuels, i.e., blast furnace gas, other manufactured gases, kerosene, jet fuel, propane, and waste oils was eliminated. The threshold for coal plants remained at 50 megawatts. The following caveats for each fuel type should be noted:

PETROLEUM COKE - includes petroleum coke-derived synthesis gas. Prior to 2011, petroleum coke-derived synthesis gas was included in Other Gases.

NATURAL GAS - includes natural gas only. Prior to 2011, includes Other Gases.

- Values for 2015 and prior years are final. Values for 2016 are preliminary.

- See Glossary for definitions.

- Starting in January 2013, there may have been a shift in the continuity of Chapter 4 tables due to changes in the sample design of Form EIA-923 and the imputation process.

- See the EIA-923 section of the Technical Notes for a discussion of the sample design for the Form EIA-923 and predecessor forms.

- See the Technical Notes for fuel conversion factors.

- Totals may not equal the sum of components because of independent rounding.

Sources: U.S. Energy Information Administration (EIA), Form EIA-923, "Power Plant Operations Report" and predecessor forms including Form EIA-423, "Monthly Cost and Quality of Fuels for Electric Plants Report" and Federal Energy Regulatory Commission (FERC), FERC Form 423, "Monthly Report of Cost and Quality of Fuels for Electric Plants."

Table 4.5. Receipts, Average Cost, and Quality of Fossil Fuels: Industrial Sector, 2006 - November 2016

Period	Coal						Petroleum Liquids					
	Receipts		Average Cost		Average Sulfur Percent by Weight	Percentage of Consumption	Receipts		Average Cost		Average Sulfur Percent by Weight	Percentage of Consumption
	(Billion Btu)	(Thousand Tons)	(Dollars per MMBtu)	(Dollars per Ton)			(Billion Btu)	(Thousand Barrels)	(Dollars per MMBtu)	(Dollars per Barrel)		
Annual Totals												
2006	320,640	15,208	2.03	42.76	1.47	60.2	19,514	3,214	7.57	45.95	1.30	21.2
2007	303,091	13,540	2.20	49.16	1.36	60.1	33,637	5,514	8.53	52.06	1.33	38.8
2008	493,724	22,044	2.72	60.96	1.28	100.7	48,822	7,958	12.50	76.69	1.01	109.0
2009	431,686	19,661	2.81	61.68	1.22	99.5	55,899	9,232	9.83	59.52	0.83	112.8
2010	468,991	21,492	2.75	60.08	1.26	87.2	33,276	5,554	13.21	79.15	0.93	125.6
2011	476,108	22,204	2.93	62.86	1.33	99.5	28,939	4,878	17.67	104.83	1.08	144.8
2012	285,172	13,206	3.02	65.24	1.33	65.8	6,739	1,095	W	W	1.52	40.8
2013	275,543	12,727	W	W	1.32	64.4	2,431	394	18.20	112.29	1.43	15.8
2014	281,867	13,050	W	W	1.33	68.4	2,290	373	17.91	109.99	1.43	15.6
2015	263,630	12,132	W	W	1.35	71.4	2,359	385	13.45	82.47	1.42	16.9
Year 2014												
January	23,384	1,093	W	W	1.29	61.0	385	62	18.67	115.30	1.30	15.0
February	21,991	1,020	W	W	1.33	62.5	332	53	20.18	125.46	1.04	19.1
March	25,143	1,161	2.92	63.25	1.41	67.2	135	22	20.74	127.74	1.16	9.3
April	22,469	1,042	3.09	66.66	1.31	70.8	142	23	17.86	110.18	1.60	14.8
May	22,090	1,028	W	W	1.27	66.3	144	23	17.67	109.00	1.70	13.6
June	21,987	1,014	W	W	1.40	65.9	197	32	18.15	111.64	1.79	19.5
July	24,237	1,122	W	W	1.29	70.6	149	24	16.89	103.81	1.54	16.2
August	25,258	1,165	W	W	1.35	73.2	117	19	W	W	1.59	14.2
Sept	23,305	1,073	W	W	1.28	71.5	140	23	17.75	108.43	1.86	14.5
October	23,967	1,110	W	W	1.35	74.9	150	25	16.21	98.83	1.56	14.8
November	23,701	1,098	W	W	1.37	70.7	169	28	17.46	105.26	1.42	15.1
December	24,334	1,125	W	W	1.30	68.4	230	38	14.15	85.81	1.33	22.4
Year 2015												
January	24,148	1,100	W	W	1.36	68.2	210	34	13.50	83.50	1.82	14.2
February	19,118	882	2.77	60.15	1.42	59.5	275	44	15.47	96.51	1.58	12.2
March	24,240	1,110	W	W	1.30	73.7	212	34	14.93	93.02	1.65	17.1
April	21,069	969	W	W	1.42	72.5	257	43	13.30	79.04	0.98	22.1
May	21,441	991	W	W	1.28	71.9	95	16	15.20	90.88	1.05	8.5
June	21,188	975	W	W	1.36	70.6	240	39	13.12	79.91	1.30	22.0
July	23,947	1,110	W	W	1.34	73.7	122	20	13.55	83.51	1.58	12.5
August	22,948	1,059	W	W	1.28	74.6	161	26	13.21	81.06	1.52	18.7
Sept	22,556	1,038	W	W	1.22	74.6	151	25	13.56	82.72	1.38	16.9
October	20,964	967	W	W	1.40	74.6	221	36	12.74	77.23	1.26	21.5
November	21,602	987	W	W	1.51	74.5	180	29	11.49	71.78	1.40	19.1
December	20,408	944	W	W	1.36	69.9	234	38	11.75	72.24	1.52	24.5
Year 2016												
January	14,296	638	W	W	1.51	42.4	142	23	10.87	67.07	1.55	12.2
February	12,538	566	W	W	1.62	40.6	274	45	8.45	51.85	1.10	25.0
March	14,648	658	W	W	1.42	48.0	170	28	8.30	51.02	1.13	23.4
April	12,466	554	W	W	1.59	55.1	177	29	W	W	1.35	24.2
May	12,401	562	2.75	60.76	1.53	49.0	83	14	10.95	66.07	1.65	8.1
June	13,814	619	2.78	62.01	1.38	51.1	190	31	9.59	58.65	1.48	20.3
July	13,139	597	2.77	61.02	1.36	48.4	60	10	10.18	62.12	1.02	5.0
August	13,513	622	W	W	1.29	50.4	58	10	10.89	65.04	0.55	5.4
Sept	10,554	477	W	W	1.37	45.3	120	20	11.04	66.33	1.01	15.4
October	12,729	585	W	W	1.43	58.9	228	37	10.22	62.63	1.14	19.0
November	9,951	451	W	W	1.46	45.2	210	35	10.40	61.84	1.26	24.6
Year to Date												
2014	257,533	11,926	W	W	1.33	68.4	2,060	335	18.33	112.72	1.45	15.1
2015	243,222	11,188	2.72	59.22	1.35	71.6	2,124	347	13.64	83.59	1.41	16.3
2016	140,050	6,329	W	W	1.45	48.2	1,712	282	9.74	59.24	1.23	15.9
Rolling 12 Months Ending in November												
2015	267,556	12,312	W	W	1.35	71.3	2,354	385	13.69	83.81	1.40	16.7
2016	160,458	7,273	W	W	1.44	50.2	1,946	320	W	W	1.27	16.6

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NM = Not meaningful due to large relative standard error or excessive percentage change.

W = Withheld to avoid disclosure of individual company data.

Notes:

Beginning in January 2013, the threshold for reporting fuel receipts data was changed from 5

Table 4.5. Receipts, Average Cost, and Quality of Fossil Fuels: Industrial Sector, 2006 - November 2016 (continued)

Period	Petroleum Coke					Natural Gas					All Fossil Fuels	
	Receipts (Billion Btu)	Receipts (Thousands Tons)	Average Cost (Dollars per MMBtu)	Average Cost (Dollars per Ton)	Average Sulfur Percent by Weight	Percentage of Consumption	Receipts (Billion Btu)	Receipts (Thousands Mcf)	Average Cost (Dollars per MMBtu)	Average Cost (Dollars per Mcf)	Percentage of Consumption	Average Cost (Dollars per MMBtu)
Annual Totals												
2006	17,875	646	1.63	45.05	5.43	42.7	869,157	844,211	7.02	7.22	75.7	5.64
2007	19,700	698	1.96	55.42	5.52	43.6	896,803	871,178	6.97	7.18	82.9	5.78
2008	39,246	1,396	3.34	93.84	4.92	117.9	1,099,613	1,068,372	8.95	9.22	111.9	7.10
2009	38,924	1,381	1.80	50.82	4.51	114.2	1,117,489	1,088,880	4.27	4.38	110.0	4.02
2010	35,866	1,269	2.46	69.38	4.90	100.5	1,166,768	1,135,917	4.64	4.77	110.4	4.24
2011	37,981	1,351	W	W	5.03	108.3	1,331,977	1,296,628	4.28	4.40	122.0	W
2012	23,861	858	2.62	72.96	5.86	42.2	834,245	813,288	2.97	3.05	70.8	W
2013	17,236	623	W	W	5.82	30.5	750,946	728,835	W	W	62.3	W
2014	9,736	358	W	W	5.83	23.2	742,347	718,360	W	W	62.7	W
2015	8,189	304	W	W	5.50	24.1	765,964	740,975	W	W	60.6	W
Year 2014												
January	398	15	W	W	5.87	11.7	66,078	64,072	W	W	60.7	W
February	339	13	W	W	5.95	11.2	59,291	57,453	W	W	64.6	W
March	834	31	W	W	5.76	24.3	65,433	63,434	W	W	67.2	W
April	755	28	W	W	5.88	19.7	58,439	56,714	W	W	63.4	W
May	408	15	W	W	5.78	11.7	60,012	58,094	W	W	63.1	W
June	990	36	W	W	5.66	25.6	60,327	58,411	W	W	64.0	W
July	794	29	W	W	5.79	20.2	64,393	62,325	W	W	62.9	W
August	912	34	W	W	5.80	25.1	64,667	62,493	W	W	62.0	W
Sept	997	36	W	W	5.92	27.6	59,277	57,273	W	W	60.5	W
October	950	34	W	W	5.92	33.0	58,228	56,273	W	W	59.5	W
November	1,071	40	W	W	5.83	33.3	61,753	59,657	W	W	63.3	W
December	1,286	47	W	W	5.86	36.1	64,449	62,162	W	W	62.3	W
Year 2015												
January	1,065	39	W	W	5.45	30.6	63,737	61,619	W	W	59.6	W
February	675	25	W	W	5.72	22.1	60,233	58,313	W	W	63.2	W
March	794	29	W	W	5.66	26.6	63,904	61,821	W	W	62.5	W
April	937	34	W	W	5.81	27.3	59,995	58,072	W	W	62.5	W
May	650	24	W	W	5.58	22.7	62,594	60,498	W	W	63.6	W
June	847	32	W	W	5.41	31.7	63,763	61,470	W	W	60.8	W
July	680	26	W	W	5.28	29.4	67,248	64,911	W	W	59.3	W
August	478	18	W	W	5.34	18.9	68,195	66,008	W	W	59.8	W
Sept	648	24	W	W	5.57	22.0	63,672	61,594	W	W	60.1	W
October	218	9	W	W	4.62	9.6	57,688	55,868	W	W	54.6	W
November	393	15	W	W	5.27	13.3	65,289	63,274	W	W	61.3	W
December	804	30	W	W	5.46	32.7	69,647	67,528	W	W	61.3	W
Year 2016												
January	400	15	W	W	5.94	16.5	63,795	61,733	W	W	57.4	W
February	122	4	W	W	6.10	4.7	56,903	55,089	W	W	55.3	W
March	574	21	W	W	5.88	18.2	60,786	59,017	W	W	57.2	W
April	669	25	W	W	5.81	29.0	60,713	58,903	W	W	58.3	W
May	0	0	--	--	0.0	0.0	60,251	58,544	W	W	57.3	W
June	222	8	W	W	5.94	8.4	61,662	59,902	W	W	57.6	W
July	222	8	W	W	5.94	8.0	65,190	63,191	W	W	57.9	W
August	217	8	W	W	5.81	8.2	65,565	63,294	W	W	57.5	W
Sept	200	8	W	W	5.64	9.9	62,004	59,964	W	W	57.4	W
October	207	8	W	W	5.66	6.8	62,533	60,657	W	W	59.7	W
November	200	8	W	W	5.47	9.0	65,021	63,167	W	W	59.8	W
Year to Date												
2014	8,450	311	W	W	5.82	22.0	677,899	656,198	W	W	62.8	W
2015	7,385	274	W	W	5.50	23.4	696,317	673,448	W	W	60.6	W
2016	3,031	112	W	W	5.83	10.7	684,423	663,461	W	W	57.8	W
Rolling 12 Months Ending in November												
2015	8,670	321	W	W	5.55	24.7	760,766	735,609	W	W	60.7	W
2016	3,835	142	W	W	5.75	12.5	754,070	730,989	W	W	58.1	W

Displayed values of zero may represent small values that round to zero.

NM = Not meaningful due to large relative standard error or excessive percentage change.

W = Withheld to avoid disclosure of individual company data.

Notes:

Beginning in January 2013, the threshold for reporting fuel receipts data was changed from 50 megawatts to 200 megawatts of nameplate capacity for plants primarily fueled by natural gas, petroleum coke, distillate fuel oil, and residual fuel oil. In addition, the requirement to report self-produced and minor fuels, i.e., blast furnace gas, other manufactured gases, kerosene, jet fuel, propane, and waste oils was eliminated. The threshold for coal plants remained at 50 megawatts. The following caveats for each fuel type should be noted:

PETROLEUM COKE - includes petroleum coke-derived synthesis gas. Prior to 2011, petroleum coke-derived synthesis gas was included in Other Gases.

NATURAL GAS - includes natural gas only. Prior to 2011, includes Other Gases.

- Values for 2015 and prior years are final. Values for 2016 are preliminary.

- See Glossary for definitions.

- Starting in January 2013, there may have been a shift in the continuity of Chapter 4 tables due to changes in the sample design of Form EIA-923 and the imputation process.

- See the EIA-923 section of the Technical Notes for a discussion of the sample design for the Form EIA-923 and predecessor forms.

- See the Technical Notes for fuel conversion factors.

- Totals may not equal the sum of components because of independent rounding.

Sources: U.S. Energy Information Administration (EIA), Form

**Table 4.6.A. Receipts of Coal Delivered for Electricity Generation by State, November 2016 and 2015
(Thousand Tons)**

Census Division and State	All Sectors			Electric Power Sector				Commercial Sector		Industrial Sector	
	November 2016	November 2015	Percentage Change	Electric Utilities		Independent Power Producers		November 2016	November 2015	November 2016	November 2015
				November 2016	November 2015	November 2016	November 2015				
New England	92	255	-64.0%	0	105	90	148	0	0	2	1
Connecticut	0	0	--	0	0	0	0	0	0	0	0
Maine	7	5	19.0%	0	0	5	4	0	0	2	1
Massachusetts	85	144	-41.0%	0	0	85	144	0	0	0	0
New Hampshire	0	105	-100.0%	0	105	0	0	0	0	0	0
Rhode Island	0	0	--	0	0	0	0	0	0	0	0
Vermont	0	0	--	0	0	0	0	0	0	0	0
Middle Atlantic	1,528	2,297	-33.0%	0	0	1,503	2,223	0	0	25	73
New Jersey	52	52	0.4%	0	0	52	52	0	0	0	0
New York	69	155	-56.0%	0	0	44	122	0	0	24	33
Pennsylvania	1,407	2,090	-33.0%	0	0	1,407	2,049	0	0	0	41
East North Central	11,072	13,747	-19.0%	6,751	8,236	4,135	5,273	0	0	186	239
Illinois	3,292	4,562	-28.0%	556	884	2,590	3,491	0	0	146	187
Indiana	2,318	2,648	-12.0%	2,216	2,400	101	248	0	0	0	0
Michigan	1,589	2,490	-36.0%	1,571	2,472	17	18	0	0	0	0
Ohio	2,016	2,200	-8.4%	589	662	1,426	1,515	0	0	0	22
Wisconsin	1,857	1,847	0.5%	1,818	1,818	0	0	0	0	39	29
West North Central	9,753	10,603	-8.0%	9,682	10,330	0	0	10	8	61	266
Iowa	1,351	1,672	-19.0%	1,291	1,498	0	0	0	0	61	175
Kansas	1,318	1,150	15.0%	1,318	1,150	0	0	0	0	0	0
Minnesota	1,395	1,479	-5.7%	1,395	1,449	0	0	0	0	0	30
Missouri	2,724	3,131	-13.0%	2,713	3,123	0	0	10	8	0	0
Nebraska	1,015	1,164	-13.0%	1,015	1,103	0	0	0	0	0	60
North Dakota	1,794	1,880	-4.6%	1,794	1,880	0	0	0	0	0	0
South Dakota	156	127	22.0%	156	127	0	0	0	0	0	0
South Atlantic	8,031	8,090	-0.7%	6,862	7,057	1,111	868	0	0	57	164
Delaware	14	0	--	0	0	14	0	0	0	0	0
District of Columbia	0	0	--	0	0	0	0	0	0	0	0
Florida	1,169	1,443	-19.0%	1,169	1,401	0	25	0	0	0	17
Georgia	1,543	1,533	0.6%	1,533	1,513	0	0	0	0	10	20
Maryland	633	405	56.0%	0	0	615	379	0	0	18	26
North Carolina	1,205	991	22.0%	1,205	954	0	15	0	0	0	23
South Carolina	635	667	-4.8%	632	651	0	0	0	0	3	17
Virginia	539	484	11.0%	447	402	67	57	0	0	26	25
West Virginia	2,292	2,567	-11.0%	1,877	2,138	415	393	0	0	0	36
East South Central	6,038	6,235	-3.2%	5,705	5,824	261	303	0	0	72	108
Alabama	1,356	1,680	-19.0%	1,356	1,680	0	0	0	0	0	0
Kentucky	3,360	3,463	-3.0%	3,360	3,463	0	0	0	0	0	0
Mississippi	452	446	1.3%	190	143	261	303	0	0	0	0
Tennessee	871	647	35.0%	799	539	0	0	0	0	72	108
West South Central	11,043	11,322	-2.5%	4,992	5,963	6,046	5,300	0	0	5	60
Arkansas	1,198	994	21.0%	978	785	215	197	0	0	5	12
Louisiana	699	915	-24.0%	469	635	230	280	0	0	0	0
Oklahoma	832	1,698	-51.0%	743	1,552	89	98	0	0	0	48
Texas	8,314	7,716	7.8%	2,802	2,991	5,512	4,725	0	0	0	0
Mountain	8,118	8,132	-0.2%	7,274	7,162	843	969	0	0	0	0
Arizona	1,372	1,938	-29.0%	1,372	1,938	0	0	0	0	0	0
Colorado	1,517	1,369	11.0%	1,517	1,369	0	0	0	0	0	0
Idaho	0	0	--	0	0	0	0	0	0	0	0
Montana	803	884	-9.1%	0	20	803	864	0	0	0	0
Nevada	77	93	-17.0%	36	48	40	44	0	0	0	0
New Mexico	1,071	1,085	-1.2%	1,071	1,085	0	0	0	0	0	0
Utah	1,197	642	86.0%	1,197	623	0	19	0	0	0	0
Wyoming	2,081	2,122	-1.9%	2,081	2,080	0	42	0	0	0	0
Pacific Contiguous	589	428	38.0%	70	125	475	226	0	0	44	76
California	44	76	-43.0%	0	0	0	0	0	0	44	76
Oregon	70	125	-44.0%	70	125	0	0	0	0	0	0
Washington	475	226	110.0%	0	0	475	226	0	0	0	0
Pacific Noncontiguous	133	148	-10.0%	13	26	120	122	0	0	0	0
Alaska	13	26	-51.0%	13	26	0	0	0	0	0	0
Hawaii	120	122	-1.0%	0	0	120	122	0	0	0	0
U.S. Total	56,396	61,257	-7.9%	41,349	44,830	14,586	15,432	10	8	451	987

Displayed values of zero may represent small values that round to zero.

NM = Not meaningful due to large relative standard error or excessive percentage change.

W = Withheld to avoid disclosure of individual company data.

Notes:

See Glossary for definitions. Values for 2015 are final. Values for 2016 are preliminary. See Technical Notes for a discussion of the sample design for the Form EIA-923.

Totals may not equal sum of components because of independent rounding. Percentage change is calculated before rounding.

Coal includes anthracite, bituminous, subbituminous, lignite, waste coal, and coal-derived synthesis gas.

Source: U.S. Energy Information Administration, Form EIA-923, "Power Plant Operations Report."

Table 4.6.B. Receipts of Coal Delivered for Electricity Generation by State, (Year-to-Date) November 2016 and 2015 (Thousand Tons)

Census Division and State	All Sectors			Electric Power Sector				Commercial Sector		Industrial Sector	
	November 2016 YTD	November 2015 YTD	Percentage Change	Electric Utilities		Independent Power Producers		November 2016 YTD	November 2015 YTD	November 2016 YTD	November 2015 YTD
				November 2016 YTD	November 2015 YTD	November 2016 YTD	November 2015 YTD				
New England	1,162	1,929	-40.0%	177	657	971	1,244	0	0	15	28
Connecticut	85	251	-66.0%	0	0	85	251	0	0	0	0
Maine	76	97	-21.0%	0	0	62	69	0	0	15	28
Massachusetts	824	925	-11.0%	0	0	824	925	0	0	0	0
New Hampshire	177	657	-73.0%	177	657	0	0	0	0	0	0
Rhode Island	0	0	--	0	0	0	0	0	0	0	0
Vermont	0	0	--	0	0	0	0	0	0	0	0
Middle Atlantic	17,999	29,606	-39.0%	0	0	17,648	28,804	0	0	351	802
New Jersey	581	785	-26.0%	0	0	581	785	0	0	0	0
New York	534	953	-44.0%	0	0	273	661	0	0	261	292
Pennsylvania	16,884	27,868	-39.0%	0	0	16,793	27,359	0	0	91	510
East North Central	123,959	160,832	-23.0%	73,854	92,812	47,979	65,267	0	27	2,126	2,726
Illinois	35,082	50,924	-31.0%	6,306	7,877	27,201	41,020	0	0	1,576	2,027
Indiana	26,341	32,439	-19.0%	24,716	29,817	1,624	2,622	0	0	0	0
Michigan	19,092	27,272	-30.0%	18,852	26,980	229	242	0	27	10	23
Ohio	26,271	28,916	-9.1%	7,195	7,311	18,925	21,383	0	0	152	222
Wisconsin	17,173	21,282	-19.0%	16,785	20,828	0	0	0	0	388	454
West North Central	105,510	127,958	-18.0%	104,353	124,799	0	0	47	73	1,110	3,086
Iowa	15,991	20,883	-23.0%	14,881	18,854	0	0	0	0	1,110	2,029
Kansas	13,201	16,431	-20.0%	13,201	16,431	0	0	0	0	0	0
Minnesota	11,343	16,138	-30.0%	11,343	15,787	0	0	0	14	0	336
Missouri	32,091	37,951	-15.0%	32,044	37,892	0	0	47	59	0	0
Nebraska	11,578	13,920	-17.0%	11,578	13,199	0	0	0	0	0	721
North Dakota	20,068	21,673	-7.4%	20,068	21,673	0	0	0	0	0	0
South Dakota	1,238	962	29.0%	1,238	962	0	0	0	0	0	0
South Atlantic	86,575	103,420	-16.0%	75,346	89,472	10,463	12,133	0	0	766	1,816
Delaware	214	152	41.0%	0	0	214	152	0	0	0	0
District of Columbia	0	0	--	0	0	0	0	0	0	0	0
Florida	13,975	18,049	-23.0%	13,685	17,268	290	564	0	0	0	217
Georgia	15,878	18,727	-15.0%	15,752	18,542	0	0	0	0	126	185
Maryland	4,899	6,031	-19.0%	0	0	4,692	5,779	0	0	207	251
North Carolina	10,764	14,940	-28.0%	10,764	14,375	0	220	0	0	0	345
South Carolina	7,358	10,318	-29.0%	7,273	10,173	0	0	0	0	85	146
Virginia	7,111	7,170	-0.8%	6,390	6,050	443	805	0	0	279	315
West Virginia	26,376	28,032	-5.9%	21,482	23,064	4,825	4,612	0	0	69	357
East South Central	61,847	71,775	-14.0%	57,946	67,456	2,807	2,995	0	0	1,094	1,324
Alabama	14,973	18,845	-21.0%	14,973	18,845	0	0	0	0	0	0
Kentucky	34,140	38,021	-10.0%	34,140	38,021	0	0	0	0	0	0
Mississippi	4,027	4,890	-18.0%	1,220	1,894	2,807	2,995	0	0	0	0
Tennessee	8,707	10,019	-13.0%	7,613	8,695	0	0	0	0	1,094	1,324
West South Central	98,440	125,907	-22.0%	47,669	65,517	50,714	59,828	0	0	57	562
Arkansas	11,378	13,917	-18.0%	9,525	11,613	1,797	2,228	0	0	57	75
Louisiana	6,179	9,969	-38.0%	4,626	5,832	1,554	4,137	0	0	0	0
Oklahoma	9,629	17,247	-44.0%	8,640	15,517	989	1,244	0	0	0	487
Texas	71,254	84,774	-16.0%	24,879	32,555	46,374	52,219	0	0	0	0
Mountain	80,806	97,229	-17.0%	72,339	86,762	8,236	10,241	0	0	231	227
Arizona	14,066	20,185	-30.0%	14,066	20,185	0	0	0	0	0	0
Colorado	14,591	16,927	-14.0%	14,591	16,927	0	0	0	0	0	0
Idaho	0	0	--	0	0	0	0	0	0	0	0
Montana	7,783	9,079	-14.0%	0	200	7,783	8,879	0	0	0	0
Nevada	912	1,238	-26.0%	459	772	453	467	0	0	0	0
New Mexico	9,801	11,285	-13.0%	9,801	11,285	0	0	0	0	0	0
Utah	12,139	14,057	-14.0%	11,908	13,424	0	406	0	0	231	227
Wyoming	21,513	24,458	-12.0%	21,513	23,969	0	489	0	0	0	0
Pacific Contiguous	4,327	4,976	-13.0%	951	1,324	2,795	3,035	0	0	580	617
California	580	617	-6.0%	0	0	0	0	0	0	580	617
Oregon	951	1,324	-28.0%	951	1,324	0	0	0	0	0	0
Washington	2,795	3,035	-7.9%	0	0	2,795	3,035	0	0	0	0
Pacific Noncontiguous	965	727	33.0%	181	128	784	599	0	0	0	0
Alaska	181	128	41.0%	181	128	0	0	0	0	0	0
Hawaii	784	599	31.0%	0	0	784	599	0	0	0	0
U.S. Total	581,589	724,360	-20.0%	432,816	528,926	142,397	184,146	47	100	6,329	11,188

Displayed values of zero may represent small values that round to zero.

NM = Not meaningful due to large relative standard error or excessive percentage change.

W = Withheld to avoid disclosure of individual company data.

Notes:

See Glossary for definitions. Values for 2015 are final. Values for 2016 are preliminary. See Technical Notes for a discussion of the sample design for the Form EIA-923.

Totals may not equal sum of components because of independent rounding. Percentage change is calculated before rounding.

Coal includes anthracite, bituminous, subbituminous, lignite, waste coal, and coal-derived synthesis gas.

Source: U.S. Energy Information Administration, Form EIA-923, "Power Plant Operations Report."

**Table 4.7.A. Receipts of Petroleum Liquids Delivered for Electricity Generation by State, November 2016 and 2015
(Thousand Barrels)**

Census Division and State	All Sectors			Electric Power Sector				Commercial Sector		Industrial Sector	
	November 2016	November 2015	Percentage Change	Electric Utilities		Independent Power Producers		November 2016	November 2015	November 2016	November 2015
				November 2016	November 2015	November 2016	November 2015				
New England	138	500	-72.0%	1	1	136	498	0	0	1	2
Connecticut	5	79	-94.0%	0	0	5	79	0	0	0	0
Maine	2	184	-99.0%	0	0	0	182	0	0	1	2
Massachusetts	124	233	-47.0%	0	0	124	233	0	0	0	0
New Hampshire	1	1	98.0%	1	1	0	0	0	0	0	0
Rhode Island	7	3	123.0%	0	0	7	3	0	0	0	0
Vermont	0	0	--	0	0	0	0	0	0	0	0
Middle Atlantic	177	567	-69.0%	117	431	49	133	0	0	12	2
New Jersey	1	6	-86.0%	0	0	1	6	0	0	0	0
New York	122	519	-76.0%	117	431	4	86	0	0	1	2
Pennsylvania	54	42	28.0%	0	0	44	42	0	0	11	0
East North Central	119	64	87.0%	67	47	50	15	0	0	3	1
Illinois	9	10	-9.4%	0	3	9	7	0	0	0	0
Indiana	14	13	11.0%	14	13	0	0	0	0	0	0
Michigan	16	10	62.0%	14	10	0	0	0	0	2	0
Ohio	75	17	343.0%	33	9	41	8	0	0	1	0
Wisconsin	6	14	-60.0%	6	14	0	0	0	0	0	0
West North Central	40	53	-25.0%	39	53	0	0	0	0	0	0
Iowa	7	6	22.0%	7	6	0	0	0	0	0	0
Kansas	8	13	-41.0%	8	13	0	0	0	0	0	0
Minnesota	2	19	-89.0%	2	19	0	0	0	0	0	0
Missouri	19	10	79.0%	19	10	0	0	0	0	0	0
Nebraska	0	0	-100.0%	0	0	0	0	0	0	0	0
North Dakota	3	5	-38.0%	3	5	0	0	0	0	0	0
South Dakota	1	0	--	1	0	0	0	0	0	0	0
South Atlantic	257	232	11.0%	200	136	38	73	0	0	18	23
Delaware	0	14	-99.0%	0	0	0	14	0	0	0	0
District of Columbia	0	0	--	0	0	0	0	0	0	0	0
Florida	7	16	-58.0%	7	15	0	0	0	0	0	0
Georgia	25	24	7.0%	17	18	1	0	0	0	7	6
Maryland	20	23	-11.0%	0	0	20	23	0	0	0	0
North Carolina	11	84	-86.0%	11	78	0	1	0	0	0	5
South Carolina	23	20	15.0%	12	10	0	0	0	0	11	10
Virginia	144	41	250.0%	134	5	10	35	0	0	0	1
West Virginia	26	10	160.0%	19	10	7	0	0	0	0	0
East South Central	43	27	60.0%	41	26	0	0	0	0	1	0
Alabama	2	3	-35.0%	2	3	0	0	0	0	0	0
Kentucky	18	17	4.0%	18	17	0	0	0	0	0	0
Mississippi	1	0	--	1	0	0	0	0	0	0	0
Tennessee	22	6	242.0%	20	6	0	0	0	0	1	0
West South Central	9	22	-58.0%	8	17	2	5	0	0	0	0
Arkansas	7	16	-53.0%	6	12	1	4	0	0	0	0
Louisiana	0	1	-100.0%	0	0	0	1	0	0	0	0
Oklahoma	0	0	--	0	0	0	0	0	0	0	0
Texas	2	5	-63.0%	2	5	0	0	0	0	0	0
Mountain	29	22	30.0%	26	20	3	3	0	0	0	0
Arizona	14	7	110.0%	14	7	0	0	0	0	0	0
Colorado	0	0	--	0	0	0	0	0	0	0	0
Idaho	0	0	--	0	0	0	0	0	0	0	0
Montana	3	2	22.0%	0	0	3	2	0	0	0	0
Nevada	0	1	-100.0%	0	1	0	0	0	0	0	0
New Mexico	4	2	63.0%	4	2	0	0	0	0	0	0
Utah	1	2	-47.0%	1	2	0	0	0	0	0	0
Wyoming	8	8	-2.2%	8	8	0	0	0	0	0	0
Pacific Contiguous	2	5	-62.0%	1	4	1	0	0	0	0	0
California	0	0	--	0	0	0	0	0	0	0	0
Oregon	0	4	-100.0%	0	4	0	0	0	0	0	0
Washington	2	1	57.0%	1	1	1	0	0	0	0	0
Pacific Noncontiguous	736	814	-9.6%	573	651	163	163	0	0	0	0
Alaska	1	2	-6.0%	1	2	0	0	0	0	0	0
Hawaii	734	812	-9.6%	572	649	163	163	0	0	0	0
U.S. Total	1,551	2,306	-33.0%	1,074	1,386	441	891	0	0	35	29

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Totals may not equal sum of components because of independent rounding. Percentage change is calculated before rounding.

Petroleum Liquids includes distillate and residual fuel oils.

See the Technical Notes for fuel conversion factors.

Source: U.S. Energy Information Administration, Form EIA-923, "Power Plant Operations Report."

Table 4.7.B. Receipts of Petroleum Liquids Delivered for Electricity Generation by State, (Year-to-Date) November 2016 and 2015 (Thousand Barrels)

Census Division and State	All Sectors			Electric Power Sector				Commercial Sector		Industrial Sector	
	November 2016 YTD	November 2015 YTD	Percentage Change	Electric Utilities		Independent Power Producers		November 2016 YTD	November 2015 YTD	November 2016 YTD	November 2015 YTD
				November 2016 YTD	November 2015 YTD	November 2016 YTD	November 2015 YTD				
New England	498	2,927	-83.0%	74	63	419	2,860	0	0	5	4
Connecticut	35	761	-95.0%	0	0	35	761	0	0	0	0
Maine	23	870	-97.0%	0	0	18	866	0	0	5	4
Massachusetts	416	1,101	-62.0%	66	6	351	1,095	0	0	0	0
New Hampshire	9	81	-89.0%	9	57	0	23	0	0	0	0
Rhode Island	15	115	-87.0%	0	0	15	115	0	0	0	0
Vermont	0	0	--	0	0	0	0	0	0	0	0
Middle Atlantic	942	3,990	-76.0%	275	1,450	631	2,526	0	0	37	14
New Jersey	13	117	-89.0%	0	0	13	117	0	0	0	0
New York	562	2,908	-81.0%	275	1,450	267	1,448	0	0	20	11
Pennsylvania	367	964	-62.0%	0	0	350	961	0	0	17	3
East North Central	942	994	-5.2%	489	640	425	318	0	0	28	36
Illinois	107	90	19.0%	3	11	104	79	0	0	0	0
Indiana	170	253	-33.0%	170	253	0	0	0	0	0	0
Michigan	164	164	0.1%	155	154	0	0	0	0	9	10
Ohio	456	418	9.1%	120	158	317	236	0	0	19	24
Wisconsin	46	69	-33.0%	42	64	4	4	0	0	0	2
West North Central	330	383	-14.0%	326	383	4	0	0	0	0	0
Iowa	84	61	38.0%	84	61	0	0	0	0	0	0
Kansas	36	71	-48.0%	36	71	0	0	0	0	0	0
Minnesota	36	43	-15.0%	32	43	4	0	0	0	0	0
Missouri	114	133	-14.0%	114	133	0	0	0	0	0	0
Nebraska	3	2	50.0%	3	2	0	0	0	0	0	0
North Dakota	51	43	18.0%	51	43	0	0	0	0	0	0
South Dakota	4	30	-88.0%	4	30	0	0	0	0	0	0
South Atlantic	3,421	4,606	-26.0%	2,579	3,208	638	1,108	0	0	203	289
Delaware	78	183	-57.0%	0	0	78	183	0	0	0	0
District of Columbia	0	0	--	0	0	0	0	0	0	0	0
Florida	831	620	34.0%	824	600	7	4	0	0	0	17
Georgia	250	260	-3.7%	159	132	32	75	0	0	60	53
Maryland	262	452	-42.0%	0	0	262	452	0	0	0	0
North Carolina	261	611	-57.0%	200	531	61	41	0	0	0	39
South Carolina	255	427	-40.0%	137	286	0	7	0	0	117	134
Virginia	1,279	1,848	-31.0%	1,062	1,471	191	330	0	0	26	47
West Virginia	205	204	0.2%	198	188	7	16	0	0	0	0
East South Central	423	447	-5.3%	404	436	10	7	0	0	8	4
Alabama	60	74	-19.0%	50	67	10	7	0	0	0	0
Kentucky	174	175	-0.3%	174	175	0	0	0	0	0	0
Mississippi	24	45	-46.0%	24	45	0	0	0	0	0	0
Tennessee	165	154	7.4%	157	150	0	0	0	0	8	4
West South Central	252	328	-23.0%	187	230	65	98	0	0	0	0
Arkansas	61	94	-35.0%	46	71	15	22	0	0	0	0
Louisiana	53	94	-44.0%	51	70	2	24	0	0	0	0
Oklahoma	28	4	652.0%	28	4	0	0	0	0	0	0
Texas	110	137	-19.0%	63	85	47	51	0	0	0	0
Mountain	319	330	-3.3%	292	310	27	20	0	0	0	0
Arizona	98	94	4.4%	98	94	0	0	0	0	0	0
Colorado	13	6	130.0%	13	6	0	0	0	0	0	0
Idaho	0	0	--	0	0	0	0	0	0	0	0
Montana	22	13	70.0%	0	0	22	13	0	0	0	0
Nevada	21	28	-24.0%	16	22	5	6	0	0	0	0
New Mexico	73	95	-23.0%	73	95	0	0	0	0	0	0
Utah	25	29	-16.0%	25	28	0	2	0	0	0	0
Wyoming	68	66	3.0%	68	66	0	0	0	0	0	0
Pacific Contiguous	14	15	-2.7%	1	5	13	9	0	0	0	0
California	0	0	--	0	0	0	0	0	0	0	0
Oregon	0	5	-100.0%	0	5	0	0	0	0	0	0
Washington	14	10	42.0%	1	1	13	9	0	0	0	0
Pacific Noncontiguous	8,145	8,645	-5.8%	6,383	6,813	1,762	1,832	0	0	0	0
Alaska	8	16	-47.0%	8	16	0	0	0	0	0	0
Hawaii	8,136	8,629	-5.7%	6,374	6,797	1,762	1,832	0	0	0	0
U.S. Total	15,286	22,664	-33.0%	11,011	13,537	3,994	8,780	0	0	282	347

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Totals may not equal sum of components because of independent rounding. Percentage change is calculated before rounding.

Petroleum Liquids includes distillate and residual fuel oils.

See the Technical Notes for fuel conversion factors.

Source: U.S. Energy Information Administration, Form EIA-923, "Power Plant Operations Report."

**Table 4.8.A. Receipts of Petroleum Coke Delivered for Electricity Generation by State, November 2016 and 2015
(Thousand Tons)**

Census Division and State	All Sectors			Electric Power Sector				Commercial Sector		Industrial Sector	
	November 2016	November 2015	Percentage Change	Electric Utilities		Independent Power Producers		November 2016	November 2015	November 2016	November 2015
				November 2016	November 2015	November 2016	November 2015				
New England	0	0	--	0	0	0	0	0	0	0	0
Connecticut	0	0	--	0	0	0	0	0	0	0	0
Maine	0	0	--	0	0	0	0	0	0	0	0
Massachusetts	0	0	--	0	0	0	0	0	0	0	0
New Hampshire	0	0	--	0	0	0	0	0	0	0	0
Rhode Island	0	0	--	0	0	0	0	0	0	0	0
Vermont	0	0	--	0	0	0	0	0	0	0	0
Middle Atlantic	0	9	-100.0%	0	0	0	0	0	0	0	9
New Jersey	0	0	--	0	0	0	0	0	0	0	0
New York	0	0	--	0	0	0	0	0	0	0	0
Pennsylvania	0	9	-100.0%	0	0	0	0	0	0	0	9
East North Central	73	143	-49.0%	27	78	46	59	0	0	0	5
Illinois	0	0	--	0	0	0	0	0	0	0	0
Indiana	0	56	-100.0%	0	56	0	0	0	0	0	0
Michigan	19	19	-0.2%	19	19	0	0	0	0	0	0
Ohio	46	59	-22.0%	0	0	46	59	0	0	0	0
Wisconsin	8	9	-9.2%	8	4	0	0	0	0	0	5
West North Central	0	0	--	0	0	0	0	0	0	0	0
Iowa	0	0	--	0	0	0	0	0	0	0	0
Kansas	0	0	--	0	0	0	0	0	0	0	0
Minnesota	0	0	--	0	0	0	0	0	0	0	0
Missouri	0	0	--	0	0	0	0	0	0	0	0
Nebraska	0	0	--	0	0	0	0	0	0	0	0
North Dakota	0	0	--	0	0	0	0	0	0	0	0
South Dakota	0	0	--	0	0	0	0	0	0	0	0
South Atlantic	84	96	-12.0%	76	96	0	0	0	0	8	0
Delaware	0	0	--	0	0	0	0	0	0	0	0
District of Columbia	0	0	--	0	0	0	0	0	0	0	0
Florida	76	96	-21.0%	76	96	0	0	0	0	0	0
Georgia	8	0	--	0	0	0	0	0	0	8	0
Maryland	0	0	--	0	0	0	0	0	0	0	0
North Carolina	0	0	--	0	0	0	0	0	0	0	0
South Carolina	0	0	--	0	0	0	0	0	0	0	0
Virginia	0	0	--	0	0	0	0	0	0	0	0
West Virginia	0	0	--	0	0	0	0	0	0	0	0
East South Central	13	48	-73.0%	13	48	0	0	0	0	0	0
Alabama	0	0	--	0	0	0	0	0	0	0	0
Kentucky	13	48	-73.0%	13	48	0	0	0	0	0	0
Mississippi	0	0	--	0	0	0	0	0	0	0	0
Tennessee	0	0	--	0	0	0	0	0	0	0	0
West South Central	163	132	23.0%	163	132	0	0	0	0	0	0
Arkansas	0	0	--	0	0	0	0	0	0	0	0
Louisiana	163	132	23.0%	163	132	0	0	0	0	0	0
Oklahoma	0	0	--	0	0	0	0	0	0	0	0
Texas	0	0	--	0	0	0	0	0	0	0	0
Mountain	0	0	--	0	0	0	0	0	0	0	0
Arizona	0	0	--	0	0	0	0	0	0	0	0
Colorado	0	0	--	0	0	0	0	0	0	0	0
Idaho	0	0	--	0	0	0	0	0	0	0	0
Montana	0	0	--	0	0	0	0	0	0	0	0
Nevada	0	0	--	0	0	0	0	0	0	0	0
New Mexico	0	0	--	0	0	0	0	0	0	0	0
Utah	0	0	--	0	0	0	0	0	0	0	0
Wyoming	0	0	--	0	0	0	0	0	0	0	0
Pacific Contiguous	0	0	--	0	0	0	0	0	0	0	0
California	0	0	--	0	0	0	0	0	0	0	0
Oregon	0	0	--	0	0	0	0	0	0	0	0
Washington	0	0	--	0	0	0	0	0	0	0	0
Pacific Noncontiguous	0	0	--	0	0	0	0	0	0	0	0
Alaska	0	0	--	0	0	0	0	0	0	0	0
Hawaii	0	0	--	0	0	0	0	0	0	0	0
U.S. Total	333	429	-22.0%	279	354	46	59	0	0	8	15

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Totals may not equal sum of components because of independent rounding. Percentage change is calculated before rounding.

Petroleum Coke includes petroleum coke-derived synthesis gas.

See the Technical Notes for fuel conversion factors.

Source: U.S. Energy Information Administration, Form EIA-923, "Power Plant Operations Report."

Table 4.8.B. Receipts of Petroleum Coke Delivered for Electricity Generation by State, (Year-to-Date) November 2016 and 2015 (Thousand Tons)

Census Division and State	All Sectors			Electric Power Sector				Commercial Sector		Industrial Sector	
	November 2016 YTD	November 2015 YTD	Percentage Change	Electric Utilities		Independent Power Producers		November 2016 YTD	November 2015 YTD	November 2016 YTD	November 2015 YTD
				November 2016 YTD	November 2015 YTD	November 2016 YTD	November 2015 YTD				
New England	0	0	--	0	0	0	0	0	0	0	0
Connecticut	0	0	--	0	0	0	0	0	0	0	0
Maine	0	0	--	0	0	0	0	0	0	0	0
Massachusetts	0	0	--	0	0	0	0	0	0	0	0
New Hampshire	0	0	--	0	0	0	0	0	0	0	0
Rhode Island	0	0	--	0	0	0	0	0	0	0	0
Vermont	0	0	--	0	0	0	0	0	0	0	0
Middle Atlantic	0	99	-100.0%	0	0	0	0	0	0	0	99
New Jersey	0	0	--	0	0	0	0	0	0	0	0
New York	0	0	--	0	0	0	0	0	0	0	0
Pennsylvania	0	99	-100.0%	0	0	0	0	0	0	0	99
East North Central	940	1,192	-21.0%	485	666	437	458	0	0	18	68
Illinois	0	0	--	0	0	0	0	0	0	0	0
Indiana	162	353	-54.0%	162	353	0	0	0	0	0	0
Michigan	278	295	-5.7%	278	282	0	13	0	0	0	0
Ohio	437	445	-1.8%	0	0	437	445	0	0	0	0
Wisconsin	63	98	-35.0%	45	30	0	0	0	0	18	68
West North Central	0	0	--	0	0	0	0	0	0	0	0
Iowa	0	0	--	0	0	0	0	0	0	0	0
Kansas	0	0	--	0	0	0	0	0	0	0	0
Minnesota	0	0	--	0	0	0	0	0	0	0	0
Missouri	0	0	--	0	0	0	0	0	0	0	0
Nebraska	0	0	--	0	0	0	0	0	0	0	0
North Dakota	0	0	--	0	0	0	0	0	0	0	0
South Dakota	0	0	--	0	0	0	0	0	0	0	0
South Atlantic	1,334	1,043	28.0%	1,241	936	0	0	0	0	93	107
Delaware	0	0	--	0	0	0	0	0	0	0	0
District of Columbia	0	0	--	0	0	0	0	0	0	0	0
Florida	1,241	936	33.0%	1,241	936	0	0	0	0	0	0
Georgia	93	107	-13.0%	0	0	0	0	0	0	93	107
Maryland	0	0	--	0	0	0	0	0	0	0	0
North Carolina	0	0	--	0	0	0	0	0	0	0	0
South Carolina	0	0	--	0	0	0	0	0	0	0	0
Virginia	0	0	--	0	0	0	0	0	0	0	0
West Virginia	0	0	--	0	0	0	0	0	0	0	0
East South Central	77	559	-86.0%	77	559	0	0	0	0	0	0
Alabama	0	0	--	0	0	0	0	0	0	0	0
Kentucky	77	559	-86.0%	77	559	0	0	0	0	0	0
Mississippi	0	0	--	0	0	0	0	0	0	0	0
Tennessee	0	0	--	0	0	0	0	0	0	0	0
West South Central	1,451	1,611	-9.9%	1,451	1,611	0	0	0	0	0	0
Arkansas	0	0	--	0	0	0	0	0	0	0	0
Louisiana	1,451	1,611	-9.9%	1,451	1,611	0	0	0	0	0	0
Oklahoma	0	0	--	0	0	0	0	0	0	0	0
Texas	0	0	--	0	0	0	0	0	0	0	0
Mountain	0	0	--	0	0	0	0	0	0	0	0
Arizona	0	0	--	0	0	0	0	0	0	0	0
Colorado	0	0	--	0	0	0	0	0	0	0	0
Idaho	0	0	--	0	0	0	0	0	0	0	0
Montana	0	0	--	0	0	0	0	0	0	0	0
Nevada	0	0	--	0	0	0	0	0	0	0	0
New Mexico	0	0	--	0	0	0	0	0	0	0	0
Utah	0	0	--	0	0	0	0	0	0	0	0
Wyoming	0	0	--	0	0	0	0	0	0	0	0
Pacific Contiguous	0	0	--	0	0	0	0	0	0	0	0
California	0	0	--	0	0	0	0	0	0	0	0
Oregon	0	0	--	0	0	0	0	0	0	0	0
Washington	0	0	--	0	0	0	0	0	0	0	0
Pacific Noncontiguous	0	0	--	0	0	0	0	0	0	0	0
Alaska	0	0	--	0	0	0	0	0	0	0	0
Hawaii	0	0	--	0	0	0	0	0	0	0	0
U.S. Total	3,803	4,504	-16.0%	3,254	3,772	437	458	0	0	112	274

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Totals may not equal sum of components because of independent rounding. Percentage change is calculated before rounding.

Petroleum Coke includes petroleum coke-derived synthesis gas.

See the Technical Notes for fuel conversion factors.

Source: U.S. Energy Information Administration, Form EIA-923, "Power Plant Operations Report."

**Table 4.9.A. Receipts of Natural Gas Delivered for Electricity Generation by State, November 2016 and 2015
(Million Cubic Feet)**

Census Division and State	All Sectors			Electric Power Sector				Commercial Sector		Industrial Sector	
	November 2016	November 2015	Percentage Change	Electric Utilities		Independent Power Producers		November 2016	November 2015	November 2016	November 2015
				November 2016	November 2015	November 2016	November 2015				
New England	24,247	24,972	-2.9%	18	60	24,229	24,912	0	0	0	0
Connecticut	9,461	9,530	-0.7%	0	0	9,461	9,530	0	0	0	0
Maine	1,128	1,812	-38.0%	0	0	1,128	1,812	0	0	0	0
Massachusetts	7,674	7,701	-0.4%	18	28	7,657	7,674	0	0	0	0
New Hampshire	3,080	3,796	-19.0%	0	32	3,080	3,764	0	0	0	0
Rhode Island	2,903	2,132	36.0%	0	0	2,903	2,132	0	0	0	0
Vermont	0	0	--	0	0	0	0	0	0	0	0
Middle Atlantic	81,692	86,176	-5.2%	5,540	7,370	75,793	78,663	0	0	360	142
New Jersey	18,871	22,567	-16.0%	0	0	18,871	22,567	0	0	0	0
New York	25,444	29,293	-13.0%	5,540	7,370	19,796	21,875	0	0	108	49
Pennsylvania	37,377	34,316	8.9%	0	0	37,125	34,222	0	0	251	94
East North Central	59,579	54,021	10.0%	24,068	25,544	33,712	27,016	497	679	1,302	782
Illinois	7,557	6,306	20.0%	405	206	7,146	6,095	0	0	6	5
Indiana	12,931	10,784	20.0%	10,827	8,185	2,103	2,599	0	0	0	0
Michigan	16,853	13,565	24.0%	4,314	4,777	11,530	7,661	497	679	512	448
Ohio	15,693	15,605	0.6%	2,909	5,350	12,424	10,163	0	0	360	92
Wisconsin	6,545	7,762	-16.0%	5,613	7,027	508	498	0	0	424	236
West North Central	9,756	6,720	45.0%	8,689	5,867	708	771	92	70	267	13
Iowa	2,082	447	366.0%	1,815	445	0	0	0	0	267	2
Kansas	1,180	578	104.0%	1,180	578	0	0	0	0	0	0
Minnesota	3,239	3,009	7.7%	2,781	2,703	457	306	1	1	0	0
Missouri	2,022	2,130	-5.1%	1,680	1,596	251	465	91	69	0	0
Nebraska	560	138	307.0%	560	127	0	0	0	0	0	11
North Dakota	203	5	NM	203	5	0	0	0	0	0	0
South Dakota	469	413	14.0%	469	413	0	0	0	0	0	0
South Atlantic	164,049	176,753	-7.2%	138,132	142,010	22,147	31,218	0	0	3,770	3,525
Delaware	4,435	3,026	47.0%	0	0	3,307	2,087	0	0	1,128	939
District of Columbia	0	0	--	0	0	0	0	0	0	0	0
Florida	74,153	87,084	-15.0%	70,457	79,941	3,696	7,047	0	0	0	96
Georgia	24,796	28,866	-14.0%	20,538	20,510	3,404	7,111	0	0	853	1,245
Maryland	521	3,006	-83.0%	0	0	348	2,954	0	0	173	52
North Carolina	23,747	22,634	4.9%	22,124	20,941	1,623	1,218	0	0	0	475
South Carolina	13,314	13,703	-2.8%	8,865	12,085	4,338	1,546	0	0	110	72
Virginia	21,980	17,695	24.0%	16,025	8,504	5,169	8,544	0	0	785	648
West Virginia	1,104	739	49.0%	123	28	260	712	0	0	721	0
East South Central	63,160	68,849	-8.3%	40,707	44,707	21,094	23,218	0	0	1,359	924
Alabama	29,325	29,903	-1.9%	8,428	9,071	20,897	20,832	0	0	0	0
Kentucky	4,190	5,633	-26.0%	4,008	5,633	182	0	0	0	0	0
Mississippi	24,597	26,936	-8.7%	24,583	24,550	14	2,386	0	0	0	0
Tennessee	5,048	6,377	-21.0%	3,688	5,453	0	0	0	0	1,359	924
West South Central	197,666	215,982	-8.5%	53,374	58,551	91,476	103,202	0	0	52,816	54,229
Arkansas	10,443	5,723	82.0%	3,913	1,664	6,352	3,675	0	0	178	385
Louisiana	37,519	47,336	-21.0%	16,690	25,131	2,960	4,066	0	0	17,869	18,139
Oklahoma	20,667	20,411	1.3%	13,966	13,708	6,701	6,583	0	0	0	120
Texas	129,037	142,511	-9.5%	18,805	18,048	75,464	88,879	0	0	34,769	35,585
Mountain	39,188	52,394	-25.0%	32,212	40,595	6,926	11,780	0	0	50	19
Arizona	11,284	17,520	-36.0%	6,806	10,410	4,478	7,110	0	0	0	0
Colorado	5,367	9,248	-42.0%	4,501	8,096	867	1,152	0	0	0	0
Idaho	714	1,961	-64.0%	229	817	484	1,144	0	0	0	0
Montana	0	449	-100.0%	0	448	0	1	0	0	0	0
Nevada	14,068	13,846	1.6%	14,068	13,846	0	0	0	0	0	0
New Mexico	4,711	4,918	-4.2%	3,692	2,552	1,019	2,366	0	0	0	0
Utah	3,041	4,312	-29.0%	2,913	4,285	78	8	0	0	50	19
Wyoming	3	141	-98.0%	3	141	0	0	0	0	0	0
Pacific Contiguous	57,367	71,260	-19.0%	22,755	28,280	31,369	39,341	0	0	3,243	3,640
California	46,220	53,927	-14.0%	15,575	18,598	27,402	31,689	0	0	3,243	3,640
Oregon	7,717	8,520	-9.4%	4,272	4,392	3,445	4,128	0	0	0	0
Washington	3,431	8,813	-61.0%	2,908	5,290	523	3,523	0	0	0	0
Pacific Noncontiguous	1,011	1,374	-26.0%	1,011	1,374	0	0	0	0	0	0
Alaska	1,011	1,374	-26.0%	1,011	1,374	0	0	0	0	0	0
Hawaii	0	0	--	0	0	0	0	0	0	0	0
U.S. Total	697,714	758,502	-8.0%	326,505	354,358	307,453	340,122	589	749	63,167	63,274

Displayed values of zero may represent small values that round to zero.

NM = Not meaningful due to large relative standard error or excessive percentage change.

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Notes:

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Totals may not equal sum of components because of independent rounding. Percentage change is calculated before rounding.

Source: U.S. Energy Information Administration, Form EIA-923, "Power Plant Operations Report."

Table 4.9.B. Receipts of Natural Gas Delivered for Electricity Generation by State, (Year-to-Date) November 2016 and 2015 (Million Cubic Feet)

Census Division and State				Electric Power Sector				Commercial Sector		Industrial Sector	
All Sectors				Electric Utilities		Independent Power Producers		Commercial Sector		Industrial Sector	
	November 2016 YTD	November 2015 YTD	Percentage Change	November 2016 YTD	November 2015 YTD	November 2016 YTD	November 2015 YTD	November 2016 YTD	November 2015 YTD	November 2016 YTD	November 2015 YTD
New England	347,456	343,494	1.2%	1,900	2,164	345,556	341,330	0	0	0	0
Connecticut	109,207	105,211	3.8%	0	0	109,207	105,211	0	0	0	0
Maine	21,769	16,767	30.0%	0	0	21,769	16,767	0	0	0	0
Massachusetts	140,829	136,748	3.0%	1,449	1,856	139,381	134,892	0	0	0	0
New Hampshire	31,677	40,004	-21.0%	451	308	31,226	39,696	0	0	0	0
Rhode Island	43,973	44,764	-1.8%	0	0	43,973	44,764	0	0	0	0
Vermont	0	0	--	0	0	0	0	0	0	0	0
Middle Atlantic	1,122,109	1,021,325	9.9%	95,101	92,484	1,024,665	927,009	0	0	2,344	1,831
New Jersey	289,404	244,886	18.0%	0	0	289,404	244,886	0	0	0	0
New York	393,370	394,485	-0.3%	95,101	92,484	297,438	301,282	0	0	831	718
Pennsylvania	439,335	381,954	15.0%	0	0	437,823	380,841	0	0	1,512	1,113
East North Central	787,144	588,819	34.0%	348,003	261,112	423,491	316,362	5,866	4,775	9,784	6,569
Illinois	127,821	65,815	94.0%	12,137	4,462	115,651	61,301	0	0	33	52
Indiana	135,614	101,392	34.0%	111,252	80,589	24,362	20,803	0	0	0	0
Michigan	222,169	144,777	53.0%	79,053	45,355	132,112	90,760	5,866	4,775	5,138	3,886
Ohio	193,693	187,927	3.1%	51,288	50,327	141,135	136,722	0	0	1,270	877
Wisconsin	107,847	88,908	21.0%	94,273	80,378	10,231	6,777	0	0	3,342	1,753
West North Central	159,006	121,510	31.0%	133,738	103,925	23,363	16,214	1,351	1,089	554	283
Iowa	28,822	22,558	28.0%	28,268	22,541	0	0	0	0	554	17
Kansas	16,071	11,443	40.0%	16,071	11,443	0	0	0	0	0	0
Minnesota	60,034	45,995	31.0%	47,641	38,727	12,383	6,945	9	74	0	249
Missouri	42,470	32,713	30.0%	30,149	22,429	10,980	9,269	1,341	1,015	0	0
Nebraska	4,149	3,396	22.0%	4,149	3,380	0	0	0	0	0	16
North Dakota	1,854	510	264.0%	1,854	510	0	0	0	0	0	0
South Dakota	5,606	4,896	15.0%	5,606	4,896	0	0	0	0	0	0
South Atlantic	2,230,562	2,077,531	7.4%	1,796,821	1,701,730	397,507	337,798	0	0	36,234	38,004
Delaware	60,443	51,761	17.0%	0	0	47,561	39,180	0	0	12,882	12,581
District of Columbia	0	0	--	0	0	0	0	0	0	0	0
Florida	1,075,461	1,037,463	3.7%	996,106	988,028	79,355	48,620	0	0	0	815
Georgia	363,323	339,544	7.0%	275,386	242,084	79,158	85,832	0	0	8,779	11,628
Maryland	46,978	34,579	36.0%	0	0	45,001	34,250	0	0	1,977	329
North Carolina	270,909	250,975	7.9%	234,684	218,166	36,225	27,584	0	0	0	5,225
South Carolina	122,930	120,184	2.3%	99,108	108,111	22,132	11,486	0	0	1,689	586
Virginia	276,853	230,309	20.0%	190,041	143,968	79,492	79,500	0	0	7,321	6,840
West Virginia	13,665	12,716	7.5%	1,495	1,372	8,584	11,345	0	0	3,586	0
East South Central	865,383	775,826	12.0%	570,083	480,542	284,988	285,943	0	0	10,312	9,341
Alabama	364,400	345,753	5.4%	105,643	87,230	258,756	258,523	0	0	0	0
Kentucky	61,894	50,880	22.0%	56,644	44,945	5,250	5,935	0	0	0	0
Mississippi	348,829	306,243	14.0%	327,847	284,758	20,982	21,485	0	0	0	0
Tennessee	90,260	72,950	24.0%	79,948	63,609	0	0	0	0	10,312	9,341
West South Central	2,677,813	2,678,026	0.0%	820,280	768,600	1,290,496	1,327,988	0	0	567,037	581,439
Arkansas	126,612	102,556	23.0%	49,229	28,391	75,355	70,604	0	0	2,029	3,562
Louisiana	500,251	490,690	1.9%	257,589	274,513	46,811	30,815	0	0	195,852	185,361
Oklahoma	258,821	231,430	12.0%	181,389	151,723	77,432	79,127	0	0	0	579
Texas	1,792,129	1,853,351	-3.3%	332,074	313,972	1,090,898	1,147,442	0	0	369,157	391,937
Mountain	640,116	617,320	3.7%	493,342	464,204	146,074	152,609	0	0	700	508
Arizona	242,605	229,937	5.5%	141,135	127,375	101,469	102,561	0	0	0	0
Colorado	83,801	79,584	5.3%	70,651	63,720	13,150	15,864	0	0	0	0
Idaho	19,319	21,890	-12.0%	11,308	12,663	8,011	9,227	0	0	0	0
Montana	0	4,379	-100.0%	0	4,362	0	18	0	0	0	0
Nevada	176,758	174,201	1.5%	176,758	174,201	0	0	0	0	0	0
New Mexico	67,595	59,704	13.0%	45,218	35,842	22,377	23,861	0	0	0	0
Utah	50,003	46,558	7.4%	48,235	44,981	1,068	1,070	0	0	700	508
Wyoming	35	1,068	-97.0%	35	1,061	0	7	0	0	0	0
Pacific Contiguous	692,926	812,569	-15.0%	275,989	302,245	380,441	474,851	0	0	36,496	35,473
California	544,127	663,787	-18.0%	191,646	215,534	315,986	412,779	0	0	36,496	35,473
Oregon	87,125	76,723	14.0%	46,145	41,114	40,980	35,609	0	0	0	0
Washington	61,674	72,059	-14.0%	38,198	45,597	23,476	26,462	0	0	0	0
Pacific Noncontiguous	12,074	14,462	-17.0%	12,074	14,462	0	0	0	0	0	0
Alaska	12,074	14,462	-17.0%	12,074	14,462	0	0	0	0	0	0
Hawaii	0	0	--	0	0	0	0	0	0	0	0
U.S. Total	9,534,590	9,050,883	5.3%	4,547,331	4,191,468	4,316,582	4,180,105	7,217	5,863	663,461	673,448

Displayed values of zero may represent small values that round to zero.

NM = Not meaningful due to large relative standard error or excessive percentage change.

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Notes:

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See Glossary for definitions. Values for 2015 are final. Values for 2016 are preliminary. See Technical Notes for a discussion of Totals may not equal sum of components because of independent rounding. Percentage change is calculated before rounding.

Source: U.S. Energy Information Administration, Form EIA-923, "Power Plant Operations Report."

**Table 4.10.A. Average Cost of Coal Delivered for Electricity Generation by State, November 2016 and 2015
(Dollars per MMBtu)**

Census Division and State	Electric Power Sector			Electric Utilities		Independent Power Producers	
	November 2016	November 2015	Percentage Change	November 2016	November 2015	November 2016	November 2015
New England	W	W	W	--	3.57	W	W
Connecticut	--	--	--	--	--	--	--
Maine	W	W	W	--	--	W	W
Massachusetts	W	W	W	--	--	W	W
New Hampshire	--	3.57	--	--	3.57	--	--
Rhode Island	--	--	--	--	--	--	--
Vermont	--	--	--	--	--	--	--
Middle Atlantic	1.93	2.14	-9.8%	--	--	1.93	2.14
New Jersey	W	W	W	--	--	W	W
New York	W	W	W	--	--	W	W
Pennsylvania	1.85	2.08	-11.0%	--	--	1.85	2.08
East North Central	2.05	2.13	-3.8%	2.14	2.23	1.90	1.98
Illinois	1.75	1.91	-8.4%	1.82	2.07	1.74	1.86
Indiana	W	W	W	2.22	2.30	W	W
Michigan	W	W	W	2.23	2.32	W	W
Ohio	W	W	W	1.84	2.08	W	W
Wisconsin	2.17	2.13	1.9%	2.17	2.13	--	--
West North Central	1.73	1.71	1.2%	1.73	1.71	--	--
Iowa	1.55	1.50	3.3%	1.55	1.50	--	--
Kansas	1.74	1.73	0.6%	1.74	1.73	--	--
Minnesota	2.02	1.80	12.0%	2.02	1.80	--	--
Missouri	1.91	1.87	2.1%	1.91	1.87	--	--
Nebraska	1.34	1.32	1.5%	1.34	1.32	--	--
North Dakota	1.50	1.65	-9.1%	1.50	1.65	--	--
South Dakota	2.30	2.93	-22.0%	2.30	2.93	--	--
South Atlantic	2.73	2.80	-2.5%	2.75	2.86	2.61	2.32
Delaware	W	--	W	--	--	W	--
District of Columbia	--	--	--	--	--	--	--
Florida	3.00	W	W	3.00	3.14	--	W
Georgia	2.68	2.69	-0.4%	2.68	2.69	--	--
Maryland	2.86	2.82	1.4%	--	--	2.86	2.82
North Carolina	3.19	3.38	-5.6%	3.19	3.38	--	3.49
South Carolina	3.11	3.47	-10.0%	3.11	3.47	--	--
Virginia	W	W	W	2.81	2.84	W	W
West Virginia	W	2.24	W	2.22	2.37	W	1.46
East South Central	W	W	W	2.17	2.24	W	W
Alabama	2.26	2.38	-5.0%	2.26	2.38	--	--
Kentucky	2.08	2.17	-4.1%	2.08	2.17	--	--
Mississippi	W	W	W	2.67	2.58	W	W
Tennessee	2.31	2.23	3.6%	2.31	2.23	--	--
West South Central	1.96	2.04	-3.9%	2.12	2.25	1.81	1.79
Arkansas	W	W	W	2.09	2.25	W	W
Louisiana	W	W	W	3.06	3.85	W	W
Oklahoma	W	W	W	1.97	1.98	W	W
Texas	1.87	1.88	-0.5%	2.03	2.07	1.78	1.75
Mountain	W	W	W	1.83	1.88	W	W
Arizona	2.15	2.07	3.9%	2.15	2.07	--	--
Colorado	1.74	1.84	-5.4%	1.74	1.84	--	--
Idaho	--	--	--	--	--	--	--
Montana	W	W	W	--	1.49	W	W
Nevada	W	W	W	2.01	2.30	W	W
New Mexico	2.07	2.19	-5.5%	2.07	2.19	--	--
Utah	1.90	1.81	5.0%	1.90	1.81	--	--
Wyoming	1.50	W	W	1.50	1.58	--	W
Pacific Contiguous	W	W	W	2.14	2.51	W	W
California	--	--	--	--	--	--	--
Oregon	2.14	2.51	-15.0%	2.14	2.51	--	--
Washington	W	W	W	--	--	W	W
Pacific Noncontiguous	W	W	W	3.00	3.57	W	W
Alaska	3.00	3.57	-16.0%	3.00	3.57	--	--
Hawaii	W	W	W	--	--	W	W
U.S. Total	2.08	2.14	-2.8%	2.13	2.20	1.92	1.97

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Notes:

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See Technical Notes for a discussion of the sample design for the Form EIA-923.

Totals may not equal sum of components because of independent rounding. Percentage change is calculated before rounding.

Coal includes anthracite, bituminous, subbituminous, lignite, waste coal, and coal-derived synthesis gas.

Source: U.S. Energy Information Administration, Form EIA-923, "Power Plant Operations Report."

**Table 4.10.B. Average Cost of Coal Delivered for Electricity Generation by State, (Year-to-Date) November 2016 and 2015
(Dollars per MMBtu)**

Census Division and State	Electric Power Sector			Electric Utilities		Independent Power Producers	
	November 2016 YTD	November 2015 YTD	Percentage Change	November 2016 YTD	November 2015 YTD	November 2016 YTD	November 2015 YTD
New England	W	3.52	W	4.07	3.87	W	3.30
Connecticut	W	W	W	--	--	W	W
Maine	W	W	W	--	--	W	W
Massachusetts	W	W	W	--	--	W	W
New Hampshire	4.07	3.87	5.2%	4.07	3.87	--	--
Rhode Island	--	--	--	--	--	--	--
Vermont	--	--	--	--	--	--	--
Middle Atlantic	2.00	2.35	-15.0%	--	--	2.00	2.35
New Jersey	W	3.83	W	--	--	W	3.83
New York	W	2.83	W	--	--	W	2.83
Pennsylvania	1.93	2.29	-16.0%	--	--	1.93	2.29
East North Central	2.09	2.19	-4.6%	2.18	2.29	1.94	2.04
Illinois	W	1.92	W	1.98	2.06	W	1.89
Indiana	W	W	W	2.25	2.32	W	W
Michigan	W	W	W	2.24	2.40	W	W
Ohio	2.06	W	W	1.89	2.13	2.12	W
Wisconsin	2.21	2.28	-3.1%	2.21	2.28	--	--
West North Central	1.72	1.73	-0.6%	1.72	1.73	--	--
Iowa	1.59	1.63	-2.5%	1.59	1.63	--	--
Kansas	1.70	1.71	-0.6%	1.70	1.71	--	--
Minnesota	2.06	1.90	8.4%	2.06	1.90	--	--
Missouri	1.87	1.90	-1.6%	1.87	1.90	--	--
Nebraska	1.34	1.35	-0.7%	1.34	1.35	--	--
North Dakota	1.53	1.56	-1.9%	1.53	1.56	--	--
South Dakota	2.24	2.26	-0.9%	2.24	2.26	--	--
South Atlantic	2.75	2.93	-6.1%	2.78	2.97	2.53	2.67
Delaware	W	W	W	--	--	W	W
District of Columbia	--	--	--	--	--	--	--
Florida	W	W	W	3.02	3.08	W	W
Georgia	2.80	2.93	-4.4%	2.80	2.93	--	--
Maryland	W	2.87	W	--	--	W	2.87
North Carolina	3.10	3.48	-11.0%	3.10	3.48	--	3.56
South Carolina	3.19	3.56	-10.0%	3.19	3.56	--	--
Virginia	W	2.95	W	2.90	2.87	W	3.50
West Virginia	W	2.32	W	2.30	2.37	W	2.00
East South Central	W	W	W	2.20	2.33	W	W
Alabama	2.36	2.45	-3.7%	2.36	2.45	--	--
Kentucky	2.12	2.22	-4.5%	2.12	2.22	--	--
Mississippi	W	W	W	2.68	3.08	W	W
Tennessee	2.23	2.39	-6.7%	2.23	2.39	--	--
West South Central	1.91	2.07	-7.7%	2.15	2.19	1.68	1.92
Arkansas	W	W	W	2.18	2.26	W	W
Louisiana	W	W	W	2.87	3.11	W	W
Oklahoma	W	W	W	1.91	1.97	W	W
Texas	1.80	1.98	-9.1%	2.09	2.12	1.64	1.89
Mountain	W	W	W	1.89	1.93	W	W
Arizona	2.14	2.07	3.4%	2.14	2.07	--	--
Colorado	1.87	1.83	2.2%	1.87	1.83	--	--
Idaho	--	--	--	--	--	--	--
Montana	W	W	W	--	1.74	W	W
Nevada	W	W	W	2.02	2.51	W	W
New Mexico	1.87	2.35	-20.0%	1.87	2.35	--	--
Utah	1.94	1.95	-0.5%	1.94	1.95	--	--
Wyoming	1.70	W	W	1.70	1.63	--	W
Pacific Contiguous	W	W	W	2.24	2.39	W	W
California	--	--	--	--	--	--	--
Oregon	2.24	2.39	-6.3%	2.24	2.39	--	--
Washington	W	W	W	--	--	W	W
Pacific Noncontiguous	W	W	W	3.09	3.26	W	W
Alaska	3.09	3.26	-5.2%	3.09	3.26	--	--
Hawaii	W	W	W	--	--	W	W
U.S. Total	2.11	2.22	-5.0%	2.17	2.26	1.94	2.11

Displayed values of zero may represent small values that round to zero.

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Notes:

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See Technical Notes for a discussion of the sample design for the Form EIA-923.

Totals may not equal sum of components because of independent rounding. Percentage change is calculated before rounding.

Coal includes anthracite, bituminous, subbituminous, lignite, waste coal, and coal-derived synthesis gas.

Source: U.S. Energy Information Administration, Form EIA-923, "Power Plant Operations Report."

**Table 4.11.A. Average Cost of Petroleum Liquids Delivered for Electricity Generation by State, November 2016 and 2015
(Dollars per MMBtu)**

Census Division and State	Electric Power Sector			Electric Utilities		Independent Power Producers	
	November 2016	November 2015	Percentage Change	November 2016	November 2015	November 2016	November 2015
New England	W	W	W	12.16	14.25	W	W
Connecticut	W	W	W	--	--	W	W
Maine	W	W	W	--	--	W	W
Massachusetts	W	9.55	W	21.72	21.60	W	9.54
New Hampshire	11.10	13.16	-16.0%	11.10	13.16	--	--
Rhode Island	W	W	W	--	--	W	W
Vermont	--	--	--	--	--	--	--
Middle Atlantic	W	7.35	W	7.00	6.71	W	9.52
New Jersey	W	10.16	W	--	--	W	10.16
New York	W	7.02	W	7.00	6.71	W	8.65
Pennsylvania	11.25	11.29	-0.4%	--	--	11.25	11.29
East North Central	11.74	12.15	-3.4%	11.15	12.38	12.53	11.42
Illinois	11.40	11.63	-2.0%	--	12.51	11.40	11.32
Indiana	11.22	12.06	-7.0%	11.22	12.06	--	--
Michigan	11.07	10.99	0.7%	11.07	10.99	--	--
Ohio	12.06	12.12	-0.5%	11.17	12.67	12.78	11.53
Wisconsin	11.01	13.42	-18.0%	11.01	13.42	--	--
West North Central	10.93	12.12	-9.8%	10.93	12.12	--	--
Iowa	11.14	12.26	-9.1%	11.14	12.26	--	--
Kansas	10.89	11.38	-4.3%	10.89	11.38	--	--
Minnesota	11.94	13.15	-9.2%	11.94	13.15	--	--
Missouri	11.25	11.53	-2.4%	11.25	11.53	--	--
Nebraska	--	13.47	--	--	13.47	--	--
North Dakota	8.44	11.18	-25.0%	8.44	11.18	--	--
South Dakota	10.54	--	--	10.54	--	--	--
South Atlantic	9.38	W	W	8.95	10.98	11.75	W
Delaware	--	W	W	--	--	--	W
District of Columbia	--	--	--	--	--	--	--
Florida	12.05	11.89	1.3%	12.05	11.89	--	--
Georgia	W	10.74	W	10.86	10.74	W	--
Maryland	10.97	10.65	3.0%	--	--	10.97	10.65
North Carolina	11.29	W	W	11.29	10.59	--	W
South Carolina	12.37	12.29	0.7%	12.37	12.29	--	--
Virginia	W	W	W	7.61	9.76	W	W
West Virginia	W	11.98	W	12.84	11.98	W	--
East South Central	11.44	11.54	-0.9%	11.44	11.54	--	--
Alabama	12.00	12.02	-0.2%	12.00	12.02	--	--
Kentucky	11.38	11.78	-3.4%	11.38	11.78	--	--
Mississippi	11.46	--	--	11.46	--	--	--
Tennessee	11.42	10.62	7.5%	11.42	10.62	--	--
West South Central	W	W	W	10.92	11.61	W	W
Arkansas	W	W	W	10.89	11.63	W	W
Louisiana	--	W	W	--	--	--	W
Oklahoma	--	--	--	--	--	--	--
Texas	W	11.54	W	11.00	11.54	W	--
Mountain	W	W	W	12.52	13.22	W	W
Arizona	12.82	13.63	-5.9%	12.82	13.63	--	--
Colorado	--	--	--	--	--	--	--
Idaho	--	--	--	--	--	--	--
Montana	W	W	W	--	--	W	W
Nevada	--	W	W	--	12.67	--	W
New Mexico	13.31	14.98	-11.0%	13.31	14.98	--	--
Utah	11.43	W	W	11.43	13.88	--	W
Wyoming	11.75	12.29	-4.4%	11.75	12.29	--	--
Pacific Contiguous	W	W	W	12.29	10.66	W	W
California	--	--	--	--	--	--	--
Oregon	--	10.53	--	--	10.53	--	--
Washington	W	W	W	12.29	11.29	W	W
Pacific Noncontiguous	W	W	W	10.19	9.01	W	W
Alaska	16.04	15.73	2.0%	16.04	15.73	--	--
Hawaii	W	W	W	10.17	9.00	W	W
U.S. Total	10.06	8.93	13.0%	9.79	8.80	10.76	9.13

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See Technical Notes for a discussion of the sample design for the Form EIA-923.

Totals may not equal sum of components because of independent rounding. Percentage change is calculated before rounding.

Petroleum Liquids includes distillate and residual fuel oils.

See the Technical Notes for fuel conversion factors.

Source: U.S. Energy Information Administration, Form EIA-923, "Power Plant Operations Report."

Table 4.11.B. Average Cost of Petroleum Liquids Delivered for Electricity Generation by State, (Year-to-Date) November 2016 and 2015 (Dollars per MMBtu)

Census Division and State	Electric Power Sector			Electric Utilities		Independent Power Producers	
	November 2016 YTD	November 2015 YTD	Percentage Change	November 2016 YTD	November 2015 YTD	November 2016 YTD	November 2015 YTD
New England	W	W	W	9.64	11.49	W	W
Connecticut	10.59	W	W	--	--	10.59	W
Maine	W	W	W	--	--	W	W
Massachusetts	W	11.85	W	9.61	22.01	W	11.81
New Hampshire	9.85	W	W	9.85	10.54	--	W
Rhode Island	W	W	W	--	--	W	W
Vermont	--	--	--	--	--	--	--
Middle Atlantic	10.02	11.44	-12.0%	7.80	8.98	11.04	13.12
New Jersey	9.83	14.01	-30.0%	--	--	9.83	14.01
New York	9.81	10.93	-10.0%	7.80	8.98	11.89	12.94
Pennsylvania	10.39	13.37	-22.0%	--	--	10.39	13.37
East North Central	W	13.87	W	10.64	13.91	W	13.78
Illinois	10.74	W	W	11.03	14.20	10.74	W
Indiana	10.43	14.02	-26.0%	10.43	14.02	--	--
Michigan	10.44	13.18	-21.0%	10.44	13.18	--	--
Ohio	W	13.80	W	10.90	13.95	W	13.70
Wisconsin	W	W	W	11.39	15.10	W	W
West North Central	W	12.82	W	10.49	12.82	W	--
Iowa	11.08	13.02	-15.0%	11.08	13.02	--	--
Kansas	10.30	12.67	-19.0%	10.30	12.67	--	--
Minnesota	W	13.52	W	11.29	13.52	W	--
Missouri	10.57	13.19	-20.0%	10.57	13.19	--	--
Nebraska	11.03	20.52	-46.0%	11.03	20.52	--	--
North Dakota	9.12	12.83	-29.0%	9.12	12.83	--	--
South Dakota	8.54	9.48	-9.9%	8.54	9.48	--	--
South Atlantic	9.89	12.89	-23.0%	9.78	12.65	10.39	13.70
Delaware	W	W	W	--	--	W	W
District of Columbia	--	--	--	--	--	--	--
Florida	W	W	W	11.62	14.50	W	W
Georgia	9.25	16.27	-43.0%	9.54	17.28	7.83	14.11
Maryland	9.62	10.79	-11.0%	--	--	9.62	10.79
North Carolina	W	W	W	10.10	13.35	W	W
South Carolina	10.99	15.02	-27.0%	10.99	15.02	--	--
Virginia	W	11.93	W	7.97	10.74	W	17.62
West Virginia	W	W	W	11.22	14.03	W	W
East South Central	W	W	W	10.27	12.92	W	W
Alabama	W	W	W	9.81	13.29	W	W
Kentucky	10.47	13.67	-23.0%	10.47	13.67	--	--
Mississippi	9.31	10.49	-11.0%	9.31	10.49	--	--
Tennessee	10.32	12.66	-18.0%	10.32	12.66	--	--
West South Central	10.51	13.21	-20.0%	10.33	13.09	11.04	13.49
Arkansas	W	W	W	9.99	13.26	W	W
Louisiana	W	W	W	9.66	12.53	W	W
Oklahoma	12.14	13.81	-12.0%	12.14	13.81	--	--
Texas	W	W	W	10.31	13.37	W	W
Mountain	W	14.89	W	11.21	14.92	W	14.56
Arizona	11.19	13.95	-20.0%	11.19	13.95	--	--
Colorado	10.12	15.01	-33.0%	10.12	15.01	--	--
Idaho	--	--	--	--	--	--	--
Montana	W	W	W	--	--	W	W
Nevada	W	W	W	11.79	16.98	W	W
New Mexico	10.96	15.74	-30.0%	10.96	15.74	--	--
Utah	11.64	W	W	11.64	14.84	--	W
Wyoming	11.40	14.44	-21.0%	11.40	14.44	--	--
Pacific Contiguous	W	W	W	12.29	11.66	W	W
California	--	--	--	--	--	--	--
Oregon	--	11.72	--	--	11.72	--	--
Washington	W	W	W	12.29	11.29	W	W
Pacific Noncontiguous	W	W	W	8.39	11.11	W	W
Alaska	14.31	17.45	-18.0%	14.31	17.45	--	--
Hawaii	W	W	W	8.38	11.10	W	W
U.S. Total	9.24	11.65	-21.0%	9.03	11.57	9.85	11.78

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Totals may not equal sum of components because of independent rounding. Percentage change is calculated before rounding.

Petroleum Liquids includes distillate and residual fuel oils.

See the Technical Notes for fuel conversion factors.

Source: U.S. Energy Information Administration, Form EIA-923, "Power Plant Operations Report."

**Table 4.12.A. Average Cost of Petroleum Coke Delivered for Electricity Generation by State, November 2016 and 2015
(Dollars per MMBtu)**

Census Division and State	Electric Power Sector			Electric Utilities		Independent Power Producers	
	November 2016	November 2015	Percentage Change	November 2016	November 2015	November 2016	November 2015
New England	--	--	--	--	--	--	--
Connecticut	--	--	--	--	--	--	--
Maine	--	--	--	--	--	--	--
Massachusetts	--	--	--	--	--	--	--
New Hampshire	--	--	--	--	--	--	--
Rhode Island	--	--	--	--	--	--	--
Vermont	--	--	--	--	--	--	--
Middle Atlantic	--	--	--	--	--	--	--
New Jersey	--	--	--	--	--	--	--
New York	--	--	--	--	--	--	--
Pennsylvania	--	--	--	--	--	--	--
East North Central	W	W	W	1.45	1.14	W	W
Illinois	--	--	--	--	--	--	--
Indiana	--	0.95	--	--	0.95	--	--
Michigan	1.32	1.66	-20.0%	1.32	1.66	--	--
Ohio	W	W	W	--	--	W	W
Wisconsin	1.73	1.73	0.0%	1.73	1.73	--	--
West North Central	--	--	--	--	--	--	--
Iowa	--	--	--	--	--	--	--
Kansas	--	--	--	--	--	--	--
Minnesota	--	--	--	--	--	--	--
Missouri	--	--	--	--	--	--	--
Nebraska	--	--	--	--	--	--	--
North Dakota	--	--	--	--	--	--	--
South Dakota	--	--	--	--	--	--	--
South Atlantic	2.35	1.65	42.0%	2.35	1.65	--	--
Delaware	--	--	--	--	--	--	--
District of Columbia	--	--	--	--	--	--	--
Florida	2.35	1.65	42.0%	2.35	1.65	--	--
Georgia	--	--	--	--	--	--	--
Maryland	--	--	--	--	--	--	--
North Carolina	--	--	--	--	--	--	--
South Carolina	--	--	--	--	--	--	--
Virginia	--	--	--	--	--	--	--
West Virginia	--	--	--	--	--	--	--
East South Central	1.47	1.57	-6.4%	1.47	1.57	--	--
Alabama	--	--	--	--	--	--	--
Kentucky	1.47	1.57	-6.4%	1.47	1.57	--	--
Mississippi	--	--	--	--	--	--	--
Tennessee	--	--	--	--	--	--	--
West South Central	2.34	1.49	57.0%	2.34	1.49	--	--
Arkansas	--	--	--	--	--	--	--
Louisiana	2.34	1.49	57.0%	2.34	1.49	--	--
Oklahoma	--	--	--	--	--	--	--
Texas	--	--	--	--	--	--	--
Mountain	--	--	--	--	--	--	--
Arizona	--	--	--	--	--	--	--
Colorado	--	--	--	--	--	--	--
Idaho	--	--	--	--	--	--	--
Montana	--	--	--	--	--	--	--
Nevada	--	--	--	--	--	--	--
New Mexico	--	--	--	--	--	--	--
Utah	--	--	--	--	--	--	--
Wyoming	--	--	--	--	--	--	--
Pacific Contiguous	--	--	--	--	--	--	--
California	--	--	--	--	--	--	--
Oregon	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--
Pacific Noncontiguous	--	--	--	--	--	--	--
Alaska	--	--	--	--	--	--	--
Hawaii	--	--	--	--	--	--	--
U.S. Total	W	W	W	2.22	1.46	W	W

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Totals may not equal sum of components because of independent rounding. Percentage change is calculated before rounding.

Petroleum Coke includes petroleum coke-derived synthesis gas.

See the Technical Notes for fuel conversion factors.

Source: U.S. Energy Information Administration, Form EIA-923, "Power Plant Operations Report."

Table 4.12.B. Average Cost of Petroleum Coke Delivered for Electricity Generation by State, (Year-to-Date) November 2016 and 2015 (Dollars per MMBtu)

Census Division and State	Electric Power Sector			Electric Utilities		Independent Power Producers	
	November 2016 YTD	November 2015 YTD	Percentage Change	November 2016 YTD	November 2015 YTD	November 2016 YTD	November 2015 YTD
New England	--	--	--	--	--	--	--
Connecticut	--	--	--	--	--	--	--
Maine	--	--	--	--	--	--	--
Massachusetts	--	--	--	--	--	--	--
New Hampshire	--	--	--	--	--	--	--
Rhode Island	--	--	--	--	--	--	--
Vermont	--	--	--	--	--	--	--
Middle Atlantic	--	--	--	--	--	--	--
New Jersey	--	--	--	--	--	--	--
New York	--	--	--	--	--	--	--
Pennsylvania	--	--	--	--	--	--	--
East North Central	W	W	W	1.22	1.30	W	W
Illinois	--	--	--	--	--	--	--
Indiana	0.96	0.95	1.1%	0.96	0.95	--	--
Michigan	1.30	W	W	1.30	1.76	--	W
Ohio	W	W	W	--	--	W	W
Wisconsin	1.71	1.67	2.4%	1.71	1.67	--	--
West North Central	--	--	--	--	--	--	--
Iowa	--	--	--	--	--	--	--
Kansas	--	--	--	--	--	--	--
Minnesota	--	--	--	--	--	--	--
Missouri	--	--	--	--	--	--	--
Nebraska	--	--	--	--	--	--	--
North Dakota	--	--	--	--	--	--	--
South Dakota	--	--	--	--	--	--	--
South Atlantic	1.53	2.17	-29.0%	1.53	2.17	--	--
Delaware	--	--	--	--	--	--	--
District of Columbia	--	--	--	--	--	--	--
Florida	1.53	2.17	-29.0%	1.53	2.17	--	--
Georgia	--	--	--	--	--	--	--
Maryland	--	--	--	--	--	--	--
North Carolina	--	--	--	--	--	--	--
South Carolina	--	--	--	--	--	--	--
Virginia	--	--	--	--	--	--	--
West Virginia	--	--	--	--	--	--	--
East South Central	1.55	1.69	-8.3%	1.55	1.69	--	--
Alabama	--	--	--	--	--	--	--
Kentucky	1.55	1.69	-8.3%	1.55	1.69	--	--
Mississippi	--	--	--	--	--	--	--
Tennessee	--	--	--	--	--	--	--
West South Central	1.51	1.83	-17.0%	1.51	1.83	--	--
Arkansas	--	--	--	--	--	--	--
Louisiana	1.51	1.83	-17.0%	1.51	1.83	--	--
Oklahoma	--	--	--	--	--	--	--
Texas	--	--	--	--	--	--	--
Mountain	--	--	--	--	--	--	--
Arizona	--	--	--	--	--	--	--
Colorado	--	--	--	--	--	--	--
Idaho	--	--	--	--	--	--	--
Montana	--	--	--	--	--	--	--
Nevada	--	--	--	--	--	--	--
New Mexico	--	--	--	--	--	--	--
Utah	--	--	--	--	--	--	--
Wyoming	--	--	--	--	--	--	--
Pacific Contiguous	--	--	--	--	--	--	--
California	--	--	--	--	--	--	--
Oregon	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--
Pacific Noncontiguous	--	--	--	--	--	--	--
Alaska	--	--	--	--	--	--	--
Hawaii	--	--	--	--	--	--	--
U.S. Total	1.60	1.87	-14.0%	1.48	1.80	2.50	2.45

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Totals may not equal sum of components because of independent rounding. Percentage change is calculated before rounding.

