



*Independent Statistics & Analysis*

U.S. Energy Information  
Administration

# Electric Power Monthly

## with Data for December 2018

February 2019

**February 2019 EPM Revision Notice – March 15, 2019**

**Table 8.5., Net Summer Capacity (MW) of Existing Utility Scale Units by Technology for Puerto Rico, 2007-December 2018 was revised to correct for the underreporting of petroleum and total capacity for years 2007-2017 and hydroelectric, natural gas, petroleum and total capacity for 2018.**

This report was prepared by the U.S. Energy Information Administration (EIA), the statistical and analytical agency within the U.S. Department of Energy. By law, EIA's data, analyses, and forecasts are independent of approval by any other officer or employee of the United States Government. The views in this report therefore should not be construed as representing those of the Department of Energy or other Federal agencies



---

## Contacts

---

The Electric Power Monthly is prepared by the U.S. Energy Information Administration.

Questions and comments concerning the contents of the Electric Power Monthly may be directed to:

Brady Tyra  
 U.S. Energy Information Administration, EI-23  
 U.S. Department of Energy  
 1000 Independence Avenue, S.W.  
 Washington, DC, 20585-0650

Email address: [infoelectric@eia.gov](mailto:infoelectric@eia.gov)

Subject specialists:

<b>Subject</b>	<b>Specialist</b>
U.S. electric net generation	Brady Tyra
U.S. electric consumption of fuels	Christopher Cassar
U.S. electric stocks of fuels	Christopher Cassar
U.S. electric fossil-fuel receipts	Joy Liu
U.S. electric fossil-fuel costs	Joy Liu
U.S. sales of electricity to ultimate consumers	Peter Wong
Sampling and estimation methodologies	Orhan Yildiz

Requests for additional information on other statistics available from the U.S. Energy Information Administration or questions concerning subscriptions and report distribution may be directed to the Office of Communications of the U.S. Energy Information Administration at [infoctr@eia.gov](mailto:infoctr@eia.gov).

## 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."

## Table of Contents

---

Contacts

    Quality

Preface

    Background

    Data Sources

    Table and Figure Index

References

Glossary

---

## Table and Figure Index

---

### *Executive Summary*

Table ES.1.A.	Total Electric Power Industry Summary Statistics
Table ES.1.B.	Total Electric Power Industry Summary Statistics, Year-to-Date
Table ES.2.A.	Summary Statistics: Receipts and Cost of Fossil Fuels for the Electric Power Industry by Sector, Physical Units
Table ES.2.B.	Summary Statistics: Receipts and Cost of Fossil Fuels for the Electric Power Industry by Sector, Btus

### *Chapter 1. Net Generation*

Table 1.1.	Net Generation by Energy Source: Total (All Sectors)
Table 1.1.A.	Net Generation from Renewable Sources: Total (All Sectors)
Table 1.2.A.	Net Generation by Energy Source: Electric Utilities
Table 1.2.B.	Net Generation by Energy Source: Independent Power Producers
Table 1.2.C.	Net Generation by Energy Source: Commercial Combined Heat and Power Sector
Table 1.2.D.	Net Generation by Energy Source: Industrial Combined Heat and Power Sector
Table 1.2.E.	Net Generation by Energy Source: Residential Sector
Table 1.3.A.	Net Generation by State by Sector
Table 1.3.B.	Net Generation by State by Sector, Year-to-Date
Table 1.4.A.	Net Generation from Coal by State by Sector
Table 1.4.B.	Net Generation from Coal by State by Sector, Year-to-Date
Table 1.5.A.	Net Generation from Petroleum Liquids by State by Sector
Table 1.5.B.	Net Generation from Petroleum Liquids by State by Sector, Year-to-Date
Table 1.6.A.	Net Generation from Petroleum Coke by State by Sector
Table 1.6.B.	Net Generation from Petroleum Coke by State by Sector, Year-to-Date
Table 1.7.A.	Net Generation from Natural Gas by State by Sector
Table 1.7.B.	Net Generation from Natural Gas by State by Sector, Year-to-Date
Table 1.7.C.	Utility-Scale Facility Net Generation from Natural Gas by Technology: Total (All Sectors)
Table 1.8.A.	Net Generation from Other Gases by State by Sector
Table 1.8.B.	Net Generation from Other Gases by State by Sector, Year-to-Date
Table 1.9.A.	Net Generation from Nuclear Energy by State by Sector
Table 1.9.B.	Net Generation from Nuclear Energy by State by Sector, Year-to-Date
Table 1.10.A.	Net Generation from Hydroelectric (Conventional) Power by State by Sector
Table 1.10.B.	Net Generation from Hydroelectric (Conventional) Power by State by Sector, Year-to-Date
Table 1.11.A.	Net Generation from Renewable Sources Excluding Hydroelectric by State by Sector
Table 1.11.B.	Net Generation from Renewable Sources Excluding Hydroelectric by State by Sector, Year-to-Date
Table 1.12.A.	Net Generation from Hydroelectric (Pumped Storage) Power by State by Sector
Table 1.12.B.	Net Generation from Hydroelectric (Pumped Storage) Power by State by Sector, Year-to-Date
Table 1.13.A.	Net Generation from Other Energy Sources by State by Sector
Table 1.13.B.	Net Generation from Other Energy Sources by State by Sector, Year-to-Date
Table 1.14.A.	Net Generation from Wind by State by Sector
Table 1.14.B.	Net Generation from Wind by State by Sector, Year-to-Date
Table 1.15.A.	Net Generation from Biomass by State by Sector

---

Table 1.15.B.	Net Generation from Biomass by State by Sector, Year-to-Date
Table 1.16.A.	Net Generation from Geothermal by Census Division by Sector
Table 1.16.B.	Net Generation from Geothermal by Census Division by Sector, Year-to-Date
Table 1.17.A.	Net Generation from Solar Photovoltaic by Census Division by Sector
Table 1.17.B.	Net Generation from Solar Photovoltaic by Census Division by Sector, Year-to-Date
Table 1.18.A.	Net Generation from Solar Thermal by Sector
Table 1.18.B.	Net Generation from Solar Thermal by Census Division by Sector, Year-to-Date

## *Chapter 2. Consumption of Fossil Fuels*

Table 2.1.A.	Coal: Consumption for Electricity Generation by Sector
Table 2.1.B.	Coal: Consumption for Useful Thermal Output by Sector
Table 2.1.C.	Coal: Consumption for Electricity Generation and Useful Thermal Output by Sector
Table 2.2.A.	Petroleum Liquids: Consumption for Electricity Generation by Sector
Table 2.2.B.	Petroleum Liquids: Consumption for Useful Thermal Output by Sector
Table 2.2.C.	Petroleum Liquids: Consumption for Electricity Generation and Useful Thermal Output by Sector
Table 2.3.A.	Petroleum Coke: Consumption for Electricity Generation by Sector
Table 2.3.B.	Petroleum Coke: Consumption for Useful Thermal Output by Sector
Table 2.3.C.	Petroleum Coke: Consumption for Electricity Generation and Useful Thermal Output by Sector
Table 2.4.A.	Natural Gas: Consumption for Electricity Generation by Sector
Table 2.4.B.	Natural Gas: Consumption for Useful Thermal Output by Sector
Table 2.4.C.	Natural Gas: Consumption for Electricity Generation and Useful Thermal Output by Sector
Table 2.5.A.	Landfill Gas: Consumption for Electricity Generation by Sector
Table 2.5.B.	Landfill Gas: Consumption for Useful Output by Sector
Table 2.5.C.	Landfill Gas: Consumption for Electricity Generation and Useful Thermal Output by Sector
Table 2.6.A.	Biogenic Municipal Solid Waste: Consumption for Electricity Generation by Sector
Table 2.6.B.	Biogenic Municipal Solid Waste: Consumption for Useful Thermal Output by Sector
Table 2.6.C.	Biogenic Municipal Solid Waste: Consumption for Electricity Generation and Useful Thermal Output by Sector
Table 2.7.A	Wood/Wood Waste Biomass: Consumption for Electricity Generation by Sector
Table 2.7.B	Wood/Wood Waste Biomass: Consumption for Useful Thermal Output by Sector
Table 2.7 C	Wood/Wood Waste Biomass: Consumption for Electricity Generation and Useful Thermal Output by Sector
Table 2.8.A.	Consumption of Coal for Electricity Generation by State by Sector
Table 2.8.B.	Consumption of Coal for Electricity Generation by State by Sector, Year-to-Date
Table 2.9.A.	Consumption of Petroleum Liquids for Electricity Generation by State by Sector
Table 2.9.B.	Consumption of Petroleum Liquids for Electricity Generation by State by Sector, Year-to-Date
Table 2.10.A.	Consumption of Petroleum Coke for Electricity Generation by State by Sector
Table 2.10.B.	Consumption of Petroleum Coke for Electricity Generation by State by Sector, Year-to-Date
Table 2.11.A.	Consumption of Natural Gas for Electricity Generation by State by Sector
Table 2.11.B.	Consumption of Natural Gas for Electricity Generation by State by Sector, Year-to-Date
Table 2.12.A.	Consumption of Landfill Gas for Electricity Generation by State by Sector
Table 2.12.B.	Consumption of Landfill Gas for Electricity Generation by State by Sector, Year-to-Date
Table 2.13.A.	Consumption of Biogenic Municipal Solid Waste for Electricity Generation by State by Sector

---

Table 2.13.B.	Consumption of Biogenic Municipal Solid Waste for Electricity Generation by State by Sector, Year-to-Date
Table 2.14.A	Consumption of Wood/Wood Waste Biomass for Electricity Generation by State by Sector
Table 2.14.B	Consumption of Wood/Wood Waste Biomass for Electricity Generation by State by Sector, Year-to-Date

### ***Chapter 3. Fossil-Fuel Stocks for Electricity Generation***

Table 3.1.	Stocks of Coal, Petroleum Liquids, and Petroleum Coke: Electric Power Sector
Table 3.2.	Stocks of Coal, Petroleum Liquids, and Petroleum Coke: Electric Power Sector, by State
Table 3.3.	Stocks of Coal, Petroleum Liquids, and Petroleum Coke: Electric Power Sector, by Census Division
Table 3.4.	Stocks of Coal by Coal Rank

### ***Chapter 4. Receipts and Cost of Fossil Fuels***

Table 4.1.	Receipts, Average Cost, and Quality of Fossil Fuels: Total (All Sectors)
Table 4.2.	Receipts, Average Cost, and Quality of Fossil Fuels: Electric Utilities
Table 4.3.	Receipts, Average Cost, and Quality of Fossil Fuels: Independent Power Producers
Table 4.4.	Receipts, Average Cost, and Quality of Fossil Fuels: Commercial Sector
Table 4.5.	Receipts, Average Cost, and Quality of Fossil Fuels: Industrial Sector
Table 4.6.A.	Receipts of Coal Delivered for Electricity Generation by State
Table 4.6.B.	Receipts of Coal Delivered for Electricity Generation by State, Year-to-Date
Table 4.7.A.	Receipts of Petroleum Liquids Delivered for Electricity Generation by State
Table 4.7.B.	Receipts of Petroleum Liquids Delivered for Electricity Generation by State, Year-to-Date
Table 4.8.A.	Receipts of Petroleum Coke Delivered for Electricity Generation by State
Table 4.8.B.	Receipts of Petroleum Coke Delivered for Electricity Generation by State, Year-to-Date
Table 4.9.A.	Receipts of Natural Gas Delivered for Electricity Generation by State
Table 4.9.B.	Receipts of Natural Gas Delivered for Electricity Generation by State, Year-to-Date
Table 4.10.A.	Average Cost of Coal Delivered for Electricity Generation by State
Table 4.10.B.	Average Cost of Coal Delivered for Electricity Generation by State, Year-to-Date
Table 4.11.A.	Average Cost of Petroleum Liquids Delivered for Electricity Generation by State
Table 4.11.B.	Average Cost of Petroleum Liquids Delivered for Electricity Generation by State, Year-to-Date
Table 4.12.A.	Average Cost of Petroleum Coke Delivered for Electricity Generation by State
Table 4.12.B.	Average Cost of Petroleum Coke Delivered for Electricity Generation by State, Year-to-Date
Table 4.13.A.	Average Cost of Natural Gas Delivered for Electricity Generation by State
Table 4.13.B.	Average Cost of Natural Gas Delivered for Electricity Generation by State, Year-to-Date
Table 4.14.	Receipts and Quality of Coal by Rank Delivered for Electricity Generation: Total (All Sectors) by State
Table 4.15.	Receipts and Quality of Coal by Rank Delivered for Electricity Generation: Electric Utilities by State
Table 4.16.	Receipts and Quality of Coal by Rank Delivered for Electricity Generation: Independent Power Producers by State
Table 4.17.	Receipts and Quality of Coal by Rank Delivered for Electricity Generation: Commercial Combined Heat and Power Producers by State
Table 4.18.	Receipts and Quality of Coal by Rank Delivered for Electricity Generation: Industrial Combined Heat and Power Producers by State

---

### ***Chapter 5. Sales to Ultimate Consumers, Revenue, and Average Price of Electricity to Ultimate Consumers***

Table 5.1.	Sales of Electricity to Ultimate Customers: Total by End-Use Sector
Table 5.2.	Revenue from Sales of Electricity to Ultimate Customers: Total by End-Use Sector
Table 5.3.	Average Price of Electricity to Ultimate Customers: Total by End-Use Sector
Table 5.4.A.	Sales of Electricity to Ultimate Customers by End-Use Sector, by State
Table 5.4.B.	Sales of Electricity to Ultimate Customers by End-Use Sector, by State, Year-to-Date
Table 5.5.A.	Revenue from Sales of Electricity to Ultimate Customers by End-Use Sector, by State
Table 5.5.B.	Revenue from Sales of Electricity to Ultimate Customers by End-Use Sector, by State, Year-to-Date
Table 5.6.A.	Average Price of Electricity to Ultimate Customers by End-Use Sector, by State
Table 5.6.B.	Average Price of Electricity to Ultimate Customers by End-Use Sector, by State, Year-to-Date
Table 5.7.	Number of Ultimate Consumers Served, by Sector
Table 5.8.	Number of Ultimate Consumers Served, by Sector and State

### ***Chapter 6. Capacity***

Table 6.1.	Electric Generating Summer Capacity Changes (MW) for Utility Scale Units
Table 6.1.A.	Net Summer Capacity for Utility Scale Solar Photovoltaic and Distributed Solar Photovoltaic Capacity (Megawatts), 2008-September 2015
Table 6.1.B.	Net Summer Capacity for Estimated Distributed Solar Photovoltaic Capacity by Sector
Table 6.2.A.	Net Summer Capacity of Utility Scale Units by Technology and by State
Table 6.2.B.	Net Summer Capacity Using Primarily Renewable Energy Sources by State
Table 6.2.C.	Net Summer Capacity of Utility Scale Units Using Primarily Fossil Fuels by State
Table 6.3.	New Utility Scale Generating Units by Operating Company, Plant, and Month
Table 6.4.	Retired Utility Scale Generating Units by Operating Company, Plant, and Month
Table 6.5.	Planned U.S. Electric Generating Unit Additions
Table 6.6.	Planned U.S. Electric Generating Unit Retirements
Table 6.7.A.	Capacity Factors for Utility Scale Generators Primarily Using Fossil Fuels
Table 6.7.B.	Capacity Factors for Utility Scale Generators Not Primarily Using Fossil Fuels
Figure 6.1.A.	Utility Scale Generating Units Added
Figure 6.1.B.	Utility Scale Generating Units Retired
Figure 6.1.C.	Utility Scale Generating Units Planned to Come Online
Figure 6.1.D.	Utility Scale Generating Units Planned to Retire

### ***Chapter 7. Imports and Exports***

Table 7.1.	U.S. Electricity Imports from and Electricity Exports to Canada and Mexico (Megawatthours)
------------	--

### ***Chapter 8. Puerto Rico***

Table 8.1	Sales of Electricity to Ultimate Customers by End-Use Sector
Table 8.2	Revenue from Sales of Electricity to Ultimate Consumers by End-Use Sector
Table 8.3	Number of Ultimate Customers Seved by Sector by End-Use Sector
Table 8.4	Average Price of Electricity to Ultimate Consumers by End-Use Sector
Table 8.5	Table 8.5. Net Summer Capacity (MW) of Existing Utility Scale Units by Technology for Puerto Rico, 2007-April 2018



---

*Appendices*

Table A.1.A.	Relative Standard Error for Net Generation by Fuel Type: Total (All Sectors) by Census Division and State
Table A.1.A.	Relative Standard Error for Net Generation by Fuel Type: Total (All Sectors) by Census Division and State (Continued)
Table A.1.B.	Relative Standard Error for Net Generation by Fuel Type: Total (All Sectors) by Census Division and State, Year-to-Date
Table A.1.B.	Relative Standard Error for Net Generation by Fuel Type: Total (All Sectors) by Census Division and State, Year-to-Date (Continued)
Table A.2.A.	Relative Standard Error for Net Generation by Fuel Type: Electric Utilities by Census Division and State
Table A.2.A.	Relative Standard Error for Net Generation by Fuel Type: Electric Utilities by Census Division and State (Continued)
Table A.2.B.	Relative Standard Error for Net Generation by Fuel Type: Electric Utilities by Census Division and State, Year-to-Date
Table A.2.B.	Relative Standard Error for Net Generation by Fuel Type: Electric Utilities by Census Division and State, Year-to-Date (Continued)
Table A.3.A.	Relative Standard Error for Net Generation by Fuel Type: Independent Power Producers by Census Division and State
Table A.3.A.	Relative Standard Error for Net Generation by Fuel Type: Independent Power Producers by Census Division and State (Continued)
Table A.3.B.	Relative Standard Error for Net Generation by Fuel Type: Independent Power Producers by Census Division and State, Year-to-Date
Table A.3.B.	Relative Standard Error for Net Generation by Fuel Type: Independent Power Producers by Census Division and State, Year-to-Date (Continued)
Table A.4.A.	Relative Standard Error for Net Generation by Fuel Type: Commercial Sector by Census Division and State
Table A.4.A.	Relative Standard Error for Net Generation by Fuel Type: Commercial Sector by Census Division and State (Continued)
Table A.4.B.	Relative Standard Error for Net Generation by Fuel Type: Commercial Sector by Census Division and State, Year-to-Date
Table A.4.B.	Relative Standard Error for Net Generation by Fuel Type: Commercial Sector by Census Division and State, Year-to-Date (Continued)
Table A.5.A.	Relative Standard Error for Net Generation by Fuel Type: Industrial Sector by Census Division and State
Table A.5.A.	Relative Standard Error for Net Generation by Fuel Type: Industrial Sector by Census Division and State, (Continued)
Table A.5.B.	Relative Standard Error for Net Generation by Fuel Type: Industrial Sector by Census Division and State, Year-to-Date
Table A.5.B.	Relative Standard Error for Net Generation by Fuel Type: Industrial Sector by Census Division and State, Year-to-Date (Continued)
Table A.6.A.	Relative Standard Error for Sales of Electricity to Ultimate Customers by End-Use Sector, Census Division, and State
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

Table A.7.A.	Relative Standard Error for Revenue from Sales of Electricity to Ultimate Customers by End-Use Sector, Census Division, and State
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
Table A.8.A.	Relative Standard Error for Average Price of Electricity to Ultimate Customers by End-Use Sector, Census Division, and State
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
Table B.1.	Major Disturbances and Unusual Occurrences, Year-to-Date
Table B.2.	Major Disturbances and Unusual Occurrences, Prior Year
Table C.1.	Average Heat Content of Fossil-Fuel Receipts
Table C.2.	Comparison of Preliminary Monthly Data versus Final Monthly Data at the U.S. Level
Table C.3.	Comparison of Annual Monthly Estimates versus Annual Data at the U.S. Level, All Sectors
Table C.4.	Unit-of-Measure Equivalents for Electricity