Petroleum Coke includes petroleum coke-derived synthesis gas.

See the Technical Notes for fuel conversion factors.

Source: U.S. Energy Information Administration, Form EIA-923, "Power Plant Operations Report."

**Table 4.13.A. Average Cost of Natural Gas Delivered for Electricity Generation by State, November 2016 and 2015
(Dollars per MMBtu)**

Census Division and State	Electric Power Sector			Electric Utilities		Independent Power Producers	
	November 2016	November 2015	Percentage Change	November 2016	November 2015	November 2016	November 2015
New England	3.57	4.16	-14.0%	3.33	5.29	3.57	4.16
Connecticut	3.26	5.00	-35.0%	--	--	3.26	5.00
Maine	--	W	W	--	--	--	W
Massachusetts	4.46	3.52	27.0%	3.33	3.53	4.47	3.52
New Hampshire	W	W	W	--	6.81	W	W
Rhode Island	W	3.20	W	--	--	W	3.20
Vermont	--	--	--	--	--	--	--
Middle Atlantic	2.36	1.96	20.0%	3.28	2.83	2.28	1.87
New Jersey	2.37	1.74	36.0%	--	--	2.37	1.74
New York	2.86	2.61	9.6%	3.28	2.83	2.72	2.52
Pennsylvania	2.03	1.53	33.0%	--	--	2.03	1.53
East North Central	2.62	2.35	11.0%	2.78	2.39	2.50	2.31
Illinois	W	W	W	3.03	3.56	W	W
Indiana	W	W	W	2.79	2.50	W	W
Michigan	2.67	2.48	7.7%	2.82	2.48	2.62	2.48
Ohio	2.20	1.96	12.0%	2.06	1.90	2.23	2.00
Wisconsin	W	W	W	3.10	2.57	W	W
West North Central	3.06	W	W	2.99	3.35	3.90	W
Iowa	2.85	4.75	-40.0%	2.85	4.75	--	--
Kansas	3.16	3.80	-17.0%	3.16	3.80	--	--
Minnesota	W	W	W	3.34	3.55	W	W
Missouri	W	W	W	2.64	2.56	W	W
Nebraska	2.98	3.20	-6.9%	2.98	3.20	--	--
North Dakota	2.74	11.52	-76.0%	2.74	11.52	--	--
South Dakota	2.36	2.76	-14.0%	2.36	2.76	--	--
South Atlantic	3.74	3.39	10.0%	3.80	3.53	2.79	2.33
Delaware	--	--	--	--	--	--	--
District of Columbia	--	--	--	--	--	--	--
Florida	W	3.85	W	4.01	3.90	W	2.36
Georgia	3.04	W	W	3.07	2.60	2.87	W
Maryland	3.47	2.94	18.0%	--	--	3.47	2.94
North Carolina	W	W	W	3.54	3.67	W	W
South Carolina	W	W	W	3.19	2.74	W	W
Virginia	W	W	W	4.54	3.16	W	W
West Virginia	2.66	1.77	50.0%	2.46	1.83	2.76	1.77
East South Central	2.87	2.37	21.0%	2.89	2.36	2.80	2.41
Alabama	W	W	W	3.21	2.43	W	W
Kentucky	W	2.47	W	3.06	2.47	W	--
Mississippi	W	W	W	2.77	2.32	W	W
Tennessee	2.84	2.29	24.0%	2.84	2.29	--	--
West South Central	2.67	2.25	19.0%	2.83	2.37	2.55	2.17
Arkansas	W	W	W	3.03	2.72	W	W
Louisiana	W	W	W	2.86	2.26	W	W
Oklahoma	W	W	W	2.73	2.44	W	W
Texas	2.64	2.23	18.0%	2.85	2.42	2.57	2.18
Mountain	3.32	W	W	3.33	2.76	3.23	W
Arizona	W	W	W	3.57	2.86	W	W
Colorado	W	W	W	3.58	2.94	W	W
Idaho	4.66	2.72	71.0%	4.66	2.72	--	--
Montana	--	W	W	--	1.91	--	W
Nevada	3.23	2.73	18.0%	3.23	2.73	--	--
New Mexico	2.94	2.50	18.0%	2.94	2.50	--	--
Utah	W	W	W	3.16	2.46	W	W
Wyoming	12.11	3.59	237.0%	12.11	3.59	--	--
Pacific Contiguous	3.13	2.80	12.0%	3.52	3.14	2.81	2.51
California	3.18	2.86	11.0%	3.70	3.32	2.87	2.53
Oregon	W	W	W	2.62	2.45	W	W
Washington	W	W	W	3.96	3.22	W	W
Pacific Noncontiguous	6.87	5.45	26.0%	6.87	5.45	--	--
Alaska	6.87	5.45	26.0%	6.87	5.45	--	--
Hawaii	--	--	--	--	--	--	--
U.S. Total	3.04	2.69	13.0%	3.37	2.97	2.60	2.31

Displayed values of zero may represent small values that round to zero.

NM = Not meaningful due to large relative standard error or excessive percentage change.

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Notes:

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See Technical Notes for a discussion of the sample design for the Form EIA-923.

Totals may not equal sum of components because of independent rounding. Percentage change is calculated before rounding.

Source: U.S. Energy Information Administration, Form EIA-923, "Power Plant Operations Report."

**Table 4.13.B. Average Cost of Natural Gas Delivered for Electricity Generation by State, (Year-to-Date) November 2016 and 2015
(Dollars per MMBtu)**

Census Division and State	Electric Power Sector			Electric Utilities		Independent Power Producers	
	November 2016 YTD	November 2015 YTD	Percentage Change	November 2016 YTD	November 2015 YTD	November 2016 YTD	November 2015 YTD
New England	3.08	4.34	-29.0%	3.50	3.93	3.08	4.35
Connecticut	3.39	4.57	-26.0%	--	--	3.39	4.57
Maine	W	W	W	--	--	W	W
Massachusetts	2.89	4.30	-33.0%	3.38	3.77	2.88	4.31
New Hampshire	W	W	W	3.91	4.91	W	W
Rhode Island	W	3.69	W	--	--	W	3.69
Vermont	--	--	--	--	--	--	--
Middle Atlantic	2.08	2.99	-30.0%	2.50	3.71	2.03	2.90
New Jersey	2.01	2.97	-32.0%	--	--	2.01	2.97
New York	2.49	3.45	-28.0%	2.50	3.71	2.49	3.36
Pennsylvania	1.74	2.50	-30.0%	--	--	1.74	2.50
East North Central	2.57	2.89	-11.0%	2.70	3.02	2.45	2.78
Illinois	2.75	W	W	3.00	3.81	2.72	W
Indiana	W	W	W	2.83	3.01	W	W
Michigan	2.64	3.23	-18.0%	2.82	3.22	2.54	3.24
Ohio	2.15	2.33	-7.7%	2.16	2.44	2.14	2.29
Wisconsin	W	W	W	2.72	3.24	W	W
West North Central	2.86	W	W	2.86	3.51	2.84	W
Iowa	2.58	3.12	-17.0%	2.58	3.12	--	--
Kansas	3.27	3.75	-13.0%	3.27	3.75	--	--
Minnesota	W	W	W	2.99	3.73	W	W
Missouri	W	W	W	2.77	3.32	W	W
Nebraska	3.05	3.72	-18.0%	3.05	3.72	--	--
North Dakota	2.72	8.42	-68.0%	2.72	8.42	--	--
South Dakota	2.42	3.24	-25.0%	2.42	3.24	--	--
South Atlantic	3.39	4.02	-16.0%	3.49	4.16	2.58	2.91
Delaware	--	--	--	--	--	--	--
District of Columbia	--	--	--	--	--	--	--
Florida	3.73	4.35	-14.0%	3.75	4.37	2.85	2.84
Georgia	2.90	3.23	-10.0%	2.96	3.27	2.69	3.08
Maryland	2.83	3.96	-29.0%	--	--	2.83	3.96
North Carolina	W	W	W	3.62	4.72	W	W
South Carolina	W	W	W	3.23	3.43	W	W
Virginia	W	3.45	W	2.97	3.91	W	2.18
West Virginia	W	W	W	2.42	2.82	W	W
East South Central	2.74	2.98	-8.1%	2.75	2.96	2.73	3.01
Alabama	W	W	W	2.86	3.07	W	W
Kentucky	W	W	W	3.06	3.53	W	W
Mississippi	W	W	W	2.72	2.90	W	W
Tennessee	2.51	2.76	-9.1%	2.51	2.76	--	--
West South Central	2.57	2.88	-11.0%	2.68	2.99	2.49	2.80
Arkansas	W	W	W	3.00	3.35	W	W
Louisiana	2.60	W	W	2.65	2.98	2.37	W
Oklahoma	W	W	W	2.68	3.05	W	W
Texas	2.55	2.84	-10.0%	2.65	2.95	2.51	2.81
Mountain	2.91	W	W	2.92	3.28	2.76	W
Arizona	W	3.34	W	3.11	3.46	W	2.99
Colorado	W	3.57	W	3.06	3.44	W	4.31
Idaho	2.84	2.94	-3.4%	2.84	2.94	--	--
Montana	--	W	W	--	2.31	--	W
Nevada	2.85	3.23	-12.0%	2.85	3.23	--	--
New Mexico	2.84	3.15	-9.8%	2.84	3.15	--	--
Utah	W	W	W	2.58	2.96	W	W
Wyoming	7.95	W	W	7.95	4.64	--	W
Pacific Contiguous	2.93	3.24	-9.6%	3.20	3.50	2.69	3.00
California	3.05	3.33	-8.4%	3.44	3.67	2.78	3.07
Oregon	W	W	W	2.29	2.78	W	W
Washington	W	W	W	3.33	3.49	W	W
Pacific Noncontiguous	6.57	5.37	22.0%	6.57	5.37	--	--
Alaska	6.57	5.37	22.0%	6.57	5.37	--	--
Hawaii	--	--	--	--	--	--	--
U.S. Total	2.81	3.32	-15.0%	3.08	3.57	2.45	3.00

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Notes:

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See Technical Notes for a discussion of the sample design for the Form EIA-923.

Totals may not equal sum of components because of independent rounding. Percentage change is calculated before rounding.

Source: U.S. Energy Information Administration, Form EIA-923, "Power Plant Operations Report."

Table 4.14. Receipts and Quality of Coal by Rank Delivered for Electricity Generation: Total (All Sectors) by State, November 2016

Census Division and State	Bituminous			Subbituminous			Lignite		
	Receipts (Thousand Tons)	Average Sulfur Percent by Weight	Average Ash Percent by Weight	Receipts (Thousand Tons)	Average Sulfur Percent by Weight	Average Ash Percent by Weight	Receipts (Thousand Tons)	Average Sulfur Percent by Weight	Average Ash Percent by Weight
New England	92	0.64	9.4	0	--	--	0	--	--
Connecticut	0	--	--	0	--	--	0	--	--
Maine	7	0.75	8.0	0	--	--	0	--	--
Massachusetts	85	0.63	9.5	0	--	--	0	--	--
New Hampshire	0	--	--	0	--	--	0	--	--
Rhode Island	0	--	--	0	--	--	0	--	--
Vermont	0	--	--	0	--	--	0	--	--
Middle Atlantic	1,419	3.27	8.9	0	--	--	0	--	--
New Jersey	52	1.77	7.2	0	--	--	0	--	--
New York	69	2.46	8.3	0	--	--	0	--	--
Pennsylvania	1,298	3.37	9.0	0	--	--	0	--	--
East North Central	4,977	3.08	9.6	6,094	0.25	4.9	0	--	--
Illinois	509	3.55	18.9	2,784	0.22	4.7	0	--	--
Indiana	2,201	2.79	8.6	117	0.23	4.7	0	--	--
Michigan	101	2.36	7.3	1,487	0.28	5.0	0	--	--
Ohio	2,016	3.36	9.0	0	--	--	0	--	--
Wisconsin	151	2.68	8.1	1,706	0.26	5.3	0	--	--
West North Central	37	3.17	9.8	7,962	0.29	5.1	1,755	0.79	10.4
Iowa	11	3.40	7.4	1,340	0.24	4.9	0	--	--
Kansas	15	3.08	12.6	1,303	0.31	4.8	0	--	--
Minnesota	0	--	--	1,395	0.41	6.3	0	--	--
Missouri	10	3.04	8.5	2,713	0.23	4.8	0	--	--
Nebraska	0	--	--	1,015	0.29	5.3	0	--	--
North Dakota	0	--	--	39	0.34	5.3	1,755	0.79	10.4
South Dakota	0	--	--	156	0.35	5.2	0	--	--
South Atlantic	7,124	2.44	10.1	870	0.34	4.8	0	--	--
Delaware	14	2.41	7.5	0	--	--	0	--	--
District of Columbia	0	--	--	0	--	--	0	--	--
Florida	1,169	2.38	8.6	0	--	--	0	--	--
Georgia	700	2.54	7.8	843	0.34	4.8	0	--	--
Maryland	606	2.57	9.3	27	0.20	4.6	0	--	--
North Carolina	1,205	1.94	9.5	0	--	--	0	--	--
South Carolina	635	1.76	9.2	0	--	--	0	--	--
Virginia	539	1.04	14.1	0	--	--	0	--	--
West Virginia	2,256	3.18	11.4	0	--	--	0	--	--
East South Central	3,431	2.68	9.0	2,346	0.27	5.1	261	0.48	14.1
Alabama	378	1.14	10.9	978	0.26	5.2	0	--	--
Kentucky	2,400	3.07	9.0	960	0.28	5.2	0	--	--
Mississippi	93	0.97	6.8	97	0.28	4.8	261	0.48	14.1
Tennessee	559	2.34	7.8	312	0.26	4.9	0	--	--
West South Central	77	2.46	16.2	7,873	0.28	5.3	3,093	1.01	16.4
Arkansas	5	0.64	8.1	1,193	0.26	5.4	0	--	--
Louisiana	39	3.18	9.8	385	0.26	5.0	275	0.55	14.8
Oklahoma	33	1.89	25.8	799	0.27	4.8	0	--	--
Texas	0	--	--	5,496	0.29	5.3	2,818	1.05	16.5
Mountain	2,423	0.62	14.1	5,694	0.51	9.2	0	--	--
Arizona	567	0.62	10.8	806	0.72	11.9	0	--	--
Colorado	184	0.51	12.4	1,332	0.31	5.5	0	--	--
Idaho	0	--	--	0	--	--	0	--	--
Montana	0	--	--	803	0.70	10.2	0	--	--
Nevada	36	0.42	6.0	40	0.32	5.4	0	--	--
New Mexico	515	0.76	21.9	557	0.73	22.1	0	--	--
Utah	1,121	0.58	13.1	76	1.07	8.7	0	--	--
Wyoming	0	--	--	2,081	0.40	6.9	0	--	--
Pacific Contiguous	44	0.48	10.0	545	0.40	8.2	0	--	--
California	44	0.48	10.0	0	--	--	0	--	--
Oregon	0	--	--	70	0.24	4.4	0	--	--
Washington	0	--	--	475	0.43	8.8	0	--	--
Pacific Noncontiguous	0	--	--	120	0.19	3.8	8	0.16	10.5
Alaska	0	--	--	0	--	--	8	0.16	10.5
Hawaii	0	--	--	120	0.19	3.8	0	--	--
U.S. Total	19,623	2.49	10.1	31,506	0.32	5.9	5,117	0.91	14.2

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Notes:

Bituminous coal includes anthracite coal and coal-derived synthesis gas.

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Source: U.S. Energy Information Administration, Form EIA-923, "Power Plant Operations Report."

Table 4.15. Receipts and Quality of Coal by Rank Delivered for Electricity Generation: Electric Utilities by State, November 2016

Census Division and State	Bituminous			Subbituminous			Lignite		
	Receipts (Thousand Tons)	Average Sulfur Percent by Weight	Average Ash Percent by Weight	Receipts (Thousand Tons)	Average Sulfur Percent by Weight	Average Ash Percent by Weight	Receipts (Thousand Tons)	Average Sulfur Percent by Weight	Average Ash Percent by Weight
New England	0	--	--	0	--	--	0	--	--
Connecticut	0	--	--	0	--	--	0	--	--
Maine	0	--	--	0	--	--	0	--	--
Massachusetts	0	--	--	0	--	--	0	--	--
New Hampshire	0	--	--	0	--	--	0	--	--
Rhode Island	0	--	--	0	--	--	0	--	--
Vermont	0	--	--	0	--	--	0	--	--
Middle Atlantic	0	--	--	0	--	--	0	--	--
New Jersey	0	--	--	0	--	--	0	--	--
New York	0	--	--	0	--	--	0	--	--
Pennsylvania	0	--	--	0	--	--	0	--	--
East North Central	3,054	2.89	8.6	3,697	0.26	5.1	0	--	--
Illinois	144	2.80	12.7	412	0.20	4.6	0	--	--
Indiana	2,099	2.74	8.5	117	0.23	4.7	0	--	--
Michigan	84	2.67	7.6	1,487	0.28	5.0	0	--	--
Ohio	589	3.45	8.5	0	--	--	0	--	--
Wisconsin	137	2.87	7.8	1,681	0.26	5.3	0	--	--
West North Central	15	3.08	12.6	7,912	0.29	5.1	1,755	0.79	10.4
Iowa	0	--	--	1,291	0.24	4.9	0	--	--
Kansas	15	3.08	12.6	1,303	0.31	4.8	0	--	--
Minnesota	0	--	--	1,395	0.41	6.3	0	--	--
Missouri	0	--	--	2,713	0.23	4.8	0	--	--
Nebraska	0	--	--	1,015	0.29	5.3	0	--	--
North Dakota	0	--	--	39	0.34	5.3	1,755	0.79	10.4
South Dakota	0	--	--	156	0.35	5.2	0	--	--
South Atlantic	6,019	2.37	10.0	843	0.34	4.8	0	--	--
Delaware	0	--	--	0	--	--	0	--	--
District of Columbia	0	--	--	0	--	--	0	--	--
Florida	1,169	2.38	8.6	0	--	--	0	--	--
Georgia	690	2.56	7.7	843	0.34	4.8	0	--	--
Maryland	0	--	--	0	--	--	0	--	--
North Carolina	1,205	1.94	9.5	0	--	--	0	--	--
South Carolina	632	1.76	9.2	0	--	--	0	--	--
Virginia	447	1.11	15.5	0	--	--	0	--	--
West Virginia	1,877	3.04	11.0	0	--	--	0	--	--
East South Central	3,358	2.72	9.0	2,346	0.27	5.1	0	--	--
Alabama	378	1.14	10.9	978	0.26	5.2	0	--	--
Kentucky	2,400	3.07	9.0	960	0.28	5.2	0	--	--
Mississippi	93	0.97	6.8	97	0.28	4.8	0	--	--
Tennessee	487	2.60	8.1	312	0.26	4.9	0	--	--
West South Central	39	3.18	9.8	4,308	0.27	5.2	645	1.31	19.3
Arkansas	0	--	--	978	0.26	5.4	0	--	--
Louisiana	39	3.18	9.8	155	0.24	4.9	275	0.55	14.8
Oklahoma	0	--	--	743	0.26	4.8	0	--	--
Texas	0	--	--	2,432	0.27	5.3	370	1.98	23.3
Mountain	2,423	0.62	14.1	4,851	0.48	9.1	0	--	--
Arizona	567	0.62	10.8	806	0.72	11.9	0	--	--
Colorado	184	0.51	12.4	1,332	0.31	5.5	0	--	--
Idaho	0	--	--	0	--	--	0	--	--
Montana	0	--	--	0	--	--	0	--	--
Nevada	36	0.42	6.0	0	--	--	0	--	--
New Mexico	515	0.76	21.9	557	0.73	22.1	0	--	--
Utah	1,121	0.58	13.1	76	1.07	8.7	0	--	--
Wyoming	0	--	--	2,081	0.40	6.9	0	--	--
Pacific Contiguous	0	--	--	70	0.24	4.4	0	--	--
California	0	--	--	0	--	--	0	--	--
Oregon	0	--	--	70	0.24	4.4	0	--	--
Washington	0	--	--	0	--	--	0	--	--
Pacific Noncontiguous	0	--	--	0	--	--	8	0.16	10.5
Alaska	0	--	--	0	--	--	8	0.16	10.5
Hawaii	0	--	--	0	--	--	0	--	--
U.S. Total	14,908	2.30	10.1	24,028	0.32	6.0	2,408	0.92	12.7

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Notes:

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See Glossary for definitions. Values for 2016 are preliminary. Values for 2015 are final. See Technical Notes for a discussion of the sample design for the Form EIA-923.

Source: U.S. Energy Information Administration, Form EIA-923, "Power Plant Operations Report."

Table 4.16. Receipts and Quality of Coal by Rank Delivered for Electricity Generation: Independent Power Producers by State, November 2016

Census Division and State	Bituminous			Subbituminous			Lignite		
	Receipts (Thousand Tons)	Average Sulfur Percent by Weight	Average Ash Percent by Weight	Receipts (Thousand Tons)	Average Sulfur Percent by Weight	Average Ash Percent by Weight	Receipts (Thousand Tons)	Average Sulfur Percent by Weight	Average Ash Percent by Weight
New England	90	0.64	9.4	0	--	--	0	--	--
Connecticut	0	--	--	0	--	--	0	--	--
Maine	5	0.74	7.9	0	--	--	0	--	--
Massachusetts	85	0.63	9.5	0	--	--	0	--	--
New Hampshire	0	--	--	0	--	--	0	--	--
Rhode Island	0	--	--	0	--	--	0	--	--
Vermont	0	--	--	0	--	--	0	--	--
Middle Atlantic	1,394	3.30	8.9	0	--	--	0	--	--
New Jersey	52	1.77	7.2	0	--	--	0	--	--
New York	44	2.87	8.2	0	--	--	0	--	--
Pennsylvania	1,297	3.37	9.0	0	--	--	0	--	--
East North Central	1,812	3.39	11.2	2,323	0.21	4.6	0	--	--
Illinois	267	3.97	27.7	2,323	0.21	4.6	0	--	--
Indiana	101	3.70	9.2	0	--	--	0	--	--
Michigan	17	0.48	5.8	0	--	--	0	--	--
Ohio	1,426	3.32	9.2	0	--	--	0	--	--
Wisconsin	0	--	--	0	--	--	0	--	--
West North Central	0	--	--	0	--	--	0	--	--
Iowa	0	--	--	0	--	--	0	--	--
Kansas	0	--	--	0	--	--	0	--	--
Minnesota	0	--	--	0	--	--	0	--	--
Missouri	0	--	--	0	--	--	0	--	--
Nebraska	0	--	--	0	--	--	0	--	--
North Dakota	0	--	--	0	--	--	0	--	--
South Dakota	0	--	--	0	--	--	0	--	--
South Atlantic	1,048	2.91	10.5	27	0.20	4.6	0	--	--
Delaware	14	2.41	7.5	0	--	--	0	--	--
District of Columbia	0	--	--	0	--	--	0	--	--
Florida	0	--	--	0	--	--	0	--	--
Georgia	0	--	--	0	--	--	0	--	--
Maryland	588	2.59	9.0	27	0.20	4.6	0	--	--
North Carolina	0	--	--	0	--	--	0	--	--
South Carolina	0	--	--	0	--	--	0	--	--
Virginia	67	0.81	9.0	0	--	--	0	--	--
West Virginia	379	3.87	13.3	0	--	--	0	--	--
East South Central	0	--	--	0	--	--	261	0.48	14.1
Alabama	0	--	--	0	--	--	0	--	--
Kentucky	0	--	--	0	--	--	0	--	--
Mississippi	0	--	--	0	--	--	261	0.48	14.1
Tennessee	0	--	--	0	--	--	0	--	--
West South Central	33	1.89	25.8	3,566	0.30	5.3	2,448	0.93	15.7
Arkansas	0	--	--	215	0.23	5.5	0	--	--
Louisiana	0	--	--	230	0.27	5.0	0	--	--
Oklahoma	33	1.89	25.8	56	0.40	5.0	0	--	--
Texas	0	--	--	3,064	0.30	5.3	2,448	0.93	15.7
Mountain	0	--	--	843	0.68	9.9	0	--	--
Arizona	0	--	--	0	--	--	0	--	--
Colorado	0	--	--	0	--	--	0	--	--
Idaho	0	--	--	0	--	--	0	--	--
Montana	0	--	--	803	0.70	10.2	0	--	--
Nevada	0	--	--	40	0.32	5.4	0	--	--
New Mexico	0	--	--	0	--	--	0	--	--
Utah	0	--	--	0	--	--	0	--	--
Wyoming	0	--	--	0	--	--	0	--	--
Pacific Contiguous	0	--	--	475	0.43	8.8	0	--	--
California	0	--	--	0	--	--	0	--	--
Oregon	0	--	--	0	--	--	0	--	--
Washington	0	--	--	475	0.43	8.8	0	--	--
Pacific Noncontiguous	0	--	--	120	0.19	3.8	0	--	--
Alaska	0	--	--	0	--	--	0	--	--
Hawaii	0	--	--	120	0.19	3.8	0	--	--
U.S. Total	4,377	3.18	10.3	7,354	0.32	5.8	2,709	0.90	15.6

Displayed values of zero may represent small values that round to zero.

NM = Not meaningful due to large relative standard error or excessive percentage change.

W = Withheld to avoid disclosure of individual company data.

Notes:

Bituminous coal includes anthracite coal and coal-derived synthesis gas.

See Glossary for definitions. Values for 2016 are preliminary. Values for 2015 are final. See Technical Notes for a discussion of the sample design for the Form EIA-923.

Source: U.S. Energy Information Administration, Form EIA-923, "Power Plant Operations Report."

**Table 4.17. Receipts and Quality of Coal by Rank Delivered for Electricity Generation:
Commercial Sector by State, November 2016**

Census Division and State	Bituminous			Subbituminous			Lignite		
	Receipts (Thousand Tons)	Average Sulfur Percent by Weight	Average Ash Percent by Weight	Receipts (Thousand Tons)	Average Sulfur Percent by Weight	Average Ash Percent by Weight	Receipts (Thousand Tons)	Average Sulfur Percent by Weight	Average Ash Percent by Weight
New England	0	--	--	0	--	--	0	--	--
Connecticut	0	--	--	0	--	--	0	--	--
Maine	0	--	--	0	--	--	0	--	--
Massachusetts	0	--	--	0	--	--	0	--	--
New Hampshire	0	--	--	0	--	--	0	--	--
Rhode Island	0	--	--	0	--	--	0	--	--
Vermont	0	--	--	0	--	--	0	--	--
Middle Atlantic	0	--	--	0	--	--	0	--	--
New Jersey	0	--	--	0	--	--	0	--	--
New York	0	--	--	0	--	--	0	--	--
Pennsylvania	0	--	--	0	--	--	0	--	--
East North Central	0	--	--	0	--	--	0	--	--
Illinois	0	--	--	0	--	--	0	--	--
Indiana	0	--	--	0	--	--	0	--	--
Michigan	0	--	--	0	--	--	0	--	--
Ohio	0	--	--	0	--	--	0	--	--
Wisconsin	0	--	--	0	--	--	0	--	--
West North Central	10	3.04	8.5	0	--	--	0	--	--
Iowa	0	--	--	0	--	--	0	--	--
Kansas	0	--	--	0	--	--	0	--	--
Minnesota	0	--	--	0	--	--	0	--	--
Missouri	10	3.04	8.5	0	--	--	0	--	--
Nebraska	0	--	--	0	--	--	0	--	--
North Dakota	0	--	--	0	--	--	0	--	--
South Dakota	0	--	--	0	--	--	0	--	--
South Atlantic	0	--	--	0	--	--	0	--	--
Delaware	0	--	--	0	--	--	0	--	--
District of Columbia	0	--	--	0	--	--	0	--	--
Florida	0	--	--	0	--	--	0	--	--
Georgia	0	--	--	0	--	--	0	--	--
Maryland	0	--	--	0	--	--	0	--	--
North Carolina	0	--	--	0	--	--	0	--	--
South Carolina	0	--	--	0	--	--	0	--	--
Virginia	0	--	--	0	--	--	0	--	--
West Virginia	0	--	--	0	--	--	0	--	--
East South Central	0	--	--	0	--	--	0	--	--
Alabama	0	--	--	0	--	--	0	--	--
Kentucky	0	--	--	0	--	--	0	--	--
Mississippi	0	--	--	0	--	--	0	--	--
Tennessee	0	--	--	0	--	--	0	--	--
West South Central	0	--	--	0	--	--	0	--	--
Arkansas	0	--	--	0	--	--	0	--	--
Louisiana	0	--	--	0	--	--	0	--	--
Oklahoma	0	--	--	0	--	--	0	--	--
Texas	0	--	--	0	--	--	0	--	--
Mountain	0	--	--	0	--	--	0	--	--
Arizona	0	--	--	0	--	--	0	--	--
Colorado	0	--	--	0	--	--	0	--	--
Idaho	0	--	--	0	--	--	0	--	--
Montana	0	--	--	0	--	--	0	--	--
Nevada	0	--	--	0	--	--	0	--	--
New Mexico	0	--	--	0	--	--	0	--	--
Utah	0	--	--	0	--	--	0	--	--
Wyoming	0	--	--	0	--	--	0	--	--
Pacific Contiguous	0	--	--	0	--	--	0	--	--
California	0	--	--	0	--	--	0	--	--
Oregon	0	--	--	0	--	--	0	--	--
Washington	0	--	--	0	--	--	0	--	--
Pacific Noncontiguous	0	--	--	0	--	--	0	--	--
Alaska	0	--	--	0	--	--	0	--	--
Hawaii	0	--	--	0	--	--	0	--	--
U.S. Total	10	3.04	8.5	0	--	--	0	--	--

Displayed values of zero may represent small values that round to zero.

NM = Not meaningful due to large relative standard error or excessive percentage change.

W = Withheld to avoid disclosure of individual company data.

Notes:

Bituminous coal includes anthracite coal and coal-derived synthesis gas.

See Glossary for definitions. Values for 2016 are preliminary. Values for 2015 are final. See Technical Notes for a discussion of the sample design for the Form EIA-923.

Source: U.S. Energy Information Administration, Form EIA-923, "Power Plant Operations Report."

**Table 4.18. Receipts and Quality of Coal by Rank Delivered for Electricity Generation:
Industrial Sector by State, November 2016**

Census Division and State	Bituminous			Subbituminous			Lignite		
	Receipts (Thousand Tons)	Average Sulfur Percent by Weight	Average Ash Percent by Weight	Receipts (Thousand Tons)	Average Sulfur Percent by Weight	Average Ash Percent by Weight	Receipts (Thousand Tons)	Average Sulfur Percent by Weight	Average Ash Percent by Weight
New England	2	0.79	8.3	0	--	--	0	--	--
Connecticut	0	--	--	0	--	--	0	--	--
Maine	2	0.79	8.3	0	--	--	0	--	--
Massachusetts	0	--	--	0	--	--	0	--	--
New Hampshire	0	--	--	0	--	--	0	--	--
Rhode Island	0	--	--	0	--	--	0	--	--
Vermont	0	--	--	0	--	--	0	--	--
Middle Atlantic	25	1.71	8.6	0	--	--	0	--	--
New Jersey	0	--	--	0	--	--	0	--	--
New York	24	1.71	8.6	0	--	--	0	--	--
Pennsylvania	0	1.60	11.7	0	--	--	0	--	--
East North Central	111	3.30	8.9	75	0.62	6.3	0	--	--
Illinois	98	3.70	8.5	49	0.80	6.5	0	--	--
Indiana	0	--	--	0	--	--	0	--	--
Michigan	0	--	--	0	--	--	0	--	--
Ohio	0	--	--	0	--	--	0	--	--
Wisconsin	14	0.50	11.5	26	0.28	5.8	0	--	--
West North Central	11	3.40	7.4	49	0.18	4.4	0	--	--
Iowa	11	3.40	7.4	49	0.18	4.4	0	--	--
Kansas	0	--	--	0	--	--	0	--	--
Minnesota	0	--	--	0	--	--	0	--	--
Missouri	0	--	--	0	--	--	0	--	--
Nebraska	0	--	--	0	--	--	0	--	--
North Dakota	0	--	--	0	--	--	0	--	--
South Dakota	0	--	--	0	--	--	0	--	--
South Atlantic	57	1.09	11.8	0	--	--	0	--	--
Delaware	0	--	--	0	--	--	0	--	--
District of Columbia	0	--	--	0	--	--	0	--	--
Florida	0	--	--	0	--	--	0	--	--
Georgia	10	1.23	9.8	0	--	--	0	--	--
Maryland	18	1.81	21.9	0	--	--	0	--	--
North Carolina	0	--	--	0	--	--	0	--	--
South Carolina	3	0.76	8.7	0	--	--	0	--	--
Virginia	26	0.65	7.0	0	--	--	0	--	--
West Virginia	0	--	--	0	--	--	0	--	--
East South Central	72	0.80	6.0	0	--	--	0	--	--
Alabama	0	--	--	0	--	--	0	--	--
Kentucky	0	--	--	0	--	--	0	--	--
Mississippi	0	--	--	0	--	--	0	--	--
Tennessee	72	0.80	6.0	0	--	--	0	--	--
West South Central	5	0.64	8.1	0	--	--	0	--	--
Arkansas	5	0.64	8.1	0	--	--	0	--	--
Louisiana	0	--	--	0	--	--	0	--	--
Oklahoma	0	--	--	0	--	--	0	--	--
Texas	0	--	--	0	--	--	0	--	--
Mountain	0	--	--	0	--	--	0	--	--
Arizona	0	--	--	0	--	--	0	--	--
Colorado	0	--	--	0	--	--	0	--	--
Idaho	0	--	--	0	--	--	0	--	--
Montana	0	--	--	0	--	--	0	--	--
Nevada	0	--	--	0	--	--	0	--	--
New Mexico	0	--	--	0	--	--	0	--	--
Utah	0	--	--	0	--	--	0	--	--
Wyoming	0	--	--	0	--	--	0	--	--
Pacific Contiguous	44	0.48	10.0	0	--	--	0	--	--
California	44	0.48	10.0	0	--	--	0	--	--
Oregon	0	--	--	0	--	--	0	--	--
Washington	0	--	--	0	--	--	0	--	--
Pacific Noncontiguous	0	--	--	0	--	--	0	--	--
Alaska	0	--	--	0	--	--	0	--	--
Hawaii	0	--	--	0	--	--	0	--	--
U.S. Total	327	1.74	8.7	124	0.45	5.5	0	--	--

Displayed values of zero may represent small values that round to zero.

NM = Not meaningful due to large relative standard error or excessive percentage change.

W = Withheld to avoid disclosure of individual company data.

Notes:

Bituminous coal includes anthracite coal and coal-derived synthesis gas.

See Glossary for definitions. Values for 2016 are preliminary. Values for 2015 are final. See Technical Notes for a discussion of the sample design for the Form EIA-923.

Source: U.S. Energy Information Administration, Form EIA-923, "Power Plant Operations Report."

**Table 5.1. Sales of Electricity to Ultimate Customers:
Total by End-Use Sector, 2006 - November 2016 (Thousand Megawatthours)**

Period	Residential	Commercial	Industrial	Transportation	All Sectors
Annual Totals					
2006	1,351,520	1,299,744	1,011,298	7,358	3,669,919
2007	1,392,241	1,336,315	1,027,832	8,173	3,764,561
2008	1,380,662	1,336,133	1,009,516	7,653	3,733,965
2009	1,364,758	1,306,853	917,416	7,768	3,596,795
2010	1,445,708	1,330,199	971,221	7,712	3,754,841
2011	1,422,801	1,328,057	991,316	7,672	3,749,846
2012	1,374,515	1,327,101	985,714	7,320	3,694,650
2013	1,394,812	1,337,079	985,352	7,625	3,724,868
2014	1,407,208	1,352,158	997,576	7,758	3,764,700
2015	1,404,096	1,360,752	986,508	7,637	3,758,992
Year 2014					
January	146,511	113,866	80,149	712	341,238
February	128,475	104,353	75,413	700	308,941
March	114,233	106,968	80,539	648	302,388
April	92,290	102,459	80,505	640	275,894
May	95,727	109,666	85,383	646	291,421
June	118,049	118,423	85,711	609	322,792
July	137,028	125,434	88,417	645	351,524
August	135,830	125,603	89,808	642	351,883
Sept	120,741	120,049	85,489	628	326,907
October	98,038	113,023	84,994	625	296,680
November	99,486	104,245	81,044	637	285,413
December	120,801	108,070	80,123	626	309,620
Year 2015					
January	137,765	111,620	79,609	673	329,666
February	123,838	105,482	76,749	699	306,768
March	117,167	107,796	79,709	679	305,352
April	90,199	104,168	80,489	620	275,475
May	95,161	109,406	82,916	609	288,091
June	120,300	119,270	86,218	609	326,397
July	146,038	128,504	87,747	648	362,938
August	144,515	128,519	88,373	625	362,032
Sept	125,417	122,195	84,730	615	332,958
October	99,349	112,821	83,249	636	296,055
November	92,678	104,140	78,495	604	275,917
December	111,670	106,829	78,224	619	297,344
Year 2016					
January	130,727	109,874	75,892	660	317,153
February	115,871	102,890	73,916	647	293,323
March	100,134	105,159	75,882	610	281,785
April	88,097	101,454	75,826	595	265,973
May	93,980	107,897	78,249	582	280,708
June	124,887	119,670	80,185	632	325,374
July	153,975	129,261	83,319	648	367,203
August	155,859	134,229	85,336	630	376,055
Sept	129,114	122,960	79,666	637	332,378
October	101,138	112,314	77,919	613	291,985
November	92,797	104,451	75,092	591	272,932
Year to Date					
2014	1,286,408	1,244,088	917,454	7,131	3,455,081
2015	1,292,426	1,253,922	908,283	7,017	3,461,649
2016	1,286,581	1,250,159	861,283	6,845	3,404,868
Rolling 12 Months Ending in November					
2015	1,413,227	1,361,992	988,406	7,644	3,771,269
2016	1,398,251	1,356,988	939,507	7,464	3,702,211

See Technical notes for additional information on the Commercial, Industrial, and Transportation sectors. NA = Not available. See Glossary for definitions.

Geographic coverage is the 50 States and the District of Columbia. Values include energy service provider (power marketer) data.

Values for 2015 and prior years are final. Values for 2016 are preliminary estimates based on a cutoff model sample. See Technical Notes for a discussion of the sample design for the Form EIA-826. Utilities and energy service providers may classify commercial and industrial customers based on either NAICS codes or demands or usage falling within specified limits by rate schedule. Changes from year to year in consumer counts, sales and revenues, particularly involving the commercial and industrial consumer sectors, may result from respondent implementation of changes in the definitions of consumers, and reclassifications. Sales and net generation may not correspond exactly for a particular month for a variety of reasons (i.e., sales data may include purchases of electricity from nonutilities or imported electricity). Net generation is for the calendar month while sales and associated revenue accumulate from bills collected for periods of time (28 to 35 days) that vary dependent upon customer class and consumption occurring in and outside the calendar month.

Sources: U.S. Energy Information Administration, Form EIA-826, Monthly Electric Sales and Revenue Report with State Distributions Report;

Form EIA-861, Annual Electric Power Industry Report; and Form EIA-861S, Annual Electric Power Industry Report (Short Form).

**Table 5.2. Revenue from Sales of Electricity to Ultimate Customers:
Total by End-Use Sector, 2006 - November 2016 (Million Dollars)**

Period	Residential	Commercial	Industrial	Transportation	All Sectors
Annual Totals					
2006	140,582	122,914	62,308	702	326,506
2007	148,295	128,903	65,712	792	343,703
2008	155,496	137,036	70,231	820	363,583
2009	157,044	132,747	62,670	828	353,289
2010	166,778	135,554	65,772	814	368,918
2011	166,714	135,927	67,606	803	371,049
2012	163,280	133,898	65,761	747	363,687
2013	169,131	137,188	67,934	805	375,058
2014	176,178	145,253	70,855	810	393,096
2015	177,624	144,781	68,166	771	391,342
Year 2014					
January	17,075	11,790	5,596	78	34,539
February	15,338	11,142	5,370	73	31,922
March	13,996	11,390	5,632	68	31,087
April	11,365	10,715	5,451	65	27,596
May	12,300	11,555	5,833	65	29,753
June	15,337	12,974	6,335	65	34,710
July	17,943	14,014	6,742	69	38,767
August	17,708	13,876	6,748	64	38,396
Sept	15,639	13,399	6,299	69	35,406
October	12,352	12,239	6,007	64	30,663
November	12,417	10,967	5,470	65	28,920
December	14,707	11,192	5,372	66	31,336
Year 2015					
January	16,665	11,506	5,310	70	33,552
February	15,215	11,204	5,277	73	31,768
March	14,450	11,460	5,441	69	31,419
April	11,379	10,802	5,323	60	27,564
May	12,300	11,457	5,589	60	29,405
June	15,537	12,993	6,133	62	34,725
July	18,904	14,229	6,538	67	39,738
August	18,659	14,065	6,493	63	39,280
Sept	16,347	13,420	6,107	63	35,937
October	12,633	12,100	5,728	63	30,524
November	11,775	10,722	5,185	58	27,740
December	13,759	10,825	5,043	61	29,688
Year 2016					
January	15,662	11,006	4,861	62	31,591
February	14,066	10,493	4,721	61	29,341
March	12,586	10,680	4,907	58	28,230
April	10,955	10,274	4,852	56	26,136
May	12,023	11,055	5,134	53	28,266
June	15,882	12,677	5,635	61	34,255
July	19,522	13,733	6,026	62	39,344
August	20,104	14,367	6,158	62	40,691
Sept	16,611	13,156	5,698	63	35,528
October	12,595	11,755	5,237	58	29,645
November	11,829	10,707	4,985	53	27,574
Year to Date					
2014	161,471	134,061	65,483	745	361,760
2015	163,864	133,956	63,123	710	361,654
2016	161,836	129,903	58,213	649	350,601
Rolling 12 Months Ending in November					
2015	178,571	145,148	68,496	775	392,990
2016	175,595	140,728	63,256	710	380,288

See Technical notes for additional information on the Commercial, Industrial, and Transportation sectors. NA = Not available. See Glossary for definitions.

Geographic coverage is the 50 States and the District of Columbia. Values include energy service provider (power marketer) data.

Values for 2015 and prior years are final. Values for 2016 are preliminary estimates based on a cutoff model sample. See Technical Notes for a discussion of the sample design for the Form EIA-826. Utilities and energy service providers may classify commercial and industrial customers based on either NAICS codes or demands or usage falling within specified limits by rate schedule. Changes from year to year in consumer counts, sales and revenues, particularly involving the commercial and industrial consumer sectors, may result from respondent implementation of changes in the definitions of consumers, and reclassifications. Sales and net generation may not correspond exactly for a particular month for a variety of reasons (i.e., sales data may include purchases of electricity from nonutilities or imported electricity). Net generation is for the calendar month while sales and associated revenue accumulate from bills collected for periods of time (28 to 35 days) that vary dependent upon customer class and consumption occurring in and outside the calendar month.

Sources: U.S. Energy Information Administration, Form EIA-826, Monthly Electric Sales and Revenue Report with State Distributions Report; Form EIA-861, Annual Electric Power Industry Report; and Form EIA-861S, Annual Electric Power Industry Report (Short Form).

**Table 5.3. Average Price of Electricity to Ultimate Customers:
Total by End-Use Sector, 2006 - November 2016 (Cents per Kilowatthour)**

Period	Residential	Commercial	Industrial	Transportation	All Sectors
Annual Totals					
2006	10.40	9.46	6.16	9.54	8.90
2007	10.65	9.65	6.39	9.70	9.13
2008	11.26	10.26	6.96	10.71	9.74
2009	11.51	10.16	6.83	10.66	9.82
2010	11.54	10.19	6.77	10.56	9.83
2011	11.72	10.24	6.82	10.46	9.90
2012	11.88	10.09	6.67	10.21	9.84
2013	12.13	10.26	6.89	10.55	10.07
2014	12.52	10.74	7.10	10.45	10.44
2015	12.65	10.64	6.91	10.09	10.41
Year 2014					
January	11.65	10.35	6.98	10.93	10.12
February	11.94	10.68	7.12	10.41	10.33
March	12.25	10.65	6.99	10.43	10.28
April	12.31	10.46	6.77	10.23	10.00
May	12.85	10.54	6.83	10.06	10.21
June	12.99	10.96	7.39	10.60	10.75
July	13.09	11.17	7.62	10.68	11.03
August	13.04	11.05	7.51	10.02	10.91
Sept	12.95	11.16	7.37	11.02	10.83
October	12.60	10.83	7.07	10.27	10.34
November	12.48	10.52	6.75	10.20	10.13
December	12.17	10.36	6.70	10.48	10.12
Year 2015					
January	12.10	10.31	6.67	10.45	10.18
February	12.29	10.62	6.88	10.49	10.36
March	12.33	10.63	6.83	10.12	10.29
April	12.62	10.37	6.61	9.76	10.01
May	12.93	10.47	6.74	9.87	10.21
June	12.92	10.89	7.11	10.15	10.64
July	12.94	11.07	7.45	10.34	10.95
August	12.91	10.94	7.35	10.14	10.85
Sept	13.03	10.98	7.21	10.29	10.79
October	12.72	10.73	6.88	9.91	10.31
November	12.71	10.30	6.61	9.63	10.05
December	12.32	10.13	6.45	9.81	9.98
Year 2016					
January	11.98	10.02	6.41	9.41	9.96
February	12.14	10.20	6.39	9.49	10.00
March	12.57	10.16	6.47	9.43	10.02
April	12.43	10.13	6.40	9.41	9.83
May	12.79	10.25	6.56	9.13	10.07
June	12.72	10.59	7.03	9.59	10.53
July	12.68	10.62	7.23	9.63	10.71
August	12.90	10.70	7.22	9.90	10.82
Sept	12.87	10.70	7.15	9.83	10.69
October	12.45	10.47	6.72	9.44	10.15
November	12.75	10.25	6.64	9.04	10.10
Year to Date					
2014	12.55	10.78	7.14	10.44	10.47
2015	12.68	10.68	6.95	10.11	10.45
2016	12.58	10.39	6.76	9.49	10.30
Rolling 12 Months Ending in November					
2015	12.64	10.66	6.93	10.14	10.42
2016	12.56	10.37	6.73	9.51	10.27

See Technical notes for additional information on the Commercial, Industrial, and Transportation sectors. NA = Not available. See Glossary for definitions.

Geographic coverage is the 50 States and the District of Columbia. Values include energy service provider (power marketer) data.

Values for 2015 and prior years are final. Values for 2016 are preliminary estimates based on a cutoff model sample. See Technical Notes for a discussion of the sample design for the Form EIA-826. Utilities and energy service providers may classify commercial and industrial customers based on either NAICS codes or demands or usage falling within specified limits by rate schedule. Changes from year to year in consumer counts, sales and revenues, particularly involving the commercial and industrial consumer sectors, may result from respondent implementation of changes in the definitions of consumers, and reclassifications. Sales and net generation may not correspond exactly for a particular month for a variety of reasons (i.e., sales data may include purchases of electricity from nonutilities or imported electricity). Net generation is for the calendar month while sales and associated revenue accumulate from bills collected for periods of time (28 to 35 days) that vary dependent upon customer class and consumption occurring in and outside the calendar month.

Sources: U.S. Energy Information Administration, Form EIA-826, Monthly Electric Sales and Revenue Report with State Distributions Report;

Form EIA-861, Annual Electric Power Industry Report; and Form EIA-861S, Annual Electric Power Industry Report (Short Form).

**Table 5.4.A. Sales of Electricity to Ultimate Customers by End-Use Sector,
by State, November 2016 and 2015 (Thousand Megawatthours)**

Census Division and State	Residential		Commercial		Industrial		Transportation		All Sectors	
	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015
New England	3,235	3,192	3,948	4,017	1,375	1,476	45	42	8,603	8,727
Connecticut	866	836	926	960	263	263	15	13	2,071	2,072
Maine	330	323	291	272	233	246	0	0	854	841
Massachusetts	1,349	1,353	1,964	2,003	547	629	27	27	3,887	4,012
New Hampshire	317	309	330	342	157	158	0	0	804	810
Rhode Island	214	216	282	285	61	64	2	2	560	567
Vermont	159	155	155	154	113	117	0	0	427	426
Middle Atlantic	8,989	8,692	12,068	12,037	5,577	5,730	317	308	26,951	26,767
New Jersey	1,817	1,789	2,905	2,895	538	614	23	24	5,284	5,322
New York	3,509	3,380	5,818	5,813	1,423	1,483	232	225	10,982	10,901
Pennsylvania	3,663	3,523	3,344	3,329	3,616	3,633	61	59	10,685	10,544
East North Central	12,530	12,774	14,028	13,957	14,593	15,376	40	43	41,191	42,150
Illinois	2,984	3,145	3,821	3,822	3,201	3,319	35	38	10,041	10,324
Indiana	2,123	2,096	1,833	1,777	3,198	3,738	2	2	7,155	7,612
Michigan	2,364	2,438	2,927	2,948	2,453	2,474	0	0	7,745	7,861
Ohio	3,470	3,467	3,642	3,579	3,837	3,948	3	3	10,952	10,998
Wisconsin	1,588	1,627	1,805	1,832	1,905	1,896	0	0	5,298	5,355
West North Central	6,618	6,812	7,882	7,903	7,091	7,396	4	3	21,595	22,114
Iowa	873	884	976	972	1,884	1,807	0	0	3,733	3,663
Kansas	801	807	1,186	1,165	894	886	0	0	2,881	2,857
Minnesota	1,537	1,602	1,762	1,813	1,657	1,691	2	2	4,959	5,107
Missouri	2,089	2,143	2,321	2,297	945	1,358	2	1	5,357	5,799
Nebraska	611	628	741	748	858	840	0	0	2,210	2,216
North Dakota	376	403	517	534	630	597	0	0	1,523	1,534
South Dakota	331	346	378	373	223	218	0	0	932	937
South Atlantic	23,420	23,712	23,788	24,045	11,157	11,712	100	113	58,465	59,581
Delaware	296	317	322	354	176	179	0	0	794	850
District of Columbia	141	125	637	650	13	24	25	32	816	831
Florida	8,175	9,212	7,305	7,825	1,321	1,412	7	8	16,808	18,456
Georgia	3,566	3,508	3,508	3,517	2,489	2,557	13	13	9,575	9,595
Maryland	1,786	1,687	2,240	2,464	318	332	42	46	4,388	4,528
North Carolina	3,762	3,371	3,657	3,554	2,189	2,329	0	1	9,607	9,254
South Carolina	1,945	1,782	1,632	1,555	2,220	2,542	0	0	5,797	5,880
Virginia	2,963	2,934	3,875	3,546	1,351	1,320	12	14	8,200	7,813
West Virginia	787	777	612	580	1,080	1,017	0	0	2,479	2,374
East South Central	7,342	7,112	6,928	6,874	7,904	7,902	0	0	22,175	21,888
Alabama	1,971	1,963	1,705	1,731	2,613	2,581	0	0	6,288	6,275
Kentucky	1,643	1,620	1,466	1,438	2,254	2,264	0	0	5,364	5,323
Mississippi	1,190	1,115	1,065	1,100	1,341	1,279	0	0	3,596	3,494
Tennessee	2,538	2,415	2,692	2,605	1,696	1,777	0	0	6,927	6,796
West South Central	13,614	12,644	15,105	14,426	13,845	14,508	18	17	42,582	41,595
Arkansas	1,093	1,029	954	915	1,332	1,268	0	0	3,378	3,212
Louisiana	2,039	1,946	2,002	1,956	2,748	2,899	1	1	6,791	6,801
Oklahoma	1,312	1,279	1,553	1,546	1,394	1,532	0	0	4,259	4,356
Texas	9,170	8,391	10,597	10,009	8,370	8,809	17	16	28,154	27,225
Mountain	6,311	6,354	7,261	7,295	6,364	6,844	11	11	19,948	20,504
Arizona	1,924	1,869	2,209	2,120	1,124	1,232	0	0	5,258	5,222
Colorado	1,340	1,412	1,577	1,632	1,298	1,258	5	5	4,221	4,308
Idaho	649	714	488	508	481	496	0	0	1,618	1,718
Montana	376	385	390	404	352	374	0	0	1,118	1,163
Nevada	725	601	740	697	918	1,165	1	1	2,383	2,464
New Mexico	442	466	700	700	619	633	0	0	1,761	1,799
Utah	639	689	866	918	738	806	5	5	2,248	2,417
Wyoming	215	218	291	315	835	879	0	0	1,341	1,412
Pacific Contiguous	10,346	10,978	12,955	13,078	6,769	7,123	57	67	30,128	31,247
California	6,194	6,432	9,342	9,368	3,954	4,019	55	65	19,544	19,884
Oregon	1,470	1,610	1,305	1,368	909	1,007	2	2	3,686	3,986
Washington	2,682	2,936	2,309	2,343	1,906	2,097	1	0	6,898	7,376
Pacific Noncontiguous	391	408	487	508	416	427	0	0	1,294	1,344
Alaska	182	182	237	235	116	109	0	0	535	526
Hawaii	209	227	250	273	300	318	0	0	759	817
U.S. Total	92,797	92,678	104,451	104,140	75,092	78,495	591	604	272,932	275,917

See Technical notes for additional information on the Commercial, Industrial, and Transportation sectors.

Displayed values of zero may represent small values that round to zero. The Excel version of this table provides additional precision which may be accessed by selecting individual cells.

Notes: - See Glossary for definitions. - Values for 2015 are final. Values for 2016 are preliminary estimates based on a cutoff model sample.

See Technical Notes for a discussion of the sample design for the Form EIA-826.

Utilities and energy service providers may classify commercial and industrial customers based on either NAICS codes or demands or usage falling within specified limits by rate schedule.

Changes from year to year in consumer counts, sales and revenues, particularly involving the commercial and industrial consumer sectors, may result from respondent implementation of changes in the definitions of consumers, and reclassifications.

Totals may not equal sum of components because of independent rounding.

Source: U.S. Energy Information Administration, Form EIA-826, Monthly Electric Sales and Revenue Report with State Distributions Report.

**Table 5.4.B. Sales of Electricity to Ultimate Customers by End-Use Sector,
by State, Year-to-Date through November 2016 and 2015 (Thousand Megawatthours)**

Census Division and State	Residential		Commercial		Industrial		Transportation		All Sectors	
	November 2016 YTD	November 2015 YTD								
New England	42,402	43,667	48,118	49,123	15,695	17,248	504	525	106,719	110,562
Connecticut	11,583	11,883	11,693	11,945	2,980	3,160	167	177	26,423	27,165
Maine	4,139	4,231	3,639	3,655	2,609	2,944	0	0	10,387	10,830
Massachusetts	17,939	18,591	23,475	24,121	6,281	7,277	312	324	48,008	50,313
New Hampshire	4,053	4,165	4,107	4,145	1,834	1,828	0	0	9,994	10,139
Rhode Island	2,835	2,885	3,358	3,402	702	733	25	24	6,920	7,044
Vermont	1,853	1,910	1,846	1,854	1,288	1,306	0	0	4,987	5,070
Middle Atlantic	122,056	124,164	145,181	146,846	64,916	67,051	3,526	3,575	335,679	341,636
New Jersey	26,833	27,030	35,319	35,713	6,372	6,783	276	279	68,799	69,805
New York	46,640	47,034	69,993	70,875	15,653	16,633	2,524	2,587	134,810	137,129
Pennsylvania	48,582	50,099	39,870	40,258	42,891	43,636	726	709	132,069	134,702
East North Central	169,800	167,733	170,577	168,878	169,857	180,830	522	539	510,756	517,980
Illinois	41,880	40,925	46,624	46,278	38,579	39,815	462	480	127,545	127,497
Indiana	29,487	29,778	22,322	22,174	38,238	44,188	19	19	90,066	96,159
Michigan	31,297	30,454	35,941	35,329	27,597	28,180	4	4	94,839	93,967
Ohio	47,518	47,310	43,863	43,473	43,465	46,605	36	36	134,882	137,425
Wisconsin	19,618	19,266	21,827	21,624	21,978	22,041	0	0	63,423	62,932
West North Central	92,177	92,482	93,945	93,489	77,773	84,208	41	41	263,935	270,219
Iowa	12,417	12,440	11,167	11,055	19,829	19,626	0	0	43,413	43,121
Kansas	12,358	12,210	14,468	14,214	9,786	10,322	0	0	36,613	36,746
Minnesota	19,295	19,667	21,229	21,470	18,310	19,757	21	22	58,855	60,916
Missouri	31,161	31,114	28,418	28,151	11,024	15,718	19	19	70,622	75,001
Nebraska	8,769	8,594	8,758	8,545	9,660	9,845	0	0	27,187	26,983
North Dakota	4,085	4,342	5,507	5,706	6,691	6,378	0	0	16,284	16,426
South Dakota	4,092	4,115	4,398	4,349	2,472	2,561	0	0	10,962	11,026
South Atlantic	329,134	332,549	287,835	287,584	126,375	131,865	1,218	1,249	744,563	753,248
Delaware	4,348	4,524	3,900	3,964	1,911	2,190	0	0	10,160	10,678
District of Columbia	2,309	2,298	7,709	7,611	179	215	308	318	10,506	10,441
Florida	112,787	113,996	87,379	88,191	15,045	15,489	87	88	215,299	217,764
Georgia	53,129	52,440	43,852	43,608	29,060	29,615	156	156	126,197	125,819
Maryland	24,806	25,371	27,248	27,663	3,466	3,566	493	499	56,014	57,098
North Carolina	52,858	53,260	44,805	44,447	24,695	25,403	6	8	122,364	123,119
South Carolina	28,131	27,815	20,383	20,275	24,542	27,198	0	0	73,056	75,289
Virginia	40,628	42,390	45,380	44,618	15,652	16,145	168	181	101,828	103,334
West Virginia	10,137	10,454	7,178	7,207	11,825	12,044	0	0	29,140	29,705
East South Central	109,382	109,822	84,833	85,466	89,193	94,602	0	0	283,408	289,890
Alabama	29,600	29,634	21,408	21,683	29,868	30,881	0	0	80,875	82,198
Kentucky	24,003	24,190	17,908	18,086	25,016	28,044	0	0	66,927	70,320
Mississippi	17,245	17,312	12,950	13,350	15,125	14,441	0	0	45,321	45,103
Tennessee	38,533	38,687	32,567	32,347	19,184	21,236	0	0	90,284	92,270
West South Central	200,960	202,920	179,790	179,838	157,212	164,587	179	177	538,141	547,523
Arkansas	16,393	16,967	11,241	11,275	14,673	14,791	0	0	42,307	43,033
Louisiana	28,554	29,498	23,074	23,152	30,625	32,114	11	11	82,264	84,775
Oklahoma	21,117	20,869	18,713	19,172	15,581	16,551	0	0	55,411	56,592
Texas	134,897	135,587	126,762	126,239	96,332	101,132	167	166	358,158	363,123
Mountain	88,841	86,906	87,303	87,295	76,502	78,039	123	123	252,770	252,362
Arizona	31,495	30,635	27,405	27,109	13,623	13,646	5	6	72,528	71,396
Colorado	17,190	16,700	18,693	18,723	14,130	14,025	59	58	50,072	49,505
Idaho	7,130	7,117	5,649	5,701	8,056	8,265	0	0	20,834	21,083
Montana	4,281	4,290	4,470	4,471	3,885	4,123	0	0	12,636	12,883
Nevada	11,744	11,452	9,062	8,864	12,444	12,964	8	8	33,258	33,289
New Mexico	6,133	6,050	8,173	8,183	6,843	6,944	0	0	21,149	21,177
Utah	8,444	8,282	10,450	10,658	8,321	8,609	52	51	27,267	27,600
Wyoming	2,424	2,381	3,401	3,586	9,201	9,463	0	0	15,026	15,430
Pacific Contiguous	127,662	127,946	147,207	149,972	79,100	85,231	732	789	354,701	363,939
California	81,079	81,585	105,889	108,658	46,191	48,616	705	762	233,864	239,621
Oregon	16,392	16,185	14,642	14,685	10,615	11,965	22	22	41,670	42,857
Washington	30,191	30,176	26,677	26,629	22,293	24,651	6	5	79,166	81,461
Pacific Noncontiguous	4,168	4,237	5,370	5,431	4,659	4,621	0	0	14,196	14,290
Alaska	1,788	1,824	2,510	2,514	1,247	1,234	0	0	5,546	5,571
Hawaii	2,379	2,414	2,860	2,917	3,411	3,387	0	0	8,650	8,719
U.S. Total	1,286,581	1,292,426	1,250,159	1,253,922	861,283	908,283	6,845	7,017	3,404,868	3,461,649

Table 5.5.A. Revenue from Sales of Electricity to Ultimate Customers by End-Use Sector, by State, November 2016 and 2015 (Million Dollars)

Census Division and State	Residential		Commercial		Industrial		Transportation		All Sectors	
	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015
New England	610	592	593	588	164	179	3	4	1,371	1,362
Connecticut	170	167	152	147	34	34	1	1	358	350
Maine	54	52	36	35	21	22	0	0	111	110
Massachusetts	258	248	292	292	71	83	1	2	623	625
New Hampshire	61	56	48	49	19	20	0	0	128	125
Rhode Island	39	40	41	41	8	8	0	0	88	91
Vermont	28	27	23	23	11	12	0	0	62	62
Middle Atlantic	1,422	1,391	1,462	1,481	381	400	33	34	3,297	3,306
New Jersey	278	274	342	348	52	59	2	2	674	684
New York	623	616	814	816	83	87	26	27	1,546	1,547
Pennsylvania	521	500	306	316	245	253	4	5	1,077	1,075
East North Central	1,666	1,708	1,407	1,386	1,019	1,057	3	3	4,095	4,153
Illinois	384	417	335	343	203	214	2	3	924	978
Indiana	264	252	190	175	241	256	0	0	695	683
Michigan	365	357	322	310	175	168	0	0	863	835
Ohio	424	455	366	366	256	281	0	0	1,046	1,102
Wisconsin	229	227	194	192	145	138	0	0	568	556
West North Central	781	774	724	700	470	480	0	0	1,975	1,953
Iowa	105	99	86	79	98	93	0	0	288	270
Kansas	105	104	117	116	65	66	0	0	287	286
Minnesota	202	190	180	164	119	119	0	0	501	473
Missouri	225	241	196	200	60	81	0	0	481	523
Nebraska	66	65	63	62	59	58	0	0	187	185
North Dakota	39	37	47	45	53	47	0	0	139	129
South Dakota	39	38	36	34	17	15	0	0	91	88
South Atlantic	2,729	2,780	2,205	2,236	691	725	8	9	5,632	5,750
Delaware	41	46	32	38	13	15	0	0	87	98
District of Columbia	19	17	75	78	1	2	2	3	98	100
Florida	924	1,065	674	738	104	113	1	1	1,703	1,917
Georgia	390	368	342	323	136	134	1	1	869	826
Maryland	256	251	247	261	25	27	3	4	532	543
North Carolina	422	384	306	298	126	136	0	0	854	819
South Carolina	244	228	165	158	123	144	0	0	532	530
Virginia	341	337	303	288	89	90	1	1	734	716
West Virginia	92	83	60	53	73	63	0	0	225	200
East South Central	832	788	717	697	462	450	0	0	2,012	1,935
Alabama	242	223	193	182	156	141	0	0	592	546
Kentucky	181	176	142	138	124	124	0	0	448	438
Mississippi	131	127	106	113	81	80	0	0	318	321
Tennessee	278	261	275	264	101	104	0	0	654	630
West South Central	1,439	1,370	1,162	1,149	724	764	1	1	3,327	3,284
Arkansas	110	104	76	75	76	77	0	0	263	257
Louisiana	187	178	172	166	141	152	0	0	500	496
Oklahoma	123	133	106	112	64	74	0	0	293	319
Texas	1,019	955	808	796	443	460	1	1	2,270	2,212
Mountain	726	712	674	675	365	407	1	1	1,766	1,796
Arizona	224	210	213	201	64	68	0	0	502	479
Colorado	163	166	156	161	94	90	1	1	414	417
Idaho	65	67	39	38	28	28	0	0	132	134
Montana	42	42	40	41	17	19	0	0	98	101
Nevada	86	76	57	62	29	61	0	0	172	199
New Mexico	53	55	67	68	35	37	0	0	155	160
Utah	68	73	74	75	41	46	1	0	184	194
Wyoming	24	24	28	29	57	58	0	0	110	112
Pacific Contiguous	1,526	1,563	1,655	1,703	624	640	5	6	3,809	3,911
California	1,113	1,115	1,342	1,383	476	485	4	5	2,935	2,988
Oregon	158	172	117	121	58	61	0	0	333	354
Washington	255	276	196	199	90	94	0	0	541	569
Pacific Noncontiguous	98	98	108	108	84	83	0	0	290	289
Alaska	39	36	43	41	19	17	0	0	101	94
Hawaii	60	62	65	67	66	66	0	0	190	195
U.S. Total	11,829	11,775	10,707	10,722	4,985	5,185	53	58	27,574	27,740

See Technical notes for additional information on the Commercial, Industrial, and Transportation sectors.

Displayed values of zero may represent small values that round to zero. The Excel version of this table provides additional precision which may be accessed by selecting individual cells.

Notes: - See Glossary for definitions. - Values for 2015 are final. Values for 2016 are preliminary estimates based on a cutoff model sample.

See Technical Notes for a discussion of the sample design for the Form EIA-826.

Utilities and energy service providers may classify commercial and industrial customers based on either NAICS codes or demands or usage falling within specified limits by rate schedule.

Changes from year to year in consumer counts, sales and revenues, particularly involving the commercial and industrial consumer sectors, may result from respondent implementation of changes in the definitions of consumers, and reclassifications.

Totals may not equal sum of components because of independent rounding.

Source: U.S. Energy Information Administration, Form EIA-826, Monthly Electric Sales and Revenue Report with State Distributions Report.

Table 5.5.B. Revenue from Sales of Electricity to Ultimate Customers by End-Use Sector, by State, Year-to-Date through November 2016 and 2015 (Million Dollars)

Census Division and State	Residential		Commercial		Industrial		Transportation		All Sectors	
	November 2016 YTD	November 2015 YTD								
New England	8,010	8,509	7,296	7,621	1,896	2,134	42	53	17,245	18,318
Connecticut	2,327	2,503	1,848	1,915	388	411	18	24	4,582	4,852
Maine	654	664	443	458	235	267	0	0	1,332	1,389
Massachusetts	3,433	3,689	3,646	3,818	823	988	19	25	7,921	8,521
New Hampshire	746	772	593	621	226	233	0	0	1,564	1,627
Rhode Island	529	555	499	538	95	101	5	4	1,128	1,199
Vermont	321	326	268	270	130	134	0	0	719	730
Middle Atlantic	19,290	19,861	18,273	19,394	4,569	4,938	384	421	42,517	44,613
New Jersey	4,236	4,279	4,406	4,593	648	726	24	29	9,314	9,627
New York	8,222	8,760	10,172	10,933	948	1,058	305	336	19,646	21,086
Pennsylvania	6,832	6,822	3,696	3,868	2,973	3,154	56	56	13,556	13,899
East North Central	21,965	21,767	16,807	16,847	11,727	12,637	36	38	50,535	51,289
Illinois	5,139	5,141	4,086	4,196	2,469	2,663	31	33	11,724	12,032
Indiana	3,359	3,448	2,168	2,172	2,667	3,039	2	2	8,196	8,660
Michigan	4,789	4,389	3,828	3,736	1,939	1,984	0	0	10,557	10,110
Ohio	5,843	6,058	4,329	4,380	2,947	3,272	3	3	13,121	13,712
Wisconsin	2,835	2,731	2,396	2,363	1,705	1,680	0	0	6,936	6,774
West North Central	10,923	10,672	8,950	8,712	5,521	5,831	4	4	25,399	25,218
Iowa	1,544	1,464	1,057	997	1,236	1,172	0	0	3,837	3,633
Kansas	1,609	1,507	1,488	1,436	726	788	0	0	3,823	3,731
Minnesota	2,473	2,394	2,110	2,037	1,335	1,393	2	2	5,920	5,827
Missouri	3,437	3,504	2,591	2,592	752	1,019	2	2	6,782	7,116
Nebraska	964	921	781	744	732	754	0	0	2,478	2,419
North Dakota	424	423	506	506	554	516	0	0	1,484	1,445
South Dakota	471	459	418	399	187	189	0	0	1,076	1,048
South Atlantic	38,485	39,142	26,744	27,344	8,101	8,703	96	102	73,426	75,291
Delaware	588	607	396	405	153	183	0	0	1,137	1,196
District of Columbia	298	298	904	911	16	19	29	28	1,247	1,255
Florida	12,681	13,223	7,966	8,396	1,175	1,278	7	8	21,830	22,904
Georgia	6,129	6,102	4,240	4,335	1,645	1,760	8	8	12,022	12,205
Maryland	3,535	3,490	2,987	3,049	272	306	39	42	6,832	6,887
North Carolina	5,934	6,030	3,887	3,883	1,542	1,652	0	1	11,364	11,566
South Carolina	3,511	3,508	2,064	2,076	1,471	1,645	0	0	7,046	7,229
Virginia	4,672	4,834	3,629	3,670	1,050	1,126	13	15	9,364	9,644
West Virginia	1,137	1,051	671	620	776	733	0	0	2,584	2,404
East South Central	11,819	11,884	8,545	8,761	5,178	5,690	0	0	25,542	26,335
Alabama	3,564	3,478	2,373	2,356	1,808	1,880	0	0	7,745	7,713
Kentucky	2,468	2,472	1,679	1,707	1,369	1,540	0	0	5,516	5,720
Mississippi	1,817	1,953	1,239	1,410	889	954	0	0	3,945	4,316
Tennessee	3,970	3,980	3,255	3,288	1,112	1,317	0	0	8,336	8,585
West South Central	21,257	22,280	14,047	14,751	8,176	9,255	10	10	43,490	46,295
Arkansas	1,629	1,670	915	939	870	926	0	0	3,414	3,536
Louisiana	2,600	2,763	1,950	2,010	1,526	1,752	1	1	6,077	6,526
Oklahoma	2,141	2,135	1,400	1,482	752	894	0	0	4,293	4,510
Texas	14,888	15,712	9,782	10,320	5,027	5,683	9	9	29,706	31,723
Mountain	10,425	10,356	8,387	8,530	4,863	5,193	12	12	23,687	24,092
Arizona	3,868	3,752	2,892	2,837	830	866	0	1	7,591	7,455
Colorado	2,070	2,033	1,810	1,858	1,005	1,041	6	6	4,891	4,937
Idaho	719	710	442	447	534	550	0	0	1,695	1,706
Montana	475	470	455	459	194	221	0	0	1,124	1,150
Nevada	1,342	1,464	728	824	742	893	1	1	2,813	3,182
New Mexico	741	761	805	849	390	447	0	0	1,936	2,057
Utah	939	905	931	927	531	535	5	5	2,405	2,372
Wyoming	272	262	322	329	637	642	0	0	1,231	1,233
Pacific Contiguous	18,639	18,310	19,693	20,767	7,286	7,774	65	71	45,684	46,921
California	14,057	13,839	16,162	17,291	5,618	5,980	63	68	35,900	37,178
Oregon	1,743	1,732	1,298	1,295	656	717	2	2	3,699	3,745
Washington	2,839	2,739	2,234	2,181	1,012	1,077	0	0	6,085	5,997
Pacific Noncontiguous	1,022	1,084	1,159	1,231	896	968	0	0	3,077	3,283
Alaska	369	363	457	440	193	181	0	0	1,019	984
Hawaii	653	721	702	791	703	787	0	0	2,058	2,299
U.S. Total	161,836	163,864	129,903	133,956	58,213	63,123	649	710	350,601	361,654

See Technical notes for additional information on the Commercial, Industrial, and Transportation sectors.

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Changes from year to year in consumer counts, sales and revenues, particularly involving the commercial and industrial consumer sectors, may result from respondent implementation of changes in the definitions of consumers, and reclassifications.

Totals may not equal sum of components because of independent rounding.

Source: U.S. Energy Information Administration, Form EIA-826, Monthly Electric Sales and Revenue Report with State Distributions Report.

Table 5.6.A. Average Price of Electricity to Ultimate Customers by End-Use Sector, by State, November 2016 and 2015 (Cents per Kilowatthour)

Census Division and State	Residential		Commercial		Industrial		Transportation		All Sectors	
	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015
New England	18.86	18.54	15.02	14.63	11.96	12.14	7.19	8.69	15.94	15.61
Connecticut	19.66	20.04	16.45	15.27	12.82	12.97	8.99	11.04	17.27	16.88
Maine	16.24	16.20	12.46	13.02	9.16	8.96	--	--	13.02	13.06
Massachusetts	19.15	18.35	14.89	14.60	12.89	13.19	5.26	6.75	16.02	15.59
New Hampshire	19.11	18.15	14.67	14.39	12.33	12.62	--	--	15.96	15.48
Rhode Island	18.17	18.62	14.48	14.54	13.47	13.25	19.23	19.29	15.80	15.97
Vermont	17.84	17.67	14.78	14.63	9.91	10.11	--	--	14.62	14.49
Middle Atlantic	15.82	16.00	12.11	12.30	6.82	6.98	10.26	11.19	12.23	12.35
New Jersey	15.29	15.32	11.76	12.04	9.66	9.69	8.39	9.37	12.75	12.86
New York	17.75	18.23	13.99	14.04	5.87	5.87	11.23	12.14	14.08	14.19
Pennsylvania	14.24	14.20	9.15	9.50	6.78	6.98	7.27	8.32	10.08	10.20
East North Central	13.29	13.37	10.03	9.93	6.98	6.87	7.20	7.38	9.94	9.85
Illinois	12.86	13.27	8.77	8.99	6.34	6.45	6.91	7.18	9.21	9.47
Indiana	12.42	12.03	10.36	9.84	7.53	6.85	11.35	10.30	9.71	8.97
Michigan	15.46	14.63	10.99	10.51	7.15	6.81	12.10	11.64	11.14	10.62
Ohio	12.22	13.11	10.04	10.22	6.67	7.11	8.00	7.83	9.55	10.02
Wisconsin	14.40	13.93	10.77	10.47	7.59	7.25	15.00	16.67	10.72	10.38
West North Central	11.80	11.36	9.19	8.85	6.63	6.49	8.72	8.61	9.15	8.83
Iowa	12.00	11.16	8.78	8.09	5.20	5.13	--	--	7.72	7.37
Kansas	13.16	12.83	9.87	9.96	7.23	7.49	--	--	9.97	10.00
Minnesota	13.15	11.87	10.22	9.06	7.17	7.03	10.16	9.54	10.11	9.27
Missouri	10.79	11.25	8.43	8.71	6.36	6.00	7.17	7.38	8.98	9.01
Nebraska	10.73	10.36	8.48	8.24	6.87	6.92	--	--	8.48	8.34
North Dakota	10.30	9.19	9.08	8.45	8.44	7.84	--	--	9.12	8.41
South Dakota	11.71	11.10	9.50	9.08	7.44	7.07	--	--	9.79	9.36
South Atlantic	11.65	11.72	9.27	9.30	6.19	6.19	7.90	7.91	9.63	9.65
Delaware	13.87	14.47	10.07	10.68	7.42	8.13	--	--	10.90	11.56
District of Columbia	13.71	13.71	11.77	12.03	8.64	9.06	9.43	9.21	11.99	12.09
Florida	11.30	11.56	9.23	9.43	7.88	8.01	8.51	9.19	10.13	10.39
Georgia	10.93	10.50	9.76	9.19	5.46	5.25	4.66	4.37	9.07	8.61
Maryland	14.33	14.89	11.04	10.60	7.79	8.28	7.90	7.88	12.12	12.00
North Carolina	11.22	11.39	8.37	8.40	5.74	5.86	8.44	8.15	8.89	8.85
South Carolina	12.54	12.81	10.09	10.16	5.55	5.65	--	--	9.17	9.02
Virginia	11.52	11.47	7.81	8.13	6.62	6.83	7.82	7.60	8.95	9.16
West Virginia	11.72	10.73	9.76	9.13	6.79	6.24	--	--	9.09	8.41
East South Central	11.34	11.08	10.35	10.14	5.85	5.69	--	--	9.07	8.84
Alabama	12.29	11.39	11.33	10.51	5.99	5.46	--	--	9.41	8.71
Kentucky	11.01	10.85	9.71	9.56	5.52	5.50	--	--	8.35	8.22
Mississippi	11.04	11.43	9.95	10.27	6.03	6.26	--	--	8.85	9.17
Tennessee	10.95	10.81	10.23	10.15	5.93	5.88	--	--	9.44	9.27
West South Central	10.57	10.84	7.69	7.97	5.23	5.26	5.84	5.57	7.81	7.90
Arkansas	10.08	10.12	8.02	8.25	5.72	6.09	11.70	9.45	7.78	8.00
Louisiana	9.16	9.15	8.61	8.50	5.13	5.24	9.60	7.56	7.37	7.30
Oklahoma	9.40	10.39	6.80	7.23	4.62	4.84	--	--	6.89	7.32
Texas	11.11	11.38	7.62	7.95	5.29	5.23	5.59	5.43	8.06	8.13
Mountain	11.50	11.21	9.28	9.25	5.74	5.95	9.85	9.80	8.85	8.76
Arizona	11.66	11.24	9.64	9.46	5.71	5.54	9.23	7.96	9.54	9.17
Colorado	12.16	11.72	9.90	9.86	7.26	7.14	10.15	9.96	9.81	9.68
Idaho	10.08	9.34	7.90	7.57	5.75	5.74	--	--	8.14	7.78
Montana	11.06	10.79	10.22	10.13	4.75	5.05	--	--	8.78	8.71
Nevada	11.80	12.70	7.73	8.94	3.16	5.21	7.34	8.51	7.21	8.09
New Mexico	11.98	11.77	9.55	9.74	5.65	5.92	--	--	8.79	8.92
Utah	10.71	10.63	8.55	8.12	5.58	5.65	9.94	9.95	8.19	8.02
Wyoming	11.30	11.11	9.78	9.24	6.85	6.63	--	--	8.20	7.90
Pacific Contiguous	14.75	14.24	12.77	13.02	9.22	8.98	7.89	8.40	12.64	12.52
California	17.97	17.33	14.37	14.76	12.03	12.07	7.83	8.37	15.02	15.03
Oregon	10.75	10.68	8.93	8.84	6.38	6.04	9.34	9.25	9.03	8.88
Washington	9.51	9.41	8.49	8.49	4.73	4.47	9.24	9.00	7.85	7.71
Pacific Noncontiguous	25.08	23.98	22.18	21.28	20.29	19.42	--	--	22.45	21.51
Alaska	21.18	20.04	18.26	17.39	16.15	15.54	--	--	18.80	17.92
Hawaii	28.48	27.15	25.90	24.64	21.89	20.76	--	--	25.03	23.83
U.S. Total	12.75	12.71	10.25	10.30	6.64	6.61	9.04	9.63	10.10	10.05

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Totals may not equal sum of components because of independent rounding.

Source: U.S. Energy Information Administration, Form EIA-826, Monthly Electric Sales and Revenue Report with State Distributions Report.

Table 5.6.B. Average Price of Electricity to Ultimate Customers by End-Use Sector, by State, Year-to-Date through November 2016 and 2015 (Cents per Kilowatthour)

Census Division and State	Residential		Commercial		Industrial		Transportation		All Sectors	
	November 2016 YTD	November 2015 YTD								
New England	18.89	19.49	15.16	15.51	12.08	12.37	8.26	10.16	16.16	16.57
Connecticut	20.09	21.06	15.81	16.03	13.03	13.00	10.70	13.41	17.34	17.86
Maine	15.81	15.68	12.16	12.54	9.00	9.08	--	--	12.82	12.83
Massachusetts	19.14	19.84	15.53	15.83	13.10	13.58	6.12	7.77	16.50	16.94
New Hampshire	18.41	18.54	14.43	14.99	12.32	12.73	--	--	15.65	16.04
Rhode Island	18.65	19.24	14.87	15.82	13.53	13.80	18.77	18.55	16.30	17.02
Vermont	17.34	17.08	14.51	14.54	10.06	10.25	--	--	14.41	14.39
Middle Atlantic	15.80	16.00	12.59	13.21	7.04	7.36	10.90	11.77	12.67	13.06
New Jersey	15.79	15.83	12.47	12.86	10.17	10.71	8.76	10.37	13.54	13.79
New York	17.63	18.62	14.53	15.43	6.06	6.36	12.06	12.99	14.57	15.38
Pennsylvania	14.06	13.62	9.27	9.61	6.93	7.23	7.65	7.87	10.26	10.32
East North Central	12.94	12.98	9.85	9.98	6.90	6.99	6.91	7.00	9.89	9.90
Illinois	12.27	12.56	8.76	9.07	6.40	6.69	6.69	6.79	9.19	9.44
Indiana	11.39	11.58	9.71	9.80	6.97	6.88	9.73	9.97	9.10	9.01
Michigan	15.30	14.41	10.65	10.57	7.03	7.04	11.59	11.42	11.13	10.76
Ohio	12.30	12.80	9.87	10.07	6.78	7.02	7.77	7.70	9.73	9.98
Wisconsin	14.45	14.17	10.98	10.93	7.76	7.62	14.59	14.45	10.94	10.76
West North Central	11.85	11.54	9.53	9.32	7.10	6.92	9.36	9.07	9.62	9.33
Iowa	12.44	11.77	9.47	9.02	6.23	5.97	--	--	8.84	8.43
Kansas	13.02	12.35	10.28	10.11	7.42	7.63	--	--	10.44	10.15
Minnesota	12.82	12.17	9.94	9.49	7.29	7.05	10.14	9.56	10.06	9.56
Missouri	11.03	11.26	9.12	9.21	6.82	6.48	8.48	8.49	9.60	9.49
Nebraska	11.00	10.72	8.92	8.71	7.58	7.65	--	--	9.11	8.96
North Dakota	10.38	9.73	9.18	8.86	8.28	8.10	--	--	9.11	8.79
South Dakota	11.52	11.15	9.49	9.19	7.56	7.38	--	--	9.81	9.50
South Atlantic	11.69	11.77	9.29	9.51	6.41	6.60	7.90	8.13	9.86	10.00
Delaware	13.51	13.42	10.15	10.23	8.02	8.35	--	--	11.19	11.20
District of Columbia	12.90	12.95	11.72	11.97	8.98	8.75	9.36	8.89	11.87	12.02
Florida	11.24	11.60	9.12	9.52	7.81	8.25	8.33	8.92	10.14	10.52
Georgia	11.54	11.64	9.67	9.94	5.66	5.94	5.10	5.37	9.53	9.70
Maryland	14.25	13.76	10.96	11.02	7.85	8.58	7.84	8.37	12.20	12.06
North Carolina	11.23	11.32	8.67	8.74	6.25	6.50	7.84	7.88	9.29	9.39
South Carolina	12.48	12.61	10.13	10.24	5.99	6.05	--	--	9.64	9.60
Virginia	11.50	11.40	8.00	8.22	6.71	6.98	7.75	8.13	9.20	9.33
West Virginia	11.22	10.05	9.35	8.60	6.56	6.09	--	--	8.87	8.09
East South Central	10.81	10.82	10.07	10.25	5.81	6.02	--	--	9.01	9.08
Alabama	12.04	11.74	11.08	10.87	6.05	6.09	--	--	9.58	9.38
Kentucky	10.28	10.22	9.37	9.44	5.47	5.49	--	--	8.24	8.13
Mississippi	10.53	11.28	9.57	10.56	5.88	6.60	--	--	8.70	9.57
Tennessee	10.30	10.29	9.99	10.16	5.79	6.20	--	--	9.23	9.30
West South Central	10.58	10.98	7.81	8.20	5.20	5.62	5.66	5.53	8.08	8.46
Arkansas	9.94	9.84	8.14	8.33	5.93	6.26	10.26	11.35	8.07	8.22
Louisiana	9.11	9.37	8.45	8.68	4.98	5.46	9.01	8.31	7.39	7.70
Oklahoma	10.14	10.23	7.48	7.73	4.83	5.40	--	--	7.75	7.97
Texas	11.04	11.59	7.72	8.17	5.22	5.62	5.42	5.33	8.29	8.74
Mountain	11.73	11.92	9.61	9.77	6.36	6.65	9.71	10.00	9.37	9.55
Arizona	12.28	12.25	10.55	10.46	6.10	6.34	9.47	9.45	10.47	10.44
Colorado	12.04	12.17	9.69	9.92	7.11	7.42	9.77	10.12	9.77	9.97
Idaho	10.08	9.97	7.83	7.84	6.63	6.65	--	--	8.14	8.09
Montana	11.09	10.95	10.19	10.27	4.98	5.36	--	--	8.89	8.92
Nevada	11.43	12.79	8.04	9.29	5.96	6.89	7.86	9.18	8.46	9.56
New Mexico	12.08	12.58	9.85	10.38	5.70	6.43	--	--	9.16	9.71
Utah	11.12	10.92	8.91	8.70	6.38	6.22	9.94	10.05	8.82	8.60
Wyoming	11.24	11.02	9.47	9.18	6.92	6.78	--	--	8.20	7.99
Pacific Contiguous	14.60	14.31	13.38	13.85	9.21	9.12	8.94	8.96	12.88	12.89
California	17.34	16.96	15.26	15.91	12.16	12.30	8.93	8.96	15.35	15.52
Oregon	10.63	10.70	8.86	8.82	6.18	5.99	9.26	9.15	8.88	8.74
Washington	9.40	9.08	8.37	8.19	4.54	4.37	8.98	8.12	7.69	7.36
Pacific Noncontiguous	24.52	25.58	21.58	22.66	19.23	20.96	--	--	21.67	22.97
Alaska	20.63	19.91	18.20	17.50	15.48	14.69	--	--	18.37	17.67
Hawaii	27.44	29.86	24.54	27.10	20.61	23.24	--	--	23.79	26.36
U.S. Total	12.58	12.68	10.39	10.68	6.76	6.95	9.49	10.11	10.30	10.45

See Technical notes for additional information on the Commercial, Industrial, and Transportation sectors.

Displayed values of zero may represent small values that round to zero. The Excel version of this table provides additional precision which may be accessed by selecting individual cells.

Notes: - See Glossary for definitions. - Values for 2015 are final. Values for 2016 are preliminary estimates based on a cutoff model sample.

See Technical Notes for a discussion of the sample design for the Form EIA-826.

Utilities and energy service providers may classify commercial and industrial customers based on either NAICS codes or demands or usage falling within specified limits by rate schedule.

Changes from year to year in consumer counts, sales and revenues, particularly involving the commercial and industrial consumer sectors, may result from respondent implementation of changes in the definitions of consumers, and reclassifications.

Totals may not equal sum of components because of independent rounding.

Source: U.S. Energy Information Administration, Form EIA-826, Monthly Electric Sales and Revenue Report with State Distributions Report.

**Table 5.7. Number of Ultimate Customers Served by Sector:
2008 - November 2016**

Period	Residential	Commercial	Industrial	Transportation	All Sectors
Annual Totals					
2008	125,037,870	17,582,277	774,817	726	143,395,691
2009	125,208,777	17,562,150	757,497	703	143,529,126
2010	125,717,767	17,674,167	747,691	238	144,139,862
2011	126,143,072	17,637,928	727,889	92	144,508,982
2012	126,832,252	17,728,903	732,344	83	145,293,583
2013	127,776,941	17,679,466	831,734	74	146,288,214
2014	128,680,294	17,853,836	839,154	79	147,373,362
2015	129,811,667	17,985,582	835,527	78	148,632,855
Year 2014					
January	128,080,045	17,756,185	824,418	82	146,660,730
February	127,760,935	17,694,926	810,164	79	146,266,104
March	128,398,293	17,795,435	817,663	79	147,011,470
April	128,347,095	17,795,240	829,796	80	146,972,211
May	128,428,131	17,834,341	840,580	84	147,103,136
June	128,562,601	17,810,020	838,886	77	147,211,584
July	129,055,781	17,937,858	865,715	78	147,859,432
August	128,924,140	17,889,944	856,377	77	147,670,538
Sept	128,788,358	17,922,008	856,589	78	147,567,033
October	129,521,707	17,993,992	860,902	76	148,376,677
November	128,640,689	17,827,317	824,992	76	147,293,074
December	129,655,750	17,988,765	843,760	76	148,488,351
Year 2015					
January	129,177,100	17,924,312	814,536	77	147,916,025
February	128,836,192	17,854,428	808,801	77	147,499,498
March	129,858,190	17,975,571	823,107	78	148,656,946
April	129,607,349	17,955,904	823,833	78	148,387,164
May	129,550,528	17,675,632	828,518	79	148,054,757
June	129,833,960	18,042,403	851,608	79	148,728,050
July	130,322,224	18,099,332	860,552	79	149,282,187
August	129,696,710	18,013,711	849,033	78	148,559,532
Sept	130,004,031	18,059,742	851,435	78	148,915,286
October	130,277,004	18,087,524	851,293	78	149,215,899
November	129,722,466	17,995,604	825,647	78	148,543,795
December	130,854,255	18,142,822	837,966	78	149,835,121
Year 2016					
January	130,338,137	17,991,441	804,014	77	149,133,669
February	130,108,723	18,008,622	799,802	80	148,917,227
March	131,347,367	18,177,658	810,369	86	150,335,480
April	130,487,878	18,048,728	797,992	83	149,334,681
May	131,044,615	18,110,086	813,820	86	149,968,607
June	131,330,880	18,162,552	827,317	86	150,320,835
July	131,138,611	18,138,233	821,498	82	150,098,424
August	131,378,687	18,232,121	833,219	82	150,444,109
Sept	131,392,219	18,200,554	820,959	82	150,413,814
October	131,335,608	18,195,532	813,568	83	150,344,791
November	131,340,346	18,176,753	799,957	83	150,317,139
Rolling 12 Months Ending in November					
2015	129,711,792	17,972,744	836,010	78	148,520,624
2016	131,008,111	18,132,092	815,040	82	149,955,325

See Technical notes for additional information on the Commercial, Industrial, and Transportation sectors. NA = Not available. See Glossary for definitions.

Geographic coverage is the 50 States and the District of Columbia. Values include energy service provider (power marketer) data.

Values for 2015 and prior years are final. Values for 2016 are preliminary estimates based on a cutoff model sample. See Technical Notes for a discussion of the sample design for the Form EIA-826. Utilities and energy service providers may classify commercial and industrial customers based on either NAICS codes or demands or usage falling within specified limits by rate schedule. Changes from year to year in consumer counts, sales and revenues, particularly involving the commercial and industrial consumer sectors, may result from respondent implementation of changes in the definitions of consumers, and reclassifications. Sales and net generation may not correspond exactly for a particular month for a variety of reasons (i.e., sales data may include purchases of electricity from nonutilities or imported electricity). Net generation is for the calendar month while sales and associated revenue accumulate from bills collected for periods of time (28 to 35 days) that vary dependent upon customer class and consumption occurring in and outside the calendar month.

Sources: U.S. Energy Information Administration, Form EIA-826, Monthly Electric Sales and Revenue Report with State Distributions Report; Form EIA-861, Annual Electric Power Industry Report; and Form EIA-861S, Annual Electric Power Industry Report (Short Form).

Table 5.8. Number of Ultimate Customers Served by Sector by State:

November 2016 and 2015

Census Division and State	Residential		Commercial		Industrial		Transportation		All Sectors	
	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015
New England	6,306,648	6,319,481	879,887	872,673	26,019	26,679	6	7	7,212,560	7,218,840
Connecticut	1,492,170	1,471,641	152,422	150,687	4,471	4,371	3	3	1,649,066	1,626,702
Maine	683,198	660,520	95,947	92,275	2,958	2,786	0	0	782,103	755,581
Massachusetts	2,761,478	2,828,963	409,593	408,119	13,296	14,112	2	3	3,184,369	3,251,197
New Hampshire	614,143	605,971	106,793	106,425	3,256	3,270	0	0	724,192	715,666
Rhode Island	442,856	440,169	59,525	61,202	1,824	1,907	1	1	504,206	503,279
Vermont	312,803	312,217	55,607	53,965	214	233	0	0	368,624	366,415
Middle Atlantic	15,985,254	15,897,826	2,286,468	2,261,563	42,431	43,196	20	NM	18,314,173	18,202,604
New Jersey	3,522,889	3,504,756	514,807	514,085	11,805	12,114	6	NM	4,049,507	4,030,961
New York	7,119,376	7,085,540	1,077,184	1,056,076	7,531	7,516	8	7	8,204,099	8,149,139
Pennsylvania	5,342,989	5,307,530	694,477	691,402	23,095	23,566	6	6	6,060,567	6,022,504
East North Central	20,021,928	19,826,950	2,473,603	2,456,184	51,984	54,721	8	8	22,547,523	22,337,863
Illinois	5,250,951	5,194,844	606,251	603,973	5,482	5,980	3	3	5,862,687	5,804,800
Indiana	2,817,625	2,808,903	347,789	350,916	17,419	18,219	1	1	3,182,834	3,178,039
Michigan	4,340,339	4,289,047	545,284	534,371	NM	6,015	1	1	4,891,311	4,829,434
Ohio	4,935,565	4,891,799	622,211	619,930	18,680	19,044	2	2	5,576,458	5,530,775
Wisconsin	2,677,448	2,642,357	352,068	346,994	NM	5,463	1	1	3,034,233	2,994,815
West North Central	9,385,637	9,277,055	1,439,633	1,413,196	112,910	124,491	3	2	10,938,183	10,814,744
Iowa	1,371,647	1,355,163	240,479	232,258	NM	7,660	0	0	1,618,891	1,595,081
Kansas	1,259,379	1,232,457	234,438	229,769	25,523	23,965	0	0	1,519,340	1,486,191
Minnesota	2,369,310	2,357,405	285,654	285,623	NM	9,663	1	1	2,662,993	2,652,692
Missouri	2,767,181	2,738,761	375,981	374,233	8,302	10,238	2	1	3,151,466	3,123,233
Nebraska	846,232	828,277	158,331	149,489	53,386	60,284	0	0	1,057,949	1,038,050
North Dakota	376,206	375,444	72,654	71,763	7,915	8,927	0	0	456,775	456,134
South Dakota	395,682	389,548	72,096	70,061	NM	3,754	0	0	470,769	463,363
South Atlantic	27,499,218	27,054,538	3,771,840	3,718,084	79,826	79,888	13	11	31,350,897	30,852,521
Delaware	419,537	416,681	53,185	52,452	1,120	860	0	0	473,842	469,993
District of Columbia	261,681	251,672	25,973	25,831	1	1	3	1	287,658	277,505
Florida	9,317,535	9,163,688	1,230,456	1,202,045	20,685	19,800	2	2	10,568,678	10,385,535
Georgia	4,281,006	4,205,210	577,640	564,187	19,298	20,478	1	1	4,877,945	4,789,876
Maryland	2,297,920	2,267,375	251,035	249,466	8,827	8,777	5	5	2,557,787	2,525,623
North Carolina	4,452,425	4,350,576	697,584	671,463	9,930	10,229	1	1	5,159,940	5,032,269
South Carolina	2,234,192	2,195,552	360,817	359,671	4,557	4,208	0	0	2,599,566	2,559,431
Virginia	3,376,595	3,341,680	432,161	450,733	3,761	3,692	1	1	3,812,518	3,796,106
West Virginia	858,327	862,104	142,989	142,236	11,647	11,843	0	0	1,012,963	1,016,183
East South Central	8,316,054	8,198,800	1,380,914	1,374,432	24,758	26,989	0	0	9,721,726	9,600,221
Alabama	2,224,452	2,187,238	368,824	364,185	8,133	7,259	0	0	2,601,409	2,558,682
Kentucky	1,972,273	1,950,701	298,225	299,926	7,611	7,552	0	0	2,278,109	2,258,179
Mississippi	1,298,179	1,272,740	237,818	232,480	7,661	10,924	0	0	1,543,658	1,516,144
Tennessee	2,821,150	2,788,121	476,047	477,841	1,353	1,254	0	0	3,298,550	3,267,216
West South Central	15,605,765	15,436,975	2,190,098	2,188,221	179,382	183,025	6	6	17,975,251	17,808,227
Arkansas	1,373,063	1,358,226	190,520	188,765	36,104	36,287	2	2	1,599,689	1,583,280
Louisiana	2,069,705	2,047,037	291,306	299,075	18,509	19,722	1	1	2,379,521	2,365,835
Oklahoma	1,752,769	1,728,627	282,855	279,015	17,980	18,513	0	0	2,053,604	2,026,155
Texas	10,410,228	10,303,085	1,425,417	1,421,366	106,789	108,503	3	3	11,942,437	11,832,957
Mountain	9,565,686	9,441,276	1,370,470	1,375,153	86,218	93,281	4	4	11,022,378	10,909,714
Arizona	2,731,226	2,704,034	316,882	315,754	6,850	7,718	1	1	3,054,959	3,027,507
Colorado	2,267,575	2,237,004	357,905	365,471	14,035	16,029	1	1	2,639,516	2,618,505
Idaho	718,298	705,038	107,460	106,347	27,976	27,510	0	0	853,734	838,895
Montana	501,466	493,425	107,439	104,644	NM	8,983	0	0	615,577	607,052
Nevada	1,147,705	1,130,403	162,057	160,589	NM	3,495	1	1	1,312,910	1,294,488
New Mexico	889,956	873,083	138,271	142,290	8,505	9,373	0	0	1,036,732	1,024,746
Utah	1,038,502	1,029,529	121,919	122,415	9,466	9,668	1	1	1,169,888	1,161,613
Wyoming	270,958	268,760	58,537	57,643	9,567	10,505	0	0	339,062	336,908
Pacific Contiguous	17,937,749	17,557,583	2,269,533	2,224,868	194,284	191,283	23	21	20,401,589	19,973,755
California	13,235,820	12,930,586	1,654,826	1,629,554	142,135	138,175	15	13	15,032,796	14,698,328
Oregon	1,722,958	1,693,083	236,160	229,977	24,041	24,592	2	2	1,983,161	1,947,654
Washington	2,978,971	2,933								

Table 6.1. Electric Generating Summer Capacity Changes (MW), October 2016 to November 2016

Technology	Capacity Source	As of End of October 2016	Activity During November 2016 as Reported to EIA		As of End of November 2016	Net Change in Capacity - Current Month and Prior Periods			Changes in and Total Net Summer Capacity -- Outlook Based on Reports to EIA							
			Total In-Service Capacity	Actual Capacity Additions		Total In-Service Capacity	Current Month	Year to Date	Past 12 Months	Planned Capacity Additions	Planned Capacity Reductions	Planned Net Change	Planned Total Net Summer	At End of Next Month	At End of Next 12 Months	
Onshore Wind (Summer Capacity)	Utility Scale Facilities	75,427.1	698.8	0.0	76,125.9	698.8	3,552.5	5,918.3	3,212.8	6,614.2	0.0	3,212.8	6,614.2	79,338.7	82,740.1	
Offshore Wind (Summer Capacity)	Utility Scale Facilities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	29.3	29.3	0.0	29.3	29.3	29.3	29.3	
Wind (Summer Capacity)	Utility Scale Facilities	75,427.1	698.8	0.0	76,125.9	698.8	3,552.5	5,918.3	3,242.1	6,643.5	0.0	0.0	3,242.1	6,643.5	79,368.0	82,769.4
Solar Photovoltaic	Utility Scale Facilities	16,150.7	486.2	0.0	16,636.9	486.2	4,731.5	6,158.2	2,566.5	4,915.9	0.0	0.0	2,566.5	4,915.9	19,203.4	21,552.8
Solar Thermal without Energy Storage	Utility Scale Facilities	1,352.5	0.0	0.0	1,352.5	0.0	0.0	-43.8	0.0	0.0	0.0	0.0	0.0	0.0	1,352.5	1,352.5
Solar Thermal with Energy Storage	Utility Scale Facilities	405.4	0.0	0.0	405.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	405.4	405.4
Solar Subtotal	Utility Scale Facilities	17,908.6	486.2	0.0	18,394.8	486.2	4,731.5	6,114.4	2,566.5	4,915.9	0.0	0.0	2,566.5	4,915.9	20,961.3	23,310.7
Conventional Hydroelectric	Utility Scale Facilities	79,949.3	36.0	0.0	79,985.3	36.0	321.1	327.1	2.0	247.8	0.0	109.2	2.0	138.6	79,987.3	80,123.9
Wood/Wood Waste Biomass	Utility Scale Facilities	8,943.3	0.0	0.0	8,943.3	0.0	-25.6	-46.6	62.0	105.0	0.0	10.5	62.0	94.5	9,005.3	9,037.8
Landfill Gas	Utility Scale Facilities	2,110.4	1.8	0.0	2,112.2	1.8	35.3	27.3	4.0	20.3	0.0	10.4	4.0	9.9	2,116.2	2,122.1
Municipal Solid Waste	Utility Scale Facilities	2,247.1	0.0	0.0	2,247.1	0.0	-1.1	-1.1	0.0	0.0	0.0	2.0	0.0	-2.0	2,247.1	2,245.1
Other Waste Biomass	Utility Scale Facilities	808.7	5.2	0.0	813.9	5.2	14.5	14.5	4.0	18.0	0.8	0.8	3.2	17.2	817.1	831.1
Biomass Sources Subtotal	Utility Scale Facilities	14,109.5	7.0	0.0	14,116.5	7.0	23.1	-5.9	70.0	143.3	0.8	23.7	69.2	119.6	14,185.7	14,236.1
Geothermal	Utility Scale Facilities	2,541.5	0.0	0.0	2,541.5	0.0	0.0	0.0	0.0	30.0	0.0	-30.0	-30.0	2,511.5	2,511.5	
Renewable Sources Subtotal	Utility Scale Facilities	189,936.0	1,228.0	0.0	191,164.0	1,228.0	8,628.2	12,353.9	5,880.6	11,950.5	30.8	162.9	5,849.8	11,787.6	197,013.8	202,951.6
Natural Gas Fired Combined Cycle	Utility Scale Facilities	239,405.0	44.6	0.0	239,449.6	44.6	5,431.2	5,431.6	80.0	10,002.4	0.0	80.0	10,002.4	239,529.6	249,452.0	
Natural Gas Fired Combustion Turbine	Utility Scale Facilities	124,790.2	291.0	0.0	125,081.2	291.0	1,495.7	1,475.6	69.2	616.2	59.3	91.3	9.9	524.9	125,091.1	125,606.1
Natural Gas Steam Turbine	Utility Scale Facilities	79,357.6	41.0	0.0	79,398.6	41.0	1,367.4	343.4	0.0	1.2	305.0	453.5	-305.0	-452.3	79,093.6	78,946.3
Natural Gas Internal Combustion Engine	Utility Scale Facilities	3,807.0	0.0	0.0	3,807.0	0.0	231.3	231.0	224.6	502.2	0.9	0.9	223.7	501.3	4,030.7	4,308.3
Natural Gas with Compressed Air Storage	Utility Scale Facilities	110.0	0.0	0.0	110.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	110.0	110.0
Other Natural Gas	Utility Scale Facilities	112.7	0.0	0.0	112.7	0.0	8.1	9.5	1.4	1.4	0.0	0.0	1.4	1.4	114.1	114.1
Natural Gas Subtotal	Utility Scale Facilities	447,582.5	376.6	0.0	447,959.1	376.6	8,533.7	7,491.1	375.2	11,123.4	365.2	545.7	10.0	10,577.7	447,969.1	458,536.8
Conventional Steam Coal	Utility Scale Facilities	270,827.9	0.0	51.0	270,776.9	-51.0	-8,128.0	-9,662.3	11.0	11.0	650.0	3,432.1	-639.0	-3,421.1	270,137.9	267,355.8
Coal Integrated Gasification Combined Cycle	Utility Scale Facilities	815.0	0.0	0.0	815.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	815.0	815.0
Coal Subtotal	Utility Scale Facilities	271,642.9	0.0	51.0	271,591.9	-51.0	-8,128.0	-9,662.3	11.0	11.0	650.0	3,432.1	-639.0	-3,421.1	270,952.9	268,170.8
Petroleum Coke	Utility Scale Facilities	1,540.3	0.0	0.0	1,540.3	0.0	-204.0	-204.0	0.0	0.0	0.0	0.0	0.0	0.0	1,540.3	1,540.3
Petroleum Liquids	Utility Scale Facilities	34,852.8	22.8	0.0	34,875.6	22.8	-210.4	-225.4	2.3	2.3	0.7	605.0	1.6	-602.7	34,877.2	34,272.9
Other Gases	Utility Scale Facilities	2,497.2	0.0	0.0	2,497.2	0.0	-3.2	-33.2	0.0	0.0	0.0	0.0	0.0	0.0	2,497.2	2,497.2
Fossil Fuels Subtotal	Utility Scale Facilities	758,115.7	399.4	51.0	758,464.1	348.4	-11.9	-2,633.8	388.5	11,136.7	1,015.9	4,582.8	-627.4	6,553.9	757,836.7	765,018.0
Hydroelectric Pumped Storage	Utility Scale Facilities	22,670.1	0.0	0.0	22,670.1	0.0	95.0	95.0	0.0	114.0	0.0	0.0	0.0	114.0	22,670.1	22,784.1
Flywheels	Utility Scale Facilities	42.0	0.0	0.0	42.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	42.0	42.0
Batteries	Utility Scale Facilities	369.2	0.0	0.0	369.2	0.0	77.0	90.5	26.2	58.6	0.0	0.0	26.2	58.6	395.4	427.8
Energy Storage Subtotal	Utility Scale Facilities	23,081.3	0.0	0.0	23,081.3	0.0	172.0	185.5	26.2	172.6	0.0	0.0	26.2	172.6	23,107.5	23,253.9
Nuclear	Utility Scale Facilities	99,315.9	0.0	0.0	99,315.9	0.0	643.9	643.9	0.0	20.0	0.0	836.8	0.0	-816.8	99,315.9	98,499.1
All Other	Utility Scale Facilities	1,484.8	15.0	15.0	1,484.8	0.0	23.4	23.4	0.0	1.5	0.0	0.0	0.0	1.5	1,484.8	1,486.3
TOTAL	UTILITY SCALE FACILITIES	1,071,933.7	1,642.4	66.0	1,073,510.1	1,576.4	9,455.6	10,572.9	6,295.3	23,281.3	1,046.7	5,582.5	5,248.6	17,698.8	1,078,758.7	1,091,208.9
Estimated Distributed Solar Photovoltaic	Distributed Facilities	12,575.5			12,863.5	288.1	3,085.0	3,446.8								
Estimated Total Solar Photovoltaic	All Facilities	28,726.2			29,500.4	774.3	7,816.5	9,605.0								
Estimated Total Solar	All Facilities	30,484.1			31,258.3	774.3	7,816.5	9,561.2								

NOTES:

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Table 6.1.A. Net Summer Capacity for Utility Scale Solar Photovoltaic and Distributed Solar Photovoltaic Capacity (Megawatts)
2008 - November 2016

Period	Utility Solar Photovoltaic	Estimated Distributed Solar Photovoltaic	Estimated Total Solar Photovoltaic
Annual Totals			
2008	70.8	N/A	N/A
2009	145.5	N/A	N/A
2010	393.4	N/A	N/A
2011	1,052.0	N/A	N/A
2012	2,694.1	N/A	N/A
2013	5,336.1	N/A	N/A
2014	8,656.6	7,326.6	15,983.2
2015	11,905.4	9,778.5	21,683.9
Year 2014			
January	5,688.0	5,612.6	11,300.6
February	5,839.2	5,728.2	11,567.4
March	5,967.9	5,853.0	11,820.9
April	6,188.0	5,978.9	12,166.9
May	6,368.8	6,111.6	12,480.4
June	6,564.1	6,227.2	12,791.3
July	6,706.3	6,369.2	13,075.5
August	7,105.0	6,603.0	13,708.0
Sept	7,215.1	6,749.8	13,964.9
October	7,575.3	6,922.0	14,497.3
November	8,005.3	7,078.0	15,083.3
December	8,656.6	7,326.6	15,983.2
Year 2015			
January	8,873.2	7,369.4	16,242.6
February	9,027.0	7,529.1	16,556.1
March	9,088.1	7,696.7	16,784.8
April	9,154.4	7,860.3	17,014.7
May	9,368.0	8,050.6	17,418.6
June	9,638.9	8,235.9	17,874.8
July	9,714.8	8,479.1	18,193.9
August	9,945.4	8,700.9	18,646.3
Sept	10,050.2	8,951.5	19,001.7
October	10,156.7	9,188.4	19,345.1
November	10,478.7	9,416.7	19,895.4
December	11,905.4	9,778.5	21,683.9
Year 2016			
January	12,113.5	10,238.4	22,351.9
February	12,242.9	10,499.1	22,742.0
March	12,415.2	10,825.8	23,241.0
April	12,947.2	11,083.7	24,030.9
May	13,051.1	11,326.7	24,377.8
June	13,226.4	11,584.6	24,811.0
July	13,947.6	11,800.5	25,748.1
August	14,862.2	12,083.9	26,946.1
Sept	15,595.6	12,302.1	27,897.7
October	16,150.7	12,575.5	28,726.2
November	16,636.9	12,863.5	29,500.4

Values for 2015 are final. Values for 2016 are preliminary.

Sources: U.S. Energy Information Administration, Form EIA-860, 'Annual Electric Generator Report' and Form EIA-860M, 'Monthly Update to the Annual Electric Generator Report.'

Estimated distributed solar photovoltaic capacity is based on data from Form EIA-826, Form EIA-861 and from estimation methods described in the technical notes.

Table 6.1.B. Net Summer Capacity for Estimated Distributed Solar Photovoltaic Capacity by Sector (Megawatts): 2014 - November 2016

Period	Residential	Commercial	Industrial	Total
Annual Totals				
2014	3,346.3	3,279.7	700.6	7,326.6
2015	5,191.5	3,706.7	880.3	9,778.5
Year 2014				
January	2,285.2	2,766.5	561.0	5,612.6
February	2,354.4	2,804.9	568.9	5,728.2
March	2,428.2	2,848.7	576.2	5,853.0
April	2,506.9	2,883.8	588.2	5,978.9
May	2,588.3	2,930.2	593.0	6,111.6
June	2,677.6	2,946.1	603.5	6,227.2
July	2,765.0	2,989.0	615.1	6,369.2
August	2,873.0	3,096.4	633.6	6,603.0
Sept	2,980.3	3,128.7	640.9	6,749.8
October	3,092.8	3,162.3	667.0	6,922.0
November	3,191.8	3,203.2	683.0	7,078.0
December	3,346.3	3,279.7	700.6	7,326.6
Year 2015				
January	3,424.8	3,227.0	717.6	7,369.4
February	3,550.2	3,245.1	733.7	7,529.1
March	3,689.3	3,268.3	739.1	7,696.7
April	3,816.3	3,294.6	749.4	7,860.3
May	3,949.5	3,336.6	764.5	8,050.6
June	4,110.7	3,356.2	768.9	8,235.9
July	4,275.5	3,414.5	789.1	8,479.1
August	4,440.5	3,455.9	804.5	8,700.9
Sept	4,635.1	3,498.9	817.4	8,951.5
October	4,815.7	3,540.5	832.2	9,188.4
November	4,972.5	3,593.4	850.8	9,416.7
December	5,191.5	3,706.7	880.3	9,778.5
Year 2016				
January	5,373.5	3,975.7	889.2	10,238.4
February	5,572.5	4,017.1	909.5	10,499.1
March	5,798.1	4,088.7	939.0	10,825.8
April	5,996.6	4,130.3	956.8	11,083.7
May	6,184.1	4,169.7	973.0	11,326.7
June	6,377.9	4,219.9	986.9	11,584.6
July	6,538.9	4,255.5	1,006.2	11,800.5
August	6,732.3	4,326.7	1,025.0	12,083.9
Sept	6,875.5	4,398.9	1,027.7	12,302.1
October	7,059.9	4,477.6	1,038.0	12,575.5
November	7,241.5	4,572.9	1,049.1	12,863.5

Values for 2015 are final. Values for 2016 are preliminary.

Sources: U.S. Energy Information Administration, Form EIA-860, 'Annual Electric Generator Report' and Form EIA-860M, 'Monthly Update to the Annual Electric Generator Report.'

Estimated distributed solar photovoltaic capacity is based on data from Form EIA-826, Form EIA-861 and from estimation methods described in the technical notes.

Table 6.2.A. Net Summer Capacity of Utility Scale Units by Technology and by State, November 2016 and 2015 (Megawatts)

Census Division and State	Renewable Sources		Fossil Fuels		Hydroelectric Pumped Storage		Other Energy Storage		Nuclear		All Other Sources		All Sources	
	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015
New England	5,089.8	4,973.0	22,730.1	22,753.3	1,797.4	1,775.4	2.0	2.0	4,018.0	4,018.0	48.0	48.0	33,685.3	33,569.7
Connecticut	333.6	331.4	6,312.7	6,309.6	29.4	29.4	0.0	0.0	2,087.8	2,087.8	26.0	26.0	8,789.5	8,784.2
Maine	2,197.4	2,159.5	2,442.5	2,442.5	0.0	0.0	0.0	0.0	0.0	0.0	22.0	22.0	4,661.9	4,624.0
Massachusetts	995.8	950.3	9,795.0	9,839.3	1,768.0	1,746.0	2.0	2.0	682.3	682.3	0.0	0.0	13,243.1	13,219.9
New Hampshire	932.5	918.9	2,270.9	2,270.9	0.0	0.0	0.0	0.0	1,247.9	1,247.9	0.0	0.0	4,451.3	4,437.7
Rhode Island	69.3	57.3	1,809.3	1,791.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1,878.6	1,848.6
Vermont	561.2	555.6	99.7	99.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	660.9	655.3
Middle Atlantic	10,691.9	10,644.3	69,323.9	68,015.6	3,409.1	3,409.1	40.0	40.0	19,224.5	19,224.5	11.2	11.2	102,700.6	101,344.7
New Jersey	727.6	682.6	13,584.3	13,535.5	420.0	420.0	0.0	0.0	4,107.9	4,107.9	11.2	11.2	18,851.0	18,757.2
New York	7,110.1	7,109.1	25,983.0	26,310.5	1,406.1	1,406.1	20.0	20.0	5,397.6	5,397.6	0.0	0.0	39,916.8	40,243.3
Pennsylvania	2,854.2	2,852.6	29,756.6	28,169.6	1,583.0	1,583.0	20.0	20.0	9,719.0	9,719.0	0.0	0.0	43,932.8	42,344.2
East North Central	10,239.7	10,049.9	113,805.9	116,595.5	2,037.0	1,964.0	137.6	100.6	18,896.1	18,896.1	110.1	110.1	145,226.4	147,716.2
Illinois	3,977.0	3,987.8	29,437.2	29,988.2	0.0	0.0	72.6	72.6	11,589.6	11,589.6	0.0	0.0	45,076.4	45,638.2
Indiana	2,179.7	1,992.5	23,353.9	24,263.4	0.0	0.0	20.0	0.0	0.0	0.0	89.0	89.0	25,642.6	26,344.9
Michigan	2,257.7	2,253.5	20,874.7	21,871.2	2,037.0	1,964.0	0.0	0.0	3,976.5	3,976.5	0.0	0.0	29,145.9	30,065.2
Ohio	715.6	715.6	25,800.0	28,865.0	0.0	0.0	45.0	28.0	2,134.0	2,134.0	0.0	0.0	28,694.6	28,742.6
Wisconsin	1,109.7	1,100.5	14,340.1	14,607.7	0.0	0.0	0.0	0.0	1,196.0	1,196.0	21.1	21.1	16,666.9	16,925.3
West North Central	22,028.2	20,527.3	60,621.4	61,263.3	657.0	657.0	2.0	2.0	5,377.4	5,855.5	24.5	24.5	88,710.5	88,329.6
Iowa	6,467.3	6,238.9	9,567.2	9,950.1	0.0	0.0	0.0	0.0	601.4	601.4	0.0	0.0	16,635.9	16,790.4
Kansas	3,863.7	3,191.6	9,716.8	9,583.1	0.0	0.0	0.0	0.0	1,175.0	1,175.0	0.8	0.8	14,756.3	13,950.5
Minnesota	4,116.0	3,913.7	10,132.6	10,240.6	0.0	0.0	1.0	1.0	1,647.0	1,647.0	18.4	18.4	15,915.0	15,820.7
Missouri	1,035.2	1,032.2	18,659.1	18,946.6	657.0	657.0	1.0	1.0	1,190.0	1,190.0	0.0	0.0	21,542.3	21,826.8
Nebraska	1,218.7	1,178.9	6,239.9	6,237.1	0.0	0.0	0.0	0.0	764.0	1,242.1	0.0	0.0	8,222.6	8,658.1
North Dakota	2,891.5	2,634.0	4,615.5	4,615.5	0.0	0.0	0.0	0.0	0.0	0.0	5.3	5.3	7,512.3	7,254.8
South Dakota	2,435.8	2,338.0	1,690.3	1,690.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4,126.1	4,028.3
South Atlantic	14,993.0	13,403.7	159,760.1	158,279.9	7,905.2	7,905.2	76.5	65.5	24,578.6	24,578.6	509.7	509.7	207,823.1	204,742.6
Delaware	44.9	44.9	3,359.0	3,358.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3,403.9	3,403.0
District of Columbia	12.0	12.0	9.0	9.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21.0	21.0
Florida	1,443.9	1,423.9	54,112.4	53,374.6	0.0	0.0	0.0	0.0	3,572.0	3,572.0	348.7	348.7	59,477.0	58,719.2
Georgia	3,626.2	3,034.5	26,956.9	27,190.9	1,862.2	1,862.2	0.0	0.0	4,061.0	4,061.0	0.0	0.0	36,506.3	36,148.6
Maryland	1,009.0	1,002.4	9,556.7	9,681.7	0.0	0.0	11.0	0.0	1,707.8	1,707.8	0.0	0.0	12,284.5	12,391.9
North Carolina	4,295.2	3,454.6	22,021.3	22,021.3	86.0	86.0	0.0	0.0	5,113.6	5,113.6	161.0	161.0	31,677.1	30,836.5
South Carolina	1,790.4	1,790.4	11,633.0	11,635.2	2,716.0	2,716.0	0.0	0.0	6,556.2	6,556.2	0.0	0.0	22,695.6	22,697.8
Virginia	1,841.4	1,755.0	17,948.5	16,845.8	3,241.0	3,241.0	0.0	0.0	3,568.0	3,568.0	0.0	0.0	26,598.9	25,409.8
West Virginia	930.0	886.0	14,163.3	14,163.3	0.0	0.0	65.5	65.5	0.0	0.0	0.0	0.0	15,158.8	15,114.8
East South Central	8,288.6	8,011.4	65,848.3	68,051.3	1,616.3	1,616.3	0.0	0.0	10,990.1	9,868.1	1.4	1.4	86,744.7	87,548.5
Alabama	4,014.9	3,941.6	20,214.5	21,398.5	0.0	0.0	0.0	0.0	5,066.4	5,066.4	0.0	0.0	29,295.8	30,406.5
Kentucky	1,109.9	906.0	19,004.5	19,153.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20,114.4	20,059.5
Mississippi	274.7	274.7	14,315.4	14,407.4	0.0	0.0	0.0	0.0	1,401.0	1,401.0	1.4	1.4	15,992.5	16,084.5
Tennessee	2,889.1	2,889.1	12,313.9	13,091.9	1,616.3	1,616.3	0.0	0.0	4,522.7	3,400.7	0.0	0.0	21,342.0	20,998.0
West South Central	29,828.1	25,855.2	145,608.0	145,932.5	286.0	286.0	41.0	40.0	8,896.2	8,896.2	527.2	512.2	185,186.5	181,522.4
Arkansas	1,590.6	1,578.6	11,279.6	11,279.6	28.0	28.0	0.0	0.0	1,808.5	1,808.5	0.0	0.0	14,706.7	14,694.7
Louisiana	687.1	687.1	23,201.8	23,144.6	0.0	0.0	0.0	0.0	2,127.7	2,127.7	290.9	275.9	26,307.5	26,235.3
Oklahoma	6,389.5													

Table 6.2.B. Net Summer Capacity Using Primarily Renewable Energy Sources and by State, November 2016 and 2015 (Megawatts)

Census Division and State	Summer Capacity at Utility Scale Facilities												Distributed Capacity		Summer Capacity From Utility Scale Facilities and Distributed Capacity			
	Wind		Solar Photovoltaic		Solar Thermal		Conventional Hydroelectric		Biomass Sources		Geothermal		Total Renewable Sources		Estimated Distributed Solar Photovoltaic Capacity	Estimated Total Solar Photovoltaic Capacity	Estimated Total Solar Capacity	
	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015
New England	1,066.0	994.1	412.9	373.9	0.0	0.0	1,955.2	1,948.8	1,655.7	1,656.2	0.0	0.0	5,089.8	4,973.0	1,365.1	988.0	1,778.0	1,361.9
Connecticut	0.0	0.0	12.2	10.0	0.0	0.0	122.2	122.2	199.2	199.2	0.0	0.0	333.6	331.4	258.7	171.8	270.9	181.8
Maine	652.7	612.8	0.0	0.0	0.0	0.0	728.9	728.9	815.8	817.8	0.0	0.0	2,197.4	2,159.5	22.2	16.3	22.2	16.3
Massachusetts	90.5	82.6	356.1	321.3	0.0	0.0	265.9	263.1	283.3	283.3	0.0	0.0	995.8	950.3	956.1	718.2	1,312.2	1,039.5
New Hampshire	183.1	171.0	0.0	0.0	0.0	0.0	504.8	504.8	244.6	243.1	0.0	0.0	932.5	918.9	48.9	22.8	48.9	22.8
Rhode Island	19.5	7.5	10.2	10.2	0.0	0.0	2.7	2.7	36.9	36.9	0.0	0.0	69.3	57.3	16.3	9.8	26.5	20.0
Vermont	120.2	120.2	34.4	32.4	0.0	0.0	330.7	327.1	75.9	75.9	0.0	0.0	561.2	555.6	62.9	49.1	97.3	81.5
Middle Atlantic	3,088.1	3,088.1	615.1	551.1	0.0	0.0	5,623.5	5,623.5	1,365.2	1,381.6	0.0	0.0	10,691.9	10,644.3	2,186.2	1,673.2	2,801.3	2,224.3
New Jersey	7.6	7.6	478.6	433.6	0.0	0.0	12.3	12.3	229.1	229.1	0.0	0.0	727.6	682.6	1,250.1	1,006.1	1,728.7	1,439.7
New York	1,747.0	1,747.0	94.3	75.3	0.0	0.0	4,711.6	4,711.6	557.2	575.2	0.0	0.0	7,109.1	7,109.1	719.4	488.9	813.7	564.2
Pennsylvania	1,333.5	1,333.5	42.2	42.2	0.0	0.0	899.6	899.6	578.9	577.3	0.0	0.0	2,854.2	2,852.6	216.8	178.2	259.0	220.4
East North Central	7,814.1	7,655.1	244.1	193.4	0.0	0.0	913.2	910.3	1,268.3	1,291.1	0.0	0.0	10,239.7	10,049.9	172.0	142.6	416.1	336.0
Illinois	3,799.8	3,799.8	32.8	32.8	0.0	0.0	34.1	34.1	110.3	121.1	0.0	0.0	3,977.0	3,987.8	26.0	18.8	58.8	51.6
Indiana	1,889.7	1,739.7	155.1	117.9	0.0	0.0	60.4	60.4	74.5	74.5	0.0	0.0	2,179.7	1,992.5	10.2	7.1	165.3	125.0
Michigan	1,360.1	1,360.1	12.5	2.0	0.0	0.0	324.6	330.9	560.5	560.5	0.0	0.0	2,257.7	2,253.5	32.0	27.3	44.5	29.3
Ohio	433.1	424.1	42.7	39.7	0.0	0.0	101.9	101.9	137.9	149.9	0.0	0.0	715.6	715.6	78.2	69.4	120.9	109.1
Wisconsin	331.4	331.4	1.0	1.0	0.0	0.0	392.2	383.0	385.1	385.1	0.0	0.0	1,109.7	1,100.5	25.5	20.1	26.5	21.1
West North Central	18,175.7	16,684.1	23.5	14.2	0.0	0.0	3,278.1	3,278.1	550.9	550.9	0.0	0.0	22,028.2	20,527.3	184.9	147.2	208.4	161.4
Iowa	6,299.2	6,070.8	0.0	0.0	0.0	0.0	144.9	144.9	23.2	23.2	0.0	0.0	6,467.3	6,238.9	39.4	29.1	39.4	29.1
Kansas	3,846.7	3,174.6	1.0	1.0	0.0	0.0	7.0	7.0	9.0	9.0	0.0	0.0	3,863.7	3,191.6	6.7	3.1	7.7	4.1
Minnesota	3,440.7	3,240.7	4.0	1.7	0.0	0.0	194.6	194.6	476.7	476.7	0.0	0.0	4,116.0	3,913.7	28.2	19.5	32.2	21.2
Missouri	458.5	458.5	14.5	11.5	0.0	0.0	545.7	545.7	16.5	16.5	0.0	0.0	1,035.2	1,032.2	108.1	94.1	122.6	105.6
Nebraska	921.1	885.3	4.0	0.0	0.0	0.0	277.9	277.9	15.7	15.7	0.0	0.0	1,218.7	1,178.9	1.7	0.9	5.7	0.9
North Dakota	2,371.7	2,114.2	0.0	0.0	0.0	0.0	510.0	510.0	9.8	9.8	0.0	0.0	2,891.5	2,634.0	0.2	0.2	0.2	0.2
South Dakota	837.8	740.0	0.0	0.0	0.0	0.0	1,598.0	1,598.0	0.0	0.0	0.0	0.0	2,435.8	2,338.0	0.6	0.3	0.6	0.3
South Atlantic	775.3	775.3	2,783.3	1,247.5	0.0	0.0	7,251.7	7,207.7	4,182.7	4,173.2	0.0	0.0	14,993.0	13,403.7	1,103.9	622.2	3,887.2	1,869.7
Delaware	2.0	2.0	30.7	30.7	0.0	0.0	0.0	0.0	12.2	12.2	0.0	0.0	44.9	44.9	80.8	54.2	111.5	84.9
District of Columbia	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.0	12.0	0.0	0.0	12.0	12.0	41.0	20.4	41.0	20.4
Florida	0.0	0.0	100.8	80.8	0.0	0.0	54.5	54.5	1,288.6	1,288.6	0.0	0.0	1,443.9	1,423.9	153.1	102.0	253.9	182.8
Georgia	0.0	0.0	680.9	91.2	0.0	0.0	2,047.5	2,047.5	897.8	895.8	0.0	0.0	3,626.2	3,034.5	NM	NM	NM	NM
Maryland	190.0	190.0	87.0	79.3	0.0	0.0	590.0	590.0	142.0	143.1	0.0	0.0	1,009.0	1,002.4	554.5	289.2	641.5	368.5
North Carolina	0.0	0.0	1,798.4	963.0	0.0	0.0	2,004.1	2,004.1	492.7	487.5	0.0	0.0	4,295.2	3,454.6	105.4	65.1	1,903.8	1,028.1
South Carolina	0.0	0.0	2.5	2.5	0.0	0.0	1,345.1	1,345.1	442.8	442.8	0.0	0.0	1,790.4	1,790.4	34.8	5.2	37.3	7.7
Virginia	0.0	0.0	83.0	0.0	0.0	0.0	866.0	866.0	892.4	889.0	0.0	0.0	1,841.4	1,755.0	30.2	21.5	113.2	21.5
West Virginia	583.3	583.3	0.0	0.0	0.0	0.0	344.5	300.5	2.2	2.2	0.0	0.0	930.0	886.0	4.3	3.1	4.3	3.1
East South Central	29.1	29.1	130.2	45.2	0.0	0.0	6,919.8	6,726.9	1,209.5	1,210.2	0.0</td							

Table 6.2.C. Net Summer Capacity of Utility Scale Units Using Primarily Fossil Fuels and by State, November 2016 and 2015 (Megawatts)

Census Division and State	Natural Gas Fired Combined Cycle		Natural Gas Fired Combustion Turbine		Other Natural Gas		Coal		Petroleum Coke		Petroleum Liquids		Other Gases		Total Fossil Fuels	
	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015
New England	11,911.0	11,893.0	1,115.5	1,111.7	647.1	644.3	1,955.3	1,988.3	0.0	0.0	7,101.2	7,116.0	0.0	0.0	22,730.1	22,753.3
Connecticut	2,547.5	2,547.5	479.3	479.3	422.2	419.1	383.4	383.4	0.0	0.0	2,480.3	2,480.3	0.0	0.0	6,312.7	6,309.6
Maine	1,250.0	1,250.0	297.1	297.1	14.5	14.5	0.0	0.0	0.0	0.0	880.9	880.9	0.0	0.0	2,442.5	2,442.5
Massachusetts	5,098.6	5,098.6	335.3	331.5	198.0	198.3	1,038.0	1,071.0	0.0	0.0	3,125.1	3,139.9	0.0	0.0	9,795.0	9,839.3
New Hampshire	1,235.2	1,235.2	3.8	3.8	0.0	0.0	533.9	533.9	0.0	0.0	498.0	498.0	0.0	0.0	2,270.9	2,270.9
Rhode Island	1,779.7	1,761.7	0.0	0.0	12.4	12.4	0.0	0.0	0.0	0.0	17.2	17.2	0.0	0.0	1,809.3	1,791.3
Vermont	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	99.7	99.7	0.0	0.0	99.7	99.7
Middle Atlantic	26,296.8	24,621.1	7,599.7	7,599.7	13,533.8	13,207.8	16,308.0	16,993.0	78.6	78.6	5,383.2	5,391.6	123.8	123.8	69,323.9	68,015.6
New Jersey	8,104.3	8,047.5	2,817.1	2,817.1	1,109.2	1,109.2	1,245.0	1,245.0	11.6	11.6	273.7	281.7	23.4	23.4	13,584.3	13,535.5
New York	8,122.0	8,069.1	3,105.2	3,105.2	9,522.0	9,522.0	1,749.6	2,129.6	0.0	0.0	3,484.2	3,484.6	0.0	0.0	25,983.0	26,310.5
Pennsylvania	10,070.5	8,504.5	1,677.4	1,677.4	2,902.6	2,576.6	13,313.4	13,618.4	67.0	67.0	1,625.3	1,625.3	100.4	100.4	29,756.6	28,169.6
East North Central	17,043.4	17,001.6	25,915.5	25,528.0	3,901.4	3,283.4	62,758.3	66,347.9	317.6	521.6	2,729.8	2,739.9	1,139.9	1,173.1	113,805.9	116,595.5
Illinois	3,549.8	3,543.0	10,164.4	10,164.4	278.2	278.2	14,644.6	15,204.6	0.0	0.0	685.7	680.3	114.5	117.7	29,437.2	29,988.2
Indiana	2,480.2	2,480.2	3,127.6	3,142.6	706.1	88.1	16,111.4	17,416.9	70.0	274.0	270.3	273.3	588.3	588.3	23,353.9	24,263.4
Michigan	4,296.5	4,296.5	3,833.7	3,431.2	2,465.8	2,465.8	9,451.0	10,837.5	47.2	47.2	530.5	543.0	250.0	250.0	20,874.7	21,871.2
Ohio	4,076.0	4,041.0	5,427.7	5,427.7	131.4	131.4	15,189.9	15,259.9	142.0	142.0	645.9	645.9	187.1	217.1	25,800.0	25,865.0
Wisconsin	2,640.9	2,640.9	3,362.1	3,362.1	319.9	319.9	7,361.4	7,629.0	58.4	58.4	597.4	597.4	0.0	0.0	14,340.1	14,607.7
West North Central	6,034.9	5,917.9	11,415.8	11,393.8	3,901.8	3,617.1	35,132.4	36,198.1	32.0	32.0	4,096.1	4,096.0	8.4	8.4	60,621.4	61,263.3
Iowa	1,125.8	1,125.8	1,140.6	1,105.6	572.8	467.4	5,681.7	6,205.9	32.0	32.0	1,014.3	1,013.4	0.0	0.0	9,567.2	9,950.1
Kansas	266.0	149.0	2,171.8	2,184.8	2,054.5	2,024.0	4,687.2	4,687.2	0.0	0.0	537.3	538.1	0.0	0.0	9,716.8	9,583.1
Minnesota	2,173.2	2,173.2	2,534.1	2,534.1	325.8	353.8	4,300.1	4,380.1	0.0	0.0	799.4	799.4	0.0	0.0	10,132.6	10,240.6
Missouri	1,837.3	1,837.3	3,395.2	3,395.2	349.9	349.9	11,932.0	12,219.5	0.0	0.0	1,144.7	1,144.7	0.0	0.0	18,659.1	18,946.6
Nebraska	342.6	342.6	1,151.5	1,151.5	590.1	413.3	3,842.0	4,016.0	0.0	0.0	313.7	313.7	0.0	0.0	6,239.9	6,237.1
North Dakota	0.0	0.0	328.0	328.0	0.0	0.0	4,214.4	4,214.4	0.0	0.0	64.7	64.7	8.4	8.4	4,615.5	4,615.5
South Dakota	290.0	290.0	694.6	694.6	8.7	8.7	475.0	475.0	0.0	0.0	222.0	222.0	0.0	0.0	1,690.3	1,690.3
South Atlantic	51,253.3	48,550.2	31,111.9	31,110.1	7,112.1	7,157.8	58,281.6	59,261.6	83.8	83.8	11,782.4	11,981.4	135.0	135.0	159,760.1	158,279.9
Delaware	1,512.0	1,512.0	311.0	311.0	876.9	876.0	410.0	410.0	0.0	0.0	114.1	114.1	135.0	135.0	3,359.0	3,358.1
District of Columbia	0.0	0.0	9.0	9.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.0	9.0
Florida	27,505.6	26,245.6	7,500.2	7,481.4	3,027.7	3,119.7	10,234.0	10,591.0	0.0	0.0	5,844.9	5,936.9	0.0	0.0	54,112.4	53,374.6
Georgia	7,953.2	7,953.2	7,840.0	7,857.0	789.4	789.4	9,353.5	9,508.5	83.8	83.8	937.0	999.0	0.0	0.0	26,956.9	27,190.9
Maryland	250.0	250.0	1,581.0	1,581.0	1,415.8	1,489.8	4,712.0	4,712.0	0.0	0.0	1,597.9	1,648.9	0.0	0.0	9,556.7	9,681.7
North Carolina	4,766.0	4,766.0	6,049.7	6,049.7	0.0	0.0	10,802.8	10,802.8	0.0	0.0	402.8	402.8	0.0	0.0	22,021.3	22,021.3
South Carolina	2,409.0	2,409.0	2,855.6	2,855.6	296.0	298.2	5,547.0	5,547.0	0.0	0.0	525.4	525.4	0.0	0.0	11,633.0	11,635.2
Virginia	6,857.5	5,414.4	3,894.1	3,894.1	583.3	584.7	4,264.3	4,609.3	0.0	0.0	2,349.3	2,343.3	0.0	0.0	17,948.5	16,845.8
West Virginia	0.0	0.0	1,071.3	1,071.3	123.0	0.0	12,958.0	13,081.0	0.0	0.0	11.0	11.0	0.0	0.0	14,163.3	14,163.3
East South Central	19,040.8	19,040.8	13,003.3	13,003.3	4,055.0	3,887.0	29,432.4	31,803.4	0.0	0.0	217.0	217.0	99.8	99.8	65,848.3	68,051.3
Alabama	9,397.8	9,397.8	2,530.6	2,530.6	636.3	636.3	7,507.4	8,691.4	0.0	0.0	42.6	42.6	99.8	99.8	20,214.5	21,398.5
Kentucky	663.3	663.3	4,976.6	4,976.6	260.0	0.0										

Table 6.3. New Utility Scale Generating Units by Operating Company, Plant, and Month, 2016

Year	Month	Entity ID	Entity Name	Plant Producer Type	Plant Name	Plant State	Plant ID	Generator ID	Net Summer Capacity (MW)	Technology	Energy Source Code	Prime Mover Code
2016	1	40577	American Mun Power-Ohio, Inc	Electric Utility	Cannelton Hydroelectric Plant	KY	57399	CG1	29.3	Conventional Hydroelectric	WAT	HY
2016	1	40577	American Mun Power-Ohio, Inc	Electric Utility	Willow Island Hydroelectric Plant	WV	57401	WIG1	22.0	Conventional Hydroelectric	WAT	HY
2016	1	59247	Beafield Solar II LLC	IPP	Beafield Solar II	NC	59488	BEARF	4.9	Solar Photovoltaic	SUN	PV
2016	1	58562	Blueberry One, LLC	IPP	Blueberry One	NC	58605	PV1	5.0	Solar Photovoltaic	SUN	PV
2016	1	59858	Chel Solar LLC	IPP	Chel Solar	NC	59508	PV1	5.0	Solar Photovoltaic	SUN	PV
2016	1	7977	City of Hamilton - (OH)	Electric Utility	Meldahl Hydroelectric Project	KY	56872	2	35.0	Conventional Hydroelectric	WAT	HY
2016	1	59693	Cline Solar Farm LLC	IPP	Cline Solar Farm, LLC	NC	59929	NB007	4.9	Solar Photovoltaic	SUN	PV
2016	1	59692	Coats Solar Farm LLC	IPP	Coats Solar Farm, LLC	NC	59937	NB006	4.9	Solar Photovoltaic	SUN	PV
2016	1	5109	DTE Electric Company	Electric Utility	Greenwood Solar Farm	MI	60019	1	1.9	Solar Photovoltaic	SUN	PV
2016	1	57170	EDF Renewable Asset Holdings, Inc.	IPP	Milo Wind Project LLC	NM	59838	GEN1	50.0	Onshore Wind Turbine	WND	WT
2016	1	58873	Green Energy Team LLC	IPP	Biomass to Energy Facility, Kauai	HI	59035	MKA1	8.3	Other Waste Biomass	AB	ST
2016	1	59835	Green Farm Solar LLC	IPP	Green Farm	NC	59148	GREEN	5.0	Solar Photovoltaic	SUN	PV
2016	1	59853	Happy Solar LLC	IPP	Happy Solar	NC	59512	PV1	4.0	Solar Photovoltaic	SUN	PV
2016	1	9267	Hoosier Energy R E C, Inc	Electric Utility	New Castle Solar RES	IN	59981	PV1	1.1	Solar Photovoltaic	SUN	PV
2016	1	9324	Indiana Michigan Power Co	Electric Utility	Deer Creek PV	IN	59855	DCPV1	2.5	Solar Photovoltaic	SUN	PV
2016	1	59285	Innovative Solar 6, LLC	IPP	Innovative Solar 6	NC	59542	IS6	3.6	Solar Photovoltaic	SUN	PV
2016	1	59447	Innovative Solar 64, LLC	IPP	Innovative Solar 64	NC	59677	IS064	4.9	Solar Photovoltaic	SUN	PV
2016	1	59851	Jacob Solar LLC	IPP	Jacob Solar	NC	59503	PV1	5.0	Solar Photovoltaic	SUN	PV
2016	1	58891	Jericho Power LLC	IPP	Jericho Power	NH	59070	WT 1	12.1	Onshore Wind Turbine	WND	WT
2016	1	59850	Kenneth Solar LLC	IPP	Kenneth Solar	NC	59507	PV1	3.0	Solar Photovoltaic	SUN	PV
2016	1	58679	Kirkwall Holdings, LLC	IPP	Kirkwall Holdings	NC	58791	PV1	5.0	Solar Photovoltaic	SUN	PV
2016	1	59245	Lanier Solar	IPP	Lanier Solar	NC	59486	LANIE	4.9	Solar Photovoltaic	SUN	PV
2016	1	58451	McCoy Solar, LLC	IPP	McCoy Solar Energy Project	CA	58462	BLK7	41.9	Solar Photovoltaic	SUN	PV
2016	1	59691	Meadowbrook Solar Farm LLC	IPP	Meadowbrook Solar Farm	NC	59936	NB008	4.9	Solar Photovoltaic	SUN	PV
2016	1	12341	MidAmerican Energy Co	Electric Utility	Adams Wind	IA	59637	ADWF4	46.9	Onshore Wind Turbine	WND	WT
2016	1	59857	Murdock Solar LLC	IPP	Murdock Solar	NC	59509	PV1	4.0	Solar Photovoltaic	SUN	PV
2016	1	59262	NRG Solar Oasis, LLC	IPP	NRG Solar Oasis LLC	CA	59528	OASIS	20.0	Solar Photovoltaic	SUN	PV
2016	1	59899	OEE XVII, LLC	Commercial	Harpster Wind	OH	60126	H1	1.5	Onshore Wind Turbine	WND	WT
2016	1	56545	Pattern Operators LP	IPP	Fowler Ridge IV Wind Farm LLC	IN	59547	1	150.0	Onshore Wind Turbine	WND	WT
2016	1	59514	River Mountains Solar, LLC	IPP	River Mountains Solar	NV	59747	1	14.4	Solar Photovoltaic	SUN	PV
2016	1	59363	Silver State Solar Power South, LLC	IPP	Silver State Solar Power South	NV	58644	BLK4	35.7	Solar Photovoltaic	SUN	PV
2016	1	59836	Simons Solar Farm LLC	IPP	Simons Farm	NC	59149	SIMON	5.0	Solar Photovoltaic	SUN	PV
2016	1	60183	SoNCPower10, LLC	IPP	Hertford Solar Farm	NC	60384	HERT	5.0	Solar Photovoltaic	SUN	PV
2016	1	58674	Sonne One, LLC	IPP	Sonne One	NC	58782	PV1	5.0	Solar Photovoltaic	SUN	PV
2016	1	60212	South Winston Farm, LLC	IPP	South Winston Farm, LLC	NC	60409	SWFPV	5.2	Solar Photovoltaic	SUN	PV
2016	1	17650	Southern Power Co	IPP	Stateline Solar	CA	58646	STL3	37.9	Solar Photovoltaic	SUN	PV
2016	1	58661	Sustainable Power Group, LLC	IPP	SEPV 18	CA	59730	SPV18	2.0	Solar Photovoltaic	SUN	PV
2016	1	59412	Tarboro Solar LLC	IPP	Tarboro Solar	NC	59648	5MWPV	5.0	Solar Photovoltaic	SUN	PV
2016	1	59690	Vance Solar Farm LLC	IPP	Vance Solar Farm, LLC	NC	59928	NB007	4.9	Solar Photovoltaic	SUN	PV
2016	1	56948	Waverly Wind Farm LLC	IPP	Waverly Wind Farm LLC	KS	57614	GEN1	199.0	Onshore Wind Turbine	WND	WT
2016	2	59841	70SM1 8ME LLC	IPP	Calipatria Solar Farm	CA	59088	GEN 1	20.0	Solar Photovoltaic	SUN	PV
2016	2	40577	American Mun Power-Ohio, Inc	Electric Utility	Willow Island Hydroelectric Plant	WV	57401	WIG2	22.0	Conventional Hydroelectric	WAT	HY
2016	2	7977	City of Hamilton - (OH)	Electric Utility	Meldahl Hydroelectric Project	KY	56872	1	35.0	Conventional Hydroelectric	WAT	HY
2016	2	10908	City of Lenox - (IA)	Electric Utility	Lenox	IA	1158	5	1.8	Petroleum Liquids	DFO	IC
2016	2	56769	Consolidated Edison Development Inc.	IPP	Corcoran Solar 3	CA	59900	C3CA	20.0	Solar Photovoltaic	SUN	PV
2016	2	57365	Consolidated Edison Solutions Inc	IPP	CES Cherry Hill Solar	NJ	60201	CHNJ	1.2	Solar Photovoltaic	SUN	PV
2016	2	16064	Graphix Packaging International	Industrial	Plant 31 Paper Mill	LA	50028	GEN7	32.0	Natural Gas Fired Combined Cycle	NG	CC
2016	2	59784	Innovative Solar 63, LLC	IPP	Innovative Solar 63, LLC	NC	60053	FLS1	4.9	Solar Photovoltaic	SUN	PV
2016	2	59937	Lemoore PV1, LLC	IPP	Lemoore 1	CA	60142	LEPV1	1.5	Solar Photovoltaic	SUN	PV
2016	2	59791	Lindberg Field Solar I LLC	IPP	Lindberg Field Solar	CA	60060	SDIA2	2.1	Solar Photovoltaic	SUN	PV
2016	2	59996	Long Farm 46 Solar, LLC	IPP	Long Farm 46 Solar, LLC	NC	60208	PV1	5.0	Solar Photovoltaic	SUN	PV
2016	2	17470	PUD 1 of Snohomish County	Electric Utility	MESA 1	WA	60016	B	1.0	Batteries	MWH	BA
2016	2	57313	SolarCity Corporation	IPP	Onondaga County - Metro Water Board	NY	60097	PV1	1.0	Solar Photovoltaic	SUN	PV
2016	2	57313	SolarCity Corporation	IPP	Town of Needham VNEM	MA	60110	PV1	3.0	Solar Photovoltaic	SUN	PV
2016	2	57313	SolarCity Corporation	IPP	Williamsburg Solar LLC VNEM	MA	60111	PV1	2.2	Solar Photovoltaic	SUN	PV
2016	2	17650	Southern Power Co	IPP	Butler Solar Farm 20	GA	58891	1	20.0	Solar Photovoltaic	SUN	PV
2016	2	17650	Southern Power Co	IPP	Stateline Solar	CA	58646	STL4	37.9	Solar Photovoltaic	SUN	PV
2016	2	59788	Steel Bridge Solar, LLC	IPP	Steel Bridge Solar, LLC	OR	60057	STEEL	2.3	Solar Photovoltaic	SUN	PV
2016	2	59885	UIL Distributed Resources, LLC	IPP	UDR Glastonbury Fuel Cell	CT	60109	UDRFC	2.5	Other Natural Gas	NG	FC
2016	2	59969	Whitethorn Solar LLC	IPP	Whitethorn Solar LLC	CA	60193	GEN1	3.3	Solar Photovoltaic	SUN	PV
2016	2	58984	Winton Solar LLC	IPP	Winton Solar	NC	59177	5MWPV	5.0	Solar Photovoltaic	SUN	PV
2016	3	40577	American Mun Power-Ohio, Inc	Electric Utility	Cannelton Hydroelectric Plant	KY	57399	CG2	29.3	Conventional Hydroelectric	WAT	HY
2016	3	59789	Avalon Solar Partners II, LLC	IPP	Avalon Solar II	AZ	60062	ASII	16.0	Solar Photovoltaic	SUN	PV
2016	3	59842	Blythe Solar 110, LLC	IPP	Blythe Solar 110, LLC	CA	60093	BLCK1	38.7	Solar Photovoltaic	SUN	PV
2016	3	298	City of Alexandria - (LA)	Electric Utility	D G Hunter	LA	6558	10	8.6	Natural Gas Internal Combustion Engine	NG	IC
2016	3	298	City of Alexandria - (LA)	Electric Utility	D G Hunter	LA	6558	11	8.6	Natural Gas Internal Combustion Engine	NG	IC
2016	3	298	City of Alexandria - (LA)	Electric Utility	D G Hunter	LA	6558	5	8.6	Natural Gas Internal Combustion Engine	NG	IC
2016	3	298	City of Alexandria - (LA)	Electric Utility	D G Hunter	LA	6558	6	8.6	N		

Table 6.3. New Utility Scale Generating Units by Operating Company, Plant, and Month, 2016

Year	Month	Entity ID	Entity Name	Plant Producer Type	Plant Name	Plant State	Plant ID	Generator ID	Net Summer Capacity (MW)	Technology	Energy Source Code	Prime Mover Code
2016	4	58877	Blue Heron Hydro LLC	IPP	Townshend Hydro	VT	59089	GEN10	0.1	Conventional Hydroelectric	WAT	HY
2016	4	58877	Blue Heron Hydro LLC	IPP	Townshend Hydro	VT	59089	GEN11	0.1	Conventional Hydroelectric	WAT	HY
2016	4	58877	Blue Heron Hydro LLC	IPP	Townshend Hydro	VT	59089	GEN12	0.1	Conventional Hydroelectric	WAT	HY
2016	4	58877	Blue Heron Hydro LLC	IPP	Townshend Hydro	VT	59089	GEN2	0.1	Conventional Hydroelectric	WAT	HY
2016	4	58877	Blue Heron Hydro LLC	IPP	Townshend Hydro	VT	59089	GEN3	0.1	Conventional Hydroelectric	WAT	HY
2016	4	58877	Blue Heron Hydro LLC	IPP	Townshend Hydro	VT	59089	GEN4	0.1	Conventional Hydroelectric	WAT	HY
2016	4	58877	Blue Heron Hydro LLC	IPP	Townshend Hydro	VT	59089	GEN5	0.1	Conventional Hydroelectric	WAT	HY
2016	4	58877	Blue Heron Hydro LLC	IPP	Townshend Hydro	VT	59089	GEN6	0.1	Conventional Hydroelectric	WAT	HY
2016	4	58877	Blue Heron Hydro LLC	IPP	Townshend Hydro	VT	59089	GEN7	0.1	Conventional Hydroelectric	WAT	HY
2016	4	58877	Blue Heron Hydro LLC	IPP	Townshend Hydro	VT	59089	GEN8	0.1	Conventional Hydroelectric	WAT	HY
2016	4	58877	Blue Heron Hydro LLC	IPP	Townshend Hydro	VT	59089	GEN9	0.1	Conventional Hydroelectric	WAT	HY
2016	4	59842	Blythe Solar 110, LLC	IPP	Blythe Solar 110, LLC	CA	60093	BLCK2	36.3	Solar Photovoltaic	SUN	PV
2016	4	59842	Blythe Solar 110, LLC	IPP	Blythe Solar 110, LLC	CA	60093	BLCK3	34.8	Solar Photovoltaic	SUN	PV
2016	4	59228	Bowerman Power LFG, LLC	IPP	Bowerman Power LFG, LLC	CA	59461	GEN01	3.4	Landfill Gas	LFG	IC
2016	4	59228	Bowerman Power LFG, LLC	IPP	Bowerman Power LFG, LLC	CA	59461	GEN02	3.4	Landfill Gas	LFG	IC
2016	4	59228	Bowerman Power LFG, LLC	IPP	Bowerman Power LFG, LLC	CA	59461	GEN03	3.4	Landfill Gas	LFG	IC
2016	4	59228	Bowerman Power LFG, LLC	IPP	Bowerman Power LFG, LLC	CA	59461	GEN04	3.4	Landfill Gas	LFG	IC
2016	4	59228	Bowerman Power LFG, LLC	IPP	Bowerman Power LFG, LLC	CA	59461	GEN05	3.4	Landfill Gas	LFG	IC
2016	4	59228	Bowerman Power LFG, LLC	IPP	Bowerman Power LFG, LLC	CA	59461	GEN06	3.4	Landfill Gas	LFG	IC
2016	4	59228	Bowerman Power LFG, LLC	IPP	Bowerman Power LFG, LLC	CA	59461	GEN07	3.4	Landfill Gas	LFG	IC
2016	4	57260	CSOLAR IV West LLC	IPP	Imperial Solar Energy Center West	CA	57491	56819	148.7	Solar Photovoltaic	SUN	PV
2016	4	7977	City of Hamilton - (OH)	Electric Utility	Meldahl Hydroelectric Project	KY	56872	3	35.0	Conventional Hydroelectric	WAT	HY
2016	4	4254	Consumers Energy Co	Electric Utility	Grand Valley Solar Gardens	MI	60118	1	3.0	Solar Photovoltaic	SUN	PV
2016	4	59745	First Solar Asset Management	IPP	Kingbird A Solar LLC	CA	59868	GEN01	20.0	Solar Photovoltaic	SUN	PV
2016	4	59745	First Solar Asset Management	IPP	Kingbird B Solar, LLC	CA	60091	GEN01	20.0	Solar Photovoltaic	SUN	PV
2016	4	6452	Florida Power & Light Co	Electric Utility	Port Everglades	FL	617	5A	1,260.0	Natural Gas Fired Combined Cycle	NG	CT
2016	4	6452	Florida Power & Light Co	Electric Utility	Port Everglades	FL	617	5B	—	Natural Gas Fired Combined Cycle	NG	CT
2016	4	6452	Florida Power & Light Co	Electric Utility	Port Everglades	FL	617	SST	—	Natural Gas Fired Combined Cycle	NG	CA
2016	4	59403	Gaston Solar LLC	IPP	Gaston Solar	NC	59642	5MWPV	5.0	Solar Photovoltaic	SUN	PV
2016	4	59462	Heelstone Energy Holdings, LLC	IPP	Crestwood Solar Center LLC	NC	59914	CREST	5.0	Solar Photovoltaic	SUN	PV
2016	4	49893	Invenergy Services LLC	IPP	Prairie Breeze III	NE	60314	GEN1	35.8	Onshore Wind Turbine	WND	WT
2016	4	58451	McCoy Solar, LLC	IPP	McCoy Solar Energy Project	CA	58462	BLK2	21.0	Solar Photovoltaic	SUN	PV
2016	4	12524	Midwest Energy Inc	Electric Utility	Goodman Energy Center	KS	56497	10	9.2	Natural Gas Internal Combustion Engine	NG	IC
2016	4	12524	Midwest Energy Inc	Electric Utility	Goodman Energy Center	KS	56497	11	9.2	Natural Gas Internal Combustion Engine	NG	IC
2016	4	12524	Midwest Energy Inc	Electric Utility	Goodman Energy Center	KS	56497	12	9.2	Natural Gas Internal Combustion Engine	NG	IC
2016	4	59911	Milo Solar LLC	IPP	Milo Solar	NC	58739	PV1	3.0	Solar Photovoltaic	SUN	PV
2016	4	59913	Minnie Solar LLC	IPP	Minnie Solar	NC	58740	PV1	3.0	Solar Photovoltaic	SUN	PV
2016	4	12199	Montana-Dakota Utilities Co	Electric Utility	Lewis & Clark	MT	6089	2	9.1	Natural Gas Internal Combustion Engine	NG	IC
2016	4	12199	Montana-Dakota Utilities Co	Electric Utility	Lewis & Clark	MT	6089	3	9.1	Natural Gas Internal Combustion Engine	NG	IC
2016	4	60211	Nash 97 Solar, LLC	IPP	Nash 97 Solar, LLC	NC	60408	97PV	5.2	Solar Photovoltaic	SUN	PV
2016	4	59916	Owen Solar LLC	IPP	Owen Solar	NC	58742	PV1	5.0	Solar Photovoltaic	SUN	PV
2016	4	59713	Potrero Hills Energy Producers, LLC	IPP	Potrero Hills Energy Producers	CA	59952	1	1.6	Landfill Gas	LFG	IC
2016	4	59713	Potrero Hills Energy Producers, LLC	IPP	Potrero Hills Energy Producers	CA	59952	2	1.6	Landfill Gas	LFG	IC
2016	4	59713	Potrero Hills Energy Producers, LLC	IPP	Potrero Hills Energy Producers	CA	59952	3	1.6	Landfill Gas	LFG	IC
2016	4	59713	Potrero Hills Energy Producers, LLC	IPP	Potrero Hills Energy Producers	CA	59952	4	1.6	Landfill Gas	LFG	IC
2016	4	59713	Potrero Hills Energy Producers, LLC	IPP	Potrero Hills Energy Producers	CA	59952	5	1.6	Landfill Gas	LFG	IC
2016	4	59363	Silver State Solar Power South, LLC	IPP	Silver State Solar Power South	NV	58644	BLK5	35.0	Solar Photovoltaic	SUN	PV
2016	4	59363	Silver State Solar Power South, LLC	IPP	Silver State Solar Power South	NV	58644	BLK6	36.6	Solar Photovoltaic	SUN	PV
2016	4	57313	SolarCity Corporation	IPP	Genentech-Oceanside	CA	60231	PV1	4.5	Solar Photovoltaic	SUN	PV
2016	4	59914	Sophie Solar LLC	IPP	Sophie Solar	NC	58745	PV1	4.5	Solar Photovoltaic	SUN	PV
2016	4	17609	Southern California Edison Co	Electric Utility	Tehachapi Energy Storage Project	CA	59661	TSP1	8.0	Batteries	MWH	BA
2016	4	17650	Southern Power Co	IPP	Grant Wind, LLC	OK	60013	GRANT	151.8	Onshore Wind Turbine	WND	WT
2016	4	17650	Southern Power Co	IPP	Stateline Solar	CA	58646	STL5	37.9	Solar Photovoltaic	SUN	PV
2016	4	59915	Star Solar LLC	IPP	Star Solar	NC	58746	PV1	5.0	Solar Photovoltaic	SUN	PV
2016	4	58661	Sustainable Power Group, LLC	Commercial	Southbridge Solar	MA	60278	SBRDG	1.9	Solar Photovoltaic	SUN	PV
2016	4	19497	United Illuminating Co	Electric Utility	UI RCP Bridgeport Seaside	CT	60054	BPPV	2.2	Solar Photovoltaic	SUN	PV
2016	4	19876	Virginia Electric & Power Co	Electric Utility	Brunswick County Power Station	VA	58260	CT01	263.9	Natural Gas Fired Combined Cycle	NG	CT
2016	4	19876	Virginia Electric & Power Co	Electric Utility	Brunswick County Power Station	VA	58260	CT02	263.9	Natural Gas Fired Combined Cycle	NG	CT
2016	4	19876	Virginia Electric & Power Co	Electric Utility	Brunswick County Power Station	VA	58260	CT03	263.9	Natural Gas Fired Combined Cycle	NG	CT
2016	4	19876	Virginia Electric & Power Co	Electric Utility	Brunswick County Power Station	VA	58260	ST01	579.4	Natural Gas Fired Combined Cycle	NG	CA
2016	4	19876	Virginia Electric & Power Co	Electric Utility	Western Branch High School	VA	59904	1	1.0	Solar Photovoltaic	SUN	PV
2016	4	58982	Woodland Solar LLC	IPP	Woodland Solar	NC	59175	5MWPV	5.0	Solar Photovoltaic	SUN	PV
2016	4	60059	ZGlobal Inc	IPP	Castor Solar	CA	60277	CASTR	1.5	Solar Photovoltaic	SUN	PV
2016	5	60281	Altus Power America Management, LLC	IPP	Rail Trail	MA	60492	PV1	2.0	Solar Photovoltaic	SUN	PV
2016	5	60281	Altus Power America Management, LLC	IPP	Rising Paper	MA	60493	1	2.5	Solar Photovoltaic	SUN	PV
2016	5	59359	BHE Renewables, LLC	IPP	Marshall Wind Farm	KS	59084	RPMA	73.8	Onshore Wind Turbine	WND	WT
2016	5	60157	Battleboro Farm, LLC	IPP	Battleboro Farm	NC	60369	BFPV	5.2	Solar Photovoltaic	SUN	PV
2016	5	58468	Dominion Renewable Energy	IPP	Marin							

Table 6.3. New Utility Scale Generating Units by Operating Company, Plant, and Month, 2016

Year	Month	Entity ID	Entity Name	Plant Producer Type	Plant Name	Plant State	Plant ID	Generator ID	Net Summer Capacity (MW)	Technology	Energy Source Code	Prime Mover Code
2016	6	58685	Beaver Dam Energy LLC	IPP	Beaver Dam	PA	58811	GEN1	4.2	Natural Gas Internal Combustion Engine	NG	IC
2016	6	58685	Beaver Dam Energy LLC	IPP	Beaver Dam	PA	58811	GEN2	4.2	Natural Gas Internal Combustion Engine	NG	IC
2016	6	58685	Beaver Dam Energy LLC	IPP	Beaver Dam	PA	58811	GEN3	4.2	Natural Gas Internal Combustion Engine	NG	IC
2016	6	58685	Beaver Dam Energy LLC	IPP	Beaver Dam	PA	58811	GEN4	4.2	Natural Gas Internal Combustion Engine	NG	IC
2016	6	58685	Beaver Dam Energy LLC	IPP	Beaver Dam	PA	58811	GEN5	4.2	Natural Gas Internal Combustion Engine	NG	IC
2016	6	58695	Coronal Development Services	IPP	Holdrege Solar Center	NE	59713	HDSC	4.0	Solar Photovoltaic	SUN	PV
2016	6	59263	Fresh Air Energy XVIII, LLC	IPP	Meadows PV 1	NC	59513	MEAD1	20.0	Solar Photovoltaic	SUN	PV
2016	6	59776	Frontier Solar, LLC	IPP	Frontier Solar LLC	CA	60039	FTRS	20.0	Solar Photovoltaic	SUN	PV
2016	6	9273	Indianapolis Power & Light Co	Electric Utility	Harding Street	IN	990	BAT1	20.0	Batteries	MWH	BA
2016	6	49893	Invenenergy Services LLC	IPP	Gunsight Mountain Wind Energy LLC	TX	56776	1	120.0	Onshore Wind Turbine	WND	WT
2016	6	56211	KCP&L Greater Missouri Operations Co	Electric Utility	Greenwood (MO)	MO	6074	5	3.0	Solar Photovoltaic	SUN	PV
2016	6	26253	Louisiana Energy & Power Authority	Electric Utility	LEPA Unit No. 1	LA	58478	LEPA1	59.0	Natural Gas Fired Combined Cycle	NG	CC
2016	6	58451	McCoy Solar, LLC	IPP	McCoy Solar Energy Project	CA	58462	BLK3	39.6	Solar Photovoltaic	SUN	PV
2016	6	12397	Metropolitan Water District of S CA	Electric Utility	Weymouth Solar Plant	CA	60255	1	2.0	Solar Photovoltaic	SUN	PV
2016	6	12397	Metropolitan Water District of S CA	Electric Utility	Weymouth Solar Plant	CA	60255	2	1.0	Solar Photovoltaic	SUN	PV
2016	6	58417	Panda Liberty O&M LLC	IPP	Panda Liberty Generation Plant	PA	58420	GEN1	376.0	Natural Gas Fired Combined Cycle	NG	CS
2016	6	16179	Rochelle Municipal Utilities	Electric Utility	South Main Street	IL	961	16	1.8	Petroleum Liquids	DFO	IC
2016	6	16179	Rochelle Municipal Utilities	Electric Utility	South Main Street	IL	961	17	1.8	Petroleum Liquids	DFO	IC
2016	6	16179	Rochelle Municipal Utilities	Electric Utility	South Main Street	IL	961	18	1.8	Petroleum Liquids	DFO	IC
2016	6	59404	Seaboard Solar LLC	IPP	Seaboard Solar LLC	NC	59643	5MWPV	5.0	Solar Photovoltaic	SUN	PV
2016	6	59363	Silver State Solar Power South, LLC	IPP	Silver State Solar Power South	NV	58644	BLK8	16.2	Solar Photovoltaic	SUN	PV
2016	6	60206	Solar Star California XL, LLC	IPP	RCWD PV Project	CA	60426	RCWD	1.9	Solar Photovoltaic	SUN	PV
2016	6	59837	South Plains Wind Energy II, LLC	IPP	South Plains II	TX	60087	SPII	300.0	Onshore Wind Turbine	WND	WT
2016	6	17650	Southern Power Co	IPP	Stateline Solar	CA	58646	STL6	37.9	Solar Photovoltaic	SUN	PV
2016	6	58661	Sustainable Power Group, LLC	IPP	Leavenworth Greenworks LLC	NY	59276	LEAVG	9.5	Solar Photovoltaic	SUN	PV
2016	6	58661	Sustainable Power Group, LLC	IPP	SEPV Mojave West	CA	59740	SPVMW	20.0	Solar Photovoltaic	SUN	PV
2016	6	59328	Tart Farm, LLC	IPP	Tart Farm	NC	59583	PV1	5.0	Solar Photovoltaic	SUN	PV
2016	6	18642	Tennessee Valley Authority	Electric Utility	Watts Bar Nuclear Plant	TN	7722	2	1,122.0	Nuclear	NUC	ST
2016	6	20910	Wolverine Power Supply Coop	Electric Utility	Alpine Power Plant	MI	59926	A11	202.6	Natural Gas Fired Combustion Turbine	NG	GT
2016	7	59273	62SK 8me, LLC	IPP	Springbok Solar Farm 1	CA	59532	SB1	100.0	Solar Photovoltaic	SUN	PV
2016	7	59050	Algonquin Power Co	IPP	Odell Wind Farm	MN	58657	1	200.0	Onshore Wind Turbine	WND	WT
2016	7	59843	Blythe Solar II, LLC	IPP	Blythe Solar II, LLC	CA	60092	BLCK4	33.2	Solar Photovoltaic	SUN	PV
2016	7	60204	CB Bladen Solar, LLC	IPP	CB Bladen Solar, LLC	NC	60402	CBPV	5.2	Solar Photovoltaic	SUN	PV
2016	7	57044	Constellation Solar New Jersey, LLC	IPP	NHA at Mansfield NJ	NJ	60378	PV1	5.0	Solar Photovoltaic	SUN	PV
2016	7	58468	Dominion Renewable Energy	IPP	Enterprise Solar, LLC	UT	59386	ENTS1	80.0	Solar Photovoltaic	SUN	PV
2016	7	59765	Eight Flags Energy LLC	Electric CHP	Eight Flags Energy	FL	60025	01	19.8	Natural Gas Fired Combustion Turbine	NG	GT
2016	7	59939	Floyd Solar, LLC	IPP	Floyd Solar, LLC	NC	60147	FLS1	6.5	Solar Photovoltaic	SUN	PV
2016	7	11208	Los Angeles Department of Water & Power	Electric Utility	Scattergood	CA	404	4	214.4	Natural Gas Fired Combined Cycle	NG	CT
2016	7	11208	Los Angeles Department of Water & Power	Electric Utility	Scattergood	CA	404	5	107.2	Natural Gas Fired Combined Cycle	NG	CA
2016	7	11208	Los Angeles Department of Water & Power	Electric Utility	Scattergood	CA	404	6	105.8	Natural Gas Fired Combustion Turbine	NG	GT
2016	7	11208	Los Angeles Department of Water & Power	Electric Utility	Scattergood	CA	404	7	105.8	Natural Gas Fired Combustion Turbine	NG	GT
2016	7	59120	Los Vientos Windpower IV, LLC	IPP	Los Vientos Windpower IV	TX	59321	GEN1	200.0	Onshore Wind Turbine	WND	WT
2016	7	12869	Monterey Regional Waste Mgmt	Commercial	Marina Landfill Gas	CA	10748	U4J16	1.2	Landfill Gas	LFG	IC
2016	7	60145	NRG Solar Las Vegas MB 2	IPP	NRG Solar Las Vegas MB 2, LLC	NV	60350	LVMB2	1.5	Solar Photovoltaic	SUN	PV
2016	7	14624	PUD No 2 of Grant County	Electric Utility	Wanapum	WA	3888	6A	122.0	Conventional Hydroelectric	WAT	HY
2016	7	58417	Panda Liberty O&M LLC	IPP	Panda Liberty Generation Plant	PA	58420	GEN2	382.5	Natural Gas Fired Combined Cycle	NG	CS
2016	7	58421	Panda Patriot O&M LLC	IPP	Panda Patriot Generation Plant	PA	58426	GEN1	382.5	Natural Gas Fired Combined Cycle	NG	CS
2016	7	58421	Panda Patriot O&M LLC	IPP	Panda Patriot Generation Plant	PA	58426	GEN2	382.5	Natural Gas Fired Combined Cycle	NG	CS
2016	7	59016	Passadumkeag Windpark LLC	IPP	Passadumkeag Windpark LLC	ME	59222	Q357	39.9	Onshore Wind Turbine	WND	WT
2016	7	15248	Portland General Electric Co	Electric Utility	Carty Generating Station	OR	58503	GEN1	300.0	Natural Gas Fired Combined Cycle	NG	CT
2016	7	15248	Portland General Electric Co	Electric Utility	Carty Generating Station	OR	58503	GEN2	200.0	Natural Gas Fired Combined Cycle	NG	CA
2016	7	60068	Red Horse III	IPP	Red Horse III	AZ	60285	RH3	30.0	Solar Photovoltaic	SUN	PV
2016	7	57313	SolarCity Corporation	IPP	Chesapeake College	MD	60465	PV1	1.5	Solar Photovoltaic	SUN	PV
2016	7	57313	SolarCity Corporation	IPP	Jackson Board of Education-Liberty HS	NJ	60113	PV1	1.2	Solar Photovoltaic	SUN	PV
2016	7	57313	SolarCity Corporation	IPP	Oregon Convention Center	OR	60112	PV1	1.4	Solar Photovoltaic	SUN	PV
2016	7	17650	Southern Power Co	IPP	RE Tranquility	CA	59939	TQ	205.3	Solar Photovoltaic	SUN	PV
2016	7	17650	Southern Power Co	IPP	Stateline Solar	CA	58646	STL7	37.9	Solar Photovoltaic	SUN	PV
2016	7	18125	Stillwater Utilities Authority	Electric Utility	Stillwater Energy Center	OK	59647	1	18.6	Natural Gas Internal Combustion Engine	NG	IC
2016	7	18125	Stillwater Utilities Authority	Electric Utility	Stillwater Energy Center	OK	59647	2	18.6	Natural Gas Internal Combustion Engine	NG	IC
2016	7	18125	Stillwater Utilities Authority	Electric Utility	Stillwater Energy Center	OK	59647	3	18.6	Natural Gas Internal Combustion Engine	NG	IC
2016	7	58661	Sustainable Power Group, LLC	IPP	Summer Solar LLC	CA	60280	SUMSL	20.0	Solar Photovoltaic	SUN	PV
2016	7	59598	Tooele Army Depot	IPP	Tooele Wind Turbine	UT	59817	GEN03	1.7	Onshore Wind Turbine	WND	WT
2016	7	58600	Waihou North LLC	IPP	Waihou North Solar	HI	58655	INV-1	0.5	Solar Photovoltaic	SUN	PV
2016	7	58600	Waihou North LLC	IPP	Waihou North Solar	HI	58655	INV-2	0.5	Solar Photovoltaic	SUN	PV
2016	7	58600	Waihou North LLC	IPP	Waihou North Solar	HI	58655	INV-3	0.5	Solar Photovoltaic	SUN	PV
2016	7	58600	Waihou North LLC	IPP	Waihou North Solar	HI	58655	INV-4	0.5	Solar Photovoltaic	SUN	PV
2016	7	58600	Waihou North LLC	IPP	Waihou North Solar	HI	58655	INV-5	0.5	Solar Photovoltaic	SUN	PV
2016	7	58600</										

Table 6.3. New Utility Scale Generating Units by Operating Company, Plant, and Month, 2016

Year	Month	Entity ID	Entity Name	Plant Producer Type	Plant Name	Plant State	Plant ID	Generator ID	Net Summer Capacity (MW)	Technology	Energy Source Code	Prime Mover Code
2016	8	60209	Roswell Solar, LLC	IPP	Roswell Solar, LLC	NM	60406	RSPV	70.0	Solar Photovoltaic	SUN	PV
2016	8	57313	SolarCity Corporation	IPP	The Clorox Company	MD	60461	PV1	1.6	Solar Photovoltaic	SUN	PV
2016	8	59773	SunE Solar XVI Lessor, LLC	IPP	SunE Rochester	CA	60032	RCCTR	1.0	Solar Photovoltaic	SUN	PV
2016	8	58661	Sustainable Power Group, LLC	IPP	Antelope Big Sky Ranch	CA	60279	ABSR	20.0	Solar Photovoltaic	SUN	PV
2016	8	59963	TWE New Bern Solar Project, LLC	IPP	TWE New Bern Solar Project, LLC	NC	60191	FLS1	4.0	Solar Photovoltaic	SUN	PV
2016	8	59108	WED Coventry Four, LLC	IPP	WED Coventry 4	RI	59306	WEDC4	1.5	Onshore Wind Turbine	WND	WT
2016	8	59117	WED Coventry Six, LLC	IPP	WED Coventry 6	RI	59314	COV6	1.5	Onshore Wind Turbine	WND	WT
2016	8	59117	WED Coventry Six, LLC	IPP	WED Coventry 6	RI	59314	COV6A	1.5	Onshore Wind Turbine	WND	WT
2016	8	59117	WED Coventry Six, LLC	IPP	WED Coventry 6	RI	59314	COV6B	1.5	Onshore Wind Turbine	WND	WT
2016	8	59107	WED Coventry Three, LLC	IPP	WED Coventry 3	RI	59305	WEDC3	1.5	Onshore Wind Turbine	WND	WT
2016	8	59106	WED Coventry Two, LLC	IPP	WED Coventry 2	RI	59302	COV2	1.5	Onshore Wind Turbine	WND	WT
2016	8	59106	WED Coventry Two, LLC	IPP	WED Coventry 2	RI	59302	COV2A	1.5	Onshore Wind Turbine	WND	WT
2016	8	59106	WED Coventry Two, LLC	IPP	WED Coventry 2	RI	59302	COV2B	1.5	Onshore Wind Turbine	WND	WT
2016	8	60156	White Farm Solar, LLC	IPP	White Farm Solar, LLC	NC	60363	WFSPV	5.2	Solar Photovoltaic	SUN	PV
2016	9	59616	63SU 8me, LLC	IPP	Springbok Solar Farm 2	CA	59840	SB2	155.0	Solar Photovoltaic	SUN	PV
2016	9	772	Archer Daniels Midland Co	Industrial	Archer Daniels Midland Cedar Rapids	IA	10864	GEN7	35.0	Natural Gas Fired Combustion Turbine	NG	GT
2016	9	59843	Blythe Solar II, LLC	IPP	Blythe Solar II, LLC	CA	60092	BLCK6	32.0	Solar Photovoltaic	SUN	PV
2016	9	58519	Clean Energy Collective LLC	IPP	Carver MA 1	MA	60442	CMA1	2.0	Solar Photovoltaic	SUN	PV
2016	9	58519	Clean Energy Collective LLC	IPP	Wareham MA 1	MA	60443	WMA1	2.0	Solar Photovoltaic	SUN	PV
2016	9	58519	Clean Energy Collective LLC	IPP	Westport MA 1	MA	60473	WPMA1	1.3	Solar Photovoltaic	SUN	PV
2016	9	58519	Clean Energy Collective LLC	IPP	Westport MA 2	MA	60476	WPMA2	1.2	Solar Photovoltaic	SUN	PV
2016	9	59429	Comanche Solar	IPP	Comanche Solar	CO	59656	COMCH	120.0	Solar Photovoltaic	SUN	PV
2016	9	59595	Copper Mountain Solar 4, LLC	IPP	Copper Mountain Solar 4, LLC	NV	59814	PV02	41.8	Solar Photovoltaic	SUN	PV
2016	9	58695	Coronal Development Services	IPP	County Home Solar Center, LLC	NC	60199	CHSC1	2.0	Solar Photovoltaic	SUN	PV
2016	9	58695	Coronal Development Services	IPP	Grove Solar Center, LLC	OR	60330	GSC1	6.0	Solar Photovoltaic	SUN	PV
2016	9	58695	Coronal Development Services	IPP	Mariposa Solar Center LLC	NC	59162	MSC 1	5.0	Solar Photovoltaic	SUN	PV
2016	9	58695	Coronal Development Services	IPP	Open Range Solar Center, LLC	OR	60332	ORSC1	10.0	Solar Photovoltaic	SUN	PV
2016	9	58468	Dominion Renewable Energy	IPP	Granite Mountain Solar East	UT	59946	GMSE	80.0	Solar Photovoltaic	SUN	PV
2016	9	58468	Dominion Renewable Energy	IPP	Granite Mountain Solar West	UT	59945	GMSW	50.4	Solar Photovoltaic	SUN	PV
2016	9	5701	El Paso Electric Co	Electric Utility	Montana Power Station	TX	58562	GT-4	100.0	Natural Gas Fired Combustion Turbine	NG	GT
2016	9	59258	Five Points Solar Park, LLC	IPP	Five Points Solar Park	CA	59523	FRFSP	60.0	Solar Photovoltaic	SUN	PV
2016	9	60158	Flint Hill Solar, LLC	IPP	Flint Hill Solar, LLC	NC	60370	FHSPV	5.2	Solar Photovoltaic	SUN	PV
2016	9	57104	Golden Springs Development Company LLC	IPP	Building G	CA	60153	BLDGG	1.2	Solar Photovoltaic	SUN	PV
2016	9	57104	Golden Springs Development Company LLC	IPP	Dulles	CA	60182	DULLE	2.0	Solar Photovoltaic	SUN	PV
2016	9	60215	Hardison Farm Solar, LLC	IPP	Hardison Farm Solar, LLC	NC	60415	HFSPV	5.2	Solar Photovoltaic	SUN	PV
2016	9	9267	Hoosier Energy R E C, Inc	Electric Utility	Henryville Solar RES	IN	59986	PV1	1.1	Solar Photovoltaic	SUN	PV
2016	9	9267	Hoosier Energy R E C, Inc	Electric Utility	New Haven Solar RES	IN	59983	PV1	1.1	Solar Photovoltaic	SUN	PV
2016	9	9234	Indiana Municipal Power Agency	Electric Utility	IMPA Huntingburg Solar Park	IN	60251	SHUNT	2.0	Solar Photovoltaic	SUN	PV
2016	9	9234	Indiana Municipal Power Agency	Electric Utility	IMPA Washington Solar Park	IN	60252	SWASH	4.0	Solar Photovoltaic	SUN	PV
2016	9	59245	Lanier Solar	IPP	Lanier Solar	NC	59486	LANIE	4.9	Solar Photovoltaic	SUN	PV
2016	9	60214	Maxton Solar, LLC	IPP	Maxton Solar, LLC	NC	60416	MSPV	4.9	Solar Photovoltaic	SUN	PV
2016	9	12341	MidAmerican Energy Co	Electric Utility	Ida Grove Wind	IA	60342	IGWF	28.6	Onshore Wind Turbine	WND	WT
2016	9	12341	MidAmerican Energy Co	Electric Utility	O'Brien Wind	IA	60326	OBWF	61.9	Onshore Wind Turbine	WND	WT
2016	9	56990	NJR Clean Energy Ventures Corporation	IPP	Bernards Solar	NJ	60437	BERNS	2.9	Solar Photovoltaic	SUN	PV
2016	9	60185	Nicolis, LLC	IPP	Nicolis Solar PV Plant	CA	59600	GEN1	19.0	Solar Photovoltaic	SUN	PV
2016	9	15500	Puget Sound Energy Inc	Electric Utility	Glacier Battery Storage	WA	60444	GLA	2.0	Batteries	MWH	BA
2016	9	59790	River Bend Solar, LLC	IPP	River Bend Solar, LLC	AL	60058	RVRBN	75.0	Solar Photovoltaic	SUN	PV
2016	9	60263	SR Skylark B, LLC	IPP	SR Skylark B	CO	60497	SKY B	2.0	Solar Photovoltaic	SUN	PV
2016	9	59605	South Louisville Solar LLC	IPP	South Louisville Solar	NC	59825	5MWPV	5.0	Solar Photovoltaic	SUN	PV
2016	9	60045	Stainback Solar Farm, LLC	IPP	Stainback Solar Farm	NC	60257	INV1	5.0	Solar Photovoltaic	SUN	PV
2016	9	60216	Sullivan Solar, LLC	IPP	Sullivan Solar, LLC	IN	60410	SULPV	5.2	Solar Photovoltaic	SUN	PV
2016	9	60184	Tropico, LLC	IPP	Tropico Solar PV Plant	CA	59599	GEN1	13.0	Solar Photovoltaic	SUN	PV
2016	9	60142	Wortham Solar Farm, LLC	IPP	Wortham Solar Farm	NC	60361	INV1	5.0	Solar Photovoltaic	SUN	PV
2016	10	60242	Athens Energy, LLC	IPP	Athens Energy	ME	60457	1	7.0	Wood/Wood Waste Biomass	WDS	OT
2016	10	57421	BayWa r.e Wind LLC	IPP	Chopin Wind LLC	OR	59076	WT1	10.0	Onshore Wind Turbine	WND	WT
2016	10	60143	Bison Solar LLC	IPP	Bison Solar LLC	CO	60351	BPSPV1	30.0	Solar Photovoltaic	SUN	PV
2016	10	59843	Blythe Solar II, LLC	IPP	Blythe Solar II, LLC	CA	60092	BLCK7	32.1	Solar Photovoltaic	SUN	PV
2016	10	60208	Chaves Solar LLC	IPP	Chaves Solar, LLC	NM	60405	CSPV	70.0	Solar Photovoltaic	SUN	PV
2016	10	60094	Clinton Battery Utility, LLC	IPP	Clinton Battery	OH	60297	1	10.0	Batteries	MWH	BA
2016	10	59595	Copper Mountain Solar 4, LLC	IPP	Copper Mountain Solar 4, LLC	NV	59814	PV01	51.8	Solar Photovoltaic	SUN	PV
2016	10	4329	Copper Valley Elec Assn, Inc	Electric Utility	Allison Creek Hydro	AK	58982	GEN1	6.5	Conventional Hydroelectric	WAT	HY
2016	10	58695	Coronal Development Services	IPP	Hyline Solar Center, LLC	OR	60331	HSC1	9.0	Solar Photovoltaic	SUN	PV
2016	10	60293	DG Colorado Solar, LLC	IPP	Clear Spring Ranch PV Project	CO	60511	PV1	10.0	Solar Photovoltaic	SUN	PV
2016	10	58468	Dominion Renewable Energy	IPP	Eastern Shore Solar, LLC	VA	60127	PV1	80.0	Solar Photovoltaic	SUN	PV
2016	10	58135	Ecos Energy LLC	IPP	Munro Valley Solar	CA	60412	MUN	4.0	Solar Photovoltaic	SUN	PV
2016	10	7140	Georgia Power Co	Electric Utility	Fort Gordon Solar Facility	GA	59863	1	30.0	Solar Photovoltaic	SUN	PV
2016	10	7140	Georgia Power Co	Electric Utility	Fort Stewart Solar Facility	GA	59865	1	30.0	Solar Photovoltaic	SUN	PV
2016	10	57104	Golden Springs Development Company LLC	IPP</td								

Table 6.3. New Utility Scale Generating Units by Operating Company, Plant, and Month, 2016

Year	Month	Entity ID	Entity Name	Plant Producer Type	Plant Name	Plant State	Plant ID	Generator ID	Net Summer Capacity (MW)	Technology	Energy Source Code	Prime Mover Code
2016	11	12341	MidAmerican Energy Co	Electric Utility	Ida Grove Wind	IA	60342	IGWF4	27.6	Onshore Wind Turbine	WND	WT
2016	11	58589	Orbit Energy Charlotte	IPP	Orbit Energy Charlotte	NC	58638	1	5.2	Other Waste Biomass	OBG	IC
2016	11	60238	Pavani Solar II LLC	IPP	Pavani Solar II LLC	UT	60449	PSII	50.0	Solar Photovoltaic	SUN	PV
2016	11	56895	Pio Pico Energy Center LLC	IPP	Pio Pico Energy Center	CA	57555	CTG1	97.0	Natural Gas Fired Combustion Turbine	NG	GT
2016	11	56895	Pio Pico Energy Center LLC	IPP	Pio Pico Energy Center	CA	57555	CTG2	97.0	Natural Gas Fired Combustion Turbine	NG	GT
2016	11	56895	Pio Pico Energy Center LLC	IPP	Pio Pico Energy Center	CA	57555	CTG3	97.0	Natural Gas Fired Combustion Turbine	NG	GT
2016	11	17650	Southern Power Co	IPP	RE Garland	CA	60233	PV2	185.0	Solar Photovoltaic	SUN	PV
2016	11	17650	Southern Power Co	IPP	RE Roserock	TX	59994	ROSEK	160.0	Solar Photovoltaic	SUN	PV

NOTES:

Capacity from facilities with a total generator nameplate capacity less than 1 MW are excluded from this table.
Entity ID and Plant ID are official, unique identification numbers assigned by EIA; Generator IDs are assigned by plant owners and/or operators.
Descriptions for the Energy Source Codes and the Prime Mover Codes listed in the table can be found in the Technical Notes.