# Executive Summary

Table ES1.A. Total Electric Power Industry Summary Statistics, 2018 and 2017

Net Generation and Consumption of Fuels for December														
		Total (All Sectors)			Electric Power Sector				Commercial		Industrial		Residential	
					Electric Utilities		Independent Power Producers							
Fuel	Facility Type	December 2018	December 2017	Percentage Change	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017
Net Generation (Thousand Megawatthours)														
Coal	Utility Scale Facilities	96,825	106,546	-9.1%	72,165	76,870	24,007	28,990	29	35	623	651	0	0
Petroleum Liquids	Utility Scale Facilities	930	1,982	-53.1%	633	953	244	951	10	23	43	55	0	0
Petroleum Coke	Utility Scale Facilities	807	737	9.5%	601	556	142	122	1	1	63	58	0	0
Natural Gas	Utility Scale Facilities	106,978	111,373	-3.9%	48,783	53,353	49,219	49,104	685	674	8,292	8,242	0	0
Other Gas	Utility Scale Facilities	998	1,096	-9.0%	0	24	342	359	0	0	656	713	0	0
Nuclear	Utility Scale Facilities	71,657	73,700	-2.8%	38,223	38,871	33,434	34,828	0	0	0	0	0	0
Hydroelectric Conventional	Utility Scale Facilities	23,728	22,377	6.0%	21,130	20,729	2,446	1,526	17	23	135	99	0	0
Renewable Sources Excluding Hydroelectric	Utility Scale Facilities	34,787	35,151	-1.0%	4,360	4,672	27,660	27,658	283	267	2,485	2,553	0	0
... Wind	Utility Scale Facilities	24,825	24,575	1.0%	3,606	3,805	21,194	20,747	17	14	9	9	0	0
... Solar Thermal and Photovoltaic	Utility Scale Facilities	3,188	3,389	-5.9%	300	304	2,856	3,054	28	29	4	3	0	0
... Wood and Wood-Derived Fuels	Utility Scale Facilities	3,414	3,738	-8.7%	247	350	773	936	8	6	2,386	2,446	0	0
... Other Biomass	Utility Scale Facilities	1,825	1,877	-2.8%	111	124	1,431	1,440	197	218	85	95	0	0
... Geothermal	Utility Scale Facilities	1,535	1,571	-2.3%	95	89	1,407	1,482	33	0	0	0	0	0
Hydroelectric Pumped Storage	Utility Scale Facilities	-522	-656	-20.4%	-426	-557	-96	-99	0	0	0	0	0	0
Other Energy Sources	Utility Scale Facilities	1,147	1,146	0.1%	51	50	582	586	89	91	426	419	0	0
All Energy Sources	Utility Scale Facilities	337,334	353,452	-4.6%	185,519	195,521	137,979	144,026	1,114	1,114	12,723	12,790	0	0
Estimated Small Scale Solar Photovoltaic	Small Scale Facilities	1,774	1,472	20.5%	0	0	0	0	591	492	159	138	1,025	841
Estimated Total Solar Photovoltaic	All Facilities	4,870	4,739	2.8%	300	298	2,764	2,937	618	521	163	141	1,025	841
Estimated Total Solar	All Facilities	4,962	4,861	2.1%	300	304	2,856	3,054	618	521	163	141	1,025	841
Consumption of Fossil Fuels for Electricity Generation														
Coal (1000 tons)	Utility Scale Facilities	55,549	58,457	-5.0%	41,527	41,733	13,782	16,479	8	9	232	236	0	0
Petroleum Liquids (1000 barrels)	Utility Scale Facilities	1,618	3,414	-52.6%	1,150	1,779	405	1,551	20	31	43	52	0	0
Petroleum Coke (1000 tons)	Utility Scale Facilities	299	292	2.5%	241	231	41	44	0	0	17	16	0	0
Natural Gas (1000 Mcf)	Utility Scale Facilities	764,161	806,395	-5.2%	366,377	404,455	345,032	349,174	4,098	4,259	48,654	48,508	0	0
Consumption of Fossil Fuels for Useful Thermal Output														
Coal (1000 tons)	Utility Scale Facilities	1,186	1,285	-7.7%	183	208	118	119	39	56	846	903	0	0
Petroleum Liquids (1000 barrels)	Utility Scale Facilities	270	373	-27.7%	3	19	80	47	36	46	151	262	0	0
Petroleum Coke (1000 tons)	Utility Scale Facilities	76	76	-0.2%	1	1	8	10	2	2	65	63	0	0
Natural Gas (1000 Mcf)	Utility Scale Facilities	110,030	106,899	2.9%	3,229	3,729	29,319	27,671	9,042	9,488	68,440	66,010	0	0
Consumption of Fossil Fuels for Electricity Generation and Useful Thermal Output														
Coal (1000 tons)	Utility Scale Facilities	56,735	59,743	-5.0%	41,710	41,940	13,900	16,598	47	66	1,078	1,139	0	0
Petroleum Liquids (1000 barrels)	Utility Scale Facilities	1,888	3,787	-50.1%	1,153	1,797	485	1,598	57	77	194	314	0	0
Petroleum Coke (1000 tons)	Utility Scale Facilities	376	368	2.0%	242	233	50	54	2	2	82	80	0	0
Natural Gas (1000 Mcf)	Utility Scale Facilities	874,192	913,294	-4.3%	369,606	408,184	374,352	376,845	13,139	13,747	117,094	114,519	0	0
Fuel Stocks (end-of-month)														
Coal (1000 tons)	Utility Scale Facilities	103,445	138,994	-25.6%	84,605	114,782	18,181	22,905	66	135	593	1,172	0	0
Petroleum Liquids (1000 barrels)	Utility Scale Facilities	26,606	31,135	-14.5%	16,729	20,253	8,353	9,041	392	422	1,132	1,420	0	0
Petroleum Coke (1000 tons)	Utility Scale Facilities	739	1,047	-29.4%	522	692	19	171	4	3	195	180	0	0

Sales, Revenue, and Average Price of Electricity to Ultimate Customers for December									
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)		
	December 2018	December 2017	Percentage Change	December 2018	December 2017	Percentage Change	December 2018	December 2017	Percentage Change
Residential	122,620	122,005	0.5%	15,285	15,189	0.6%	12.47	12.45	0.2%
Commercial	107,678	109,306	-1.5%	11,122	11,239	-1.0%	10.33	10.28	0.5%
Industrial	76,213	80,242	-5.0%	5,066	5,249	-3.5%	6.65	6.54	1.7%
Transportation	660	664	-0.6%	64	62	3.4%	9.72	9.35	4.0%
All Sectors	307,171	312,216	-1.6%	31,538	31,739	-0.6%	10.27	10.17	1.0%

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, waste coal, refined coal, synthetic coal, and coal-derived synthesis gas.

Petroleum Liquids includes 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 that cannot be identified separately.

Other Gases includes blast furnace gas and other manufactured and waste gases derived from fossil fuels.

Wood and Wood-Derived Fuels include wood, black liquor, and other wood waste.

Other Biomass includes biogenic municipal solid waste, landfill gas, sludge waste, agricultural byproducts, and other biomass.

Coal stocks include anthracite, bituminous, subbituminous, lignite, refined coal, and synthetic coal; waste coal is excluded.

Sales of electricity to ultimate customers and net generation may not correspond exactly for a particular month for a variety of reasons (e.g., sales data may include imported electricity).

Net generation is presented for the calendar month while sales of electricity to ultimate customers and associated revenue accumulate from bills collected for periods of time that vary depending

Table ES1.B. Total Electric Power Industry Summary Statistics, Year-to-Date 2018 and 2017

Net Generation and Consumption of Fuels for January through December														
Fuel	Facility Type	Total (All Sectors)			Electric Power Sector				Commercial		Industrial		Residential	
		December 2018 YTD	December 2017 YTD	Percentage Change	Electric Utilities		Independent Power Producers		December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD
					December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD						
Net Generation (Thousand Megawatthours)														
Coal	Utility Scale Facilities	1,146,393	1,205,835	-4.9%	860,325	893,639	278,210	304,198	327	329	7,531	7,669	0	0
Petroleum Liquids	Utility Scale Facilities	15,742	12,414	26.8%	9,805	8,567	5,263	3,281	147	103	527	463	0	0
Petroleum Coke	Utility Scale Facilities	8,830	8,976	-1.6%	6,817	6,711	1,263	1,480	7	8	743	776	0	0
Natural Gas	Utility Scale Facilities	1,468,013	1,296,415	13.2%	714,303	623,835	651,354	572,919	8,343	8,042	94,012	91,619	0	0
Other Gas	Utility Scale Facilities	12,191	12,469	-2.2%	151	149	3,847	3,978	0	0	8,193	8,343	0	0
Nuclear	Utility Scale Facilities	807,078	804,950	0.3%	424,251	424,485	382,827	380,465	0	0	0	0	0	0
Hydroelectric Conventional	Utility Scale Facilities	291,724	300,333	-2.9%	265,480	275,677	24,600	23,034	240	240	1,403	1,383	0	0
Renewable Sources Excluding Hydroelectric	Utility Scale Facilities	421,049	386,277	9.0%	48,278	46,111	340,390	308,338	3,234	3,251	29,147	28,578	0	0
... Wind	Utility Scale Facilities	274,952	254,303	8.1%	37,162	37,068	237,494	217,006	191	144	105	84	0	0
... Solar Thermal and Photovoltaic	Utility Scale Facilities	66,604	53,286	25.0%	5,252	3,348	60,629	49,375	629	521	92	42	0	0
... Wood and Wood-Derived Fuels	Utility Scale Facilities	41,411	41,152	0.6%	3,407	3,226	9,926	10,416	77	70	28,002	27,440	0	0
... Other Biomass	Utility Scale Facilities	21,354	21,610	-1.2%	1,403	1,448	16,699	16,636	2,304	2,515	948	1,012	0	0
... Geothermal	Utility Scale Facilities	16,728	15,927	5.0%	1,054	1,022	15,642	14,905	33	0	0	0	0	0
Hydroelectric Pumped Storage	Utility Scale Facilities	-5,905	-6,495	-9.1%	-4,785	-5,448	-1,119	-1,047	0	0	0	0	0	0
Other Energy Sources	Utility Scale Facilities	12,695	13,094	-3.0%	587	551	6,406	6,527	1,020	1,088	4,682	4,928	0	0
All Energy Sources	Utility Scale Facilities	4,177,810	4,034,268	3.6%	2,325,212	2,274,277	1,693,041	1,603,173	13,318	13,060	146,239	143,758	0	0
Estimated Small Scale Solar Photovoltaic	Small Scale Facilities	29,543	23,990	23.1%	0	0	0	0	9,756	7,685	2,641	2,364	17,146	13,942
Estimated Total Solar Photovoltaic	All Facilities	92,555	74,007	25.1%	5,201	3,326	57,089	46,127	10,386	8,206	2,733	2,406	17,146	13,942
Estimated Total Solar	All Facilities	96,147	77,276	24.4%	5,252	3,348	60,629	49,375	10,386	8,206	2,733	2,406	17,146	13,942
Consumption of Fossil Fuels for Electricity Generation														
Coal (1000 tons)	Utility Scale Facilities	635,833	663,911	-4.2%	473,564	484,389	159,452	176,643	94	95	2,723	2,783	0	0
Petroleum Liquids (1000 barrels)	Utility Scale Facilities	27,245	21,696	25.6%	17,733	15,567	8,692	5,461	281	191	539	476	0	0
Petroleum Coke (1000 tons)	Utility Scale Facilities	3,311	3,490	-5.1%	2,740	2,731	388	542	2	3	181	214	0	0
Natural Gas (1000 Mcf)	Utility Scale Facilities	10,855,155	9,507,760	14.2%	5,494,870	4,754,883	4,756,881	4,161,987	51,844	50,060	551,560	540,830	0	0
Consumption of Fossil Fuels for Useful Thermal Output														
Coal (1000 tons)	Utility Scale Facilities	13,721	14,667	-6.5%	2,321	2,802	1,162	1,158	493	515	9,745	10,192	0	0
Petroleum Liquids (1000 barrels)	Utility Scale Facilities	2,694	2,012	33.9%	92	72	320	220	363	238	1,919	1,482	0	0
Petroleum Coke (1000 tons)	Utility Scale Facilities	833	977	-14.8%	12	11	93	115	10	15	717	836	0	0
Natural Gas (1000 Mcf)	Utility Scale Facilities	1,235,703	1,168,850	5.7%	41,038	38,740	332,905	309,945	103,286	104,324	758,474	715,842	0	0
Consumption of Fossil Fuels for Electricity Generation and Useful Thermal Output														
Coal (1000 tons)	Utility Scale Facilities	649,554	678,578	-4.3%	475,884	487,192	160,613	177,801	587	610	12,468	12,975	0	0
Petroleum Liquids (1000 barrels)	Utility Scale Facilities	29,940	23,708	26.3%	17,825	15,640	9,013	5,681	644	429	2,457	1,958	0	0
Petroleum Coke (1000 tons)	Utility Scale Facilities	4,144	4,467	-7.2%	2,752	2,742	481	657	12	17	898	1,050	0	0
Natural Gas (1000 Mcf)	Utility Scale Facilities	12,090,858	10,676,610	13.2%	5,535,908	4,793,623	5,089,786	4,471,932	155,131	154,383	1,310,034	1,256,672	0	0

Sales, Revenue, and Average Price of Electricity to Ultimate Customers for January through December									
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)		
	December 2018 YTD	December 2017 YTD	Percentage Change	December 2018 YTD	December 2017 YTD	Percentage Change	December 2018 YTD	December 2017 YTD	Percentage Change
Residential	1,464,373	1,378,648	6.2%	188,742	177,661	6.2%	12.89	12.89	0.0%
Commercial	1,376,741	1,352,888	1.8%	146,696	144,242	1.7%	10.66	10.66	0.0%
Industrial	953,076	984,298	-3.2%	66,090	67,691	-2.4%	6.93	6.88	0.7%
Transportation	7,738	7,523	2.9%	756	728	3.8%	9.77	9.68	0.9%
All Sectors	3,801,928	3,723,356	2.1%	402,283	390,322	3.1%	10.58	10.48	1.0%

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, waste coal, refined coal, synthetic coal, and coal-derived synthesis gas.

Petroleum Liquids includes 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 that cannot be identified separately.

Other Gases includes blast furnace gas and other manufactured and waste gases derived from fossil fuels.

Wood and Wood-Derived Fuels include wood, black liquor, and other wood waste.

Other Biomass includes biogenic municipal solid waste, landfill gas, sludge waste, agricultural byproducts, and other biomass.

Coal stocks include anthracite, bituminous, subbituminous, lignite, refined coal, and synthetic coal; waste coal is excluded.

Sales of electricity to ultimate customers and net generation may not correspond exactly for a particular month for a variety of reasons (e.g., sales data may include imported electricity).

Net generation is presented for the calendar month while sales of electricity to ultimate customers and associated revenue accumulate from bills collected for periods of time that vary depending

Table ES2.A. Summary Statistics: Receipts and Cost of Fossil Fuels for the Electric Power Industry by Sector, Physical Units, 2018 and 2017

Total (All Sectors)										
Fuel	Receipts		Cost		Number of Plants		Year-to-Date Receipts		Year-to-Date Cost	
	(Physical Units)		(Dollars / Physical Unit)				(Physical Units)		(Dollars / Physical Unit)	
	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017
Coal (1000 tons)	52,977	51,851	40.45	38.66	261	293	594,683	642,364	39.38	39.27
Petroleum Liquids (1000 barrels)	1,708	1,773	83.38	84.87	152	203	19,717	16,127	86.12	71.35
Petroleum Coke (1000 tons)	238	287	57.24	60.99	6	5	3,010	3,309	71.76	59.90
Natural Gas (1000 Mcf)	745,864	814,486	4.89	3.75	554	785	10,039,232	9,628,733	3.67	3.49

Electric Utilities										
Fuel	Receipts		Cost		Number of Plants		Year-to-Date Receipts		Year-to-Date Cost	
	(Physical Units)		(Dollars / Physical Unit)				(Physical Units)		(Dollars / Physical Unit)	
	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017
Coal (1000 tons)	38,682	37,543	41.58	40.20	177	195	438,023	467,595	40.39	40.81
Petroleum Liquids (1000 barrels)	1,026	1,043	83.32	78.67	97	128	12,324	11,640	86.46	70.19
Petroleum Coke (1000 tons)	232	287	57.52	60.99	5	5	2,940	3,224	72.34	60.31
Natural Gas (1000 Mcf)	339,020	389,987	5.11	3.83	287	425	4,822,698	4,640,827	3.81	3.74

Independent Power Producers										
Fuel	Receipts		Cost		Number of Plants		Year-to-Date Receipts		Year-to-Date Cost	
	(Physical Units)		(Dollars / Physical Unit)				(Physical Units)		(Dollars / Physical Unit)	
	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017
Coal (1000 tons)	13,613	13,519	36.83	33.70	67	77	148,687	165,567	35.76	34.19
Petroleum Liquids (1000 barrels)	639	688	83.33	95.35	46	65	7,021	4,190	85.59	74.73
Petroleum Coke (1000 tons)	0	0	--	--	0	0	0	0	--	--
Natural Gas (1000 Mcf)	342,143	354,352	4.64	3.77	221	310	4,456,582	4,201,573	3.52	3.19

Commercial Sector										
Fuel	Receipts		Cost		Number of Plants		Year-to-Date Receipts		Year-to-Date Cost	
	(Physical Units)		(Dollars / Physical Unit)				(Physical Units)		(Dollars / Physical Unit)	
	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017
Coal (1000 tons)	2	4	66.83	63.31	1	1	13	24	66.52	63.31
Petroleum Liquids (1000 barrels)	0	0	--	--	0	0	0	0	--	--
Petroleum Coke (1000 tons)	0	0	--	--	0	0	0	0	--	--
Natural Gas (1000 Mcf)	732	711	3.52	3.89	3	3	8,823	7,593	3.59	3.95

Industrial Sector										
Fuel	Receipts		Cost		Number of Plants		Year-to-Date Receipts		Year-to-Date Cost	
	(Physical Units)		(Dollars / Physical Unit)				(Physical Units)		(Dollars / Physical Unit)	
	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017
Coal (1000 tons)	680	785	48.52	50.09	16	20	7,960	9,178	51.58	52.29
Petroleum Liquids (1000 barrels)	43	42	85.58	69.14	9	10	372	297	83.97	69.57
Petroleum Coke (1000 tons)	6	0	47.00	--	1	0	71	85	47.47	44.08
Natural Gas (1000 Mcf)	63,969	69,435	4.85	3.21	43	47	751,129	778,741	3.46	3.28

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, 2018 and 2017

Total (All Sectors)												
Fuel	Receipts				Cost				Year-to-Date			
	(Billion Btu)		(Dollars / Million Btu)		Number of Plants		(Billion Btu)		(Dollars / Million Btu)			
	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017
Coal	1,012,118	981,795	2.12	2.04	261	293	11,357,521	12,261,029	2.06	2.06		
Petroleum Liquids	10,295	10,753	13.83	13.99	152	203	118,873	96,977	14.26	11.86		
Petroleum Coke	6,718	8,088	2.03	2.17	6	5	85,122	92,837	2.54	2.13		
Natural Gas	771,128	841,838	4.73	3.63	554	785	10,366,144	9,951,815	3.55	3.37		
Fossil Fuels	1,800,259	1,842,473	3.25	2.80	718	975	21,927,660	22,402,658	2.80	2.65		

Electric Utilities												
Fuel	Receipts				Cost				Year-to-Date			
	(Billion Btu)		(Dollars / Million Btu)		Number of Plants		(Billion Btu)		(Dollars / Million Btu)			
	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017
Coal	741,030	716,306	2.17	2.11	177	195	8,386,175	9,011,629	2.11	2.12		
Petroleum Liquids	6,239	6,345	13.70	12.93	97	128	74,884	70,422	14.22	11.60		
Petroleum Coke	6,541	8,088	2.04	2.17	5	5	83,211	90,481	2.56	2.15		
Natural Gas	350,009	402,754	4.95	3.71	287	425	4,976,093	4,794,383	3.69	3.62		
Fossil Fuels	1,103,818	1,133,494	3.12	2.74	395	548	13,520,363	13,966,916	2.76	2.68		

Independent Power Producers												
Fuel	Receipts				Cost				Year-to-Date			
	(Billion Btu)		(Dollars / Million Btu)		Number of Plants		(Billion Btu)		(Dollars / Million Btu)			
	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017
Coal	256,990	248,991	1.95	1.83	67	77	2,805,911	3,056,215	1.89	1.85		
Petroleum Liquids	3,789	4,145	14.06	15.82	46	65	41,671	24,704	14.38	12.67		
Petroleum Coke	0	0	--	--	0	0	0	0	--	--		
Natural Gas	354,311	366,717	4.48	3.64	221	310	4,608,011	4,346,156	3.41	3.08		
Fossil Fuels	615,089	619,853	3.37	2.91	274	374	7,455,593	7,427,075	2.82	2.54		

Commercial Sector												
Fuel	Receipts				Cost				Year-to-Date			
	(Billion Btu)		(Dollars / Million Btu)		Number of Plants		(Billion Btu)		(Dollars / Million Btu)			
	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017
Coal	46	89	2.97	2.79	1	1	290	548	2.94	2.78		
Petroleum Liquids	0	0	--	--	0	0	0	0	--	--		
Petroleum Coke	0	0	--	--	0	0	0	0	--	--		
Natural Gas	756	734	3.41	3.77	3	3	9,090	7,841	3.49	3.82		
Fossil Fuels	802	823	3.39	3.67	3	3	9,379	8,389	3.47	3.75		

Industrial Sector												
Fuel	Receipts				Cost				Year-to-Date			
	(Billion Btu)		(Dollars / Million Btu)		Number of Plants		(Billion Btu)		(Dollars / Million Btu)			
	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017
Coal	14,052	16,408	2.35	2.40	16	20	165,145	192,637	2.49	2.49		
Petroleum Liquids	268	263	13.75	11.14	9	10	2,319	1,850	13.46	11.18		
Petroleum Coke	178	0	1.70	--	1	0	1,911	2,356	1.75	1.59		
Natural Gas	66,052	71,633	4.70	3.11	43	47	772,950	803,435	3.36	3.18		
Fossil Fuels	80,550	88,304	4.31	3.00	46	50	942,325	1,000,279	3.23	3.06		

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.