Table 6.4. Retired Utility Scale Generating Units by Operating Company, Plant, and Month, 2016

Year	Month	Entity ID	Entity Name	Plant Producer Type	Plant Name	Plant State	Plant ID	Generator ID	Net Summer Capacity (MW)	Technology	Energy Source Code	Prime Mover Code
2016	1	9231	City of Independence - (MO)	Electric Utility	Missouri City	MO	2171	1	19.0	Conventional Steam Coal	BIT	ST
2016	1	9231	City of Independence - (MO)	Electric Utility	Missouri City	MO	2171	2	19.0	Conventional Steam Coal	BIT	ST
2016	2	3900	City of Coggon - (IA)	Electric Utility	Coggon	IA	1132	IC1	0.6	Petroleum Liquids	DFO	IC
2016	2	9996	City of Kansas City - (KS)	Electric Utility	Quindaro	KS	1295	GT1	13.0	Natural Gas Fired Combustion Turbine	NG	GT
2016	2	11142	City of Logansport - (IN)	Electric Utility	Logansport	IN	1032	4	16.5	Conventional Steam Coal	BIT	ST
2016	2	11142	City of Logansport - (IN)	Electric Utility	Logansport	IN	1032	5	22.0	Conventional Steam Coal	BIT	ST
2016	2	11142	City of Logansport - (IN)	Electric Utility	Logansport	IN	1032	6	15.0	Natural Gas Fired Combustion Turbine	NG	GT
2016	2	17872	City of St Francis - (KS)	Electric Utility	St Francis	KS	1321	3	0.8	Petroleum Liquids	DFO	IC
2016	2	4161	Constellation Power Source Gen	IPP	Perryman	MD	1556	GT2	51.0	Petroleum Liquids	DFO	GT
2016	3	6455	Duke Energy Florida, Inc	Electric Utility	G E Turner	FL	629	P1	10.0	Petroleum Liquids	DFO	GT
2016	3	6455	Duke Energy Florida, Inc	Electric Utility	G E Turner	FL	629	P2	10.0	Petroleum Liquids	DFO	GT
2016	3	6455	Duke Energy Florida, Inc	Electric Utility	Rio Pinar	FL	637	P1	12.0	Petroleum Liquids	DFO	GT
2016	3	49770	Energy Recovery Operations, Inc	Commercial	Hanford Waste to Energy Facility	MD	54935	001	1.1	Municipal Solid Waste	MSW	ST
2016	3	7801	Gulf Power Co	Electric Utility	Lansing Smith	FL	643	1	162.0	Conventional Steam Coal	BIT	ST
2016	3	7801	Gulf Power Co	Electric Utility	Lansing Smith	FL	643	2	195.0	Conventional Steam Coal	BIT	ST
2016	3	13168	NRG Huntley Operations Inc	IPP	C R Huntley Generating Station	NY	2549	67	190.0	Conventional Steam Coal	SUB	ST
2016	3	13168	NRG Huntley Operations Inc	IPP	C R Huntley Generating Station	NY	2549	S68	190.0	Conventional Steam Coal	SUB	ST
2016	3	14127	Omaha Public Power District	Electric Utility	North Omaha	NE	2291	2	87.0	Conventional Steam Coal	SUB	ST
2016	3	56690	Town of Portsmouth	IPP	Portsmouth Wind Turbine	RI	57350	WTG-1	1.5	Onshore Wind Turbine	WND	WT
2016	4	4045	City of Columbia - (MO)	Electric Utility	Columbia (MO)	MO	2123	5	16.5	Conventional Steam Coal	BIT	ST
2016	4	4254	Consumers Energy Co	Electric Utility	B C Cobb	MI	1695	4	156.0	Conventional Steam Coal	SUB	ST
2016	4	4254	Consumers Energy Co	Electric Utility	B C Cobb	MI	1695	5	156.0	Conventional Steam Coal	SUB	ST
2016	4	4254	Consumers Energy Co	Electric Utility	J C Weadock	MI	1720	7	152.0	Conventional Steam Coal	SUB	ST
2016	4	4254	Consumers Energy Co	Electric Utility	J C Weadock	MI	1720	8	151.0	Conventional Steam Coal	SUB	ST
2016	4	4254	Consumers Energy Co	Electric Utility	J R Whiting	MI	1723	1	102.0	Conventional Steam Coal	SUB	ST
2016	4	4254	Consumers Energy Co	Electric Utility	J R Whiting	MI	1723	2	95.0	Conventional Steam Coal	SUB	ST
2016	4	4254	Consumers Energy Co	Electric Utility	J R Whiting	MI	1723	3	122.0	Conventional Steam Coal	SUB	ST
2016	4	5109	DTE Electric Company	Electric Utility	Trenton Channel	MI	1745	7	110.0	Conventional Steam Coal	SUB	ST
2016	4	15470	Duke Energy Indiana, LLC	Electric Utility	Wabash River	IN	1010	2	85.0	Conventional Steam Coal	BIT	ST
2016	4	15470	Duke Energy Indiana, LLC	Electric Utility	Wabash River	IN	1010	3	85.0	Conventional Steam Coal	BIT	ST
2016	4	15470	Duke Energy Indiana, LLC	Electric Utility	Wabash River	IN	1010	4	85.0	Conventional Steam Coal	BIT	ST
2016	4	15470	Duke Energy Indiana, LLC	Electric Utility	Wabash River	IN	1010	5	95.0	Conventional Steam Coal	BIT	ST
2016	4	5580	East Kentucky Power Coop, Inc	Electric Utility	Dale	KY	1385	3	74.0	Conventional Steam Coal	BIT	ST
2016	4	5580	East Kentucky Power Coop, Inc	Electric Utility	Dale	KY	1385	4	75.0	Conventional Steam Coal	BIT	ST
2016	4	9273	Indianapolis Power & Light Co	Electric Utility	Eagle Valley (IN)	IN	991	3	40.0	Conventional Steam Coal	BIT	ST
2016	4	9273	Indianapolis Power & Light Co	Electric Utility	Eagle Valley (IN)	IN	991	4	56.0	Conventional Steam Coal	BIT	ST
2016	4	9273	Indianapolis Power & Light Co	Electric Utility	Eagle Valley (IN)	IN	991	5	62.0	Conventional Steam Coal	BIT	ST
2016	4	9273	Indianapolis Power & Light Co	Electric Utility	Eagle Valley (IN)	IN	991	6	99.0	Conventional Steam Coal	BIT	ST
2016	4	9273	Indianapolis Power & Light Co	Electric Utility	Eagle Valley (IN)	IN	991	IC1	3.0	Petroleum Liquids	DFO	IC
2016	4	10000	Kansas City Power & Light Co	Electric Utility	Montrose	MO	2080	1	170.0	Conventional Steam Coal	SUB	ST
2016	4	12341	MidAmerican Energy Co	Electric Utility	George Neal North	IA	1091	1	134.3	Conventional Steam Coal	SUB	ST
2016	4	12341	MidAmerican Energy Co	Electric Utility	George Neal North	IA	1091	2	283.7	Conventional Steam Coal	SUB	ST
2016	4	26840	Port Townsend Paper Co	Industrial	Port Townsend Paper	WA	50544	GEN4	3.0	Wood/Wood Waste Biomass	BLQ	ST
2016	4	15474	Public Service Co of Oklahoma	Electric Utility	Northeastern	OK	2963	4	460.0	Conventional Steam Coal	SUB	ST
2016	4	17698	Southwestern Electric Power Co	Electric Utility	Welsh	TX	6139	2	528.0	Conventional Steam Coal	SUB	ST
2016	4	18642	Tennessee Valley Authority	Electric Utility	Colbert	AL	47	1	178.0	Conventional Steam Coal	BIT	ST
2016	4	18642	Tennessee Valley Authority	Electric Utility	Colbert	AL	47	2	178.0	Conventional Steam Coal	BIT	ST
2016	4	18642	Tennessee Valley Authority	Electric Utility	Colbert	AL	47	3	178.0	Conventional Steam Coal	BIT	ST
2016	4	18642	Tennessee Valley Authority	Electric Utility	Colbert	AL	47	4	178.0	Conventional Steam Coal	BIT	ST
2016	4	18642	Tennessee Valley Authority	Electric Utility	Colbert	AL	47	5	472.0	Conventional Steam Coal	BIT	ST
2016	4	20847	Wisconsin Electric Power Co	Electric Utility	Milwaukee County	WI	7549	1	7.0	Conventional Steam Coal	SUB	ST
2016	5	4161	Constellation Power Source Gen	IPP	Riverside (MD)	MD	1559	4	74.0	Natural Gas Steam Turbine	NG	ST
2016	5	5517	Dynegy Midwest Generation Inc	IPP	Wood River	IL	898	4	89.5	Conventional Steam Coal	SUB	ST
2016	5	5517	Dynegy Midwest Generation Inc	IPP	Wood River	IL	898	5	375.5	Conventional Steam Coal	SUB	ST
2016	5	12807	Michigan South Central Pwr Agy	Electric Utility	Endicott Station	MI	4259	1	55.0	Conventional Steam Coal	BIT	ST
2016	5	14165	NRG Power Midwest LP	IPP	Avon Lake	OH	2836	7	70.0	Conventional Steam Coal	BIT	ST
2016	5	56217	Portsmouth Operating Services LLC	IPP	Portsmouth Genco LLC	VA	10071	GEN1	57.5	Conventional Steam Coal	BIT	ST
2016	5	56217	Portsmouth Operating Services LLC	IPP	Portsmouth Genco LLC	VA	10071	GEN2	57.5	Conventional Steam Coal	BIT	ST
2016	5	55768	RC Cape May Holdings LLC	IPP	B L England	NJ	2378	IC1	2.0	Petroleum Liquids	DFO	IC
2016	5	55768	RC Cape May Holdings LLC	IPP	B L England	NJ	2378	IC2	2.0	Petroleum Liquids	DFO	IC
2016	5	55768	RC Cape May Holdings LLC	IPP	B L England	NJ	2378	IC3	2.0	Petroleum Liquids	DFO	IC
2016	5	55768	RC Cape May Holdings LLC	IPP	B L England	NJ	2378	IC4	2.0	Petroleum Liquids	DFO	IC
2016	5	7726	Sharp Grossmont Hospital	Commercial	Grossmont Hospital	CA	10115	GEN1	0.8	Natural Gas Fired Combustion Turbine	NG	GT
2016	5	7726	Sharp Grossmont Hospital	Commercial	Grossmont Hospital	CA	10115	GEN2	0.8	Natural Gas Fired Combustion Turbine	NG	GT
2016	5	40211	Wabash Valley Power Assn, Inc	Electric Utility	Wabash Valley Power IGCC	IN	57842	1	85.0	Petroleum Coke	SGP	CA
2016	6	221	Alaska Village Elec Coop, Inc	Electric Utility	Hooper Bay	AK	6319	5	0.5	Petroleum Liquids	DFO	IC
2016	6	1009	City of Austin - (MN)	Electric Utility	Austin Northeast	MN	1961	1	28.0	Natural Gas Steam Turbine	NG	ST
2016	6	8198	City of Harrisonburg - (VA)	Electric Utility	Harrisonburg Power Plant	VA	56006	ST-1	2.7	Natural Gas Steam Turbine	NG	ST
2016	6	8723	City of Holland	Electric Utility	James De Young	MI	1830	3	10.5	Conventional Steam Coal	BIT	ST
2016	6	4329	Copper Valley Elec Assn, Inc	Electric Utility</td								

Table 6.5. Planned U.S. Electric Generating Unit Additions

Year	Month	Entity ID	Entity Name	Plant Producer Type	Plant Name	Plant State	Plant ID	Generator ID	Net Summer Capacity (MW)	Technology	Energy Source Code	Prime Mover Code	Status	Nameplate Capacity (MW)
2016	12	57369	Apple, Inc.	Industrial	Apple Campus 2 Fuel Cell	CA	59557	AC2FC	4.0	Other Waste Biomass	OBG	FC	(V) Under construction, more than 50 percent complete	4.0
2016	12	15339	Avangrid Renewables Inc	IPP	Desert Wind Farm, LLC	NC	59968	1	208.0	Onshore Wind Turbine	WND	WT	(V) Under construction, more than 50 percent complete	208.0
2016	12	59359	BHE Renewables, LLC	IPP	Grande Prairie Wind Farm	NE	58695	1	400.0	Onshore Wind Turbine	WND	WT	(TS) Construction complete, but not yet in commercial operation	400.0
2016	12	59474	BQ Energy LLC	IPP	Steel Sun	NY	59705	SSUN2	2.0	Solar Photovoltaic	SUN	PV	(TS) Construction complete, but not yet in commercial operation	2.0
2016	12	58625	Black Oak Wind, LLC	IPP	Black Oak Wind Farm	MN	58692	1	78.0	Onshore Wind Turbine	WND	WT	(V) Under construction, more than 50 percent complete	78.0
2016	12	60044	Bluestem Wind Energy, LLC	IPP	Bluestem	OK	60256	1	198.0	Onshore Wind Turbine	WND	WT	(V) Under construction, more than 50 percent complete	198.0
2016	12	60149	Brady Wind II, LLC	IPP	Brady II Wind Energy Center	ND	60354	BWE2	150.0	Onshore Wind Turbine	WND	WT	(V) Under construction, more than 50 percent complete	150.0
2016	12	58540	California PV Energy LLC	IPP	CA Department of Public Health at Richmo	CA	60428	PV1	2.2	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	2.2
2016	12	59991	Caprock Solar 1, LLC	IPP	Caprock Solar 1 LLC	NM	59251	PV1	24.4	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	25.0
2016	12	57412	Chisholm View Wind Project	IPP	Chisholm View Wind Project	OK	58041	2	64.8	Onshore Wind Turbine	WND	WT	(V) Under construction, more than 50 percent complete	64.8
2016	12	58871	Citizens Enterprises Corporation	IPP	Hunt Road Solar	MA	59927	PV1	4.5	Solar Photovoltaic	SUN	PV	(U) Under construction, less than or equal to 50 percent complete	4.5
2016	12	11268	City of Lowell - (MI)	Electric Utility	Chatham	MI	58254	CT02R	3.2	Natural Gas Fired Combined Cycle	NG	GT	(V) Under construction, more than 50 percent complete	3.6
2016	12	14534	City of Pasadena - (CA)	Electric Utility	Glenarm	CA	422	GT5	68.0	Natural Gas Fired Combined Cycle	NG	CC	(V) Under construction, more than 50 percent complete	71.0
2016	12	17845	City of Springfield - (UT)	Electric Utility	Whitehead	UT	7028	K6CAT	2.5	Natural Gas Internal Combustion Engine	NG	IC	(TS) Construction complete, but not yet in commercial operation	2.5
2016	12	56769	Consolidated Edison Development Inc.	IPP	CED Avenal	CA	60077	AVCA	15.8	Solar Photovoltaic	SUN	PV	(TS) Construction complete, but not yet in commercial operation	15.8
2016	12	56769	Consolidated Edison Development Inc.	IPP	CED Duxor 1	CA	60078	DU1CA	20.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	20.0
2016	12	56769	Consolidated Edison Development Inc.	IPP	CED Duxor 2	CA	60079	DU2CA	20.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	20.0
2016	12	56769	Consolidated Edison Development Inc.	IPP	CED Duxor 3	CA	60080	DU3CA	15.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	15.0
2016	12	56769	Consolidated Edison Development Inc.	IPP	CED Duxor 4	CA	60081	DU4CA	20.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	20.0
2016	12	56769	Consolidated Edison Development Inc.	IPP	Oro Loma	CA	59915	ORCA	20.0	Solar Photovoltaic	SUN	PV	(TS) Construction complete, but not yet in commercial operation	20.0
2016	12	5109	DTE Electric Company	Electric Utility	Echo Wind Park	MI	58121	GEN3	50.0	Onshore Wind Turbine	WND	WT	(U) Under construction, less than or equal to 50 percent complete	50.0
2016	12	57406	Deepwater Wind Block Island LLC	IPP	Block Island Wind Farm	RI	58035	BIWF	29.3	Offshore Wind Turbine	WND	WS	(TS) Construction complete, but not yet in commercial operation	30.0
2016	12	5416	Duke Energy Carolinas, LLC	IPP	Mocksville Solar	NC	59570	PV1	7.1	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	15.4
2016	12	15470	Duke Energy Indiana, LLC	Electric Utility	Crane Solar Facility	IN	60435	XXXXX	7.1	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	17.0
2016	12	58970	Ecoplexus, Inc	IPP	Baker PV 1	NC	59517	BAKE1	5.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	5.0
2016	12	58970	Ecoplexus, Inc	IPP	Benthall Bridge PV 1	NC	59515	BENT1	5.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	5.0
2016	12	58970	Ecoplexus, Inc	IPP	Turkey Creek PV1	NC	60000	TRKCK	13.5	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	13.5
2016	12	58720	Enbridge	IPP	New Creek Wind	WV	60132	NCG01	103.0	Onshore Wind Turbine	WND	WT	(TS) Construction complete, but not yet in commercial operation	103.0
2016	12	59380	Enel Green Power NA, Inc.	IPP	Drift Sand Wind Project LLC	OK	59065	WT1	109.8	Onshore Wind Turbine	WND	WT	(V) Under construction, more than 50 percent complete	109.8
2016	12	59380	Enel Green Power NA, Inc.	IPP	Lindahl Wind Project, LLC	ND	59684	LWP01	150.0	Onshore Wind Turbine	WND	WT	(V) Under construction, more than 50 percent complete	150.0
2016	12	59380	Enel Green Power NA, Inc.	IPP	South Fork Wind Farm	MN	58691	STFK1	13.0	Onshore Wind Turbine	WND	WT	(V) Under construction, more than 50 percent complete	13.0
2016	12	60201	Exum Farm Solar, LLC	IPP	Exum Farm Solar, LLC	NC	60400	FLS1	4.9	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	4.9
2016	12	31719	FPL Energy Wyman LLC	IPP	William F Wyman	ME	1507	BESS	16.2	Batteries	MWH	BA	(V) Under construction, more than 50 percent complete	16.7
2016	12	59745	First Solar Asset Management	IPP	Moapa Southern Paiute	NV	57859	1	250.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	250.0
2016	12	59155	First Wind O&M, LLC	IPP	Bingham Wind	ME	57531	1	186.0	Onshore Wind Turbine	WND	WT	(V) Under construction, more than 50 percent complete	186.0
2016	12	59155	First Wind O&M, LLC	IPP	Hancock Wind Plant	ME	58686	HANC1	51.0	Onshore Wind Turbine	WND	WT	(V) Under construction, more than 50 percent complete	51.0
2016	12	6452	Florida Power & Light Co	Electric Utility	Babcock Solar Energy Center	FL	59993	1	74.5	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	74.5
2016	12	6452	Florida Power & Light Co	Electric Utility	Manatee Solar Energy Center	FL	60014	1	74.5	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	74.5
2016	12	59481	Franklin Solar LLC	IPP	Franklin Solar Center LLC	NC	59708	5MWPV	5.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	5.0
2016	12	59988	Frontier Windpower, LLC	IPP	Frontier Windpower	OK	60218	FC1	200.0	Onshore Wind Turbine	WND	WT	(V) Under construction, more than 50 percent complete	200.0
2016	12	7140	Georgia Power Co	Electric Utility	King's Bay Solar Facility	GA	59864	1	30.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	30.0
2016	12	55932	Georgia-Pacific Brewton LLC	Industrial	Georgia-Pacific Brewton Mill	AL	54789	4TG	62.0	Wood/Wood Waste Biomass	BLQ	ST	(V) Under construction, more than 50 percent complete	75.0
2016	12	59806	Grand View PV Solar Two, LLC	IPP	Grand View Solar Two	ID	60068	GVS2	60.0	Solar Photovoltaic	SUN	PV	(TS) Construction complete, but not yet in commercial operation	60.0
2016	12	59806	Grand View PV Solar Two, LLC	IPP	Grand View Solar Two	ID	60068	GV55	20.0	Solar Photovoltaic	SUN	PV	(TS) Construction complete, but not yet in commercial operation	20.0
2016	12	59462	Heelstone Energy Holdings, LLC	IPP	Freemont Solar Center LLC	NC	59912	FREE	5.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	5.0
2016	12	59462	Heelstone Energy Holdings, LLC	IPP	Sonne Two	NC	58629	PV1	5.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	5.0
2016	12	59462	Heelstone Energy Holdings, LLC	IPP	Valley Center	CA	60509	PV1	3.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	3.0
2016	12	59977	Hemlock Solar LLC	IPP	Hemlock Solar	NC	60207	HEMLK	5.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	5.0
2016	12	56946	Hidalgo Wind Farm LLC	IPP	Hidalgo Wind Farm LLC	TX	57617	GEN1	250.0	Onshore Wind Turbine	WND	WT	(TS) Construction complete, but not yet in commercial operation	250.0
2016	12	60164	ILR Landfill	IPP	ILR Landfill	NJ	60375	ILR1	7.7	Solar Photovoltaic	SUN	PV	(U) Under construction, less than or equal to 50 percent complete	7.7
2016	12	59941	Innovative Solar 43, LLC	IPP	Innovative Solar 43, LLC	NC	60149	FLS1	50.8	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	50.8
2016	12	59441	Innovative Solar 46, LLC	IPP	Innovative Solar 46	NC	59671	IS046	78.5	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	78.5
2016	12	60198	Kennedy Solar, LLC	IPP	Kennedy Solar, LLC	NC	60397	FLS1	4.9	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	4.9
2016	12	59022	Leonardo Wind 1 LLC	IPP	Leonardo Wind 1 LLC	IA	59228	WT1	3.0	Onshore Wind Turbine				

Table 6.5. Planned U.S. Electric Generating Unit Additions

Year	Month	Entity ID	Entity Name	Plant Producer Type	Plant Name	Plant State	Plant ID	Generator ID	Net Summer Capacity (MW)	Technology	Energy Source Code	Prime Mover Code	Status	Nameplate Capacity (MW)
2016	12	57313	SolarCity Corporation	IPP	Connecticut Municipal Electric Energy Cooperative-Norwich (Rogers Rd)	CT	60228	PV1	1.0	Solar Photovoltaic	SUN	PV	(TS) Construction complete, but not yet in commercial operation	1.0
2016	12	57313	SolarCity Corporation	IPP	Hewlett-Packard (HP) - Andover, MA	MA	60099	PV1	1.7	Solar Photovoltaic	SUN	PV	(TS) Construction complete, but not yet in commercial operation	1.7
2016	12	57313	SolarCity Corporation	IPP	Onondaga County- Clearwater	NY	60462	PV1	2.4	Solar Photovoltaic	SUN	PV	(U) Under construction, less than or equal to 50 percent complete	2.4
2016	12	57313	SolarCity Corporation	IPP	Onondaga County- Jamesville	NY	60232	PV1	1.9	Solar Photovoltaic	SUN	PV	(TS) Construction complete, but not yet in commercial operation	1.9
2016	12	57313	SolarCity Corporation	IPP	US-TOPCO (Soccer Center)	CA	60086	PV1	3.0	Solar Photovoltaic	SUN	PV	(TS) Construction complete, but not yet in commercial operation	3.0
2016	12	17583	South Texas Electric Coop, Inc	Electric Utility	Red Gate Power Plant	TX	59391	ENG01	18.3	Natural Gas Internal Combustion Engine	NG	IC	(TS) Construction complete, but not yet in commercial operation	18.7
2016	12	17583	South Texas Electric Coop, Inc	Electric Utility	Red Gate Power Plant	TX	59391	ENG02	18.3	Natural Gas Internal Combustion Engine	NG	IC	(TS) Construction complete, but not yet in commercial operation	18.7
2016	12	17583	South Texas Electric Coop, Inc	Electric Utility	Red Gate Power Plant	TX	59391	ENG03	18.3	Natural Gas Internal Combustion Engine	NG	IC	(TS) Construction complete, but not yet in commercial operation	18.7
2016	12	17583	South Texas Electric Coop, Inc	Electric Utility	Red Gate Power Plant	TX	59391	ENG04	18.3	Natural Gas Internal Combustion Engine	NG	IC	(TS) Construction complete, but not yet in commercial operation	18.7
2016	12	17583	South Texas Electric Coop, Inc	Electric Utility	Red Gate Power Plant	TX	59391	ENG05	18.3	Natural Gas Internal Combustion Engine	NG	IC	(TS) Construction complete, but not yet in commercial operation	18.7
2016	12	17583	South Texas Electric Coop, Inc	Electric Utility	Red Gate Power Plant	TX	59391	ENG06	18.3	Natural Gas Internal Combustion Engine	NG	IC	(TS) Construction complete, but not yet in commercial operation	18.7
2016	12	17583	South Texas Electric Coop, Inc	Electric Utility	Red Gate Power Plant	TX	59391	ENG07	18.3	Natural Gas Internal Combustion Engine	NG	IC	(TS) Construction complete, but not yet in commercial operation	18.7
2016	12	17583	South Texas Electric Coop, Inc	Electric Utility	Red Gate Power Plant	TX	59391	ENG10	18.3	Natural Gas Internal Combustion Engine	NG	IC	(TS) Construction complete, but not yet in commercial operation	18.7
2016	12	17583	South Texas Electric Coop, Inc	Electric Utility	Red Gate Power Plant	TX	59391	ENG11	18.3	Natural Gas Internal Combustion Engine	NG	IC	(TS) Construction complete, but not yet in commercial operation	18.7
2016	12	17583	South Texas Electric Coop, Inc	Electric Utility	Red Gate Power Plant	TX	59391	ENG12	18.3	Natural Gas Internal Combustion Engine	NG	IC	(TS) Construction complete, but not yet in commercial operation	18.7
2016	12	17650	Southern Power Co	IPP	Boulder Solar Power, LLC	NV	60352	BSP	100.0	Solar Photovoltaic	SUN	PV	(TS) Construction complete, but not yet in commercial operation	100.0
2016	12	17650	Southern Power Co	IPP	Butler Solar Project 103	GA	59896	1	103.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	103.0
2016	12	17650	Southern Power Co	IPP	East Pecos Solar	TX	60436	1	118.5	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	118.5
2016	12	17650	Southern Power Co	IPP	Rutherford Farm	NC	59589	PV1	61.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	61.0
2016	12	60197	St. Pauls Solar 1, LLC	IPP	St. Pauls Solar 1, LLC	NC	60396	FLS1	4.9	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	4.9
2016	12	59138	SunPower Corporation, Systems	IPP	Rio Bravo Solar 1 LLC	CA	59249	PV1	19.5	Solar Photovoltaic	SUN	PV	(TS) Construction complete, but not yet in commercial operation	20.0
2016	12	59138	SunPower Corporation, Systems	IPP	Rio Bravo Solar II LLC	CA	59250	PV1	19.5	Solar Photovoltaic	SUN	PV	(TS) Construction complete, but not yet in commercial operation	20.0
2016	12	59138	SunPower Corporation, Systems	IPP	Wildwood Solar II	CA	59253	PV1	14.7	Solar Photovoltaic	SUN	PV	(TS) Construction complete, but not yet in commercial operation	15.0
2016	12	59839	Sunflower Wind Project	IPP	Sunflower Wind Project	ND	60088	SNFLR	104.0	Onshore Wind Turbine	WND	WT	(V) Under construction, more than 50 percent complete	104.0
2016	12	58658	Sunlight Partners	IPP	Beetle Solar	NC	59511	PV1	4.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	4.0
2016	12	58658	Sunlight Partners	IPP	Carol Jean Solar	NC	59017	GEN 1	4.0	Solar Photovoltaic	SUN	PV	(U) Under construction, less than or equal to 50 percent complete	4.0
2016	12	58658	Sunlight Partners	IPP	Husky Solar	NC	59510	PV1	5.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	5.0
2016	12	58661	Sustainable Power Group, LLC	IPP	Antelope DSR 1	CA	60186	DSR1	50.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	50.0
2016	12	58661	Sustainable Power Group, LLC	IPP	Antelope DSR 2	CA	60187	DSR2	5.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	5.0
2016	12	58661	Sustainable Power Group, LLC	IPP	Elevation Solar C	CA	59964	ELVSC	40.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	40.0
2016	12	58661	Sustainable Power Group, LLC	IPP	Hecate Energy Beacon Solar 3	CA	59316	BEAC3	56.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	56.0
2016	12	58661	Sustainable Power Group, LLC	IPP	Hecate Energy Beacon Solar 4	CA	59317	BEAC4	50.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	50.0
2016	12	58661	Sustainable Power Group, LLC	IPP	North Lancaster Ranch	CA	59962	NLR	20.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	20.0
2016	12	58661	Sustainable Power Group, LLC	IPP	Solverde 1	CA	60185	SOLV1	85.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	85.0
2016	12	58661	Sustainable Power Group, LLC	IPP	Western Antelope Blue Sky B	CA	59961	WABSB	20.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	20.0
2016	12	58661	Sustainable Power Group, LLC	IPP	Western Antelope Dry Ranch	CA	58627	WADR	10.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	10.0
2016	12	58926	Synarpha Bondsville, LLC	IPP	Palmer Landfill	MA	60076	SYNPL	4.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	4.0
2016	12	18454	Tampa Electric Co	Electric Utility	LegoLand Solar	FL	60371	1	1.5	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	1.5
2016	12	60245	Three Peaks Power LLC	IPP	Three Peaks Power	UT	60432	TPP	80.0	Solar Photovoltaic	SUN	PV	(TS) Construction complete, but not yet in commercial operation	80.0
2016	12	24211	Tucson Electric Power Co	Electric Utility	Demoss Petreco	AZ	124	BA1	10.0	Batteries	MWH	BA	(V) Under construction, more than 50 percent complete	10.0
2016	12	60273	Tyler Bluff Wind Project, LLC	IPP	Tyler Bluff Wind Project, LLC	TX	60502	GEN1	125.6	Onshore Wind Turbine	WND	WT	(TS) Construction complete, but not yet in commercial operation	125.6
2016	12	58153	US Magnesium	Industrial	US Magnesium	UT	58191	GT4	24.0	Natural Gas Fired Combustion Turbine	NG	GT	(V) Under construction, more than 50 percent complete	30.0
2016	12	19876	Virginia Electric & Power Co	Electric Utility	Scott Solar Farm	VA	60316	1	6.8	Solar Photovoltaic	SUN	PV	(U) Under construction, less than or equal to 50 percent complete	17.0
2016	12	19876	Virginia Electric & Power Co	Electric Utility	Whitehouse Solar Farm	VA	60319	1	8.0	Solar Photovoltaic	SUN	PV	(U) Under construction, less than or equal to 50 percent complete	20.0
2016	12	19876	Virginia Electric & Power Co	Electric Utility	Woodland Solar Farm	VA	60318	1	7.6	Solar Photovoltaic	SUN	PV	(U) Under construction, less than or equal to 50 percent complete	19.0
2016	12	54842	WM Renewable Energy LLC	IPP	Waste Management Redwood LGFTE	CA	59299	RED1	2.0	Landfill Gas	LFG	IC	(V) Under construction, more than 50 percent complete	2.0
2016	12	54842	WM Renewable Energy LLC	IPP	Waste Management Redwood LGFTE	CA	59299	RED2	2.0	Landfill Gas	LFG	IC	(V) Under construction, more than 50 percent complete	2.0
2017	1	55918	Acciona Wind Energy USA LLC	IPP	San Roman Wind I, LLC	TX	59712	SRWI	95.3	Onshore Wind Turbine	WND	WT	(V) Under construction, more than 50 percent complete	95.3
2017	1	60281	Altus Power America Management, LLC	IPP	Aloha Solar Energy Fund 1 PK1	HI	58659	PK-1	5.0	Solar Photovoltaic	SUN	PV	(U) Under construction, less than or equal to 50 percent complete	5.0
2017	1	59758	American Falls Solar II, LLC	IPP	American Falls Solar II	ID	60012	IPAF2	20.0	Solar Photovoltaic	SUN	PV	(U) Under construction, less than or equal to 50 percent complete	20.0
2017	1	59757	American Falls Solar LLC	IPP	American Falls Solar	ID	60011	IPAF	20.0	Solar Photovoltaic	SUN	PV	(U) Under construction, less than or equal to 50 percent complete	20.0
2017	1	1307	Basin Electric Power Coop	Electric Utility	Lonesome Creek Station	ND	57943	04	40.0	Natural Gas Fired Combustion Turbine	NG	GT	(TS) Construction complete, but not yet in commercial operation	60.5
2017	1	1307	Basin Electric Power Coop	Electric Utility	Pioneer Generating Station	ND	57943	05	40.0	Natural Gas Fired Combustion Turbine	NG	GT	(TS) Construction complete, but not yet in commercial operation	60.5
2017	1	1307	Basin Electric Power Coop	Electric Utility	Pioneer Generating Station	ND	57881	11</td						

Table 6.5. Planned U.S. Electric Generating Unit Additions

Year	Month	Entity ID	Entity Name	Plant Producer Type	Plant Name	Plant State	Plant ID	Generator ID	Net Summer Capacity (MW)	Technology	Energy Source Code	Prime Mover Code	Status	Nameplate Capacity (MW)
2017	1	60412	Portal Ridge Solar, LLC	IPP	Portal Ridge Solar C, LLC	CA	60311	GEN01	11.4	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	11.4
2017	1	58661	Sustainable Power Group, LLC	IPP	Lancaster WAD B	CA	59739	LWADB	5.0	Solar Photovoltaic	SUN	PV	(U) Under construction, less than or equal to 50 percent complete	5.0
2017	1	60046	TPE Alta Luna, LLC	IPP	Alta Luna	NM	60258	ALPV1	28.1	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	28.1
2017	1	18454	Tampa Electric Co	Electric Utility	Polk	FL	7242	2CC	459.0	Natural Gas Fired Combined Cycle	NG	CA	(V) Under construction, more than 50 percent complete	463.0
2017	1	24211	Tucson Electric Power Co	Electric Utility	Fort Huachuca Solar PV Project	AZ	58972	FHUA2	4.1	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	4.1
2017	1	59116	WED Coventry Five, LLC	IPP	WED Coventry 5	RI	59313	COV5	1.5	Onshore Wind Turbine	WND	WT	(V) Under construction, more than 50 percent complete	1.5
2017	2	59050	Algonquin Power Co	IPP	Algonquin SKIC 10 Solar, LLC	CA	60242	SK10	10.0	Solar Photovoltaic	SUN	PV	(U) Under construction, less than or equal to 50 percent complete	10.0
2017	2	58666	Alpaca Energy LLC	IPP	Alpaca	PA	58813	1	6.8	Natural Gas Internal Combustion Engine	NG	IC	(V) Under construction, more than 50 percent complete	7.0
2017	2	58666	Alpaca Energy LLC	IPP	Alpaca	PA	58813	2	6.8	Natural Gas Internal Combustion Engine	NG	IC	(V) Under construction, more than 50 percent complete	7.0
2017	2	58666	Alpaca Energy LLC	IPP	Alpaca	PA	58813	3	6.8	Natural Gas Internal Combustion Engine	NG	IC	(V) Under construction, more than 50 percent complete	7.0
2017	2	59861	Benson Creek	IPP	Benson Creek Windfarm	OR	59491	BCW1	10.0	Onshore Wind Turbine	WND	WT	(U) Under construction, less than or equal to 50 percent complete	10.0
2017	2	56031	CPV Maryland LLC	IPP	CPV St Charles Energy Center	MD	56846	GTG1	205.0	Natural Gas Fired Combined Cycle	NG	CT	(V) Under construction, more than 50 percent complete	215.0
2017	2	56031	CPV Maryland LLC	IPP	CPV St Charles Energy Center	MD	56846	GTG2	205.0	Natural Gas Fired Combined Cycle	NG	CT	(V) Under construction, more than 50 percent complete	215.0
2017	2	56031	CPV Maryland LLC	IPP	CPV St Charles Energy Center	MD	56846	STGEN	316.0	Natural Gas Fired Combined Cycle	NG	CA	(V) Under construction, more than 50 percent complete	316.0
2017	2	8723	City of Holland	Electric Utility	Holland Energy Park	MI	59093	10	43.1	Natural Gas Fired Combined Cycle	NG	CT	(V) Under construction, more than 50 percent complete	53.1
2017	2	8723	City of Holland	Electric Utility	Holland Energy Park	MI	59093	11	43.1	Natural Gas Fired Combined Cycle	NG	CT	(V) Under construction, more than 50 percent complete	53.1
2017	2	8723	City of Holland	Electric Utility	Holland Energy Park	MI	59093	12	40.9	Natural Gas Fired Combined Cycle	NG	CA	(V) Under construction, more than 50 percent complete	43.2
2017	2	58695	Coronal Development Services	IPP	Gulf Coast Solar Center I	FL	59689	GCSC1	30.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	30.0
2017	2	58695	Coronal Development Services	IPP	Gulf Coast Solar Center II	FL	59690	GCSC2	40.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	40.0
2017	2	58695	Coronal Development Services	IPP	Gulf Coast Solar Center III	FL	59691	GCSC3	50.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	50.0
2017	2	59979	Cotton Plains Wind I, LLC	IPP	Cotton Plains Wind Farm	TX	60210	CPWF	50.4	Onshore Wind Turbine	WND	WT	(V) Under construction, more than 50 percent complete	50.4
2017	2	5416	Duke Energy Carolinas, LLC	Electric Utility	Monroe Solar Facility	NC	60383	MONPV	27.3	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	59.4
2017	2	59862	Durbin Creek	IPP	Durbin Creek Windfarm	OR	59492	DCW	10.0	Onshore Wind Turbine	WND	WT	(U) Under construction, less than or equal to 50 percent complete	10.0
2017	2	25438	Friant Power Authority	IPP	Friant Hydro Facility	CA	50393	RO2	9.0	Conventional Hydroelectric	WAT	HY	(V) Under construction, more than 50 percent complete	6.9
2017	2	19547	Hawaiian Electric Co Inc	Electric Utility	HNL Emergency Power Facility	HI	58469	AP1	2.5	Other Waste Biomass	OBL	IC	(V) Under construction, more than 50 percent complete	2.5
2017	2	19547	Hawaiian Electric Co Inc	Electric Utility	HNL Emergency Power Facility	HI	58469	AP2	2.5	Other Waste Biomass	OBL	IC	(V) Under construction, more than 50 percent complete	2.5
2017	2	19547	Hawaiian Electric Co Inc	Electric Utility	HNL Emergency Power Facility	HI	58469	AP3	2.5	Other Waste Biomass	OBL	IC	(V) Under construction, more than 50 percent complete	2.5
2017	2	19547	Hawaiian Electric Co Inc	Electric Utility	HNL Emergency Power Facility	HI	58469	AP4	2.5	Other Waste Biomass	OBL	IC	(V) Under construction, more than 50 percent complete	2.5
2017	2	59860	Jett Creek	IPP	Jett Creek Windfarm	OR	59490	JCW1	10.0	Onshore Wind Turbine	WND	WT	(U) Under construction, less than or equal to 50 percent complete	10.0
2017	2	58689	Milan Energy LLC	IPP	Milan	PA	58818	1	6.8	Natural Gas Internal Combustion Engine	NG	IC	(V) Under construction, more than 50 percent complete	7.0
2017	2	58689	Milan Energy LLC	IPP	Milan	PA	58818	2	6.8	Natural Gas Internal Combustion Engine	NG	IC	(V) Under construction, more than 50 percent complete	7.0
2017	2	58689	Milan Energy LLC	IPP	Milan	PA	58818	3	6.8	Natural Gas Internal Combustion Engine	NG	IC	(V) Under construction, more than 50 percent complete	7.0
2017	2	58159	Penn State University	Commercial	West Campus Steam Plant	PA	58194	WC 4	0.6	Natural Gas Steam Turbine	NG	ST	(V) Under construction, more than 50 percent complete	2.9
2017	2	58159	Penn State University	Commercial	West Campus Steam Plant	PA	58194	WC 5	0.6	Natural Gas Steam Turbine	NG	ST	(V) Under construction, more than 50 percent complete	2.2
2017	2	59863	Prospector	IPP	Prospector Windfarm	OR	59493	PW	10.0	Onshore Wind Turbine	WND	WT	(U) Under construction, less than or equal to 50 percent complete	10.0
2017	2	59337	Sedberry Farm, LLC	IPP	Sedberry Farm	NC	59592	PV1	5.0	Solar Photovoltaic	SUN	PV	(U) Under construction, less than or equal to 50 percent complete	5.0
2017	2	57313	SolarCity Corporation	IPP	Maricopa County Community Colleges- Estr	AZ	60230	PV1	1.7	Solar Photovoltaic	SUN	PV	(TS) Construction complete, but not yet in commercial operation	1.7
2017	2	57313	SolarCity Corporation	IPP	Orange County Solar Farm (NY)	NY	60229	PV1	1.5	Solar Photovoltaic	SUN	PV	(TS) Construction complete, but not yet in commercial operation	1.5
2017	2	57313	SolarCity Corporation	IPP	Town of Halfmoon	NY	60115	PV1	1.0	Solar Photovoltaic	SUN	PV	(TS) Construction complete, but not yet in commercial operation	1.0
2017	2	18454	Tampa Electric Co	Electric Utility	Big Bend	FL	645	1	19.0	Solar Photovoltaic	SUN	PV	(U) Under construction, less than or equal to 50 percent complete	19.0
2017	2	59021	Venus Wind 3 LLC	IPP	Venus Wind 3 LLC	IA	59230	WT1	3.0	Onshore Wind Turbine	WND	WT	(U) Under construction, less than or equal to 50 percent complete	3.0
2017	2	19876	Virginia Electric & Power Co	Electric Utility	Merck	VA	59095	1	0.8	Solar Photovoltaic	SUN	PV	(U) Under construction, less than or equal to 50 percent complete	2.1
2017	2	59864	Willow Spring	IPP	Willow Spring Windfarm	OR	59494	WSW1	10.0	Onshore Wind Turbine	WND	WT	(U) Under construction, less than or equal to 50 percent complete	10.0
2017	3	60019	96WI 8ME, LLC	IPP	Midway Solar Farm II	CA	60237	MSF2	30.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	30.0
2017	3	40577	American Mun Power-Ohio, Inc	Electric Utility	Smithland Hydroelectric Plant	KY	57400	SG1	25.3	Conventional Hydroelectric	WAT	HY	(V) Under construction, more than 50 percent complete	25.3
2017	3	40577	American Mun Power-Ohio, Inc	Electric Utility	Smithland Hydroelectric Plant	KY	57400	SG2	25.3	Conventional Hydroelectric	WAT	HY	(V) Under construction, more than 50 percent complete	25.3
2017	3	59725	Ariel Solar, LLC	IPP	Bloomsbury Solar, LLC	NC	59790	BLOOM	5.0	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	5.0
2017	3	803	Arizona Public Service Co	Electric Utility	Red Rock	AZ	60467	PV1	40.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	40.0
2017	3	58519	Clean Energy Collective LLC	IPP	Fairhaven C	MA	60423	FCPV	1.6	Solar Photovoltaic	SUN	PV	(U) Under construction, less than or equal to 50 percent complete	1.6
2017	3	58519	Clean Energy Collective LLC	IPP	West Bridgewater AB	MA	60424	WBAB	1.7	Solar Photovoltaic	SUN	PV	(U) Under construction, less than or equal to 50 percent complete	1.7
2017	3	59997	Customized Energy Solutions	IPP	ESS Fairgrounds	MD	60215	ESSFG	4.0	Batteries	MWH	BA	(L) Regulatory approvals pending. Not under construction	4.0
2017	3	59997	Customized Energy Solutions	IPP	ESS Lewes	DE	60216	ESSLS	8.0	Batteries	MWH	BA	(U) Under construction, less than or equal to 50 percent complete	8.0
2017	3	59997	Customized Energy Solutions	IPP	ESS Wesel	MD	60214	ESSWL	6.0	Batteries	MWH	BA	(L) Regulatory approvals pending. Not under construction	6.0
2017	3	59997	Customized Energy Solutions	IPP	NA 1(Hagerstown)	MD	60213	MPSHG	2.0	Batteries	MWH	BA	(L) Regulatory approvals pending. Not under construction	2.0
2017	3	58970	Ecoplexus, Inc	IPP	American Legion PV 1	NC	59516	AMLEG	16.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	1

Table 6.5. Planned U.S. Electric Generating Unit Additions

Year	Month	Entity ID	Entity Name	Plant Producer Type	Plant Name	Plant State	Plant ID	Generator ID	Net Summer Capacity (MW)	Technology	Energy Source Code	Prime Mover Code	Status	Nameplate Capacity (MW)
2017	4	58658	Sunlight Partners	IPP	Alexis Solar	NC	60139	PV1	5.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	5.0
2017	4	58658	Sunlight Partners	IPP	Anna Solar	NC	60176	PV1	5.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	5.0
2017	4	58658	Sunlight Partners	IPP	Blue Bird Solar	NC	60177	PV1	4.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	4.0
2017	4	58658	Sunlight Partners	IPP	Bonnie Solar	NC	60175	PV1	5.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	5.0
2017	4	58658	Sunlight Partners	IPP	Brooke Solar	NC	60140	PV1	4.5	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	4.5
2017	4	58658	Sunlight Partners	IPP	Cardinal Solar	NC	60174	PV1	5.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	5.0
2017	4	58658	Sunlight Partners	IPP	Carter Solar	NC	60167	PV1	5.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	5.0
2017	4	58658	Sunlight Partners	IPP	Cash Solar	NC	60178	PV1	5.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	5.0
2017	4	58658	Sunlight Partners	IPP	Christina Solar	NC	60172	PV1	3.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	3.0
2017	4	58658	Sunlight Partners	IPP	Clayton Solar	NC	60171	PV1	5.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	5.0
2017	4	58658	Sunlight Partners	IPP	Daystar Solar	NC	60179	PV1	5.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	5.0
2017	4	58658	Sunlight Partners	IPP	Eagle Solar	NC	60161	PV1	4.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	4.0
2017	4	58658	Sunlight Partners	IPP	Grove Solar	NC	60181	PV1	5.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	5.0
2017	4	58658	Sunlight Partners	IPP	Hawk Solar	NC	60163	PV1	5.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	5.0
2017	4	58658	Sunlight Partners	IPP	Heedeh Solar	NC	60157	PV1	4.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	4.0
2017	4	58658	Sunlight Partners	IPP	Higgins Solar	NC	60166	PV1	5.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	5.0
2017	4	58658	Sunlight Partners	IPP	Icarus Solar	NC	60169	PV1	3.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	3.0
2017	4	58658	Sunlight Partners	IPP	Iga Solar	NC	60170	PV1	5.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	5.0
2017	4	58658	Sunlight Partners	IPP	Izia Solar	NC	60141	PV1	5.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	5.0
2017	4	58658	Sunlight Partners	IPP	Jordan Solar	NC	60164	PV1	5.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	5.0
2017	4	58658	Sunlight Partners	IPP	June Solar	NC	60158	PV1	2.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	2.0
2017	4	58658	Sunlight Partners	IPP	Kathleen Solar	NC	60180	PV1	5.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	5.0
2017	4	58658	Sunlight Partners	IPP	Longleaf Solar	NC	60173	PV1	5.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	5.0
2017	4	58658	Sunlight Partners	IPP	Robin Solar	NC	60165	PV1	5.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	5.0
2017	4	58658	Sunlight Partners	IPP	Roman Solar	NC	60159	PV1	5.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	5.0
2017	4	58658	Sunlight Partners	IPP	Sadie Solar	NC	60168	PV1	5.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	5.0
2017	4	58658	Sunlight Partners	IPP	Shelter Solar	NC	60156	PV1	5.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	5.0
2017	4	58658	Sunlight Partners	IPP	Signature Solar	NC	60155	PV1	5.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	5.0
2017	4	58658	Sunlight Partners	IPP	Tate Solar	NC	60160	PV1	5.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	5.0
2017	4	58658	Sunlight Partners	IPP	Wilfork Solar	NC	60162	PV1	5.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	5.0
2017	4	58661	Sustainable Power Group, LLC	IPP	Aspiration G	CA	59737	ASPRG	9.0	Solar Photovoltaic	SUN	PV	(U) Under construction, less than or equal to 50 percent complete	9.0
2017	4	58661	Sustainable Power Group, LLC	IPP	Hecate Energy Beacon Solar 1	CA	59315	BEAC1	56.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	56.0
2017	5	40577	American Mun Power-Ohio, Inc	Electric Utility	Smithland Hydroelectric Plant	KY	57400	SG3	25.3	Conventional Hydroelectric	WAT	HY	(V) Under construction, more than 50 percent complete	25.3
2017	5	59474	BQ Energy LLC	IPP	Kings Park Solar I	NY	59880	KIPS1	2.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	2.0
2017	5	59474	BQ Energy LLC	IPP	Kings Park Solar II	NY	59881	KIPS2	2.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	2.0
2017	5	59007	Clipperion Holdings LLC	IPP	Clipperion Holdings	NC	59213	PV1	5.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	5.0
2017	5	58970	Ecoplexus, Inc	IPP	Flat Meeks PV 1	NC	59514	FLAT1	5.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	5.0
2017	5	6035	Exelon Power	IPP	Wolf Hollow II	TX	59812	CGT4	307.2	Natural Gas Fired Combined Cycle	NG	CT	(V) Under construction, more than 50 percent complete	360.0
2017	5	6035	Exelon Power	IPP	Wolf Hollow II	TX	59812	CGT5	307.2	Natural Gas Fired Combined Cycle	NG	CT	(V) Under construction, more than 50 percent complete	360.0
2017	5	6035	Exelon Power	IPP	Wolf Hollow II	TX	59812	STG6	454.9	Natural Gas Fired Combined Cycle	NG	CA	(V) Under construction, less than or equal to 50 percent complete	511.2
2017	5	59745	Frist Solar Asset Management	IPP	Playa Solar 2	NV	60261	GEN1	100.0	Solar Photovoltaic	SUN	PV	(U) Under construction, less than or equal to 50 percent complete	100.0
2017	5	59155	First Wind O&M, LLC	IPP	Millani South PV	HI	58281	1	14.7	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	14.7
2017	5	60252	Friendswood Energy Genco, LLC	IPP	Friendswood Energy	TX	60468	GT-1	117.0	Natural Gas Fired Combustion Turbine	NG	GT	(U) Under construction, less than or equal to 50 percent complete	121.5
2017	5	59446	Innovative Solar 55, LLC	IPP	Innovative Solar 55	NC	59676	ISO44	6.5	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	6.5
2017	5	58989	Kawailoa Solar, LLC	IPP	Kawailoa Solar	HI	60125	KAWS	49.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	49.0
2017	5	60098	MS Solar 2, LLC	IPP	Sumrall I Solar Farm	MS	60306	SUM1	52.0	Solar Photovoltaic	SUN	PV	(U) Under construction, less than or equal to 50 percent complete	52.0
2017	5	12258	Medical Area Total Egy Plt Inc	Commercial	Medical Area Total Energy Plant	MA	10883	CT3	12.8	Natural Gas Fired Combustion Turbine	NG	GT	(V) Under construction, more than 50 percent complete	13.8
2017	5	40229	Old Dominion Electric Coop	Electric Utility	Wildcat Point Generation Facility	MD	59220	CT1	310.3	Natural Gas Fired Combined Cycle	NG	CT	(V) Under construction, more than 50 percent complete	310.3
2017	5	40229	Old Dominion Electric Coop	Electric Utility	Wildcat Point Generation Facility	MD	59220	CT2	310.3	Natural Gas Fired Combined Cycle	NG	CT	(V) Under construction, more than 50 percent complete	310.3
2017	5	40229	Old Dominion Electric Coop	Electric Utility	Wildcat Point Generation Facility	MD	59220	ST1	493.0	Natural Gas Fired Combined Cycle	NG	CA	(V) Under construction, more than 50 percent complete	493.0
2017	5	60246	Sunnyway Energy 2, LLC	IPP	Sunray 2	CA	10437	SUN2	20.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	20.0
2017	5	60247	Sunnyway Energy 3 LLC	IPP	Sunray 3	CA	10438	SUN3	13.8	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	13.8
2017	5	58661	Sustainable Power Group, LLC	IPP	Central Antelope Dry Ranch B LLC	CA	60281	CADR8	3.0	Solar Photovoltaic	SUN	PV	(U) Under construction, less than or equal to 50 percent complete	3.0
2017	5	24211	Tucson Electric Power Co	Electric Utility	UASTP II	AZ	57717	UABA	10.0	Batteries	MWH	BA	(U) Under construction, less than or equal to 50 percent complete	10.0
2017	5	59764	Waipio PV, LLC	IPP	Waipio Solar	HI	60024	WPO	45.9	Solar Photovoltaic	SUN	PV	(U) Under construction, less than or equal to 50 percent complete	45.9
2017	6	60248	Agilon Energy LLC	IPP	Chamon Power LLC	TX	60460	CH1	43.0	Natural Gas Fired Combustion Turbine	NG	GT	(L) Regulatory approvals pending. Not under construction	50.0
2017	6	60248	Agilon Energy LLC	IPP	Chamon Power LLC									

Table 6.5. Planned U.S. Electric Generating Unit Additions

Year	Month	Entity ID	Entity Name	Plant Producer Type	Plant Name	Plant State	Plant ID	Generator ID	Net Summer Capacity (MW)	Technology	Energy Source Code	Prime Mover Code	Status	Nameplate Capacity (MW)
2017	7	59362	Jericho Rise Wind Farm LLC	IPP	Jericho Rise Wind Farm LLC	NY	59629	GEN1	77.7	Onshore Wind Turbine	WND	WT	(V) Under construction, more than 50 percent complete	77.7
2017	7	59342	Maricopa West Solar PV 2, LLC	IPP	Maricopa West Solar 2	CA	59608	MWS2	20.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	20.0
2017	7	14624	PUD No 2 of Grant County	Electric Utility	Wanapum	WA	3888	3A	122.0	Conventional Hydroelectric	WAT	HY	(P) Planned for installation, but regulatory approvals not initiated	122.0
2017	7	60193	Tamworth Holdings, LLC	IPP	Tamworth Holdings	NC	60394	PV1	5.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	5.0
2017	8	60112	97W1 8ME, LLC	IPP	Midway Solar Farm III	CA	60315	MSF3	20.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	20.0
2017	8	60042	Fluvanna Wind Energy LLC	IPP	Fluvanna	TX	59245	FLUV1	155.4	Onshore Wind Turbine	WND	WT	(U) Under construction, less than or equal to 50 percent complete	155.4
2017	8	58849	Mariah del Este LLC	IPP	Mariah East	TX	59006	MARN	230.4	Onshore Wind Turbine	WND	WT	(U) Under construction, less than or equal to 50 percent complete	230.4
2017	8	56967	RRE Austin Solar LLC	IPP	Pflugerville Solar Farm	TX	57659	PSF	120.0	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	120.0
2017	8	57313	SolarCity Corporation	IPP	Broome County	NY	60507	NORTH	2.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	2.0
2017	8	57313	SolarCity Corporation	IPP	Broome County	NY	60507	SOUTH	2.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	2.0
2017	8	60154	White Street Renewables LLC	IPP	White Street Renewables	NC	60364	WSLG	1.6	Landfill Gas	LFG	IC	(T) Regulatory approvals received. Not under construction	1.6
2017	8	60154	White Street Renewables LLC	IPP	White Street Renewables	NC	60364	WSPV	3.4	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	3.4
2017	9	60292	Advanced Solar Power Holdings, Inc	IPP	Two Mile Desert Project	NC	60510	PV1	16.2	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	16.2
2017	9	15399	Avangrid Renewables Inc	IPP	Tule Wind LLC	CA	57913	1	143.0	Onshore Wind Turbine	WND	WT	(U) Under construction, less than or equal to 50 percent complete	143.0
2017	9	6175	City of Falls City - (NE)	Electric Utility	Falls City	NE	2237	9	9.3	Natural Gas Internal Combustion Engine	NG	IC	(T) Regulatory approvals received. Not under construction	9.3
2017	9	59745	First Solar Asset Management	IPP	Playa Solar	NV	59827	GEN01	79.0	Solar Photovoltaic	SUN	PV	(U) Under construction, less than or equal to 50 percent complete	79.0
2017	9	60099	MS Solar 3, LLC	IPP	Sumrall II Solar Farm	MS	60303	SUM2	52.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	52.0
2017	9	59109	SUNE BEACON SITE 2, LLC	IPP	Beacon Solar Plant Site 2	CA	59309	BEAC2	45.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	45.0
2017	9	59110	SUNE BEACON SITE 5, LLC	IPP	Beacon Solar Plant Site 5	CA	59308	BEAC5	36.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	36.0
2017	10	56608	Calpine Mid-Merit LLC	IPP	York Energy Center	PA	55524	CTG6	216.3	Natural Gas Fired Combined Cycle	NG	CT	(U) Under construction, less than or equal to 50 percent complete	234.9
2017	10	56608	Calpine Mid-Merit LLC	IPP	York Energy Center	PA	55524	STG2	395.1	Natural Gas Fired Combined Cycle	NG	CA	(U) Under construction, less than or equal to 50 percent complete	419.6
2017	10	60096	Calvert Energy LLC	IPP	Pine Valley Solar Farm, LLC	NC	60298	PV1	5.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	5.0
2017	10	58695	Coronal Development Services	IPP	Fusion Solar Center LLC	CT	58876	PV	20.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	20.0
2017	10	59633	Great Bay Solar I LLC	IPP	Great Bay Solar 1	MD	59851	GBS01	57.0	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	150.0
2017	10	9267	Hoosier Energy R E C, Inc	Electric Utility	Dedatur Co. Solar RES (IN)	IN	59988	PV1	1.1	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	1.1
2017	10	9267	Hoosier Energy R E C, Inc	Electric Utility	Jackson Co. Solar RES	IN	59989	PV1	1.1	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	1.1
2017	10	9267	Hoosier Energy R E C, Inc	Electric Utility	Spring Mill Solar RES	IN	59987	PV1	1.1	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	1.1
2017	10	59669	Louisburg Solar LLC	IPP	Louisburg Solar	NC	59895	5MWPV	5.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	5.0
2017	10	58850	Mariah del Sur LLC	IPP	Mariah South	TX	59007	MAR S	230.4	Onshore Wind Turbine	WND	WT	(U) Under construction, less than or equal to 50 percent complete	230.4
2017	10	58653	Oxbow Creek Energy LLC	IPP	Oxbow Creek	PA	58714	GEN1	4.2	Natural Gas Internal Combustion Engine	NG	IC	(T) Regulatory approvals received. Not under construction	4.4
2017	10	58653	Oxbow Creek Energy LLC	IPP	Oxbow Creek	PA	58714	GEN2	4.2	Natural Gas Internal Combustion Engine	NG	IC	(T) Regulatory approvals received. Not under construction	4.4
2017	10	58653	Oxbow Creek Energy LLC	IPP	Oxbow Creek	PA	58714	GEN3	4.2	Natural Gas Internal Combustion Engine	NG	IC	(T) Regulatory approvals received. Not under construction	4.4
2017	10	58653	Oxbow Creek Energy LLC	IPP	Oxbow Creek	PA	58714	GEN4	4.2	Natural Gas Internal Combustion Engine	NG	IC	(T) Regulatory approvals received. Not under construction	4.4
2017	10	58653	Oxbow Creek Energy LLC	IPP	Oxbow Creek	PA	58714	GEN5	4.2	Natural Gas Internal Combustion Engine	NG	IC	(T) Regulatory approvals received. Not under construction	4.4
2017	10	40580	Southern Minnesota Mun P Agny	Electric Utility	Owatonna Energy Station	MN	60254	UNIT1	9.7	Natural Gas Internal Combustion Engine	NG	IC	(U) Under construction, less than or equal to 50 percent complete	9.7
2017	10	40580	Southern Minnesota Mun P Agny	Electric Utility	Owatonna Energy Station	MN	60254	UNIT2	9.7	Natural Gas Internal Combustion Engine	NG	IC	(U) Under construction, less than or equal to 50 percent complete	9.7
2017	10	40580	Southern Minnesota Mun P Agny	Electric Utility	Owatonna Energy Station	MN	60254	UNIT3	9.7	Natural Gas Internal Combustion Engine	NG	IC	(U) Under construction, less than or equal to 50 percent complete	9.7
2017	10	40580	Southern Minnesota Mun P Agny	Electric Utility	Owatonna Energy Station	MN	60254	UNIT4	9.7	Natural Gas Internal Combustion Engine	NG	IC	(U) Under construction, less than or equal to 50 percent complete	9.7
2017	10	59056	Tri Global Energy, LLC	IPP	Fiber Winds	TX	59244	FIBE1	80.0	Onshore Wind Turbine	WND	WT	(T) Regulatory approvals received. Not under construction	80.0
2017	10	59056	Tri Global Energy, LLC	IPP	Goodnight	TX	59246	GOOD1	500.0	Onshore Wind Turbine	WND	WT	(U) Under construction, less than or equal to 50 percent complete	500.0
2017	10	19876	Virginia Electric & Power Co	Electric Utility	Remington Solar Facility	VA	59685	01	20.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	20.0
2017	10	57028	West Butte Wind Power LLC	IPP	West Butte Wind Power Project	OR	57704	WB-1	104.5	Onshore Wind Turbine	WND	WT	(L) Regulatory approvals pending. Not under construction	104.5
2017	11	803	Arizona Public Service Co	Electric Utility	Ocotillo	AZ	116	GT3	104.7	Natural Gas Fired Combustion Turbine	NG	GT	(P) Planned for installation, but regulatory approvals not initiated	161.9
2017	11	60420	BentonSun LLC	IPP	North Slope, LLC	NY	60420	NSPV	200.0	Onshore Wind Turbine	WND	WT	(L) Regulatory approvals pending. Not under construction	200.0
2017	11	5416	Duke Energy Carolinas, LLC	Electric Utility	W S Lee	SC	3264	CT11	230.0	Natural Gas Fired Combined Cycle	NG	CT	(V) Under construction, more than 50 percent complete	243.0
2017	11	5416	Duke Energy Carolinas, LLC	Electric Utility	W S Lee	SC	3264	CT12	230.0	Natural Gas Fired Combined Cycle	NG	CT	(V) Under construction, more than 50 percent complete	243.0
2017	11	5416	Duke Energy Carolinas, LLC	Electric Utility	W S Lee	SC	3264	ST10	293.0	Natural Gas Fired Combined Cycle	NG	CA	(V) Under construction, more than 50 percent complete	362.0
2017	12	60074	Ajax Solar, LLC	IPP	Ajax Solar	NC	60288	PV1	4.9	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	5.0
2017	12	58794	American Wind Energy Management Corp.	IPP	Sangamon Wind One LLC	IL	58925	SAN1	30.0	Onshore Wind Turbine	WND	WT	(P) Planned for installation, but regulatory approvals not initiated	30.0
2017	12	58794	American Wind Energy Management Corp.	IPP	Sugar Creek Wind One LLC	IL	58924	SUG1	175.0	Onshore Wind Turbine	WND	WT	(T) Regulatory approvals received. Not under construction	175.0
2017	12	59192	Amity Energy, LLC	IPP	Amity Energy LLC	PA	59418	1	6.8	Natural Gas Internal Combustion Engine	NG	IC	(L) Regulatory approvals pending. Not under construction	7.0
2017	12	59192	Amity Energy, LLC	IPP	Amity Energy LLC	PA	59418	2	6.8	Natural Gas Internal Combustion Engine	NG	IC	(L) Regulatory approvals pending. Not under construction	7.0
2017	12	59192	Amity Energy, LLC	IPP	Amity Energy LLC	PA	59418	3	6.8	Natural Gas Internal Combustion Engine	NG	IC	(L) Regulatory approvals pending. Not under construction	7.0
2017	12	59714	Antrim Wind Energy LLC	IPP	Antrim Wind	NH	59953	AWN1	28.4	Onshore Wind Turbine	WND	WT	(P) Planned for installation, but regulatory approvals not initiated	28.8
2017	12	803	Arizona Public Service Co	Electric Utility										

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Year	Month	Entity ID	Entity Name	Plant Producer Type	Plant Name	Plant State	Plant ID	Generator ID	Net Summer Capacity (MW)	Technology	Energy Source Code	Prime Mover Code	Status	Nameplate Capacity (MW)
2017	12	56215	E.ON Climate Renewables N America LLC	IPP	Vici Wind Farm	OK	59062	VICI	104.4	Onshore Wind Turbine	WND	WT	(L) Regulatory approvals pending. Not under construction	104.4
2017	12	58970	Ecoplexus, Inc.	IPP	E Nash PV1	NC	60002	NASH1	20.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	20.0
2017	12	58970	Ecoplexus, Inc.	IPP	Grandy PV 1	NC	59518	GRAND	20.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	20.0
2017	12	58970	Ecoplexus, Inc.	IPP	High Shoals PV1	NC	59997	HISHO	16.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	16.0
2017	12	58970	Ecoplexus, Inc.	IPP	Manning PV 1	NC	59520	MANN	5.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	5.0
2017	12	58970	Ecoplexus, Inc.	IPP	Round Hill PV1	NC	59998	RNDHL	5.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	5.0
2017	12	58970	Ecoplexus, Inc.	IPP	Vaughn Creek PV1	NC	60001	VNCRK	20.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	20.0
2017	12	58970	Ecoplexus, Inc.	IPP	Willoughby PV1	NC	60003	WILL1	20.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	20.0
2017	12	59380	Enel Green Power NA, Inc.	IPP	Apple Blossom Wind Farm	MI	58690	APLB1	100.0	Onshore Wind Turbine	WND	WT	(T) Regulatory approvals received. Not under construction	100.0
2017	12	60147	Enercap Solar Development, LLC	IPP	Hilly Branch	NC	60358	28941	2.0	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	2.0
2017	12	60147	Enercap Solar Development, LLC	IPP	Neal Hawkins Rd	NC	60359	60916	4.3	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	4.3
2017	12	60147	Enercap Solar Development, LLC	IPP	Pike Road Solar	NC	60360	51116	5.0	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	5.0
2017	12	58672	Everpower Wind Holdings Inc	IPP	Buckeye Wind Farm	OH	58776	1	200.0	Onshore Wind Turbine	WND	WT	(T) Regulatory approvals received. Not under construction	200.0
2017	12	58672	Everpower Wind Holdings Inc	IPP	Coyote Crest Wind Farm	WA	58778	1	126.0	Onshore Wind Turbine	WND	WT	(T) Regulatory approvals received. Not under construction	126.0
2017	12	58672	Everpower Wind Holdings Inc	IPP	Horse Thief Wind Project, LLC	MT	59758	1	80.0	Onshore Wind Turbine	WND	WT	(L) Regulatory approvals pending. Not under construction	80.0
2017	12	58672	Everpower Wind Holdings Inc	IPP	Mason Dixon Wind Farm	PA	60212	1	80.0	Onshore Wind Turbine	WND	WT	(L) Regulatory approvals pending. Not under construction	80.0
2017	12	58672	Everpower Wind Holdings Inc	IPP	Mud Springs Wind Project, LLC	MT	59756	1	80.0	Onshore Wind Turbine	WND	WT	(L) Regulatory approvals pending. Not under construction	80.0
2017	12	58672	Everpower Wind Holdings Inc	IPP	Pryor Caves Wind Project, LLC	MT	59757	1	80.0	Onshore Wind Turbine	WND	WT	(L) Regulatory approvals pending. Not under construction	80.0
2017	12	58672	Everpower Wind Holdings Inc	IPP	Scioto Ridge Wind Farm	OH	58780	1	300.0	Onshore Wind Turbine	WND	WT	(T) Regulatory approvals received. Not under construction	300.0
2017	12	58672	Everpower Wind Holdings Inc	IPP	Terrapin Hills Wind Farm	MD	60211	1	50.0	Onshore Wind Turbine	WND	WT	(L) Regulatory approvals pending. Not under construction	50.0
2017	12	56615	First Solar Project Development	IPP	Aiya Solar Project	NV	59869	GEN01	100.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	100.0
2017	12	59155	First Wind O&M, LLC	IPP	Bowers Wind Project	ME	57088	1	48.0	Onshore Wind Turbine	WND	WT	(L) Regulatory approvals pending. Not under construction	48.0
2017	12	58692	Florey Knob LLC	IPP	Florey Knob	PA	58821	1	6.8	Natural Gas Internal Combustion Engine	NG	IC	(T) Regulatory approvals received. Not under construction	7.0
2017	12	58692	Florey Knob LLC	IPP	Florey Knob	PA	58821	2	6.8	Natural Gas Internal Combustion Engine	NG	IC	(T) Regulatory approvals received. Not under construction	7.0
2017	12	58692	Florey Knob LLC	IPP	Florey Knob	PA	58821	3	6.8	Natural Gas Internal Combustion Engine	NG	IC	(T) Regulatory approvals received. Not under construction	7.0
2017	12	7189	Gila Bend Power Partners LLC	IPP	Gila Bend Power Generation Station	AZ	55507	2	156.0	Natural Gas Fired Combined Cycle	NG	CT	(P) Planned for installation, but regulatory approvals not initiated	170.0
2017	12	7189	Gila Bend Power Partners LLC	IPP	Gila Bend Power Generation Station	AZ	55507	3	156.0	Natural Gas Fired Combined Cycle	NG	CT	(P) Planned for installation, but regulatory approvals not initiated	170.0
2017	12	7189	Gila Bend Power Partners LLC	IPP	Gila Bend Power Generation Station	AZ	55507	4	390.0	Natural Gas Fired Combined Cycle	NG	CA	(P) Planned for installation, but regulatory approvals not initiated	390.0
2017	12	60222	Haida Energy, Inc.	Electric Utility	Hilangay Hydro	AK	59037	GEN 1	5.0	Conventional Hydroelectric	WAT	HY	(U) Under construction, less than or equal to 50 percent complete	5.0
2017	12	60095	High Pockets Solar, LLC	IPP	High Pockets Solar	NC	60305	PV1	1.9	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	1.9
2017	12	58684	Hop Bottom Energy LLC	IPP	Hop Bottom	PA	58800	1	6.8	Natural Gas Internal Combustion Engine	NG	IC	(T) Regulatory approvals received. Not under construction	7.0
2017	12	58684	Hop Bottom Energy LLC	IPP	Hop Bottom	PA	58800	2	6.8	Natural Gas Internal Combustion Engine	NG	IC	(T) Regulatory approvals received. Not under construction	7.0
2017	12	58684	Hop Bottom Energy LLC	IPP	Hop Bottom	PA	58800	3	6.8	Natural Gas Internal Combustion Engine	NG	IC	(T) Regulatory approvals received. Not under construction	7.0
2017	12	58901	Hydro Green Energy	IPP	Braddock Lock and Dam	PA	59091	GEN1	5.3	Conventional Hydroelectric	WAT	HY	(L) Regulatory approvals pending. Not under construction	5.3
2017	12	59439	Innovative Solar 54, LLC	IPP	Innovative Solar 54	NC	59669	IS054	50.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	50.0
2017	12	59448	Innovative Solar 67, LLC	IPP	Innovative Solar 67	NC	59678	IS067	33.3	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	33.3
2017	12	60069	Jester Solar LLC	IPP	Jester Solar	NC	60290	PV1	4.9	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	5.0
2017	12	59678	KDC Solar PR1, LLC	IPP	KDC Solar PR1, LLC	NJ	59910	SF	22.0	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	22.0
2017	12	56911	Kalaeloa Solar One LLC	IPP	Kalaeloa Solar One	HI	57569	KS1-A	3.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	3.0
2017	12	60223	Ketchikan Electric Company	Electric Utility	Mahoney Lake Hydroelectric	AK	59027	GEN 1	9.6	Conventional Hydroelectric	WAT	HY	(L) Regulatory approvals pending. Not under construction	9.6
2017	12	56939	Lexington Chenoa Wind Farm II LLC	IPP	Bright Stalk Wind Farm II	IL	57622	GEN1	200.0	Onshore Wind Turbine	WND	WT	(P) Planned for installation, but regulatory approvals not initiated	200.0
2017	12	56940	Lexington Chenoa Wind Farm LLC	IPP	Bright Stalk Wind Farm I	IL	57623	GEN1	200.0	Onshore Wind Turbine	WND	WT	(P) Planned for installation, but regulatory approvals not initiated	200.0
2017	12	11204	Los Alamos County	Electric Utility	Los Alamos PV Site	NM	58256	4	1.0	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	1.0
2017	12	59343	Maricopa East Solar PV, LLC	IPP	Maricopa East Solar	CA	59609	MES	18.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	18.0
2017	12	59761	McLean Homestead, LLC	IPP	McLean Homestead	NC	60020	PV1	4.9	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	4.9
2017	12	56941	Meadow Lake Wind Farm V LLC	IPP	Meadow Lake Wind Farm V	IN	57628	GEN1	100.0	Onshore Wind Turbine	WND	WT	(P) Planned for installation, but regulatory approvals not initiated	100.0
2017	12	60035	Michigan Wind 3, LLC	IPP	Michigan Wind 3	MI	60246	1	152.8	Onshore Wind Turbine	WND	WT	(L) Regulatory approvals pending. Not under construction	152.8
2017	12	58718	Na Pua Makani Power Partners LLC	IPP	Na Pua Makani Wind Project	HI	58837	WT1	25.0	Onshore Wind Turbine	WND	WT	(P) Planned for installation, but regulatory approvals not initiated	25.0
2017	12	56935	Number Nine Wind Farm LLC	IPP	Number Nine Wind Farm	ME	57612	GEN1	250.0	Onshore Wind Turbine	WND	WT	(P) Planned for installation, but regulatory approvals not initiated	250.0
2017	12	58653	Oxbow Creek Energy LLC	IPP	Oxbow Creek	PA	58714	1	6.8	Natural Gas Internal Combustion Engine	NG	IC	(T) Regulatory approvals received. Not under construction	7.0
2017	12	58653	Oxbow Creek Energy LLC	IPP	Oxbow Creek	PA	58714	2	6.8	Natural Gas Internal Combustion Engine	NG	IC	(T) Regulatory approvals received. Not under construction	7.0
2017	12	58653	Oxbow Creek Energy LLC	IPP	Oxbow Creek	PA	58714	3	6.8	Natural Gas Internal Combustion Engine	NG	IC	(T) Regulatory approvals received. Not under construction	7.0
2017	12	56645	Pattern Operators LP	IPP	Grady Wind Energy Center, LLC	NM	60317	1	110.4	Onshore Wind Turbine	WND	WT	(P) Planned for installation, but regulatory approvals not initiated	200.8
2017	12	56949	Paulding Wind Farm LLC	IPP	Paulding Wind Farm LLC	OH	57611	GEN1	49.0	Onshore Wind Turbine	WND	WT	(L) Regulatory approvals pending. Not under construction	49.0
2017	12	59771	Pecan Solar LLC	IPP	Pecan Solar	NC	60030	PECAN	74.9	Solar Photovoltaic	S			