# Chapter 1

## Net Generation



**Table 1.1. Net Generation by Energy Source: Total (All Sectors), 2008-December 2018  
(Thousand Megawatthours)**

Period	Generation at Utility Scale Facilities											Small Scale Generation	Net Generation From Utility and Small 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 Generation at Utility Scale Facilities	Estimated Solar Photovoltaic	Estimated Total Solar Photovoltaic	Estimated Total Solar
<b>Annual Totals</b>															
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	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	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	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	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	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	N/A
2014	1,581,710	18,276	11,955	1,126,809	12,022	797,166	259,367	17,691	261,522	-6,174	13,461	4,093,606	11,233	26,482	28,924
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	39,032
2016	1,239,149	13,008	11,197	1,378,307	12,807	805,694	267,812	36,054	305,579	-6,686	13,754	4,076,675	18,812	51,483	54,866
2017	1,205,835	12,414	8,976	1,296,415	12,469	804,950	300,333	53,286	332,991	-6,495	13,094	4,034,268	23,990	74,007	77,276
2018	1,146,393	15,742	8,830	1,468,013	12,191	807,078	291,724	66,604	354,445	-5,905	12,695	4,177,810	29,543	92,555	96,147
<b>Year 2016</b>															
January	113,459	1,396	966	110,044	1,195	72,525	25,615	1,486	25,193	-312	1,153	352,719	980	2,380	2,465
February	92,705	1,299	910	98,552	1,062	65,638	24,139	2,242	26,496	-399	1,041	313,685	1,145	3,145	3,386
March	72,173	874	927	103,890	1,197	66,149	27,390	2,617	28,467	-384	1,090	304,390	1,525	3,885	4,143
April	72,113	833	1,006	98,876	1,132	62,732	25,878	2,880	26,787	-452	1,109	292,894	1,703	4,309	4,583
May	81,695	984	974	110,430	1,053	66,576	25,486	3,425	25,286	-321	1,195	316,784	1,879	4,916	5,304
June	116,034	972	1,005	131,395	1,043	67,175	23,237	3,473	22,763	-497	1,180	367,781	1,928	4,990	5,401
July	136,316	1,273	1,049	151,554	1,077	70,349	21,455	3,945	24,428	-784	1,225	411,887	2,000	5,474	5,945
August	135,635	1,258	1,078	154,760	1,064	71,526	19,570	3,969	20,496	-902	1,248	409,701	1,942	5,543	5,911
Sept	114,138	946	980	125,603	1,020	65,448	16,368	3,635	22,894	-715	1,168	351,484	1,735	5,007	5,370
October	99,194	937	635	102,898	913	60,733	17,339	3,191	26,558	-561	1,108	312,945	1,552	4,495	4,743
November	86,940	1,070	799	93,942	1,013	65,179	18,808	2,767	26,052	-607	1,098	297,062	1,257	3,840	4,024
December	118,747	1,166	869	96,364	1,037	71,662	22,528	2,424	30,159	-753	1,139	345,343	1,167	3,500	3,591
<b>Year 2017</b>															
January	115,333	1,121	944	95,473	1,046	73,121	26,788	2,030	26,676	-435	1,093	343,190	1,246	3,186	3,276
February	86,822	874	723	82,694	977	63,560	23,643	2,555	27,317	-508	995	289,652	1,384	3,804	3,939
March	89,365	950	899	95,022	1,060	65,093	29,272	4,245	31,688	-521	1,062	317,935	1,972	5,921	6,218
April	81,335	846	431	88,418	1,001	56,743	29,390	4,696	30,854	-439	1,049	294,325	2,195	6,580	6,891
May	92,777	971	847	98,067	1,055	61,313	32,384	5,663	28,782	-423	1,083	322,518	2,423	7,684	8,086
June	107,508	1,001	901	117,317	992	67,011	30,222	6,175	26,258	-568	1,099	357,916	2,487	8,197	8,662
July	127,697	1,166	889	146,994	1,048	71,314	26,491	5,753	22,832	-759	1,211	404,386	2,555	7,996	8,308
August	119,488	970	765	141,209	1,134	72,384	21,851	5,434	20,527	-638	1,220	384,342	2,480	7,573	7,914
Sept	98,203	925	712	118,112	1,060	68,098	19,067	5,115	24,142	-606	1,033	335,861	2,225	6,991	7,340
October	89,775	956	572	106,852	999	65,995	18,284	4,821	31,558	-463	1,027	320,376	1,990	6,497	6,811
November	90,986	903	755	94,883	1,001	66,618	20,565	3,409	30,596	-478	1,077	310,315	1,561	4,839	4,970
December	106,546	1,982	737	111,373	1,096	73,700	22,377	3,389	31,762	-656	1,146	353,452	1,472	4,739	4,861
<b>Year 2018</b>															
January	118,939	5,291	952	110,046	994	74,649	25,596	3,407	33,882	-547	1,115	374,324	1,615	4,894	5,022
February	81,922	780	738	96,002	990	64,790	25,533	4,113	30,561	-315	1,001	306,115	1,762	5,684	5,875
March	80,612	811	648	104,933	1,064	67,033	25,951	5,203	34,103	-490	1,113	320,982	2,427	7,373	7,630
April	73,383	854	691	99,446	940	59,133	27,490	6,249	32,891	-377	1,038	301,739	2,736	8,670	8,984
May	85,311	1,022	415	116,107	1,000	67,320	30,434	7,070	30,331	-390	1,074	339,694	3,010	9,650	10,080
June	101,509	1,062	765	130,823	1,010	69,688	27,955	7,804	31,106	-433	1,111	372,398	3,060	10,347	10,863
July	115,477	1,273	922	167,250	1,105	72,456	24,014	6,938	22,937	-644	1,116	412,542	3,147	9,705	10,085
August	115,216	1,041	873	162,377	1,225	72,282	21,400	6,981	26,326	-747	1,007	407,981	3,018	9,590	9,999
Sept	96,742	1,039	835	142,772	1,001	64,725	18,665	6,469	24,283	-603	800	356,728	2,681	8,720	9,150
October	87,452	989	484	124,171	930	59,397	18,781	5,223	27,536	-492	1,091	325,563	2,400	7,349	7,624
November	93,005	952	699	107,109	933	63,948	22,176	3,958	28,890	-343	1,081	322,409	1,914	5,705	5,873
December	96,825	930	807	106,978	998	71,657	23,728	3,188	31,599	-522	1,147	337,334	1,774	4,870	4,962
<b>Year to Date</b>															
2016	1,239,149	13,008	11,197	1,378,307	12,807	805,694	267,812	36,054	305,579	-6,686	13,754	4,076,675	18,812	51,483	54,866
2017	1,205,835	12,414	8,976	1,296,415	12,469	804,950	300,333	53,286	332,991	-6,495	13,094	4,034,268	23,990	74,007	77,276
2018	1,146,393	15,742	8,830	1,468,013	12,191	807,078	291,724	66,604	354,445	-5,905	12,695	4,177,810	29,543	92,555	96,147
<b>Rolling 12 Months Ending in December</b>															
2017	1,205,835	12,414	8,976	1,296,415	12,469	804,950	300,333	53,286	332,991	-6,495	13,094	4,034,268	23,990	74,007	77,276
2018	1,146,393	15,742	8,830	1,468,013	12,191	807,078	291,724	66,604	354,445	-5,905	12,695	4,177,810	29,543	92,555	96,147

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.

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.

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

Other Gas includes blast furnace gas and other manufactured and waste gases derived from fossil fuels. Prior to 2011, Other Gas included propane and synthesis gases.

See the Technical Notes for fuel conversion factors.

Renewable Sources include wood, black liquor, other wood waste, biogenic municipal solid waste, landfill gas, sludge waste, agriculture byproducts, other biomass, geothermal, solar thermal, photovoltaic energy, and wind.

Other includes non-biogenic municipal solid waste, batteries, hydrogen, purchased steam, sulfur, tire-derived fuel, and other miscellaneous energy sources.

Notes: Beginning with 2001 data, non-biogenic municipal solid waste and tire-derived fuels are reclassified as non-renewable energy sources and included in Other. Biogenic municipal solid waste is included in Other Renewable Sources.

See Glossary for definitions. Values for 2017 and prior years are final. Values for 2018 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. 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: U.S. Energy Information Administration, Form EIA-923, Power Plant Operations Report; 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.

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

**Table 1.1.A. Net Generation from Renewable Sources: Total (All Sectors), 2008-December 2018  
(Thousand Megawatthours)**

Period	Generation at Utility Scale Facilities										Small Scale Generation	Generation From Utility and Small Scale Facilities	
	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 Solar Photovoltaic	Estimated Total Solar Photovoltaic	Estimated Total Solar
<b>Annual Totals</b>													
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
2016	226,993	32,670	3,384	40,947	11,218	7,265	3,331	15,826	267,812	609,445	18,812	51,483	54,866
2017	254,303	50,017	3,269	41,152	11,543	6,951	3,115	15,927	300,333	686,610	23,990	74,007	77,276
2018	274,952	63,012	3,592	41,411	11,336	7,163	2,854	16,728	291,724	712,773	29,543	92,555	96,147
<b>Year 2016</b>													
January	18,466	1,400	86	3,600	915	603	277	1,332	25,615	52,294	980	2,380	2,465
February	20,138	2,000	241	3,406	886	537	285	1,243	24,139	52,877	1,145	3,145	3,386
March	21,939	2,360	257	3,403	949	579	281	1,315	27,390	58,474	1,525	3,885	4,143
April	20,799	2,606	273	2,967	932	593	287	1,209	25,878	55,544	1,703	4,309	4,583
May	18,848	3,037	388	3,187	980	649	280	1,342	25,486	54,197	1,879	4,916	5,304
June	16,303	3,062	412	3,414	934	614	247	1,251	23,237	49,473	1,928	4,990	5,401
July	17,618	3,473	471	3,658	943	635	262	1,311	21,455	49,828	2,000	5,474	5,945
August	13,589	3,602	368	3,722	942	634	285	1,324	19,570	44,035	1,942	5,543	5,911
Sept	16,404	3,272	363	3,407	895	589	272	1,327	16,368	42,897	1,735	5,007	5,370
October	20,335	2,942	249	3,176	839	589	265	1,353	17,339	47,088	1,552	4,495	4,743
November	19,406	2,583	184	3,391	993	602	296	1,364	18,808	47,627	1,257	3,840	4,024
December	23,146	2,333	91	3,615	1,011	640	293	1,454	22,528	55,111	1,167	3,500	3,591
<b>Year 2017</b>													
January	19,840	1,940	90	3,505	1,050	617	280	1,383	26,788	55,494	1,246	3,186	3,276
February	21,198	2,419	136	3,186	910	528	256	1,239	23,643	53,515	1,384	3,804	3,939
March	24,993	3,949	297	3,457	1,007	557	290	1,385	29,272	65,205	1,972	5,921	6,218
April	24,613	4,385	310	3,149	956	544	254	1,337	29,390	64,939	2,195	6,580	6,891
May	22,450	5,261	402	3,189	989	604	267	1,283	32,384	66,829	2,423	7,684	8,086
June	19,809	5,710	465	3,439	956	588	251	1,214	30,222	62,655	2,487	8,197	8,662
July	15,960	5,442	311	3,703	948	604	261	1,355	26,491	55,077	2,555	7,996	8,308
August	13,621	5,093	341	3,753	945	617	246	1,345	21,851	47,812	2,480	7,573	7,914
Sept	17,855	4,766	349	3,294	914	558	224	1,297	19,067	48,325	2,225	6,991	7,340
October	25,306	4,507	314	3,306	921	558	238	1,229	18,284	54,663	1,990	6,497	6,811
November	24,082	3,278	131	3,430	951	571	272	1,289	20,565	54,569	1,561	4,839	4,970
December	24,575	3,267	123	3,738	995	606	276	1,571	22,377	57,528	1,472	4,739	4,861
<b>Year 2018</b>													
January	26,862	3,279	128	3,759	989	590	275	1,407	25,596	62,885	1,615	4,894	5,022
February	24,096	3,922	191	3,379	941	561	259	1,326	25,533	60,208	1,762	5,684	5,875
March	27,283	4,945	258	3,535	999	599	272	1,414	25,951	65,257	2,427	7,373	7,630
April	26,783	5,935	314	3,096	941	570	256	1,246	27,490	66,630	2,736	8,670	8,984
May	23,603	6,640	430	3,550	932	574	238	1,434	30,434	67,835	3,010	9,650	10,080
June	24,376	7,287	517	3,573	927	630	230	1,369	27,955	66,864	3,060	10,347	10,863
July	16,014	6,558	380	3,690	945	640	212	1,436	24,014	53,890	3,147	9,705	10,085
August	19,530	6,572	409	3,570	951	632	214	1,429	21,400	54,707	3,018	9,590	9,999
Sept	17,977	6,039	430	3,284	880	563	191	1,388	18,665	49,417	2,681	8,720	9,150
October	21,147	4,949	275	3,277	929	597	240	1,347	18,781	51,541	2,400	7,349	7,624
November	22,457	3,790	168	3,284	936	588	227	1,397	22,176	55,024	1,914	5,705	5,873
December	24,825	3,096	92	3,414	967	619	239	1,535	23,728	58,515	1,774	4,870	4,962
<b>Year to Date</b>													
2016	226,993	32,670	3,384	40,947	11,218	7,265	3,331	15,826	267,812	609,445	18,812	51,483	54,866
2017	254,303	50,017	3,269	41,152	11,543	6,951	3,115	15,927	300,333	686,610	23,990	74,007	77,276
2018	274,952	63,012	3,592	41,411	11,336	7,163	2,854	16,728	291,724	712,773	29,543	92,555	96,147
<b>Rolling 12 Months Ending in December</b>													
2017	254,303	50,017	3,269	41,152	11,543	6,951	3,115	15,927	300,333	686,610	23,990	74,007	77,276
2018	274,952	63,012	3,592	41,411	11,336	7,163	2,854	16,728	291,724	712,773	29,543	92,555	96,147

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

Other Waste Biomass includes sludge waste, agricultural byproducts, other biomass solids, other biomass liquids, and other biomass gases (including digester gases, methane, and other biomass gases).

Notes: Beginning with 2001 data, non-biogenic municipal solid waste and tire-derived fuels are reclassified as non-renewable energy sources and included in Other. Biogenic municipal solid waste is included in Other Renewable Sources.

See Glossary for definitions. Values for 2017 and prior years are final. Values for 2018 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. 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: U.S. Energy Information Administration, Form EIA-923, Power Plant Operations Report; 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.

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

**Table 1.2.A. Net Generation by Energy Source: Electric Utilities, 2008-December 2018**  
(Thousand Megawatthours)

Period	Generation at Utility Scale Facilities										Total	
	Coal	Petroleum Liquids	Petroleum Coke	Natural Gas	Other Gas	Nuclear	Hydroelectric Conventional	Solar	Renewable Sources Excluding Hydroelectric and Solar	Hydroelectric Pumped Storage		Other
<b>Annual Totals</b>												
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
2016	922,399	9,069	8,881	654,780	154	424,400	247,787	1,995	40,666	-5,629	421	2,304,923
2017	893,639	8,567	6,711	623,835	149	424,485	275,677	3,348	42,763	-5,448	551	2,274,277
2018	860,325	9,805	6,817	714,303	151	424,251	265,480	5,252	43,026	-4,785	587	2,325,212
<b>Year 2016</b>												
January	84,012	965	832	52,818	3	37,974	23,579	95	3,303	-230	34	203,384
February	69,852	830	734	48,009	4	34,281	22,015	135	3,624	-332	30	179,182
March	56,982	623	724	49,949	5	34,445	25,125	151	3,696	-291	42	171,452
April	53,542	602	858	46,425	7	34,036	23,742	169	3,887	-367	34	162,936
May	62,093	695	763	52,908	10	36,531	23,508	187	3,098	-257	33	179,569
June	86,611	710	793	63,858	16	37,000	21,716	188	3,034	-409	40	213,557
July	100,856	926	833	71,913	21	37,919	20,030	197	2,837	-678	34	234,890
August	100,156	905	856	72,293	13	37,927	18,241	207	2,432	-787	33	232,277
Sept	83,223	644	807	58,392	23	33,919	15,283	197	3,215	-626	35	195,105
October	72,950	658	418	47,710	7	30,016	16,149	182	3,479	-471	36	171,134
November	64,830	700	596	44,171	22	33,082	17,599	154	3,635	-522	35	164,301
December	87,293	811	667	46,333	22	37,268	20,799	139	4,425	-657	36	197,136
<b>Year 2017</b>												
January	85,985	810	743	45,702	13	38,425	24,717	136	3,161	-346	44	199,391
February	64,844	632	540	39,534	17	33,911	21,619	178	3,541	-418	39	164,437
March	65,992	755	535	46,397	16	34,693	26,768	260	4,241	-455	43	179,245
April	58,913	631	260	43,444	18	30,217	26,683	288	4,020	-368	46	164,153
May	69,099	710	654	48,524	5	31,728	29,577	328	3,467	-350	38	183,781
June	81,297	714	698	56,453	10	35,022	27,897	338	3,298	-474	45	205,299
July	96,782	648	673	71,107	19	37,874	24,333	324	2,639	-646	53	233,807
August	90,517	698	540	67,671	2	38,667	20,124	318	2,304	-531	55	220,364
Sept	71,859	661	523	56,393	0	35,496	17,749	304	2,946	-522	49	185,458
October	66,498	721	405	50,140	9	35,038	16,950	291	4,543	-388	44	174,251
November	64,983	633	583	45,117	15	34,541	18,529	279	4,235	-394	45	168,569
December	76,870	953	556	53,353	24	38,871	20,729	304	4,369	-557	50	195,521
<b>Year 2018</b>												
January	88,647	2,359	770	55,197	26	39,366	23,664	288	4,417	-475	42	214,299
February	61,029	609	575	46,841	17	33,941	23,504	335	3,931	-226	40	170,598
March	58,552	585	491	50,592	16	35,262	23,793	453	4,181	-408	49	173,565
April	55,319	619	477	48,319	28	30,580	25,150	500	3,869	-295	42	164,609
May	64,011	730	336	58,571	11	34,479	28,051	490	3,350	-309	47	189,767
June	77,886	747	670	65,945	13	36,437	25,826	565	3,510	-339	52	211,313
July	88,147	652	716	82,694	15	38,293	21,964	512	2,721	-522	57	235,250
August	87,383	700	686	78,287	24	38,885	19,240	521	2,972	-626	58	228,131
Sept	73,136	763	639	68,926	3	34,377	16,649	496	3,052	-500	50	197,592
October	65,038	733	378	59,831	0	31,364	16,703	450	3,411	-405	46	177,349
November	69,011	673	477	50,518	0	33,043	19,806	342	3,552	-254	52	177,220
December	72,165	633	601	48,783	0	38,223	21,130	300	4,059	-426	51	185,519
<b>Year to Date</b>												
2016	922,399	9,069	8,881	654,780	154	424,400	247,787	1,995	40,666	-5,629	421	2,304,923
2017	893,639	8,567	6,711	623,835	149	424,485	275,677	3,348	42,763	-5,448	551	2,274,277
2018	860,325	9,805	6,817	714,303	151	424,251	265,480	5,252	43,026	-4,785	587	2,325,212
<b>Rolling 12 Months Ending in December</b>												
2017	893,639	8,567	6,711	623,835	149	424,485	275,677	3,348	42,763	-5,448	551	2,274,277
2018	860,325	9,805	6,817	714,303	151	424,251	265,480	5,252	43,026	-4,785	587	2,325,212

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.

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.

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

Other Gas includes blast furnace gas and other manufactured and waste gases derived from fossil fuels. Prior to 2011, Other Gas included propane and synthesis gases.

See the Technical Notes for fuel conversion factors.

Renewable Sources include wood, black liquor, other wood waste, biogenic municipal solid waste, landfill gas, sludge waste, agriculture byproducts, other biomass, geothermal, solar thermal, photovoltaic energy, and wind.

Other includes non-biogenic municipal solid waste, batteries, hydrogen, purchased steam, sulfur, tire-derived fuel, and other miscellaneous energy sources.

Notes: Beginning with 2001 data, non-biogenic municipal solid waste and tire-derived fuels are reclassified as non-renewable energy sources and included in Other. Biogenic municipal solid waste is included in Other Renewable Sources.

See Glossary for definitions. Values for 2017 and prior years are final. Values for 2018 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. 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: U.S. Energy Information Administration, Form EIA-923, Power Plant Operations Report; 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 1.2.B Net Generation by Energy Source: Independent Power Producers, 2008-December 2018**  
(Thousand Megawatthours)

Period	Generation at Utility Scale Facilities											Total
	Coal	Petroleum Liquids	Petroleum Coke	Natural Gas	Other Gas	Nuclear	Hydroelectric Conventional	Solar	Renewable Sources Excluding Hydroelectric and Solar	Hydroelectric Pumped Storage	Other	
<b>Annual Totals</b>												
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
2016	307,263	3,360	1,401	624,600	3,758	381,294	18,539	33,502	233,553	-1,057	6,941	1,613,156
2017	304,198	3,281	1,480	572,919	3,978	380,465	23,034	49,375	258,962	-1,047	6,527	1,603,173
2018	278,210	5,263	1,263	651,354	3,847	382,827	24,600	60,629	279,760	-1,119	6,406	1,693,041
<b>Year 2016</b>												
January	28,612	379	42	48,969	341	34,551	1,884	1,363	19,168	-82	589	135,816
February	22,057	416	99	42,840	295	31,357	1,991	2,065	20,345	-66	540	121,939
March	14,363	210	138	45,900	355	31,704	2,100	2,420	22,164	-93	549	119,810
April	17,877	188	97	44,832	311	28,696	1,993	2,662	20,487	-84	554	117,612
May	18,842	233	124	49,574	303	30,046	1,847	3,188	19,608	-64	610	124,310
June	28,585	214	131	59,185	335	30,175	1,410	3,229	17,117	-88	595	140,888
July	34,564	291	136	70,645	324	32,430	1,306	3,690	18,856	-106	610	162,745
August	34,607	309	140	73,317	319	33,599	1,217	3,701	15,341	-115	617	163,051
Sept	30,124	258	113	58,805	323	31,529	996	3,394	17,145	-89	557	143,155
October	25,524	232	141	47,044	228	30,717	1,080	2,965	20,549	-90	549	128,939
November	21,446	325	116	41,736	330	32,097	1,122	2,576	19,760	-85	560	119,981
December	30,661	307	124	41,755	296	34,394	1,591	2,250	23,013	-96	613	134,908
<b>Year 2017</b>												
January	28,587	254	139	41,183	336	34,695	1,918	1,876	20,878	-90	583	130,360
February	21,314	197	123	35,510	291	29,650	1,894	2,348	21,360	-90	514	113,110
March	22,696	147	81	40,458	342	30,400	2,358	3,941	24,871	-66	523	125,751
April	21,829	174	113	37,135	282	26,526	2,538	4,358	24,347	-71	507	117,739
May	23,043	220	136	41,497	345	29,585	2,628	5,277	22,777	-73	548	125,981
June	25,528	249	132	52,380	313	31,988	2,185	5,772	20,315	-93	549	139,318
July	30,237	227	138	66,734	350	33,440	2,030	5,366	17,417	-114	572	156,397
August	28,293	231	140	64,705	358	33,717	1,617	5,056	15,432	-107	580	150,023
Sept	25,701	223	136	53,827	346	32,602	1,228	4,755	18,701	-84	508	137,942
October	22,616	191	110	48,886	318	30,957	1,221	4,480	24,488	-75	518	133,509
November	25,364	215	111	41,702	337	32,077	1,891	3,093	23,772	-84	539	129,016
December	28,990	951	122	49,104	359	34,828	1,526	3,054	24,605	-99	586	144,026
<b>Year 2018</b>												
January	29,504	2,805	116	46,057	303	35,283	1,798	3,087	26,708	-72	580	146,169
February	20,197	122	106	41,328	309	30,849	1,895	3,737	24,120	-89	549	123,123
March	21,359	177	100	46,383	330	31,770	2,012	4,698	27,241	-82	570	134,557
April	17,451	191	154	43,137	306	28,553	2,196	5,683	26,495	-82	535	124,619
May	20,649	244	23	49,389	349	32,841	2,232	6,506	24,259	-81	532	136,942
June	22,987	263	NM	56,379	317	33,251	1,992	7,147	24,944	-95	589	147,792
July	26,663	256	135	75,464	348	34,163	1,918	6,349	17,456	-123	593	163,223
August	27,171	293	124	74,840	369	33,398	2,037	6,378	20,663	-121	442	165,593
Sept	22,985	229	125	65,221	315	30,348	1,899	5,897	18,730	-103	311	145,957
October	21,843	212	43	56,160	259	28,033	1,950	4,715	21,578	-87	564	135,269
November	23,396	228	177	47,778	299	30,904	2,226	3,576	22,763	-88	559	131,818
December	24,007	244	142	49,219	342	33,434	2,446	2,856	24,804	-96	582	137,979
<b>Year to Date</b>												
2016	307,263	3,360	1,401	624,600	3,758	381,294	18,539	33,502	233,553	-1,057	6,941	1,613,156
2017	304,198	3,281	1,480	572,919	3,978	380,465	23,034	49,375	258,962	-1,047	6,527	1,603,173
2018	278,210	5,263	1,263	651,354	3,847	382,827	24,600	60,629	279,760	-1,119	6,406	1,693,041
<b>Rolling 12 Months Ending in December</b>												
2017	304,198	3,281	1,480	572,919	3,978	380,465	23,034	49,375	258,962	-1,047	6,527	1,603,173
2018	278,210	5,263	NM	651,354	3,847	382,827	24,600	60,629	279,760	-1,119	6,406	1,693,041

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.

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.

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

Other Gas includes blast furnace gas and other manufactured and waste gases derived from fossil fuels. Prior to 2011, Other Gas included propane and synthesis gases.

See the Technical Notes for fuel conversion factors.

Renewable Sources include wood, black liquor, other wood waste, biogenic municipal solid waste, landfill gas, sludge waste, agriculture byproducts, other biomass, geothermal, solar thermal, photovoltaic energy, and wind.

Other includes non-biogenic municipal solid waste, batteries, hydrogen, purchased steam, sulfur, tire-derived fuel, and other miscellaneous energy sources.

Notes: Beginning with 2001 data, non-biogenic municipal solid waste and tire-derived fuels are reclassified as non-renewable energy sources and included in Other. Biogenic municipal solid waste is included in Other Renewable Sources.

See Glossary for definitions. Values for 2017 and prior years are final. Values for 2018 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. 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: U.S. Energy Information Administration, Form EIA-923, Power Plant Operations Report; 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 1.2.C. Net Generation by Energy Source: Commercial Sector, 2008-December 2018**  
(Thousand Megawatthours)

Period	Generation at Utility Scale Facilities											Small Scale Generation	Net Generation From Utility and Small 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 Generation at Utility Scale Facilities	Estimated Solar Photovoltaic	Estimated Total Solar Photovoltaic	Estimated Total Solar
<b>Annual Totals</b>															
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
2016	383	77	6	7,730	0	0	217	529	2,697	0	1,068	12,706	6,158	6,687	6,687
2017	329	103	8	8,042	0	0	240	521	2,729	0	1,088	13,060	7,685	8,206	8,206
2018	327	147	7	8,343	0	0	240	629	2,605	0	1,020	13,318	9,756	10,386	10,386
<b>Year 2016</b>															
January	43	8	1	605	0	0	21	26	230	0	89	1,022	346	373	373
February	45	8	1	570	0	0	18	39	210	0	75	967	398	437	437
March	46	3	1	579	0	0	22	44	225	0	90	1,011	520	564	564
April	24	6	0	551	0	0	15	46	221	0	97	961	566	612	612
May	20	6	0	607	0	0	12	48	230	0	96	1,019	616	663	663
June	23	5	0	692	0	0	13	53	220	0	83	1,089	623	676	676
July	24	8	1	831	0	0	15	55	234	0	96	1,263	640	696	696
August	26	7	0	859	0	0	19	58	234	0	95	1,298	620	677	677
Sept	29	4	0	700	0	0	23	48	223	0	87	1,114	556	605	605
October	27	5	0	617	0	0	21	42	218	0	90	1,021	493	536	536
November	35	8	0	521	0	0	17	36	224	0	85	927	393	428	428
December	42	8	1	598	0	0	21	33	228	0	85	1,015	387	420	420
<b>Year 2017</b>															
January	41	13	1	681	0	0	27	17	232	0	84	1,098	420	438	438
February	32	8	1	597	0	0	15	27	206	0	78	963	458	485	485
March	33	9	1	652	0	0	15	42	233	0	86	1,071	629	671	671
April	20	5	0	574	0	0	23	46	222	0	87	976	699	745	745
May	19	7	0	619	0	0	24	53	245	0	101	1,069	770	823	823
June	21	5	0	718	0	0	15	61	225	0	89	1,135	777	838	838
July	25	7	0	786	0	0	14	58	237	0	99	1,227	808	866	866
August	23	8	1	766	0	0	17	55	231	0	100	1,202	788	843	843
Sept	27	6	1	701	0	0	14	52	216	0	90	1,107	709	761	761
October	24	6	1	661	0	0	29	47	217	0	94	1,079	632	679	679
November	29	7	1	611	0	0	23	34	228	0	88	1,020	502	536	536
December	35	23	1	674	0	0	23	29	238	0	91	1,114	492	521	521
<b>Year 2018</b>															
January	44	NM	1	673	0	0	23	28	226	0	85	1,124	547	575	575
February	32	8	1	635	0	0	23	35	202	0	73	1,008	599	635	635
March	26	8	1	651	0	0	NM	45	224	0	84	1,063	813	858	858
April	22	9	0	634	0	0	25	57	210	0	82	1,040	900	957	957
May	19	9	0	644	0	0	NM	65	216	0	91	1,070	986	1,052	1,052
June	21	8	0	706	0	0	NM	81	217	0	92	1,148	999	1,080	1,080
July	25	12	0	821	0	0	NM	68	214	0	91	1,251	1,032	1,100	1,100
August	30	10	0	831	0	0	NM	70	219	0	91	1,269	989	1,059	1,059
Sept	29	8	1	749	0	0	14	66	200	0	80	1,148	890	957	957
October	24	8	1	673	0	0	NM	50	217	0	84	1,070	786	836	836
November	27	12	1	641	0	0	NM	34	204	0	78	1,014	624	659	659
December	29	10	1	685	0	0	17	28	255	0	89	1,114	591	618	618
<b>Year to Date</b>															
2016	383	77	6	7,730	0	0	217	529	2,697	0	1,068	12,706	6,158	6,687	6,687
2017	329	103	8	8,042	0	0	240	521	2,729	0	1,088	13,060	7,685	8,206	8,206
2018	327	147	7	8,343	0	0	240	629	2,605	0	1,020	13,318	9,756	10,386	10,386
<b>Rolling 12 Months Ending in December</b>															
2017	329	103	8	8,042	0	0	240	521	2,729	0	1,088	13,060	7,685	8,206	8,206
2018	327	NM	7	8,343	0	0	NM	629	2,605	0	1,020	13,318	9,756	10,386	10,386

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.

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.

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

Other Gas includes blast furnace gas and other manufactured and waste gases derived from fossil fuels. Prior to 2011, Other Gas included propane and synthesis gases.

See the Technical Notes for fuel conversion factors.

Renewable Sources include wood, black liquor, other wood waste, biogenic municipal solid waste, landfill gas, sludge waste, agriculture byproducts, other biomass, geothermal, solar thermal, photovoltaic energy, and wind.

Other includes non-biogenic municipal solid waste, batteries, hydrogen, purchased steam, sulfur, tire-derived fuel, and other miscellaneous energy sources.

Notes: Beginning with 2001 data, non-biogenic municipal solid waste and tire-derived fuels are reclassified as non-renewable energy sources and included in Other. Biogenic municipal solid waste is included in Other Renewable Sources.

See Glossary for definitions. Values for 2017 and prior years are final. Values for 2018 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. 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: U.S. Energy Information Administration, Form EIA-923, Power Plant Operations Report; 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, Form 423, Monthly Report of Cost and Quality of Fuels for Electric Plants.

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

**Table 1.2.D. Net Generation by Energy Source: Industrial Sector, 2008-December 2018**  
(Thousand Megawatthours)

Period	Generation at Utility Scale Facilities											Small Scale Generation	Net Generation From Utility and Small 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 Generation at Utility Scale Facilities	Estimated Solar Photovoltaic	Estimated Total Solar Photovoltaic	Estimated Total Solar
<b>Annual Totals</b>															
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
2016	9,103	503	909	91,197	8,895	0	1,269	27	28,663	0	5,324	145,890	2,060	2,087	2,087
2017	7,669	463	776	91,619	8,343	0	1,383	42	28,536	0	4,928	143,758	2,364	2,406	2,406
2018	7,531	527	743	94,012	8,193	0	1,403	92	29,055	0	4,682	146,239	2,641	2,733	2,733
<b>Year 2016</b>															
January	793	45	91	7,653	851	0	130	1	2,492	0	442	12,497	113	115	115
February	750	45	76	7,133	763	0	115	2	2,317	0	396	11,597	124	126	126
March	781	39	63	7,462	837	0	142	2	2,381	0	409	12,117	171	173	173
April	670	37	50	7,067	815	0	128	2	2,192	0	424	11,386	186	189	189
May	740	51	87	7,341	740	0	119	3	2,350	0	456	11,886	206	208	208
June	814	44	81	7,661	692	0	99	3	2,391	0	463	12,248	206	209	209
July	873	48	79	8,165	731	0	104	3	2,501	0	486	12,989	214	217	217
August	847	37	81	8,291	732	0	92	3	2,489	0	503	13,075	209	212	212
Sept	782	41	60	7,706	674	0	65	2	2,312	0	489	12,111	190	192	192
October	693	41	75	7,527	679	0	88	2	2,312	0	433	11,851	174	176	176
November	630	37	87	7,514	662	0	69	2	2,433	0	418	11,852	139	140	140
December	750	40	78	7,678	720	0	117	1	2,493	0	405	12,283	128	129	129
<b>Year 2017</b>															
January	720	43	61	7,907	696	0	126	1	2,405	0	382	12,341	123	124	124
February	632	38	60	7,052	668	0	115	2	2,209	0	364	11,142	137	139	139
March	644	38	82	7,515	702	0	131	3	2,342	0	411	11,868	197	200	200
April	573	35	58	7,266	701	0	146	4	2,265	0	410	11,457	213	217	217
May	616	34	57	7,428	704	0	155	4	2,293	0	396	11,686	239	242	242
June	662	33	71	7,765	668	0	124	5	2,420	0	416	12,164	241	246	246
July	653	34	78	8,367	679	0	115	5	2,540	0	486	12,956	252	257	257
August	655	33	83	8,067	774	0	93	5	2,560	0	484	12,754	246	251	251
Sept	615	34	52	7,191	715	0	75	4	2,281	0	386	11,354	223	227	227
October	637	38	56	7,366	673	0	84	4	2,310	0	370	11,537	201	204	204
November	610	47	61	7,453	649	0	121	3	2,361	0	405	11,710	156	158	158
December	651	55	58	8,242	713	0	99	3	2,550	0	419	12,790	138	141	141
<b>Year 2018</b>															
January	744	82	66	8,119	665	0	112	4	2,531	0	408	12,732	146	150	150
February	664	41	55	7,197	665	0	112	5	2,309	0	339	11,387	154	160	160
March	676	41	58	7,307	718	0	122	7	2,457	0	410	11,796	220	227	227
April	591	35	59	7,356	607	0	119	8	2,316	0	379	11,471	240	248	248
May	632	40	55	7,503	640	0	125	9	2,507	0	405	11,915	266	275	275
June	615	43	77	7,793	680	0	114	11	2,435	0	376	12,144	267	278	278
July	641	50	71	8,271	742	0	113	9	2,546	0	376	12,819	276	286	286
August	633	37	63	8,419	832	0	106	11	2,472	0	416	12,989	268	278	278
Sept	592	38	70	7,876	682	0	103	10	2,301	0	359	12,031	245	255	255
October	547	37	63	7,707	671	0	115	8	2,331	0	397	11,876	223	231	231
November	572	39	44	8,172	634	0	127	6	2,370	0	391	12,357	176	182	182
December	623	43	63	8,292	656	0	135	4	2,480	0	426	12,723	159	163	163
<b>Year to Date</b>															
2016	9,103	503	909	91,197	8,895	0	1,269	27	28,663	0	5,324	145,890	2,060	2,087	2,087
2017	7,669	463	776	91,619	8,343	0	1,383	42	28,536	0	4,928	143,758	2,364	2,406	2,406
2018	7,531	527	743	94,012	8,193	0	1,403	92	29,055	0	4,682	146,239	2,641	2,733	2,733
<b>Rolling 12 Months Ending in December</b>															
2017	7,669	463	776	91,619	8,343	0	1,383	42	28,536	0	4,928	143,758	2,364	2,406	2,406
2018	7,531	527	743	94,012	8,193	0	1,403	92	29,055	0	4,682	146,239	2,641	2,733	2,733

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.

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.

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

Other Gas includes blast furnace gas and other manufactured and waste gases derived from fossil fuels. Prior to 2011, Other Gas included propane and synthesis gases.

See the Technical Notes for fuel conversion factors.

Renewable Sources include wood, black liquor, other wood waste, biogenic municipal solid waste, landfill gas, sludge waste, agriculture byproducts, other biomass, geothermal, solar thermal, photovoltaic energy, and wind.

Other includes non-biogenic municipal solid waste, batteries, hydrogen, purchased steam, sulfur, tire-derived fuel, and other miscellaneous energy sources.

Notes: Beginning with 2001 data, non-biogenic municipal solid waste and tire-derived fuels are reclassified as non-renewable energy sources and included in Other. Biogenic municipal solid waste is included in Other Renewable Sources.

See Glossary for definitions. Values for 2017 and prior years are final. Values for 2018 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. 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: U.S. Energy Information Administration, Form EIA-923, Power Plant Operations Report; 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.