Table 6.5. Planned U.S. Electric Generating Unit Additions

Year	Month	Entity ID	Entity Name	Plant Producer Type	Plant Name	Plant State	Plant ID	Generator ID	Net Summer Capacity (MW)	Technology	Energy Source Code	Prime Mover Code	Status	Nameplate Capacity (MW)
2018	1	58783	Marselles Land and Water Company	IPP	Marselles Lock and Dam Hydro	IL	58903	UNIT3	2.6	Conventional Hydroelectric	WAT	HY	(L) Regulatory approvals pending. Not under construction	2.6
2018	1	58783	Marselles Land and Water Company	IPP	Marselles Lock and Dam Hydro	IL	58903	UNIT4	2.6	Conventional Hydroelectric	WAT	HY	(L) Regulatory approvals pending. Not under construction	2.6
2018	1	14063	Oklahoma Gas & Electric Co	Electric Utility	Mustang	OK	2953	GT1	57.0	Natural Gas Fired Combustion Turbine	NG	GT	(L) Regulatory approvals pending. Not under construction	66.0
2018	1	14063	Oklahoma Gas & Electric Co	Electric Utility	Mustang	OK	2953	GT2	57.0	Natural Gas Fired Combustion Turbine	NG	GT	(L) Regulatory approvals pending. Not under construction	66.0
2018	1	14063	Oklahoma Gas & Electric Co	Electric Utility	Mustang	OK	2953	GT3	57.0	Natural Gas Fired Combustion Turbine	NG	GT	(L) Regulatory approvals pending. Not under construction	66.0
2018	1	14063	Oklahoma Gas & Electric Co	Electric Utility	Mustang	OK	2953	GT4	57.0	Natural Gas Fired Combustion Turbine	NG	GT	(L) Regulatory approvals pending. Not under construction	66.0
2018	1	14063	Oklahoma Gas & Electric Co	Electric Utility	Mustang	OK	2953	GT5	57.0	Natural Gas Fired Combustion Turbine	NG	GT	(L) Regulatory approvals pending. Not under construction	66.0
2018	1	14063	Oklahoma Gas & Electric Co	Electric Utility	Mustang	OK	2953	GT6	57.0	Natural Gas Fired Combustion Turbine	NG	GT	(L) Regulatory approvals pending. Not under construction	66.0
2018	1	14063	Oklahoma Gas & Electric Co	Electric Utility	Mustang	OK	2953	GT7	57.0	Natural Gas Fired Combustion Turbine	NG	GT	(L) Regulatory approvals pending. Not under construction	66.0
2018	1	60162	Panda Hummel Station LLC	IPP	Panda Hummel Station LLC	PA	60368	CTG1	226.3	Natural Gas Fired Combined Cycle	NG	CT	(U) Under construction, less than or equal to 50 percent complete	231.2
2018	1	60162	Panda Hummel Station LLC	IPP	Panda Hummel Station LLC	PA	60368	CTG2	226.3	Natural Gas Fired Combined Cycle	NG	CT	(U) Under construction, less than or equal to 50 percent complete	231.2
2018	1	60162	Panda Hummel Station LLC	IPP	Panda Hummel Station LLC	PA	60368	CTG3	226.3	Natural Gas Fired Combined Cycle	NG	CT	(U) Under construction, less than or equal to 50 percent complete	231.2
2018	1	60162	Panda Hummel Station LLC	IPP	Panda Hummel Station LLC	PA	60368	STG	417.6	Natural Gas Fired Combined Cycle	NG	CA	(U) Under construction, less than or equal to 50 percent complete	460.0
2018	1	16534	Sacramento Municipal Util Dist	Electric Utility	White Rock/Slab Creek	CA	435	H3	2.6	Conventional Hydroelectric	WAT	HY	(P) Planned for installation, but regulatory approvals not initiated	2.6
2018	1	58846	Southeast Renewable Fuels, LLC	Industrial	SRF Sorghum to Ethanol Advanced Biorefin	FL	58997	G1001	12.0	Other Waste Biomass	OBS	ST	(U) Under construction, less than or equal to 50 percent complete	15.0
2018	1	17650	Southern Power Co	IPP	Lamesa Solar	TX	60372	LSPV2	100.0	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	100.0
2018	2	803	Arizona Public Service Co	Electric Utility	Ocotillo	AZ	116	GT5	104.7	Natural Gas Fired Combustion Turbine	NG	GT	(P) Planned for installation, but regulatory approvals not initiated	161.9
2018	2	59686	Coronado Power Ventures LLC	IPP	Pinecrest Energy Center	TX	59923	CTG-1	229.0	Natural Gas Fired Combined Cycle	NG	CT	(T) Regulatory approvals received. Not under construction	232.0
2018	2	59686	Coronado Power Ventures LLC	IPP	Pinecrest Energy Center	TX	59923	CTG-2	229.0	Natural Gas Fired Combined Cycle	NG	CT	(T) Regulatory approvals received. Not under construction	232.0
2018	2	59686	Coronado Power Ventures LLC	IPP	Pinecrest Energy Center	TX	59923	STG	289.0	Natural Gas Fired Combined Cycle	NG	CA	(T) Regulatory approvals received. Not under construction	289.0
2018	2	56615	First Solar Project Development	IPP	Little Bear Solar 1, LLC	CA	59870	GEN01	20.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	20.0
2018	2	56615	First Solar Project Development	IPP	Little Bear Solar 2, LLC	CA	59885	GEN01	20.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	20.0
2018	2	56615	First Solar Project Development	IPP	Windhub Solar A LLC	CA	59878	GEN01	20.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	20.0
2018	2	56615	First Solar Project Development	IPP	Windhub Solar B, LLC	CA	59896	GEN01	20.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	20.0
2018	2	58959	Freeport LNG Development L.P.	Industrial	Freeport LP Pretreatment Facility	TX	59145	65CTG	77.5	Natural Gas Fired Combustion Turbine	NG	GT	(L) Regulatory approvals pending. Not under construction	97.0
2018	2	60040	Hale Wind Energy	IPP	Hale Community Wind Farm	TX	59247	HALE2	240.0	Onshore Wind Turbine	WND	WT	(L) Regulatory approvals pending. Not under construction	240.0
2018	2	59434	Mattawoman Energy, LLC	IPP	Mattawoman Energy Center	MD	59662	CGT11	286.0	Natural Gas Fired Combined Cycle	NG	CC	(P) Planned for installation, but regulatory approvals not initiated	286.0
2018	2	59434	Mattawoman Energy, LLC	IPP	Mattawoman Energy Center	MD	59662	CGT12	286.0	Natural Gas Fired Combined Cycle	NG	CC	(P) Planned for installation, but regulatory approvals not initiated	286.0
2018	2	59434	Mattawoman Energy, LLC	IPP	Mattawoman Energy Center	MD	59662	STG11	436.0	Natural Gas Fired Combined Cycle	NG	CC	(P) Planned for installation, but regulatory approvals not initiated	436.0
2018	3	59272	41MB 8me, LLC	IPP	Borden Solar Farm	CA	59531	BRDN	50.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	50.0
2018	3	803	Arizona Public Service Co	Electric Utility	Ocotillo	AZ	116	GT6	104.7	Natural Gas Fired Combustion Turbine	NG	GT	(P) Planned for installation, but regulatory approvals not initiated	161.9
2018	3	59686	Coronado Power Ventures LLC	IPP	La Paloma Energy Center	TX	59924	CTG-1	211.5	Natural Gas Fired Combined Cycle	NG	CT	(T) Regulatory approvals received. Not under construction	230.0
2018	3	59686	Coronado Power Ventures LLC	IPP	La Paloma Energy Center	TX	59924	CTG-2	211.5	Natural Gas Fired Combined Cycle	NG	CT	(T) Regulatory approvals received. Not under construction	230.0
2018	3	59686	Coronado Power Ventures LLC	IPP	La Paloma Energy Center	TX	59924	STG-1	300.0	Natural Gas Fired Combined Cycle	NG	CA	(T) Regulatory approvals received. Not under construction	311.0
2018	3	5310	Doswell Ltd Partnership	IPP	Doswell Energy Center	VA	52019	GEN8	150.0	Natural Gas Fired Combustion Turbine	NG	GT	(L) Regulatory approvals pending. Not under construction	187.0
2018	3	5310	Doswell Ltd Partnership	IPP	Doswell Energy Center	VA	52019	GEN9	150.0	Natural Gas Fired Combustion Turbine	NG	GT	(L) Regulatory approvals pending. Not under construction	187.0
2018	3	58766	FGE Texas II LLC	IPP	FGE Texas II	TX	58930	CA1	388.9	Natural Gas Fired Combined Cycle	NG	CA	(L) Regulatory approvals pending. Not under construction	382.5
2018	3	58766	FGE Texas II LLC	IPP	FGE Texas II	TX	58930	GT1	219.7	Natural Gas Fired Combined Cycle	NG	CT	(L) Regulatory approvals pending. Not under construction	208.3
2018	3	58766	FGE Texas II LLC	IPP	FGE Texas II	TX	58930	GT2	219.7	Natural Gas Fired Combined Cycle	NG	CT	(L) Regulatory approvals pending. Not under construction	208.3
2018	3	19547	Hawaiian Electric Co Inc	Electric Utility	Schofield Generating Station	HI	60328	S1	8.4	Other Waste Biomass	OBL	IC	(U) Under construction, less than or equal to 50 percent complete	8.4
2018	3	19547	Hawaiian Electric Co Inc	Electric Utility	Schofield Generating Station	HI	60328	S2	8.4	Other Waste Biomass	OBL	IC	(U) Under construction, less than or equal to 50 percent complete	8.4
2018	3	19547	Hawaiian Electric Co Inc	Electric Utility	Schofield Generating Station	HI	60328	S3	8.4	Other Waste Biomass	OBL	IC	(U) Under construction, less than or equal to 50 percent complete	8.4
2018	3	19547	Hawaiian Electric Co Inc	Electric Utility	Schofield Generating Station	HI	60328	S4	8.4	Other Waste Biomass	OBL	IC	(U) Under construction, less than or equal to 50 percent complete	8.4
2018	3	19547	Hawaiian Electric Co Inc	Electric Utility	Schofield Generating Station	HI	60328	S5	8.4	Other Waste Biomass	OBL	IC	(U) Under construction, less than or equal to 50 percent complete	8.4
2018	3	19547	Hawaiian Electric Co Inc	Electric Utility	Schofield Generating Station	HI	60328	S6	8.4	Other Waste Biomass	OBL	IC	(U) Under construction, less than or equal to 50 percent complete	8.4
2018	3	13781	Northern States Power Co - Minnesota	Electric Utility	Black Dog	MN	1904	6-1	215.0	Natural Gas Fired Combustion Turbine	NG	GT	(L) Regulatory approvals pending. Not under construction	238.0
2018	3	59260	Wright Solar Park, LLC	IPP	Wright Solar Park	CA	59525	FRWSP	200.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	200.0
2018	4	803	Arizona Public Service Co	Electric Utility	Ocotillo	AZ	116	GT7	104.7	Natural Gas Fired Combustion Turbine	NG	GT	(P) Planned for installation, but regulatory approvals not initiated	161.9
2018	4	59683	Rockwood Energy Center LLC	IPP	Rockwood Energy Center LLC	TX	59918	ROCKW	1,068.0	Natural Gas Fired Combined Cycle	NG	CC	(T) Regulatory approvals received. Not under construction	1,068.0
2018	4	56789	TBE Montgomery LLC	IPP	TBE-Montgomery LLC	NY	57472	CTG	11.6	Other Waste Biomass	OBG	CT	(U) Under construction, less than or equal to 50 percent complete	12.0
2018	4	56789	TBE Montgomery LLC	IPP	TBE-Montgomery LLC	NY	57472	STG	7.4	Other Waste Biomass	OBG	CA	(U) Under construction, less than or equal to 50 percent complete	9.0
2018	4	59056	Tri Global Energy, LLC	IPP	Changing Winds	TX	59243	CHAN1	288.0	Onshore Wind Turbine	WND	WT	(U) Under construction, less than or equal to 50 percent complete	288.0
2018	4	20421	Western Minnesota Mun Pwr Agny	Electric Utility	Red Rock Hydro Plant	IA	58434	1	27.5	Conventional Hydroelectric	WAT	HY	(T) Regulatory approvals received. Not under construction	18.2
2018	4	20421	Western Minnesota Mun Pwr Agny	Electric Utility	Red Rock Hydro Plant	IA	58434	2	27.5	Conventional Hydroelectric	WAT	HY	(T) Regulatory approvals received. Not under construction	18.2

Table 6.5. Planned U.S. Electric Generating Unit Additions

Year	Month	Entity ID	Entity Name	Plant Producer Type	Plant Name	Plant State	Plant ID	Generator ID	Net Summer Capacity (MW)	Technology	Energy Source Code	Prime Mover Code	Status	Nameplate Capacity (MW)
2018	6	59357	Nasavota Energy Generation Holdings	IPP	Clear Springs Energy Center	TX	59615	CTG-3	177.0	Natural Gas Fired Combustion Turbine	NG	GT	(P) Planned for installation, but regulatory approvals not initiated	183.0
2018	6	59357	Nasavota Energy Generation Holdings	IPP	Union Valley Energy Center	TX	59616	CTG-1	178.0	Natural Gas Fired Combustion Turbine	NG	GT	(P) Planned for installation, but regulatory approvals not initiated	183.0
2018	6	59357	Nasavota Energy Generation Holdings	IPP	Union Valley Energy Center	TX	59616	CTG-2	178.0	Natural Gas Fired Combustion Turbine	NG	GT	(P) Planned for installation, but regulatory approvals not initiated	183.0
2018	6	59357	Nasavota Energy Generation Holdings	IPP	Union Valley Energy Center	TX	59616	CTG-3	178.0	Natural Gas Fired Combustion Turbine	NG	GT	(P) Planned for installation, but regulatory approvals not initiated	183.0
2018	6	59357	Nasavota Energy Generation Holdings	IPP	Van Alstyne Energy Center	TX	59617	CTG-1	177.0	Natural Gas Fired Combustion Turbine	NG	GT	(P) Planned for installation, but regulatory approvals not initiated	183.0
2018	6	59357	Nasavota Energy Generation Holdings	IPP	Van Alstyne Energy Center	TX	59617	CTG-2	177.0	Natural Gas Fired Combustion Turbine	NG	GT	(P) Planned for installation, but regulatory approvals not initiated	183.0
2018	6	59357	Nasavota Energy Generation Holdings	IPP	Van Alstyne Energy Center	TX	59617	CTG-3	177.0	Natural Gas Fired Combustion Turbine	NG	GT	(P) Planned for installation, but regulatory approvals not initiated	183.0
2018	6	15147	PSEG Fossil LLC	IPP	PSEG Seaway Generating Station	NJ	2411	701	321.0	Natural Gas Fired Combined Cycle	NG	CT	(U) Under construction, less than or equal to 50 percent complete	430.0
2018	6	15147	PSEG Fossil LLC	IPP	PSEG Seaway Generating Station	NJ	2411	702	219.0	Natural Gas Fired Combined Cycle	NG	CA	(U) Under construction, less than or equal to 50 percent complete	287.0
2018	6	59489	Perennial-Wind Chaser LLC	IPP	Perennial Wind Chaser Station	OR	59721	GT1	98.7	Natural Gas Fired Combustion Turbine	NG	GT	(P) Planned for installation, but regulatory approvals not initiated	106.0
2018	6	59489	Perennial-Wind Chaser LLC	IPP	Perennial Wind Chaser Station	OR	59721	GT2	98.7	Natural Gas Fired Combustion Turbine	NG	GT	(P) Planned for installation, but regulatory approvals not initiated	106.0
2018	6	59489	Perennial-Wind Chaser LLC	IPP	Perennial Wind Chaser Station	OR	59721	GT3	98.7	Natural Gas Fired Combustion Turbine	NG	GT	(P) Planned for installation, but regulatory approvals not initiated	106.0
2018	6	59489	Perennial-Wind Chaser LLC	IPP	Perennial Wind Chaser Station	OR	59721	GT4	98.7	Natural Gas Fired Combustion Turbine	NG	GT	(P) Planned for installation, but regulatory approvals not initiated	106.0
2018	6	17650	Southern Power Co	IPP	Mankato Energy Center	MN	56104	CTG1	200.0	Natural Gas Fired Combined Cycle	NG	CT	(P) Planned for installation, but regulatory approvals not initiated	210.0
2018	6	57109	St Joseph Energy Center LLC	IPP	St Joseph Energy Center	IN	57794	CT1	229.0	Natural Gas Fired Combined Cycle	NG	CT	(P) Planned for installation, but regulatory approvals not initiated	238.0
2018	6	57109	St Joseph Energy Center LLC	IPP	St Joseph Energy Center	IN	57794	CT2	229.0	Natural Gas Fired Combined Cycle	NG	CT	(P) Planned for installation, but regulatory approvals not initiated	238.0
2018	6	57109	St Joseph Energy Center LLC	IPP	St Joseph Energy Center	IN	57794	ST1	245.0	Natural Gas Fired Combined Cycle	NG	CA	(P) Planned for installation, but regulatory approvals not initiated	260.0
2018	6	56927	Wallingford Energy LLC	IPP	Wallingford Energy	CT	55517	CTG6	45.0	Natural Gas Fired Combustion Turbine	NG	GT	(P) Planned for installation, but regulatory approvals not initiated	50.0
2018	6	56927	Wallingford Energy LLC	IPP	Wallingford Energy	CT	55517	CTG7	45.0	Natural Gas Fired Combustion Turbine	NG	GT	(P) Planned for installation, but regulatory approvals not initiated	50.0
2018	7	56769	Consolidated Edison Development Inc.	IPP	Castle Gap Solar	TX	60123	CGAP	117.3	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	117.3
2018	7	56615	First Solar Project Development	IPP	CA Flats Solar 150, LLC	CA	60034	GEN01	150.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	150.0
2018	7	14624	PUD No 2 of Grant County	Electric Utility	Wanapum	WA	3888	4A	122.0	Conventional Hydroelectric	WAT	HY	(P) Planned for installation, but regulatory approvals not initiated	122.0
2018	7	59056	Tri Global Energy, LLC	IPP	Bearkat	TX	59972	BRKAT	360.0	Onshore Wind Turbine	WND	WT	(U) Under construction, less than or equal to 50 percent complete	360.0
2018	7	59056	Tri Global Energy, LLC	IPP	Blue Cloud Renewable Energy Project, LLC	TX	60270	WT1	300.0	Onshore Wind Turbine	WND	WT	(U) Under construction, less than or equal to 50 percent complete	300.0
2018	7	54863	U S Power Generating Company LLC	IPP	Gowanus Gas Turbines Generating	NY	2494	SS	90.0	Natural Gas Fired Combustion Turbine	NG	GT	(T) Regulatory approvals received. Not under construction	93.0
2018	8	56615	First Solar Project Development	IPP	Snow Mountain Solar, LLC	NV	59935	GEN01	100.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	100.0
2018	10	6455	Duke Energy Florida, Inc	Electric Utility	Citrus County Combined Cycle Plant	FL	60138	2GTA	251.7	Natural Gas Fired Combined Cycle	NG	CT	(U) Under construction, less than or equal to 50 percent complete	310.3
2018	10	6455	Duke Energy Florida, Inc	Electric Utility	Citrus County Combined Cycle Plant	FL	60138	2GBT	251.7	Natural Gas Fired Combined Cycle	NG	CT	(U) Under construction, less than or equal to 50 percent complete	310.3
2018	10	6455	Duke Energy Florida, Inc	Electric Utility	Citrus County Combined Cycle Plant	FL	60138	CCZST	316.7	Natural Gas Fired Combined Cycle	NG	CA	(U) Under construction, less than or equal to 50 percent complete	364.7
2018	10	59123	NTE Carolinas, LLC	IPP	Kings Mountain Energy Center	NC	59325	KMEC1	244.0	Natural Gas Fired Combined Cycle	NG	CT	(T) Regulatory approvals received. Not under construction	301.5
2018	10	59123	NTE Carolinas, LLC	IPP	Kings Mountain Energy Center	NC	59325	KMEC2	208.0	Natural Gas Fired Combined Cycle	NG	CA	(T) Regulatory approvals received. Not under construction	234.0
2018	10	59056	Tri Global Energy, LLC	IPP	Tex-Mex Renewable Energy Project, LLC	TX	60269	WT1	80.0	Onshore Wind Turbine	WND	WT	(U) Under construction, less than or equal to 50 percent complete	80.0
2018	11	58847	Carlsbad Energy Center	IPP	Carlsbad Energy Center	CA	59002	CEC 6	105.3	Natural Gas Fired Combustion Turbine	NG	GT	(L) Regulatory approvals pending. Not under construction	105.3
2018	11	58847	Carlsbad Energy Center	IPP	Carlsbad Energy Center	CA	59002	CEC 7	105.3	Natural Gas Fired Combustion Turbine	NG	GT	(L) Regulatory approvals pending. Not under construction	105.3
2018	11	58847	Carlsbad Energy Center	IPP	Carlsbad Energy Center	CA	59002	CEC 8	105.3	Natural Gas Fired Combustion Turbine	NG	GT	(L) Regulatory approvals pending. Not under construction	105.3
2018	11	58847	Carlsbad Energy Center	IPP	Carlsbad Energy Center	CA	59002	CEC 9	105.3	Natural Gas Fired Combustion Turbine	NG	GT	(L) Regulatory approvals pending. Not under construction	105.3
2018	11	58847	Carlsbad Energy Center	IPP	Carlsbad Energy Center	CA	59002	CEC10	105.3	Natural Gas Fired Combustion Turbine	NG	GT	(L) Regulatory approvals pending. Not under construction	105.3
2018	11	58847	Carlsbad Energy Center	IPP	Carlsbad Energy Center	CA	59002	CEC11	105.3	Natural Gas Fired Combustion Turbine	NG	GT	(L) Regulatory approvals pending. Not under construction	105.3
2018	11	57170	EDF Renewable Asset Holdings, Inc.	IPP	Copenhagen Wind Farm	NY	58979	CPHGN	79.9	Onshore Wind Turbine	WND	WT	(T) Regulatory approvals received. Not under construction	79.9
2018	12	58794	American Wind Energy Management Corp.	IPP	Sangamon Wind Two LLC	IL	58926	SAZ2	100.0	Onshore Wind Turbine	WND	WT	(P) Planned for installation, but regulatory approvals not initiated	100.0
2018	12	56771	Black Hills Service Company LLC	Electric Utility	Cheyenne Prairie Generating Station	WY	57703	O2B	40.0	Natural Gas Fired Combustion Turbine	NG	GT	(P) Planned for installation, but regulatory approvals not initiated	40.0
2018	12	56771	Black Hills Service Company LLC	Electric Utility	Cheyenne Prairie Generating Station	WY	57703	03A	40.0	Natural Gas Fired Combustion Turbine	NG	GT	(P) Planned for installation, but regulatory approvals not initiated	40.0
2018	12	58662	Blue Mountain Power Partners	IPP	Blue Mountain Wind Farm	UT	58764	BM1	80.0	Onshore Wind Turbine	WND	WT	(U) Under construction, less than or equal to 50 percent complete	80.0
2018	12	59992	Caprock Solar 2, LLC	IPP	Caprock Solar 2 LLC	NM	59846	PV1	30.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	30.0
2018	12	58391	Chilocco Wind Farm LLC	IPP	Chilocco Wind Farm	OK	58406	1	76.5	Onshore Wind Turbine	WND	WT	(U) Under construction, less than or equal to 50 percent complete	76.5
2018	12	58391	Chilocco Wind Farm LLC	IPP	Chilocco Wind Farm	OK	58406	2	76.5	Onshore Wind Turbine	WND	WT	(U) Under construction, less than or equal to 50 percent complete	76.5
2018	12	59432	Clear Creek Power	IPP	Highland Park Project	CO	59659	HPWT	198.0	Onshore Wind Turbine	WND	WT	(P) Planned for installation, but regulatory approvals not initiated	198.0
2018	12	56769	Consolidated Edison Development Inc.	IPP	Panache Valley Solar Farm	CA	57340	1	240.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	240.0
2018	12	56872	Contra Costa Generating Station LLC	IPP	Oakley Generating Station	CA	57552	CT1	197.3	Natural Gas Fired Combined Cycle	NG	CT	(U) Under construction, less than or equal to 50 percent complete	222.3
2018	12	56872	Contra Costa Generating Station LLC	IPP	Oakley Generating Station	CA	57552	CT2	197.3	Natural Gas Fired Combined Cycle	NG	CT	(U) Under construction, less than or equal to 50 percent complete	222.3
2018	12	56872	Contra Costa Generating Station LLC	IPP	Oakley Generating Station	CA	57552	ST	191.3	Natural Gas Fired Combined Cycle	NG	CA	(U) Under construction, less than or equal to 50 percent complete	227.7
2018	12	56215	E ON Climate Renewables N America LLC	IPP	Stella Wind Farm	TX	59063	WT1	200.0	Onshore Wind Turbine	WND	WT	(L) Regulatory approvals pending. Not under construction	200.0
2018	12	39347	East Texas Electric Coop, Inc	Electric Utility	RC Thomas Hydroelectric Project	TX	58645							

Table 6.5. Planned U.S. Electric Generating Unit Additions

Year	Month	Entity ID	Entity Name	Plant Producer Type	Plant Name	Plant State	Plant ID	Generator ID	Net Summer Capacity (MW)	Technology	Energy Source Code	Prime Mover Code	Status	Nameplate Capacity (MW)
2018	12	19511	University of Alaska	Commercial	University of Alaska Fairbanks	AK	50711	GEN5	17.0	Conventional Steam Coal	SUB	ST	(U) Under construction, less than or equal to 50 percent complete	17.0
2018	12	19876	Virginia Electric & Power Co	Electric Utility	Greenville County Power Station	VA	59913	CT01	324.4	Natural Gas Fired Combined Cycle	NG	CC	(L) Regulatory approvals pending. Not under construction	369.8
2018	12	19876	Virginia Electric & Power Co	Electric Utility	Greenville County Power Station	VA	59913	CT02	324.4	Natural Gas Fired Combined Cycle	NG	CC	(L) Regulatory approvals pending. Not under construction	369.8
2018	12	19876	Virginia Electric & Power Co	Electric Utility	Greenville County Power Station	VA	59913	CT03	324.4	Natural Gas Fired Combined Cycle	NG	CC	(L) Regulatory approvals pending. Not under construction	369.8
2018	12	19876	Virginia Electric & Power Co	Electric Utility	Greenville County Power Station	VA	59913	ST01	611.8	Natural Gas Fired Combined Cycle	NG	CC	(L) Regulatory approvals pending. Not under construction	663.9
2019	1	56794	CE Obsidian Energy LLC	IPP	Black Rock I	CA	57477	G3201	60.0	Geothermal	GEO	ST	(L) Regulatory approvals pending. Not under construction	70.0
2019	1	49893	Invenergy Services LLC	IPP	Lackawanna Energy Center	PA	60357	GEN3	465.0	Natural Gas Fired Combined Cycle	NG	CS	(U) Under construction, less than or equal to 50 percent complete	555.0
2019	3	59056	Tn Global Energy, LLC	IPP	Crosby County Wind Farm, LLC	TX	60273	WT1	160.0	Onshore Wind Turbine	WND	WT	(P) Planned for installation, but regulatory approvals not initiated	160.0
2019	4	58409	Future Power PA	IPP	Good Spring NGCC Facility	PA	58409	GT1	232.0	Natural Gas Fired Combined Cycle	NG	CT	(L) Regulatory approvals pending. Not under construction	250.0
2019	4	58409	Future Power PA	IPP	Good Spring NGCC Facility	PA	58409	ST1	108.0	Natural Gas Fired Combined Cycle	NG	CA	(L) Regulatory approvals pending. Not under construction	108.0
2019	4	15473	Public Service Co of NM	Electric Utility	La Luz Energy Center	NM	58284	0002	40.2	Natural Gas Fired Combustion Turbine	NG	GT	(P) Planned for installation, but regulatory approvals not initiated	42.3
2019	5	2172	Brazos Electric Power Coop Inc	Electric Utility	Hill County Generation Facility	TX	60194	CT1	205.0	Natural Gas Fired Combustion Turbine	NG	GT	(L) Regulatory approvals pending. Not under construction	232.0
2019	5	2172	Brazos Electric Power Coop Inc	Electric Utility	Hill County Generation Facility	TX	60194	CT2	205.0	Natural Gas Fired Combustion Turbine	NG	GT	(L) Regulatory approvals pending. Not under construction	232.0
2019	5	2172	Brazos Electric Power Coop Inc	Electric Utility	Hill County Generation Facility	TX	60194	CT3	205.0	Natural Gas Fired Combustion Turbine	NG	GT	(L) Regulatory approvals pending. Not under construction	232.0
2019	5	59111	Crawford Renewable Energy, LLC	IPP	Crawford Renewable Energy - Meadville Po	PA	59307	MPS	93.5	All Other	TDF	ST	(U) Under construction, less than or equal to 50 percent complete	99.5
2019	5	59677	Middlesex Energy Center LLC	IPP	Middlesex Energy Center LLC	NJ	59909	CT001	560.0	Natural Gas Fired Combined Cycle	NG	CC	(P) Planned for installation, but regulatory approvals not initiated	560.0
2019	5	58798	Shell Chemical Appalachia LLC	Industrial	Shell Chemical Appalachia LLC	PA	58933	GTG1	41.0	Natural Gas Fired Combined Cycle	NG	CT	(P) Planned for installation, but regulatory approvals not initiated	41.0
2019	5	58798	Shell Chemical Appalachia LLC	Industrial	Shell Chemical Appalachia LLC	PA	58933	GTG2	41.0	Natural Gas Fired Combined Cycle	NG	CT	(P) Planned for installation, but regulatory approvals not initiated	41.0
2019	5	58798	Shell Chemical Appalachia LLC	Industrial	Shell Chemical Appalachia LLC	PA	58933	GTG3	41.0	Natural Gas Fired Combined Cycle	NG	CT	(P) Planned for installation, but regulatory approvals not initiated	41.0
2019	5	58798	Shell Chemical Appalachia LLC	Industrial	Shell Chemical Appalachia LLC	PA	58933	STG1	75.0	Natural Gas Fired Combined Cycle	NG	CA	(P) Planned for installation, but regulatory approvals not initiated	75.0
2019	5	58798	Shell Chemical Appalachia LLC	Industrial	Shell Chemical Appalachia LLC	PA	58933	STG2	75.0	Natural Gas Fired Combined Cycle	NG	CA	(P) Planned for installation, but regulatory approvals not initiated	75.0
2019	6	58881	Apex Bethel Energy Center	IPP	Apex Bethel Energy Center	TX	59048	ABEC1	158.5	Natural Gas with Compressed Air Storage	NG	CE	(T) Regulatory approvals received. Not under construction	158.5
2019	6	58881	Apex Bethel Energy Center	IPP	Apex Bethel Energy Center	TX	59048	ABEC2	158.5	Natural Gas with Compressed Air Storage	NG	CE	(T) Regulatory approvals received. Not under construction	158.5
2019	6	7277	Calpine Corporation	IPP	Wild Horse Power Plant	CA	57181	1	40.0	Geothermal	GEO	ST	(T) Regulatory approvals received. Not under construction	48.0
2019	6	56606	Calpine New Jersey Generation LLC	IPP	Deepwater	NJ	2384	CT1	235.0	Natural Gas Fired Combustion Turbine	NG	GT	(L) Regulatory approvals pending. Not under construction	242.0
2019	6	56606	Calpine New Jersey Generation LLC	IPP	Deepwater	NJ	2384	ST1	198.5	Natural Gas Steam Turbine	NG	ST	(L) Regulatory approvals pending. Not under construction	214.0
2019	6	6452	Florida Power & Light Co	Electric Utility	Okeechobee Clean Energy Center	FL	60345	1A	376.6	Natural Gas Fired Combined Cycle	NG	CT	(L) Regulatory approvals pending. Not under construction	376.6
2019	6	6452	Florida Power & Light Co	Electric Utility	Okeechobee Clean Energy Center	FL	60345	1B	376.6	Natural Gas Fired Combined Cycle	NG	CT	(L) Regulatory approvals pending. Not under construction	376.6
2019	6	6452	Florida Power & Light Co	Electric Utility	Okeechobee Clean Energy Center	FL	60345	1C	376.6	Natural Gas Fired Combined Cycle	NG	CT	(L) Regulatory approvals pending. Not under construction	376.6
2019	6	6452	Florida Power & Light Co	Electric Utility	Okeechobee Clean Energy Center	FL	60345	1ST	593.3	Natural Gas Fired Combined Cycle	NG	CA	(L) Regulatory approvals pending. Not under construction	593.3
2019	6	7140	Georgia Power Co	Electric Utility	Vogtle	GA	649	3	1,100.0	Nuclear	NUC	ST	(U) Under construction, less than or equal to 50 percent complete	1,100.0
2019	6	59487	Moundsville Power, LLC	IPP	Moundsville Power	WV	59720	MPCA1	224.9	Natural Gas Fired Combined Cycle	NG	CA	(L) Regulatory approvals pending. Not under construction	321.6
2019	6	59487	Moundsville Power, LLC	IPP	Moundsville Power	WV	59720	MPC1	177.3	Natural Gas Fired Combined Cycle	NG	CT	(L) Regulatory approvals pending. Not under construction	195.5
2019	6	59487	Moundsville Power, LLC	IPP	Moundsville Power	WV	59720	MPC2	177.3	Natural Gas Fired Combined Cycle	NG	CT	(L) Regulatory approvals pending. Not under construction	195.5
2019	6	21461	NRG Canal LLC	IPP	Canal	MA	1599	3	330.0	Natural Gas Fired Combustion Turbine	NG	GT	(P) Planned for installation, but regulatory approvals not initiated	330.0
2019	6	54866	Robinson Power Company LLC	IPP	Robinson Power Company LLC	PA	56453	CTG1	950.0	Natural Gas Fired Combined Cycle	NG	CC	(L) Regulatory approvals pending. Not under construction	1,025.0
2019	6	17539	South Carolina Electric&Gas Company	Electric Utility	V C Summer	SC	6127	2	1,100.0	Nuclear	NUC	ST	(U) Under construction, less than or equal to 50 percent complete	1,100.0
2019	6	20159	Washington Parish Engr Ctr LLC	IPP	Washington Parish Energy Center	LA	55486	CTG1	172.0	Natural Gas Fired Combined Cycle	NG	CT	(V) Under construction, more than 50 percent complete	200.0
2019	6	20159	Washington Parish Engr Ctr LLC	IPP	Washington Parish Energy Center	LA	55486	CTG2	172.0	Natural Gas Fired Combined Cycle	NG	CT	(V) Under construction, more than 50 percent complete	200.0
2019	7	59235	Cogentrix Development Holdings, LLC	IPP	Buckeye Generation Center, LLC	AZ	59471	CTG01	104.0	Natural Gas Fired Combustion Turbine	NG	GT	(P) Planned for installation, but regulatory approvals not initiated	108.7
2019	7	59235	Cogentrix Development Holdings, LLC	IPP	Buckeye Generation Center, LLC	AZ	59471	CTG02	104.0	Natural Gas Fired Combustion Turbine	NG	GT	(P) Planned for installation, but regulatory approvals not initiated	108.7
2019	7	59235	Cogentrix Development Holdings, LLC	IPP	Buckeye Generation Center, LLC	AZ	59471	CTG03	104.0	Natural Gas Fired Combustion Turbine	NG	GT	(P) Planned for installation, but regulatory approvals not initiated	108.7
2019	7	59235	Cogentrix Development Holdings, LLC	IPP	Buckeye Generation Center, LLC	AZ	59471	CTG04	104.0	Natural Gas Fired Combustion Turbine	NG	GT	(P) Planned for installation, but regulatory approvals not initiated	108.7
2019	7	59235	Cogentrix Development Holdings, LLC	IPP	Buckeye Generation Center, LLC	AZ	59471	CTG05	104.0	Natural Gas Fired Combustion Turbine	NG	GT	(P) Planned for installation, but regulatory approvals not initiated	108.7
2019	7	59235	Cogentrix Development Holdings, LLC	IPP	Buckeye Generation Center, LLC	AZ	59471	CTG06	104.0	Natural Gas Fired Combustion Turbine	NG	GT	(P) Planned for installation, but regulatory approvals not initiated	108.7
2019	7	14624	PUD No 2 of Grant County	Electric Utility	Wanapum	WA	3888	8A	122.0	Conventional Hydroelectric	WAT	HY	(P) Planned for installation, but regulatory approvals not initiated	122.0
2019	7	59137	Palmer Renewable Energy	IPP	Palmer Renewable Energy	MA	59336	PRE	42.0	Wood/Wood Waste Biomass	WDS	ST	(L) Regulatory approvals pending. Not under construction	42.0
2019	9	60064	Clean Path Energy Center, LLC	IPP	Clean Path Energy Center	NM	60289	PVGEN	70.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	70.0
2019	10	60064	Clean Path Energy Center, LLC	IPP	Clean Path Energy Center	NM	60289	CPEC1	680.0	Natural Gas Fired Combined Cycle	NG	CC	(L) Regulatory approvals pending. Not under construction	680.0
2019	10	56534	Cricket Valley Energy Center LLC	IPP	Cricket Valley Energy	NY	57185	U001	345.0	Natural Gas Fired Combined Cycle	NG	CC	(P) Planned for installation, but regulatory approvals not initiated	390.0
2019	10	56534	Cricket Valley Energy Center LLC	IPP	Cricket Valley Energy	NY	57185	U002	345.0	Natural Gas Fired Combined Cycle	NG	CC	(P) Planned for installation, but regulatory approvals not initiated	390.0
2019	10	56534	Cricket Valley Energy Center LLC	IPP	Cricket Valley Energy	NY	57185	U003	345.0	Natural Gas Fired Combined Cycle	NG	CC	(P) Planned for installation, but regulatory approvals not initiated	390.0
2019	10	30446	Duke Energy Progress - (NC)	Electric Utility	Asheville	NC	2706	CT5	191.2	Natural Gas Fired Combined Cycle	NG	CT	(P) Planned for installation, but regulatory approvals not initiated	191.2
2019	11	30446												

Table 6.5. Planned U.S. Electric Generating Unit Additions

Year	Month	Entity ID	Entity Name	Plant Producer Type	Plant Name	Plant State	Plant ID	Generator ID	Net Summer Capacity (MW)	Technology	Energy Source Code	Prime Mover Code	Status	Nameplate Capacity (MW)
2020	6	59845	Blythe Solar IV, LLC	IPP	Blythe Solar IV, LLC	CA	60095	BLCK1	31.2	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	31.2
2020	6	49846	Covanta Honolulu Resource Recovery	Commercial	H Power	HI	10334	PV1	2.1	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	2.1
2020	6	59964	ESC Brooke County Power I	IPP	ESC Brooke County Power I	WV	60202	BCCA1	261.2	Natural Gas Fired Combined Cycle	NG	CA	(P) Planned for installation, but regulatory approvals not initiated	280.5
2020	6	59964	ESC Brooke County Power I	IPP	ESC Brooke County Power I	WV	60202	BCCT1	252.3	Natural Gas Fired Combined Cycle	NG	CT	(P) Planned for installation, but regulatory approvals not initiated	280.5
2020	6	59964	ESC Brooke County Power I	IPP	ESC Brooke County Power I	WV	60202	BCCT2	252.3	Natural Gas Fired Combined Cycle	NG	CT	(P) Planned for installation, but regulatory approvals not initiated	280.5
2020	6	59966	ESC Harrison County Power	IPP	ESC Harrison County Power	WV	60206	HCCA1	205.4	Natural Gas Fired Combined Cycle	NG	CA	(P) Planned for installation, but regulatory approvals not initiated	207.4
2020	6	59966	ESC Harrison County Power	IPP	ESC Harrison County Power	WV	60206	H CCT1	319.1	Natural Gas Fired Combined Cycle	NG	CT	(P) Planned for installation, but regulatory approvals not initiated	371.5
2020	6	59965	ESC Tioga County Power	IPP	ESC Tioga County Power	PA	60205	TCCA1	302.0	Natural Gas Fired Combined Cycle	NG	CA	(P) Planned for installation, but regulatory approvals not initiated	331.5
2020	6	59965	ESC Tioga County Power	IPP	ESC Tioga County Power	PA	60205	T CCT1	253.1	Natural Gas Fired Combined Cycle	NG	CT	(P) Planned for installation, but regulatory approvals not initiated	280.5
2020	6	59965	ESC Tioga County Power	IPP	ESC Tioga County Power	PA	60205	T CCT2	253.1	Natural Gas Fired Combined Cycle	NG	CT	(P) Planned for installation, but regulatory approvals not initiated	280.5
2020	6	7140	Georgia Power Co	Electric Utility	Vogtle	GA	649	4	1,100.0	Nuclear	NUC	ST	(U) Under construction, less than or equal to 50 percent complete	1,100.0
2020	6	56167	Imperial Valley Solar, LLC	IPP	Imperial Valley Solar, LLC	CA	56917	2	400.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	400.0
2020	6	59588	Lake Creek 3 Power Company LLC	IPP	Lake Creek	TX	3502	CT1	207.0	Natural Gas Fired Combustion Turbine	NG	GT	(U) Under construction, less than or equal to 50 percent complete	235.5
2020	6	55983	Luminant Generation Company LLC	IPP	DeCordova Steam Electric Station	TX	8063	CT5	207.0	Natural Gas Fired Combustion Turbine	NG	GT	(U) Under construction, less than or equal to 50 percent complete	235.5
2020	6	55983	Luminant Generation Company LLC	IPP	DeCordova Steam Electric Station	TX	8063	CT6	207.0	Natural Gas Fired Combustion Turbine	NG	GT	(U) Under construction, less than or equal to 50 percent complete	235.5
2020	6	17539	South Carolina Electric&Gas Company	Electric Utility	V C Summer	SC	6127	3	1,100.0	Nuclear	NUC	ST	(U) Under construction, less than or equal to 50 percent complete	1,100.0
2020	6	56883	Tradinghouse Power Company LLC	IPP	Tradinghouse	TX	3506	CT1	207.0	Natural Gas Fired Combustion Turbine	NG	GT	(U) Under construction, less than or equal to 50 percent complete	235.5
2020	6	56883	Tradinghouse Power Company LLC	IPP	Tradinghouse	TX	3506	CT2	207.0	Natural Gas Fired Combustion Turbine	NG	GT	(U) Under construction, less than or equal to 50 percent complete	235.5
2020	7	58758	CPV Smyth Generation Company LLC	IPP	CPV Smyth Generation Company LLC	VA	58878	1	989.0	Natural Gas Fired Combined Cycle	NG	CC	(P) Planned for installation, but regulatory approvals not initiated	1,017.0
2020	8	59844	Blythe Solar III, LLC	IPP	Blythe Solar III, LLC	CA	60094	BLCK2	31.2	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	31.2
2020	8	59845	Blythe Solar IV, LLC	IPP	Blythe Solar IV, LLC	CA	60095	BLCK2	31.2	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	31.2
2020	9	7277	Calpine Corporation	IPP	Buckeye Geothermal Power Plant	CA	57180	1	49.9	Geothermal	GEO	ST	(L) Regulatory approvals pending. Not under construction	56.9
2020	10	59844	Blythe Solar III, LLC	IPP	Blythe Solar III, LLC	CA	60094	BLCK3	31.2	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	31.2
2020	10	59845	Blythe Solar IV, LLC	IPP	Blythe Solar IV, LLC	CA	60095	BLCK3	31.2	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	31.2
2020	10	5580	East Kentucky Power Coop, Inc	Electric Utility	Green Valley LFGTE	KY	56278	4	0.8	Landfill Gas	LFG	IC	(P) Planned for installation, but regulatory approvals not initiated	0.8
2020	12	59844	Blythe Solar III, LLC	IPP	Blythe Solar III, LLC	CA	60094	BLCK4	31.2	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	31.2
2020	12	59845	Blythe Solar IV, LLC	IPP	Blythe Solar IV, LLC	CA	60095	BLCK4	31.2	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	31.2
2020	12	7277	Calpine Corporation	IPP	Telephone Flat	CA	55846	1	42.0	Geothermal	GEO	ST	(P) Planned for installation, but regulatory approvals not initiated	49.9
2020	12	59365	Capital Power Corporation	IPP	Nolin Hills Wind, LLC	OR	60070	GEN	350.0	Onshore Wind Turbine	WND	WT	(P) Planned for installation, but regulatory approvals not initiated	350.0
2020	12	11208	Los Angeles Department of Water & Power	Electric Utility	Scattergood	CA	404	8	209.5	Natural Gas Fired Combined Cycle	NG	CC	(P) Planned for installation, but regulatory approvals not initiated	209.5
2020	12	11208	Los Angeles Department of Water & Power	Electric Utility	Scattergood	CA	404	9	209.5	Natural Gas Fired Combined Cycle	NG	CC	(P) Planned for installation, but regulatory approvals not initiated	108.8
2020	12	58842	Power Company of Wyoming LLC	IPP	Chokecherry and Sierra Madre Wind	WY	58987	I-B	813.0	Onshore Wind Turbine	WND	WT	(L) Regulatory approvals pending. Not under construction	813.0
2020	12	19316	Two Elk Generation Partners LP	IPP	Two Elk Generating Station	WY	55360	GEN1	275.0	Conventional Steam Coal	W/C	ST	(U) Under construction, less than or equal to 50 percent complete	320.0
2021	1	56794	CE Obsidian Energy LLC	IPP	Black Rock III	CA	57479	G303	60.0	Geothermal	GEO	ST	(T) Regulatory approvals received. Not under construction	70.0
2021	1	19876	Virginia Electric & Power Co	Electric Utility	VA Offshore Wind Project (VOWTAP)	VA	59693	OSW1	12.0	Offshore Wind Turbine	WND	WS	(L) Regulatory approvals pending. Not under construction	12.0
2021	4	55927	Power4Georgians LLC	Electric Utility	Plant Washington	GA	56675	MAIN	850.0	Conventional Steam Coal	SUB	ST	(T) Regulatory approvals received. Not under construction	850.0
2021	5	16572	Salt River Project	Electric Utility	Copper Crossing Gen Station	AZ	58413	CCGS1	97.0	Natural Gas Fired Combustion Turbine	NG	GT	(P) Planned for installation, but regulatory approvals not initiated	116.0
2021	5	16572	Salt River Project	Electric Utility	Copper Crossing Gen Station	AZ	58413	CCGS3	210.0	Natural Gas Fired Combustion Turbine	NG	GT	(P) Planned for installation, but regulatory approvals not initiated	228.0
2022	5	16572	Salt River Project	Electric Utility	Copper Crossing Gen Station	AZ	58413	CCGS2	97.0	Natural Gas Fired Combustion Turbine	NG	GT	(P) Planned for installation, but regulatory approvals not initiated	116.0
2022	5	16572	Salt River Project	Electric Utility	Copper Crossing Gen Station	AZ	58413	CCGS4	210.0	Natural Gas Fired Combustion Turbine	NG	GT	(P) Planned for installation, but regulatory approvals not initiated	228.0
2022	6	55983	Luminant Generation Company LLC	IPP	Eagle Mountain	TX	3489	CT1	224.9	Natural Gas Fired Combined Cycle	NG	CT	(L) Regulatory approvals pending. Not under construction	235.5
2022	6	55983	Luminant Generation Company LLC	IPP	Eagle Mountain	TX	3489	CT2	224.9	Natural Gas Fired Combined Cycle	NG	CT	(L) Regulatory approvals pending. Not under construction	235.5
2022	6	55983	Luminant Generation Company LLC	IPP	Eagle Mountain	TX	3489	ST1	344.4	Natural Gas Fired Combined Cycle	NG	CA	(L) Regulatory approvals pending. Not under construction	382.5
2022	12	56943	Blackstone Wind Farm III LLC	IPP	Blackstone Wind Farm III	IL	57618	GEN1	200.0	Onshore Wind Turbine	WND	WT	(P) Planned for installation, but regulatory approvals not initiated	200.0
2022	12	56944	Blackstone Wind Farm IV LLC	IPP	Blackstone Wind Farm IV	IL	57619	GEN1	100.0	Onshore Wind Turbine	WND	WT	(P) Planned for installation, but regulatory approvals not initiated	100.0
2022	12	7277	Calpine Corporation	IPP	Four Mile Hill	CA	55845	1	42.0	Geothermal	GEO	ST	(P) Planned for installation, but regulatory approvals not initiated	49.9
2022	12	58842	Power Company of Wyoming LLC	IPP	Chokecherry and Sierra Madre Wind	WY	58987	II-A	750.0	Onshore Wind Turbine	WND	WT	(L) Regulatory approvals pending. Not under construction	750.0
2022	12	56425	Simpson Ridge Wind Farm LLC	IPP	Simpson Ridge Wind Farm LLC	WY	57117	GEN 1	50.0	Onshore Wind Turbine	WND	WT	(P) Planned for installation, but regulatory approvals not initiated	50.0
2023	5	16572	Salt River Project	Electric Utility	Copper Crossing Gen Station	AZ	58413	CCGS5	210.0	Natural Gas Fired Combustion Turbine	NG	GT	(P) Planned for installation, but regulatory approvals not initiated	228.0
2023	5	18454	Tampa Electric Co	Electric Utility	Tampa Electric Co NA 2	FL	56352	2	204.0	Natural Gas Fired Combustion Turbine	NG	GT	(P) Planned for installation, but regulatory approvals not initiated	220.0
2023	12	57470	Noble Energy Systems, Inc.	IPP	Pea Patch Wind Farm	MD	58087	PEAP	50.0	Onshore Wind Turbine	WND	WT	(T) Regulatory approvals received. Not under construction	50.0
2023	12	58842	Power Company of Wyoming LLC	IPP	Chokecherry and Sierra Madre Wind	WY	58987	II-B	750.0	Onshore Wind Turbine	WND	WT	(L) Regulatory approvals pending. Not under construction	750.0

NOTES:

Capacity from facilities with a total generator nameplate capacity less than 1 MW are excluded from this table.

Entity ID and Plant ID are official, unique identification numbers assigned by EIA. Generator IDs are assigned by plant owners and/or operators.

Table 6.6. Planned U.S. Electric Generating Unit Retirements

Year	Month	Entity ID	Entity Name	Plant Producer Type	Plant Name	Plant State	Plant ID	Generator ID	Net Summer Capacity (MW)	Technology	Energy Source Code	Prime Mover Code
2016	12	733	Appalachian Power Co	Electric Utility	Kanawha River	WV	3936	1	200.0	Conventional Steam Coal	BIT	ST
2016	12	733	Appalachian Power Co	Electric Utility	Kanawha River	WV	3936	2	200.0	Conventional Steam Coal	BIT	ST
2016	12	56730	Cedar Bay Operating Services LLC	Electric CHP	Cedar Bay Generating Company LP	FL	10672	GEN1	250.0	Conventional Steam Coal	BIT	ST
2016	12	11713	City of Marshall - (MI)	Electric Utility	Marshall (MI)	MI	1844	IC2	0.9	Natural Gas Internal Combustion Engine	NG	IC
2016	12	11713	City of Marshall - (MI)	Electric Utility	Marshall (MI)	MI	1844	IC4	0.7	Petroleum Liquids	DFO	IC
2016	12	14534	City of Pasadena - (CA)	Electric Utility	Broadway (CA)	CA	420	B3	71.0	Natural Gas Steam Turbine	NG	ST
2016	12	6455	Duke Energy Florida, Inc	Electric Utility	Suwannee River	FL	638	1	28.0	Natural Gas Steam Turbine	NG	ST
2016	12	6455	Duke Energy Florida, Inc	Electric Utility	Suwannee River	FL	638	2	29.0	Natural Gas Steam Turbine	NG	ST
2016	12	6455	Duke Energy Florida, Inc	Electric Utility	Suwannee River	FL	638	3	71.0	Natural Gas Steam Turbine	NG	ST
2016	12	7160	Geysers Power Co LLC	IPP	West Ford Flat Power Plant	CA	10199	WFF1	15.0	Geothermal	GEO	ST
2016	12	7160	Geysers Power Co LLC	IPP	West Ford Flat Power Plant	CA	10199	WFF2	15.0	Geothermal	GEO	ST
2016	12	13960	NRG Cabrillo Power Ops Inc	IPP	EI Cajon	CA	301	ENCI	16.0	Natural Gas Fired Combustion Turbine	NG	GT
2016	12	13960	NRG Cabrillo Power Ops Inc	IPP	Encina	CA	302	ST1	106.0	Natural Gas Steam Turbine	NG	ST
2016	12	13960	NRG Cabrillo Power Ops Inc	IPP	Miramar	CA	305	MRGT	36.0	Natural Gas Fired Combustion Turbine	NG	GT
2016	12	14063	Oklahoma Gas & Electric Co	Electric Utility	Horseshoe Lake	OK	2951	GT7	7.3	Natural Gas Fired Combustion Turbine	NG	GT
2016	12	17578	South Orange Co Wastewtr Auth	Commercial	Alico Water Management Agency	CA	10820	GEN1	0.4	Other Waste Biomass	OBG	IC
2016	12	17578	South Orange Co Wastewtr Auth	Commercial	Alico Water Management Agency	CA	10820	GEN2	0.4	Other Waste Biomass	OBG	IC
2017	1	5943	Entergy Nu Fitzpatrick LLC	IPP	James A Fitzpatrick	NY	6110	1	836.8	Nuclear	NUC	ST
2017	2	55932	Georgia-Pacific Brewton LLC	Industrial	Georgia-Pacific Brewton Mill	AL	54789	1TG	10.5	Wood/Wood Waste Biomass	BLQ	ST
2017	2	25835	Portland City of	IPP	Ground Water Pumping Station	OR	50105	GPS1	0.9	Conventional Hydroelectric	WAT	HY
2017	2	25835	Portland City of	IPP	Ground Water Pumping Station	OR	50105	GPS2	0.9	Conventional Hydroelectric	WAT	HY
2017	2	25835	Portland City of	IPP	Ground Water Pumping Station	OR	50105	GPS3	0.9	Conventional Hydroelectric	WAT	HY
2017	2	25835	Portland City of	IPP	Ground Water Pumping Station	OR	50105	GPS4	0.9	Conventional Hydroelectric	WAT	HY
2017	2	25835	Portland City of	IPP	Ground Water Pumping Station	OR	50105	GPS5	0.9	Conventional Hydroelectric	WAT	HY
2017	2	25835	Portland City of	IPP	Ground Water Pumping Station	OR	50105	GPS6	0.9	Conventional Hydroelectric	WAT	HY
2017	2	57440	SABIC IP Mt. Vernon, LLC	Industrial	SABIC Innovative Plastics Mt. Vernon	IN	58063	1	3.0	Conventional Steam Coal	BIT	ST
2017	3	54843	WM Illinois Renewable Energy LLC	IPP	Lake Gas Recovery	IL	50575	GEN2	2.9	Landfill Gas	LFG	GT
2017	3	54843	WM Illinois Renewable Energy LLC	IPP	Lake Gas Recovery	IL	50575	GEN3	2.9	Landfill Gas	LFG	GT
2017	3	54842	WM Renewable Energy LLC	IPP	BJ Gas Recovery	GA	54392	GEN1	0.8	Landfill Gas	LFG	IC
2017	3	54842	WM Renewable Energy LLC	IPP	BJ Gas Recovery	GA	54392	GEN3	0.8	Landfill Gas	LFG	IC
2017	3	54842	WM Renewable Energy LLC	IPP	Monroe Livingston Gas Recovery	NY	50565	GEN2	0.8	Landfill Gas	LFG	IC
2017	4	18445	City of Tallahassee - (FL)	Electric Utility	Arvah B Hopkins	FL	688	GT1	12.0	Natural Gas Fired Combustion Turbine	NG	GT
2017	4	18642	Tennessee Valley Authority	Electric Utility	Paradise	KY	1378	1	628.0	Conventional Steam Coal	BIT	ST
2017	4	18642	Tennessee Valley Authority	Electric Utility	Paradise	KY	1378	2	602.0	Conventional Steam Coal	BIT	ST
2017	4	19876	Virginia Electric & Power Co	Electric Utility	Yorktown	VA	3809	1	159.0	Conventional Steam Coal	BIT	ST
2017	4	19876	Virginia Electric & Power Co	Electric Utility	Yorktown	VA	3809	2	164.0	Conventional Steam Coal	BIT	ST
2017	5	5701	El Paso Electric Co	Electric Utility	Rio Grande	NM	2444	6	45.0	Natural Gas Steam Turbine	NG	ST
2017	5	7570	Great River Energy	Electric Utility	Stanton	ND	2824	1	188.1	Conventional Steam Coal	SUB	ST
2017	5	7570	Great River Energy	Electric Utility	Stanton	ND	2824	2	1.0	Petroleum Liquids	DFO	IC
2017	5	15452	PSEG Power Connectic LLC	IPP	Bridgeport Station	CT	568	4	16.9	Petroleum Liquids	KER	GT
2017	5	55768	RC Cape May Holdings LLC	IPP	B L England	NJ	2378	3	148.0	Petroleum Liquids	RFO	ST
2017	6	58534	Brayton Point Energy LLC	IPP	Brayton Point	MA	1619	1	225.2	Conventional Steam Coal	BIT	ST
2017	6	58534	Brayton Point Energy LLC	IPP	Brayton Point	MA	1619	2	237.8	Conventional Steam Coal	BIT	ST
2017	6	58534	Brayton Point Energy LLC	IPP	Brayton Point	MA	1619	3	57.5	Conventional Steam Coal	BIT	ST
2017	6	58534	Brayton Point Energy LLC	IPP	Brayton Point	MA	1619	4	435.0	Petroleum Liquids	RFO	ST
2017	6	9417	Interstate Power and Light Co	Electric Utility	Dubuque	IA	1046	3	31.1	Natural Gas Steam Turbine	NG	ST
2017	6	9417	Interstate Power and Light Co	Electric Utility	Dubuque	IA	1046	4	37.5	Natural Gas Steam Turbine	NG	ST
2017	6	9417	Interstate Power and Light Co	Electric Utility	Dubuque	IA	1046	IC1	2.0	Petroleum Liquids	DFO	IC
2017	6	9417	Interstate Power and Light Co	Electric Utility	Dubuque	IA	1046	IC2	1.4	Petroleum Liquids	DFO	IC
2017	6	54899	NAES Corporation - (DE)	IPP	McKee Run	DE	599	1	17.5	Natural Gas Steam Turbine	NG	ST
2017	6	54899	NAES Corporation - (DE)	IPP	McKee Run	DE	599	2	17.4	Natural Gas Steam Turbine	NG	ST
2017	6	54842	WM Renewable Energy LLC	IPP	New Milford Gas Recovery	CT	50564	GEN4	0.8	Landfill Gas	LFG	IC
2017	8	14624	PUD No 2 of Grant County	Electric Utility	Wanapum	WA	3888	4	103.8	Conventional Hydroelectric	WAT	HY
2017	10	18445	City of Tallahassee - (FL)	Electric Utility	S O Purdon	FL	689	GT1	10.0	Natural Gas Fired Combustion Turbine	NG	GT
2017	10	18445	City of Tallahassee - (FL)	Electric Utility	S O Purdon	FL	689	GT2	10.0	Natural Gas Fired Combustion Turbine	NG	GT
2017	10	5677	Waste Energy Services Inc	Electric CHP	Waste Energy Services	MI	50077	CAT1	0.5	Landfill Gas	LFG	IC
2017	10	5677	Waste Energy Services Inc	Electric CHP	Waste Energy Services	MI	50077	CAT2	0.3	Landfill Gas	LFG	IC
2017	10	5677	Waste Energy Services Inc	Electric CHP	Waste Energy Services	MI	50077	CAT3	0.3	Landfill Gas	LFG	IC
2017	10	5677	Waste Energy Services Inc	Electric CHP	Waste Energy Services	MI	50077	CAT4	0.3	Landfill Gas	LFG	IC
2017	12	463	Ameresco LFG I Inc	IPP	AI Turi	NY	10549	3010	0.8	Landfill Gas	LFG	IC
2017	12	3989	City of Colorado Springs - (CO)	Electric Utility	Martin Drake	CO	492	5	46.0	Conventional Steam Coal	SUB	ST
2017	12	5701	El Paso Electric Co	Electric Utility	Newman	TX	3456	4	83.0	Natural Gas Fired Combined Cycle	NG	CA
2017	12	5701	El Paso Electric Co	Electric Utility	Newman	TX	3456	CT1	72.0	Natural Gas Fired Combined Cycle	NG	CT
2017	12	5701	El Paso Electric Co	Electric Utility	Newman	TX	3456	CT2	72.0	Natural Gas Fired Combined Cycle	NG	CT
2017	12	5701	El Paso Electric Co	Electric Utility	Rio Grande	NM	2444	7	46.0	Natural Gas Steam Turbine	NG	ST
2017	12	7160	Geysers Power Co LLC	IPP	Geysers Unit 5-20	CA	286	U10	30.0	Geothermal	GEO	ST
2017	12	7160	Geysers Power Co LLC	IPP	Geysers Unit 5-20	CA	286	U9	30.0	Geothermal	GEO	ST
2017	12	9417	Interstate Power and Light Co	Electric Utility	Burlington (IA)	IA	1104	GT1	15.2	Natural Gas Fired Combustion Turbine	NG	GT
2017	12	9417	Interstate Power and Light Co	Electric Utility	Burl							

Table 6.6. Planned U.S. Electric Generating Unit Retirements

Year	Month	Entity ID	Entity Name	Plant Producer Type	Plant Name	Plant State	Plant ID	Generator ID	Net Summer Capacity (MW)	Technology	Energy Source Code	Prime Mover Code
2017	12	56661	Sustainable Power Group, LLC	IPP	Santa Clara (85C)	CA	50534	WGNS	18.0	Onshore Wind Turbine	WND	WT
2017	12	18642	Tennessee Valley Authority	Electric Utility	Johnsonville	TN	3406	1	107.0	Conventional Steam Coal	SUB	ST
2017	12	18642	Tennessee Valley Authority	Electric Utility	Johnsonville	TN	3406	2	107.0	Conventional Steam Coal	SUB	ST
2017	12	18642	Tennessee Valley Authority	Electric Utility	Johnsonville	TN	3406	3	107.0	Conventional Steam Coal	SUB	ST
2017	12	18642	Tennessee Valley Authority	Electric Utility	Johnsonville	TN	3406	4	107.0	Conventional Steam Coal	SUB	ST
2018	1	12541	City of Milford - (IA)	Electric Utility	Milford	IA	1164	1	0.6	Petroleum Liquids	DFO	IC
2018	1	12541	City of Milford - (IA)	Electric Utility	Milford	IA	1164	4	0.5	Petroleum Liquids	DFO	IC
2018	1	17891	City of St Marys - (OH)	Electric Utility	St Marys	OH	2942	7	12.0	Petroleum Liquids	DFO	GT
2018	4	18445	City of Tallahassee - (FL)	Electric Utility	Arvah B Hopkins	FL	688	GT2	24.0	Natural Gas Fired Combustion Turbine	NG	GT
2018	4	6455	Duke Energy Florida, Inc	Electric Utility	Crystal River	FL	628	1	370.0	Conventional Steam Coal	BIT	ST
2018	4	6455	Duke Energy Florida, Inc	Electric Utility	Crystal River	FL	628	2	499.0	Conventional Steam Coal	BIT	ST
2018	5	15147	PSEG Fossil LLC	IPP	PSEG Sewaren Generating Station	NJ	2411	1	102.8	Natural Gas Steam Turbine	NG	ST
2018	5	15147	PSEG Fossil LLC	IPP	PSEG Sewaren Generating Station	NJ	2411	2	118.0	Natural Gas Steam Turbine	NG	ST
2018	5	15147	PSEG Fossil LLC	IPP	PSEG Sewaren Generating Station	NJ	2411	3	106.2	Natural Gas Steam Turbine	NG	ST
2018	5	15147	PSEG Fossil LLC	IPP	PSEG Sewaren Generating Station	NJ	2411	4	123.6	Natural Gas Steam Turbine	NG	ST
2018	6	55951	Exelon Nuclear	IPP	Quad Cities Generating Station	IL	880	1	908.0	Nuclear	NUC	ST
2018	6	55951	Exelon Nuclear	IPP	Quad Cities Generating Station	IL	880	2	911.0	Nuclear	NUC	ST
2018	6	9397	International Turbine Res Inc	IPP	Dinosaur Point	CA	10005	WTGS	17.0	Onshore Wind Turbine	WND	WT
2018	7	7308	Hawkeye Energy Greenport LLC	IPP	Hawkeye Energy Greenport LLC	NY	55969	U-01	52.7	Petroleum Liquids	KER	GT
2018	7	15466	Public Service Co of Colorado	Electric Utility	Salida	CO	474	1	0.8	Conventional Hydroelectric	WAT	HY
2018	8	14624	PUD No 2 of Grant County	Electric Utility	Wanapum	WA	3888	8	103.8	Conventional Hydroelectric	WAT	HY
2018	9	17166	Sierra Pacific Power Co	Electric Utility	Fort Churchill	NV	2330	1	113.0	Natural Gas Steam Turbine	NG	ST
2018	10	56997	Marina Energy LLC	Commercial	Stockton Athletic Center	NJ	57864	2LOT7	0.5	Solar Photovoltaic	SUN	PV
2018	10	56516	Morris Energy Operations Company, LLC	Electric CHP	Bayonne Plant Holding LLC	NJ	50497	GTG1	163.0	Natural Gas Fired Combined Cycle	NG	CT
2018	10	56516	Morris Energy Operations Company, LLC	Electric CHP	Bayonne Plant Holding LLC	NJ	50497	GTG2	—	Natural Gas Fired Combined Cycle	NG	CT
2018	10	56516	Morris Energy Operations Company, LLC	Electric CHP	Bayonne Plant Holding LLC	NJ	50497	GTG3	—	Natural Gas Fired Combined Cycle	NG	CT
2018	10	56516	Morris Energy Operations Company, LLC	Electric CHP	Bayonne Plant Holding LLC	NJ	50497	STG1	—	Natural Gas Fired Combined Cycle	NG	CA
2018	12	16604	City of San Antonio - (TX)	Electric Utility	J T Deely	TX	6181	1	420.0	Conventional Steam Coal	SUB	ST
2018	12	16604	City of San Antonio - (TX)	Electric Utility	J T Deely	TX	6181	2	420.0	Conventional Steam Coal	SUB	ST
2018	12	12384	Midwest Generations EME LLC	IPP	Will County	IL	884	4	510.0	Conventional Steam Coal	SUB	ST
2018	12	13781	Northern States Power Co - Minnesota	Electric Utility	Northern States Flambeau	WI	3984	1	12.0	Natural Gas Fired Combustion Turbine	NG	GT
2018	12	20856	Wisconsin Power & Light Co	Electric Utility	Edgewater	WI	4050	4	302.4	Conventional Steam Coal	SUB	ST
2019	6	29926	Energy Nuclear Generation Co	IPP	Pilgrim Nuclear Power Station	MA	1590	1	682.3	Nuclear	NUC	ST
2019	9	17166	Sierra Pacific Power Co	Electric Utility	Brunswick	NV	6510	1	2.0	Petroleum Liquids	DFO	IC
2019	9	17166	Sierra Pacific Power Co	Electric Utility	Brunswick	NV	6510	2	2.0	Petroleum Liquids	DFO	IC
2019	9	17166	Sierra Pacific Power Co	Electric Utility	Brunswick	NV	6510	3	2.0	Petroleum Liquids	DFO	IC
2019	10	22148	AES Alamitos LLC	IPP	AES Alamitos LLC	CA	315	1	175.0	Natural Gas Steam Turbine	NG	ST
2019	10	22148	AES Alamitos LLC	IPP	AES Alamitos LLC	CA	315	2	175.0	Natural Gas Steam Turbine	NG	ST
2019	10	22148	AES Alamitos LLC	IPP	AES Alamitos LLC	CA	315	5	485.0	Natural Gas Steam Turbine	NG	ST
2019	10	23693	AES Huntington Beach LLC	IPP	AES Huntington Beach LLC	CA	335	1	225.8	Natural Gas Steam Turbine	NG	ST
2019	10	22484	AES Redondo Beach LLC	IPP	AES Redondo Beach LLC	CA	356	7	480.0	Natural Gas Steam Turbine	NG	ST
2019	11	3046	Duke Energy Progress - (NC)	Electric Utility	Asheville	NC	2706	1	189.0	Conventional Steam Coal	BIT	ST
2019	11	3046	Duke Energy Progress - (NC)	Electric Utility	Asheville	NC	2706	2	189.0	Conventional Steam Coal	BIT	ST
2019	12	195	Alabama Power Co	Electric Utility	Barry	AL	3	1	55.0	Natural Gas Steam Turbine	NG	ST
2019	12	195	Alabama Power Co	Electric Utility	Barry	AL	3	2	55.0	Natural Gas Steam Turbine	NG	ST
2019	12	195	Alabama Power Co	Electric Utility	Gadsden	AL	7	1	64.0	Natural Gas Steam Turbine	NG	ST
2019	12	195	Alabama Power Co	Electric Utility	Gadsden	AL	7	2	66.0	Natural Gas Steam Turbine	NG	ST
2019	12	56706	Chevron Technology Ventures	IPP	Questa Solar Facility	NM	57369	QST	1.0	Solar Photovoltaic	SUN	PV
2019	12	54802	Dynegy - Moss Landing LLC	IPP	Dynegy Moss Landing Power Plant	CA	260	6	754.0	Natural Gas Steam Turbine	NG	ST
2019	12	54802	Dynegy - Moss Landing LLC	IPP	Dynegy Moss Landing Power Plant	CA	260	7	755.0	Natural Gas Steam Turbine	NG	ST
2019	12	5701	El Paso Electric Co	Electric Utility	Newman	TX	3456	1	74.0	Natural Gas Steam Turbine	NG	ST
2019	12	5701	El Paso Electric Co	Electric Utility	Newman	TX	3456	3	102.0	Natural Gas Steam Turbine	NG	ST
2019	12	55951	Exelon Nuclear	IPP	Oyster Creek	NJ	2388	1	607.7	Nuclear	NUC	ST
2019	12	56211	KCP&L Greater Missouri Operations Co	Electric Utility	Sibley	MO	2094	1	49.8	Conventional Steam Coal	SUB	ST
2019	12	56211	KCP&L Greater Missouri Operations Co	Electric Utility	Sibley	MO	2094	2	47.1	Conventional Steam Coal	SUB	ST
2019	12	11820	Massachusetts Inst of Tech	Commercial	Mass Inst Tech Cntrl Utilities/Cogen Plt	MA	54907	CTG1	19.0	Natural Gas Fired Combustion Turbine	NG	GT
2019	12	12686	Mississippi Power Co	Electric Utility	Jack Watson	MS	2049	3	107.0	Natural Gas Steam Turbine	NG	ST
2019	12	17718	Southwestern Public Service Co	Electric Utility	Cunningham	NM	2454	1	71.0	Natural Gas Steam Turbine	NG	ST
2019	12	17718	Southwestern Public Service Co	Electric Utility	Plant X	TX	3485	1	38.0	Natural Gas Steam Turbine	NG	ST
2019	12	20856	Wisconsin Power & Light Co	Electric Utility	Rock River	WI	4057	3	24.8	Natural Gas Fired Combustion Turbine	NG	GT
2019	12	20856	Wisconsin Power & Light Co	Electric Utility	Rock River	WI	4057	4	14.4	Natural Gas Fired Combustion Turbine	NG	GT
2019	12	20856	Wisconsin Power & Light Co	Electric Utility	Rock River	WI	4057	5	44.1	Natural Gas Fired Combustion Turbine	NG	GT
2019	12	20856	Wisconsin Power & Light Co	Electric Utility	Rock River	WI	4057	6	44.6	Natural Gas Fired Combustion Turbine	NG	GT
2019	12	20856	Wisconsin Power & Light Co	Electric Utility	Sheepskin	WI	4059	1	28.4	Natural Gas Fired Combustion Turbine	NG	GT
2020	1	21622	The University of Texas at Dallas	Commercial	University of Texas at Dallas	TX	54607	GEN1	3.5	Natural Gas Internal Combustion Engine	NG	IC
2020	1	20847	Wisconsin Electric Power Co	Electric Utility	Presque Isle	MI	1769	5	55.0	Conventional Steam Coal	SUB	ST
2020	1	20847	Wisconsin Electric Power Co	Electric Utility	Presque Isle	MI	1769	6	55.0	Conventional Steam Coal	SUB	ST
2020	1	20847	Wisconsin Electric Power Co	Electric Utility	Presque Isle	MI	1769	7	78.0	Conventional Steam Coal	SUB	ST
2020	1	20847	Wisconsin Electric Power Co	Electric Utility	Pres							

Table 6.6. Planned U.S. Electric Generating Unit Retirements

Year	Month	Entity ID	Entity Name	Plant Producer Type	Plant Name	Plant State	Plant ID	Generator ID	Net Summer Capacity (MW)	Technology	Energy Source Code	Prime Mover Code
2020	12	11208	Los Angeles Department of Water & Power	Electric Utility	Scattergood	CA	404	1	174.0	Natural Gas Steam Turbine	NG	ST
2020	12	11208	Los Angeles Department of Water & Power	Electric Utility	Scattergood	CA	404	2	177.0	Natural Gas Steam Turbine	NG	ST
2020	12	14232	Otter Tail Power Co	Electric Utility	Hoot Lake	MN	1943	D1	0.2	Petroleum Liquids	DFO	IC
2020	12	14232	Otter Tail Power Co	Electric Utility	Hoot Lake	MN	1943	D2	0.1	Petroleum Liquids	DFO	IC
2020	12	17718	Southwestern Public Service Co	Electric Utility	Plant X	TX	3485	2	90.0	Natural Gas Steam Turbine	NG	ST
2020	12	19099	TransAlta Centralia Gen LLC	IPP	Transalta Centralia Generation	WA	3845	1	670.0	Conventional Steam Coal	SUB	ST
2021	1	18445	City of Tallahassee - (FL)	Electric Utility	Arvah B Hopkins	FL	688	1	76.0	Natural Gas Steam Turbine	NG	ST
2021	1	15248	Portland General Electric Co	Electric Utility	Boardman	OR	6106	1	585.0	Conventional Steam Coal	SUB	ST
2021	5	58435	Collinwood BioEnergy	Industrial	Collinwood BioEnergy Facility	OH	58439	CBE01	1.0	Other Waste Biomass	OBG	IC
2021	6	14232	Otter Tail Power Co	Electric Utility	Hoot Lake	MN	1943	2	58.0	Conventional Steam Coal	SUB	ST
2021	6	14232	Otter Tail Power Co	Electric Utility	Hoot Lake	MN	1943	3	80.0	Conventional Steam Coal	SUB	ST
2021	9	17166	Sierra Pacific Power Co	Electric Utility	Fort Churchill	NV	2330	2	113.0	Natural Gas Steam Turbine	NG	ST
2021	10	14127	Omaha Public Power District	Electric Utility	North Omaha	NE	2291	3	86.0	Natural Gas Steam Turbine	NG	ST
2021	12	56211	KCP&L Greater Missouri Operations Co	Electric Utility	Lake Road (MO)	MO	2098	4	96.3	Conventional Steam Coal	SUB	ST
2021	12	10000	Kansas City Power & Light Co	Electric Utility	Monroe	MO	2080	2	164.0	Conventional Steam Coal	SUB	ST
2021	12	10000	Kansas City Power & Light Co	Electric Utility	Monroe	MO	2080	3	176.0	Conventional Steam Coal	SUB	ST
2021	12	17166	Sierra Pacific Power Co	Electric Utility	North Valmy	NV	8224	1	254.0	Conventional Steam Coal	SUB	ST
2022	1	59409	Eco Services Operations LLC	Industrial	Houston Plant	TX	52065	GEN2	1.5	All Other	WH	ST
2022	8	6909	Gainesville Regional Utilities	Electric Utility	Deerhaven Generating Station	FL	663	1	75.0	Natural Gas Steam Turbine	NG	ST
2022	9	177	AES Hawaii Inc	Electric CHP	AES Hawaii	HI	10673	GEN1	180.0	Conventional Steam Coal	BIT	ST
2022	11	13781	Northern States Power Co - Minnesota	Electric Utility	Cornell	WI	6086	1	6.2	Conventional Hydroelectric	WAT	HY
2022	11	13781	Northern States Power Co - Minnesota	Electric Utility	Cornell	WI	6086	2	6.4	Conventional Hydroelectric	WAT	HY
2022	11	13781	Northern States Power Co - Minnesota	Electric Utility	Cornell	WI	6086	3	6.9	Conventional Hydroelectric	WAT	HY
2022	11	13781	Northern States Power Co - Minnesota	Electric Utility	Cornell	WI	6086	4	0.4	Conventional Hydroelectric	WAT	HY
2022	12	13781	Northern States Power Co - Minnesota	Electric Utility	French Island	WI	4005	3	61.0	Petroleum Liquids	DFO	GT
2022	12	13781	Northern States Power Co - Minnesota	Electric Utility	French Island	WI	4005	4	61.0	Petroleum Liquids	DFO	GT
2022	12	13781	Northern States Power Co - Minnesota	Electric Utility	Sherburne County	MN	6090	2	682.0	Conventional Steam Coal	SUB	ST
2022	12	17718	Southwestern Public Service Co	Electric Utility	Nichols	TX	3484	1	107.0	Natural Gas Steam Turbine	NG	ST
2023	1	11135	City of Logan - (UT)	Electric Utility	Hydro III	UT	3675	HY1	0.7	Conventional Hydroelectric	WAT	HY
2023	1	11135	City of Logan - (UT)	Electric Utility	Hydro III	UT	3675	HY2	0.7	Conventional Hydroelectric	WAT	HY
2023	3	57173	AC Landfill Energy LLC	IPP	AC Landfill Energy LLC	NJ	57845	UNIT1	1.5	Landfill Gas	LFG	IC
2023	3	57173	AC Landfill Energy LLC	IPP	AC Landfill Energy LLC	NJ	57845	UNIT2	1.8	Landfill Gas	LFG	IC
2023	3	57173	AC Landfill Energy LLC	IPP	AC Landfill Energy LLC	NJ	57845	UNIT3	1.8	Landfill Gas	LFG	IC
2023	3	13399	Nevada Cogeneration Assoc # 1	Electric CHP	Nevada Cogen Assoc#1 GarnetVly	NV	54350	GTA	21.7	Natural Gas Fired Combined Cycle	NG	CT
2023	3	13399	Nevada Cogeneration Assoc # 1	Electric CHP	Nevada Cogen Assoc#1 GarnetVly	NV	54350	GTB	21.7	Natural Gas Fired Combined Cycle	NG	CT
2023	3	13399	Nevada Cogeneration Assoc # 1	Electric CHP	Nevada Cogen Assoc#1 GarnetVly	NV	54350	GTC	21.7	Natural Gas Fired Combined Cycle	NG	CT
2023	3	13399	Nevada Cogeneration Assoc # 1	Electric CHP	Nevada Cogen Assoc#1 GarnetVly	NV	54350	STM	24.0	Natural Gas Fired Combined Cycle	NG	CA
2023	3	13365	Nevada Cogeneration Assoc # 2	Electric CHP	Nevada Cogen Associates 2 Black Mountain	NV	54349	GTA	21.7	Natural Gas Fired Combined Cycle	NG	CT
2023	3	13365	Nevada Cogeneration Assoc # 2	Electric CHP	Nevada Cogen Associates 2 Black Mountain	NV	54349	GTB	21.7	Natural Gas Fired Combined Cycle	NG	CT
2023	3	13365	Nevada Cogeneration Assoc # 2	Electric CHP	Nevada Cogen Associates 2 Black Mountain	NV	54349	GTC	21.7	Natural Gas Fired Combined Cycle	NG	CT
2023	3	13365	Nevada Cogeneration Assoc # 2	Electric CHP	Nevada Cogen Associates 2 Black Mountain	NV	54349	STM	28.0	Natural Gas Fired Combined Cycle	NG	CA
2023	12	13781	Northern States Power Co - Minnesota	Electric Utility	Blue Lake	MN	8027	1	39.0	Petroleum Liquids	DFO	GT
2023	12	13781	Northern States Power Co - Minnesota	Electric Utility	Blue Lake	MN	8027	2	39.0	Petroleum Liquids	DFO	GT
2023	12	13781	Northern States Power Co - Minnesota	Electric Utility	Blue Lake	MN	8027	3	36.0	Petroleum Liquids	DFO	GT
2023	12	13781	Northern States Power Co - Minnesota	Electric Utility	Blue Lake	MN	8027	4	39.0	Petroleum Liquids	DFO	GT
2023	12	13781	Northern States Power Co - Minnesota	Electric Utility	French Island	WI	4005	1	9.0	Wood/Wood Waste Biomass	WDS	ST
2023	12	13781	Northern States Power Co - Minnesota	Electric Utility	French Island	WI	4005	2	7.0	Wood/Wood Waste Biomass	WDS	ST
2023	12	13781	Northern States Power Co - Minnesota	Electric Utility	Laverne Battery	MN	58579	1	1.0	Batteries	MWH	BA
2023	12	14063	Oklahoma Gas & Electric Co	Electric Utility	Horseshoe Lake	OK	2951	6	167.8	Natural Gas Steam Turbine	NG	ST
2023	12	17718	Southwestern Public Service Co	Electric Utility	Nichols	TX	3484	2	106.0	Natural Gas Steam Turbine	NG	ST
2024	7	1951	White Pine Electric Power LLC	IPP	White Pine Electric Power	MI	10148	GEN1	18.0	Natural Gas Steam Turbine	NG	ST
2024	7	1951	White Pine Electric Power LLC	IPP	White Pine Electric Power	MI	10148	GEN3	18.0	Natural Gas Steam Turbine	NG	ST
2024	12	13781	Northern States Power Co - Minnesota	Electric Utility	Apple River	WI	6231	1	0.4	Conventional Hydroelectric	WAT	HY
2024	12	13781	Northern States Power Co - Minnesota	Electric Utility	Apple River	WI	6231	3	0.5	Conventional Hydroelectric	WAT	HY
2024	12	13781	Northern States Power Co - Minnesota	Electric Utility	Apple River	WI	6231	4	0.5	Conventional Hydroelectric	WAT	HY
2024	12	13781	Northern States Power Co - Minnesota	Electric Utility	Granite City	MN	1910	1	13.0	Natural Gas Fired Combustion Turbine	NG	GT
2024	12	13781	Northern States Power Co - Minnesota	Electric Utility	Granite City	MN	1910	2	13.0	Natural Gas Fired Combustion Turbine	NG	GT
2024	12	13781	Northern States Power Co - Minnesota	Electric Utility	Granite City	MN	1910	3	13.0	Natural Gas Fired Combustion Turbine	NG	GT
2024	12	13781	Northern States Power Co - Minnesota	Electric Utility	Granite City	MN	1910	4	13.0	Natural Gas Fired Combustion Turbine	NG	GT
2024	12	17718	Southwestern Public Service Co	Electric Utility	Plant X	TX	3485	3	93.0	Natural Gas Steam Turbine	NG	ST
2025	8	13781	Northern States Power Co - Minnesota	Electric Utility	White River (WI)	WI	3989	1	0.2	Conventional Hydroelectric	WAT	HY
2025	8	13781	Northern States Power Co - Minnesota	Electric Utility	White River (WI)	WI	3989	2	0.2	Conventional Hydroelectric	WAT	HY
2025	11	13781	Northern States Power Co - Minnesota	Electric Utility	Trego	WI	4012	1	0.4	Conventional Hydroelectric	WAT	HY
2025	11	13781	Northern States Power Co - Minnesota	Electric Utility	Trego	WI	4012	2	0.3	Conventional Hydroelectric	WAT	HY
2025	12	13781	Northern States Power Co - Minnesota	Electric Utility	Angus Anson	SD	7237	1	90.0	Natural Gas Fired Combustion Turbine	NG	GT
2025	12	13781	Northern States Power Co - Minnesota	Electric Utility	Angus Anson	SD	7237	2	90.0	Natural Gas Fired Combustion Turbine	NG	GT
2025	12	13781	Northern States Power Co - Minnesota	Electric Utility	Saxon Falls	WI	1756	1	0.5	Conventional Hydroelectric	WAT	HY
2025	12</											

Table 6.7.A. Capacity Factors for Utility Scale Generators Primarily Using Fossil Fuels, January 2013-November 2016

Period	Coal	Natural Gas				Petroleum		
		Natural Gas Fired Combined Cycle	Natural Gas Fired Combustion Turbine	Steam Turbine	Internal Combustion Engine	Steam Turbine	Petroleum Liquids Fired Combustion Turbine	Internal Combustion Engine
Annual Factors								
2013	59.7%	48.2%	4.9%	10.6%	6.1%	12.1%	0.8%	2.2%
2014	61.0%	48.3%	5.2%	10.4%	8.5%	12.5%	1.1%	1.4%
2015	54.7%	55.9%	6.9%	11.5%	8.9%	13.3%	1.1%	2.2%
Year 2014								
January	71.2%	47.2%	6.6%	10.0%	7.8%	19.5%	3.8%	2.3%
February	71.9%	42.5%	4.7%	9.2%	8.7%	12.0%	0.9%	1.5%
March	61.7%	39.7%	4.7%	7.2%	7.1%	13.7%	1.1%	1.4%
April	51.1%	40.3%	3.8%	7.2%	7.9%	9.4%	0.5%	1.0%
May	54.1%	45.0%	5.0%	9.8%	7.8%	10.2%	0.6%	1.6%
June	64.8%	51.1%	5.4%	11.8%	7.6%	14.8%	0.9%	1.3%
July	67.9%	57.7%	6.2%	15.2%	9.7%	15.0%	1.0%	1.5%
August	67.5%	61.0%	6.6%	16.9%	11.0%	14.4%	1.3%	1.5%
Sept	59.2%	55.4%	5.7%	12.7%	9.5%	13.5%	0.7%	1.4%
October	50.7%	49.0%	5.2%	10.6%	8.8%	8.6%	0.7%	1.3%
November	56.0%	43.7%	4.5%	7.6%	8.3%	7.7%	0.8%	1.2%
December	56.6%	46.2%	4.1%	5.9%	7.2%	10.7%	0.6%	1.1%
Year 2015								
January	61.3%	52.6%	4.4%	7.6%	5.2%	12.4%	0.6%	2.5%
February	64.9%	52.2%	6.2%	9.9%	5.7%	22.8%	1.9%	3.1%
March	50.3%	50.7%	5.2%	8.3%	8.5%	7.9%	0.6%	1.9%
April	43.3%	47.9%	5.7%	9.4%	6.6%	12.0%	0.9%	2.2%
May	49.8%	50.2%	6.7%	9.3%	8.7%	12.6%	1.1%	2.0%
June	62.6%	61.5%	8.3%	13.7%	11.2%	12.0%	1.0%	2.0%
July	66.8%	67.2%	10.7%	19.4%	12.3%	15.5%	1.3%	2.4%
August	64.9%	66.9%	8.9%	19.0%	12.3%	14.8%	1.2%	2.4%
Sept	58.7%	61.4%	8.2%	14.2%	9.8%	15.9%	1.2%	2.1%
October	47.0%	53.6%	6.7%	10.5%	8.1%	14.5%	1.0%	2.1%
November	43.9%	50.9%	7.0%	8.4%	8.6%	10.5%	1.9%	1.8%
December	43.6%	54.6%	5.0%	8.5%	8.5%	9.7%	1.1%	2.0%
Year 2016								
January	55.4%	56.6%	4.5%	6.3%	NA	9.4%	0.5%	NA
February	48.3%	53.9%	4.6%	6.4%	NA	9.9%	0.5%	NA
March	35.6%	50.7%	7.2%	9.9%	NA	8.3%	1.3%	NA
April	37.2%	48.3%	8.6%	12.1%	NA	9.1%	1.0%	NA
May	41.1%	53.2%	7.7%	12.5%	NA	10.6%	1.3%	NA
June	60.7%	64.6%	10.0%	17.3%	NA	12.5%	1.5%	NA
July	69.1%	68.8%	14.3%	22.7%	NA	16.1%	2.5%	NA
August	68.5%	71.3%	14.5%	21.0%	NA	14.3%	3.1%	NA
Sept	59.7%	61.3%	9.4%	14.3%	NA	12.2%	1.4%	NA
October	50.2%	48.1%	7.6%	11.2%	NA	8.2%	1.1%	NA
November	45.5%	46.9%	6.6%	5.9%	NA	9.3%	0.7%	NA

Values for 2015 and prior years are final. Values for 2016 are preliminary. NA = Not Available

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

Table 6.7.B. Capacity Factors for Utility Scale Generators Not Primarily Using Fossil Fuels, January 2013-November 2016

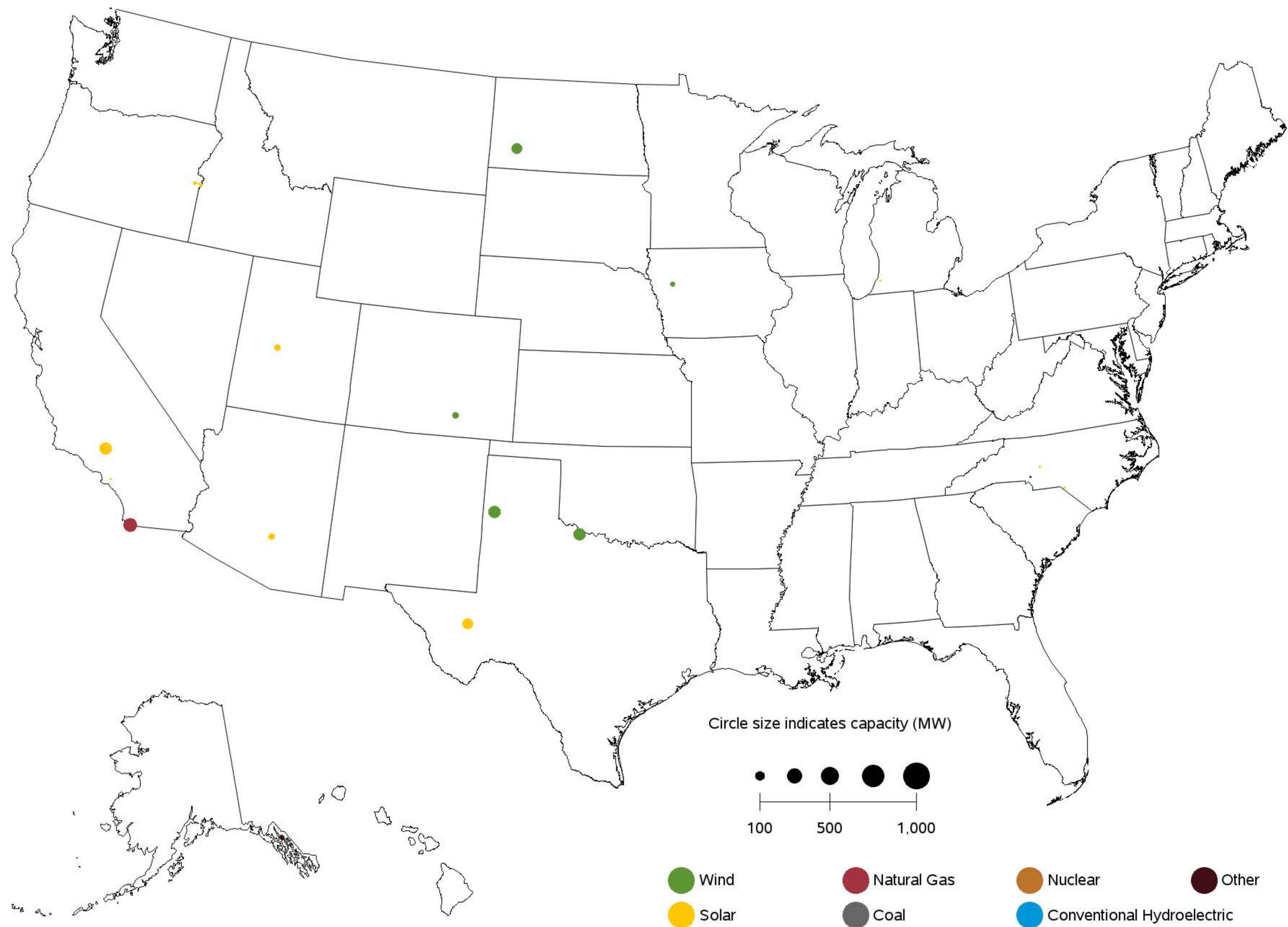
Period	Nuclear	Conventional Hydropower	Wind	Solar Photovoltaic	Solar Thermal	Landfill Gas and Municipal Solid Waste	Other Biomass Including Wood	Geothermal
Annual Factors								
2013	89.9%	38.9%	32.4%	NA	NA	68.9%	56.7%	73.6%
2014	91.7%	37.3%	34.0%	25.9%	19.8%	68.9%	58.9%	74.0%
2015	92.3%	35.8%	32.2%	25.8%	22.1%	68.7%	55.3%	74.3%
Year 2014								
January	99.1%	36.7%	40.3%	NA	NA	68.1%	60.0%	74.0%
February	94.0%	32.6%	34.8%	NA	NA	68.3%	59.5%	73.3%
March	84.5%	40.7%	39.8%	NA	NA	69.6%	59.7%	73.5%
April	78.8%	44.5%	43.2%	NA	NA	69.9%	49.5%	74.6%
May	85.2%	44.6%	34.9%	NA	NA	70.6%	48.2%	73.2%
June	95.4%	44.8%	36.5%	NA	NA	70.8%	63.0%	73.4%
July	97.5%	41.3%	27.0%	NA	NA	73.1%	63.4%	72.5%
August	96.4%	33.7%	22.5%	30.9%	25.4%	71.1%	62.8%	73.0%
Sept	94.6%	28.2%	26.1%	30.7%	26.3%	68.9%	61.2%	74.2%
October	84.5%	29.2%	31.6%	26.5%	21.1%	64.4%	56.5%	73.9%
November	91.3%	32.6%	42.3%	22.3%	13.8%	66.1%	62.1%	77.3%
December	99.6%	37.8%	30.4%	15.1%	5.6%	65.4%	60.8%	75.5%
Year 2015								
January	101.3%	40.7%	31.2%	16.8%	5.0%	65.1%	57.2%	75.9%
February	95.8%	41.4%	34.1%	22.1%	14.5%	64.3%	60.0%	76.4%
March	88.0%	40.8%	31.4%	26.7%	22.6%	63.0%	53.4%	76.8%
April	84.3%	39.4%	37.5%	30.9%	30.5%	66.8%	47.3%	72.4%
May	89.8%	33.9%	34.8%	31.2%	27.0%	68.5%	48.4%	76.6%
June	96.4%	35.8%	27.9%	31.7%	32.2%	69.2%	56.7%	74.1%
July	97.3%	35.8%	27.4%	31.4%	31.1%	73.1%	59.9%	74.7%
August	98.6%	32.5%	25.8%	31.3%	32.3%	71.5%	61.6%	73.9%
Sept	93.6%	28.3%	28.1%	26.6%	27.1%	68.8%	56.1%	67.9%
October	82.5%	28.3%	31.6%	22.8%	16.5%	68.3%	48.8%	72.4%
November	84.8%	33.8%	39.0%	20.7%	16.9%	72.4%	55.8%	75.4%
December	94.9%	39.4%	37.4%	17.5%	9.5%	73.0%	58.3%	75.3%
Year 2016								
January	98.8%	42.4%	34.2%	17.9%	6.8%	70.3%	51.2%	73.6%
February	95.6%	43.2%	39.9%	26.7%	19.5%	66.0%	54.0%	73.5%
March	90.1%	45.2%	40.4%	28.0%	19.6%	63.5%	47.8%	72.8%
April	87.8%	44.2%	39.0%	30.8%	20.9%	68.5%	36.4%	68.9%
May	90.7%	42.6%	34.3%	35.0%	28.9%	75.2%	39.0%	74.1%
June	94.5%	40.2%	30.6%	33.6%	33.5%	73.8%	47.2%	71.6%
July	94.7%	35.9%	32.0%	34.8%	36.9%	72.8%	52.4%	72.7%
August	96.3%	32.7%	24.5%	33.4%	29.2%	73.7%	54.9%	73.5%
Sept	91.0%	28.4%	30.7%	30.1%	30.2%	70.7%	47.4%	76.1%
October	81.9%	29.2%	36.7%	25.3%	19.1%	66.4%	38.0%	75.1%
November	91.1%	33.3%	35.5%	21.3%	14.4%	71.5%	41.6%	78.2%

Values for 2015 and prior years are final. Values for 2016 are preliminary. NA = Not Available

Notes: Solar Thermal Capacity Factors include generation from plants using concentrated solar power energy storage.