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

**Table 1.2.E. Net Generation by Energy Source: Residential Sector, 2014-December 2018  
(Thousand Megawatthours)**

Period	Small Scale Generation	
		Estimated Small Scale Solar Photovoltaic Generation
Annual Totals		
2014		4,947
2015		6,999
2016		10,595
2017		13,942
2018		17,146
Year 2016		
January		520
February		622
March		835
April		951
May		1,058
June		1,099
July		1,146
August		1,113
Sept		989
October		884
November		726
December		653
Year 2017		
January		703
February		789
March		1,147
April		1,283
May		1,415
June		1,469
July		1,495
August		1,446
Sept		1,293
October		1,157
November		904
December		841
Year 2018		
January		922
February		1,008
March		1,394
April		1,596
May		1,758
June		1,793
July		1,839
August		1,762
Sept		1,545
October		1,391
November		1,114
December		1,025
Year to Date		
2016		10,595
2017		13,942
2018		17,146
Rolling 12 Months Ending in December		
2017		13,942
2018		17,146

See Glossary for definitions. Values for 2017 and prior years are final. Values for 2018 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 small scale solar photovoltaic generation and small scale solar photovoltaic capacity are based on data from Form EIA-861M, 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, December 2018 and 2017 (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	
	December 2018	December 2017	Percentage Change	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017
New England	8,850	9,284	-4.7%	296	319	8,191	8,603	102	114	260	247
Connecticut	3,602	3,481	3.5%	10	9	3,508	3,376	32	40	52	57
Maine	927	981	-5.4%	0	0	743	807	14	18	170	155
Massachusetts	2,122	2,441	-13.1%	45	54	2,008	2,318	44	45	24	23
New Hampshire	1,449	1,609	-9.9%	150	169	1,290	1,430	7	7	2	2
Rhode Island	522	581	-10.2%	0	0	507	568	NM	3	11	10
Vermont	226	191	18.3%	91	87	135	104	0	0	0	0
Middle Atlantic	36,672	37,593	-2.4%	3,051	3,317	33,067	33,668	186	206	369	401
New Jersey	6,004	6,358	-5.6%	NM	-1	5,883	6,240	45	50	62	68
New York	11,269	11,199	0.6%	3,022	3,313	8,060	7,693	106	116	81	76
Pennsylvania	19,399	20,036	-3.2%	15	5	19,124	19,735	35	40	225	257
East North Central	50,239	55,172	-8.9%	19,008	22,387	30,095	31,703	165	160	971	923
Illinois	15,564	16,728	-7.0%	443	407	14,813	16,037	42	42	266	243
Indiana	9,594	10,336	-7.2%	6,923	7,830	2,312	2,142	16	23	343	341
Michigan	8,485	9,886	-14.2%	6,150	6,598	2,112	3,097	74	70	149	121
Ohio	10,998	11,558	-4.8%	1,065	2,250	9,852	9,242	21	15	60	52
Wisconsin	5,598	6,664	-16.0%	4,426	5,302	1,005	1,186	13	11	154	166
West North Central	27,466	31,532	-12.9%	21,487	24,820	5,578	6,275	53	50	348	387
Iowa	5,861	5,372	9.1%	4,507	3,991	1,179	1,193	20	19	155	168
Kansas	4,890	4,768	2.6%	3,245	3,164	1,634	1,597	NM	1	9	6
Minnesota	5,423	5,862	-7.5%	4,293	4,343	989	1,349	16	16	125	154
Missouri	3,454	7,272	-52.5%	3,087	6,756	350	500	14	12	3	4
Nebraska	3,255	3,248	0.2%	2,639	2,606	575	603	2	1	40	38
North Dakota	3,652	4,002	-8.7%	2,981	3,172	655	812	0	0	16	17
South Dakota	931	1,009	-7.7%	736	788	195	221	NM	0	0	0
South Atlantic	64,989	66,445	-2.2%	54,462	54,705	8,756	9,975	152	137	1,619	1,628
Delaware	236	502	-52.9%	2	2	169	432	NM	1	64	67
District of Columbia	8	6	39.5%	0	0	0	0	8	6	0	0
Florida	17,929	17,747	1.0%	16,832	16,429	637	846	7	6	454	466
Georgia	10,417	10,917	-4.6%	9,029	9,347	939	1,115	NM	0	449	454
Maryland	3,385	3,177	6.5%	239	57	3,048	3,044	83	52	14	26
North Carolina	10,993	11,463	-4.1%	9,738	10,285	1,073	968	22	32	161	178
South Carolina	7,946	8,097	-1.9%	7,464	7,780	319	167	0	0	163	150
Virginia	8,657	7,965	8.7%	7,020	5,945	1,383	1,765	30	40	223	214
West Virginia	5,417	6,572	-17.6%	4,139	4,860	1,188	1,639	0	0	91	73
East South Central	29,423	31,223	-5.8%	25,381	26,615	3,241	3,783	13	21	787	804
Alabama	11,781	12,026	-2.0%	8,939	8,702	2,446	2,919	0	0	395	405
Kentucky	6,683	6,371	4.9%	6,618	6,228	12	89	0	0	53	54
Mississippi	4,077	5,032	-19.0%	3,148	4,111	763	745	0	2	166	174
Tennessee	6,881	7,793	-11.7%	6,676	7,573	20	29	13	19	173	172
West South Central	56,536	59,281	-4.6%	18,881	19,716	30,841	32,783	89	62	6,724	6,720
Arkansas	5,516	6,009	-8.2%	4,723	5,274	630	577	NM	4	159	154
Louisiana	7,716	8,524	-9.5%	4,210	4,994	743	721	10	13	2,752	2,797
Oklahoma	6,888	6,284	9.6%	3,234	2,509	3,579	3,698	0	0	74	76
Texas	36,417	38,465	-5.3%	6,714	6,939	25,888	27,787	75	45	3,739	3,694
Mountain	32,949	30,652	7.5%	25,842	23,678	6,766	6,640	79	47	261	286
Arizona	9,402	8,311	13.1%	8,081	7,645	1,308	653	13	12	0	0
Colorado	5,127	4,730	8.4%	4,063	3,550	1,055	1,170	2	3	7	7
Idaho	1,374	1,592	-13.7%	886	1,002	431	533	4	5	52	52
Montana	2,396	2,700	-11.3%	814	877	1,578	1,820	0	0	4	3
Nevada	2,948	3,098	-4.9%	1,996	2,034	896	1,032	41	10	14	22
New Mexico	3,209	2,567	25.0%	2,198	1,715	1,001	842	10	10	0	0
Utah	4,075	3,439	18.5%	3,796	3,100	217	270	9	8	53	62
Wyoming	4,419	4,215	4.8%	4,008	3,755	279	320	0	0	131	139
Pacific Contiguous	28,897	30,830	-6.3%	16,267	18,960	11,068	10,256	210	255	1,352	1,358
California	14,951	14,752	1.4%	5,412	6,115	8,163	7,229	201	245	1,175	1,162
Oregon	5,560	5,892	-5.6%	3,901	4,468	1,595	1,360	7	7	58	57
Washington	8,386	10,186	-17.7%	6,955	8,377	1,310	1,667	3	3	119	139
Pacific Noncontiguous	1,315	1,440	-8.7%	843	1,004	376	340	65	62	31	35
Alaska	508	639	-20.4%	450	575	22	21	28	35	9	8
Hawaii	807	801	0.7%	393	428	354	319	36	27	23	27
U.S. Total	337,334	353,452	-4.6%	185,519	195,521	137,979	144,026	1,114	1,114	12,723	12,790

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 2018 are preliminary. Values for 2017 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 1.3.B. Utility Scale Facility Net Generation

by State, by Sector, Year-to-Date through December 2018 and 2017 (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	
	December 2018 YTD	December 2017 YTD	Percentage Change	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD
New England	105,564	105,234	0.3%	3,123	2,550	98,105	98,469	1,271	1,316	3,065	2,899
Connecticut	39,042	34,563	13.0%	94	98	37,952	33,426	387	423	610	616
Maine	11,451	11,264	1.7%	0	0	9,275	9,207	165	215	2,010	1,843
Massachusetts	27,965	32,204	-13.2%	657	546	26,444	30,843	588	548	276	268
New Hampshire	17,582	17,447	0.8%	1,415	975	16,067	16,373	69	70	31	30
Rhode Island	7,167	7,615	-5.9%	0	3	6,970	7,410	59	58	138	143
Vermont	2,357	2,141	10.1%	957	929	1,397	1,210	3	3	0	0
Middle Atlantic	424,584	417,349	1.7%	36,067	34,874	381,788	375,657	2,362	2,376	4,366	4,442
New Jersey	75,255	75,645	-0.5%	167	130	73,727	74,102	662	674	699	740
New York	134,156	128,065	4.8%	35,749	34,642	96,161	91,247	1,319	1,310	927	867
Pennsylvania	215,173	213,639	0.7%	151	103	211,900	210,309	381	392	2,741	2,836
East North Central	608,198	579,494	5.0%	240,478	237,154	354,923	330,431	2,014	1,916	10,782	9,993
Illinois	187,864	183,591	2.3%	5,687	5,066	178,689	175,353	520	433	2,969	2,739
Indiana	112,150	98,930	13.4%	83,725	77,340	24,343	17,669	250	265	3,832	3,656
Michigan	115,966	112,314	3.3%	81,092	79,939	32,472	30,223	840	831	1,562	1,320
Ohio	124,761	119,552	4.4%	17,280	23,429	106,528	95,224	255	263	699	636
Wisconsin	67,457	65,107	3.6%	52,695	51,380	12,891	11,961	150	124	1,720	1,642
West North Central	352,474	340,047	3.7%	286,225	277,405	61,280	57,930	620	602	4,350	4,110
Iowa	64,187	57,910	10.8%	49,280	43,189	12,546	12,507	220	210	2,141	2,003
Kansas	52,983	50,933	4.0%	35,351	33,850	17,530	17,025	15	15	87	43
Minnesota	63,234	58,749	7.6%	49,065	45,690	12,468	11,378	192	184	1,509	1,497
Missouri	82,174	84,607	-2.9%	76,734	81,061	5,223	3,325	175	175	43	46
Nebraska	36,809	35,407	4.0%	31,372	30,095	5,031	4,933	18	19	388	360
North Dakota	41,771	41,505	0.6%	35,048	34,637	6,541	6,708	0	0	181	160
South Dakota	11,315	10,936	3.5%	9,375	8,883	1,940	2,052	NM	0	0	0
South Atlantic	821,243	792,859	3.6%	670,343	659,053	130,214	113,479	1,678	1,491	19,009	18,837
Delaware	6,014	7,496	-19.8%	38	24	4,895	6,304	7	6	1,073	1,161
District of Columbia	79	67	18.9%	0	0	0	0	79	67	0	0
Florida	244,898	238,413	2.7%	227,615	222,272	12,050	10,881	72	72	5,161	5,188
Georgia	130,061	127,455	2.0%	108,480	107,179	16,291	15,208	8	6	5,281	5,063
Maryland	43,927	34,104	28.8%	3,799	256	39,042	33,022	842	543	244	283
North Carolina	134,070	128,468	4.4%	116,103	114,362	15,831	11,863	283	357	1,853	1,886
South Carolina	99,618	93,081	7.0%	92,180	88,079	5,481	3,228	3	2	1,955	1,772
Virginia	95,446	90,417	5.6%	72,199	70,951	20,369	16,620	383	439	2,494	2,407
West Virginia	67,132	73,357	-8.5%	49,929	55,929	16,253	16,351	0	0	949	1,077
East South Central	368,133	351,917	4.6%	311,666	301,873	47,106	40,792	209	201	9,153	9,052
Alabama	144,989	139,964	3.6%	102,654	101,709	37,838	33,817	0	0	4,497	4,437
Kentucky	79,191	73,179	8.2%	77,891	72,106	719	454	0	0	580	619
Mississippi	63,516	59,728	6.3%	53,348	51,510	8,250	6,291	6	5	1,912	1,921
Tennessee	80,437	79,046	1.8%	77,771	76,547	299	229	203	195	2,163	2,075
West South Central	730,372	685,021	6.6%	255,278	228,403	397,859	380,432	983	907	76,252	75,279
Arkansas	67,134	60,775	10.5%	58,506	54,209	6,863	4,863	42	43	1,723	1,660
Louisiana	101,354	97,719	3.7%	62,051	56,686	9,162	10,084	165	137	29,975	30,812
Oklahoma	87,107	73,732	18.1%	42,468	36,426	43,752	36,484	0	0	887	823
Texas	474,777	452,794	4.9%	92,253	81,082	338,081	329,001	775	727	43,668	41,985
Mountain	371,879	361,265	2.9%	285,645	282,251	82,516	75,245	592	576	3,127	3,193
Arizona	112,303	105,852	6.1%	95,021	91,623	17,132	14,062	150	166	0	0
Colorado	56,010	53,844	4.0%	42,332	41,471	13,568	12,268	35	31	76	74
Idaho	17,403	17,396	0.0%	11,206	11,447	5,587	5,367	50	52	560	530
Montana	27,424	28,221	-2.8%	11,362	11,545	16,032	16,645	0	0	30	31
Nevada	39,929	38,201	4.5%	27,593	26,836	11,835	10,945	169	127	332	294
New Mexico	32,639	33,597	-2.9%	20,995	24,595	11,512	8,884	108	117	24	1
Utah	39,851	37,412	6.5%	35,381	32,614	3,801	3,872	80	84	589	843
Wyoming	46,320	46,742	-0.9%	41,756	42,120	3,048	3,202	0	0	1,516	1,420
Pacific Contiguous	378,856	384,772	-1.5%	225,287	239,669	134,992	126,583	2,837	2,966	15,741	15,554
California	197,227	206,146	-4.3%	75,785	90,422	105,041	99,342	2,726	2,867	13,675	13,515
Oregon	64,836	62,714	3.4%	47,877	48,765	16,232	13,266	82	72	646	611
Washington	116,793	115,912	0.8%	101,626	100,482	13,719	13,975	29	27	1,419	1,428
Pacific Noncontiguous	16,506	16,310	1.2%	11,100	11,045	4,259	4,156	753	708	394	400
Alaska	6,515	6,497	0.3%	5,798	5,823	255	231	356	335	107	108
Hawaii	9,991	9,812	1.8%	5,302	5,223	4,004	3,924	398	373	287	292
U.S. Total	4,177,810	4,034,268	3.6%	2,325,212	2,274,277	1,693,041	1,603,173	13,318	13,060	146,239	143,758

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 2018 are preliminary. Values for 2017 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.A. Utility Scale Facility Net Generation from Coal by State, by Sector, December 2018 and 2017 (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	
	December 2018	December 2017	Percentage Change	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017
New England	138	220	-37.1%	86	109	51	110	0	0	NM	0
Connecticut	43	104	-58.7%	0	0	43	104	0	0	0	0
Maine	9	7	40.1%	0	0	8	6	0	0	NM	0
Massachusetts	0	0	--	0	0	0	0	0	0	0	0
New Hampshire	86	109	-21.2%	86	109	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	4,508	5,748	-21.6%	0	0	4,493	5,727	0	0	14	21
New Jersey	99	129	-23.3%	0	0	99	129	0	0	0	0
New York	67	115	-41.5%	0	0	67	107	0	0	0	8
Pennsylvania	4,342	5,504	-21.1%	0	0	4,327	5,492	0	0	14	12
East North Central	22,569	24,811	-9.0%	13,449	15,077	8,903	9,544	NM	6	214	184
Illinois	4,687	5,115	-8.4%	429	345	4,087	4,630	NM	4	168	136
Indiana	6,570	7,137	-7.9%	6,159	6,851	411	283	0	2	0	0
Michigan	3,547	3,074	15.4%	3,507	3,035	33	36	0	0	NM	3
Ohio	4,832	6,054	-20.2%	459	1,459	4,372	4,595	0	0	1	1
Wisconsin	2,932	3,431	-14.5%	2,894	3,387	0	0	0	0	39	44
West North Central	13,444	16,597	-19.0%	13,238	16,359	0	0	8	10	198	228
Iowa	2,598	2,044	27.1%	2,480	1,918	0	0	7	7	111	118
Kansas	2,054	1,908	7.6%	2,054	1,908	0	0	0	0	0	0
Minnesota	2,370	2,235	6.1%	2,333	2,175	0	0	0	0	37	60
Missouri	1,846	5,937	-68.9%	1,846	5,935	0	0	1	2	0	0
Nebraska	1,934	1,867	3.6%	1,895	1,829	0	0	0	0	40	38
North Dakota	2,360	2,382	-0.9%	2,349	2,370	0	0	0	0	NM	12
South Dakota	282	225	25.8%	282	225	0	0	0	0	0	0
South Atlantic	15,231	17,283	-11.9%	13,579	14,745	1,584	2,456	7	9	62	72
Delaware	2	63	-96.5%	0	0	2	63	0	0	0	0
District of Columbia	0	0	--	0	0	0	0	0	0	0	0
Florida	2,416	2,445	-1.2%	2,409	2,432	0	0	0	0	7	13
Georgia	2,609	2,504	4.2%	2,593	2,486	0	0	0	0	16	18
Maryland	579	914	-36.6%	0	0	574	906	0	0	5	7
North Carolina	2,407	2,877	-16.3%	2,383	2,846	6	11	6	7	12	14
South Carolina	1,460	1,459	0.1%	1,460	1,455	0	0	0	0	1	3
Virginia	742	832	-10.8%	689	737	32	77	1	2	20	17
West Virginia	5,015	6,189	-19.0%	4,044	4,789	970	1,400	0	0	0	0
East South Central	9,540	10,679	-10.7%	9,207	10,431	285	199	0	0	48	49
Alabama	2,004	2,748	-27.1%	2,000	2,746	0	0	0	0	4	3
Kentucky	5,299	4,687	13.0%	5,299	4,687	0	0	0	0	0	0
Mississippi	470	303	55.3%	185	103	285	199	0	0	0	0
Tennessee	1,767	2,940	-39.9%	1,723	2,894	0	0	0	0	44	46
West South Central	14,675	16,324	-10.1%	8,318	8,033	6,332	8,264	0	0	25	27
Arkansas	3,011	2,585	16.5%	2,516	2,117	491	463	0	0	3	5
Louisiana	950	1,052	-9.7%	576	683	373	369	0	0	0	0
Oklahoma	1,440	1,217	18.3%	1,239	981	179	215	0	0	22	22
Texas	9,274	11,470	-19.1%	3,985	4,252	5,289	7,218	0	0	0	0
Mountain	15,363	13,798	11.3%	13,839	12,050	1,488	1,706	0	0	36	42
Arizona	2,806	2,468	13.7%	2,806	2,468	0	0	0	0	0	0
Colorado	2,566	2,474	3.7%	2,564	2,472	0	0	0	0	1	1
Idaho	NM	3	NM	0	0	0	0	0	0	NM	3
Montana	1,292	1,528	-15.4%	27	0	1,265	1,527	0	0	1	1
Nevada	421	74	472.7%	291	-4	130	78	0	0	0	0
New Mexico	1,523	1,199	27.0%	1,523	1,199	0	0	0	0	0	0
Utah	2,905	2,503	16.0%	2,874	2,464	30	39	0	0	0	0
Wyoming	3,848	3,550	8.4%	3,753	3,450	64	63	0	0	31	37
Pacific Contiguous	1,181	919	28.5%	413	40	743	851	0	0	25	29
California	23	27	-16.7%	0	0	0	0	0	0	23	27
Oregon	413	40	938.8%	413	40	0	0	0	0	0	0
Washington	745	852	-12.5%	0	0	743	851	0	0	2	1
Pacific Noncontiguous	174	168	3.7%	NM	27	128	132	NM	10	0	0
Alaska	64	52	23.3%	NM	27	18	16	NM	10	0	0
Hawaii	110	116	-5.1%	0	0	110	116	0	0	0	0
U.S. Total	96,825	106,546	-9.1%	72,165	76,870	24,007	28,990	29	35	623	651

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 2018 are preliminary. Values for 2017 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 December 2018 and 2017 (Thousand Megawatthours)

Census Division and State	All Sectors			Electric Power Sector				Commercial Sector		Industrial Sector	
	Generation at Utility Scale Facilities			Electric Utilities		Independent Power Producers		Generation at Utility Scale Facilities		Generation at Utility Scale Facilities	
	December 2018 YTD	December 2017 YTD	Percentage Change	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD
	December 2018 YTD	December 2017 YTD	Percentage Change	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD
New England	1,072	1,689	-36.5%	666	287	386	1,392	0	0	20	10
Connecticut	330	198	66.9%	0	0	330	198	0	0	0	0
Maine	76	68	11.9%	0	0	56	58	0	0	20	10
Massachusetts	0	1,136	-100.0%	0	0	0	1,136	0	0	0	0
New Hampshire	666	287	131.9%	666	287	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	46,032	49,621	-7.2%	0	0	45,842	49,235	0	0	190	385
New Jersey	1,193	1,216	-1.9%	0	0	1,193	1,216	0	0	0	0
New York	690	770	-10.4%	0	0	679	562	0	0	11	209
Pennsylvania	44,148	47,634	-7.3%	0	0	43,969	47,458	0	0	179	177
East North Central	272,340	276,582	-1.5%	161,998	167,556	107,879	106,945	77	63	2,386	2,017
Illinois	59,764	57,980	3.1%	4,052	4,002	53,810	52,403	39	29	1,862	1,546
Indiana	77,501	72,385	7.1%	73,151	69,731	4,312	2,620	38	34	0	0
Michigan	42,910	42,021	2.1%	42,399	41,531	427	444	0	0	85	46
Ohio	58,794	68,344	-14.0%	9,458	16,856	49,330	51,478	0	0	6	9
Wisconsin	33,370	35,852	-6.9%	32,937	35,437	0	0	0	0	433	416
West North Central	185,583	185,041	0.3%	182,941	182,466	0	1	85	106	2,557	2,469
Iowa	28,576	25,358	12.7%	26,974	23,787	0	0	74	83	1,528	1,489
Kansas	20,468	19,390	5.6%	20,468	19,390	0	0	0	0	0	0
Minnesota	23,398	22,782	2.7%	22,872	22,270	0	0	1	1	525	511
Missouri	59,934	67,519	-11.2%	59,924	67,496	0	1	10	22	0	0
Nebraska	23,171	21,174	9.4%	22,783	20,813	0	0	0	0	388	360
North Dakota	27,656	26,756	3.4%	27,541	26,648	0	0	0	0	116	108
South Dakota	2,380	2,062	15.4%	2,380	2,062	0	0	0	0	0	0
South Atlantic	195,113	210,560	-7.3%	170,254	186,731	24,115	23,001	45	56	699	772
Delaware	273	359	-23.8%	0	0	273	359	0	0	0	0
District of Columbia	0	0	--	0	0	0	0	0	0	0	0
Florida	30,124	37,513	-19.7%	30,026	37,265	7	109	0	0	92	139
Georgia	32,182	32,487	-0.9%	31,987	32,311	0	0	0	0	195	176
Maryland	10,067	8,514	18.2%	0	0	10,007	8,440	0	0	60	74
North Carolina	31,681	34,460	-8.1%	31,408	34,136	94	113	39	45	141	167
South Carolina	19,498	18,152	7.4%	19,481	18,127	0	0	0	0	16	25
Virginia	9,313	10,726	-13.2%	8,524	9,999	586	524	6	11	197	192
West Virginia	61,975	68,349	-9.3%	48,827	54,893	13,148	13,456	0	0	0	0
East South Central	117,199	121,020	-3.2%	113,673	118,076	2,831	2,231	0	0	694	713
Alabama	31,784	31,440	1.1%	31,737	31,411	0	0	0	0	47	29
Kentucky	59,168	57,237	3.4%	59,168	57,237	0	0	0	0	0	0
Mississippi	5,280	4,628	14.1%	2,449	2,397	2,831	2,231	0	0	0	0
Tennessee	20,967	27,715	-24.3%	20,320	27,031	0	0	0	0	647	684
West South Central	168,164	190,618	-11.8%	92,704	91,640	75,209	98,644	0	0	250	334
Arkansas	29,996	26,285	14.1%	24,754	22,743	5,197	3,497	0	0	46	45
Louisiana	11,787	12,316	-4.3%	7,780	7,240	4,007	5,075	0	0	0	0
Oklahoma	14,907	17,368	-14.2%	12,868	15,329	1,834	1,750	0	0	205	289
Texas	111,475	134,648	-17.2%	47,302	46,328	64,172	88,321	0	0	0	0
Mountain	151,756	161,264	-5.9%	136,252	144,883	15,074	15,731	0	0	430	650
Arizona	30,745	31,396	-2.1%	30,745	31,396	0	0	0	0	0	0
Colorado	26,382	29,242	-9.8%	26,370	29,233	0	0	0	0	12	9
Idaho	25	24	4.9%	0	0	0	0	0	0	25	24
Montana	13,221	13,864	-4.6%	234	225	12,981	13,633	0	0	5	6
Nevada	2,485	1,866	33.2%	1,443	902	1,042	964	0	0	0	0
New Mexico	13,402	18,414	-27.2%	13,402	18,414	0	0	0	0	0	0
Utah	25,912	26,390	-1.8%	25,501	25,759	412	413	0	0	0	217
Wyoming	39,584	40,069	-1.2%	38,558	38,954	638	721	0	0	388	394
Pacific Contiguous	7,138	7,509	-4.9%	1,474	1,728	5,359	5,463	0	0	305	318
California	281	291	-3.4%	0	0	0	0	0	0	281	291
Oregon	1,474	1,728	-14.7%	1,474	1,728	0	0	0	0	0	0
Washington	5,383	5,490	-1.9%	0	0	5,359	5,463	0	0	24	27
Pacific Noncontiguous	1,996	1,931	3.3%	362	271	1,515	1,557	119	104	0	0
Alaska	685	556	23.2%	362	271	204	181	119	104	0	0
Hawaii	1,311	1,376	-4.7%	0	0	1,311	1,376	0	0	0	0
U.S. Total	1,146,393	1,205,835	-4.9%	860,325	893,639	278,210	304,198	327	329	7,531	7,669

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 2018 are preliminary. Values for 2017 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, December 2018 and 2017 (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	
	December 2018	December 2017	Percentage Change	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017
New England	15	495	-96.9%	NM	47	NM	432	NM	10	NM	6
Connecticut	NM	140	NM	NM	2	NM	135	NM	2	0	1
Maine	NM	85	NM	0	0	NM	80	0	0	NM	5
Massachusetts	NM	139	NM	NM	31	NM	104	NM	5	1	0
New Hampshire	2	77	-97.0%	NM	10	NM	64	2	2	0	0
Rhode Island	NM	50	NM	0	0	NM	49	NM	0	0	0
Vermont	NM	3	NM	NM	3	0	0	0	0	0	0
Middle Atlantic	40	536	-92.6%	NM	176	28	346	NM	8	4	5
New Jersey	9	48	-81.7%	1	0	8	48	0	0	0	0
New York	NM	423	NM	NM	176	NM	234	NM	8	4	5
Pennsylvania	18	64	-72.5%	0	0	17	64	0	0	NM	0
East North Central	37	48	-22.0%	17	29	18	14	0	0	1	4
Illinois	4	4	-1.7%	NM	1	4	4	0	0	0	0
Indiana	7	13	-48.1%	6	8	0	1	0	0	1	3
Michigan	8	13	-36.6%	8	13	0	0	0	0	NM	0
Ohio	16	17	-5.0%	NM	7	15	10	0	0	0	0
Wisconsin	2	1	175.5%	NM	1	0	0	0	0	NM	0
West North Central	25	40	-37.8%	25	38	NM	2	0	0	0	0
Iowa	7	14	-50.0%	7	14	NM	0	0	0	0	0
Kansas	4	6	-41.5%	4	6	0	0	0	0	0	0
Minnesota	NM	4	NM	NM	2	NM	2	0	0	0	0
Missouri	6	11	-50.2%	6	11	0	0	0	0	0	0
Nebraska	NM	1	NM	NM	1	0	0	0	0	0	0
North Dakota	7	4	69.4%	7	4	0	0	0	0	0	0
South Dakota	NM	0	NM	NM	0	0	0	NM	0	0	0
South Atlantic	144	198	-27.0%	103	130	26	47	4	3	11	17
Delaware	NM	15	NM	0	1	NM	14	0	0	0	0
District of Columbia	0	0	--	0	0	0	0	0	0	0	0
Florida	33	36	-8.5%	29	30	NM	4	0	0	3	2
Georgia	14	25	-41.3%	9	12	NM	0	0	0	5	12
Maryland	2	11	-83.0%	0	0	2	10	NM	0	0	1
North Carolina	29	37	-22.0%	26	33	NM	2	NM	0	NM	1
South Carolina	11	9	22.3%	10	8	0	0	NM	0	1	1
Virginia	36	55	-33.9%	13	36	20	16	3	2	1	0
West Virginia	17	10	72.1%	17	10	0	0	0	0	0	0
East South Central	25	22	11.3%	19	21	4	0	0	0	1	1
Alabama	6	6	0.9%	1	5	4	0	0	0	NM	0
Kentucky	8	-3	-399.3%	8	-3	0	0	0	0	0	0
Mississippi	2	2	-11.3%	2	2	0	0	0	0	0	0
Tennessee	9	17	-46.8%	8	16	0	0	0	0	1	0
West South Central	8	14	-42.0%	6	13	2	1	0	0	0	0
Arkansas	1	6	-73.5%	1	6	0	0	0	0	0	0
Louisiana	NM	1	NM	NM	1	0	0	0	0	0	0
Oklahoma	1	2	-51.0%	1	2	0	0	0	0	0	0
Texas	4	5	-22.5%	2	4	1	1	0	0	0	0
Mountain	11	20	-45.3%	10	19	2	1	0	0	0	0
Arizona	2	6	-67.8%	2	6	0	0	0	0	0	0
Colorado	NM	1	NM	NM	1	0	0	0	0	0	0
Idaho	0	0	-99.4%	0	0	0	0	0	0	0	0
Montana	1	1	63.5%	NM	0	1	1	0	0	0	0
Nevada	1	0	237.7%	1	0	0	0	0	0	0	0
New Mexico	2	3	-55.3%	2	3	0	0	0	0	0	0
Utah	3	3	7.2%	3	3	0	0	0	0	0	0
Wyoming	2	6	-70.3%	2	6	0	0	0	0	0	0
Pacific Contiguous	6	6	8.8%	3	4	1	1	NM	0	NM	1
California	4	3	31.3%	3	3	0	0	0	0	1	0
Oregon	0	1	-69.5%	0	1	0	0	NM	0	0	0
Washington	NM	2	NM	NM	0	1	1	0	0	NM	1
Pacific Noncontiguous	618	603	2.4%	441	476	155	106	2	1	20	20
Alaska	76	76	0.4%	73	73	0	0	2	1	2	2
Hawaii	541	527	2.6%	368	403	155	106	0	0	18	18
U.S. Total	930	1,982	-53.1%	633	953	244	951	10	23	43	55

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 2018 are preliminary. Values for 2017 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 December 2018 and 2017 (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	
	December 2018 YTD	December 2017 YTD	Percentage Change	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD
New England	1,310	747	75.5%	207	84	1,028	609	45	39	30	15
Connecticut	379	178	112.5%	NM	5	370	169	NM	4	1	1
Maine	202	132	52.2%	0	0	173	117	2	2	27	13
Massachusetts	474	266	78.7%	92	44	359	204	NM	16	2	1
New Hampshire	182	105	73.2%	104	25	62	66	16	14	0	0
Rhode Island	NM	58	NM	0	3	NM	53	2	3	0	0
Vermont	NM	7	NM	NM	7	0	0	0	0	0	0
Middle Atlantic	2,236	934	139.3%	587	239	1,581	638	NM	16	41	41
New Jersey	266	80	230.7%	3	0	256	80	5	0	1	0
New York	1,477	598	147.1%	582	239	843	309	NM	12	35	38
Pennsylvania	493	256	92.5%	2	0	482	249	4	4	NM	3
East North Central	594	525	13.1%	300	319	263	180	6	4	25	22
Illinois	67	51	30.5%	NM	8	55	43	0	0	0	0
Indiana	131	125	4.8%	111	107	0	1	1	0	19	17
Michigan	118	110	8.1%	113	105	0	0	4	3	2	2
Ohio	253	206	22.8%	42	67	207	136	1	0	3	2
Wisconsin	25	33	-25.5%	23	32	1	0	0	0	NM	1
West North Central	344	299	15.1%	328	289	NM	7	2	1	1	1
Iowa	105	104	1.0%	104	103	1	0	0	0	0	0
Kansas	56	55	3.5%	56	55	0	0	0	0	0	0
Minnesota	40	35	14.6%	26	26	NM	7	2	1	1	1
Missouri	92	61	50.9%	92	61	0	0	0	0	0	0
Nebraska	7	6	28.7%	7	6	0	0	0	0	0	0
North Dakota	39	36	8.2%	39	36	0	0	0	0	0	0
South Dakota	5	3	49.1%	4	3	0	0	NM	0	0	0
South Atlantic	2,974	1,707	74.2%	2,049	1,309	731	261	57	34	136	103
Delaware	152	25	499.4%	6	2	146	23	0	0	0	0
District of Columbia	0	0	--	0	0	0	0	0	0	0	0
Florida	571	512	11.5%	530	489	12	6	0	0	28	17
Georgia	219	142	53.7%	NM	74	47	4	5	2	74	62
Maryland	251	102	145.4%	3	2	242	97	NM	1	3	2
North Carolina	497	251	97.6%	453	227	NM	12	NM	1	NM	11
South Carolina	276	98	182.5%	225	88	39	1	NM	0	11	8
Virginia	850	456	86.3%	594	309	205	115	47	28	NM	3
West Virginia	159	120	32.6%	145	119	14	1	0	0	0	0
East South Central	313	241	29.5%	268	227	29	4	0	0	16	11
Alabama	68	36	90.8%	30	25	29	3	0	0	NM	7
Kentucky	88	71	24.2%	88	71	0	0	0	0	0	0
Mississippi	29	11	148.7%	25	9	0	0	0	0	4	2
Tennessee	128	124	3.7%	126	122	0	0	0	0	2	2
West South Central	151	158	-4.6%	122	97	20	56	1	1	8	5
Arkansas	37	49	-24.7%	NM	23	6	24	0	0	3	2
Louisiana	NM	19	NM	NM	19	0	0	0	0	0	0
Oklahoma	18	16	12.0%	17	15	0	0	0	0	1	1
Texas	58	74	-22.3%	39	39	NM	33	1	1	4	2
Mountain	186	209	-11.3%	165	191	21	18	0	0	0	0
Arizona	50	57	-11.7%	50	57	0	0	0	0	0	0
Colorado	12	7	65.7%	12	7	0	0	0	0	0	0
Idaho	0	0	-66.3%	0	0	0	0	0	0	0	0
Montana	17	13	26.1%	NM	0	16	13	0	0	0	0
Nevada	10	9	17.1%	7	5	3	4	0	0	0	0
New Mexico	20	41	-49.9%	20	41	0	0	0	0	0	0
Utah	36	38	-7.1%	35	37	1	1	0	0	0	0
Wyoming	40	44	-7.9%	40	44	0	0	0	0	0	0
Pacific Contiguous	99	79	25.1%	44	47	16	14	NM	1	39	17
California	70	46	52.1%	34	35	6	3	0	1	29	8
Oregon	NM	10	NM	5	10	0	0	NM	0	0	0
Washington	25	23	6.6%	5	3	10	11	0	0	10	9
Pacific Noncontiguous	7,536	7,514	0.3%	5,734	5,766	1,561	1,493	9	7	232	248
Alaska	779	881	-11.5%	732	832	0	0	6	5	41	44
Hawaii	6,756	6,634	1.8%	5,002	4,934	1,561	1,493	3	2	191	204
U.S. Total	15,742	12,414	26.8%	9,805	8,567	5,263	3,281	147	103	527	463

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 2018 are preliminary. Values for 2017 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, December 2018 and 2017 (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	
	December 2018	December 2017	Percentage Change	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017
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	16	17	-2.4%	0	0	0	0	0	0	16	17
New Jersey	6	7	-22.3%	0	0	0	0	0	0	6	7
New York	0	0	--	0	0	0	0	0	0	0	0
Pennsylvania	NM	10	NM	0	0	0	0	0	0	NM	10
East North Central	203	163	24.4%	89	72	98	81	0	0	15	10
Illinois	0	0	--	0	0	0	0	0	0	0	0
Indiana	0	0	--	0	0	0	0	0	0	0	0
Michigan	96	66	44.2%	80	56	0	0	0	0	15	10
Ohio	98	81	21.0%	0	0	98	81	0	0	0	0
Wisconsin	9	16	-41.9%	9	16	0	0	0	0	0	0
West North Central	1	8	-82.8%	0	0	0	0	1	1	0	7
Iowa	1	8	-82.8%	0	0	0	0	1	1	0	7
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	121	120	1.0%	102	105	0	0	0	0	19	15
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	102	105	-2.7%	102	105	0	0	0	0	0	0
Georgia	19	15	26.9%	0	0	0	0	0	0	19	15
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	422	389	8.5%	409	379	0	0	0	0	13	10
Arkansas	0	0	--	0	0	0	0	0	0	0	0
Louisiana	417	383	8.7%	409	379	0	0	0	0	7	4
Oklahoma	0	0	--	0	0	0	0	0	0	0	0
Texas	5	6	-3.2%	0	0	0	0	0	0	5	6
Mountain	44	41	6.7%	0	0	44	41	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	44	41	6.7%	0	0	44	41	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	807	737	9.5%	601	556	142	122	1	1	63	58

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 2018 are preliminary. Values for 2017 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.B. Utility Scale Facility Net Generation from Petroleum Coke

by State, by Sector, Year-to-Date through December 2018 and 2017 (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	
	December 2018 YTD	December 2017 YTD	Percentage Change	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 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	166	175	-5.2%	0	0	0	0	0	0	166	175
New Jersey	60	76	-20.6%	0	0	0	0	0	0	60	76
New York	0	0	--	0	0	0	0	0	0	0	0
Pennsylvania	106	99	6.6%	0	0	0	0	0	0	106	99
East North Central	2,041	2,153	-5.2%	1,085	967	833	1,035	0	0	123	151
Illinois	0	0	--	0	0	0	0	0	0	0	0
Indiana	0	0	--	0	0	0	0	0	0	0	0
Michigan	1,096	1,007	8.9%	984	856	0	0	0	0	112	151
Ohio	844	1,035	-18.5%	0	0	833	1,035	0	0	10	0
Wisconsin	101	111	-8.8%	101	111	0	0	0	0	0	0
West North Central	44	43	1.7%	0	0	0	0	7	8	36	34
Iowa	44	43	1.7%	0	0	0	0	7	8	36	34
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	1,716	1,091	57.3%	1,506	951	0	0	0	0	211	140
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	1,506	951	58.3%	1,506	951	0	0	0	0	0	0
Georgia	211	140	50.3%	0	0	0	0	0	0	211	140
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	427	-100.1%	0	427	0	0	0	0	0	0
Alabama	0	0	--	0	0	0	0	0	0	0	0
Kentucky	0	427	-100.1%	0	427	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	4,433	4,640	-4.5%	4,227	4,366	0	0	0	0	206	274
Arkansas	0	0	--	0	0	0	0	0	0	0	0
Louisiana	4,356	4,551	-4.3%	4,227	4,366	0	0	0	0	130	185
Oklahoma	0	0	--	0	0	0	0	0	0	0	0
Texas	77	90	-14.5%	0	0	0	0	0	0	77	90
Mountain	429	445	-3.6%	0	0	429	445	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	429	445	-3.6%	0	0	429	445	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	8,830	8,976	-1.6%	6,817	6,711	1,263	1,480	7	8	743	776