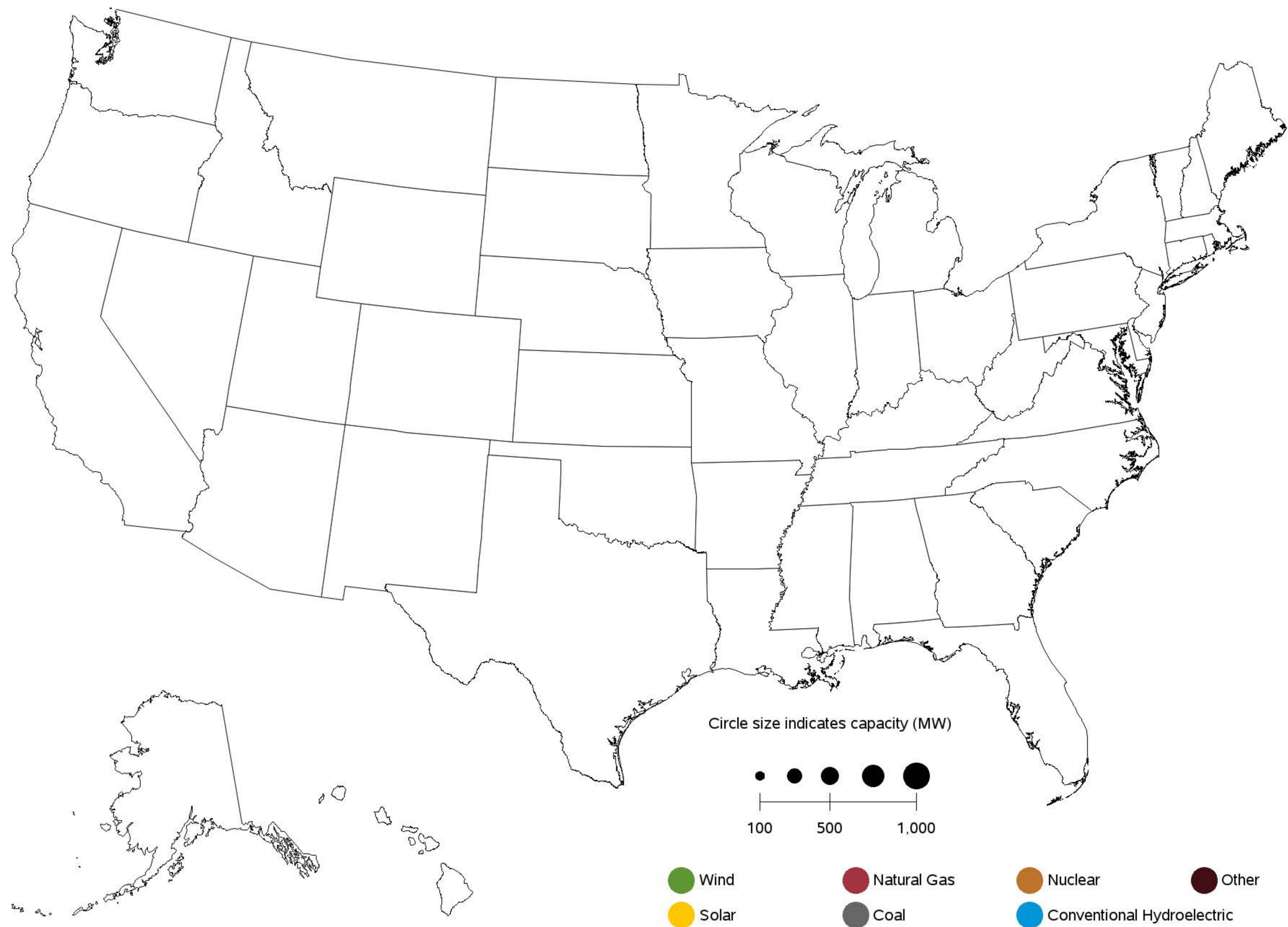
Sources: U.S. Energy Information Administration, Form EIA-923, Power Plant Operations Report; U.S. Energy Information Administration, Form EIA-860, 'Annual Electric Generator Report' and Form EIA-860M, 'Monthly Update to the Annual Electric Generator Report.'

Figure 6.1.A. Utility-Scale Generating Units Added in November 2016



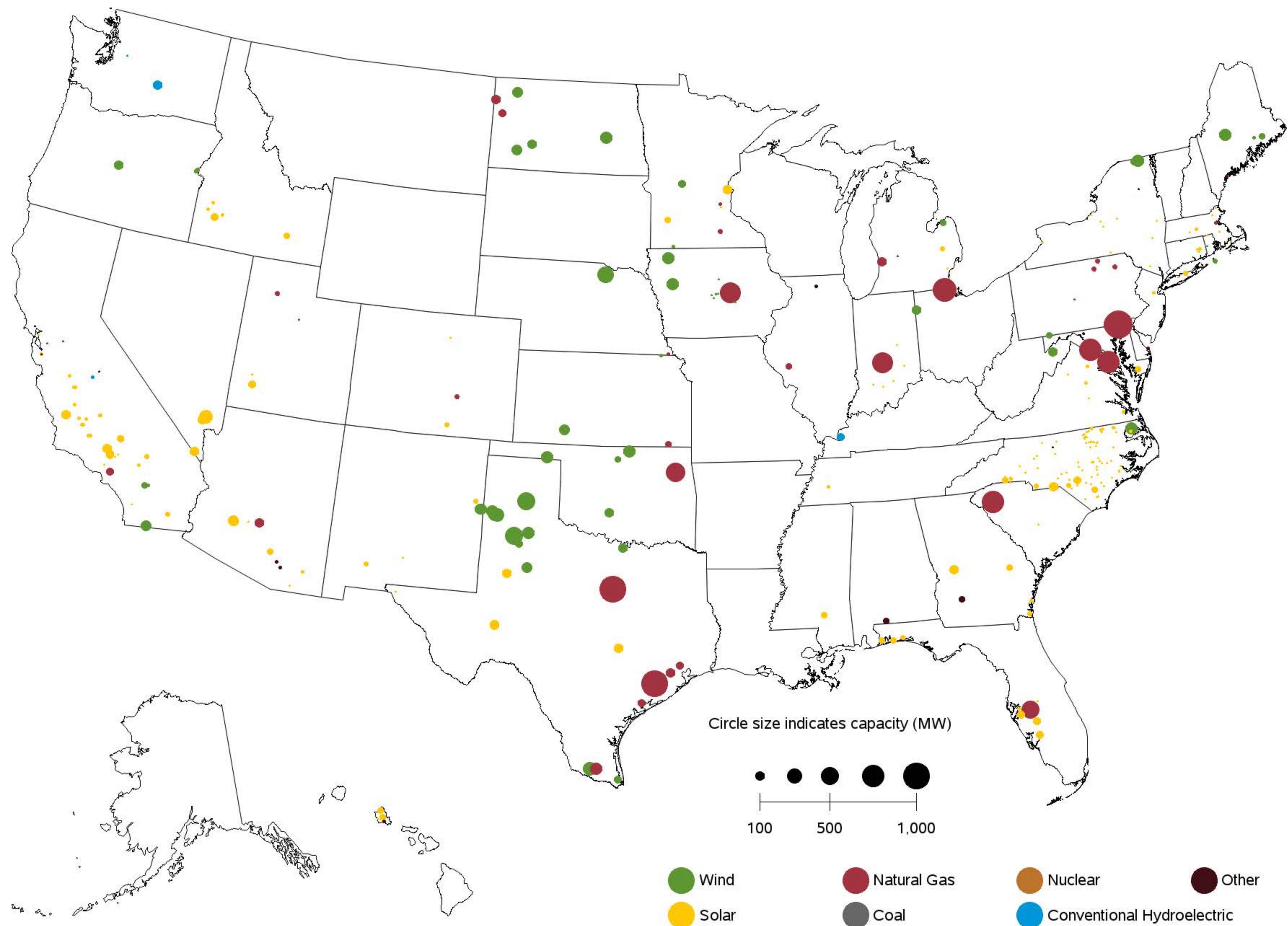
Sources: U.S. Energy Information Administration, Form EIA-860, 'Annual Electric Generator Report' and Form EIA-860M, 'Monthly Update to the Annual Electric Generator Report.'

Figure 6.1.B. Utility-Scale Generating Units Retired in November 2016



Sources: U.S. Energy Information Administration, Form EIA-860, 'Annual Electric Generator Report' and Form EIA-860M, 'Monthly Update to the Annual Electric Generator Report.'

Figure 6.1.C. Utility-Scale Generating Units Planned to Come Online from December 2016 to November 2017



Sources: U.S. Energy Information Administration, Form EIA-860, 'Annual Electric Generator Report' and Form EIA-860M, 'Monthly Update to the Annual Electric Generator Report.'

Figure 6.1.D. Utility-Scale Generating Units Planned to Retire from December 2016 to November 2017

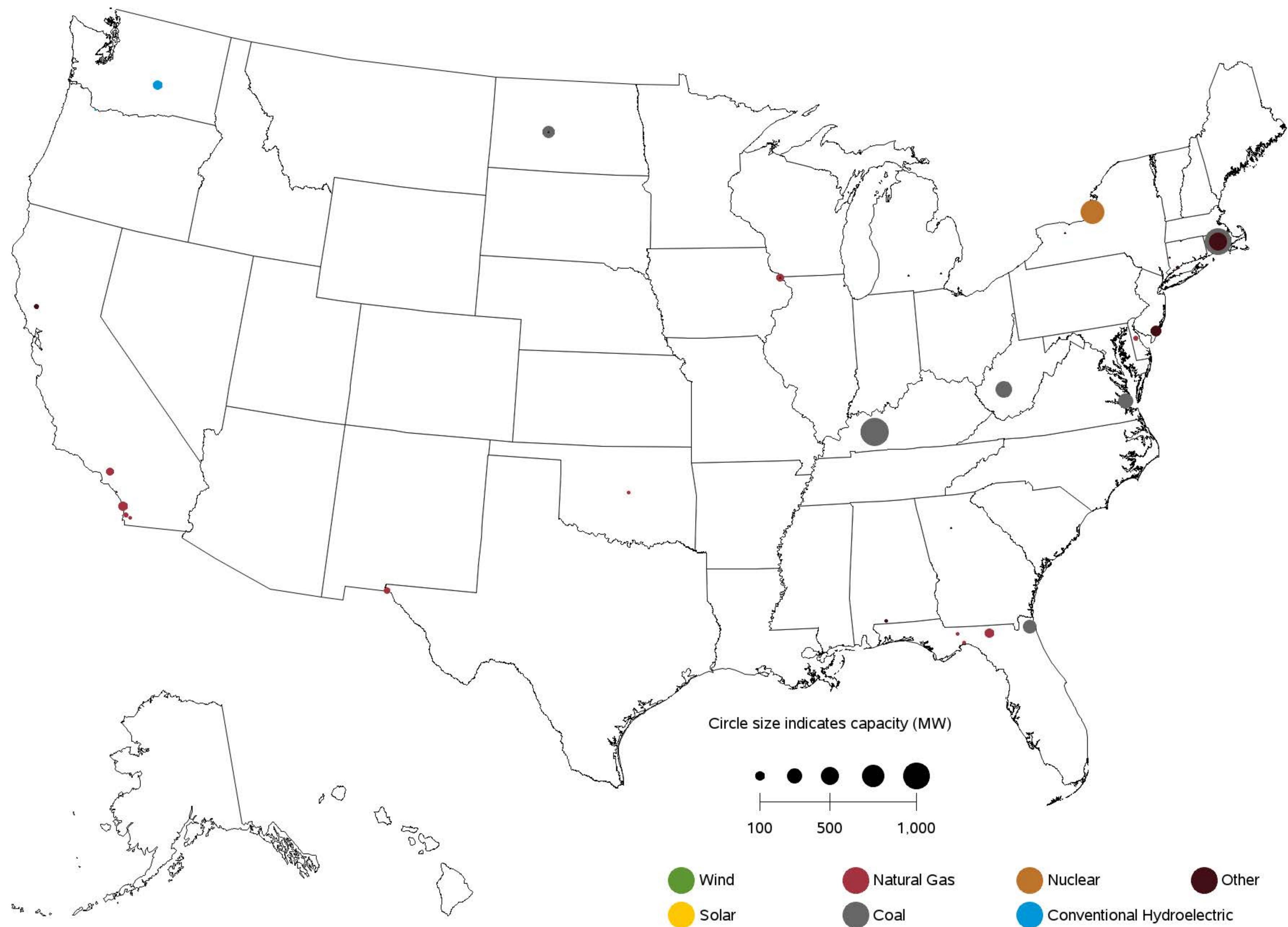


Table A.1.A. Relative Standard Error (Percent) for Net Generation by Fuel Type:

Total (All Sectors) by Census Division and State, November 2016

Census Region and State	Coal	Petroleum Liquids	Petroleum Coke	Natural Gas	Other Gases	Nuclear	Hydroelectric Conventional
New England	4	5	0	2	0	0	14
Connecticut	0	90	0	3	0	0	93
Maine	0	108	0	9	0	0	18
Massachusetts	4	4	0	5	0	0	39
New Hampshire	0	61	0	1	0	0	26
Rhode Island	0	28	0	11	0	0	989
Vermont	0	537	0	258	0	0	45
Middle Atlantic	3	33	69	1	29	0	2
New Jersey	0	206	128	3	75	0	886
New York	0	67	0	3	0	0	2
Pennsylvania	3	25	81	2	28	0	17
East North Central	0	4	8	1	12	0	15
Illinois	0	6	0	3	99	0	93
Indiana	1	6	0	2	18	0	15
Michigan	2	15	22	2	0	0	30
Ohio	1	4	4	1	61	0	26
Wisconsin	0	29	0	21	0	0	24
West North Central	1	14	152	4	100	0	8
Iowa	2	19	152	15	0	0	37
Kansas	0	26	0	14	0	0	354
Minnesota	2	140	0	4	0	0	38
Missouri	1	3	0	12	0	0	13
Nebraska	2	128	0	8	0	0	28
North Dakota	2	12	0	42	100	0	0
South Dakota	0	508	0	14	0	0	0
South Atlantic	0	9	0	0	0	0	9
Delaware	0	367	0	7	0	0	0
District of Columbia	0	3,091	0	156	0	0	0
Florida	0	8	0	1	0	0	92
Georgia	0	53	0	1	0	0	15
Maryland	0	38	0	24	0	0	0
North Carolina	1	33	0	1	0	0	17
South Carolina	0	57	0	1	0	0	27
Virginia	1	36	0	1	0	0	38
West Virginia	0	0	0	3	0	0	30
East South Central	0	6	0	1	72	0	7
Alabama	0	45	0	2	119	0	11
Kentucky	1	3	0	3	0	0	8
Mississippi	0	388	0	1	0	0	0
Tennessee	0	2	0	2	0	0	12
West South Central	0	5	3	1	4	0	12
Arkansas	0	3	0	1	0	0	17
Louisiana	0	3	2	11	7	0	0
Oklahoma	1	12	0	1	0	0	30
Texas	0	14	59	1	5	0	41
Mountain	1	12	0	1	9	0	4
Arizona	0	9	0	0	0	0	2
Colorado	0	87	0	1	0	0	33
Idaho	105	475	0	9	0	0	10
Montana	4	51	0	59	0	0	4
Nevada	0	0	0	1	0	0	2
New Mexico	0	56	0	5	0	0	116
Utah	1	28	0	7	457	0	41
Wyoming	3	2	0	22	7	0	28
Pacific Contiguous	0	37	0	1	6	0	1
California	0	32	0	2	8	0	7
Oregon	0	13,658	0	1	0	0	2
Washington	0	80	0	4	0	0	1
Pacific Noncontiguous	5	6	0	13	130	0	20
Alaska	18	6	0	13	0	0	20
Hawaii	3	6	0	0	130	0	79
U.S. Total	0	4	3	0	6	0	1

Displayed values of zero may represent small values that round to zero. The Excel version of this table provides additional precision which may be accessed by selecting individual cells.

Table A.1.A. Relative Standard Error (Percent) for Net Generation by Fuel Type:

Total (All Sectors) by Census Division and State, November 2016 (Continued)

Census Region and State	Wind	Geothermal	Biomass	Solar Thermal and Photovoltaic	Other Renewables	Hydroelectric Pumped Storage	Other Energy Sources	All Energy Sources
New England	0	0	0	11	3	0	5	1
Connecticut	0	0	0	55	5	0	7	1
Maine	0	0	0	0	1	0	14	5
Massachusetts	0	0	0	11	7	0	7	3
New Hampshire	0	0	0	0	11	0	45	2
Rhode Island	0	0	0	62	17	0	0	2
Vermont	0	0	0	34	13	0	0	22
Middle Atlantic	0	0	0	9	2	0	5	1
New Jersey	0	0	0	10	7	0	8	1
New York	0	0	0	18	2	0	8	1
Pennsylvania	0	0	0	30	2	0	7	1
East North Central	0	0	0	13	1	0	9	0
Illinois	0	0	0	35	1	0	27	0
Indiana	0	0	0	16	1	0	5	1
Michigan	0	0	0	58	3	0	14	1
Ohio	0	0	0	31	4	0	42	1
Wisconsin	0	0	0	201	3	0	41	1
West North Central	0	0	0	40	0	0	13	1
Iowa	0	0	0	0	0	0	187	1
Kansas	0	0	0	204	0	0	0	1
Minnesota	0	0	0	101	2	0	13	1
Missouri	0	0	0	48	3	0	0	1
Nebraska	0	0	0	102	1	0	0	2
North Dakota	0	0	0	0	0	0	54	2
South Dakota	0	0	0	0	1	0	0	1
South Atlantic	0	0	0	3	2	0	4	0
Delaware	0	0	0	35	28	0	0	6
District of Columbia	0	0	0	0	0	0	0	156
Florida	0	0	0	13	4	0	4	1
Georgia	0	0	0	3	2	0	0	0
Maryland	0	0	0	19	3	0	0	1
North Carolina	0	0	0	5	4	0	16	0
South Carolina	0	0	0	121	6	0	22	0
Virginia	0	0	0	6	3	0	6	0
West Virginia	0	0	0	0	0	0	0	0
East South Central	0	0	0	8	2	0	14	0
Alabama	0	0	0	0	3	0	0	1
Kentucky	0	0	0	0	7	0	0	1
Mississippi	0	0	0	0	3	0	179	1
Tennessee	0	0	0	29	6	0	0	1
West South Central	0	0	0	6	0	0	12	0
Arkansas	0	0	0	59	3	0	0	1
Louisiana	0	0	0	0	4	0	15	1
Oklahoma	0	0	0	0	0	0	47	1
Texas	0	0	0	6	0	0	14	0
Mountain	0	5	0	1	1	0	7	1
Arizona	0	0	0	2	2	0	0	0
Colorado	0	0	0	5	0	0	59	1
Idaho	0	48	0	0	4	0	49	6
Montana	0	0	0	0	2	0	0	3
Nevada	0	5	0	2	4	0	0	1
New Mexico	0	122	0	6	2	0	2,158	1
Utah	0	9	0	2	3	0	4	2
Wyoming	0	0	0	0	1	0	0	2
Pacific Contiguous	0	3	0	1	1	0	10	1
California	0	3	0	1	1	0	10	1
Oregon	0	12	0	24	2	0	49	1
Washington	0	0	0	0	1	0	43	1
Pacific Noncontiguous	0	0	0	28	5	0	0	4
Alaska	0	0	0	0	22	0	0	8
Hawaii	0	0	0	28	4	0	0	4
U.S. Total	0	3	0	1	0	0	3	0

Displayed values of zero may represent small values that round to zero. The Excel version of this table provides additional precision which may be accessed by selecting individual cells.

Table A.1.B. Relative Standard Error (Percent) for Net Generation by Fuel Type:

Total (All Sectors) by Census Division and State, Year-to-Date through November 2016

Census Region and State	Coal	Petroleum Liquids	Petroleum Coke	Natural Gas	Other Gases	Nuclear	Hydroelectric Conventional
New England	4	5	0	2	0	0	14
Connecticut	0	90	0	3	0	0	93
Maine	0	108	0	9	0	0	18
Massachusetts	4	4	0	5	0	0	39
New Hampshire	0	61	0	1	0	0	26
Rhode Island	0	28	0	11	0	0	989
Vermont	0	537	0	258	0	0	45
Middle Atlantic	3	33	69	1	29	0	2
New Jersey	0	206	128	3	75	0	886
New York	0	67	0	3	0	0	2
Pennsylvania	3	25	81	2	28	0	17
East North Central	0	4	8	1	12	0	15
Illinois	0	6	0	3	99	0	93
Indiana	1	6	0	2	18	0	15
Michigan	2	15	22	2	0	0	30
Ohio	1	4	4	1	61	0	26
Wisconsin	0	29	0	21	0	0	24
West North Central	1	14	152	4	100	0	8
Iowa	2	19	152	15	0	0	37
Kansas	0	26	0	14	0	0	354
Minnesota	2	140	0	4	0	0	38
Missouri	1	3	0	12	0	0	13
Nebraska	2	128	0	8	0	0	28
North Dakota	2	12	0	42	100	0	0
South Dakota	0	508	0	14	0	0	0
South Atlantic	0	9	0	0	0	0	9
Delaware	0	367	0	7	0	0	0
District of Columbia	0	3,091	0	156	0	0	0
Florida	0	8	0	1	0	0	92
Georgia	0	53	0	1	0	0	15
Maryland	0	38	0	24	0	0	0
North Carolina	1	33	0	1	0	0	17
South Carolina	0	57	0	1	0	0	27
Virginia	1	36	0	1	0	0	38
West Virginia	0	0	0	3	0	0	30
East South Central	0	6	0	1	72	0	7
Alabama	0	45	0	2	119	0	11
Kentucky	1	3	0	3	0	0	8
Mississippi	0	388	0	1	0	0	0
Tennessee	0	2	0	2	0	0	12
West South Central	0	5	3	1	4	0	12
Arkansas	0	3	0	1	0	0	17
Louisiana	0	3	2	11	7	0	0
Oklahoma	1	12	0	1	0	0	30
Texas	0	14	59	1	5	0	41
Mountain	1	12	0	1	9	0	4
Arizona	0	9	0	0	0	0	2
Colorado	0	87	0	1	0	0	33
Idaho	105	475	0	9	0	0	10
Montana	4	51	0	59	0	0	4
Nevada	0	0	0	1	0	0	2
New Mexico	0	56	0	5	0	0	116
Utah	1	28	0	7	457	0	41
Wyoming	3	2	0	22	7	0	28
Pacific Contiguous	0	37	0	1	6	0	1
California	0	32	0	2	8	0	7
Oregon	0	13,658	0	1	0	0	2
Washington	0	80	0	4	0	0	1
Pacific Noncontiguous	5	6	0	13	130	0	20
Alaska	18	6	0	13	0	0	20
Hawaii	3	6	0	0	130	0	79
U.S. Total	0	4	3	0	6	0	1

Displayed values of zero may represent small values that round to zero. The Excel version of this table provides additional precision which may be accessed by selecting individual cells.

Table A.1.B. Relative Standard Error (Percent) for Net Generation by Fuel Type:

Total (All Sectors) by Census Division and State, Year-to-Date through November 2016 (Continued)

Census Region and State	Wind	Geothermal	Biomass	Solar Thermal and Photovoltaic	Other Renewables	Hydroelectric Pumped Storage	Other Energy Sources	All Energy Sources
New England	0	0	0	11	3	0	5	1
Connecticut	0	0	0	55	5	0	7	1
Maine	0	0	0	0	1	0	14	5
Massachusetts	0	0	0	11	7	0	7	3
New Hampshire	0	0	0	0	11	0	45	2
Rhode Island	0	0	0	62	17	0	0	2
Vermont	0	0	0	34	13	0	0	22
Middle Atlantic	0	0	0	9	2	0	5	1
New Jersey	0	0	0	10	7	0	8	1
New York	0	0	0	18	2	0	8	1
Pennsylvania	0	0	0	30	2	0	7	1
East North Central	0	0	0	13	1	0	9	0
Illinois	0	0	0	35	1	0	27	0
Indiana	0	0	0	16	1	0	5	1
Michigan	0	0	0	58	3	0	14	1
Ohio	0	0	0	31	4	0	42	1
Wisconsin	0	0	0	201	3	0	41	1
West North Central	0	0	0	40	0	0	13	1
Iowa	0	0	0	0	0	0	187	1
Kansas	0	0	0	204	0	0	0	1
Minnesota	0	0	0	101	2	0	13	1
Missouri	0	0	0	48	3	0	0	1
Nebraska	0	0	0	102	1	0	0	2
North Dakota	0	0	0	0	0	0	54	2
South Dakota	0	0	0	0	1	0	0	1
South Atlantic	0	0	0	3	2	0	4	0
Delaware	0	0	0	35	28	0	0	6
District of Columbia	0	0	0	0	0	0	0	156
Florida	0	0	0	13	4	0	4	1
Georgia	0	0	0	3	2	0	0	0
Maryland	0	0	0	19	3	0	0	1
North Carolina	0	0	0	5	4	0	16	0
South Carolina	0	0	0	121	6	0	22	0
Virginia	0	0	0	6	3	0	6	0
West Virginia	0	0	0	0	0	0	0	0
East South Central	0	0	0	8	2	0	14	0
Alabama	0	0	0	0	3	0	0	1
Kentucky	0	0	0	0	7	0	0	1
Mississippi	0	0	0	0	3	0	179	1
Tennessee	0	0	0	29	6	0	0	1
West South Central	0	0	0	6	0	0	12	0
Arkansas	0	0	0	59	3	0	0	1
Louisiana	0	0	0	0	4	0	15	1
Oklahoma	0	0	0	0	0	0	47	1
Texas	0	0	0	6	0	0	14	0
Mountain	0	5	0	1	1	0	7	1
Arizona	0	0	0	2	2	0	0	0
Colorado	0	0	0	5	0	0	59	1
Idaho	0	48	0	0	4	0	49	6
Montana	0	0	0	0	2	0	0	3
Nevada	0	5	0	2	4	0	0	1
New Mexico	0	122	0	6	2	0	2,158	1
Utah	0	9	0	2	3	0	4	2
Wyoming	0	0	0	0	1	0	0	2
Pacific Contiguous	0	3	0	1	1	0	10	1
California	0	3	0	1	1	0	10	1
Oregon	0	12	0	24	2	0	49	1
Washington	0	0	0	0	1	0	43	1
Pacific Noncontiguous	0	0	0	28	5	0	0	4
Alaska	0	0	0	0	22	0	0	8
Hawaii	0	0	0	28	4	0	0	4
U.S. Total	0	3	0	1	0	0	3	0

Displayed values of zero may represent small values that round to zero. The Excel version of this table provides additional precision which may be accessed by selecting individual cells.

**Table A.2.A. Relative Standard Error (Percent) for Net Generation by Fuel Type:
Electric Utilities by Census Division and State, November 2016**

Census Region and State	Coal	Petroleum Liquids	Petroleum Coke	Natural Gas	Other Gases	Nuclear	Hydroelectric Conventional
New England	0	27	0	0	0	0	41
Connecticut	0	33	0	0	0	0	327
Maine	0	405	0	0	0	0	0
Massachusetts	0	64	0	0	0	0	112
New Hampshire	0	234	0	0	0	0	32
Rhode Island	0	32	0	0	0	0	0
Vermont	0	561	0	0	0	0	75
Middle Atlantic	0	131	0	11	0	0	1
New Jersey	0	719	0	270	0	0	0
New York	0	133	0	11	0	0	1
Pennsylvania	0	176	0	0	0	0	197
East North Central	1	5	0	1	36	0	16
Illinois	0	51	0	0	0	0	240
Indiana	1	5	0	1	941	0	15
Michigan	2	14	0	4	0	0	31
Ohio	3	3	0	1	0	0	6
Wisconsin	0	23	0	2	0	0	25
West North Central	1	9	0	5	0	0	8
Iowa	2	20	0	15	0	0	37
Kansas	0	26	0	13	0	0	0
Minnesota	2	56	0	3	0	0	48
Missouri	1	3	0	14	0	0	13
Nebraska	2	128	0	8	0	0	28
North Dakota	2	10	0	43	0	0	0
South Dakota	0	532	0	14	0	0	0
South Atlantic	0	9	0	0	0	0	11
Delaware	0	683	0	141	0	0	0
Florida	0	8	0	1	0	0	92
Georgia	0	82	0	0	0	0	15
Maryland	0	47	0	0	0	0	0
North Carolina	0	35	0	1	0	0	17
South Carolina	0	78	0	0	0	0	28
Virginia	0	30	0	0	0	0	38
West Virginia	0	0	0	0	0	0	69
East South Central	0	5	0	2	0	0	7
Alabama	0	0	0	6	0	0	11
Kentucky	1	3	0	0	0	0	7
Mississippi	0	437	0	1	0	0	0
Tennessee	0	0	0	0	0	0	12
West South Central	0	1	0	1	0	0	14
Arkansas	0	0	0	3	0	0	16
Louisiana	0	3	0	1	0	0	0
Oklahoma	0	6	0	1	0	0	30
Texas	0	1	0	2	0	0	41
Mountain	1	12	0	1	0	0	4
Arizona	0	9	0	1	0	0	2
Colorado	0	87	0	0	0	0	36
Idaho	0	475	0	30	0	0	10
Montana	162	1,551	0	62	0	0	4
Nevada	0	0	0	0	0	0	0
New Mexico	0	56	0	7	0	0	116
Utah	0	4	0	7	0	0	42
Wyoming	2	1	0	140	0	0	27
Pacific Contiguous	0	32	0	3	0	0	1
California	0	12	0	4	0	0	6
Oregon	0	0	0	0	0	0	2
Washington	0	324	0	5	0	0	1
Pacific Noncontiguous	0	5	0	13	0	0	20
Alaska	0	6	0	13	0	0	20
Hawaii	0	6	0	0	0	0	244
U.S. Total	0	4	0	0	36	0	1

Displayed values of zero may represent small values that round to zero. The Excel version of this table provides additional precision which may be accessed by selecting individual cells.

Table A.2.A. Relative Standard Error (Percent) for Net Generation by Fuel Type:

Electric Utilities by Census Division and State, November 2016 (Continued)

Census Region and State	Wind	Geothermal	Biomass	Solar Thermal and Photovoltaic	Other Renewables	Hydroelectric Pumped Storage	Other Energy Sources	All Energy Sources
New England	0	0	0	58	3	0	0	14
Connecticut	0	0	0	138	138	0	0	103
Maine	0	0	0	0	0	0	0	405
Massachusetts	0	0	0	64	34	0	0	57
New Hampshire	0	0	0	0	0	0	0	11
Rhode Island	0	0	0	0	0	0	0	32
Vermont	0	0	0	0	0	0	0	24
Middle Atlantic	0	0	0	28	28	0	0	3
New Jersey	0	0	0	28	28	0	0	37
New York	0	0	0	0	0	0	0	3
Pennsylvania	0	0	0	0	0	0	0	156
East North Central	0	0	0	27	2	0	0	1
Illinois	0	0	0	167	55	0	0	2
Indiana	0	0	0	34	18	0	0	1
Michigan	0	0	0	58	1	0	0	1
Ohio	0	0	0	79	54	0	0	2
Wisconsin	0	0	0	0	1	0	0	1
West North Central	0	0	0	0	0	0	9	1
Iowa	0	0	0	0	0	0	0	1
Kansas	0	0	0	0	0	0	0	1
Minnesota	0	0	0	0	2	0	0	1
Missouri	0	0	0	0	50	0	0	1
Nebraska	0	0	0	0	9	0	0	2
North Dakota	0	0	0	0	1	0	54	2
South Dakota	0	0	0	0	0	0	0	2
South Atlantic	0	0	0	8	4	0	0	0
Delaware	0	0	0	97	97	0	0	124
Florida	0	0	0	11	10	0	0	0
Georgia	0	0	0	4	4	0	0	0
Maryland	0	0	0	84	84	0	0	44
North Carolina	0	0	0	22	22	0	0	0
South Carolina	0	0	0	0	8	0	0	0
Virginia	0	0	0	118	2	0	0	0
West Virginia	0	0	0	0	0	0	0	1
East South Central	0	0	0	0	33	0	0	0
Alabama	0	0	0	0	0	0	0	1
Kentucky	0	0	0	0	33	0	0	1
Mississippi	0	0	0	0	0	0	0	1
Tennessee	0	0	0	0	0	0	0	1
West South Central	0	0	0	0	0	0	0	0
Arkansas	0	0	0	0	0	0	0	1
Louisiana	0	0	0	0	0	0	0	0
Oklahoma	0	0	0	0	0	0	0	1
Texas	0	0	0	0	0	0	0	1
Mountain	0	0	0	8	2	0	2,257	1
Arizona	0	0	0	9	9	0	0	0
Colorado	0	0	0	0	5	0	0	1
Idaho	0	0	0	0	100	0	0	10
Montana	0	0	0	0	0	0	0	5
Nevada	0	0	0	53	53	0	0	0
New Mexico	0	0	0	18	18	0	2,158	1
Utah	0	0	0	0	0	0	0	1
Wyoming	0	0	0	0	1	0	0	2
Pacific Contiguous	0	4	0	12	1	0	0	1
California	0	0	0	12	3	0	0	2
Oregon	0	222	0	98	8	0	0	2
Washington	0	0	0	0	1	0	0	1
Pacific Noncontiguous	0	0	0	41	18	0	0	5
Alaska	0	0	0	0	29	0	0	8
Hawaii	0	0	0	41	17	0	0	6
U.S. Total	0	3	0	5	0	0	7	0

Displayed values of zero may represent small values that round to zero. The Excel version of this table provides additional precision which may be accessed by selecting individual cells.

Table A.2.B. Relative Standard Error (Percent) for Net Generation by Fuel Type:

Electric Utilities by Census Division and State, Year-to-Date through November 2016

Census Region and State	Coal	Petroleum Liquids	Petroleum Coke	Natural Gas	Other Gases	Nuclear	Hydroelectric Conventional
New England	0	27	0	0	0	0	41
Connecticut	0	33	0	0	0	0	327
Maine	0	405	0	0	0	0	0
Massachusetts	0	64	0	0	0	0	112
New Hampshire	0	234	0	0	0	0	32
Rhode Island	0	32	0	0	0	0	0
Vermont	0	561	0	0	0	0	75
Middle Atlantic	0	131	0	11	0	0	1
New Jersey	0	719	0	270	0	0	0
New York	0	133	0	11	0	0	1
Pennsylvania	0	176	0	0	0	0	197
East North Central	1	5	0	1	36	0	16
Illinois	0	51	0	0	0	0	240
Indiana	1	5	0	1	941	0	15
Michigan	2	14	0	4	0	0	31
Ohio	3	3	0	1	0	0	6
Wisconsin	0	23	0	2	0	0	25
West North Central	1	9	0	5	0	0	8
Iowa	2	20	0	15	0	0	37
Kansas	0	26	0	13	0	0	0
Minnesota	2	56	0	3	0	0	48
Missouri	1	3	0	14	0	0	13
Nebraska	2	128	0	8	0	0	28
North Dakota	2	10	0	43	0	0	0
South Dakota	0	532	0	14	0	0	0
South Atlantic	0	9	0	0	0	0	11
Delaware	0	683	0	141	0	0	0
Florida	0	8	0	1	0	0	92
Georgia	0	82	0	0	0	0	15
Maryland	0	47	0	0	0	0	0
North Carolina	0	35	0	1	0	0	17
South Carolina	0	78	0	0	0	0	28
Virginia	0	30	0	0	0	0	38
West Virginia	0	0	0	0	0	0	69
East South Central	0	5	0	2	0	0	7
Alabama	0	0	0	6	0	0	11
Kentucky	1	3	0	0	0	0	7
Mississippi	0	437	0	1	0	0	0
Tennessee	0	0	0	0	0	0	12
West South Central	0	1	0	1	0	0	14
Arkansas	0	0	0	3	0	0	16
Louisiana	0	3	0	1	0	0	0
Oklahoma	0	6	0	1	0	0	30
Texas	0	1	0	2	0	0	41
Mountain	1	12	0	1	0	0	4
Arizona	0	9	0	1	0	0	2
Colorado	0	87	0	0	0	0	36
Idaho	0	475	0	30	0	0	10
Montana	162	1,551	0	62	0	0	4
Nevada	0	0	0	0	0	0	0
New Mexico	0	56	0	7	0	0	116
Utah	0	4	0	7	0	0	42
Wyoming	2	1	0	140	0	0	27
Pacific Contiguous	0	32	0	3	0	0	1
California	0	12	0	4	0	0	6
Oregon	0	0	0	0	0	0	2
Washington	0	324	0	5	0	0	1
Pacific Noncontiguous	0	5	0	13	0	0	20
Alaska	0	6	0	13	0	0	20
Hawaii	0	6	0	0	0	0	244
U.S. Total	0	4	0	0	36	0	1

Displayed values of zero may represent small values that round to zero. The Excel version of this table provides additional precision which may be accessed by selecting individual cells.

Table A.2.B. Relative Standard Error (Percent) for Net Generation by Fuel Type:

Electric Utilities by Census Division and State, Year-to-Date through November 2016 (Continued)

Census Region and State	Wind	Geothermal	Biomass	Solar Thermal and Photovoltaic	Other Renewables	Hydroelectric Pumped Storage	Other Energy Sources	All Energy Sources
New England	0	0	0	58	3	0	0	14
Connecticut	0	0	0	138	138	0	0	103
Maine	0	0	0	0	0	0	0	405
Massachusetts	0	0	0	64	34	0	0	57
New Hampshire	0	0	0	0	0	0	0	11
Rhode Island	0	0	0	0	0	0	0	32
Vermont	0	0	0	0	0	0	0	24
Middle Atlantic	0	0	0	28	28	0	0	3
New Jersey	0	0	0	28	28	0	0	37
New York	0	0	0	0	0	0	0	3
Pennsylvania	0	0	0	0	0	0	0	156
East North Central	0	0	0	27	2	0	0	1
Illinois	0	0	0	167	55	0	0	2
Indiana	0	0	0	34	18	0	0	1
Michigan	0	0	0	58	1	0	0	1
Ohio	0	0	0	79	54	0	0	2
Wisconsin	0	0	0	0	1	0	0	1
West North Central	0	0	0	0	0	0	9	1
Iowa	0	0	0	0	0	0	0	1
Kansas	0	0	0	0	0	0	0	1
Minnesota	0	0	0	0	2	0	0	1
Missouri	0	0	0	0	50	0	0	1
Nebraska	0	0	0	0	9	0	0	2
North Dakota	0	0	0	0	1	0	54	2
South Dakota	0	0	0	0	0	0	0	2
South Atlantic	0	0	0	8	4	0	0	0
Delaware	0	0	0	97	97	0	0	124
Florida	0	0	0	11	10	0	0	0
Georgia	0	0	0	4	4	0	0	0
Maryland	0	0	0	84	84	0	0	44
North Carolina	0	0	0	22	22	0	0	0
South Carolina	0	0	0	0	8	0	0	0
Virginia	0	0	0	118	2	0	0	0
West Virginia	0	0	0	0	0	0	0	1
East South Central	0	0	0	0	33	0	0	0
Alabama	0	0	0	0	0	0	0	1
Kentucky	0	0	0	0	33	0	0	1
Mississippi	0	0	0	0	0	0	0	1
Tennessee	0	0	0	0	0	0	0	1
West South Central	0	0	0	0	0	0	0	0
Arkansas	0	0	0	0	0	0	0	1
Louisiana	0	0	0	0	0	0	0	0
Oklahoma	0	0	0	0	0	0	0	1
Texas	0	0	0	0	0	0	0	1
Mountain	0	0	0	8	2	0	2,257	1
Arizona	0	0	0	9	9	0	0	0
Colorado	0	0	0	0	5	0	0	1
Idaho	0	0	0	0	100	0	0	10
Montana	0	0	0	0	0	0	0	5
Nevada	0	0	0	53	53	0	0	0
New Mexico	0	0	0	18	18	0	2,158	1
Utah	0	0	0	0	0	0	0	1
Wyoming	0	0	0	0	1	0	0	2
Pacific Contiguous	0	4	0	12	1	0	0	1
California	0	0	0	12	3	0	0	2
Oregon	0	222	0	98	8	0	0	2
Washington	0	0	0	0	1	0	0	1
Pacific Noncontiguous	0	0	0	41	18	0	0	5
Alaska	0	0	0	0	29	0	0	8
Hawaii	0	0	0	41	17	0	0	6
U.S. Total	0	3	0	5	0	0	7	0

Displayed values of zero may represent small values that round to zero. The Excel version of this table provides additional precision which may be accessed by selecting individual cells.

Table A.3.A. Relative Standard Error (Percent) for Net Generation by Fuel Type:

Independent Power Producers by Census Division and State, November 2016

Census Region and State	Coal	Petroleum Liquids	Petroleum Coke	Natural Gas	Other Gases	Nuclear	Hydroelectric Conventional
New England	0	4	0	2	0	0	16
Connecticut	0	69	0	2	0	0	97
Maine	0	173	0	2	0	0	20
Massachusetts	0	4	0	5	0	0	38
New Hampshire	0	22	0	0	0	0	33
Rhode Island	0	29	0	0	0	0	989
Vermont	0	0	0	0	0	0	55
Middle Atlantic	3	42	0	1	79	0	16
New Jersey	0	229	0	2	0	0	886
New York	0	142	0	3	0	0	24
Pennsylvania	3	28	0	1	79	0	17
East North Central	0	1	0	1	13	0	53
Illinois	0	0	0	2	0	0	65
Indiana	0	0	0	5	0	0	0
Michigan	0	0	0	2	0	0	119
Ohio	0	2	0	1	59	0	97
Wisconsin	0	0	0	0	0	0	111
West North Central	186	438	0	7	0	0	76
Iowa	0	120	0	12,508	0	0	449
Kansas	0	0	0	0	0	0	354
Minnesota	0	500	0	11	0	0	79
Missouri	186	2,159	0	9	0	0	0
South Dakota	0	594	0	0	0	0	0
South Atlantic	1	34	0	3	0	0	10
Delaware	0	431	0	8	0	0	0
District of Columbia	0	0	0	0	0	0	0
Florida	0	343	0	9	0	0	0
Georgia	0	113	0	4	0	0	506
Maryland	0	32	0	20	0	0	0
North Carolina	250	28	0	0	0	0	248
South Carolina	0	464	0	3	0	0	201
Virginia	0	87	0	2	0	0	172
West Virginia	1	0	0	9	0	0	12
East South Central	0	122	0	0	0	0	500
Alabama	0	124	0	0	0	0	0
Kentucky	0	0	0	0	0	0	500
Mississippi	0	0	0	0	0	0	0
Tennessee	0	774	0	0	0	0	0
West South Central	0	0	0	1	0	0	13
Arkansas	0	0	0	0	0	0	217
Louisiana	0	0	0	0	0	0	0
Oklahoma	0	0	0	1	0	0	0
Texas	0	0	0	1	0	0	237
Mountain	5	23	0	2	0	0	39
Arizona	0	0	0	0	0	0	0
Colorado	138	0	0	3	0	0	83
Idaho	0	0	0	9	0	0	52
Montana	4	11	0	180	0	0	95
Nevada	0	0	0	6	0	0	289
New Mexico	0	0	0	3	0	0	0
Utah	90	485	0	102	0	0	382
Wyoming	89	0	0	1,188	0	0	359
Pacific Contiguous	0	63	0	2	0	0	30
California	0	232	0	2	0	0	43
Oregon	0	0	0	1	0	0	64
Washington	0	42	0	0	0	0	50
Pacific Noncontiguous	4	16	0	0	0	0	0
Alaska	65	0	0	0	0	0	0
Hawaii	0	16	0	0	0	0	0
U.S. Total	1	7	0	0	7	0	9

Displayed values of zero may represent small values that round to zero. The Excel version of this table provides additional precision which may be accessed by selecting individual cells.

Table A.3.A. Relative Standard Error (Percent) for Net Generation by Fuel Type:

Independent Power Producers by Census Division and State, November 2016 (Continued)

Census Region and State	Wind	Geothermal	Biomass	Solar Thermal and Photovoltaic	Other Renewables	Hydroelectric Pumped Storage	Other Energy Sources	All Energy Sources
New England	0	0	0	11	4	0	5	1
Connecticut	0	0	0	60	5	0	7	1
Maine	0	0	0	0	1	0	10	5
Massachusetts	0	0	0	11	8	0	7	3
New Hampshire	0	0	0	0	13	0	45	2
Rhode Island	0	0	0	62	17	0	0	1
Vermont	0	0	0	34	34	0	0	36
Middle Atlantic	0	0	0	10	2	0	4	1
New Jersey	0	0	0	12	8	0	10	1
New York	0	0	0	18	2	0	6	1
Pennsylvania	0	0	0	33	2	0	7	1
East North Central	0	0	0	15	1	0	25	0
Illinois	0	0	0	35	1	0	0	0
Indiana	0	0	0	18	1	0	0	2
Michigan	0	0	0	0	4	0	25	1
Ohio	0	0	0	35	4	0	1,819	0
Wisconsin	0	0	0	201	8	0	0	1
West North Central	0	0	0	45	0	0	29	1
Iowa	0	0	0	0	1	0	0	1
Kansas	0	0	0	204	0	0	0	0
Minnesota	0	0	0	101	2	0	29	2
Missouri	0	0	0	60	2	0	0	3
Nebraska	0	0	0	102	0	0	0	0
North Dakota	0	0	0	0	0	0	0	0
South Dakota	0	0	0	0	1	0	0	1
South Atlantic	0	0	0	4	3	0	4	1
Delaware	0	0	0	39	32	0	0	8
District of Columbia	0	0	0	0	0	0	0	0
Florida	0	0	0	31	6	0	5	6
Georgia	0	0	0	4	6	0	0	4
Maryland	0	0	0	20	3	0	0	1
North Carolina	0	0	0	5	5	0	20	4
South Carolina	0	0	0	121	40	0	174	4
Virginia	0	0	0	0	7	0	0	2
West Virginia	0	0	0	0	0	0	0	1
East South Central	0	0	0	9	7	0	0	0
Alabama	0	0	0	0	5	0	0	0
Kentucky	0	0	0	0	133	0	0	12
Mississippi	0	0	0	0	100	0	0	0
Tennessee	0	0	0	29	20	0	0	20
West South Central	0	0	0	6	0	0	45	0
Arkansas	0	0	0	59	32	0	0	1
Louisiana	0	0	0	0	37	0	0	0
Oklahoma	0	0	0	0	0	0	0	0
Texas	0	0	0	6	0	0	99	0
Mountain	0	5	0	1	1	0	4	2
Arizona	0	0	0	2	2	0	0	1
Colorado	0	0	0	5	0	0	102	1
Idaho	0	48	0	0	4	0	0	6
Montana	0	0	0	0	2	0	0	3
Nevada	0	5	0	2	4	0	0	3
New Mexico	0	122	0	5	2	0	0	1
Utah	0	17	0	2	3	0	228	13
Wyoming	0	0	0	0	2	0	0	20
Pacific Contiguous	0	4	0	1	1	0	15	1
California	0	4	0	1	2	0	16	1
Oregon	0	0	0	24	2	0	49	2
Washington	0	0	0	0	1	0	43	2
Pacific Noncontiguous	0	0	0	39	5	0	0	6
Alaska	0	0	0	0	41	0	0	46
Hawaii	0	0	0	39	5	0	0	6
U.S. Total	0	3	0	1	0	0	3	0

Displayed values of zero may represent small values that round to zero. The Excel version of this table provides additional precision which may be accessed by selecting individual cells.

Table A.3.B. Relative Standard Error (Percent) for Net Generation by Fuel Type:

Independent Power Producers by Census Division and State, Year-to-Date through November 2016

Census Region and State	Coal	Petroleum Liquids	Petroleum Coke	Natural Gas	Other Gases	Nuclear	Hydroelectric Conventional
New England	0	4	0	2	0	0	16
Connecticut	0	69	0	2	0	0	97
Maine	0	173	0	2	0	0	20
Massachusetts	0	4	0	5	0	0	38
New Hampshire	0	22	0	0	0	0	33
Rhode Island	0	29	0	0	0	0	989
Vermont	0	0	0	0	0	0	55
Middle Atlantic	3	42	0	1	79	0	16
New Jersey	0	229	0	2	0	0	886
New York	0	142	0	3	0	0	24
Pennsylvania	3	28	0	1	79	0	17
East North Central	0	1	0	1	13	0	53
Illinois	0	0	0	2	0	0	65
Indiana	0	0	0	5	0	0	0
Michigan	0	0	0	2	0	0	119
Ohio	0	2	0	1	59	0	97
Wisconsin	0	0	0	0	0	0	111
West North Central	186	438	0	7	0	0	76
Iowa	0	120	0	12,508	0	0	449
Kansas	0	0	0	0	0	0	354
Minnesota	0	500	0	11	0	0	79
Missouri	186	2,159	0	9	0	0	0
South Dakota	0	594	0	0	0	0	0
South Atlantic	1	34	0	3	0	0	10
Delaware	0	431	0	8	0	0	0
District of Columbia	0	0	0	0	0	0	0
Florida	0	343	0	9	0	0	0
Georgia	0	113	0	4	0	0	506
Maryland	0	32	0	20	0	0	0
North Carolina	250	28	0	0	0	0	248
South Carolina	0	464	0	3	0	0	201
Virginia	0	87	0	2	0	0	172
West Virginia	1	0	0	9	0	0	12
East South Central	0	122	0	0	0	0	500
Alabama	0	124	0	0	0	0	0
Kentucky	0	0	0	0	0	0	500
Mississippi	0	0	0	0	0	0	0
Tennessee	0	774	0	0	0	0	0
West South Central	0	0	0	1	0	0	13
Arkansas	0	0	0	0	0	0	217
Louisiana	0	0	0	0	0	0	0
Oklahoma	0	0	0	1	0	0	0
Texas	0	0	0	1	0	0	237
Mountain	5	23	0	2	0	0	39
Arizona	0	0	0	0	0	0	0
Colorado	138	0	0	3	0	0	83
Idaho	0	0	0	9	0	0	52
Montana	4	11	0	180	0	0	95
Nevada	0	0	0	6	0	0	289
New Mexico	0	0	0	3	0	0	0
Utah	90	485	0	102	0	0	382
Wyoming	89	0	0	1,188	0	0	359
Pacific Contiguous	0	63	0	2	0	0	30
California	0	232	0	2	0	0	43
Oregon	0	0	0	1	0	0	64
Washington	0	42	0	0	0	0	50
Pacific Noncontiguous	4	16	0	0	0	0	0
Alaska	65	0	0	0	0	0	0
Hawaii	0	16	0	0	0	0	0
U.S. Total	1	7	0	0	7	0	9

Displayed values of zero may represent small values that round to zero. The Excel version of this table provides additional precision which may be accessed by selecting individual cells.

Table A.3.B. Relative Standard Error (Percent) for Net Generation by Fuel Type:

Independent Power Producers by Census Division and State, Year-to-Date through November 2016 (Continued)

Census Region and State	Wind	Geothermal	Biomass	Solar Thermal and Photovoltaic	Other Renewables	Hydroelectric Pumped Storage	Other Energy Sources	All Energy Sources
New England	0	0	0	11	4	0	5	1
Connecticut	0	0	0	60	5	0	7	1
Maine	0	0	0	0	1	0	10	5
Massachusetts	0	0	0	11	8	0	7	3
New Hampshire	0	0	0	0	13	0	45	2
Rhode Island	0	0	0	62	17	0	0	1
Vermont	0	0	0	34	34	0	0	36
Middle Atlantic	0	0	0	10	2	0	4	1
New Jersey	0	0	0	12	8	0	10	1
New York	0	0	0	18	2	0	6	1
Pennsylvania	0	0	0	33	2	0	7	1
East North Central	0	0	0	15	1	0	25	0
Illinois	0	0	0	35	1	0	0	0
Indiana	0	0	0	18	1	0	0	2
Michigan	0	0	0	0	4	0	25	1
Ohio	0	0	0	35	4	0	1,819	0
Wisconsin	0	0	0	201	8	0	0	1
West North Central	0	0	0	45	0	0	29	1
Iowa	0	0	0	0	1	0	0	1
Kansas	0	0	0	204	0	0	0	0
Minnesota	0	0	0	101	2	0	29	2
Missouri	0	0	0	60	2	0	0	3
Nebraska	0	0	0	102	0	0	0	0
North Dakota	0	0	0	0	0	0	0	0
South Dakota	0	0	0	0	1	0	0	1
South Atlantic	0	0	0	4	3	0	4	1
Delaware	0	0	0	39	32	0	0	8
District of Columbia	0	0	0	0	0	0	0	0
Florida	0	0	0	31	6	0	5	6
Georgia	0	0	0	4	6	0	0	4
Maryland	0	0	0	20	3	0	0	1
North Carolina	0	0	0	5	5	0	20	4
South Carolina	0	0	0	121	40	0	174	4
Virginia	0	0	0	0	7	0	0	2
West Virginia	0	0	0	0	0	0	0	1
East South Central	0	0	0	9	7	0	0	0
Alabama	0	0	0	0	5	0	0	0
Kentucky	0	0	0	0	133	0	0	12
Mississippi	0	0	0	0	100	0	0	0
Tennessee	0	0	0	29	20	0	0	20
West South Central	0	0	0	6	0	0	45	0
Arkansas	0	0	0	59	32	0	0	1
Louisiana	0	0	0	0	37	0	0	0
Oklahoma	0	0	0	0	0	0	0	0
Texas	0	0	0	6	0	0	99	0
Mountain	0	5	0	1	1	0	4	2
Arizona	0	0	0	2	2	0	0	1
Colorado	0	0	0	5	0	0	102	1
Idaho	0	48	0	0	4	0	0	6
Montana	0	0	0	0	2	0	0	3
Nevada	0	5	0	2	4	0	0	3
New Mexico	0	122	0	5	2	0	0	1
Utah	0	17	0	2	3	0	228	13
Wyoming	0	0	0	0	2	0	0	20
Pacific Contiguous	0	4	0	1	1	0	15	1
California	0	4	0	1	2	0	16	1
Oregon	0	0	0	24	2	0	49	2
Washington	0	0	0	0	1	0	43	2
Pacific Noncontiguous	0	0	0	39	5	0	0	6
Alaska	0	0	0	0	41	0	0	46
Hawaii	0	0	0	39	5	0	0	6
U.S. Total	0	3	0	1	0	0	3	0

Displayed values of zero may represent small values that round to zero. The Excel version of this table provides additional precision which may be accessed by selecting individual cells.

**Table A.4.A. Relative Standard Error for Net Generation by Fuel Type:
Commercial Sector by Census Division and State, November 2016**

Census Region and State	Coal	Petroleum Liquids	Petroleum Coke	Natural Gas	Other Gases	Nuclear	Hydroelectric Conventional
New England	0	129	0	30	0	0	662
Connecticut	0	587	0	60	0	0	0
Maine	0	549	0	221	0	0	0
Massachusetts	0	79	0	28	0	0	662
New Hampshire	0	252	0	241	0	0	0
Rhode Island	0	233	0	175	0	0	0
Vermont	0	1,201	0	2,815	0	0	0
Middle Atlantic	0	107	0	28	0	0	775
New Jersey	0	486	0	82	0	0	0
New York	0	98	0	29	0	0	775
Pennsylvania	0	1,207	0	112	0	0	0
East North Central	32	299	0	22	0	0	0
Illinois	58	433	0	45	0	0	0
Indiana	35	1,039	0	46	0	0	0
Michigan	0	241	0	28	0	0	0
Ohio	0	1,939	0	118	0	0	0
Wisconsin	0	7,275	0	93	0	0	0
West North Central	36	113	0	48	0	0	0
Iowa	75	607	0	108	0	0	0
Minnesota	423	119	0	87	0	0	0
Missouri	0	510	0	0	0	0	0
Nebraska	0	0	0	1,015	0	0	0
North Dakota	0	900	0	0	0	0	0
South Dakota	0	758	0	0	0	0	0
South Atlantic	35	224	0	48	0	0	313
District of Columbia	0	3,091	0	156	0	0	0
Florida	0	0	0	148	0	0	0
Georgia	0	53	0	0	0	0	0
Maryland	0	1,091	0	58	0	0	0
North Carolina	0	182	0	0	0	0	313
South Carolina	0	322	0	313	0	0	1,081
Virginia	244	181	0	442	0	0	0
East South Central	0	810	0	95	0	0	0
Mississippi	0	0	0	348	0	0	0
Tennessee	0	810	0	99	0	0	0
West South Central	0	1,072	0	29	0	0	0
Arkansas	0	0	0	766	0	0	0
Louisiana	0	0	0	86	0	0	0
Oklahoma	0	1,512	0	253	0	0	0
Texas	0	1,086	0	30	0	0	0
Mountain	0	806	0	16	0	0	434
Arizona	0	806	0	29	0	0	0
Colorado	0	0	0	0	0	0	434
Idaho	0	0	0	0	0	0	0
Nevada	0	0	0	39	0	0	0
New Mexico	0	0	0	30	0	0	0
Utah	0	0	0	36	0	0	0
Pacific Contiguous	0	1,409	0	9	0	0	330
California	0	1,846	0	8	0	0	330
Oregon	0	13,658	0	128	0	0	0
Washington	0	211	0	218	0	0	0
Pacific Noncontiguous	37	70	0	1,181	0	0	0
Alaska	37	110	0	1,181	0	0	0
Hawaii	0	0	0	0	0	0	0
U.S. Total	20	77	0	9	0	0	201

Displayed values of zero may represent small values that round to zero. The Excel version of this table provides additional precision which may be accessed by selecting individual cells.

Table A.4.A. Relative Standard Error for Net Generation by Fuel Type:

Commercial Sector by Census Division and State, November 2016 (Continued)

Census Region and State	Wind	Geothermal	Biomass	Solar Thermal and Photovoltaic	Other Renewables	Hydroelectric Pumped Storage	Other Energy Sources	All Energy Sources
New England	0	0	0	99	28	0	44	23
Connecticut	0	0	0	0	0	0	0	60
Maine	0	0	0	0	38	0	44	37
Massachusetts	0	0	0	99	50	0	0	25
New Hampshire	0	0	0	0	66	0	0	99
Rhode Island	0	0	0	0	111	0	0	137
Vermont	0	0	0	0	224	0	0	333
Middle Atlantic	0	0	0	21	12	0	17	15
New Jersey	0	0	0	22	10	0	0	24
New York	0	0	0	163	25	0	29	19
Pennsylvania	0	0	0	111	48	0	0	77
East North Central	0	0	0	141	16	0	18	15
Illinois	0	0	0	0	133	0	0	38
Indiana	0	0	0	0	83	0	99	32
Michigan	0	0	0	0	14	0	17	19
Ohio	0	0	0	141	119	0	0	103
Wisconsin	0	0	0	0	63	0	0	75
West North Central	0	0	0	204	31	0	72	25
Iowa	0	0	0	0	60	0	0	53
Minnesota	0	0	0	0	38	0	72	51
Missouri	0	0	0	204	204	0	0	2
Nebraska	0	0	0	0	94	0	0	108
North Dakota	0	0	0	0	0	0	0	900
South Dakota	0	0	0	0	0	0	0	758
South Atlantic	0	0	0	24	12	0	16	20
Delaware	0	0	0	199	113	0	0	113
District of Columbia	0	0	0	0	0	0	0	156
Florida	0	0	0	192	54	0	0	86
Georgia	0	0	0	136	99	0	0	61
Maryland	0	0	0	100	51	0	0	54
North Carolina	0	0	0	25	24	0	0	17
South Carolina	0	0	0	0	0	0	0	297
Virginia	0	0	0	0	13	0	16	12
East South Central	0	0	0	142	142	0	0	93
Mississippi	0	0	0	0	0	0	0	348
Tennessee	0	0	0	142	142	0	0	97
West South Central	0	0	0	169	50	0	0	27
Arkansas	0	0	0	0	186	0	0	306
Louisiana	0	0	0	0	0	0	0	86
Oklahoma	0	0	0	0	0	0	0	253
Texas	0	0	0	169	51	0	0	28
Mountain	0	0	0	26	27	0	0	16
Arizona	0	0	0	57	57	0	0	26
Colorado	0	0	0	65	65	0	0	187
Idaho	0	0	0	0	131	0	0	131
Nevada	0	0	0	33	33	0	0	26
New Mexico	0	0	0	0	320	0	0	30
Utah	0	0	0	0	100	0	0	34
Pacific Contiguous	0	0	0	24	10	0	0	7
California	0	0	0	24	10	0	0	7
Oregon	0	0	0	0	87	0	0	101
Washington	0	0	0	0	90	0	0	131
Pacific Noncontiguous	0	0	0	0	8	0	0	8
Alaska	0	0	0	0	54	0	0	30
Hawaii	0	0	0	0	0	0	0	0
U.S. Total	0	0	0	12	6	0	9	6

Displayed values of zero may represent small values that round to zero. The Excel version of this table provides additional precision which may be accessed by selecting individual cells.

Table A.4.B. Relative Standard Error for Net Generation by Fuel Type:

Commercial Sector by Census Division and State, Year-to-Date through November 2016

Census Region and State	Coal	Petroleum Liquids	Petroleum Coke	Natural Gas	Other Gases	Nuclear	Hydroelectric Conventional
New England	0	129	0	30	0	0	662
Connecticut	0	587	0	60	0	0	0
Maine	0	549	0	221	0	0	0
Massachusetts	0	79	0	28	0	0	662
New Hampshire	0	252	0	241	0	0	0
Rhode Island	0	233	0	175	0	0	0
Vermont	0	1,201	0	2,815	0	0	0
Middle Atlantic	0	107	0	28	0	0	775
New Jersey	0	486	0	82	0	0	0
New York	0	98	0	29	0	0	775
Pennsylvania	0	1,207	0	112	0	0	0
East North Central	32	299	0	22	0	0	0
Illinois	58	433	0	45	0	0	0
Indiana	35	1,039	0	46	0	0	0
Michigan	0	241	0	28	0	0	0
Ohio	0	1,939	0	118	0	0	0
Wisconsin	0	7,275	0	93	0	0	0
West North Central	36	113	0	48	0	0	0
Iowa	75	607	0	108	0	0	0
Minnesota	423	119	0	87	0	0	0
Missouri	0	510	0	0	0	0	0
Nebraska	0	0	0	1,015	0	0	0
North Dakota	0	900	0	0	0	0	0
South Dakota	0	758	0	0	0	0	0
South Atlantic	35	224	0	48	0	0	313
District of Columbia	0	3,091	0	156	0	0	0
Florida	0	0	0	148	0	0	0
Georgia	0	53	0	0	0	0	0
Maryland	0	1,091	0	58	0	0	0
North Carolina	0	182	0	0	0	0	313
South Carolina	0	322	0	313	0	0	1,081
Virginia	244	181	0	442	0	0	0
East South Central	0	810	0	95	0	0	0
Mississippi	0	0	0	348	0	0	0
Tennessee	0	810	0	99	0	0	0
West South Central	0	1,072	0	29	0	0	0
Arkansas	0	0	0	766	0	0	0
Louisiana	0	0	0	86	0	0	0
Oklahoma	0	1,512	0	253	0	0	0
Texas	0	1,086	0	30	0	0	0
Mountain	0	806	0	16	0	0	434
Arizona	0	806	0	29	0	0	0
Colorado	0	0	0	0	0	0	434
Idaho	0	0	0	0	0	0	0
Nevada	0	0	0	39	0	0	0
New Mexico	0	0	0	30	0	0	0
Utah	0	0	0	36	0	0	0
Pacific Contiguous	0	1,409	0	9	0	0	330
California	0	1,846	0	8	0	0	330
Oregon	0	13,658	0	128	0	0	0
Washington	0	211	0	218	0	0	0
Pacific Noncontiguous	37	70	0	1,181	0	0	0
Alaska	37	110	0	1,181	0	0	0
Hawaii	0	0	0	0	0	0	0
U.S. Total	20	77	0	9	0	0	201

Displayed values of zero may represent small values that round to zero. The Excel version of this table provides additional precision which may be accessed by selecting individual cells.

Table A.4.B. Relative Standard Error for Net Generation by Fuel Type:

Commercial Sector by Census Division and State, Year-to-Date through November 2016 (Continued)

Census Region and State	Wind	Geothermal	Biomass	Solar Thermal and Photovoltaic	Other Renewables	Hydroelectric Pumped Storage	Other Energy Sources	All Energy Sources
New England	0	0	0	99	28	0	44	23
Connecticut	0	0	0	0	0	0	0	60
Maine	0	0	0	0	38	0	44	37
Massachusetts	0	0	0	99	50	0	0	25
New Hampshire	0	0	0	0	66	0	0	99
Rhode Island	0	0	0	0	111	0	0	137
Vermont	0	0	0	0	224	0	0	333
Middle Atlantic	0	0	0	21	12	0	17	15
New Jersey	0	0	0	22	10	0	0	24
New York	0	0	0	163	25	0	29	19
Pennsylvania	0	0	0	111	48	0	0	77
East North Central	0	0	0	141	16	0	18	15
Illinois	0	0	0	0	133	0	0	38
Indiana	0	0	0	0	83	0	99	32
Michigan	0	0	0	0	14	0	17	19
Ohio	0	0	0	141	119	0	0	103
Wisconsin	0	0	0	0	63	0	0	75
West North Central	0	0	0	204	31	0	72	25
Iowa	0	0	0	0	60	0	0	53
Minnesota	0	0	0	0	38	0	72	51
Missouri	0	0	0	204	204	0	0	2
Nebraska	0	0	0	0	94	0	0	108
North Dakota	0	0	0	0	0	0	0	900
South Dakota	0	0	0	0	0	0	0	758
South Atlantic	0	0	0	24	12	0	16	20
Delaware	0	0	0	199	113	0	0	113
District of Columbia	0	0	0	0	0	0	0	156
Florida	0	0	0	192	54	0	0	86
Georgia	0	0	0	136	99	0	0	61
Maryland	0	0	0	100	51	0	0	54
North Carolina	0	0	0	25	24	0	0	17
South Carolina	0	0	0	0	0	0	0	297
Virginia	0	0	0	0	13	0	16	12
East South Central	0	0	0	142	142	0	0	93
Mississippi	0	0	0	0	0	0	0	348
Tennessee	0	0	0	142	142	0	0	97
West South Central	0	0	0	169	50	0	0	27
Arkansas	0	0	0	0	186	0	0	306
Louisiana	0	0	0	0	0	0	0	86
Oklahoma	0	0	0	0	0	0	0	253
Texas	0	0	0	169	51	0	0	28
Mountain	0	0	0	26	27	0	0	16
Arizona	0	0	0	57	57	0	0	26
Colorado	0	0	0	65	65	0	0	187
Idaho	0	0	0	0	131	0	0	131
Nevada	0	0	0	33	33	0	0	26
New Mexico	0	0	0	0	320	0	0	30
Utah	0	0	0	0	100	0	0	34
Pacific Contiguous	0	0	0	24	10	0	0	7
California	0	0	0	24	10	0	0	7
Oregon	0	0	0	0	87	0	0	101
Washington	0	0	0	0	90	0	0	131
Pacific Noncontiguous	0	0	0	0	8	0	0	8
Alaska	0	0	0	0	54	0	0	30
Hawaii	0	0	0	0	0	0	0	0
U.S. Total	0	0	0	12	6	0	9	6

Displayed values of zero may represent small values that round to zero. The Excel version of this table provides additional precision which may be accessed by selecting individual cells.

**Table A.5.A. Relative Standard Error for Net Generation by Fuel Type:
Industrial Sector by Census Division and State, November 2016**

Census Region and State	Coal	Petroleum Liquids	Petroleum Coke	Natural Gas	Other Gases	Nuclear	Hydroelectric Conventional
New England	81	141	0	36	0	0	47
Connecticut	0	436	0	55	0	0	0
Maine	0	128	0	51	0	0	47
Massachusetts	195	4,303	0	102	0	0	788
New Hampshire	0	418	0	209	0	0	0
Middle Atlantic	22	30	69	24	29	0	182
New Jersey	0	529	128	64	75	0	0
New York	0	46	0	38	0	0	182
Pennsylvania	47	25	81	31	28	0	0
East North Central	9	23	78	18	21	0	82
Illinois	8	0	0	50	99	0	0
Indiana	614	8	0	32	16	0	0
Michigan	99	19	89	33	0	0	208
Ohio	125	213	339	43	168	0	0
Wisconsin	18	374	0	37	0	0	89
West North Central	15	224	168	29	100	0	97
Iowa	15	429	168	30	0	0	0
Kansas	0	0	0	112	0	0	0
Minnesota	37	409	0	87	0	0	97
Missouri	175	0	0	306	0	0	0
Nebraska	44	0	0	457	0	0	0
North Dakota	90	290	0	175	100	0	0
South Atlantic	21	74	0	9	0	0	46
Delaware	0	0	0	0	0	0	0
Florida	85	201	0	19	0	0	0
Georgia	42	78	0	25	0	0	288
Maryland	0	277	0	87	0	0	0
North Carolina	82	666	0	70	0	0	1,086
South Carolina	9	8	0	75	0	0	0
Virginia	25	570	0	29	0	0	405
West Virginia	0	0	0	0	0	0	30
East South Central	6	88	0	15	72	0	0
Alabama	65	104	0	22	119	0	0
Kentucky	0	0	0	71	0	0	0
Mississippi	0	0	0	38	0	0	0
Tennessee	0	148	0	18	0	0	0
West South Central	42	67	55	2	7	0	0
Arkansas	0	49	0	24	0	0	0
Louisiana	0	0	78	2	7	0	0
Oklahoma	50	88	0	84	0	0	0
Texas	0	408	59	2	12	0	0
Mountain	42	743	0	10	9	0	0
Colorado	370	678	0	80	0	0	0
Idaho	105	0	0	50	0	0	0
Montana	308	0	0	0	0	0	0
Nevada	0	0	0	21	0	0	0
New Mexico	0	3,020	0	0	0	0	0
Utah	0	1,341	0	16	457	0	0
Wyoming	46	372	0	16	7	0	0
Pacific Contiguous	0	95	0	3	8	0	0
California	0	405	0	3	8	0	0
Oregon	0	0	0	72	0	0	0
Washington	0	82	0	0	0	0	0
Pacific Noncontiguous	201	53	0	106	130	0	149
Alaska	0	19	0	106	0	0	0
Hawaii	201	62	0	0	130	0	149
U.S. Total	7	33	34	2	7	0	32

Displayed values of zero may represent small values that round to zero. The Excel version of this table provides additional precision which may be accessed by selecting individual cells.

Table A.5.A. Relative Standard Error for Net Generation by Fuel Type:

Industrial Sector by Census Division and State, November 2016 (Continued)

Census Region and State	Wind	Geothermal	Biomass	Solar Thermal and Photovoltaic	Other Renewables	Hydroelectric Pumped Storage	Other Energy Sources	All Energy Sources
New England	0	0	0	0	2	0	37	14
Connecticut	0	0	0	0	0	0	0	55
Maine	0	0	0	0	2	0	37	11
Massachusetts	0	0	0	0	173	0	0	91
New Hampshire	0	0	0	0	0	0	0	209
Middle Atlantic	0	0	0	76	6	0	0	13
New Jersey	0	0	0	191	191	0	0	46
New York	0	0	0	0	1	0	0	17
Pennsylvania	0	0	0	83	9	0	0	16
East North Central	0	0	0	138	5	0	11	7
Illinois	0	0	0	0	0	0	28	13
Indiana	0	0	0	0	45	0	0	12
Michigan	0	0	0	0	7	0	0	16
Ohio	0	0	0	138	13	0	0	37
Wisconsin	0	0	0	0	9	0	66	15
West North Central	0	0	0	0	7	0	58	11
Iowa	0	0	0	0	46	0	187	13
Kansas	0	0	0	0	0	0	0	112
Minnesota	0	0	0	0	6	0	61	18
Missouri	0	0	0	0	214	0	0	153
Nebraska	0	0	0	0	0	0	0	44
North Dakota	0	0	0	0	0	0	0	66
South Atlantic	0	0	0	0	2	0	6	3
Delaware	0	0	0	0	99	0	0	1
Florida	0	0	0	0	5	0	6	6
Georgia	0	0	0	0	2	0	0	4
Maryland	0	0	0	0	0	0	0	21
North Carolina	0	0	0	0	4	0	26	10
South Carolina	0	0	0	0	1	0	0	3
Virginia	0	0	0	0	3	0	0	8
West Virginia	0	0	0	0	0	0	0	6
East South Central	0	0	0	0	2	0	79	4
Alabama	0	0	0	0	3	0	0	6
Kentucky	0	0	0	0	2	0	0	26
Mississippi	0	0	0	0	2	0	179	9
Tennessee	0	0	0	0	6	0	0	5
West South Central	0	0	0	0	3	0	12	2
Arkansas	0	0	0	0	2	0	0	4
Louisiana	0	0	0	0	4	0	15	2
Oklahoma	0	0	0	0	16	0	102	27
Texas	0	0	0	0	8	0	14	2
Mountain	0	0	0	169	4	0	15	7
Colorado	0	0	0	0	349	0	70	56
Idaho	0	0	0	0	3	0	49	14
Montana	0	0	0	0	54	0	0	87
Nevada	0	0	0	169	169	0	0	20
New Mexico	0	0	0	0	0	0	0	3,020
Utah	0	0	0	0	0	0	0	11
Wyoming	0	0	0	0	0	0	0	12
Pacific Contiguous	0	0	0	88	4	0	13	2
California	0	0	0	88	11	0	13	3
Oregon	0	0	0	0	8	0	0	10
Washington	0	0	0	0	4	0	0	4
Pacific Noncontiguous	0	0	0	0	42	0	0	37
Alaska	0	0	0	0	158	0	0	66
Hawaii	0	0	0	0	42	0	0	44
U.S. Total	0	0	0	51	1	0	6	1

Displayed values of zero may represent small values that round to zero. The Excel version of this table provides additional precision which may be accessed by selecting individual cells.

Table A.5.B. Relative Standard Error for Net Generation by Fuel Type:

Industrial Sector by Census Division and State, Year-to-Date through November 2016

Census Region and State	Coal	Petroleum Liquids	Petroleum Coke	Natural Gas	Other Gases	Nuclear	Hydroelectric Conventional
New England	81	141	0	36	0	0	47
Connecticut	0	436	0	55	0	0	0
Maine	0	128	0	51	0	0	47
Massachusetts	195	4,303	0	102	0	0	788
New Hampshire	0	418	0	209	0	0	0
Middle Atlantic	22	30	69	24	29	0	182
New Jersey	0	529	128	64	75	0	0
New York	0	46	0	38	0	0	182
Pennsylvania	47	25	81	31	28	0	0
East North Central	9	23	78	18	21	0	82
Illinois	8	0	0	50	99	0	0
Indiana	614	8	0	32	16	0	0
Michigan	99	19	89	33	0	0	208
Ohio	125	213	339	43	168	0	0
Wisconsin	18	374	0	37	0	0	89
West North Central	15	224	168	29	100	0	97
Iowa	15	429	168	30	0	0	0
Kansas	0	0	0	112	0	0	0
Minnesota	37	409	0	87	0	0	97
Missouri	175	0	0	306	0	0	0
Nebraska	44	0	0	457	0	0	0
North Dakota	90	290	0	175	100	0	0
South Atlantic	21	74	0	9	0	0	46
Delaware	0	0	0	0	0	0	0
Florida	85	201	0	19	0	0	0
Georgia	42	78	0	25	0	0	288
Maryland	0	277	0	87	0	0	0
North Carolina	82	666	0	70	0	0	1,086
South Carolina	9	8	0	75	0	0	0
Virginia	25	570	0	29	0	0	405
West Virginia	0	0	0	0	0	0	30
East South Central	6	88	0	15	72	0	0
Alabama	65	104	0	22	119	0	0
Kentucky	0	0	0	71	0	0	0
Mississippi	0	0	0	38	0	0	0
Tennessee	0	148	0	18	0	0	0
West South Central	42	67	55	2	7	0	0
Arkansas	0	49	0	24	0	0	0
Louisiana	0	0	78	2	7	0	0
Oklahoma	50	88	0	84	0	0	0
Texas	0	408	59	2	12	0	0
Mountain	42	743	0	10	9	0	0
Colorado	370	678	0	80	0	0	0
Idaho	105	0	0	50	0	0	0
Montana	308	0	0	0	0	0	0
Nevada	0	0	0	21	0	0	0
New Mexico	0	3,020	0	0	0	0	0
Utah	0	1,341	0	16	457	0	0
Wyoming	46	372	0	16	7	0	0
Pacific Contiguous	0	95	0	3	8	0	0
California	0	405	0	3	8	0	0
Oregon	0	0	0	72	0	0	0
Washington	0	82	0	0	0	0	0
Pacific Noncontiguous	201	53	0	106	130	0	149
Alaska	0	19	0	106	0	0	0
Hawaii	201	62	0	0	130	0	149
U.S. Total	7	33	34	2	7	0	32

Displayed values of zero may represent small values that round to zero. The Excel version of this table provides additional precision which may be accessed by selecting individual cells.

Table A.5.B. Relative Standard Error for Net Generation by Fuel Type:

Industrial Sector by Census Division and State, Year-to-Date through November 2016 (Continued)

Census Region and State	Wind	Geothermal	Biomass	Solar Thermal and Photovoltaic	Other Renewables	Hydroelectric Pumped Storage	Other Energy Sources	All Energy Sources
New England	0	0	0	0	2	0	37	14
Connecticut	0	0	0	0	0	0	0	55
Maine	0	0	0	0	2	0	37	11
Massachusetts	0	0	0	0	173	0	0	91
New Hampshire	0	0	0	0	0	0	0	209
Middle Atlantic	0	0	0	76	6	0	0	13
New Jersey	0	0	0	191	191	0	0	46
New York	0	0	0	0	1	0	0	17
Pennsylvania	0	0	0	83	9	0	0	16
East North Central	0	0	0	138	5	0	11	7
Illinois	0	0	0	0	0	0	28	13
Indiana	0	0	0	0	45	0	0	12
Michigan	0	0	0	0	7	0	0	16
Ohio	0	0	0	138	13	0	0	37
Wisconsin	0	0	0	0	9	0	66	15
West North Central	0	0	0	0	7	0	58	11
Iowa	0	0	0	0	46	0	187	13
Kansas	0	0	0	0	0	0	0	112
Minnesota	0	0	0	0	6	0	61	18
Missouri	0	0	0	0	214	0	0	153
Nebraska	0	0	0	0	0	0	0	44
North Dakota	0	0	0	0	0	0	0	66
South Atlantic	0	0	0	0	2	0	6	3
Delaware	0	0	0	0	99	0	0	1
Florida	0	0	0	0	5	0	6	6
Georgia	0	0	0	0	2	0	0	4
Maryland	0	0	0	0	0	0	0	21
North Carolina	0	0	0	0	4	0	26	10
South Carolina	0	0	0	0	1	0	0	3
Virginia	0	0	0	0	3	0	0	8
West Virginia	0	0	0	0	0	0	0	6
East South Central	0	0	0	0	2	0	79	4
Alabama	0	0	0	0	3	0	0	6
Kentucky	0	0	0	0	2	0	0	26
Mississippi	0	0	0	0	2	0	179	9
Tennessee	0	0	0	0	6	0	0	5
West South Central	0	0	0	0	3	0	12	2
Arkansas	0	0	0	0	2	0	0	4
Louisiana	0	0	0	0	4	0	15	2
Oklahoma	0	0	0	0	16	0	102	27
Texas	0	0	0	0	8	0	14	2
Mountain	0	0	0	169	4	0	15	7
Colorado	0	0	0	0	349	0	70	56
Idaho	0	0	0	0	3	0	49	14
Montana	0	0	0	0	54	0	0	87
Nevada	0	0	0	169	169	0	0	20
New Mexico	0	0	0	0	0	0	0	3,020
Utah	0	0	0	0	0	0	0	11
Wyoming	0	0	0	0	0	0	0	12
Pacific Contiguous	0	0	0	88	4	0	13	2
California	0	0	0	88	11	0	13	3
Oregon	0	0	0	0	8	0	0	10
Washington	0	0	0	0	4	0	0	4
Pacific Noncontiguous	0	0	0	0	42	0	0	37
Alaska	0	0	0	0	158	0	0	66
Hawaii	0	0	0	0	42	0	0	44
U.S. Total	0	0	0	51	1	0	6	1

Displayed values of zero may represent small values that round to zero. The Excel version of this table provides additional precision which may be accessed by selecting individual cells.