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 2018 are preliminary. Values for 2017 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.A. Utility Scale Facility Net Generation from Natural Gas by State, by Sector, December 2018 and 2017 (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	
	December 2018	December 2017	Percentage Change	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017
New England	3,779	3,846	-1.8%	6	12	3,582	3,652	78	80	113	102
Connecticut	1,864	1,533	21.6%	3	5	1,776	1,434	32	37	52	56
Maine	95	50	89.0%	0	0	67	37	2	2	26	11
Massachusetts	1,269	1,574	-19.4%	NM	6	1,206	1,509	39	36	22	23
New Hampshire	67	192	-65.3%	0	1	64	187	1	1	2	2
Rhode Island	484	496	-2.4%	0	0	469	484	NM	2	11	10
Vermont	0	0	-50.4%	0	0	0	0	0	0	0	0
Middle Atlantic	13,186	12,490	5.6%	777	973	12,110	11,216	89	104	211	198
New Jersey	3,031	2,863	5.9%	NM	12	2,981	2,796	10	20	31	35
New York	3,715	3,735	-0.5%	768	960	2,824	2,671	68	68	55	36
Pennsylvania	6,441	5,892	9.3%	1	0	6,305	5,749	11	16	124	127
East North Central	10,238	10,835	-5.5%	2,982	3,796	6,825	6,595	127	121	304	322
Illinois	637	1,370	-53.5%	3	53	548	1,214	37	37	48	66
Indiana	2,143	2,088	2.6%	684	914	1,320	1,010	12	16	127	148
Michigan	2,026	2,484	-18.5%	484	702	1,430	1,688	51	51	60	43
Ohio	4,084	3,444	18.6%	568	760	3,477	2,655	20	13	19	15
Wisconsin	1,349	1,449	-6.9%	1,242	1,367	51	28	8	4	49	50
West North Central	1,301	2,040	-36.2%	1,074	1,657	138	297	26	21	63	65
Iowa	498	583	-14.5%	450	532	0	1	8	8	40	41
Kansas	131	180	-27.3%	122	174	0	0	0	0	9	6
Minnesota	381	622	-38.8%	299	422	62	179	10	8	10	13
Missouri	205	514	-60.0%	119	389	76	117	7	5	3	4
Nebraska	NM	32	NM	NM	32	0	0	0	0	0	0
North Dakota	NM	54	NM	NM	53	0	0	0	0	1	1
South Dakota	NM	55	NM	NM	55	0	0	0	0	0	0
South Atlantic	26,187	26,311	-0.5%	21,829	21,505	3,887	4,372	97	63	375	369
Delaware	210	399	-47.3%	1	0	158	347	0	0	51	52
District of Columbia	3	1	427.5%	0	0	0	0	3	1	0	0
Florida	11,706	11,517	1.6%	11,285	10,920	281	470	2	2	137	126
Georgia	3,728	4,635	-19.6%	2,890	3,647	783	936	0	0	55	52
Maryland	989	681	45.3%	239	56	666	566	81	50	3	8
North Carolina	3,385	3,700	-8.5%	2,773	3,254	590	424	NM	10	13	12
South Carolina	1,406	1,361	3.3%	1,146	1,241	246	107	0	0	15	13
Virginia	4,719	3,940	19.8%	3,493	2,364	1,154	1,511	2	2	70	64
West Virginia	40	76	-47.1%	1	24	NM	10	0	0	31	42
East South Central	8,616	10,705	-19.5%	5,492	6,974	2,878	3,484	13	20	233	227
Alabama	4,103	4,325	-5.1%	1,583	1,348	2,405	2,866	0	0	115	112
Kentucky	882	1,200	-26.5%	850	1,089	11	87	0	0	21	23
Mississippi	2,686	4,264	-37.0%	2,185	3,689	461	529	0	2	40	44
Tennessee	945	916	3.2%	874	848	2	2	13	18	56	48
West South Central	24,127	26,306	-8.3%	6,193	7,774	11,938	12,617	80	54	5,916	5,861
Arkansas	612	1,727	-64.6%	463	1,594	114	98	NM	4	31	31
Louisiana	4,231	4,940	-14.4%	1,632	2,317	265	285	10	13	2,323	2,325
Oklahoma	2,607	2,734	-4.6%	1,592	1,284	990	1,424	0	0	25	26
Texas	16,677	16,906	-1.4%	2,506	2,579	10,569	10,811	67	38	3,536	3,479
Mountain	8,636	7,230	19.4%	6,508	5,837	1,964	1,209	38	38	126	146
Arizona	3,048	2,101	45.0%	1,982	1,712	1,053	378	12	11	0	0
Colorado	1,357	1,168	16.2%	1,190	1,014	166	151	1	2	1	2
Idaho	341	433	-21.2%	206	242	119	175	4	3	13	13
Montana	57	39	43.9%	32	27	24	12	0	0	1	1
Nevada	1,844	2,058	-10.4%	1,632	1,838	193	193	5	6	14	22
New Mexico	1,061	792	34.0%	649	487	402	295	9	10	0	0
Utah	848	558	51.9%	799	495	7	6	8	7	35	50
Wyoming	80	80	-0.5%	18	22	0	0	0	0	62	59
Pacific Contiguous	10,665	11,301	-5.6%	3,685	4,520	5,897	5,661	137	173	946	947
California	8,215	7,784	5.5%	2,591	2,657	4,562	4,038	131	166	930	923
Oregon	1,838	2,121	-13.3%	717	1,067	1,109	1,040	4	4	8	10
Washington	612	1,396	-56.1%	377	797	226	583	2	3	8	13
Pacific Noncontiguous	243	310	-21.7%	236	305	0	0	0	0	6	5
Alaska	243	310	-21.7%	236	305	0	0	0	0	6	5
Hawaii	0	0	--	0	0	0	0	0	0	0	0
U.S. Total	106,978	111,373	-3.9%	48,783	53,353	49,219	49,104	685	674	8,292	8,242

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 2018 are preliminary. Values for 2017 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 December 2018 and 2017 (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	
	December 2018 YTD	December 2017 YTD	Percentage Change	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD
New England	50,467	51,121	-1.3%	258	270	47,839	48,533	971	980	1,399	1,338
Connecticut	19,743	15,961	23.7%	41	64	18,710	14,863	383	419	609	615
Maine	2,251	2,237	0.6%	0	0	1,860	1,915	30	30	361	292
Massachusetts	18,796	22,153	-15.2%	185	173	17,850	21,250	499	472	261	258
New Hampshire	2,992	3,580	-16.4%	31	32	2,922	3,508	8	10	31	30
Rhode Island	6,684	7,188	-7.0%	0	0	6,497	6,996	49	49	138	143
Vermont	2	2	-0.6%	1	1	0	0	1	1	0	0
Middle Atlantic	166,222	157,483	5.5%	10,479	10,133	152,044	143,901	1,170	1,211	2,530	2,239
New Jersey	38,797	37,708	2.9%	182	211	38,035	36,903	190	225	391	369
New York	50,605	47,272	7.1%	10,290	9,915	38,832	36,150	849	847	633	360
Pennsylvania	76,820	72,503	6.0%	7	7	75,177	70,848	130	139	1,506	1,510
East North Central	132,304	101,577	30.2%	44,137	34,297	83,192	62,734	1,536	1,466	3,439	3,080
Illinois	16,031	15,016	6.8%	1,507	970	13,395	12,915	470	397	660	735
Indiana	25,354	17,976	41.0%	9,650	6,789	14,151	9,716	168	190	1,385	1,281
Michigan	30,552	26,131	16.9%	9,662	8,251	19,659	16,889	586	564	646	428
Ohio	42,673	28,799	48.2%	7,432	6,209	34,781	22,185	240	247	220	158
Wisconsin	17,693	13,655	29.6%	15,886	12,079	1,207	1,031	72	67	528	478
West North Central	30,455	20,587	47.9%	25,861	17,340	3,479	2,314	320	279	794	654
Iowa	7,644	4,567	67.4%	7,004	4,041	NM	4	98	86	542	437
Kansas	3,897	2,147	81.5%	3,814	2,105	0	0	0	0	82	41
Minnesota	9,170	6,708	36.7%	7,596	5,370	1,348	1,116	107	97	120	126
Missouri	6,841	5,206	31.4%	4,558	3,874	2,131	1,194	112	94	40	43
Nebraska	1,214	629	92.9%	1,211	628	0	0	3	1	0	0
North Dakota	689	676	1.9%	679	668	0	0	0	0	10	8
South Dakota	999	654	52.6%	999	654	0	0	0	0	0	0
South Atlantic	363,087	329,079	10.3%	293,291	269,973	64,379	54,016	955	673	4,463	4,417
Delaware	5,204	6,723	-22.6%	25	15	4,371	5,830	0	0	809	878
District of Columbia	23	20	16.3%	0	0	0	0	23	20	0	0
Florida	172,556	161,104	7.1%	163,299	153,028	7,664	6,606	21	24	1,571	1,446
Georgia	53,469	52,723	1.4%	39,361	39,696	13,483	12,436	0	0	625	591
Maryland	13,935	6,729	107.1%	3,785	246	9,256	5,866	806	526	88	90
North Carolina	44,079	38,590	14.2%	36,779	33,442	7,065	4,956	90	92	146	100
South Carolina	22,045	17,156	28.5%	17,544	14,347	4,368	2,686	0	0	132	124
Virginia	50,359	44,507	13.1%	32,324	29,022	17,280	14,795	16	10	739	680
West Virginia	1,417	1,527	-7.2%	174	178	891	841	0	0	352	509
East South Central	135,775	119,790	13.3%	90,072	79,380	43,003	37,833	203	196	2,496	2,381
Alabama	58,788	52,984	11.0%	20,326	18,360	37,217	33,425	0	0	1,245	1,199
Kentucky	14,606	10,380	40.7%	13,706	9,709	695	432	0	0	205	239
Mississippi	49,493	46,158	7.2%	43,956	41,739	5,078	3,962	6	5	453	452
Tennessee	12,889	10,269	25.5%	12,085	9,572	14	14	197	191	593	492
West South Central	360,165	311,250	15.7%	119,583	96,723	173,058	148,519	884	822	66,640	65,187
Arkansas	19,140	17,314	10.5%	17,481	15,832	1,305	1,169	37	37	316	277
Louisiana	61,786	58,973	4.8%	32,851	29,649	4,109	4,015	165	137	24,660	25,172
Oklahoma	41,882	30,451	37.5%	25,951	17,762	15,560	12,437	0	0	371	252
Texas	237,358	204,512	16.1%	43,300	33,480	152,083	130,899	682	648	41,293	39,485
Mountain	106,036	88,026	20.5%	81,326	68,132	22,708	17,904	416	434	1,587	1,556
Arizona	37,528	29,591	26.8%	25,511	20,418	11,874	9,030	142	143	0	0
Colorado	16,824	12,532	34.2%	14,040	10,630	2,764	1,879	1	3	19	20
Idaho	3,130	3,079	1.6%	1,533	1,575	1,432	1,333	39	40	126	132
Montana	471	417	13.0%	336	303	131	109	0	0	4	4
Nevada	26,800	26,626	0.7%	24,259	24,118	2,149	2,156	62	60	330	291
New Mexico	11,532	9,132	26.3%	7,122	5,696	4,280	3,320	105	114	24	1
Utah	8,806	5,871	50.0%	8,254	5,233	75	77	66	73	411	488
Wyoming	946	779	21.4%	270	158	1	1	0	0	675	620
Pacific Contiguous	120,270	114,266	5.3%	46,130	44,415	61,652	57,166	1,889	1,979	10,598	10,705
California	92,202	88,350	4.4%	31,047	30,106	48,910	45,800	1,821	1,921	10,425	10,523
Oregon	17,644	15,066	17.1%	8,678	7,927	8,831	7,015	50	41	86	83
Washington	10,423	10,849	-3.9%	6,405	6,383	3,912	4,350	19	17	87	99
Pacific Noncontiguous	3,232	3,235	-0.1%	3,167	3,170	0	0	0	2	65	62
Alaska	3,232	3,235	-0.1%	3,167	3,170	0	0	0	2	65	62
Hawaii	0	0	--	0	0	0	0	0	0	0	0
U.S. Total	1,468,013	1,296,415	13.2%	714,303	623,835	651,354	572,919	8,343	8,042	94,012	91,619

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 2018 are preliminary. Values for 2017 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.C. Utility Scale Facility Net Generation from Natural Gas by Technology: Total (All Sectors), 2008-December 2018  
(Thousand Megawatthours)**

Period	Natural Gas					Total
	Natural Gas Fired Combined Cycle	Natural Gas Fired Combustion Turbine	Steam Turbine	Internal Combustion Engine	Natural Gas Other	
Annual Factors						
2008	693,958	80,144	107,316	1,482	80	882,981
2009	743,901	76,141	99,588	1,332	18	920,979
2010	804,033	85,820	96,332	1,490	22	987,697
2011	828,554	85,392	97,578	2,125	40	1,013,689
2012	1,017,040	98,446	108,285	1,986	138	1,225,894
2013	947,172	91,272	83,746	2,328	317	1,124,836
2014	958,921	90,159	74,100	2,921	508	1,126,609
2015	1,130,617	108,655	89,796	3,760	654	1,333,482
2016	1,152,245	123,429	98,204	3,714	715	1,378,307
2017	1,094,951	111,733	84,492	4,370	869	1,296,415
Year 2016						
January	97,555	7,212	4,933	295	50	110,044
February	86,920	6,841	4,491	253	47	98,552
March	87,256	9,126	7,184	275	49	103,890
April	80,910	9,788	7,843	278	56	98,876
May	92,066	9,681	8,328	301	53	110,430
June	108,301	11,690	10,993	345	66	131,395
July	120,441	15,821	14,812	402	78	151,554
August	124,933	15,905	13,421	421	80	154,760
Sept	104,442	11,340	9,422	333	65	125,603
October	84,780	9,990	7,788	276	65	102,898
November	80,168	8,609	4,859	252	54	93,942
December	84,473	7,426	4,129	282	53	96,364
Year 2017						
January	83,813	7,936	3,325	330	71	95,473
February	72,179	7,254	2,933	269	60	82,694
March	80,222	9,299	5,134	303	65	95,022
April	74,282	8,063	5,716	304	53	88,418
May	82,415	8,806	6,458	319	69	98,067
June	97,888	9,970	9,002	380	76	117,317
July	121,419	12,091	12,908	481	94	146,994
August	118,900	11,160	10,591	464	93	141,209
Sept	98,230	10,132	9,276	398	76	118,112
October	88,194	9,451	8,749	382	75	106,852
November	81,319	8,336	4,804	359	65	94,883
December	96,089	9,235	5,595	382	71	111,373
Year 2018						
January	92,784	10,662	6,225	364	11	110,046
February	85,087	6,493	4,135	277	10	96,002
March	89,748	9,047	5,777	350	10	104,933
April	82,019	10,962	6,097	355	13	99,446
May	92,432	13,273	9,933	451	18	116,107
June	107,052	13,121	10,169	464	17	130,823
July	130,955	20,479	15,009	784	23	167,250
August	130,825	17,728	13,106	699	19	162,377
Sept	116,193	15,302	10,711	549	18	142,772
October	101,201	13,223	9,248	482	17	124,171
November	90,847	9,697	6,197	355	11	107,109
December	94,620	7,499	4,525	323	11	106,978

Values for 2017 and prior years are final. Values for 2018 are preliminary.

The 'Natural Gas Other' category consists of power plants with prime movers of Fuel Cells and Other Prime Movers that consume natural gas.

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

Sources: U.S. Energy Information Administration, Form EIA-923, Power Plant Operations Report; 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 1.8.A. Utility Scale Facility Net Generation from Other Gases by State, by Sector, December 2018 and 2017 (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	
	December 2018	December 2017	Percentage Change	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017
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	57	71	-19.8%	0	0	0	0	0	0	57	71
New Jersey	19	19	0.2%	0	0	0	0	0	0	19	19
New York	0	0	--	0	0	0	0	0	0	0	0
Pennsylvania	38	52	-27.2%	0	0	0	0	0	0	38	52
East North Central	400	403	-0.7%	0	24	187	198	0	0	214	181
Illinois	25	14	76.1%	0	0	0	0	0	0	25	14
Indiana	175	158	11.1%	0	0	0	0	0	0	175	158
Michigan	135	164	-18.1%	0	24	135	140	0	0	0	0
Ohio	65	67	-2.1%	0	0	52	58	0	0	13	9
Wisconsin	0	0	--	0	0	0	0	0	0	0	0
West North Central	4	4	3.2%	0	0	0	0	0	0	4	4
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	4	4	3.2%	0	0	0	0	0	0	4	4
South Dakota	0	0	--	0	0	0	0	0	0	0	0
South Atlantic	15	17	-7.3%	0	0	0	0	0	0	15	17
Delaware	12	13	-7.2%	0	0	0	0	0	0	12	13
District of Columbia	0	0	--	0	0	0	0	0	0	0	0
Florida	0	0	89.8%	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	3	3	-13.9%	0	0	0	0	0	0	3	3
East South Central	1	0	195.8%	0	0	0	0	0	0	1	0
Alabama	0	0	-100.0%	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	1	0	503.7%	0	0	0	0	0	0	1	0
West South Central	357	406	-11.9%	0	0	128	127	0	0	229	279
Arkansas	0	0	--	0	0	0	0	0	0	0	0
Louisiana	147	184	-20.0%	0	0	0	0	0	0	147	184
Oklahoma	0	0	--	0	0	0	0	0	0	0	0
Texas	210	222	-5.3%	0	0	128	127	0	0	82	95
Mountain	34	39	-14.6%	0	0	1	0	0	0	33	39
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	0	--	0	0	1	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	1	2	-36.7%	0	0	0	0	0	0	1	2
Wyoming	31	38	-16.2%	0	0	0	0	0	0	31	38
Pacific Contiguous	127	151	-15.8%	0	0	26	34	0	0	101	117
California	101	117	-13.9%	0	0	0	0	0	0	101	117
Oregon	0	0	--	0	0	0	0	0	0	0	0
Washington	26	34	-22.3%	0	0	26	34	0	0	0	0
Pacific Noncontiguous	2	5	-66.2%	0	0	0	0	0	0	2	5
Alaska	0	0	--	0	0	0	0	0	0	0	0
Hawaii	2	5	-66.2%	0	0	0	0	0	0	2	5
U.S. Total	998	1,096	-9.0%	0	24	342	359	0	0	656	713

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 2018 are preliminary. Values for 2017 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 December 2018 and 2017 (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	
	December 2018 YTD	December 2017 YTD	Percentage Change	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 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	623	666	-6.3%	0	0	1	0	0	0	622	666
New Jersey	212	219	-3.4%	0	0	0	0	0	0	212	219
New York	0	0	--	0	0	0	0	0	0	0	0
Pennsylvania	411	446	-7.8%	0	0	1	0	0	0	410	446
East North Central	4,547	4,609	-1.4%	151	149	1,989	2,126	0	0	2,407	2,334
Illinois	201	180	11.5%	0	0	1	0	0	0	200	180
Indiana	2,049	1,991	2.9%	0	0	0	0	0	0	2,049	1,991
Michigan	1,598	1,652	-3.3%	151	149	1,447	1,504	0	0	0	0
Ohio	699	786	-11.1%	0	0	542	623	0	0	157	163
Wisconsin	0	0	--	0	0	0	0	0	0	0	0
West North Central	51	42	20.8%	0	0	0	0	0	0	51	42
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	51	42	20.8%	0	0	0	0	0	0	51	42
South Dakota	0	0	--	0	0	0	0	0	0	0	0
South Atlantic	283	310	-8.8%	0	0	0	0	0	0	283	310
Delaware	252	271	-6.8%	0	0	0	0	0	0	252	271
District of Columbia	0	0	--	0	0	0	0	0	0	0	0
Florida	5	5	11.9%	0	0	0	0	0	0	5	5
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	25	34	-27.9%	0	0	0	0	0	0	25	34
East South Central	12	20	-40.7%	0	0	0	0	0	0	12	20
Alabama	1	9	-88.9%	0	0	0	0	0	0	1	9
Kentucky	0	0	--	0	0	0	0	0	0	0	0
Mississippi	0	0	--	0	0	0	0	0	0	0	0
Tennessee	11	12	-4.1%	0	0	0	0	0	0	11	12
West South Central	4,347	4,615	-5.8%	0	0	1,413	1,482	0	0	2,934	3,133
Arkansas	0	0	--	0	0	0	0	0	0	0	0
Louisiana	1,923	2,143	-10.3%	0	0	0	0	0	0	1,923	2,143
Oklahoma	0	0	--	0	0	0	0	0	0	0	0
Texas	2,425	2,472	-1.9%	0	0	1,413	1,482	0	0	1,011	990
Mountain	386	390	-1.0%	0	0	12	14	0	0	374	377
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	12	14	-9.6%	0	0	12	14	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	7	16	-60.0%	0	0	0	0	0	0	7	16
Wyoming	367	360	2.0%	0	0	0	0	0	0	367	360
Pacific Contiguous	1,886	1,764	6.9%	0	0	431	356	0	0	1,455	1,408
California	1,455	1,408	3.3%	0	0	0	0	0	0	1,455	1,408
Oregon	0	0	--	0	0	0	0	0	0	0	0
Washington	431	356	21.0%	0	0	431	356	0	0	0	0
Pacific Noncontiguous	56	52	7.1%	0	0	0	0	0	0	56	52
Alaska	0	0	--	0	0	0	0	0	0	0	0
Hawaii	56	52	7.1%	0	0	0	0	0	0	56	52
U.S. Total	12,191	12,469	-2.2%	151	149	3,847	3,978	0	0	8,193	8,343