Table A.6.A. Relative Standard Error for Sales of Electricity to Ultimate Customers by End-Use Sector, Census Division, and State, November 2016

Census Region and State	Residential	Commercial	Industrial	Transportation	Total
New England	0	1	4	0	1
Connecticut	0	1	5	0	1
Maine	0	1	2	0	1
Massachusetts	0	1	8	0	1
New Hampshire	0	1	5	0	1
Rhode Island	0	0	0	0	0
Vermont	1	3	8	0	2
Middle Atlantic	0	0	1	0	0
New Jersey	0	0	3	0	0
New York	0	0	2	0	0
Pennsylvania	0	0	1	0	0
East North Central	0	1	1	0	0
Illinois	0	1	2	0	1
Indiana	1	2	2	0	1
Michigan	1	2	3	0	1
Ohio	0	1	2	0	1
Wisconsin	1	3	5	0	2
West North Central	1	2	3	0	1
Iowa	2	7	4	0	3
Kansas	2	1	6	0	2
Minnesota	2	4	6	0	3
Missouri	1	1	7	0	1
Nebraska	2	7	7	0	4
North Dakota	2	4	8	0	4
South Dakota	3	9	10	0	5
South Atlantic	0	0	1	0	0
Delaware	1	2	8	0	2
District of Columbia	0	0	0	0	0
Florida	0	0	4	0	0
Georgia	1	1	3	0	1
Maryland	0	0	4	0	0
North Carolina	1	1	3	0	1
South Carolina	1	1	2	0	1
Virginia	1	0	3	0	1
West Virginia	0	1	0	0	0
East South Central	1	1	2	0	1
Alabama	1	1	2	0	1
Kentucky	1	2	4	0	2
Mississippi	2	1	4	0	2
Tennessee	1	2	5	0	1
West South Central	1	0	1	0	0
Arkansas	2	1	4	0	2
Louisiana	1	1	1	0	1
Oklahoma	1	1	4	0	1
Texas	1	0	2	0	1
Mountain	1	2	2	0	1
Arizona	1	3	3	0	1
Colorado	2	5	5	0	3
Idaho	1	5	5	0	2
Montana	2	8	7	0	4
Nevada	1	3	1	0	1
New Mexico	3	8	7	0	4
Utah	2	6	2	0	2
Wyoming	2	7	3	0	3
Pacific Contiguous	0	1	2	0	1
California	0	1	2	0	1
Oregon	1	4	8	0	3
Washington	1	4	6	0	2
Pacific Noncontiguous	1	4	3	0	2
Alaska	2	9	12	0	5
Hawaii	0	0	0	0	0
U.S. Total	0	0	1	0	0

Displayed values of zero may represent small values that round to zero. The Excel version of this table provides additional precision which may be accessed by selecting individual cells.

Table A.6.B. Relative Standard Error for Sales of Electricity to Ultimate Customers

by End-Use Sector, Census Division, and State, Year-to-Date through November 2016

Census Region and State	Residential	Commercial	Industrial	Transportation	Total
New England	0	0	3	0	0
Connecticut	0	1	4	0	1
Maine	0	1	1	0	0
Massachusetts	0	1	6	0	1
New Hampshire	0	1	3	0	1
Rhode Island	0	0	0	0	0
Vermont	1	3	6	0	2
Middle Atlantic	0	0	1	0	0
New Jersey	0	0	2	0	0
New York	0	0	2	0	0
Pennsylvania	0	0	0	0	0
East North Central	0	1	1	0	0
Illinois	0	1	1	0	0
Indiana	0	1	2	0	1
Michigan	0	1	2	0	1
Ohio	0	1	1	0	1
Wisconsin	0	2	3	0	1
West North Central	0	1	2	0	1
Iowa	1	5	3	0	2
Kansas	1	1	4	0	1
Minnesota	1	3	4	0	2
Missouri	0	1	5	0	1
Nebraska	1	5	5	0	2
North Dakota	1	3	6	0	3
South Dakota	1	7	7	0	3
South Atlantic	0	0	1	0	0
Delaware	0	1	6	0	1
District of Columbia	0	0	0	0	0
Florida	0	0	3	0	0
Georgia	1	1	2	0	1
Maryland	0	0	3	0	0
North Carolina	0	0	2	0	0
South Carolina	1	1	2	0	1
Virginia	0	0	2	0	0
West Virginia	0	0	0	0	0
East South Central	0	1	1	0	0
Alabama	1	1	1	0	1
Kentucky	0	1	3	0	1
Mississippi	1	1	3	0	1
Tennessee	0	1	3	0	1
West South Central	0	0	1	0	0
Arkansas	1	1	2	0	1
Louisiana	1	1	1	0	0
Oklahoma	1	1	3	0	1
Texas	0	0	1	0	0
Mountain	0	1	1	0	1
Arizona	0	2	2	0	1
Colorado	1	4	4	0	2
Idaho	0	3	2	0	1
Montana	1	6	5	0	2
Nevada	0	2	1	0	1
New Mexico	1	6	5	0	3
Utah	1	4	2	0	2
Wyoming	1	5	2	0	2
Pacific Contiguous	0	1	2	0	1
California	0	1	1	0	0
Oregon	0	3	6	0	2
Washington	0	3	4	0	2
Pacific Noncontiguous	1	3	2	0	1
Alaska	1	7	8	0	4
Hawaii	0	0	0	0	0
U.S. Total	0	0	0	0	0

Displayed values of zero may represent small values that round to zero. The Excel version of this table provides additional precision which may be accessed by selecting individual cells.

Table A.7.A. Relative Standard Error for Revenue from Sales of Electricity to Ultimate Customers by End-Use Sector, Census Division, and State, November 2016

Census Region and State	Residential	Commercial	Industrial	Transportation	Total
New England	0	1	2	0	0
Connecticut	0	1	3	0	0
Maine	0	1	2	0	1
Massachusetts	1	1	5	0	1
New Hampshire	0	1	4	0	1
Rhode Island	0	0	0	0	0
Vermont	2	4	7	0	2
Middle Atlantic	0	0	1	0	0
New Jersey	0	0	3	0	0
New York	0	0	2	0	0
Pennsylvania	0	0	1	0	0
East North Central	0	1	2	0	0
Illinois	1	1	3	0	1
Indiana	1	2	2	0	1
Michigan	1	1	4	0	1
Ohio	1	1	3	0	1
Wisconsin	1	3	6	0	2
West North Central	1	2	4	0	1
Iowa	2	6	8	0	3
Kansas	2	2	6	0	2
Minnesota	2	3	8	0	2
Missouri	1	2	6	0	1
Nebraska	3	7	11	0	4
North Dakota	2	4	8	0	3
South Dakota	3	7	13	0	4
South Atlantic	0	1	2	0	0
Delaware	1	3	13	0	2
District of Columbia	0	0	0	0	0
Florida	1	1	5	0	1
Georgia	1	1	4	0	1
Maryland	0	1	4	0	0
North Carolina	1	1	3	0	1
South Carolina	1	1	3	0	1
Virginia	1	1	4	0	1
West Virginia	0	1	0	0	0
East South Central	1	1	2	0	1
Alabama	1	2	3	0	1
Kentucky	1	2	4	0	1
Mississippi	2	3	5	0	2
Tennessee	1	2	5	0	1
West South Central	1	1	2	0	1
Arkansas	2	2	4	0	2
Louisiana	1	1	2	0	1
Oklahoma	2	2	6	0	2
Texas	1	1	2	0	1
Mountain	1	2	3	0	1
Arizona	1	3	5	0	1
Colorado	3	5	7	0	3
Idaho	1	4	6	0	2
Montana	3	6	15	0	4
Nevada	1	4	3	0	2
New Mexico	5	8	11	0	5
Utah	3	6	4	0	3
Wyoming	3	6	4	0	3
Pacific Contiguous	0	1	2	0	1
California	0	1	2	0	1
Oregon	1	3	10	0	2
Washington	1	3	8	0	2
Pacific Noncontiguous	1	3	3	0	1
Alaska	2	6	12	0	4
Hawaii	0	0	0	0	0
U.S. Total	0	0	1	0	0

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Table A.7.B. Relative Standard Error for Revenue from Sales of Electricity to Ultimate Customers

by End-Use Sector, Census Division, and State, Year-to-Date through November 2016

Census Region and State	Residential	Commercial	Industrial	Transportation	Total
New England	0	0	2	0	0
Connecticut	0	1	2	0	0
Maine	0	1	2	0	0
Massachusetts	0	1	4	0	1
New Hampshire	0	1	3	0	0
Rhode Island	0	0	0	0	0
Vermont	1	3	5	0	1
Middle Atlantic	0	0	1	0	0
New Jersey	0	0	2	0	0
New York	0	0	1	0	0
Pennsylvania	0	0	1	0	0
East North Central	0	0	1	0	0
Illinois	0	1	2	0	0
Indiana	1	1	1	0	1
Michigan	0	1	3	0	1
Ohio	0	1	2	0	0
Wisconsin	0	2	4	0	1
West North Central	0	1	2	0	1
Iowa	1	4	4	0	2
Kansas	1	1	4	0	1
Minnesota	1	3	5	0	1
Missouri	1	1	4	0	1
Nebraska	1	5	6	0	2
North Dakota	1	3	6	0	2
South Dakota	1	5	8	0	3
South Atlantic	0	0	1	0	0
Delaware	1	2	7	0	1
District of Columbia	0	0	0	0	0
Florida	0	1	3	0	0
Georgia	1	1	2	0	1
Maryland	0	0	2	0	0
North Carolina	1	1	2	0	1
South Carolina	1	1	2	0	1
Virginia	1	1	2	0	0
West Virginia	0	1	0	0	0
East South Central	0	1	2	0	0
Alabama	1	1	2	0	1
Kentucky	1	2	3	0	1
Mississippi	1	2	4	0	1
Tennessee	1	2	4	0	1
West South Central	0	1	1	0	0
Arkansas	1	2	3	0	1
Louisiana	1	1	1	0	1
Oklahoma	1	1	4	0	1
Texas	0	1	1	0	0
Mountain	0	1	2	0	1
Arizona	0	2	3	0	1
Colorado	1	4	5	0	2
Idaho	1	3	2	0	1
Montana	1	4	9	0	2
Nevada	0	3	1	0	1
New Mexico	1	6	9	0	3
Utah	1	4	2	0	2
Wyoming	1	5	3	0	2
Pacific Contiguous	0	1	1	0	0
California	0	1	1	0	0
Oregon	1	2	6	0	1
Washington	0	2	6	0	1
Pacific Noncontiguous	1	2	2	0	1
Alaska	2	5	8	0	3
Hawaii	0	0	0	0	0
U.S. Total	0	0	1	0	0

Displayed values of zero may represent small values that round to zero. The Excel version of this table provides additional precision which may be accessed by selecting individual cells.

Table A.8.A. Relative Standard Error for Average Price of Electricity to Ultimate Customers by End-Use Sector, Census Division, and State, November 2016

Census Region and State	Residential	Commercial	Industrial	Transportation	Total
New England	0	0	2	0	0
Connecticut	0	0	3	0	0
Maine	0	0	1	0	0
Massachusetts	1	0	4	0	1
New Hampshire	0	0	2	0	1
Rhode Island	0	0	0	0	0
Vermont	2	2	3	0	1
Middle Atlantic	0	0	0	0	0
New Jersey	0	0	1	0	0
New York	0	0	1	0	0
Pennsylvania	0	0	1	0	0
East North Central	0	0	1	0	0
Illinois	1	0	1	0	0
Indiana	1	1	1	0	1
Michigan	0	1	2	0	0
Ohio	1	0	1	0	0
Wisconsin	1	1	2	0	1
West North Central	1	1	2	0	0
Iowa	1	2	4	0	1
Kansas	1	2	3	0	1
Minnesota	1	1	3	0	1
Missouri	1	1	2	0	1
Nebraska	1	2	5	0	1
North Dakota	1	1	3	0	1
South Dakota	2	3	4	0	2
South Atlantic	0	0	1	0	0
Delaware	1	1	6	0	1
District of Columbia	0	0	0	0	0
Florida	0	1	2	0	0
Georgia	1	1	2	0	1
Maryland	0	0	1	0	0
North Carolina	1	1	2	0	1
South Carolina	1	1	2	0	1
Virginia	1	1	2	0	0
West Virginia	0	0	0	0	0
East South Central	1	1	1	0	0
Alabama	1	1	1	0	1
Kentucky	1	1	1	0	1
Mississippi	1	2	3	0	1
Tennessee	1	1	2	0	1
West South Central	0	1	1	0	0
Arkansas	1	2	2	0	1
Louisiana	1	1	1	0	1
Oklahoma	1	2	3	0	1
Texas	1	1	1	0	0
Mountain	0	1	1	0	0
Arizona	1	1	2	0	1
Colorado	1	1	3	0	1
Idaho	1	1	2	0	1
Montana	1	3	9	0	1
Nevada	0	2	2	0	1
New Mexico	2	2	6	0	2
Utah	1	1	2	0	1
Wyoming	2	2	2	0	1
Pacific Contiguous	0	1	1	0	0
California	0	0	1	0	0
Oregon	1	1	3	0	1
Washington	1	2	3	0	1
Pacific Noncontiguous	1	2	1	0	1
Alaska	1	4	5	0	2
Hawaii	0	0	0	0	0
U.S. Total	0	0	0	0	0

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Table A.8.B. Relative Standard Error for Average Price of Electricity to Ultimate Customers

by End-Use Sector, Census Division, and State, Year-to-Date through November 2016

Census Region and State	Residential	Commercial	Industrial	Transportation	Total
New England	0	0	3	0	0
Connecticut	0	1	4	0	1
Maine	0	1	2	0	1
Massachusetts	0	1	7	0	1
New Hampshire	0	1	4	0	1
Rhode Island	0	0	0	0	0
Vermont	1	3	7	0	2
Middle Atlantic	0	0	1	0	0
New Jersey	0	0	3	0	0
New York	0	0	2	0	0
Pennsylvania	0	0	1	0	0
East North Central	0	1	1	0	0
Illinois	0	1	2	0	1
Indiana	0	2	2	0	1
Michigan	0	2	3	0	1
Ohio	0	1	2	0	1
Wisconsin	0	3	4	0	2
West North Central	0	2	3	0	1
Iowa	1	6	5	0	2
Kansas	1	1	5	0	1
Minnesota	0	4	6	0	2
Missouri	0	1	6	0	1
Nebraska	1	6	7	0	3
North Dakota	1	4	7	0	3
South Dakota	1	8	10	0	4
South Atlantic	0	0	1	0	0
Delaware	1	2	9	0	2
District of Columbia	0	0	0	0	0
Florida	0	1	4	0	0
Georgia	1	1	3	0	1
Maryland	0	0	4	0	0
North Carolina	1	1	2	0	1
South Carolina	1	1	2	0	1
Virginia	0	1	3	0	1
West Virginia	0	1	0	0	0
East South Central	0	1	2	0	1
Alabama	1	1	2	0	1
Kentucky	1	2	4	0	1
Mississippi	1	2	4	0	1
Tennessee	0	2	5	0	1
West South Central	0	1	1	0	0
Arkansas	1	2	3	0	1
Louisiana	1	1	1	0	1
Oklahoma	1	1	4	0	1
Texas	0	1	2	0	0
Mountain	0	2	2	0	1
Arizona	0	2	4	0	1
Colorado	1	5	6	0	2
Idaho	0	4	3	0	1
Montana	1	6	10	0	3
Nevada	0	3	1	0	1
New Mexico	1	8	9	0	4
Utah	1	5	3	0	2
Wyoming	1	6	3	0	2
Pacific Contiguous	0	1	2	0	1
California	0	1	2	0	1
Oregon	0	4	8	0	2
Washington	0	3	6	0	2
Pacific Noncontiguous	1	4	3	0	2
Alaska	2	8	11	0	4
Hawaii	0	0	0	0	0
U.S. Total	0	0	1	0	0

Displayed values of zero may represent small values that round to zero. The Excel version of this table provides additional precision which may be accessed by selecting individual cells.

Table B.1 Major Disturbances and Unusual Occurrences, Year-to-Date 2016

Year	Month	Event Date and Time	Restoration Date and Time	Duration	Utility/Power Pool	NERC Region	Area Affected	Type of Disturbance	Loss (megawatts)	Number of Customers Affected
2016	1	01/10/2016 8:46 PM	01/11/2016 5:25 AM	8 Hours, 39 Minutes	ISO New England	NPCC	Maine: Connecticut; Massachusetts: Vermont; New Hampshire: Rhode Island;	Loss of electric service to more than 50,000 customers for 1 hour or more-Weather	Unknown	59859
2016	1	01/22/2016 3:52 PM	01/24/2016 12:30 PM	44 Hours, 38 Minutes	Duke Energy Progress	SERC	North Carolina: South Carolina:	Loss of electric service to more than 50,000 customers for 1 hour or more-Weather	Unknown	150000
2016	1	01/23/2016 7:49 AM	01/23/2016 9:05 AM	1 Hours, 16 Minutes	FirstEnergy Corp. Jersey Central Power & Light	RFC	New Jersey:	Loss of electric service to more than 50,000 customers for 1 hour or more-Weather	Unknown	50900
2016	2	02/05/2016 11:21 AM	02/06/2016 3:48 PM	28 Hours, 27 Minutes	ISO New England	NPCC	Connecticut: Massachusetts: Rhode Island:	Loss of electric service to more than 50,000 customers for 1 hour or more-Weather	Unknown	115057
2016	2							Electrical System Separation (Islanding) where part or parts of a power grid remain(s) operational in an otherwise blacked out area or within the partial failure of an integrated electrical system-Islanding		
2016	2	02/13/2016 12:44 PM	02/13/2016 4:27 PM	3 Hours, 43 Minutes	Pacific Gas & Electric Co	SERC	California		7	4300
2016	2	02/16/2016 8:35 AM	02/16/2016 5:28 PM	8 Hours, 53 Minutes	American Electric Power - (RFC Reliability Region) (8400 Smiths Mill Road, New Albany Ohio 43054)	RFC	Virginia: Roanoke County; Montgomery County; West Virginia: Kanawha County; Cabell County; Tennessee: Sullivan County:	Loss of electric service to more than 50,000 customers for 1 hour or more-Weather	Unknown	52640
2016	2	02/19/2016 10:00 PM	02/20/2016 11:13 PM	25 Hours, 13 Minutes	Detroit Edison Co	RFC	Michigan	Loss of electric service to more than 50,000 customers for 1 hour or more-Weather	Unknown	145314
2016	2	02/24/2016 2:45 PM	02/25/2016 5:00 AM	14 Hours, 15 Minutes	Duke Energy Carolinas	SERC	North Carolina: South Carolina	Loss of electric service to more than 50,000 customers for 1 hour or more-Weather	400	284610
2016	2	02/25/2016 1:44 AM	02/25/2016 2:45 PM	13 Hours, 1 Minutes	ISO New England	NPCC	Connecticut: Maine; Massachusetts: Rhode Island; Vermont:	Loss of electric service to more than 50,000 customers for 1 hour or more-Weather	Unknown	114190
2016	2	02/26/2016 12:01 AM	ongoing	ongoing	California Department of Water Resources	WECC	California: San Bernardino County	Fuel supply emergencies that could impact electric power system adequacy or reliability- Fuel Supply Deficiency	0	0
2016	3	03/01/2016 3:00 PM	ongoing	ongoing	Puget Sound Energy	WECC	Washington: King County; Whatcom County; Kitsap County; Skagit County:	Loss of electric service to more than 50,000 customers for 1 hour or more-Weather	Unknown	56000
2016	3	03/03/2016 11:00 AM	04/16/2016 7:47 PM	1,064 Hours, 47 Minutes	California Department of Water Resources	WECC	California: San Bernardino County:	Fuel supply emergencies that could impact electric power system adequacy or reliability- Fuel Supply Deficiency	0	0
2016	3	03/23/2016 5:00 AM	03/25/2016 11:59 PM	66 Hours, 59 Minutes	Xcel Energy/Public Service Company of Colorado	WECC	Colorado: Denver, City and County of [12]:	Loss of electric service to more than 50,000 customers for 1 hour or more-Weather	0	0
2016	4	04/02/2016 11:08 AM	04/02/2016 11:33 AM	0 Hours, 25 Minutes	California Department of Water Resources	WECC	California	Uncontrolled loss of 300 Megawatts or more of firm system loads for more than 15 minutes from a single incident- System Operations	360	0
2016	4	04/18/2016 5:05 AM	04/20/2016 7:55 AM	50 Hours, 50 Minutes	CenterPoint Energy	TRE	Texas: Harris County	Loss of electric service to more than 50,000 customers for 1 hour or more-Weather	Unknown	415103
2016	4	04/27/2016 5:50 AM	04/28/2016 1:35 AM	19 Hours, 45 Minutes	CenterPoint Energy	TRE	Texas: Harris County	Loss of electric service to more than 50,000 customers for 1 hour or more-Weather	Unknown	214864
2016	5	05/08/2016 9:12 AM	ongoing	ongoing	Peak Reliability	WECC	Washington: Clark County:	Electrical System Separation (Islanding) where part or parts of a power grid remain(s) operational in an otherwise blacked out area or within the partial failure of an integrated electrical system-Islanding	Unknown	Unknown
2016	5	05/10/2016 8:45 PM	05/13/2016 3:00 AM	54 Hours, 15 Minutes	Oncor Electric Delivery Company LLC	TRE	Texas: Dallas County, Tarrant County, Parker County:	Loss of electric service to more than 50,000 customers for 1 hour or more-Distribution Interruption	Unknown	85000
2016	5	05/19/2016 9:36 PM	05/20/2016 1:00 AM	3 Hours, 24 Minutes	Pacificorp	WECC	Utah:	Uncontrolled loss of 300 Megawatts or more of firm system loads for more than 15 minutes from a single incident- System Operations	461	85179
2016	5	05/20/2016 12:00 AM	05/22/2016 5:00 AM	53 Hours, 0 Minutes	Entergy Services, Inc.	SERC	Louisiana:	Loss of electric service to more than 50,000 customers for 1 hour or more-Distribution Interruption	Unknown	85000
2016	5	05/20/2016 1:15 AM	.	. Hours, . Minutes	Entergy Transmission - SOC	SERC	Louisiana:	Loss of electric service to more than 50,000 customers for 1 hour or more-Weather	Unknown	57184
2016	5	05/31/2016 7:30 AM	06/13/2016 7:27 AM	311 Hours, 57 Minutes	Upstate New York Power Producers	NPCC	New York: Tompkins County:	Fuel supply emergencies that could impact electric power system adequacy or reliability- Fuel Supply Deficiency	150	Unknown
2016	6	06/17/2016 3:40 PM	06/18/2016 8:34 AM	16 Hours, 54 Minutes	Southern Company	SERC	Georgia, Alabama, Mississippi, Florida:	Loss of electric service to more than 50,000 customers for 1 hour or more-Weather	304	91260
2016	7	07/05/2016 2:45 AM	07/06/2016 3:00 AM	24 Hours, 15 Minutes	Oncor Electric Delivery Company LLC	TRE	Texas: Dallas County, Tarrant County	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	52000
2016	7	07/05/2016 5:30 PM	07/06/2016 4:00 PM	22 Hours, 30 Minutes	Northern States Power Co	MRO	Minnesota, Wisconsin	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	250000
2016	7	07/07/2016 4:20 AM	07/07/2016 8:00 AM	3 Hours, 40 Minutes	Kansas City Power & Light Co	SERC	Kansas: Johnson County; Missouri: Jackson County; Platte County, Cass County; Buchanan County, Atchison County, Andrew County, Clay County, Nodaway County	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	58500
2016	7	07/08/2016 6:00 PM	ongoing	ongoing	American Electric Power - (RFC Reliability Region) (8400 Smiths Mill Road, New Albany Ohio 43054)	RFC	West Virginia: Virginia: Wayne County, Oakland County, Macomb County, St. Clair County, Lapeer County, Tuscola County, Sanilac County, Huron County	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	62961
2016	7	07/08/2016 7:00 PM	07/09/2016 12:00 AM	5 Hours, 0 Minutes	Detroit Edison Co	RFC		Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	160895
2016	7	07/08/2016 8:50 PM	07/09/2016 7:25 PM	22 Hours, 35 Minutes	Duke Energy Carolinas	SERC	North Carolina	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	600	203345
2016	7	07/09/2016 5:45 PM	07/11/2016 2:00 PM	44 Hours, 15 Minutes	Oncor Electric Delivery Company LLC	TRE	Texas: Dallas County	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	62000

Table B.1 Major Disturbances and Unusual Occurrences, Year-to-Date 2016

Year	Month	Event Date and Time	Restoration Date and Time	Duration	Utility/Power Pool	NERC Region	Area Affected	Type of Disturbance	Loss (megawatts)	Number of Customers Affected
2016	7	07/12/2016 2:10 PM	07/12/2016 8:33 PM	6 Hours, 23 Minutes	Puerto Rico Electric Power Authority	PR	Puerto Rico	Voltage Reduction-System Operations	450	218000
2016	7	07/13/2016 3:00 PM	ongoing	ongoing	Memphis Light Gas and Water Division	SERC	Tennessee: Shelby County	Public Appeal-System Operations	Unknown	Unknown
2016	7	07/14/2016 2:44 PM	07/15/2016 4:00 AM	13 Hours, 16 Minutes	American Electric Power - (SPP Reliability Region)	SPP	Oklahoma	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	96966
2016	7	07/14/2016 4:30 PM	07/16/2016 12:00 AM	31 Hours, 30 Minutes	Entergy Services, Inc.	SPP, SERC	Arkansas: Louisiana: Mississippi: Texas	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	170244
2016	7	07/14/2016 5:30 PM	07/16/2016 8:00 PM	50 Hours, 30 Minutes	Oklahoma Gas & Electric Co	SPP	Oklahoma: Arkansas	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	7300
2016	7	07/19/2016 3:45 PM	07/19/2016 7:25 PM	3 Hours, 40 Minutes	Pacificorp	WECC	Idaho	Islanding, Uncontrolled Loss 300+ MW-System Operations	485	Unknown
2016	7	07/19/2016 3:45 PM	07/19/2016 7:29 PM	3 Hours, 44 Minutes	Bonneville Power Administration	WECC	Idaho	Islanding, Uncontrolled Loss 300+ MW-System Operations	290	Unknown
2016	7	07/21/2016 7:21 PM	07/22/2016 12:09 AM	4 Hours, 48 Minutes	Puerto Rico Electric Power Authority	PR	Puerto Rico	Load Shed 100+ MW, Voltage Reduction-System Operations	200	266000
2016	7	07/22/2016 11:50 PM	07/23/2016 9:10 AM	9 Hours, 20 Minutes	ISO New England	NPCC	Massachusetts: Connecticut: Rhode Island: New Hampshire: Vermont: Maine	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	57058
2016	7	07/23/2016 3:15 PM	07/23/2016 7:53 PM	4 Hours, 38 Minutes	CAmbria Cogen Company	RFC	Pennsylvania: Cambria County	Voltage Reduction-System Operations	87	Unknown
2016	7	07/23/2016 7:30 PM	07/24/2016 7:30 AM	12 Hours, 0 Minutes	ISO New England	NPCC	Connecticut: Massachusetts: New Hampshire: Vermont: Rhode Island	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	101073
2016	7	07/25/2016 6:51 PM	07/26/2016 2:19 AM	7 Hours, 28 Minutes	Puerto Rico Electric Power Authority	PR	Puerto Rico	Voltage Reduction-System Operations	0	0
2016	7	07/26/2016 6:51 PM	07/27/2016 1:45 AM	6 Hours, 54 Minutes	Puerto Rico Electric Power Authority	PR	Puerto Rico	Voltage Reduction-System Operations	25	37100
2016	7	07/27/2016 6:50 PM	07/28/2016 1:38 AM	6 Hours, 48 Minutes	Puerto Rico Electric Power Authority	PR	Puerto Rico	Voltage Reduction-System Operations	80	106300
2016	7	07/28/2016 6:51 PM	07/29/2016 2:02 AM	7 Hours, 11 Minutes	Puerto Rico Electric Power Authority	PR	Puerto Rico	Voltage Reduction-System Operations	22	21600
2016	7	07/29/2016 7:09 PM	07/29/2016 7:57 PM	0 Hours, 48 Minutes	Puerto Rico Electric Power Authority	PR	Puerto Rico	Voltage Reduction-System Operations	0	0
2016	8	08/07/2016 6:39 PM	08/07/2016 8:27 PM	1 Hours, 48 Minutes	Peak Reliability	WECC	New Mexico: Bernalillo County	Uncontrolled loss of 300 Megawatts or more of firm system loads for more than 15 minutes from a single incident-System Operations	Unknown	Unknown
2016	8	08/10/2016 6:00 AM	ongoing	ongoing	California Department of Water Resources	WECC	California: Butte County	Fuel supply emergencies that could impact electric power system adequacy or reliability-Fuel Supply Deficiency	0	0
2016	8	08/11/2016 4:30 PM	08/11/2016 7:15 PM	2 Hours, 45 Minutes	FirstEnergy Corp	RFC	Ohio	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	62140
2016	8	08/13/2016 11:42 AM	08/13/2016 2:07 PM	2 Hours, 25 Minutes	Broad River Energy, LLC	SERC	South Carolina	Uncontrolled loss of 300 Megawatts or more of firm system loads for more than 15 minutes from a single incident-System Operations	506	0
2016	8	08/23/2016 5:00 PM	08/24/2016 12:05 AM	7 Hours, 5 Minutes	CenterPoint Energy	TRE	Texas: Harris County	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	72200
2016	8	08/24/2016 6:13 PM	08/24/2016 7:14 PM	1 Hours, 1 Minutes	Puerto Rico Electric Power Authority	PR	Puerto Rico	Uncontrolled loss of 300 Megawatts or more of firm system loads for more than 15 minutes from a single incident-System Operations	600	400000
2016	8	08/24/2016 7:18 PM	08/24/2016 7:47 PM	0 Hours, 29 Minutes	Peak Reliability	WECC	Washington: King County	Electrical System Separation (Islanding) where part or parts of a power grid remain(s) operational in an otherwise blacked out area or within the partial failure of an integrated electrical system-Islanding	9232	Unknown
2016	8	08/31/2016 9:45 AM	08/31/2016 9:55 AM	0 Hours, 10 Minutes	Peak Reliability	WECC	Colorado	Electrical System Separation (Islanding) where part or parts of a power grid remain(s) operational in an otherwise blacked out area or within the partial failure of an integrated electrical system-Transmission Interruption	0	0
2016	8	08/31/2016 2:52 PM	ongoing	ongoing	Peak Reliability	WECC	Washington: Clark County	Electrical System Separation (Islanding) where part or parts of a power grid remain(s) operational in an otherwise blacked out area or within the partial failure of an integrated electrical system-Islanding	0	0
2016	9	09/01/2016 10:00 PM	ongoing	ongoing	Seminole Electric Cooperative Inc	FRCC	Florida	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	100	Unknown
2016	9	09/02/2016 12:40 AM	09/04/2016 8:00 PM	67 Hours, 20 Minutes	City of Tallahassee - (FL)	FRCC	Florida: Leon County, Wakulla County	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	450	75000
2016	9	09/02/2016 4:00 AM	09/02/2016 4:00 PM	12 Hours, 0 Minutes	Duke Energy Florida	FRCC	Florida: Alachua County, Bay County, Citrus County, Columbia County, Dixie County, Franklin County, Gilchrist County, Gulf County, Hamilton County, Hardee County, Hernando County, Highlands County, Jefferson County, Lafayette County, Lake County, Levy County, Madison County, Marion County, Orange County, Osceola County, Pasco County, Pinellas County, Polk County, Seminole County, Sumter County, Su	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	225	90000
2016	9	09/02/2016 5:45 AM	09/03/2016 12:30 AM	18 Hours, 45 Minutes	Southern Company	SERC	Georgia	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	57000

Table B.1 Major Disturbances and Unusual Occurrences, Year-to-Date 2016

Year	Month	Event Date and Time	Restoration Date and Time	Duration	Utility/Power Pool	NERC Region	Area Affected	Type of Disturbance	Loss (megawatts)	Number of Customers Affected
2016	9	09/06/2016 6:12 PM	09/06/2016 9:24 PM	3 Hours, 12 Minutes	Peak Reliability	WECC	Washington: Clark County:	Electrical System Separation (Islanding) where part or parts of a power grid remain(s) operational in an otherwise blacked out area or within the partial failure of an integrated electrical system-Islanding	300	Unknown
2016	9	09/08/2016 8:30 AM	09/25/2016 12:00 AM	399 Hours, 30 Minutes	Upstate New York Power Producers	NPCC	New York: Tompkins County:	Fuel supply emergencies that could impact electric power system adequacy or reliability-Fuel Supply Deficiency	210	Unknown
2016	9	09/08/2016 2:49 PM	09/08/2016 3:03 PM	0 Hours, 14 Minutes	Peak Reliability	WECC	Washington:	Electrical System Separation (Islanding) where part or parts of a power grid remain(s) operational in an otherwise blacked out area or within the partial failure of an integrated electrical system-Islanding	0	0
2016	9	09/10/2016 9:42 AM	09/10/2016 9:57 AM	0 Hours, 15 Minutes	Peak Reliability	WECC	Washington: Clark County:	Load shedding of 100 Megawatts or more implemented under emergency operational policy-Generation Inadequacy	135	Unknown
2016	9	09/11/2016 12:05 PM	09/11/2016 3:10 PM	3 Hours, 5 Minutes	ISO New England	NPCC	Connecticut: Massachusetts: New Hampshire: Rhode Island: Vermont: Maine:	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	57960
2016	9	09/12/2016 12:30 PM	09/12/2016 5:56 PM	5 Hours, 26 Minutes	Public Service Company of New Mexico	WECC	New Mexico: Bernalillo County, Sandoval County, Santa Fe County, Valencia County:	Load shedding of 100 Megawatts or more implemented under emergency operational policy-Generation Inadequacy	110	53753
2016	9	09/21/2016 2:30 PM	09/24/2016 2:30 AM	60 Hours, 0 Minutes	Puerto Rico Electric Power Authority		Puerto Rico:	Complete operational failure or shut-down of the transmission and/or distribution electrical system-System Operations	2750	1475000
2016	9	09/22/2016 10:56 AM	09/22/2016 11:41 AM	0 Hours, 45 Minutes	Cedar Falls Utilities	MRO	Iowa: Black Hawk County:	Complete operational failure or shut-down of the transmission and/or distribution electrical system-System Operations	69	19124
2016	10	10/02/2016 11:30 PM	10/05/2016 8:00 AM	56 Hours, 30 Minutes	Pacificorp	WECC	Utah:	Public appeal to reduce the use of electricity for purposes of maintaining the continuity of the electric power system-Transmission Interruption	50	4000
2016	10	10/03/2016 3:09 PM	10/04/2016 7:00 PM	27 Hours, 51 Minutes	ERCOT	TRE	Texas:	Public appeal to reduce the use of electricity for purposes of maintaining the continuity of the electric power system-Public Appeal	Unknown	Unknown
2016	10	10/05/2016 11:32 AM	10/05/2016 7:00 PM	7 Hours, 28 Minutes	ERCOT	TRE	Texas:	Public appeal to reduce the use of electricity for purposes of maintaining the continuity of the electric power system-Public Appeal	Unknown	Unknown
2016	10	10/06/2016 9:50 AM	10/06/2016 7:00 PM	9 Hours, 10 Minutes	ERCOT	TRE	Texas:	Public appeal to reduce the use of electricity for purposes of maintaining the continuity of the electric power system-Public Appeal	Unknown	Unknown
2016	10	10/06/2016 7:30 PM	10/08/2016 6:00 PM	46 Hours, 30 Minutes	Florida Power & Light	FRCC	Florida:	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	5600	1200000
2016	10	10/07/2016 8:00 AM	10/09/2016 1:00 PM	53 Hours, 0 Minutes	Duke Energy Florida	FRCC	Florida: Alachua County, Bay County, Citrus County, Columbia County, Dixie County, Franklin County, Gilchrist County, Gulf County, Hamilton County, Hardee County, Hernando County, Highlands County, Jefferson County, Lafayette County, Lake County, Levy County, Madison County, Marion County, Orange County, Osceola County, Pasco County, Pinellas County, Polk County, Seminole County, Sumter County, Su	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	413	165000
2016	10	10/07/2016 11:08 AM	10/07/2016 7:00 PM	7 Hours, 52 Minutes	ERCOT	TRE	Texas:	Public appeal to reduce the use of electricity for purposes of maintaining the continuity of the electric power system-Generation Inadequacy	Unknown	Unknown
2016	10	10/07/2016 4:22 PM	10/12/2016 11:00 AM	114 Hours, 38 Minutes	Southern Company	SERC	Georgia:	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	122	36384
2016	10	10/07/2016 10:45 PM	ongoing	ongoing	Seminole Electric Cooperative Inc	FRCC	Florida:	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	Unknown
2016	10	10/08/2016 1:10 AM	ongoing	ongoing	South Carolina Electric and Gas	SERC	South Carolina:	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	1050	290824
2016	10	10/08/2016 8:21 AM	10/13/2016 5:30 PM	129 Hours, 9 Minutes	Duke Energy Progress	SERC	North Carolina: South Carolina:	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	Unknown
2016	10	10/10/2016 1:15 PM	10/10/2016 7:00 PM	5 Hours, 45 Minutes	ERCOT	TRE	Texas:	Public appeal to reduce the use of electricity for purposes of maintaining the continuity of the electric power system-Generation Inadequacy	Unknown	Unknown
2016	10	10/28/2016 1:29 PM	10/28/2016 1:38 PM	0 Hours, 9 Minutes	Pacific Gas & Electric Co	WECC	California: Plumas County:	Electrical System Separation (Islanding) where part or parts of a power grid remain(s) operational in an otherwise blacked out area or within the partial failure of an integrated electrical system-Islanding	4	482
2016	11	11/09/2016 11:59 AM	11/09/2016 6:15 PM	6 Hours, 16 Minutes	Modesto Irrigation District	WECC	California: Stanislaus County, San Joaquin County, Alameda County, Tuolumne County:	Cyber event that could potentially impact electric power system adequacy or reliability-Cyber Attack	0	0

Table B.1 Major Disturbances and Unusual Occurrences, Year-to-Date 2016

Year	Month	Event Date and Time	Restoration Date and Time	Duration	Utility/Power Pool	NERC Region	Area Affected	Type of Disturbance	Loss (megawatts)	Number of Customers Affected
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Note: Customers affected are estimates and are preliminary. Source: Form OE-417, 'Electric Emergency Incident and Disturbance Report.'

Table B.2 Major Disturbances and Unusual Occurrences, 2015

Year	Month	Event Date and Time	Restoration Date and Time	Duration	Utility/Power Pool	NERC Region	Area Affected	Type of Disturbance	Loss (megawatts)	Number of Customers Affected
2015	1	01/07/2015 5:00 PM	01/08/2015 8:35 AM	15 Hours, 35 Minutes	Memphis Light Gas and Water Division	SERC	Tennessee	Public appeal to reduce the use of electricity - Severe Weather - Winter	Unknown	Unknown
2015	1	01/07/2015 5:00 PM	01/08/2015 8:35 AM	15 Hours, 35 Minutes	Tennessee Valley Authority	SERC	Tennessee, Kentucky, Virginia, North Carolina, Georgia, Alabama, Missouri	Public appeal to reduce the use of electricity - Severe Weather - Winter	Unknown	Unknown
2015	2	02/06/2015 8:58 PM	. .	. Hours, . Minutes	Pacific Gas & Electric Co	WECC	Northern California	Loss of electric service to more than 50,000 customers for 1 hour or more - Severe Weather - Wind	Unknown	65000
2015	2	02/16/2015 9:00 PM	02/18/2015 2:00 PM	41 Hours, 0 Minutes	Tennessee Valley Authority	SERC	Tennessee, Kentucky, Virginia, North Carolina, Georgia, Alabama, Missouri	Loss of electric service to more than 50,000 customers for 1 hour or more - Severe Weather - Winter	Unknown	67189
2015	2	02/16/2015 9:41 PM	02/18/2015 7:00 AM	33 Hours, 19 Minutes	Southern Company	SERC	Northern/North Eastern Georgia	Loss of electric service to more than 50,000 customers for 1 hour or more - Severe Weather - Winter	620	186035
2015	2	02/17/2015 2:12 AM	02/18/2015 4:00 PM	37 Hours, 48 Minutes	Duke Energy Carolinas	SERC	North Carolina, South Carolina	Loss of electric service to more than 50,000 customers for 1 hour or more - Severe Weather - Winter	Unknown	68000
2015	2	02/17/2015 9:00 AM	02/18/2015 11:00 PM	38 Hours, 0 Minutes	Duke Energy Progress	SERC	North Carolina, South Carolina	Loss of electric service to more than 50,000 customers for 1 hour or more - Severe Weather - Winter	Unknown	52000
2015	2	02/18/2015 3:00 PM	02/20/2015 9:00 AM	42 Hours, 0 Minutes	Tennessee Valley Authority	SERC	Tennessee, Kentucky, Virginia, North Carolina, Georgia, Alabama, Missouri	Public appeal to reduce the use of electricity - Severe Weather - Winter	Unknown	Unknown
2015	2	02/20/2015 6:00 AM	02/20/2015 10:00 AM	4 Hours, 0 Minutes	Duke Energy Progress	SERC	North Carolina, South Carolina	System-wide voltage reductions of 3 percent or more - Severe Weather - Winter	Unknown	Unknown
2015	2	02/21/2015 8:34 AM	02/21/2015 12:45 PM	4 Hours, 11 Minutes	Tennessee Valley Authority	SERC	Fentress County, Tennessee	Loss of electric service to more than 50,000 customers for 1 hour or more - Severe Weather - Winter	Unknown	50000
2015	2	02/26/2015 3:12 AM	02/26/2015 8:00 PM	16 Hours, 48 Minutes	Duke Energy Progress	SERC	North Carolina, South Carolina	Loss of electric service to more than 50,000 customers for 1 hour or more - Severe Weather - Winter	Unknown	124000
2015	2	02/26/2015 3:30 AM	02/27/2015 12:00 PM	32 Hours, 30 Minutes	Duke Energy Carolinas	SERC	North Carolina	Loss of electric service to more than 50,000 customers for 1 hour or more - Severe Weather - Winter	400	103776
2015	3	03/15/2015 3:30 PM	03/15/2015 7:00 PM	3 Hours, 30 Minutes	Portland General Electric Co	WECC	Greater Portland & Salem, Oregon	Loss of electric service to more than 50,000 customers for 1 hour or more - Severe Weather - Wind	210	71000
2015	3	03/26/2015 3:21 PM	03/26/2015 4:59 PM	1 Hours, 38 Minutes	Pacific Gas & Electric Co	WECC	Contra Costa County, California	Electrical System Separation (Islanding) where part or parts of a power grid remain(s) operational - System Operations	15	Unknown
2015	4	04/03/2015 2:00 AM	04/03/2015 7:48 AM	5 Hours, 48 Minutes	Westar Energy Inc	SPP	Harvey, Reno, and Sedgwick Counties, Kansas	Loss of electric service to more than 50,000 customers for 1 hour or more - Severe Weather - Thunderstorms	Unknown	70000
2015	4	04/06/2015 8:12 AM	04/06/2015 12:08 PM	3 Hours, 56 Minutes	Pacific Gas & Electric Co	WECC	Butte County, California	Loss of electric service to more than 50,000 customers for 1 hour or more - System Operations	Unknown	80000
2015	4	04/07/2015 12:30 PM	04/07/2015 5:34 PM	5 Hours, 4 Minutes	Potomac Electric Power Co	RFC	Unknown	Uncontrolled loss of 300 Megawatts or more of firm system loads for more than 15 minutes from a single incident - System Operations	Unknown	Unknown
2015	4	04/07/2015 3:34 PM	04/07/2015 3:46 PM	0 Hours, 12 Minutes	WAPA Sierra Nevada Region	WECC	California	Electrical System Separation (Islanding) where part or parts of a power grid remain(s) operational - System Operations	0	0
2015	4	04/17/2015 9:16 AM	04/17/2015 11:00 AM	1 Hours, 44 Minutes	Peak Reliability	WECC	Canada	Electrical System Separation (Islanding) where part or parts of a power grid remain(s) operational - System Operations	9300	Unknown
2015	4	04/17/2015 9:30 PM	04/19/2015 11:50 PM	50 Hours, 20 Minutes	CenterPoint Energy	TRE	Houston, Texas	Loss of electric service to more than 50,000 customers for 1 hour or more - Severe Weather	Unknown	280982
2015	4	04/18/2015 9:00 PM	04/21/2015 4:00 AM	55 Hours, 0 Minutes	Oncor Electric Delivery Company LLC	TRE	Dallas, Fort Worth, Texas	Loss of electric service to more than 50,000 customers for 1 hour or more - Severe Weather	Unknown	89000
2015	4	04/24/2015 7:10 PM	04/26/2015 4:00 PM	44 Hours, 50 Minutes	Oncor Electric Delivery Company LLC	TRE	Dallas, Fort Worth, Texas	Loss of electric service to more than 50,000 customers for 1 hour or more - Severe Weather	Unknown	57000
2015	4	04/27/2015 10:30 AM	04/28/2015 6:45 PM	32 Hours, 15 Minutes	Entergy Services, Inc.	SERC	Louisiana and Texas	Loss of electric service to more than 50,000 customers for 1 hour or more - Severe Weather	Unknown	199000
2015	5	05/18/2015 3:28 PM	05/18/2015 3:47 PM	0 Hours, 19 Minutes	Peak Reliability for BCHA	WECC	Washington	Electrical System Separation (Islanding) where part or parts of a power grid remain(s) operational - Severe Weather	275	0
2015	5	05/25/2015 6:00 PM	05/29/2015 7:15 AM	85 Hours, 15 Minutes	Oncor Electric Delivery Company LLC	TRE	North Texas	Loss of electric service to more than 50,000 customers for 1 hour or more - Severe Weather	Unknown	454000
2015	5	05/25/2015 8:30 PM	. .	. Hours, . Minutes	Southwest Power Pool, Inc.	SPP	Texas, Louisiana, Arkansas	Loss of electric service to more than 50,000 customers for 1 hour or more - Severe Weather	Unknown	57351
2015	5	05/25/2015 8:30 PM	05/26/2015 6:30 PM	22 Hours, 0 Minutes	American Electric Power - (SPP Reliability Region)	SPP	Texas	Loss of electric service to more than 50,000 customers for 1 hour or more - Severe Weather	Unknown	57531
2015	5	05/25/2015 10:45 PM	05/28/2015 1:25 AM	50 Hours, 40 Minutes	CenterPoint Energy	TRE	Fort Bend County, & Harris County, Texas	Loss of electric service to more than 50,000 customers for 1 hour or more - Severe Weather	Unknown	61000
2015	5	05/26/2015 5:30 AM	05/27/2015 7:00 PM	37 Hours, 30 Minutes	Entergy Services, Inc.	SERC	Texas, Louisiana, Arkansas, Mississippi	Loss of electric service to more than 50,000 customers for 1 hour or more - Severe Weather	Unknown	78515
2015	6	06/01/2015 7:19 PM	06/02/2015 8:36 AM	13 Hours, 17 Minutes	Pacific Gas & Electric Co	WECC	California	Electrical System Separation (Islanding) where part or parts of a power grid remain(s) operational - System Operations	5	484
2015	6	06/02/2015 6:58 PM	06/02/2015 7:24 PM	0 Hours, 26 Minutes	Pacific Gas & Electric Co	WECC	California	Electrical System Separation (Islanding) where part or parts of a power grid remain(s) operational - System Operations	5	727

Table B.2 Major Disturbances and Unusual Occurrences, 2015

Year	Month	Event Date and Time	Restoration Date and Time	Duration	Utility/Power Pool	NERC Region	Area Affected	Type of Disturbance	Loss (megawatts)	Number of Customers Affected
2015	6	06/03/2015 3:00 PM	06/05/2015 5:00 PM	50 Hours, 0 Minutes	ERCOT	TRE	Texas	Public appeal to reduce the use of electricity - System Operations	Unknown	Unknown
2015	6	06/07/2015 1:52 PM	06/07/2015 2:13 PM	0 Hours, 21 Minutes	Tennessee Valley Authority	SERC	Tennessee	Uncontrolled loss of 300 Megawatts or more of firm system loads for more than 15 minutes from a single incident - System Operations	Unknown	Unknown
2015	6	06/07/2015 1:54 PM	06/07/2015 2:13 PM	0 Hours, 19 Minutes	Memphis Light Gas and Water Division	SERC	Shelby County, Tennessee	Uncontrolled loss of 300 Megawatts or more of firm system loads for more than 15 minutes from a single incident and System-wide voltage reductions of 3 percent or more - System Operations	926	Unknown
2015	6	06/08/2015 12:00 AM Hours, . Minutes	California Department of Water Resources	WECC	Merced County, California	Fuel supply emergencies that could impact electric power system adequacy or reliability - System Operations	176	Unknown
2015	6	06/23/2015 5:06 PM	06/26/2015 4:00 PM	70 Hours, 54 Minutes	Delmarva Power & Light Company	RFC	New Castle County, Delaware	Loss of electric service to more than 50,000 customers for 1 hour or more - Severe Weather	Unknown	65000
2015	6	06/23/2015 5:30 PM	06/23/2015 7:00 PM	1 Hours, 30 Minutes	Exelon Corporation / PECO	RFC	Delaware County, PA; Chester County, PA	Loss of electric service to more than 50,000 customers for 1 hour or more - Severe Weather	Unknown	200000
2015	6	06/23/2015 6:00 PM	06/30/2015 6:00 PM	168 Hours, 0 Minutes	Atlantic City Electric Co	RFC	Gloucester County, Burlington County, Atlantic County, Cape May County, New Jersey	Loss of electric service to more than 50,000 customers for 1 hour or more - Severe Weather	Unknown	263000
2015	6	06/23/2015 6:18 PM	06/23/2015 8:30 PM	2 Hours, 12 Minutes	PJM Interconnection	RFC	New Jersey	Load shedding of 100 Megawatts or more implemented under emergency operational policy and Loss of electric service to more than 50,000 customers for 1 hour or more - System Operations	198	156338
2015	6	06/23/2015 6:26 PM Hours, . Minutes	Public Service Electric & Gas	NPCC	New Jersey	Loss of electric service to more than 50,000 customers for 1 hour or more - Severe Weather	90	73000
2015	6	06/23/2015 6:30 PM	06/24/2015 5:00 AM	10 Hours, 30 Minutes	ISO New England	NPCC	Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont	Loss of electric service to more than 50,000 customers for 1 hour or more - Severe Weather	Unknown	62442
2015	6	06/26/2015 2:00 AM Hours, . Minutes	Kansas City Power & Light Co	SPP	Kansas	Loss of electric service to more than 50,000 customers for 1 hour or more - Severe Weather	Unknown	110000
2015	6	06/27/2015 5:00 PM	06/30/2015 5:18 PM	72 Hours, 18 Minutes	Detroit Edison Co	RFC	Wayne County, Michigan	Loss of electric service to more than 50,000 customers for 1 hour or more - Severe Weather	Unknown	68000
2015	6	06/29/2015 7:21 PM	06/29/2015 7:42 PM	0 Hours, 21 Minutes	Peak Reliability	WECC	Washington	Electrical System Separation (Islanding) where part or parts of a power grid remain(s) operational - Severe Weather	0	0
2015	6	06/30/2015 10:50 AM	07/01/2015 9:00 PM	34 Hours, 10 Minutes	Pacific Gas & Electric Co	WECC	California	Public appeal to reduce the use of electricity - Severe Weather	Unknown	Unknown
2015	6	06/30/2015 2:00 PM	06/30/2015 9:00 PM	7 Hours, 0 Minutes	California ISO	WECC	California	Public appeal to reduce the use of electricity - Severe Weather	Unknown	Unknown
2015	7	07/03/2015 5:17 PM	07/03/2015 11:30 PM	6 Hours, 13 Minutes	ERCOT	TRE	Texas	Uncontrolled loss of 300 Megawatts or more of firm system loads for more than 15 minutes from a single incident - System Operations	350	30000
2015	7	07/13/2015 2:14 PM	07/16/2015 6:00 AM	63 Hours, 46 Minutes	Duke Energy Ohio Inc	RFC	Ohio, Kentucky	Loss of electric service to more than 50,000 customers for 1 hour or more - Severe Weather	480	68339
2015	7	07/13/2015 7:40 PM	07/15/2015 12:15 PM	40 Hours, 35 Minutes	American Electric Power - (RFC Reliability Region)	RFC	Virginia	Loss of electric service to more than 50,000 customers for 1 hour or more - Severe Weather	Unknown	52739
2015	7	07/14/2015 3:29 PM	07/15/2015 11:55 AM	20 Hours, 26 Minutes	Entergy Services, Inc.	SPP	Arkansas	Uncontrolled loss of 300 Megawatts or more of firm system loads for more than 15 minutes from a single incident - Severe Weather	Unknown	Unknown
2015	7	07/14/2015 8:00 PM	07/15/2015 9:23 AM	13 Hours, 23 Minutes	Southern Company	SERC	Alabama	Loss of electric service to more than 50,000 customers for 1 hour or more - Severe Weather	366	111644
2015	7	07/15/2015 2:00 AM	07/15/2015 2:55 AM	0 Hours, 55 Minutes	California Department of Water Resources	WECC	California	Uncontrolled loss of 300 Megawatts or more of firm system loads for more than 15 minutes from a single incident - System Operations	360	0
2015	7	07/16/2015 4:45 PM	07/16/2015 5:48 PM	1 Hours, 3 Minutes	American Electric Power - (SPP Reliability Region)	SPP	Texas	Load shedding of 100 Megawatts or more implemented under emergency operational policy - System Operations	117	17311
2015	7	07/18/2015 2:00 AM	07/19/2015 7:00 AM	29 Hours, 0 Minutes	Northern States Power Co	MRO	Hennepin and Ramsey County, Minnesota	Loss of electric service to more than 50,000 customers for 1 hour or more - Severe Weather	250	250000
2015	7	07/18/2015 6:26 PM	07/18/2015 9:03 PM	2 Hours, 37 Minutes	Pacific Gas & Electric Co	WECC	California	Electrical System Separation (Islanding) where part or parts of a power grid remain(s) operational - System Operations	30	70
2015	7	07/18/2015 7:59 PM	07/18/2015 10:45 PM	2 Hours, 46 Minutes	Pacific Gas & Electric Co	WECC	California	Loss of electric service to more than 50,000 customers for 1 hour or more - Severe Weather	160	78164
2015	7	07/21/2015 12:47 PM	07/21/2015 1:12 PM	0 Hours, 25 Minutes	Peak Reliability	WECC	Washington	Load shedding of 100 Megawatts or more implemented under emergency operational policy - System Operations	200	Unknown
2015	7	07/27/2015 3:52 AM	07/27/2015 4:36 AM	0 Hours, 44 Minutes	Pacific Gas & Electric Co	WECC	California	Electrical System Separation (Islanding) where part or parts of a power grid remain(s) operational - System Operations	Unknown	484
2015	7	07/28/2015 12:05 PM	07/28/2015 12:26 PM	0 Hours, 21 Minutes	Puerto Rico Electric Power Authority	N/A	Puerto Rico	System-wide voltage reductions of 3 percent or more - System Operations	150	Unknown

Table B.2 Major Disturbances and Unusual Occurrences, 2015

Year	Month	Event Date and Time	Restoration Date and Time	Duration	Utility/Power Pool	NERC Region	Area Affected	Type of Disturbance	Loss (megawatts)	Number of Customers Affected
2015	7	07/29/2015 4:45 PM	07/29/2015 9:00 PM	4 Hours, 15 Minutes	Long Island Power Authority	NPCC	New York	Fuel supply emergencies that could impact electric power system adequacy or reliability - System Operations	500	0
2015	7	07/30/2015 9:50 AM	07/30/2015 7:00 PM	9 Hours, 10 Minutes	ERCOT	TRE	Texas	Public appeal to reduce the use of electricity - System Operations	Unknown	Unknown
2015	7	07/31/2015 10:55 AM	.	. Hours, . Minutes	Peak Reliability	WECC	Washington	Electrical System Separation (Islanding) where part or parts of a power grid remain(s) operational - System Operations	9	0
2015	8	08/02/2015 5:45 PM	08/04/2015 3:00 AM	33 Hours, 15 Minutes	Consumers Energy Co	RFC	Traverse County, Leelanau County, Kalkaska County, Benzie County, Manistee County, Wexford County, Missaukee County, Mecosta County, Michigan	Loss of electric service to more than 50,000 customers for 1 hour or more - Severe Weather	Unknown	162000
2015	8	08/03/2015 12:30 AM	08/03/2015 2:00 AM	1 Hours, 30 Minutes	Exelon Corporation / ComEd	RFC	Illinois	Loss of electric service to more than 50,000 customers for 1 hour or more - Severe Weather	Unknown	115000
2015	8	08/03/2015 1:00 AM	08/05/2015 12:00 AM	47 Hours, 0 Minutes	Detroit Edison Co	RFC	Michigan	Loss of electric service to more than 50,000 customers for 1 hour or more - Severe Weather	Unknown	72520
2015	8	08/04/2015 7:17 AM	08/05/2015 12:52 PM	29 Hours, 35 Minutes	ISO New England	NPCC	Massachusetts and Rhode Island	Loss of electric service to more than 50,000 customers for 1 hour or more - Severe Weather	Unknown	132000
2015	8	08/11/2015 7:30 PM	08/13/2015 4:05 AM	32 Hours, 35 Minutes	CenterPoint Energy	TRE	Houston, Texas	Loss of electric service to more than 50,000 customers for 1 hour or more - Severe Weather	Unknown	100000
2015	8	08/13/2015 3:15 PM	08/13/2015 7:00 PM	3 Hours, 45 Minutes	ERCOT	TRE	Williamson County, Texas	Public appeal to reduce the use of electricity for purposes of maintaining the continuity of the electric power system - Other	Unknown	Unknown
2015	8	08/27/2015 9:51 PM	08/28/2015 6:00 PM	20 Hours, 9 Minutes	Puerto Rico Electric Power Authority	WECC	Puerto Rico	Megawatts or more of firm system loads for more than 15 minutes from a single incident / Loss of electric service to more than 50,000 customers for 1 hour or more - System Operations	360	Unknown
2015	8	08/29/2015 10:00 AM	.	. Hours, . Minutes	Peak Reliability	WECC	Washington	Loss of electric service to more than 50,000 customers for 1 hour or more - Severe Weather	Unknown	500000
2015	8	08/29/2015 11:00 AM	09/04/2015 3:00 PM	148 Hours, 0 Minutes	Puget Sound Energy	WECC	King County, Skagit County, Whatcom County, Kitsap County, Pierce County, Thurston County, Island County, Washington	Loss of electric service to more than 50,000 customers for 1 hour or more - Severe Weather	250	250000
2015	8	08/29/2015 1:00 PM	08/31/2015 7:00 AM	42 Hours, 0 Minutes	Seattle City Light	WECC	King County, Washington	Loss of electric service to more than 50,000 customers for 1 hour or more - Severe Weather	1200	64000
2015	9	09/03/2015 2:33 AM	09/03/2015 6:25 AM	3 Hours, 52 Minutes	Lansing Board of Water & Light	RFC	Michigan	Loss of electric service to more than 50,000 customers for 1 hour or more - Severe Weather	Unknown	50114
2015	9	09/20/2015 1:12 PM	09/20/2015 1:44 PM	0 Hours, 32 Minutes	California ISO	WECC	California	Load shedding of 100 Megawatts or more implemented under emergency operational policy - System Operations	150	Unknown
2015	10	10/13/2015 10:25 AM	10/13/2015 6:00 PM	7 Hours, 35 Minutes	ERCOT	TRE	Texas	Public appeal to reduce the use of electricity - Other	Unknown	Unknown
2015	10	10/13/2015 4:32 PM	10/13/2015 8:39 PM	4 Hours, 7 Minutes	California ISO	WECC	California	Public appeal to reduce the use of electricity - Other	41788	Unknown
2015	10	10/18/2015 7:00 AM	10/18/2015 11:29 PM	16 Hours, 29 Minutes	Pacific Gas & Electric Co	WECC	Central Coast area, California	Loss of electric service to more than 50,000 customers for 1 hour or more - Severe Weather	88	55677
2015	10	10/23/2015 9:42 AM	10/23/2015 1:26 PM	3 Hours, 44 Minutes	Puerto Rico Electric Power Authority	N/A	Puerto Rico	Electrical System Separation (Islanding) where part or parts of a power grid remain(s) operational / Load shedding of 100 Megawatts or more implemented under emergency operational policy / System-wide voltage reductions of 3 percent or more / Loss of electric service to more than 50,000 customers for 1 hour or more - System Operations	500	300000
2015	10	10/31/2015 12:45 AM	11/01/2015 4:05 PM	39 Hours, 20 Minutes	CenterPoint Energy	TRE	Harris County, Texas	Loss of electric service to more than 50,000 customers for 1 hour or more - Severe Weather	Unknown	130252

Note: Customers affected are estimates and are preliminary. Source: Form OE-417, 'Electric Emergency Incident and Disturbance Report.'

Appendix C

Technical notes

This appendix describes how the U. S. Energy Information Administration (EIA) collects, estimates, and reports electric power data in the EPM.

Data quality

The EPM is prepared by the Office of Electricity, Renewables & Uranium Statistics (ERUS), Energy Information Administration (EIA), U. S. Department of Energy. Quality statistics begin with the collection of the correct data. To assure this, ERUS performs routine reviews of the data collected and the forms on which it is collected. Additionally, to assure that the data are collected from the correct parties, ERUS routinely reviews the frames for each data collection.

Automatic, computerized verification of keyed input, review by subject matter specialists, and follow-up with nonrespondents assure quality statistics. To ensure the quality standards established by the EIA, formulas that use the past history of data values in the database have been designed and implemented to check data input for errors automatically. Data values that fall outside the ranges prescribed in the formulas are verified by telephoning respondents to resolve any discrepancies. All survey nonrespondents are identified and contacted.

Reliability of data

There are two types of errors possible in an estimate based on a sample survey: sampling and non-sampling. Sampling errors occur because observations are made only on a sample, not on the entire population. Non-sampling errors can be attributed to many sources in the collection and processing of data. The accuracy of survey results is determined by the joint effects of sampling and non-sampling errors. Monthly sample survey data have both sampling and non-sampling error. Annual survey data are collected by a census and are not subject to sampling error.

Non-sampling errors can be attributed to many sources: (1) inability to obtain complete information about all cases in the sample (i.e., nonresponse); (2) response errors; (3) definitional difficulties; (4) differences in the interpretation of questions; (5) mistakes in recording or coding the data obtained; and (6) other errors of collection, response, coverage, and estimation for missing data. Note that for the cutoff sampling and model-based regression (ratio) estimation that we use, data ‘missing’ due to nonresponse, and data ‘missing’ due to being out-of-sample are treated in the same manner. Therefore missing data may be considered to result in sampling error, and variance estimates reflect all missing data.

Although no direct measurement of the biases due to non-sampling errors can be obtained, precautionary steps were taken in all phases of the frame development and data collection, processing, and tabulation processes, in an effort to minimize their influence. See the Data Processing and Data System Editing section for each EIA form for an in-depth discussion of how the sampling and non-sampling errors are handled in each case.

Relative Standard Error: The relative standard error (RSE) statistic, usually given as a percentage, describes the magnitude of sampling error that might reasonably be incurred. The RSE is the square root of the estimated variance, divided by the variable of interest. The variable of interest may be the ratio of two variables, or a single variable.

The sampling error may be less than the non-sampling error. In fact, large RSE estimates found in preliminary work with these data have often indicated non-sampling errors, which were then identified and corrected. Non-sampling errors may be attributed to many sources, including the response errors, definitional difficulties, differences in the interpretation of questions, mistakes in recording or coding data obtained, and other errors of collection, response, or coverage. These non-sampling errors also occur in complete censuses.

Using the Central Limit Theorem, which applies to sums and means such as are applicable here, there is approximately a 68 percent chance that the true total or mean is within one RSE of the estimated total or mean. Note that reported RSEs are always estimates themselves, and are usually, as here, reported as percentages. As an example, suppose that a net generation from coal value is estimated to be 1,507 million kilowatthours with an estimated RSE of 4.9 percent. This means that, ignoring any non-sampling error, there is approximately a 68 percent chance that the true million kilowatthour value is within approximately 4.9 percent of 1,507 million kilowatthours (that is, between 1,433 and 1,581 million kilowatthours). Also under the Central Limit Theorem, there is approximately a 95 percent chance that the true mean or total is within 2 RSEs of the estimated mean or total.

Note that there are times when a model may not apply, such as in the case of a substantial reclassification of sales, when the relationship between the variable of interest and the regressor data does not hold. In such a case, the new information may represent only itself, and such numbers are added to model results when estimating totals. Further, there are times when sample data may be known to be in error, or are not reported. Such cases are treated as if they were never part of the model-based sample, and values are imputed. Experiments were done to see if nonresponse should be treated differently, but it was decided to treat those cases the same as out-of-sample cases.

Relative Standard Error With Respect to a Superpopulation: The RSESP statistic is similar to the RSE (described above). Like the RSE, it is a statistic designed to estimate the variability of data and is usually given as a percentage. However, where the RSE is only designed to estimate the magnitude of sampling error, the RSESP more fully reflects the impact of variability from sampling and non-sampling errors. This is a more complete measure than RSE in that it can measure statistical variability in a complete census in addition to a sample^{21,24}. In addition to being a measure of data variability, the RSESP can also be useful in comparing different models that are applied to the same set of data²². This capability is used to test different regression models for imputation and prediction. This testing may include considerations such as comparing different regressors, the comparative reliability of different monthly samples, or the use of different geographical strata or groupings for a given model. For testing purposes, ERUS typically uses recent historical data that have been finalized. Typically, time-series graphics showing two or more models or samples are generated showing the RSESP values over time. In selecting models, consideration is given to total survey error as well as any apparent differences in robustness.

Imputation: For monthly data, if the reported values appeared to be in error and the data issue could not be resolved with the respondent, or if the facility was a nonrespondent, a regression methodology is used to impute for the facility. The same procedure is used to estimate ("predict") data for facilities not in the monthly sample. The regression methodology relies on other data to make estimates for erroneous or missing responses.

Estimation for missing monthly data is accomplished by relating the observed data each month to one or more other data elements (regressors) for which we generally have an annual census. Each year, when new annual regressor data are available, recent monthly relationships are updated, causing slight revisions to estimated monthly results. These revisions are made as soon as the annual data are released.

The basic technique employed is described in the paper "Model-Based Sampling and Inference¹⁶," on the EIA website. Additional references can be found on the InterStat website (<http://interstat.statjournals.net/>). The basis for the current methodology involves a 'borrowing of strength' technique for small domains.

Data revision procedure

ERUS has adopted the following policy with respect to the revision and correction of recurrent data in energy publications:

- Annual survey data are disseminated either as preliminary or final when first appearing in a data product. Data initially released as preliminary will be so noted in the data product. These data are typically released as final by the next dissemination of the same product; however, if final data are available at an earlier interval they may be released in another product.
- All monthly survey data are first disseminated as preliminary. These data are revised after the prior year's data are finalized and are disseminated as revised preliminary. No revisions are made to the published data before this or subsequent to these data being finalized unless significant errors are discovered.
- After data are disseminated as final, further revisions will be considered if they make a difference of 1 percent or greater at the national level. Revisions for differences that do not meet the 1 percent or greater threshold will be determined by the Office Director. In either case, the proposed revision will be subject to the EIA revision policy concerning how it affects other EIA products.
- The magnitudes of changes due to revisions experienced in the past will be included periodically in the data products, so that the reader can assess the accuracy of the data.

Data sources for Electric Power Monthly

Data published in the EPM are compiled from the following sources:

- Form EIA-923, "Power Plant Operations Report,"
- Form EIA 826, "Monthly Electric Utility Sales and Revenues with State Distributions Report,"
- Form EIA 860, "Annual Electric Generator Report,"
- Form EIA-860M, "Monthly Update to the Annual Electric Generator Report," and

- Form EIA 861, "Annual Electric Power Industry Report."

For access to these forms and their instructions, please see:
<http://www.eia.gov/cneaf/electricity/page/forms.html>.

In addition to the above-named forms, the historical data published in the EPM for periods prior to 2008 are compiled from the following sources:

- FERC Form 423, "Monthly Report of Cost and Quality of Fuels for Electric Plants,"
- Form EIA-423, "Monthly Cost and Quality of Fuels for Electric Plants Report,"
- Form EIA-759, "Monthly Power Plant Report,"
- Form EIA-860A, "Annual Electric Generator Report—Utility,"
- Form EIA-860B, "Annual Electric Generator Report—Nonutility,"
- Form EIA-900, "Monthly Nonutility Power Report,"
- Form EIA-906, "Power Plant Report," and
- Form EIA-920, "Combined Heat and Power Plant Report."

See Appendix A of the historical Electric Power Annual reports to find descriptions of forms that are no longer in use. The publications can be found from the top of the current EPA under previous issues:
<http://www.eia.gov/electricity/annual>.

Rounding rules for data: To round a number to n digits (decimal places), add one unit to the nth digit if the (n+1) digit is 5 or larger and keep the nth digit unchanged if the (n+1) digit is less than 5. The symbol for a number rounded to zero is (*).

Percent difference: The following formula is used to calculate percent differences:

$$\text{Percent Difference} = \left(\frac{x(t_2) - x(t_1)}{|x(t_1)|} \right) \times 100,$$

where $x(t_1)$ and $x(t_2)$ denote the quantity at year t_1 and subsequent year t_2 .

Meanings of symbols appearing in tables: The following symbols have the meaning described below:

P Indicates a preliminary value.

NM Data value is not meaningful, either (1) when compared to the same value for the previous time period, or (2) when a data value is not meaningful due to having a high Relative Standard Error (RSE).

Form EIA-826

The Form EIA 826, "Monthly Electric Utility Sales and Revenues with State Distributions Report," is a monthly collection of data from a sample of approximately 500 of the largest electric utilities (primarily investor owned and publicly owned) as well as a census of energy service providers with sales to ultimate consumers in deregulated States. Form EIA-861, with approximately 3,300 respondents, serves as a frame from which the Form 826 sample is drawn. Based on this sample, a model is used to estimate for the entire universe of U.S. electric utilities.

Instrument and design history: The collection of electric power sales data and related information began in the early 1940's and was established as FPC Form 5 by FPC Order 141 in 1947. In 1980, the report was revised with only selected income items remaining and became the FERC Form 5. The Form EIA 826, "Electric Utility Company Monthly Statement," replaced the FERC Form 5 in January 1983. In January 1987, the "Electric Utility Company Monthly Statement" was changed to the "Monthly Electric Utility Sales and Revenue Report with State Distributions." The title was changed again in January 2002 to "Monthly Electric Utility Sales and Revenues with State Distributions Report" to become consistent with other EIA report titles. The Form EIA 826 was revised in January 1990, and some data elements were eliminated.

In 1993, EIA for the first time used a model sample for the Form EIA 826. A stratified random sample, employing auxiliary data, was used for each of the four previous years. The sample for the Form EIA 826 was designed to obtain estimates of electricity sales and average price of electricity to ultimate consumers at the State level by end use sector.

Starting with data for January 2001, the restructuring of the electric power industry was taken into account by forming three schedules on the Form EIA-826. Schedule 1, Part A is for full service utilities that operate as in the past. Schedule 1, Part B is for electric service providers only, and Schedule 1, Part C is for those utilities providing distribution service for those on Schedule 1, Part B. In addition, Schedule 1 Part D is for those energy providers to ultimate consumers or power marketers that provide bundled service. Also, the Form EIA-826 frame was modified to include all investor-owned electric utilities and a sample of companies from other ownership classes. A new method of estimation was implemented at this same time. (See EPM April 2001, p.1.)

With the October 2004 issue of the EPM, EIA published for the first time preliminary electricity sales data for the Transportation Sector. These data are for electricity delivered to and consumed by local, regional, and metropolitan transportation systems. The data being published for the first time in the October EPM included July 2004 data as well as year-to-date. EIA's efforts to develop these new data have identified anomalies in several States and the District of Columbia. Some of these anomalies are caused by issues such as: 1) Some respondents have classified themselves as outside the realm of the survey. The Form EIA-826 collects data from those respondents providing electricity and other services to the ultimate end users. EIA has experienced specific situations where, although the respondents' customers are the ultimate end users, particular end users qualify under wholesale rate schedules. 2) The Form EIA-826 is a cutoff sample and not intended to be a census.

Beginning with 2008 data and some annual 2007 data, the Form EIA-923 replaced Forms EIA-906, EIA-920, EIA-423, and FERC 423. In addition, several sections of the discontinued Form EIA-767 have been included in either the Form EIA-860 or Form EIA-923. See the following link for a detailed explanation. <http://www.eia.gov/cneaf/electricity/2008forms/consolidate.html>

The legislative authority to collect these data is defined in the Federal Energy Administration Act of 1974 (Public Law 93-275, Sec. 13(b), 5(a), 5(b), 52).

Data processing and data system editing: Monthly Form EIA-826 submission is available via an Internet Data Collection (IDC) system. The completed data are due to EIA by the last calendar day of the month following the reporting month. Nonrespondents are contacted to obtain the data. The data are edited and additional checks are completed. Following verification, imputation is run, and tables and text of the aggregated data are produced for inclusion in the EPM.

Imputation: Regression prediction, or imputation, is done for entities not in the monthly sample and for any nonrespondents. Regressor data for Schedule 1, Part A is the average monthly sales or revenue from the most recent finalized data from survey Form EIA-861. Beginning with January 2008 data and the finalized 2007 data, the regressor data for Schedule 1 Parts B and C is the prior month's data.

Formulas and methodologies: The Form EIA 826 data are collected by end-use sector (residential, commercial, industrial, and transportation) and State. Form EIA 861 data are used as the frame from which the sample is selected and in some instances also as regressor data. Updates are made to the frame to reflect mergers that affect data processing.

With the revised definitions for the commercial and industrial sectors to include all data previously reported as 'other' data except transportation, and a separate transportation sector, all responses that would formerly have been reported under the "other" sector are now to be reported under one of the sectors that currently exist. This means there is probably a lower correlation, in general, between, say, commercial Form EIA-826 data for 2004 and commercial Form EIA-861 data for 2003 than there was between commercial Form EIA-826 data for 2003 and commercial Form EIA-861 data for 2002 or earlier years, although commercial and industrial definitions have always been somewhat nebulous due to power companies not having complete information on all customers.

Data submitted for January 2004 represent the first time respondents were to provide data specifically for the transportation end-use sector.

During 2003 transportation data were collected annually through Form EIA-861. Beginning in 2004 the transportation data were collected on a monthly basis via Form EIA-826. In order to develop an estimate of the monthly transportation data for 2003, values for both sales of electricity to ultimate customers and revenue from sales of electricity to ultimate customers were estimated using the 2004 monthly profile for the sales and revenues from the data collected via Form EIA-826. All monthly non-transportation data for 2003 (i.e. street lighting, etc.), which were previously reported in the "other" end-use sector on the Form EIA-826 have been prorated into the Commercial and Industrial end-use sectors based on the 2003 Form EIA-861 profile.

A monthly distribution factor was developed for the monthly data collected in 2004 (for the months of January through November). The transportation sales and revenues for December 2004 were assumed to be equivalent to the transportation sales and revenues for November 2004. The monthly distribution factors for January through November were applied to the annual values for transportation sales and revenues collected via Form EIA-861 to develop corresponding 2003 monthly values. The eleven month estimated totals from January through November 2003 were subtracted from the annual values obtained from Form EIA-861 in order to obtain the December 2003 values.

Data from the Form EIA-826 are used to determine estimates by sector at the State, Census division, and national level. State level sales and revenues estimates are first calculated. Then the ratio of revenue divided by sales is calculated to estimate the price of electricity to ultimate consumers at the State level. The estimates are accumulated separately to produce the Census division and U.S. level estimates¹.

Some electric utilities provide service in more than one State. To facilitate the estimation, the State service area is actually used as the sampling unit. For each State served by each utility, there is a utility State part, or "State service area." This approach allows for an explicit calculation of estimates for sales, revenue, and average price of electricity to ultimate consumers by end use sector at State, Census division, and national level. Estimation procedures include imputation to account for nonresponse. Non-sampling error must also be considered. The non-sampling error is not estimated directly, although attempts are made to minimize the non-sampling error.

Average price of electricity to ultimate consumers represents the cost per unit of electricity sold and is calculated by dividing electric revenue from ultimate consumers by the corresponding sales of electricity. The average price of electricity to ultimate consumers is calculated for all consumers and for each end-use sector.

The electric revenue used to calculate the average price of electricity to ultimate consumers is the operating revenue reported by the electric utility. Operating revenue includes energy charges, demand charges, consumer service charges, environmental surcharges, fuel adjustments, and other miscellaneous charges. Electric utility operating revenues also include State and Federal income taxes and taxes other than income taxes paid by the utility.

The average price of electricity to ultimate consumers reported in this publication by sector represents a weighted average of consumer revenue and sales within sectors and across sectors for all consumers, and does not reflect the per kWh rate charged by the electric utility to the individual consumers. Electric utilities typically employ a number of rate schedules within a single sector. These alternative rate schedules reflect the varying consumption levels and patterns of consumers and their associated impact on the costs to the electric utility for providing electrical service.

Adjusting monthly data to annual data: As a final adjustment based on our most complete data, use is made of final Form EIA-861 data, when available. The annual totals for Form EIA-826 data by State and end-use sector are compared to the corresponding Form EIA-861 values for sales and revenue. The ratio of these two values in each case is then used to adjust each corresponding monthly value.

Sensitive data: Most of the data collected on the Form EIA-826 are not considered business sensitive. However, revenue, sales, and customer data collected from energy service providers (Schedule 1, Part B), which do not also provide energy delivery, are considered business sensitive and must adhere to EIA's "Policy on the Disclosure of Individually Identifiable Energy Information in the Possession of the EIA" (45Federal Register 59812 (1980)).

Form EIA-860

The Form EIA 860, "Annual Electric Generator Report," is a mandatory annual census of all existing and planned electric generating facilities in the United States with a total generator nameplate capacity of 1 or more megawatts. The survey is used to collect data on existing power plants and 10 year plans for constructing new plants, as well as generating unit additions, modifications, and retirements in existing plants. Data on the survey are collected at the generator level. Certain power plant environmental-related data are collected at the boiler level. These data include environmental equipment design parameters, boiler air emission standards, and boiler emission controls. The Form EIA-860 is made available in January to collect data related to the previous year.

Instrument and design history: The Form EIA-860 was originally implemented in January 1985 to collect data as of year-end 1984. It was preceded by several Federal Power Commission (FPC) forms including the FPC Form 4, Form 12 and 12E, Form 67, and Form EIA-411. In January 1999, the Form EIA-860 was renamed the Form EIA-860A, "Annual Electric Generator Report – Utility" and was implemented to collect data from electric utilities as of January 1, 1999.

In 1989, the Form EIA-867, "Annual Nonutility Power Producer Report," was initiated to collect plant data on unregulated entities with a total generator nameplate capacity of 5 or more megawatts. In 1992, the reporting threshold of the Form EIA-867 was lowered to include all facilities with a combined nameplate capacity of 1 or more megawatts. Previously, data were collected every 3 years from facilities with a nameplate capacity between 1 and 5 megawatts. In 1998, the Form EIA-867, was renamed Form EIA-860B, "Annual Electric Generator Report – Nonutility." The Form EIA-860B was a mandatory survey of all existing and planned nonutility electric generating facilities in the United States with a total generator nameplate capacity of 1 or more megawatts.

Beginning with data collected for the year 2001, the infrastructure data collected on the Form EIA-860A and the Form EIA-860B were combined into the new Form EIA-860 and the monthly and annual versions of the Form EIA-906.

Starting with 2007, design parameters data formerly collected on Form EIA-767 were collected on Form EIA-860. These include design parameters associated with certain steam-electric plants' boilers, cooling systems, flue gas particulate collectors, flue gas desulfurization units, and stacks and flues.

The Federal Energy Administration Act of 1974 (Public Law 93-275) defines the legislative authority to collect these data.

Estimation of form eia-860 data: EIA received forms from all 18,151 existing generators in the 2010 Form EIA-860 frame, so no imputation was required.

Prime Movers: The Form EIA-860 sometimes represents a generator's prime mover by using the abbreviations in the table below.

Prime Mover Code	Prime Mover Description
BA	Energy Storage, Battery
CE	Energy Storage, Compressed Air
CP	Energy Storage, Concentrated Solar Power
FW	Energy Storage, Flywheel
PS	Energy Storage, Reversible Hydraulic Turbine (Pumped Storage)
ES	Energy Storage, Other
ST	Steam Turbine, including nuclear, geothermal and solar steam (does not include combined cycle)
GT	Combustion (Gas) Turbine (including jet engine design)
IC	Internal Combustion Engine (diesel, piston, reciprocating)
CA	Combined Cycle Steam Part
CT	Combined Cycle Combustion Turbine Part
CS	Combined Cycle Single Shaft
CC	Combined Cycle Total Unit
HA	Hydrokinetic, Axial Flow Turbine
HB	Hydrokinetic, Wave Buoy
HK	Hydrokinetic, Other
HY	Hydroelectric Turbine (including turbines associated with delivery of water by pipeline)
BT	Turbines Used in a Binary Cycle (including those used for geothermal applications)
PV	Photovoltaic
WT	Wind Turbine, Onshore
WS	Wind Turbine, Offshore
FC	Fuel Cell
OT	Other

Energy Sources: The Form EIA-860 sometimes represents the energy sources associated with generators by using the abbreviations and/or groupings in the table below.

Energy Source Grouping	Energy Source Code	Energy Source Description
Coal	ANT	Anthracite Coal
	BIT	Bituminous Coal
	LIG	Lignite Coal
	SUB	Subbituminous Coal
	SGC	Coal-Derived Synthesis Gas
	WC	Waste/Other Coal (including anthracite culm, bituminous gob, fine coal, lignite waste, waste coal)
Petroleum Products	DFO	Distillate Fuel Oil (including diesel, No. 1, No. 2, and No. 4 fuel oils)
	JF	Jet Fuel
	KER	Kerosene
	PC	Petroleum Coke
	PG	Gaseous Propane
	RFO	Residual Fuel Oil (including No. 5, and No. 6 fuel oils, and bunker C fuel oil)
Natural Gas and Other Gases	SG	Synthesis Gas from Petroleum Coke
	WO	Waste/Other Oil (including crude oil, liquid butane, liquid propane, naphtha, oil waste, re-refined motor oil, sludge oil, tar oil, or other petroleum-based liquid wastes)
	BFG	Blast Furnace Gas
	NG	Natural Gas
	OG	Other Gas
	NUC	Nuclear (including Uranium, Plutonium, and Thorium)
Hydroelectric Conventional	WAT	Water at a Conventional
	(Prime Mover = HY)	Hydroelectric Turbine, and water used in Wave Buoy
		Hydrokinetic Technology, Current Hydrokinetic Technology, and Tidal Hydrokinetic Technology
Hydroelectric Pumped Storage	WAT	Pumping Energy for Reversible (Pumped Storage) Hydroelectric
	(Prime Mover = PS)	Turbine
Wood and Wood-Derived Fuels	WDS	Wood/Wood Waste Solids (including paper pellets, railroad ties, utility poles, wood chips, bark, and wood waste solids)
	WDL	Wood Waste Liquids (excluding Black Liquor but including red liquor, sludge wood, spent sulfite liquor, and other wood-based liquids)
	BLQ	Black Liquor
	AB	Agricultural By-Products
	MSW	Municipal Solid Waste
	OBG	Other Biomass Gas (including digester gas, methane, and other biomass gases)
Other Biomass	OBL	Other Biomass Liquids
	OBS	Other Biomass Solids
	LFG	Landfill Gas
	SLW	Sludge Waste
	SUN	Solar (including solar thermal)
Other Renewable Energy Sources	WND	Wind
	GEO	Geothermal
	PUR	Purchased Steam
Other Energy Sources	WH	Waste heat not directly attributed to a fuel source
	TDF	Tire-Derived Fuels
	MWH	Electricity used for energy storage
	OTH	Other

Sensitive data: The tested heat rate data collected on the Form EIA-860 are considered business sensitive.

Form EIA-860M

The Form EIA 860M, “Monthly Update to the Annual Electric Generator Report,” is a mandatory monthly survey that collects data on the status of proposed new generators or changes to existing generators for plants that report on Form EIA-860.

The Form EIA-860M has a rolling frame based upon planned changes to capacity as reported on the previous Form EIA-860. Respondents are added to the frame 12 months prior to the expected effective date for all new units or expected retirement date for existing units. For all other types of capacity changes (including retirements, uprates, derates, repowering, or other modifications), respondents are added 1 month prior to the anticipated modification change date. Respondents are removed from the frame at the completion of the changes or if the change date is moved back so that the plant no longer qualifies to be in the frame. Typically, 150 to 200 utilities per month are required to report for 175 to 250 plants (including 250 to 400 generating units) on this form. The unit characteristics of interest are changes to the previously reported planned operating month and year, prime mover type, capacity, and energy sources.

Instrument and design history: The data collected on Form EIA-860M was originally collected via phone calls at the end of each month. During 2005, the Form EIA-860M was introduced as a mandatory form using the Internet Data Collection (IDC) system.

The legislative authority to collect these data is defined in the Federal Energy Administration Act of 1974 (Public Law 93-275, Sec. 13(b), 5(a), 5(b), 52).

Data processing and data system editing: Approximately 150 to 200 utilities are requested to provide data each month on the Form EIA 860M. These data are collected via the IDC system and automatically checked for certain errors. Most of the quality assurance issues are addressed by the respondents as part of the automatic edit check process. In some cases, respondents are subsequently contacted about their explanatory overrides to the edit checks.

Sensitive data: Data collected on the Form EIA-860M are not considered to be sensitive.

Form EIA-861

The Form EIA 861, “Annual Electric Power Industry Report,” is a mandatory census of electric power industry participants in the United States. The survey is used to collect information on power sales and revenue data from approximately 3,300 respondents. About 3,200 are electric utilities and the remainder are nontraditional utilities such as energy service providers or the unregulated subsidiaries of electric utilities and power marketers.

Instrument and design history: The Form EIA 861 was implemented in January 1985 for collection of data as of year end 1984. The Federal Energy Administration Act of 1974 (Public Law 93 275) defines the legislative authority to collect these data.

Data processing and data system editing: The Form EIA 861 is made available to the respondents in January of each year to collect data as of the end of the preceding calendar year. The data are edited when entered into the interactive on line system. Internal edit checks are performed to verify that current data total across and between schedules, and are comparable to data reported the previous year. Edit checks are also performed to compare data reported on the Form EIA 861 and similar data reported on the Form EIA 826. Respondents are telephoned to obtain clarification of reported data and to obtain missing data.

Data for the Form EIA 861 are collected at the owner level from all electric utilities including energy service providers in the United States, its territories, and Puerto Rico. Form EIA 861 data in this report are for the United States only.

Average price of electricity to ultimate consumers represents the cost per unit of electricity sold and is calculated by dividing electric revenue from ultimate consumers by the corresponding sales of electricity. The average price of electricity to ultimate consumers is calculated for all consumers and for each end-use sector.

The electric revenue used to calculate the average price of electricity to ultimate consumers is the operating revenue reported by the electric power industry participant. Operating revenue includes energy charges, demand charges, consumer service charges, environmental surcharges, fuel adjustments, and other miscellaneous charges. Electric power industry participant operating revenues also include State and Federal income taxes and other taxes paid by the utility.

The average price of electricity to ultimate consumers reported in this publication by sector represents a weighted average of consumer revenue and sales, and does not equal the per kWh rate charged by the electric power industry participant to the individual consumers. Electric utilities typically employ a number of rate schedules within a single sector. These alternative rate schedules reflect the varying consumption levels and patterns of consumers and their associated impact on the costs to the electric power industry participant for providing electrical service.

Sensitive data: Data collected on the Form EIA-861 are not considered to be sensitive.

Form EIA-923

Form EIA-923, "Power Plant Operations Report," is a monthly collection of data on receipts and cost of fossil fuels, fuel stocks, generation, consumption of fuel for generation, and environmental data (e.g. emission controls and cooling systems). Data are collected from a monthly sample of approximately 1,900 plants, which includes a census of nuclear and pumped-storage hydroelectric plants. In addition approximately 4,050 plants, representing all other generators 1 MW or greater, are collected annually. In addition to electric power generating plants, respondents include fuel storage terminals without

generating capacity that receive shipments of fossil fuels for eventual use in electric power generation. The monthly data are due by the last day of the month following the reporting period.

Receipts of fossil fuels, fuel cost and quality information, and fuel stocks at the end of the reporting period are all reported at the plant level. Plants that burn organic fuels and have a steam turbine capacity of at least 10 megawatts report consumption at the boiler level and generation at the generator level. For all other plants, consumption is reported at the prime-mover level. For these plants, generation is reported either at the prime-mover level or, for noncombustible sources (e.g. wind, nuclear), at the prime-mover and energy source level. The source and disposition of electricity is reported annually for nonutilities at the plant level as is revenue from sales for resale. Environmental data are collected annually from facilities that have a steam turbine capacity of at least 10 megawatts.

Instrument and design history:

Receipts and cost and quality of fossil fuels

On July 7, 1972, the Federal Power Commission (FPC) issued Order Number 453 enacting the New Code of Federal Regulations, Section 141.61, legally creating the FPC Form 423. Originally, the form was used to collect data only on fossil steam plants, but was amended in 1974 to include data on internal-combustion and combustion-turbine units. The FERC Form 423 replaced the FPC Form 423 in January 1983. The FERC Form 423 eliminated peaking units, for which data were previously collected on the FPC Form 423. In addition, the generator nameplate capacity threshold was changed from 25 megawatts to 50 megawatts. This reduction in coverage eliminated approximately 50 utilities and 250 plants. All historical FPC Form 423 data in this publication were revised to reflect the new generator-nameplate- capacity threshold of 50 or more megawatts reported on the FERC Form 423. In January 1991, the collection of data on the FERC Form 423 was extended to include combined cycle units. Historical data have not been revised to include these units. Starting with the January 1993 data, the FERC began to collect the data directly from the respondents.

The Form EIA-423 was originally implemented in January 2002 to collect monthly cost and quality data for fossil fuel receipts from owners or operators of nonutility electricity generating plants. Due to the restructuring of the electric power industry, many plants which had historically submitted this information for utility plants on the FERC Form 423 (see above) were being transferred to the nonutility sector. As a result, a large percentage of fossil fuel receipts were no longer being reported. The Form EIA-423 was implemented to fill this void and to capture the data associated with existing non-regulated power producers. Its design closely followed that of the FERC Form 423.

Both the Form EIA-423 and FERC Form 423 were superseded by Schedule 2 of the Form EIA-923 in January of 2008. At the time, the Form EIA-923 maintained the 50-megawatt threshold for these data. In January 2013, the threshold was changed to 200 megawatts for plants primarily fueled by natural gas, petroleum coke, distillate fuel oil, and residual fuel oil. The requirement to report self-produced and minor fuels, i.e., blast furnace gas, other manufactured gases, kerosene, jet fuel, propane, and waste oils was eliminated. The threshold for coal plants remained at 50 megawatts.

Not all data are collected monthly on the Form EIA-923. Beginning with 2008 data, a sample of the respondents report monthly, with the remainder reporting annually. Until January 2013, monthly fuel receipts values for the annual surveys were imputed via regression. Prior to 2008, Schedule 2 annual data were not collected or imputed.

Generation, consumption, and stocks

The Bureau of Census and the U.S. Geological Survey collected, compiled, and published data on the electric power industry prior to 1936. After 1936, the Federal Power Commission (FPC) assumed all data collection and publication responsibilities for the electric power industry and implemented the Form FPC-4. The Federal Power Act, Section 311 and 312, and FPC Order 141 defined the legislative authority to collect power production data. The Form EIA-759 replaced the Form FPC-4 in January 1982.

In 1996, the Form EIA-900 was initiated to collect sales for resale data from unregulated entities¹⁴. In 1998, the form was modified to collect sales for resale, gross generation, and sales to end user data. In 1999, the form was modified to collect net generation, consumption, and ending stock data¹⁵. In 2000, the form was modified to include the production of useful thermal output data.

In January 2001, Form EIA-906 superseded Forms EIA-759 and EIA-900. In January 2004, Form EIA-920 superseded Form EIA-906 for those plants defined as combined heat and power plants; all other plants that generate electricity continue to report on Form EIA-906. The Federal Energy Administration Act of 1974 (Public Law 93-275) defines the legislative authority to collect these data.

Forms EIA-906 and EIA-920 were superseded by survey Form EIA-923 beginning in January 2008 with the collection of annual 2007 data and monthly 2008 data.

Data processing and data system editing: Respondents are encouraged to enter data directly into a computerized database via the Internet Data Collection (IDC) system. A variety of automated quality control mechanisms are run during this process, such as range checks and comparisons with historical data. These edit checks are performed as the data are provided, and many problems that are encountered are resolved during the reporting process. Those plants that are unable to use the electronic reporting medium provide the data in hard copy, typically via fax. These data are manually entered into the computerized database. The data are subjected to the same edits as those that are electronically submitted.

If the reported data appear to be in error and the data issue cannot be resolved by follow up contact with the respondent, or if a facility is a nonrespondent, a regression methodology is used to impute for the facility. Beginning in January 2013, imputation is not performed for fuel receipts data reported on Schedule 2.

Imputation: For select survey data elements collected monthly, regression prediction, or imputation, is done for missing data, including non-sampled units and any non-respondents. For data collected annually, imputation is performed for non-respondents. For gross generation and total fuel

consumption, multiple regression is used for imputation (see discussion, above). Only approximately 0.02 percent of the national total generation for 2010 is imputed, although this will vary by State and energy source.

When gross generation is reported and net generation is not available, net generation is estimated by using a fixed ratio to gross generation by prime-mover type and installed environmental equipment. These ratios are:

Net Generation = (Factor) x Gross Generation
<u>Prime Movers:</u>
Combined Cycle Steam - 0.97
Combined Cycle Single Shaft - 0.97
Combined Cycle Combustion Turbine - 0.97
Compressed Air - 0.97
Fuel Cell - 0.99
Gas Turbine - 0.98
Hydroelectric Turbine - 0.99
Hydroelectric Pumped Storage - 0.99
Internal Combustion Engine - 0.98
Other - 0.97
Photovoltaic - 0.99
Steam Turbine - 0.97
Wind Turbine - 0.99
<u>Environmental Equipment:</u>
Flue Gas Desulfurization - 0.97
Flue Gas Particulate 0.99
All Others - 0.97

For stocks, a linear combination of the prior month's ending stocks value and the current month's consumption and receipts values are used.

Receipts of fossil fuels: Receipts data, including cost and quality of fuels, are collected at the plant level from selected electric generating plants and fossil-fuel storage terminals in the United States. These plants include independent power producers, electric utilities, and commercial and industrial combined heat and power producers. All plants with a total fossil-fueled nameplate capacity of 50 megawatts or more (excluding storage terminals, which do not produce electricity) were required to report receipts of fossil fuels. In January 2013, the threshold was changed to 200 megawatts for plants primarily fueled by natural gas, petroleum coke, distillate fuel oil, and residual fuel oil. The requirement to report self-produced and minor fuels, i.e., blast furnace gas, other manufactured gases, kerosene, jet fuel, propane, and waste oils was eliminated. The threshold for coal plants remained at 50 megawatts. The data on cost and quality of fuel shipments are used to produce aggregates and weighted averages for each fuel type at the state, Census division, and U.S. levels.

For coal, units for receipts are in tons and units for average heat contents (A) are in million Btu per ton. For petroleum, units for receipts are in barrels and units for average heat contents (A) are in million Btu per barrel.

For gas, units for receipts are in thousand cubic feet (Mcf) and units for average heat contents (A) are in million Btu per thousand cubic foot.

Power production, fuel stocks, and fuel consumption data: The Bureau of Census and the U.S. Geological Survey collected, compiled, and published data on the electric power industry prior to 1936. After 1936, the Federal Power Commission (FPC) assumed all data collection and publication responsibilities for the electric power industry and implemented the Form FPC-4. The Federal Power Act, Section 311 and 312, and FPC Order 141 defined the legislative authority to collect power production data. The Form EIA-759 replaced the Form FPC-4 in January 1982.

In 1996, the Form EIA-900 was initiated to collect sales for resale data from unregulated entities. In 1998, the form was modified to collect sales for resale, gross generation, and sales to end user data. In 1999, the form was modified to collect net generation, consumption, and ending stock data. In 2000, the form was modified to include the production of useful thermal output data.

In January 2001, Form EIA-906 superseded Forms EIA-759 and EIA-900. In January 2004, Form EIA-920 superseded Form EIA-906 for those plants defined as combined heat and power plants; all other plants that generate electricity continue to report on Form EIA-906. The Federal Energy Administration Act of 1974 (Public Law 93-275) defines the legislative authority to collect these data.

In January 2004, Form EIA-920 superseded Form EIA-906 for those plants defined as combined heat and power plants; all other plants that generate electricity continue to report on Form EIA-906.

In January 2008, Form EIA-923 superseded both the Forms EIA-906 and EIA-920 for the collection of these data.

Methodology to estimate biogenic and non-biogenic municipal solid waste²: Municipal solid waste (MSW) consumption for generation of electric power is split into its biogenic and non-biogenic components beginning with 2001 data by the following methodology:

The tonnage of MSW consumed is reported on the Form EIA-923. The composition of MSW and categorization of the components were obtained from the Environmental Protection Agency publication, *Municipal Solid Waste in the United States: 2005 Facts and Figures*. The Btu contents of the components of MSW were obtained from various sources.

The potential quantities of combustible MSW discards (which include all MSW material available for combustion with energy recovery, discards to landfill, and other disposal) were multiplied by their respective Btu contents. The EPA-based categories of MSW were then classified into renewable and non-renewable groupings. From this, EIA calculated how much of the energy potentially consumed from MSW was attributed to biogenic components and how much to non-biogenic components (see Tables 1 and 2, below).³

These values are used to allocate net generation published in the Electric Power Monthly generation tables. The tons of biogenic and non-biogenic components were estimated with the assumption that glass and metals were removed prior to combustion. The average Btu/ton for the biogenic and non-

biogenic components is estimated by dividing the total Btu consumption by the total tons. Published net generation attributed to biogenic MSW and non-biogenic MSW is classified under Other Renewables and Other, respectively.

Table 1. Btu consumption for biogenic and non-biogenic municipal solid waste (percent)

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Biogenic	57	56	55	55	56	57	55	54	51	50
Non-biogenic	43	44	45	45	44	43	46	46	49	50

Table 2. Tonnage consumption for biogenic and non-biogenic municipal solid waste (percent)

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Biogenic	77	77	76	76	75	67	65	65	64	64
Non-biogenic	23	23	24	24	25	34	35	35	36	36

Useful thermal output: With the implementation of the Form EIA-923, “Power Plant Operations Report,” in 2008, combined heat and power (CHP) plants are required to report total fuel consumed and electric power generation. Beginning with the January 2008 data, EIA will estimate the allocation of the total fuel consumed at CHP plants between electric power generation and useful thermal output.

First, an efficiency factor is determined for each plant and prime mover type. Based on data for electric power generation and useful thermal output collected in 2003 (on Form EIA-906, “Power Plant Report”) efficiency was calculated for each prime mover type at a plant. The efficiency factor is the total output in Btu, including electric power and useful thermal output (UTO), divided by the total input in Btu. Electric power is converted to Btu at 3,412 Btu per kilowatthour.

Second, to calculate the amount of fuel for electric power, the gross generation in Btu is multiplied by the efficiency factor. The fuel for UTO is the difference between the total fuel reported and the fuel for electric power generation. UTO is calculated by multiplying the fuel for UTO by the efficiency factor.

In addition, if the total fuel reported is less than the estimated fuel for electric power generation, then the fuel for electric power generation is equal to the total fuel consumed, and the UTO will be zero.

Conversion of petroleum coke to liquid petroleum: The quantity conversion is 5 barrels (of 42 U.S. gallons each) per short ton (2,000 pounds).

Conversion of propane gas to liquid petroleum: The quantity conversion is 1.53 Mcf (thousand cubic feet) per barrel (or 42 U.S. gallons each).

Conversion of synthesis gas from coal to coal: The quantity conversion is 98 Mcf (thousand cubic feet) per short ton (2,000 pounds).

Conversion of synthesis gas from petroleum coke to petroleum coke: The quantity conversion is 107.42 Mcf (thousand cubic feet) per short ton (2,000 pounds).

Issues within historical data series:

Receipts and cost and quality of fossil fuels

Values for receipts of natural gas for 2001 forward do not include blast furnace gas or other gas.

Historical data collected on FERC Form 423 and published by EIA have been reviewed for consistency between volumes and prices and for their consistency over time. However, these data were collected by FERC for regulatory rather than statistical and publication purposes. EIA did not attempt to resolve any late filing issues in the FERC Form 423 data. In 2003, EIA introduced a procedure to estimate for late or non-responding entities due to report on the FERC Form 423. Due to the introduction of this procedure, 2003 and later data cannot be directly compared to previous years' data. In January 2013, this estimation procedure was dropped.

Prior to 2008, regulated plants reported receipts data on the FERC Form 423. These plants, along with unregulated plants, now report receipts data on Schedule 2 of Form EIA-923. Because FERC issued waivers to the FERC Form 423 filing requirements to some plants who met certain criteria, and because not all types of generators were required to report (only steam turbines and combined-cycle units reported), a significant number of plants either did not submit fossil fuel receipts data or submitted only a portion of their fossil fuel receipts. Since Form EIA-923 does not have exemptions based on generator type or reporting waivers, receipts data from 2008 and later cannot be directly compared to previous years' data for the regulated sector. Furthermore, there may be a notable increase in fuel receipts beginning with January 2008 data.

Starting with the revised data for 2008, tables for total receipts begin to reflect estimation for all plants with capacity over 1 megawatt, to be consistent with other electric power data. Previous receipts data published have been a legacy of their original collection as information for a regulatory agency, not as a survey to provide more meaningful estimates of totals for statistical purposes. Totals appeared to become smaller as more electric production came from unregulated plants, until the Form EIA-423 was created to help fill that gap. As a further improvement, estimation of all receipts for the universe normally depicted in the EPM (i.e., 1 megawatt and above), with associated relative standard errors, provides a more complete assessment of the market.

Generation and consumption

Beginning in 2008, a new method of allocating fuel consumption between electric power generation and useful thermal output (UTO) was implemented. This new methodology evenly distributes a combined heat and power (CHP) plant's losses between the two output products (electric power and UTO). In the historical data, UTO was consistently assumed to be 80 percent efficient and all other losses at the plant were allocated to electric power. This change causes the fuel for electric power to be decreased while the fuel for UTO is increased as both are given the same efficiency. This results in the appearance of an increase in efficiency of production of electric power between periods.

Sensitive data: Most of the data collected on the Form EIA-923 are not considered business sensitive. However, the cost of fuel delivered to nonutilities, commodity cost of fossil fuels, and reported fuel stocks at the end of the reporting period are considered business sensitive and must adhere to EIA's "Policy on the Disclosure of Individually Identifiable Energy Information in the Possession of the EIA" (45Federal Register 59812 (1980)).

Average Capacity Factors

This section describes the methodology for calculating capacity factors by fuel and technology type for operating electric power plants. Capacity factor is a measure (expressed as a percent) of how often an electric generator operates over a specific period of time, using a ratio of the actual output to the maximum possible output over that time period.

The capacity factor calculation only includes operating electric generators in the Electric Power Sector (sectors 1, 2 and 3) using the net generation reported on the Form EIA-923 and the net summer capacity reported on the Form EIA-860. The capacity factor for a particular fuel/technology type is given by:

$$\text{CapacityFactor} = \left(\frac{\sum_{x,m} \text{Generation}_{x,m}}{\sum_{x,m} \text{Capacity}_{x,m} * \text{AvailableTime}_{x,m}} \right)$$

Where x represents generators of that fuel/technology combination and m represents the period of time (month or year). Generation and capacity are specific to a generator, and the generator is categorized by its primary fuel type as reported on the EIA-860. All generation from that generator is included, regardless of other fuels consumed. Available time is also specific to the generator in order to account for differing online and retirement dates. Therefore, these published capacity factors will differ from a simple calculation using annual generation and capacity totals from the appropriate tables in this publication.

NERC classification

The Florida Reliability Coordinating Council (FRCC) separated itself from the Southeastern Electric Reliability Council (SERC) in the mid-1990s. In 1998, several utilities realigned from Southwest Power Pool (SPP) to SERC. Name changes altered both the Mid-Continent Area Power Pool (MAPP) to the Midwest Reliability Organization (MRO) and the Western Systems Coordinating Council (WSCC) to the Western Energy Coordinating Council (WECC). The MRO membership boundaries have altered over time, but WECC membership boundaries have not. The utilities in the associated regional entity identified as the Alaska System Coordination Council (ASCC) dropped their formal participation in NERC. Both the States of Alaska and Hawaii are not contiguous with the other continental States and have no electrical interconnections. At the close of calendar year 2005, the following reliability regional councils were dissolved: East Central Area Reliability Coordinating Agreement (ECAR), Mid-Atlantic Area Council (MAAC), and Mid-America Interconnected Network (MAIN).

On January 1, 2006, the ReliabilityFirst Corporation (RFC) came into existence as a new regional reliability council. Individual utility membership in the former ECAR, MAAC, and MAIN councils mostly shifted to RFC. However, adjustments in membership as utilities joined or left various reliability councils impacted MRO, SERC, and SPP. The Texas Regional Entity (TRE) was formed from a delegation of authority from NERC to handle the regional responsibilities of the Electric Reliability Council of Texas (ERCOT). The revised delegation agreements covering all the regions were approved by the Federal Energy Regulatory Commission on March 21, 2008. Reliability Councils that are unchanged include: Florida Reliability Coordinating Council (FRCC), Northeast Power Coordinating Council (NPCC), and the Western Energy Coordinating Council (WECC).

The new NERC Regional Council names are as follows:

- Florida Reliability Coordinating Council (FRCC),
- Midwest Reliability Organization (MRO),
- Northeast Power Coordinating Council (NPCC),
- ReliabilityFirst Corporation (RFC),
- Southeastern Electric Reliability Council (SERC),
- Southwest Power Pool (SPP),
- Texas Regional Entity (TRE), and
- Western Energy Coordinating Council (WECC).

Business classification

Nonutility power producers consist of corporations, persons, agencies, authorities, or other legal entities that own or operate facilities for electric generation but are not electric utilities. This includes qualifying cogenerators, small power producer, and independent power producers. Furthermore, nonutility power producers do not have a designated franchised service area. In addition to entities whose primary business is the production and sale of electric power, entities with other primary business classifications can and do sell electric power. These can consist of manufacturing, agricultural, forestry, transportation, finance, service and administrative industries, based on the Office of Management and Budget's Standard Industrial Classification (SIC) Manual. In 1997, the SIC Manual name was changed to North American Industry Classification System (NAICS). The following is a list of the main classifications and the category of primary business activity within each classification.

Agriculture, Forestry, and Fishing

- 111 Agriculture production-crops
- 112 Agriculture production, livestock and animal specialties
- 113 Forestry
- 114 Fishing, hunting, and trapping
- 115 Agricultural services

Mining

- 211 Oil and gas extraction
- 2121 Coal mining
- 2122 Metal mining

2123 Mining and quarrying of nonmetallic minerals except fuels

Construction

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Manufacturing

- 311 Food and kindred products
- 3122 Tobacco products
- 314 Textile and mill products
- 315 Apparel and other finished products made from fabrics and similar materials
- 316 Leather and leather products
- 321 Lumber and wood products, except furniture
- 322 Paper and allied products (other than 322122 or 32213)
 - 322122 Paper mills, except building paper
 - 32213 Paperboard mills
 - 323 Printing and publishing
 - 324 Petroleum refining and related industries (other than 32411)
 - 32411 Petroleum refining
 - 325 Chemicals and allied products (other than 325188, 325211, 32512, or 325311)
 - 32512 Industrial organic chemicals
 - 325188 Industrial Inorganic Chemicals
 - 325211 Plastics materials and resins
 - 325311 Nitrogenous fertilizers
 - 326 Rubber and miscellaneous plastic products
 - 327 Stone, clay, glass, and concrete products (other than 32731)
 - 32731 Cement, hydraulic
 - 331 Primary metal industries (other than 331111 or 331312)
 - 331111 Blast furnaces and steel mills
 - 331312 Primary aluminum
 - 332 Fabricated metal products, except machinery and transportation equipment
 - 333 Industrial and commercial equipment and components except computer equipment
 - 3345 Measuring, analyzing, and controlling instruments, photographic, medical, and optical goods, watches and clocks
 - 335 Electronic and other electrical equipment and components except computer equipment
 - 336 Transportation equipment
 - 337 Furniture and fixtures
 - 339 Miscellaneous manufacturing industries

Transportation and Public Utilities

- 22 Electric, gas, and sanitary services
 - 2212 Natural gas transmission
 - 2213 Water supply
 - 22131 Irrigation systems
 - 22132 Sewerage systems
- 481 Transportation by air
- 482 Railroad transportation
- 483 Water transportation
- 484 Motor freight transportation and warehousing
- 485 Local and suburban transit and interurban highway passenger transport
- 486 Pipelines, except natural gas
- 487 Transportation services
- 491 United States Postal Service
- 513 Communications
- 562212 Refuse systems

Wholesale Trade

421 to 422

Retail Trade

441 to 454

Finance, Insurance, and Real Estate

521 to 533

Services

- 512 Motion pictures
- 514 Business services
 - 514199 Miscellaneous services
- 541 Legal services
- 561 Engineering, accounting, research, management, and related services
- 611 Education services
- 622 Health services
- 624 Social services
- 712 Museums, art galleries, and botanical and zoological gardens
- 713 Amusement and recreation services
- 721 Hotels
- 811 Miscellaneous repair services
- 8111 Automotive repair, services, and parking
- 812 Personal services
- 813 Membership organizations
- 814 Private households

Public Administration

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Multiple Survey Programs- Small Scale PV Solar Estimation of Generation

Monthly generation from small scale PV solar resources is an estimation of the generation produced from PV solar resources and not the results of a data collection effort for generation directly, with the exception of “Third Party Owned” or (TPO) solar installations which has direct data collection. TPO data however is not comprehensive. TPOs do not operate in every state, TPO collected data is not a large portion of the estimated amount, and the data has been collected for limited period of time. The generation estimate is based on data collected for PV solar capacity.

Capacity of PV solar resources is collected directly from respondents. These data are collected on several EIA forms and from several types of respondents. Monthly data for net-metered PV solar capacity is reported on the Form EIA-826. Form EIA-826 is a cutoff sample drawn from the annual survey Form EIA-861 which collects this data from all respondents. Using data from both of these surveys we have a regression model to impute for the non-sampled monthly capacity.

The survey instruments collect solar net metering capacity from reporting utilities by state and customer class. There are four customer classes: residential, commercial, industrial and transportation.

However, the estimation process included only the residential, commercial and industrial customers.¹

Data for these customer classes were further classified by U.S. Census Regions, to ensure adequate number of customer observations in for each estimation group.

Estimation Model: The total PV capacity reported by utilities in the annual EIA-861 survey is the single primary input (regressor) to the monthly estimation of PV capacity by state. The model tested for each Census Region was of the form:

$$y_{i_{2015,m}} = \beta_1 x_{i_{2013}} + w_i^{-1/2} e_i, \text{ where}$$

$x_{i_{2013}}$ is the i^{th} utility's 2013 (or the last published year) solar PV capacity

$y_{i_{2015,m}}$ is the i^{th} utility's month m , 2015 (or the current year) reported solar PV capacity

w_i is the weight factor, which is the inverse of $x_{i_{2013}}$

β_1 is effectively the growth rate of reported month m solar PV capacity

e_i is the error term

The model checks for outliers and removes them from the regression equation inputs. The model calculates RSEs by sector, state, census region, and US total. Once we have imputed for all of the

monthly net-metered PV solar capacity we add to total net metered capacity, the PV solar capacity collected on the Form EIA-861 for distributed and dispersed resources that are not net metered.

We use a second model to estimate the generation using this capacity as an input. The original methodology was developed for the “Annual Energy Outlook” based on our “NEMS” modelled projections several years ago. The original method underwent a calibration project designed to develop PV production levels for the NEMS projections consistent with simulations of a National Renewable Energy Laboratory model called PVWatts, which is itself embedded in PC software under the umbrella of the NREL’s System Advisor Model (SAM).

The PVWatts simulations require, panel azimuth orientations and tilts, something that the NEMS projections do not include. Call the combinations of azimuths and tilts “orientations.” The orientation and solar insolation (specific to a location) have a direct effect on the PV production level. The calibration project selected the 100 largest population Metropolitan Statistical Areas (MSAs) and relied on weights derived from orientation data from California Solar Initiative dataset to develop typical outputs for each of the 100 MSAs. It then was expanded from an annual estimate to a monthly estimate. A further description of this model is located here. A listing of the MSAs are included in Appendix 1.

Using Form EIA-861 data for service territories, which lists the counties that each electric distribution company (EDC) provides service, and NREL solar insolation data by county a simple average of insolation values by EDC is calculated.

Using the estimation model, we produce by utility, by state and by sector an estimate of generation. All the utilities’ capacity and generation estimates are summed by state and sector and a KWh/KW rate by state and sector is calculated.

Capacity from the Form EIA-860 that is net metered is subtracted from the total capacity by state and sector as well as the capacity reported on the EIA-826 from TPOs, resulting in a new “net” capacity amount. This capacity amount is multiplied by the KWh/KW rate to produce the non-TPO generation estimate and then it is added to the TPO reported sales to ultimate customers from the EIA-826 to obtain a final estimate for generation and a blended KWh/KW rate is calculated. The estimate for generation is aggregated by US census regions and US totals. The RSEs for capacity are checked for level of error and if they pass, the summary data by state, US census region and US total are reported in the EPM.

Appendix 2 contains a flow diagram of the data inputs, data quality control checks and data analysis required to perform this estimation.

Appendix 1- MSAs

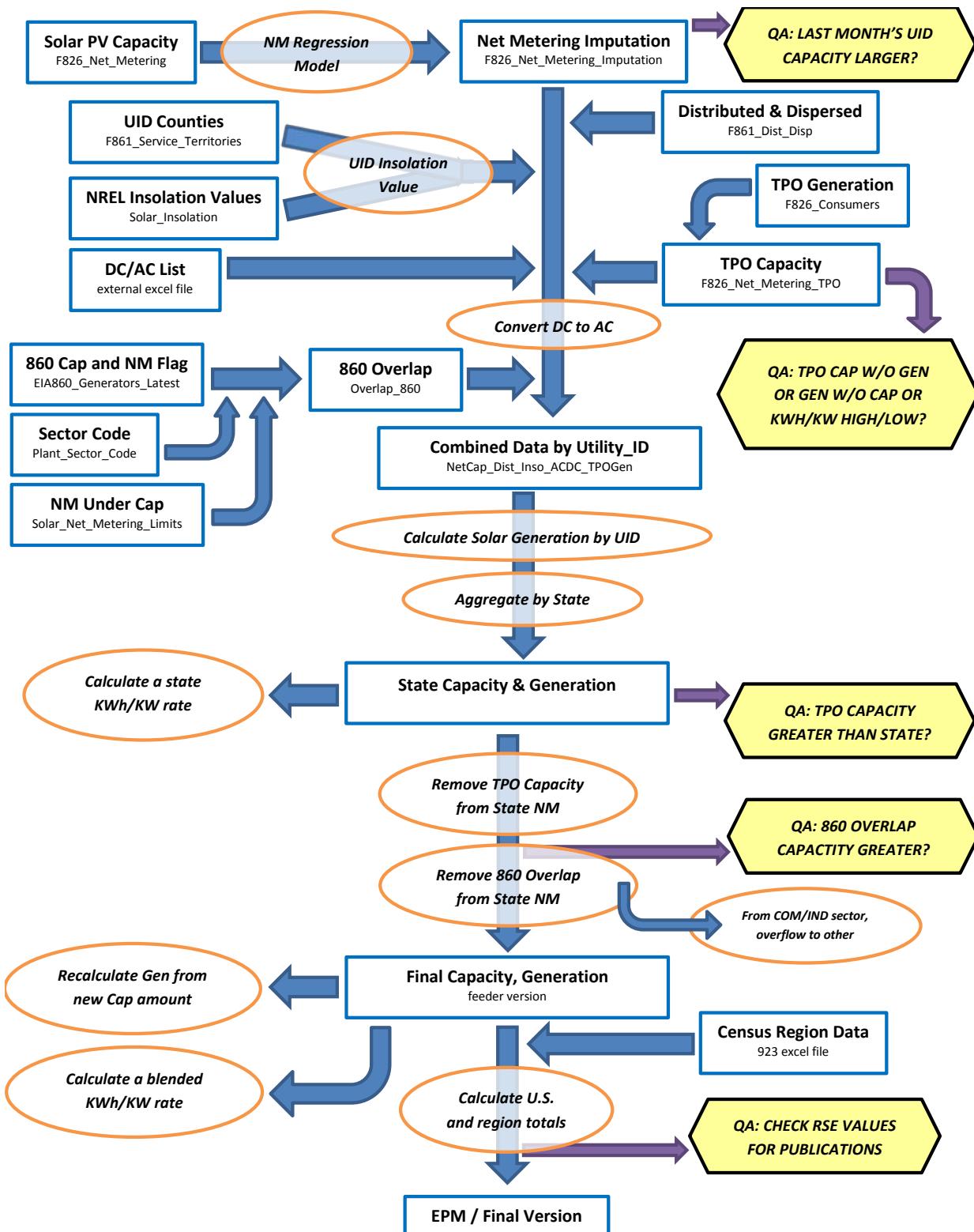
TMY3 (1991-2005) Weather Stations by MSA

Site	Weather Location	MSA
1	USA NY New York Central Park Obs.	New York-Newark-Jersey City, NY-NJ-PA MSA
2	USA CA Los Angeles Intl Airport	Los Angeles-Long Beach-Anaheim, CA MSA
3	USA IL Chicago Midway Airport	Chicago-Naperville-Elgin, IL-IN-WI MSA
4	USA TX Dallas-fort Worth Intl Airport	Dallas-Fort Worth-Arlington, TX MSA
5	USA TX Houston Bush Intercontinental	Houston-The Woodlands-Sugar Land, TX MSA
6	USA PA Philadelphia Int'l Airport	Philadelphia-Camden-Wilmington, PA-NJ-DE-MD MSA
7	USA VA Washington Dc Reagan Airport	Washington-Arlington-Alexandria, DC-VA-MD-WV MSA
8	USA FL Miami Intl Airport	Miami-Fort Lauderdale-West Palm Beach, FL MSA
9	USA GA Atlanta Hartsfield Intl Airport	Atlanta-Sandy Springs-Roswell, GA MSA
10	USA MA Boston Logan Int'l Airport	Boston-Cambridge-Newton, MA-NH MSA
11	USA CA San Francisco Intl Airport	San Francisco—Oakland—Hayward, CA MSA
12	USA AZ Phoenix Sky Harbor Intl Airport	Phoenix-Mesa-Scottsdale, AZ MSA
13	USA CA Riverside Municipal Airport	Riverside-San Bernardino-Ontario, CA MSA
14	USA MI Detroit City Airport	Detroit-Warren-Dearborn, MI MSA
15	USA WA Seattle Seattle-Tacoma Intl Airport	Seattle-Tacoma-Bellevue, WA MSA
16	USA MN Minneapolis-St. Paul Int'l Arp	Minneapolis-St. Paul-Bloomington, MN-WI MSA
17	USA CA San Diego Lindbergh Field	San Diego-Carlsbad, CA MSA
18	USA FL Tampa Int'l Airport	Tampa-St. Petersburg-Clearwater, FL MSA
19	USA MO St Louis Lambert Int'l Airport	St. Louis, MO-IL MSA
20	USA MD Baltimore-Washington Int'l Airport	Baltimore-Columbia-Towson, MD MSA
21	USA CO Denver Centennial [Golden - NREL]	Denver-Aurora-Lakewood, CO MSA
22	USA PA Pittsburgh Allegheny Co Airport	Pittsburgh, PA MSA
23	USA NC Charlotte Douglas Intl Airport	Charlotte-Concord-Gastonia, NC-SC MSA
24	USA OR Portland Hillsboro	Portland-Vancouver-Hillsboro, OR-WA MSA
25	USA TX San Antonio Intl Airport	San Antonio-New Braunfels, TX MSA
26	USA FL Orlando Intl Airport	Orlando-Kissimmee-Sanford, FL MSA
27	USA CA Sacramento Executive Airport	Sacramento—Roseville—Arden-Arcade, CA MSA
28	USA OH Cincinnati Municipal Airport	Cincinnati, OH-KY-IN MSA
29	USA OH Cleveland Hopkins Intl Airport	Cleveland-Elyria, OH MSA
30	USA MO Kansas City Int'l Airport	Kansas City, MO-KS MSA
31	USA NV Las Vegas McCarran Intl Airport	Las Vegas-Henderson-Paradise, NV MSA
32	USA OH Columbus Port Columbus Intl A	Columbus, OH MSA
33	USA IN Indianapolis Intl Airport	Indianapolis-Carmel-Anderson, IN MSA
34	USA CA San Jose Intl Airport	San Jose-Sunnyvale-Santa Clara, CA MSA
35	USA TX Austin Mueller Municipal Airport	Austin-Round Rock, TX MSA
36	USA TN Nashville Int'l Airport	Nashville-Davidson—Murfreesboro—Franklin, TN MSA

37	USA VA Norfolk Int'l Airport	Virginia Beach-Norfolk-Newport News, VA-NC MSA
38	USA RI Providence T F Green State	Providence-Warwick, RI-MA MSA
39	USA WI Milwaukee Mitchell Intl Airport	Milwaukee-Waukesha-West Allis, WI MSA
40	USA FL Jacksonville Craig	Jacksonville, FL MSA
41	USA TN Memphis Int'l Airport	Memphis, TN-MS-AR MSA
42	USA OK Oklahoma City Will Rogers	Oklahoma City, OK MSA
43	USA KY Louisville Bowman Field	Louisville/Jefferson County, KY-IN MSA
44	USA VA Richmond Int'l Airport	Richmond, VA MSA
45	USA LA New Orleans Alvin Callender	New Orleans-Metairie, LA MSA
46	USA CT Hartford Bradley Intl Airport	Hartford-West Hartford-East Hartford, CT MSA
47	USA NC Raleigh Durham Int'l	Raleigh, NC MSA
48	USA UT Salt Lake City Int'l Airport	Salt Lake City, UT MSA
49	USA AL Birmingham Municipal Airport	Birmingham-Hoover, AL MSA
50	USA NY Buffalo Niagara Intl Airport	Buffalo-Cheektowaga-Niagara Falls, NY MSA
51	USA NY Rochester Greater Rochester	Rochester, NY MSA
52	USA MI Grand Rapids Kent County Int'l Airport	Grand Rapids-Wyoming, MI MSA
53	USA AZ Tucson Int'l Airport	Tucson, AZ MSA
54	USA HI Honolulu Intl Airport	Urban Honolulu, HI MSA
55	USA OK Tulsa Int'l Airport	Tulsa, OK MSA
56	USA CA Fresno Yosemite Intl Airport	Fresno, CA MSA
57	USA CT Bridgeport Sikorsky Memorial	Bridgeport-Stamford-Norwalk, CT MSA
58	USA MA Worcester Regional Airport	Worcester, MA-CT MSA
59	USA NM Albuquerque Intl Airport	Albuquerque, NM MSA
60	USA NE Omaha Eppley Airfield	Omaha-Council Bluffs, NE-IA MSA
61	USA NY Albany County Airport	Albany-Schenectady-Troy, NY MSA
62	USA CA Bakersfield Meadows Field	Bakersfield, CA MSA
63	USA CT New Haven Tweed Airport	New Haven-Milford, CT MSA
64	USA TN Knoxville McGhee Tyson Airport	Knoxville, TN MSA
65	USA SC Greenville Downtown Airport	Greenville-Anderson-Mauldin, SC MSA
66	USA CA Oxnard Airport	Oxnard-Thousand Oaks-Ventura, CA MSA
67	USA TX El Paso Int'l Airport	El Paso, TX MSA
68	USA PA Allentown Lehigh Valley Intl	Allentown-Bethlehem-Easton, PA-NJ MSA
69	USA LA Baton Rouge Ryan Airport	Baton Rouge, LA MSA
70	USA TX McAllen Miller Intl Airport	McAllen-Edinburg-Mission, TX MSA
71	USA OH Dayton Int'l Airport	Dayton, OH MSA
72	USA SC Columbia Metro Airport	Columbia, SC MSA
73	USA NC Greensboro Piedmont Triad Int'l Airport	Greensboro-High Point, NC MSA
74	USA FL Sarasota Bradenton	North Port-Sarasota-Bradenton, FL MSA
75	USA AR Little Rock Adams Field	Little Rock-North Little Rock-Conway, AR MSA
76	USA SC Charleston Intl Airport	Charleston-North Charleston, SC MSA
77	USA OH Akron Akron-canton Reg. Airport	Akron, OH MSA
78	USA CA Stockton Metropolitan Airport	Stockton-Lodi, CA MSA

79	USA CO Colorado Springs Muni Airport	Colorado Springs, CO MSA
80	USA NY Syracuse Hancock Int'l Airport	Syracuse, NY MSA
81	USA FL Fort Myers Page Field	Cape Coral-Fort Myers, FL MSA
82	USA NC Winston-Salem Reynolds Airport	Winston-Salem, NC MSA
83	USA ID Boise Air Terminal	Boise City, ID MSA
84	USA KS Wichita Mid-continent Airport	Wichita, KS MSA
85	USA WI Madison Dane Co Regional Airport	Madison, WI MSA
86	USA MA Worcester Regional Airport	Springfield, MA MSA
87	USA FL Lakeland Linder Regional Airport	Lakeland-Winter Haven, FL MSA
88	USA UT Ogden Hinkley Airport	Ogden-Clearfield, UT MSA
89	USA OH Toledo Express Airport	Toledo, OH MSA
90	USA FL Daytona Beach Intl Airport	Deltona-Daytona Beach-Ormond Beach, FL MSA
91	USA IA Des Moines Intl Airport	Des Moines-West Des Moines, IA MSA
92	USA GA Augusta Bush Field	Augusta-Richmond County, GA-SC MSA
93	USA MS Jackson Int'l Airport	Jackson, MS MSA
94	USA UT Provo Muni	Provo-Orem, UT MSA
95	USA PA Wilkes-Barre Scranton Intl Airport	Scranton—Wilkes-Barre—Hazleton, PA MSA
96	USA PA Harrisburg Capital City Airport	Harrisburg-Carlisle, PA MSA
97	USA OH Youngstown Regional Airport	Youngstown-Warren-Boardman, OH-PA MSA
98	USA FL Melbourne Regional Airport	Palm Bay-Melbourne-Titusville, FL MSA
99	USA TN Chattanooga Lovell Field Airport	Chattanooga, TN-GA MSA
100	USA WA Spokane Int'l Airport	Spokane-Spokane Valley, WA MSA

Appendix 2 – Flow diagram of data sources and analysis



¹ The basic technique employed is described in the paper "Model-Based Sampling and Inference," on the EIA website. Additional references can be found on the InterStat website (<http://interstat.statjournals.net/>). See the following sources: Knaub, J.R., Jr. (1999a), "Using Prediction-Oriented Software for Survey Estimation," InterStat, August 1999, <http://interstat.statjournals.net/>; Knaub, J.R. Jr. (1999b), "Model-Based Sampling, Inference and Imputation," EIA web site: <http://www.eia.gov/cneaf/electricity/forms/eiawebme.pdf>; Knaub, J.R., Jr. (2005), "Classical Ratio Estimator," InterStat, October 2005, <http://interstat.statjournals.net/>; Knaub, J.R., Jr. (2007a), "Cutoff Sampling and Inference," InterStat, April 2007, <http://interstat.statjournals.net/>; Knaub, J.R., Jr. (2008), "Cutoff Sampling." Definition in Encyclopedia of Survey Research Methods, Editor: Paul J. Lavrakas, Sage, to appear; Knaub, J.R., Jr. (2000), "Using Prediction-Oriented Software for Survey Estimation - Part II: Ratios of Totals," InterStat, June 2000, <http://interstat.statjournals.net/>; Knaub, J.R., Jr. (2001), "Using Prediction-Oriented Software for Survey Estimation - Part III: Full-Scale Study of Variance and Bias," InterStat, June 2001, <http://interstat.statjournals.net/>.

² See the following sources: Bahillo, A. et al. Journal of Energy Resources Technology, "NO_x and N₂O Emissions During Fluidized Bed Combustion of Leather Wastes." Volume 128, Issue 2, June 2006. pp. 99-103; U.S. Energy Information Administration. *Renewable Energy Annual 2004*. "Average Heat Content of Selected Biomass Fuels." Washington, DC, 2005; Penn State Agricultural College Agricultural and Biological Engineering and Council for Solid Waste Solutions. Garth, J. and Kowal, P. Resource Recovery, Turning Waste into Energy, University Park, PA, 1993; Utah State University Recycling Center Frequently Asked Questions. Published at <http://www.usu.edu/recycle/faq.htm>. Accessed December 2006.

³ Biogenic components include newsprint, paper, containers and packaging, leather, textiles, yard trimmings, food wastes, and wood. Non-biogenic components include plastics, rubber and other miscellaneous non-biogenic waste.

Table C.1 Average Heat Content of Fossil-Fuel Receipts, November 2016

Census Division and State	Coal (Million Btu per Ton)	Petroleum Liquids (Million Btu per Barrel)	Petroleum Coke (Million Btu per Ton)	Natural Gas (Million Btu per Thousand Cubic Feet)
New England	22.61	6.23	--	1.03
Connecticut	--	5.80	--	1.03
Maine	24.91	6.24	--	1.01
Massachusetts	22.43	6.27	--	1.03
New Hampshire	--	5.74	--	1.03
Rhode Island	--	5.79	--	1.03
Vermont	--	--	--	--
Middle Atlantic	24.61	6.16	--	1.04
New Jersey	26.33	5.67	--	1.04
New York	25.93	6.33	--	1.03
Pennsylvania	24.48	5.78	--	1.04
East North Central	20.13	5.81	27.42	1.04
Illinois	17.68	5.80	--	1.01
Indiana	22.50	5.75	--	1.06
Michigan	18.50	5.89	26.52	1.03
Ohio	24.63	5.80	27.83	1.06
Wisconsin	18.05	5.85	27.13	1.03
West North Central	16.63	5.81	--	1.05
Iowa	17.58	5.79	--	1.05
Kansas	17.15	5.78	--	1.04
Minnesota	17.58	5.80	--	1.06
Missouri	17.55	5.80	--	1.03
Nebraska	16.89	--	--	1.06
North Dakota	13.22	5.98	--	1.00
South Dakota	16.58	6.00	--	1.06
South Atlantic	23.71	6.06	27.84	1.03
Delaware	25.76	5.50	--	1.04
District of Columbia	--	--	--	--
Florida	23.56	5.77	28.03	1.02
Georgia	20.39	5.90	25.91	1.03
Maryland	25.19	5.81	--	1.04
North Carolina	24.85	5.78	--	1.03
South Carolina	25.26	5.86	--	1.03
Virginia	23.33	6.25	--	1.06
West Virginia	24.64	5.76	--	1.08
East South Central	20.71	5.79	28.12	1.03
Alabama	19.28	5.62	--	1.03
Kentucky	21.84	5.84	28.12	1.06
Mississippi	14.75	5.81	--	1.04
Tennessee	21.67	5.76	--	1.01
West South Central	16.06	5.85	28.61	1.03
Arkansas	17.41	5.87	--	1.03
Louisiana	16.19	--	28.61	1.03
Oklahoma	17.34	--	--	1.05
Texas	15.73	5.78	--	1.02
Mountain	18.70	5.73	--	1.04
Arizona	19.51	5.65	--	1.03
Colorado	18.61	--	--	1.08
Idaho	--	--	--	1.02
Montana	16.83	5.92	--	--
Nevada	20.47	--	--	1.04
New Mexico	18.57	5.66	--	1.04
Utah	21.40	5.88	--	1.04
Wyoming	17.40	5.81	--	1.03
Pacific Contiguous	17.60	5.92	--	1.03
California	22.94	--	--	1.03
Oregon	17.24	--	--	1.04
Washington	17.17	5.92	--	1.10
Pacific Noncontiguous	18.95	6.14	--	1.01
Alaska	14.00	5.60	--	1.01
Hawaii	19.47	6.14	--	--
U.S. Total	19.19	6.08	28.14	1.03

'Coal' includes anthracite, bituminous, subbituminous, lignite, waste coal, synthetic coal, and coal-derived synthesis gas.

'Petroleum Liquids' include distillate fuel oil, residual fuel oil, jet fuel, kerosene, propane, and waste oil.

'Petroleum Coke' includes petroleum coke and synthesis gas derived from petroleum coke.

'Natural Gas' includes a small amount of supplemental gaseous fuels.

Notes: See Glossary for definitions. Values are preliminary. Data represents weighted values.

Source: U.S. Energy Information Administration, Form EIA-923, Power Plant Operations Report.

Table C.2. Comparison of Preliminary Monthly Data Versus Final Monthly Data at the U.S. Level, 2013 through 2015

Item	Mean Absolute Value of Percent Change Total (All Sectors)		
	2013	2014	2015
Net Generation			
Coal	0.31%	0.25%	0.33%
Petroleum Liquids	4.04%	2.32%	1.00%
Petroleum Coke	0.95%	2.96%	1.60%
Natural Gas	0.98%	0.42%	0.18%
Other Gases	5.81%	4.12%	3.90%
Hydroelectric	0.65%	0.49%	1.08%
Nuclear	0.00%	0.01%	0.01%
Other	0.56%	0.43%	0.80%
Total	0.19%	0.08%	0.23%
Consumption of Fossil Fuels for Electricity Generation			
Coal	0.07%	0.13%	0.24%
Petroleum Liquids	3.49%	2.17%	2.28%
Petroleum Coke	1.03%	3.19%	1.50%
Natural Gas	0.99%	0.48%	0.32%
Fuel Stocks for Electric Power Sector			
Coal	0.25%	0.38%	0.40%
Petroleum Liquids	2.54%	4.25%	2.92%
Petroleum Coke	0.08%	0.61%	0.04%
Retail Sales			
Residential	0.26%	0.30%	0.30%
Commercial	0.22%	0.38%	0.18%
Industrial	3.20%	4.39%	2.92%
Transportation	1.45%	0.44%	0.37%
Total	0.90%	1.10%	0.93%
Revenue			
Residential	0.34%	0.43%	0.15%
Commercial	0.47%	0.47%	0.62%
Industrial	4.28%	5.66%	3.15%
Transportation	3.84%	1.92%	1.09%
Total	0.76%	1.01%	0.83%
Average Retail Price			
Residential	0.12%	0.12%	0.15%
Commercial	0.30%	0.20%	0.44%
Industrial	1.05%	1.20%	0.31%
Transportation	2.49%	2.18%	0.83%
Total	0.17%	0.16%	0.11%
Receipt of Fossil Fuels			
Coal	2.50%	2.20%	1.70%
Petroleum Liquids	0.79%	0.49%	1.86%
Petroleum Coke	2.30%	2.03%	2.47%
Natural Gas	0.47%	0.26%	0.25%
Cost of Fossil Fuels			
Coal	0.18%	0.18%	0.04%
Petroleum Liquids	0.14%	0.04%	0.25%
Petroleum Coke	1.22%	1.03%	1.42%
Natural Gas	0.02%	0.06%	0.14%

Coal includes anthracite, bituminous, subbituminous, lignite, waste coal, and synthetic coal. Coal stocks exclude waste coal.

Petroleum Liquids include distillate fuel oil, residual fuel oil, jet fuel, kerosene, and waste oil.

Natural gas includes a small amount of supplemental gaseous fuels that cannot be identified separately. Excludes blast furnace gas and other gases.

Hydroelectric includes conventional hydroelectric and hydroelectric pumped storage facilities.

Other generation includes geothermal, wood, waste, wind, and solar, batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, and miscellaneous technologies.

Fuel Stocks are end-of-month values.

See technical notes (<http://www.eia.gov/cneaf/electricity/epm/appenc.pdf>) for additional information on the Commercial, Industrial and Transportation sectors.

Cost of Fossil Fuels represent weighted values.

Notes: Mean absolute value of percent change is the unweighted average of the absolute percent changes.

Sources: U.S. Energy Information Administration, Form EIA-923 'Power Plant Operations Report'; Form EIA-423, 'Monthly Cost and Quality of Fuels for Electric Plants Report'; Form EIA-826, 'Monthly Electric Sales and Revenue With State Distributions Report'; Form EIA-906, 'Power Plant Report'; Form EIA-920 'Combined Heat and Power Plant Report'; and Federal Energy Regulatory Commission, FERC Form 423, 'Monthly Report of Cost and Quality of Fuels for Electric Plants.'

Table C.3. Comparison of Preliminary Annual Data Versus Final Annual Data at the U.S. Level, 2013 through 2015

Item	2013			2014			2015		
	Preliminary Annual Data	Final Annual Data	Percent Change	Preliminary Annual Data	Final Annual Data	Percent Change	Preliminary Annual Data	Final Annual Data	Percent Change
Net Generation (Thousand MWh)									
Coal	1,585,998	1,581,115	-0.31%	1,585,697	1,581,710	-0.25%	1,356,057	1,352,398	-0.27%
Petroleum Liquids	13,410	13,820	3.06%	18,708	18,276	-2.31%	17,456	17,372	-0.48%
Petroleum Coke	13,453	13,344	-0.81%	11,781	11,955	1.48%	10,987	10,877	-1.00%
Natural Gas	1,113,665	1,124,836	1.00%	1,121,928	1,126,609	0.42%	1,335,068	1,333,482	-0.12%
Other Gases	12,271	12,853	4.75%	11,578	12,022	3.83%	12,963	13,117	1.18%
Hydroelectric	264,713	263,884	-0.31%	252,540	253,193	0.26%	246,075	243,989	-0.85%
Nuclear	789,017	789,016	0.00%	797,067	797,166	0.01%	797,178	797,178	0.00%
Other	265,683	267,096	0.53%	293,636	292,674	-0.33%	311,597	309,189	-0.77%
Total	4,058,209	4,065,964	0.19%	4,092,935	4,093,606	0.02%	4,087,381	4,077,601	-0.24%
Consumption of Fossil Fuels for Electricity Generation									
Coal (1,000 tons)	860,790	860,729	-0.01%	854,416	853,634	-0.09%	740,855	739,594	-0.17%
Petroleum Liquids (1,000 barrels)	22,751	23,231	2.11%	32,084	31,531	-1.72%	29,545	28,925	-2.10%
Petroleum Coke (1,000 tons)	4,893	4,852	-0.83%	4,325	4,412	2.02%	4,088	4,044	-1.07%
Natural Gas (1,000 Mcf)	8,512,483	8,596,299	0.98%	8,502,964	8,544,387	0.49%	10,048,346	10,016,576	-0.32%
Fuel Stocks for Electric Power Sector									
Coal (1,000 tons)	147,973	147,884	-0.06%	151,362	151,548	0.12%	197,128	195,548	-0.80%
Petroleum Liquids (1,000 barrels)	31,045	31,673	2.03%	32,139	33,505	4.25%	32,223	32,884	2.05%
Petroleum Coke (1,000 tons)	390	390	-0.01%	847	827	-2.29%	1,342	1,340	-0.15%
Retail Sales (Million kWh)									
Residential	1,391,102	1,394,812	0.27%	1,402,911	1,407,208	0.31%	1,399,884	1,404,096	0.30%
Commercial	1,338,464	1,337,079	-0.10%	1,357,505	1,352,158	-0.39%	1,358,419	1,360,752	0.17%
Industrial	954,731	985,352	3.21%	955,488	997,576	4.40%	958,563	986,508	2.92%
Transportation	7,525	7,625	1.32%	7,776	7,758	-0.24%	7,659	7,637	-0.29%
Total	3,691,822	3,724,868	0.90%	3,723,681	3,764,700	1.10%	3,724,525	3,758,992	0.93%
Revenue (Million Dollars)									
Residential	168,547	169,131	0.35%	175,404	176,178	0.44%	177,367	177,624	0.14%
Commercial	137,779	137,188	-0.43%	145,889	145,253	-0.44%	143,893	144,781	0.62%
Industrial	65,111	67,934	4.33%	67,019	70,855	5.72%	66,088	68,166	3.14%
Transportation	775	805	3.84%	798	810	1.51%	779	771	-1.12%
Total	372,213	375,058	0.76%	389,111	393,096	1.02%	388,127	391,342	0.83%
Average Retail Price (Cents/kWh)									
Residential	12.12	12.13	0.08%	12.50	12.52	0.13%	12.67	12.65	-0.16%
Commercial	10.29	10.26	-0.33%	10.75	10.74	-0.04%	10.59	10.64	0.44%
Industrial	6.82	6.89	1.09%	7.01	7.10	1.26%	6.89	6.91	0.22%
Transportation	10.30	10.55	2.49%	10.27	10.45	1.75%	10.17	10.09	-0.83%
Total	10.08	10.07	-0.13%	10.45	10.44	-0.08%	10.42	10.41	-0.10%
Receipt of Fossil Fuels									
Coal (1,000 tons)	803,206	823,222	2.49%	836,196	854,560	2.20%	769,866	782,929	1.70%
Petroleum Liquids (1,000 barrels)	20,348	20,413	0.32%	28,355	28,514	0.56%	24,512	24,320	-0.78%
Petroleum Coke (1,000 tons)	4,555	4,660	2.31%	5,091	5,195	2.03%	4,779	4,897	2.46%
Natural Gas (1,000 Mcf)	8,463,303	8,503,424	0.47%	8,423,883	8,431,423	0.09%	9,843,170	9,842,581	-0.01%
Cost of Fossil Fuels (Dollars per Million Btu)									
Coal (1,000 tons)	2.35	2.34	-0.12%	2.37	2.37	0.02%	2.22	2.22	-0.03%
Petroleum Liquids (1,000 barrels)	20.59	20.56	-0.12%	19.89	19.89	-0.03%	11.48	11.49	0.10%
Petroleum Coke (1,000 tons)	2.16	2.17	0.70%	1.96	1.98	0.97%	1.87	1.84	-1.37%
Natural Gas (1,000 Mcf)	4.33	4.33	0.03%	4.99	4.99	0.01%	3.22	3.23	0.18%

Coal includes anthracite, bituminous, subbituminous, lignite, waste coal, and synthetic coal. Coal stocks exclude waste coal.

Petroleum Liquids include distillate fuel oil, residual fuel oil, jet fuel, kerosene, and waste oil.

Natural gas includes a small amount of supplemental gaseous fuels that cannot be identified separately. Excludes blast furnace gas and other gases.

Hydroelectric includes conventional hydroelectric and hydroelectric pumped storage facilities.

Other generation includes geothermal, wood, waste, wind, and solar, batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, and miscellaneous technologies.

Fuel Stocks are end-of-year values.

See technical notes (<http://www.eia.gov/cneaf/electricity/epm/appenc.pdf>) for additional information on the Commercial, Industrial and Transportation sectors.

Cost of Fossil Fuels represent weighted values.

Notes: The average revenue per kilowatthour is calculated by dividing revenue by sales. Totals may not equal sum of components because of independent rounding.

Percent changes refer to the difference between the preliminary data published in the Electric Power Monthly (EPM) and the final data published in the EPM. Values for 2015 are Final.

Sources: U.S. Energy Information Administration, Form EIA-923 'Power Plant Operations Report'; Form EIA-423, 'Monthly Cost and Quality of Fuels for Electric Plants Report';

Form EIA-826, 'Monthly Electric Sales and Revenue With State Distributions Report'; Form EIA-906, 'Power Plant Report'; Form EIA-920 'Combined Heat and Power Plant Report';

and Federal Energy Regulatory Commission, FERC Form 423, 'Monthly Report of Cost and Quality of Fuels for Electric Plants.'

Table C.4. Unit of Measure Equivalents for Electricity

Unit	Equivalent
Kilowatt (kW)	1,000 (One Thousand) Watts
Megawatt (MW)	1,000,000 (One Million) Watts
Gigawatt (GW)	1,000,000,000 (One Billion) Watts
Terawatt (TW)	1,000,000,000,000 (One Trillion) Watts
Gigawatt	1,000,000 (One Million) Kilowatts
Thousand Gigawatts	1,000,000,000 (One Billion) Kilowatts
Kilowatthours (kWh)	1,000 (One Thousand) Watthours
Megawatthours (MWh)	1,000,000 (One Million) Watthours
Gigawatthours (GWh)	1,000,000,000 (One Billion) Watthours
Terawatthours (TWh)	1,000,000,000,000 (One Trillion) Watthours
Gigawatthours	1,000,000 (One Million) Kilowatthours
Thousand Gigawatthours	1,000,000,000 (One Billion Kilowatthours)

Source: U.S. Energy Information Administration

Glossary

Anthracite: The highest rank of coal; used primarily for residential and commercial space heating. It is a hard, brittle, and black lustrous coal, often referred to as hard coal, containing a high percentage of fixed carbon and a low percentage of volatile matter. The moisture content of fresh-mined anthracite generally is less than 15 percent. The heat content of anthracite ranges from 22 to 28 million Btu per ton on a moist, mineral-matter-free basis. The heat content of anthracite coal consumed in the United States averages 25 million Btu per ton, on the as-received basis (i.e., containing both inherent moisture and mineral matter). Note: Since the 1980's, anthracite refuse or mine waste has been used for steam electric power generation. This fuel typically has a heat content of 15 million Btu per ton or less.

Ash: Impurities consisting of silica, iron, aluminum, and other noncombustible matter that are contained in coal. Ash increases the weight of coal, adds to the cost of handling, and can affect its burning characteristics. Ash content is measured as a percent by weight of coal on a "received" or a "dry" (moisture-free, usually part of a laboratory analysis) basis.

Ash content: The amount of ash contained in the fuel (except gas) in terms of percent by weight.

Average Price of Electricity to Ultimate Consumers (formerly known as Average Revenue per Kilowatthour): The average revenue per kilowatthour of electricity sold by sector (residential, commercial, industrial, or other) and geographic area (State, Census division, and national), is calculated by dividing the total monthly revenue by the corresponding total monthly sales for each sector and geographic area.

Barrel: A unit of volume equal to 42 U.S. gallons.

Biomass: Organic non-fossil material of biological origin constituting a renewable energy resource.

Bituminous coal: A dense coal, usually black, sometimes dark brown, often with well-defined bands of bright and dull material, used primarily as fuel in steam-electric power generation, with substantial quantities also used for heat and power applications in manufacturing and to make coke. Bituminous coal is the most abundant coal in active U.S. mining regions. Its moisture content usually is less than 20 percent. The heat content of bituminous coal ranges from 21 to 30 million Btu per ton on a moist, mineral-matter-free basis. The heat content of bituminous coal consumed in the United States averages 24 million Btu per ton, on the as-received basis (i.e., containing both inherent moisture and mineral matter).

British thermal unit: The quantity of heat required to raise the temperature of 1 pound of liquid water by 1 degree Fahrenheit at the temperature at which water has its greatest density (approximately 39 degrees Fahrenheit).

Btu: The abbreviation for British thermal unit(s).

Capacity: See Generator Capacity and Generator Name Plate Capacity (Installed).

Census Divisions: Any of nine geographic areas of the United States as defined by the U.S. Department of Commerce, Bureau of the Census. The divisions, each consisting of several States, are defined as follows:

- 1) *New England*: Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont;
- 2) *Middle Atlantic*: New Jersey, New York, and Pennsylvania;
- 3) *East North Central*: Illinois, Indiana, Michigan, Ohio, and Wisconsin;
- 4) *West North Central*: Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, and South Dakota;
- 5) *South Atlantic*: Delaware, District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, and West Virginia;
- 6) *East South Central*: Alabama, Kentucky, Mississippi, and Tennessee;
- 7) *West South Central*: Arkansas, Louisiana, Oklahoma, and Texas;
- 8) *Mountain*: Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming;
- 9) *Pacific*: Alaska, California, Hawaii, Oregon, and Washington.

Note: Each division is a sub-area within a broader Census Region. In some cases, the Pacific division is subdivided into the Pacific Contiguous area (California, Oregon, and Washington) and the Pacific Noncontiguous area (Alaska and Hawaii).

Coal: A readily combustible black or brownish-black rock whose composition, including inherent moisture, consists of more than 50 percent by weight and more than 70 percent by volume of carbonaceous material. It is formed from plant remains that have been compacted, hardened, chemically altered, and metamorphosed by heat and pressure over geologic time.

Coal synfuel: Coal-based solid fuel that has been processed by a coal synfuel plant; and coal-based fuels such as briquettes, pellets, or extrusions, which are formed from fresh or recycled coal and binding materials.

Coke (petroleum): A residue high in carbon content and low in hydrogen that is the final product of thermal decomposition in the condensation process in cracking. This product is reported as marketable coke or catalyst coke. The conversion is 5 barrels (of 42 U.S. gallons each) per short ton. Coke from petroleum has a heating value of 6.024 million Btu per barrel.

Combined cycle: An electric generating technology in which electricity is produced from otherwise lost waste heat exiting from one or more gas (combustion) turbine-generators. The exiting heat from the combustion turbine(s) is routed to a conventional boiler or to a heat recovery steam generator for utilization by a steam turbine in the production of additional electricity.

Combined heat and power (CHP): Includes plants designed to produce both heat and electricity from a single heat source. *Note:* This term is being used in place of the term "cogenerator" that was used by EIA in the past. CHP better describes the facilities because some of the plants included do not produce heat and power in a sequential fashion and, as a result, do not meet the legal definition of cogeneration specified in the Public Utility Regulatory Policies Act (PURPA).

Commercial sector: An energy-consuming sector that consists of service-providing facilities and equipment of: businesses; Federal, State, and local governments; and other private and public organizations, such as religious, social, or fraternal groups. The commercial sector includes institutional living quarters. It also includes sewage treatment facilities. Common uses of energy associated with this sector include space heating, water heating, air conditioning, lighting, refrigeration, cooking, and running a wide variety of other equipment. *Note:* This sector includes generators that produce electricity and/or useful thermal output primarily to support the activities of the above-mentioned commercial establishments.

Consumption (fuel): The use of energy as a source of heat or power or as a raw material input to a manufacturing process.

Cost: The amount paid to acquire resources, such as plant and equipment, fuel, or labor services.

Demand (electric): The rate at which electric energy is delivered to or by a system, part of a system, or piece of equipment, at a given instant or averaged over any designated period of time.

Diesel: A distillate fuel oil that is used in diesel engines such as those used for transportation and for electric power generation.

Distillate fuel oil: *A general classification for one of the petroleum fractions produced in conventional distillation operations. It includes diesel fuels and fuel oils. Products known as No. 1, No. 2, and No. 4 diesel fuel are used in on-highway diesel engines, such as those in trucks and automobiles, as well as off-highway engines, such as those in railroad locomotives and agricultural machinery. Products known as No. 1, No. 2, and No. 4 fuel oils are used primarily for space heating and electric power generation.*

1) **No. 1 Distillate:** A light petroleum distillate that can be used as either a diesel fuel (see No. 1 Diesel Fuel) or a fuel oil. See No. 1 Fuel Oil.

- **No. 1 Diesel fuel:** A light distillate fuel oil that has distillation temperatures of 550 degrees Fahrenheit at the 90-percent point and meets the specifications defined in ASTM Specification D 975. It is used in high-speed diesel engines, such as those in city buses and similar vehicles. See No. 1 Distillate above.
- **No. 1 Fuel oil:** A light distillate fuel oil that has distillation temperatures of 400 degrees Fahrenheit at the 10-percent recovery point and 550 degrees Fahrenheit at the 90-percent point and meets the specifications defined in ASTM Specification D 396. It is used primarily as fuel for portable outdoor stoves and portable outdoor heaters. See No. 1 Distillate above.

2) **No. 2 Distillate:** A petroleum distillate that can be used as either a diesel fuel (see No. 2 Diesel Fuel definition below) or a fuel oil. See No. 2 Fuel oil below.

- **No. 2 Diesel fuel:** A fuel that has distillation temperatures of 500 degrees Fahrenheit at the 10-percent recovery point and 640 degrees Fahrenheit at the 90-percent recovery point and meets the specifications defined in ASTM Specification D 396. It is used in atomizing type burners for domestic heating or for moderate capacity commercial/industrial burner units. See No. 2 Distillate above.

3) *No. 4 Fuel:* A distillate fuel oil made by blending distillate fuel oil and residual fuel oil stocks. It conforms with ASTM Specification D 396 or Federal Specification VV-F-815C and is used extensively in industrial plants and in commercial burner installations that are not equipped with preheating facilities. It also includes No. 4 diesel fuel used for low- and medium-speed diesel engines and conforms to ASTM Specification D 975.

- *No. 4 Diesel fuel and No. 4 Fuel oil:* See No. 4 Fuel above.

Electric industry restructuring: The process of replacing a monopolistic system of electric utility suppliers with competing sellers, allowing individual ultimate customers to choose their supplier but still receive delivery over the power lines of the local utility. It includes the reconfiguration of vertically integrated electric utilities.

Electric plant (physical): A facility containing prime movers, electric generators, and auxiliary equipment for converting mechanical, chemical, and/or fission energy into electric energy.

Electric power sector: An energy-consuming sector that consists of electricity-only and combined-heat-and-power (CHP) plants whose primary business is to sell electricity, or electricity and heat, to the public-- i. e., North American Industry Classification System 22 plants.

Electric utility: A corporation, person, agency, authority, or other legal entity or instrumentality aligned with distribution facilities for delivery of electric energy for use primarily by the public. Included are investor-owned electric utilities, municipal and State utilities, Federal electric utilities, and rural electric cooperatives. A few entities that are tariff based and corporately aligned with companies that own distribution facilities are also included. Note: Due to the issuance of FERC Order 888 that required traditional electric utilities to functionally unbundle their generation, transmission, and distribution operations, "electric utility" currently has inconsistent interpretations from State to State.

Electricity: A form of energy characterized by the presence and motion of elementary charged particles generated by friction, induction, or chemical change.

Electricity generation: The process of producing electric energy or the amount of electric energy produced by transforming other forms of energy, commonly expressed in kilowatthours (kWh) or megawatthours (MWh).

Electricity generators: The facilities that produce only electricity, commonly expressed in kilowatthours (kWh) or megawatthours (MWh).

Energy: The capacity for doing work as measured by the capability of doing work (potential energy) or the conversion of this capability to motion (kinetic energy). Energy has several forms, some of which are easily convertible and can be changed to another form useful for work. Most of the world's convertible energy comes from fossil fuels that are burned to produce heat that is then used as a transfer medium to mechanical or other means in order to accomplish tasks. Electrical energy is usually measured in kilowatthours, while heat energy is usually measured in British thermal units.

Energy conservation features: This includes building shell conservation features, HVAC conservation features, lighting conservation features, any conservation features, and other conservation features incorporated by the building. However, this category does not include any demand-side management (DSM) program participation by the building. Any DSM program participation is included in the DSM Programs.

Energy efficiency: Refers to programs that are aimed at reducing the energy used by specific end-use devices and systems, typically without affecting the services provided. These programs reduce overall electricity consumption (reported in megawatthours), often without explicit consideration for the timing of program-induced savings. Such savings are generally achieved by substituting technically more advanced equipment to produce the same level of end-use services (e.g. lighting, heating, motor drive) with less electricity. Examples include high-efficiency appliances, efficient lighting programs, high-efficiency heating, ventilating and air conditioning (HVAC) systems or control modifications, efficient building design, advanced electric motor drives, and heat recovery systems.

Energy service provider: An energy entity that provides service to an ultimate consumer.

Energy source: Any substance or natural phenomenon that can be consumed or transformed to supply heat or power. Examples include petroleum, coal, natural gas, nuclear, biomass, electricity, wind, sunlight, geothermal, water movement, and hydrogen in fuel cells.

Energy-only service: Sales services for ultimate consumers for which the company provided only the energy consumed, where another entity provides delivery services.

Fossil fuel: An energy source formed in the earth's crust from decayed organic material. The common fossil fuels are petroleum, coal, and natural gas.

Franchised service area: A specified geographical area in which a utility has been granted the exclusive right to serve customers. A franchise allows an entity to use city streets, alleys and other public lands in order to provide, distribute, and sell services to the community.

Fuel: Any material substance that can be consumed to supply heat or power. Included are petroleum, coal, and natural gas (the fossil fuels), and other consumable materials, such as uranium, biomass, and hydrogen.

Gas: A fuel burned under boilers and by internal combustion engines for electric generation. These include natural, manufactured and waste gas.

Gas turbine plant: An electric generating facility in which the prime mover is a gas (combustion) turbine. A gas turbine typically consists of an air compressor and one or more combustion chambers where either liquid or gaseous fuel is burned. The resulting hot gases are passed through the turbine where they expand to drive both an electric generator and the compressor.

Generating unit: Any combination of physically connected generators, reactors, boilers, combustion turbines, or other prime movers operated together to produce electric power.

Generator: A machine that converts mechanical energy into electrical energy.

Generator capacity: The maximum output, commonly expressed in megawatts (MW), that generating equipment can supply to system load, adjusted for ambient conditions.

Generator nameplate capacity (installed): The maximum rated output of a generator, prime mover, or other electric power production equipment under specific conditions designated by the manufacturer. Installed generator nameplate capacity is commonly expressed in megawatts (MW) and is usually indicated on a nameplate physically attached to the generator.

Geothermal: Pertaining to heat within the Earth.

Geothermal energy: Hot water or steam extracted from geothermal reservoirs in the earth's crust. Water or steam extracted from geothermal reservoirs can be used for geothermal heat pumps, water heating, or electricity generation.

Gigawatt (GW): One billion watts.

Gigawatthour (GWh): One billion watthours.

Gross generation: The total amount of electric energy produced by generating units and measured at the generating terminal in kilowatthours (kWh) or megawatthours (MWh).

Heat content: The amount or number of British thermal units (Btu) produced by the combustion of fuel, measured in Btu/unit of measure.

Hydroelectric power: The production of electricity from the kinetic energy of falling water.

Hydroelectric power generation: Electricity generated by an electric power plant whose turbines are driven by falling water. It includes electric utility and industrial generation of hydroelectricity, unless otherwise specified. Generation is reported on a net basis, i.e., on the amount of electric energy generated after the electric energy consumed by station auxiliaries and the losses in the transformers that are considered integral parts of the station are deducted.

Hydroelectric pumped storage: Hydroelectricity that is generated during peak loads by using water previously pumped into an elevated storage reservoir during off-peak periods when excess generating capacity is available to do so. When additional generating capacity is needed, the water can be released from the reservoir through a conduit to turbine generators located in a power plant at a lower level.

Hydrogen: A colorless, odorless, highly flammable gaseous element. It is the lightest of all gases and the most abundant element in the universe, occurring chiefly in combination with oxygen in water and also in acids, bases, alcohols, petroleum, and other hydrocarbons.

Independent power producer: A corporation, person, agency, authority, or other legal entity or instrumentality that owns or operates facilities for the generation of electricity for use primarily by the public, and that is not an electric utility.

Industrial sector: An energy-consuming sector that consists of all facilities and equipment used for producing, processing, or assembling goods. The industrial sector encompasses the following types of activity: manufacturing (NAICS codes 31-33); agriculture, forestry, and hunting (NAICS code 11); mining, including oil and gas extraction (NAICS code 21); natural gas distribution (NAICS code 2212); and construction (NAICS code 23). Overall energy use in this sector is largely for process heat and cooling and powering machinery, with lesser amounts used for facility heating, air conditioning, and lighting. Fossil fuels are also used as raw material inputs to manufactured products. Note: This sector includes generators that produce electricity and/or useful thermal output primarily to support the above-mentioned industrial activities.

Interdepartmental service (electric): Interdepartmental service includes amounts charged by the electric department at tariff or other specified rates for electricity supplied by it to other utility departments.

Internal combustion plant: A plant in which the prime mover is an internal combustion engine. An internal combustion engine has one or more cylinders in which the process of combustion takes place, converting energy released from the rapid burning of a fuel-air mixture into mechanical energy. Diesel or gas-fired engines are the principal types used in electric plants. The plant is usually operated during periods of high demand for electricity.

Investor-owned utility (IOU): A privately-owned electric utility whose stock is publicly traded. It is rate regulated and authorized to achieve an allowed rate of return.

Jet fuel: A refined petroleum product used in jet aircraft engines. It includes kerosene-type jet fuel and naphtha-type jet fuel.

Kerosene: A light petroleum distillate that is used in space heaters, cook stoves, and water heaters and is suitable for use as a light source when burned in wick-fed lamps. Kerosene has a maximum distillation temperature of 400 degrees Fahrenheit at the 10-percent recovery point, a final boiling point of 572 degrees Fahrenheit, and a minimum flash point of 100 degrees Fahrenheit. Included are No. 1-K and No. 2-K, the two grades recognized by ASTM Specification D 3699 as well as all other grades of kerosene called range or stove oil, which have properties similar to those of No. 1 fuel oil.

Kilowatt (kW): One thousand watts.

Kilowatthour (kWh): One thousand watthours.

Light oil: Lighter fuel oils distilled off during the refining process. Virtually all petroleum used in internal combustion and gas-turbine engines is light oil.

Lignite: The lowest rank of coal, often referred to as brown coal, used almost exclusively as fuel for steam-electric power generation. It is brownish-black and has a high inherent moisture content, sometimes as high as 45 percent. The heat content of lignite ranges from 9 to 17 million Btu per ton on a moist, mineral-matter-free basis. The heat content of lignite consumed in the United States averages 13 million Btu per ton, on the as-received basis (i.e., containing both inherent moisture and mineral matter).

Manufactured gas: A gas obtained by destructive distillation of coal, or by thermal decomposition of oil, or by the reaction of steam passing through a bed of heated coal or coke. Examples are coal gases, coke oven gases, producer gas, blast furnace gas, blue (water) gas, and carbureted water gas

Mcf: One thousand cubic feet.

Megawatt (MW): One million watts of electricity.

Megawatthour (MWh): One million watthours.

Municipal utility: A nonprofit utility, owned by a local municipality and operated as a department thereof, governed by a city council or an independently elected or appointed board; primarily involved in the distribution and/or sale of electric power to ultimate consumers.

Natural gas: A gaseous mixture of hydrocarbon compounds, the primary one being methane. Note: The Energy Information Administration measures wet natural gas and its two sources of production, associated/dissolved natural gas and nonassociated natural gas, and dry natural gas, which is produced from wet natural gas.

- 1) *Wet natural gas:* A mixture of hydrocarbon compounds and small quantities of various nonhydrocarbons existing in the gaseous phase or in solution with crude oil in porous rock formations at reservoir conditions. The principal hydrocarbons normally contained in the mixture are methane, ethane, propane, butane, and pentane. Typical nonhydrocarbon gases that may be present in reservoir natural gas are water vapor, carbon dioxide, hydrogen sulfide, nitrogen and trace amounts of helium. Under reservoir conditions, natural gas and its associated liquefiable portions occur either in a single gaseous phase in the reservoir or in solution with crude oil and are not distinguishable at the time as separate substances. Note: The Securities and Exchange Commission and the Financial Accounting Standards Board refer to this product as natural gas.
 - Associated-dissolved natural gas: Natural gas that occurs in crude oil reservoirs either as free gas (associated) or as gas in solution with crude oil (dissolved gas).
 - Nonassociated natural gas: Natural gas that is not in contact with significant quantities of crude oil in the reservoir.
- 2) *Dry natural gas:* Natural gas which remains after: 1) the liquefiable hydrocarbon portion has been removed from the gas stream (i.e., gas after lease, field, and/or plant separation); and 2) any volumes of nonhydrocarbon gases have been removed where they occur in sufficient quantity to render the gas unmarketable. Note: Dry natural gas is also known as consumer-grade natural gas. The parameters for measurement are cubic feet at 60 degrees Fahrenheit and 14.73 pounds per square inch absolute.

Net generation: The amount of gross generation less the electrical energy consumed at the generating station(s) for station service or auxiliaries. Note: Electricity required for pumping at pumped-storage plants is regarded as electricity for station service and is deducted from gross generation.

Net summer capacity: The maximum output, commonly expressed in megawatts (MW), that generating equipment can supply to system load, as demonstrated by a multi-hour test, at the time of summer peak demand (period of May 1 through October 31). This output reflects a reduction in capacity due to electricity use for station service or auxiliaries.

Net winter capacity: The maximum output, commonly expressed in megawatts (MW), that generating equipment can supply to system load, as demonstrated by a multi-hour test, at the time of peak winter demand (period of November 1 though April 30). This output reflects a reduction in capacity due to electricity use for station service or auxiliaries.

North American Electric Reliability Council (NERC): A council formed in 1968 by the electric utility industry to promote the reliability and adequacy of bulk power supply in the electric utility systems of North America. The NERC Regions are:

- 1) Texas Regional Entity (TRE),
- 2) Florida Reliability Coordinating Council (FRCC),
- 3) Midwest Reliability Organization (MRO),
- 4) Northeast Power Coordinating Council (NPCC),
- 5) ReliabilityFirst Corporation (RFC),
- 6) Southeastern Electric Reliability Council (SERC),
- 7) Southwest Power Pool (SPP), and the
- 8) Western Energy Coordinating Council (WECC).

North American Industry Classification System (NAICS): A set of codes that describes the possible purposes of a facility.

Nuclear electric power: Electricity generated by an electric power plant whose turbines are driven by steam produced by the heat from the fission of nuclear fuel in a reactor.

Other customers: Includes public street and highway lighting, other sales to public authorities, sales to railroads and railways, sales for irrigation, and interdepartmental sales.

Other generation: Electricity originating from these sources: manufactured, supplemental gaseous fuel, propane, and waste gasses, excluding natural gas; biomass; geothermal; wind; solar thermal; photovoltaic; synthetic fuel; purchased steam; and waste oil energy sources.

Percent change: The relative change in a quantity over a specified time period. It is calculated as follows: the current value has the previous value subtracted from it; this new number is divided by the absolute value of the previous value; then this new number is multiplied by 100.

Petroleum: A broadly defined class of liquid hydrocarbon mixtures. Included are crude oil, lease condensate, unfinished oils, refined products obtained from the processing of crude oil, and natural gas plant liquids. Note: Volumes of finished petroleum products include nonhydrocarbon compounds, such as additives and detergents, after they have been blended into the products.

Petroleum coke: See Coke (petroleum).

Photovoltaic energy: Direct-current electricity generated from sunlight through solid-state semiconductor devices that have no moving parts.

Plant: A term commonly used either as a synonym for an industrial establishment or a generation facility or to refer to a particular process within an establishment.

Power: The rate at which energy is transferred. Electrical energy is usually measured in watts. Also used for a measurement of capacity.

Power production plant: All the land and land rights, structures and improvements, boiler or reactor vessel equipment, engines and engine-driven generator, turbo generator units, accessory electric equipment, and miscellaneous power plant equipment are grouped together for each individual facility.

Production (electric): Act or process of producing electric energy from other forms of energy; also, the amount of electric energy expressed in watthours (Wh).

Propane: A normally gaseous straight-chain hydrocarbon, (C₃H₈). It is a colorless paraffinic gas that boils at a temperature of -43.67 degrees Fahrenheit. It is extracted from natural gas or refinery gas streams. It includes all products covered by Gas Processors Association Specifications for commercial propane and HD-5 propane and ASTM Specification D 1835.

Public street and highway lighting service: Includes electricity supplied and services rendered for the purpose of lighting streets, highways, parks and other public places; or for traffic or other signal system service, for municipalities, or other divisions or agencies of State or Federal governments.

Railroad and railway electric service: Electricity supplied to railroads and interurban and street railways, for general railroad use, including the propulsion of cars or locomotives, where such electricity is supplied under separate and distinct rate schedules.

Receipts: Purchases of fuel.

Relative standard error: The standard deviation of a distribution divided by the arithmetic mean, sometimes multiplied by 100. It is used for the purpose of comparing the variabilities of frequency distributions but is sensitive to errors in the means.

Residential: An energy-consuming sector that consists of living quarters for private households. Common uses of energy associated with this sector include space heating, water heating, air conditioning, lighting, refrigeration, cooking, and running a variety of other appliances. The residential sector excludes institutional living quarters.

Residual fuel oil: A general classification for the heavier oils, known as No. 5 and No. 6 fuel oils, that remain after the distillate fuel oils and lighter hydrocarbons are distilled away in refinery operations. It conforms to ASTM Specifications D 396 and D 975 and Federal Specification VV-F-815C. No. 5, a residual fuel oil of medium viscosity, is also known as Navy Special and is defined in Military Specification MIL-F-859E, including Amendment 2 (NATO Symbol F-770). It is used in steam-powered vessels in government

service and inshore power plants. No. 6 fuel oil includes Bunker C fuel oil and is used for the production of electric power, space heating, vessel bunkering, and various industrial purposes.

Retail: Sales covering electrical energy supplied for residential, commercial, and industrial end-use purposes. Other small classes, such as agriculture and street lighting, also are included in this category.

Revenues: The total amount of money received by a firm from sales of its products and/or services, gains from the sales or exchange of assets, interest and dividends earned on investments, and other increases in the owner's equity except those arising from capital adjustments.

Sales: The transfer of title to an energy commodity from a seller to a buyer for a price or the quantity transferred during a specified period.

Service classifications (sectors): Consumers grouped by similar characteristics in order to be identified for the purpose of setting a common rate for electric service. Usually classified into groups identified as residential, commercial, industrial and other.

Service to public authorities: Public authority service includes electricity supplied and services rendered to municipalities or divisions or agencies of State and Federal governments, under special contracts or agreements or service classifications applicable only to public authorities.

Solar energy: The radiant energy of the sun that can be converted into other forms of energy, such as heat or electricity. Electricity produced from solar energy heats a medium that powers an electricity-generating device.

State power authority: A nonprofit utility owned and operated by a state government agency, primarily involved in the generation, marketing, and/or transmission of wholesale electric power.

Steam-electric power plant (conventional): A plant in which the prime mover is a steam turbine. The steam used to drive the turbine is produced in a boiler where fossil fuels are burned.

Stocks of fuel: A supply of fuel accumulated for future use. This includes coal and fuel oil stocks at the plant site, in coal cars, tanks, or barges at the plant site, or in separate storage sites.

Subbituminous coal: A coal whose properties range from those of lignite to those of bituminous coal and used primarily as fuel for steam-electric power generation. It may be dull, dark brown to black, soft and crumbly, at the lower end of the range, to bright, jet black, hard, and relatively strong, at the upper end. Subbituminous coal contains 20 to 30 percent inherent moisture by weight. The heat content of subbituminous coal ranges from 17 to 24 million Btu per ton on a moist, mineral-matter-free basis. The heat content of subbituminous coal consumed in the United States averages 17 to 18 million Btu per ton, on the as-received basis (i.e., containing both inherent moisture and mineral matter).

Sulfur: A yellowish nonmetallic element, sometimes known as "brimstone." It is present at various levels of concentration in many fossil fuels whose combustion releases sulfur compounds that are considered harmful to the environment. Some of the most commonly used fossil fuels are categorized according to their sulfur content, with lower sulfur fuels usually selling at a higher price. Note: No. 2 Distillate fuel is

currently reported as having either a 0.05 percent or lower sulfur level for on-highway vehicle use or a greater than 0.05 percent sulfur level for off-highway use, home heating oil, and commercial and industrial uses. Residual fuel, regardless of use, is classified as having either no more than 1 percent sulfur or greater than 1 percent sulfur. Coal is also classified as being low-sulfur at concentrations of 1 percent or less or high-sulfur at concentrations greater than 1 percent.

Sulfur content: The amount of sulfur contained in the fuel (except gas) in terms of percent by weight.

Supplemental gaseous fuel supplies: Synthetic natural gas, propane-air, coke oven gas, refinery gas, biomass gas, air injected for Btu stabilization, and manufactured gas commingled and distributed with natural gas.

Synthetic fuel: A gaseous, liquid, or solid fuel that does not occur naturally. Synfuels can be made from coal (coal gasification or coal liquefaction), petroleum products, oil shale, tar sands, or plant products. Among the synfuels are various fuel gases, including but not restricted to substitute natural gas, liquid fuels for engines (e.g., gasoline, diesel fuel, and alcohol fuels) and burner fuels (e.g., fuel heating oils).

Terrawatt: One trillion watts.

Terrawatthour: One trillion kilowatthours.

Ton: A unit of weight equal to 2,000 pounds.

Turbine: A machine for generating rotary mechanical power from the energy of a stream of fluid (such as water, steam, or hot gas). Turbines convert the kinetic energy of fluids to mechanical energy through the principles of impulse and reaction, or a mixture of the two.

Ultimate consumer: A consumer that purchases electricity for its own use and not for resale.

Useful thermal output: The thermal energy made available in a combined heat or power system for use in any industrial or commercial process, heating or cooling application, or delivered to other end users, i.e., total thermal energy made available for processes and applications other than electrical generation.

Waste coal: As a fuel for electric power generation, waste coal includes anthracite refuse or mine waste, waste from anthracite preparation plants, and coal recovered from previously mined sites.

Waste gases: As a fuel for electric power generation, waste gasses are those gasses that are produced from gasses recovered from a solid-waste or wastewater treatment facility, or the gaseous by-products of oil-refining processes.

Waste oil: As a fuel for electric power generation, waste oil includes recycled motor oil, and waste oil from transformers.

Watt (W): The unit of electrical power equal to one ampere under a pressure of one volt. A Watt is equal to 1/746 horsepower.

Watthour (Wh): The electrical energy unit of measure equal to one watt of power supplied to, or taken from, an electric circuit steadily for one hour.

Wind energy: The kinetic energy of wind converted into mechanical energy by wind turbines (i.e., blades rotating from the hub) that drive generators to produce electricity.

Year-to -date: The cumulative sum of each month's value starting with January and ending with the current month of the data.