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 2018 are preliminary. Values for 2017 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, December 2018 and 2017 (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	
	December 2018	December 2017	Percentage Change	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017
New England	2,972	2,994	-0.7%	0	0	2,972	2,994	0	0	0	0
Connecticut	1,540	1,558	-1.2%	0	0	1,540	1,558	0	0	0	0
Maine	0	0	--	0	0	0	0	0	0	0	0
Massachusetts	504	506	-0.3%	0	0	504	506	0	0	0	0
New Hampshire	928	930	-0.2%	0	0	928	930	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	14,259	14,410	-1.1%	0	0	14,259	14,410	0	0	0	0
New Jersey	2,645	3,131	-15.5%	0	0	2,645	3,131	0	0	0	0
New York	3,988	3,660	9.0%	0	0	3,988	3,660	0	0	0	0
Pennsylvania	7,626	7,619	0.1%	0	0	7,626	7,619	0	0	0	0
East North Central	13,140	14,282	-8.0%	1,856	2,445	11,285	11,837	0	0	0	0
Illinois	8,855	8,700	1.8%	0	0	8,855	8,700	0	0	0	0
Indiana	0	0	--	0	0	0	0	0	0	0	0
Michigan	1,882	3,056	-38.4%	1,856	2,445	26	611	0	0	0	0
Ohio	1,578	1,625	-2.9%	0	0	1,578	1,625	0	0	0	0
Wisconsin	826	901	-8.3%	0	0	826	901	0	0	0	0
West North Central	4,211	3,608	16.7%	3,754	3,155	457	453	0	0	0	0
Iowa	457	453	0.8%	0	0	457	453	0	0	0	0
Kansas	911	912	-0.1%	911	912	0	0	0	0	0	0
Minnesota	1,319	1,313	0.5%	1,319	1,313	0	0	0	0	0	0
Missouri	927	329	181.9%	927	329	0	0	0	0	0	0
Nebraska	597	602	-0.8%	597	602	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	18,221	18,793	-3.0%	16,869	17,450	1,352	1,344	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	2,784	2,755	1.0%	2,784	2,755	0	0	0	0	0	0
Georgia	3,073	3,095	-0.7%	3,073	3,095	0	0	0	0	0	0
Maryland	1,352	1,344	0.6%	0	0	1,352	1,344	0	0	0	0
North Carolina	3,875	3,887	-0.3%	3,875	3,887	0	0	0	0	0	0
South Carolina	4,510	5,027	-10.3%	4,510	5,027	0	0	0	0	0	0
Virginia	2,626	2,686	-2.2%	2,626	2,686	0	0	0	0	0	0
West Virginia	0	0	--	0	0	0	0	0	0	0	0
East South Central	7,795	7,289	6.9%	7,795	7,289	0	0	0	0	0	0
Alabama	3,952	3,860	2.4%	3,952	3,860	0	0	0	0	0	0
Kentucky	0	0	--	0	0	0	0	0	0	0	0
Mississippi	776	316	145.2%	776	316	0	0	0	0	0	0
Tennessee	3,068	3,112	-1.4%	3,068	3,112	0	0	0	0	0	0
West South Central	5,990	6,790	-11.8%	2,880	3,000	3,109	3,790	0	0	0	0
Arkansas	1,290	1,387	-7.0%	1,290	1,387	0	0	0	0	0	0
Louisiana	1,591	1,613	-1.4%	1,591	1,613	0	0	0	0	0	0
Oklahoma	0	0	--	0	0	0	0	0	0	0	0
Texas	3,109	3,790	-18.0%	0	0	3,109	3,790	0	0	0	0
Mountain	2,770	2,984	-7.2%	2,770	2,984	0	0	0	0	0	0
Arizona	2,770	2,984	-7.2%	2,770	2,984	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	2,300	2,548	-9.7%	2,300	2,548	0	0	0	0	0	0
California	1,488	1,681	-11.5%	1,488	1,681	0	0	0	0	0	0
Oregon	0	0	--	0	0	0	0	0	0	0	0
Washington	813	867	-6.3%	813	867	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	71,657	73,700	-2.8%	38,223	38,871	33,434	34,828	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.

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

Notes: See Glossary for definitions. Values for 2018 are preliminary. Values for 2017 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 December 2018 and 2017 (Thousand Megawatthours)

Census Division and State	All Sectors			Electric Power Sector				Commercial Sector		Industrial Sector	
	Generation at Utility Scale Facilities			Electric Utilities		Independent Power Producers		Generation at Utility Scale Facilities		Generation at Utility Scale Facilities	
	December 2018 YTD	December 2017 YTD	Percentage Change	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD
	December 2018 YTD	December 2017 YTD	Percentage Change	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD
New England	31,385	31,537	-0.5%	0	0	31,385	31,537	0	0	0	0
Connecticut	16,881	16,500	2.3%	0	0	16,881	16,500	0	0	0	0
Maine	0	0	--	0	0	0	0	0	0	0	0
Massachusetts	4,442	5,047	-12.0%	0	0	4,442	5,047	0	0	0	0
New Hampshire	10,062	9,991	0.7%	0	0	10,062	9,991	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	158,371	159,400	-0.6%	0	0	158,371	159,400	0	0	0	0
New Jersey	31,982	34,033	-6.0%	0	0	31,982	34,033	0	0	0	0
New York	42,919	42,167	1.8%	0	0	42,919	42,167	0	0	0	0
Pennsylvania	83,470	83,200	0.3%	0	0	83,470	83,200	0	0	0	0
East North Central	157,024	156,909	0.1%	25,023	26,284	132,002	130,625	0	0	0	0
Illinois	98,102	97,191	0.9%	0	0	98,102	97,191	0	0	0	0
Indiana	0	0	--	0	0	0	0	0	0	0	0
Michigan	30,479	32,381	-5.9%	25,023	26,284	5,456	6,097	0	0	0	0
Ohio	18,315	17,688	3.5%	0	0	18,315	17,688	0	0	0	0
Wisconsin	10,129	9,649	5.0%	0	0	10,129	9,649	0	0	0	0
West North Central	44,952	44,983	-0.1%	40,057	39,769	4,895	5,214	0	0	0	0
Iowa	4,895	5,214	-6.1%	0	0	4,895	5,214	0	0	0	0
Kansas	9,168	10,648	-13.9%	9,168	10,648	0	0	0	0	0	0
Minnesota	14,601	13,904	5.0%	14,601	13,904	0	0	0	0	0	0
Missouri	10,655	8,304	28.3%	10,655	8,304	0	0	0	0	0	0
Nebraska	5,632	6,913	-18.5%	5,632	6,913	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	202,708	205,235	-1.2%	187,720	190,128	14,988	15,107	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	29,312	29,146	0.6%	29,312	29,146	0	0	0	0	0	0
Georgia	34,363	33,709	1.9%	34,363	33,709	0	0	0	0	0	0
Maryland	14,988	15,107	-0.8%	0	0	14,988	15,107	0	0	0	0
North Carolina	42,077	42,374	-0.7%	42,077	42,374	0	0	0	0	0	0
South Carolina	52,716	54,345	-3.0%	52,716	54,345	0	0	0	0	0	0
Virginia	29,252	30,554	-4.3%	29,252	30,554	0	0	0	0	0	0
West Virginia	0	0	--	0	0	0	0	0	0	0	0
East South Central	82,559	81,834	0.9%	82,559	81,834	0	0	0	0	0	0
Alabama	39,463	42,652	-7.5%	39,463	42,652	0	0	0	0	0	0
Kentucky	0	0	--	0	0	0	0	0	0	0	0
Mississippi	6,919	7,365	-6.0%	6,919	7,365	0	0	0	0	0	0
Tennessee	36,176	31,818	13.7%	36,176	31,818	0	0	0	0	0	0
West South Central	71,059	66,682	6.6%	29,873	28,101	41,186	38,581	0	0	0	0
Arkansas	12,721	12,691	0.2%	12,721	12,691	0	0	0	0	0	0
Louisiana	17,153	15,410	11.3%	17,153	15,410	0	0	0	0	0	0
Oklahoma	0	0	--	0	0	0	0	0	0	0	0
Texas	41,186	38,581	6.8%	0	0	41,186	38,581	0	0	0	0
Mountain	31,097	32,340	-3.8%	31,097	32,340	0	0	0	0	0	0
Arizona	31,097	32,340	-3.8%	31,097	32,340	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	27,922	26,029	7.3%	27,922	26,029	0	0	0	0	0	0
California	18,214	17,901	1.7%	18,214	17,901	0	0	0	0	0	0
Oregon	0	0	--	0	0	0	0	0	0	0	0
Washington	9,708	8,128	19.4%	9,708	8,128	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	807,078	804,950	0.3%	424,251	424,485	382,827	380,465	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.

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

Notes: See Glossary for definitions. Values for 2018 are preliminary. Values for 2017 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, December 2018 and 2017 (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	
	December 2018	December 2017	Percentage Change	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017
New England	874	541	61.6%	128	72	705	439	0	0	40	30
Connecticut	47	18	162.1%	6	1	41	17	0	0	0	0
Maine	363	272	33.5%	0	0	323	242	0	0	39	29
Massachusetts	121	48	152.7%	33	12	86	36	0	0	1	0
New Hampshire	194	103	88.9%	36	25	158	78	0	0	0	0
Rhode Island	1	0	198.6%	0	0	1	0	0	0	0	0
Vermont	149	100	48.0%	53	34	96	66	0	0	0	0
Middle Atlantic	3,245	2,816	15.2%	2,299	2,211	939	599	1	0	6	6
New Jersey	4	0	NM	0	0	4	0	0	0	0	0
New York	2,850	2,671	6.7%	2,285	2,206	559	458	1	0	6	6
Pennsylvania	391	146	168.6%	15	4	376	141	0	0	0	0
East North Central	416	414	0.5%	351	372	49	24	0	0	16	17
Illinois	13	10	40.1%	NM	5	NM	5	0	0	0	0
Indiana	38	25	54.9%	38	25	0	0	0	0	0	0
Michigan	116	140	-16.8%	106	128	NM	9	0	0	NM	2
Ohio	59	22	165.7%	34	22	NM	0	0	0	0	0
Wisconsin	189	218	-13.3%	166	192	NM	10	0	0	13	15
West North Central	966	984	-1.8%	938	950	17	20	0	0	12	13
Iowa	76	53	41.8%	75	53	1	0	0	0	0	0
Kansas	2	3	-19.5%	0	0	2	3	0	0	0	0
Minnesota	90	108	-16.6%	65	78	NM	17	0	0	12	13
Missouri	173	91	90.9%	173	91	0	0	0	0	0	0
Nebraska	105	116	-9.8%	105	116	0	0	0	0	0	0
North Dakota	176	202	-12.7%	176	202	0	0	0	0	0	0
South Dakota	344	410	-16.3%	344	410	0	0	0	0	0	0
South Atlantic	2,180	777	180.4%	1,726	649	394	99	2	1	59	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	25	11	129.4%	25	11	0	0	0	0	0	0
Georgia	422	182	131.8%	419	180	NM	0	0	0	1	1
Maryland	324	71	359.0%	0	0	324	71	0	0	0	0
North Carolina	668	239	179.6%	660	236	NM	2	1	1	NM	0
South Carolina	369	127	191.3%	362	123	NM	3	0	0	0	0
Virginia	189	64	193.5%	183	61	NM	3	0	0	0	0
West Virginia	183	84	117.9%	77	38	49	19	0	0	57	27
East South Central	2,912	1,931	50.8%	2,911	1,930	NM	1	0	0	0	0
Alabama	1,402	738	89.9%	1,402	738	0	0	0	0	0	0
Kentucky	445	441	1.0%	444	440	NM	1	0	0	0	0
Mississippi	0	0	--	0	0	0	0	0	0	0	0
Tennessee	1,065	752	41.6%	1,065	752	0	0	0	0	0	0
West South Central	1,048	459	128.2%	940	392	107	67	NM	0	0	0
Arkansas	451	173	161.6%	445	169	6	4	0	0	0	0
Louisiana	97	61	60.5%	0	0	97	61	0	0	0	0
Oklahoma	291	136	114.1%	291	136	0	0	0	0	0	0
Texas	208	90	131.0%	203	87	4	3	NM	0	0	0
Mountain	2,358	2,581	-8.6%	2,257	2,475	101	105	0	0	0	0
Arizona	507	459	10.4%	507	459	0	0	0	0	0	0
Colorado	121	68	78.0%	105	59	NM	9	0	0	0	0
Idaho	732	816	-10.3%	663	741	69	75	0	0	0	0
Montana	747	838	-10.9%	736	826	NM	12	0	0	0	0
Nevada	72	203	-64.4%	68	195	NM	8	0	0	0	0
New Mexico	NM	12	NM	NM	12	0	0	0	0	0	0
Utah	92	100	-8.0%	91	98	1	2	0	0	0	0
Wyoming	75	85	-12.0%	75	85	0	0	0	0	0	0
Pacific Contiguous	9,613	11,684	-17.7%	9,482	11,515	130	169	NM	0	0	0
California	1,425	1,824	-21.9%	1,345	1,714	80	110	NM	0	0	0
Oregon	2,728	3,338	-18.3%	2,707	3,310	21	27	0	0	0	0
Washington	5,459	6,522	-16.3%	5,431	6,490	28	31	0	0	0	0
Pacific Noncontiguous	117	190	-38.7%	98	164	2	2	NM	20	NM	4
Alaska	110	183	-39.9%	97	163	0	0	NM	20	0	0
Hawaii	7	7	-8.7%	1	1	2	2	0	0	NM	4
U.S. Total	23,728	22,377	6.0%	21,130	20,729	2,446	1,526	17	23	135	99

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 2018 are preliminary. Values for 2017 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 December 2018 and 2017 (Thousand Megawatthours)

Census Division and State	All Sectors			Electric Power Sector				Commercial Sector		Industrial Sector	
	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	
	December 2018 YTD	December 2017 YTD	Percentage Change	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD
New England	8,167	7,455	9.6%	1,175	1,051	6,596	6,030	4	4	392	370
Connecticut	395	332	19.0%	44	25	352	307	0	0	0	0
Maine	3,600	3,389	6.2%	0	0	3,216	3,025	0	0	384	364
Massachusetts	1,135	1,037	9.4%	293	252	831	775	4	4	8	6
New Hampshire	1,641	1,413	16.1%	361	340	1,280	1,073	0	0	0	0
Rhode Island	4	2	72.9%	0	0	4	2	0	0	0	0
Vermont	1,392	1,280	8.7%	478	434	914	847	0	0	0	0
Middle Atlantic	34,477	33,282	3.6%	25,449	24,999	8,962	8,207	6	6	59	70
New Jersey	36	14	160.7%	0	0	36	14	0	0	0	0
New York	30,911	30,145	2.5%	25,308	24,904	5,538	5,165	6	6	59	70
Pennsylvania	3,530	3,123	13.0%	142	95	3,389	3,028	0	0	0	0
East North Central	5,269	5,045	4.4%	4,510	4,534	569	313	1	2	189	197
Illinois	144	125	15.2%	60	49	83	75	1	2	0	0
Indiana	342	306	11.9%	342	306	0	0	0	0	0	0
Michigan	1,634	1,679	-2.7%	1,500	1,540	107	110	0	0	26	29
Ohio	565	277	103.7%	310	277	255	0	0	0	0	0
Wisconsin	2,583	2,657	-2.8%	2,297	2,362	124	128	0	0	162	168
West North Central	12,800	12,829	-0.2%	12,438	12,438	230	236	0	0	132	156
Iowa	999	1,034	-3.3%	993	1,027	7	7	0	0	0	0
Kansas	26	29	-9.6%	0	0	26	29	0	0	0	0
Minnesota	1,206	1,258	-4.1%	877	903	197	200	0	0	132	156
Missouri	1,399	1,182	18.4%	1,399	1,182	0	0	0	0	0	0
Nebraska	1,482	1,489	-0.5%	1,482	1,489	0	0	0	0	0	0
North Dakota	2,523	2,582	-2.3%	2,523	2,582	0	0	0	0	0	0
South Dakota	5,165	5,256	-1.7%	5,165	5,256	0	0	0	0	0	0
South Atlantic	16,740	13,021	28.6%	12,677	9,960	3,456	2,497	15	12	591	553
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	239	218	9.4%	239	218	0	0	0	0	0	0
Georgia	2,878	2,410	19.4%	2,850	2,384	NM	6	0	0	11	19
Maryland	2,829	1,965	43.9%	0	0	2,829	1,965	0	0	0	0
North Carolina	5,001	3,818	31.0%	4,930	3,773	50	35	13	10	NM	0
South Carolina	2,555	1,835	39.2%	2,492	1,788	61	46	2	1	0	0
Virginia	1,450	1,116	29.9%	1,384	1,056	66	60	0	0	0	0
West Virginia	1,788	1,658	7.8%	783	740	433	385	0	0	572	534
East South Central	25,466	22,434	13.5%	25,455	22,424	NM	11	0	0	0	0
Alabama	11,058	9,237	19.7%	11,058	9,237	0	0	0	0	0	0
Kentucky	4,723	4,506	4.8%	4,712	4,495	NM	11	0	0	0	0
Mississippi	0	0	--	0	0	0	0	0	0	0	0
Tennessee	9,685	8,691	11.4%	9,685	8,691	0	0	0	0	0	0
West South Central	8,320	6,948	19.7%	7,269	5,962	1,049	984	NM	2	0	0
Arkansas	3,536	2,943	20.1%	3,480	2,898	57	45	0	0	0	0
Louisiana	959	906	5.8%	0	0	959	906	0	0	0	0
Oklahoma	2,392	2,036	17.5%	2,392	2,036	0	0	0	0	0	0
Texas	1,433	1,062	34.9%	1,398	1,028	33	33	NM	2	0	0
Mountain	34,549	34,769	-0.6%	33,058	33,273	1,478	1,482	13	14	0	0
Arizona	6,950	6,832	1.7%	6,950	6,832	0	0	0	0	0	0
Colorado	1,922	1,897	1.3%	1,668	1,630	241	253	13	14	0	0
Idaho	10,486	10,670	-1.7%	9,490	9,689	996	981	0	0	0	0
Montana	10,729	10,946	-2.0%	10,578	10,791	151	155	0	0	0	0
Nevada	1,888	1,813	4.1%	1,815	1,739	73	74	0	0	0	0
New Mexico	193	193	-0.3%	193	193	0	0	0	0	0	0
Utah	1,273	1,294	-1.6%	1,265	1,283	8	11	0	0	0	0
Wyoming	1,109	1,124	-1.3%	1,100	1,116	9	8	0	0	0	0
Pacific Contiguous	144,203	162,840	-11.4%	141,986	159,565	2,206	3,256	NM	19	0	0
California	25,898	42,363	-38.9%	24,395	39,798	1,492	2,546	NM	19	0	0
Oregon	36,729	38,294	-4.1%	36,421	37,980	308	314	0	0	0	0
Washington	81,576	82,183	-0.7%	81,169	81,787	407	396	0	0	0	0
Pacific Noncontiguous	1,733	1,710	1.4%	1,462	1,471	42	19	188	182	41	37
Alaska	1,630	1,644	-0.8%	1,442	1,462	0	0	188	182	0	0
Hawaii	103	66	56.0%	20	10	42	19	0	0	41	37
U.S. Total	291,724	300,333	-2.9%	265,480	275,677	24,600	23,034	240	240	1,403	1,383

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 2018 are preliminary. Values for 2017 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.A. Utility Scale Facility Net Generation from Renewable Sources Excluding Hydroelectric by State, by Sector, December 2018 and 2017 (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	
	December 2018	December 2017	Percentage Change	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017
New England	956	1,074	-10.9%	74	80	776	880	16	16	90	97
Connecticut	65	77	-15.4%	0	0	65	76	NM	0	NM	0
Maine	425	531	-20.0%	0	0	329	426	6	8	90	97
Massachusetts	184	150	23.1%	8	6	172	139	4	4	0	0
New Hampshire	168	194	-13.1%	28	24	136	166	5	4	0	0
Rhode Island	36	35	2.8%	0	0	35	35	1	0	0	0
Vermont	78	87	-11.0%	37	49	40	38	0	0	0	0
Middle Atlantic	1,252	1,384	-9.5%	4	3	1,138	1,250	55	54	55	77
New Jersey	140	121	16.1%	4	3	113	99	22	18	NM	0
New York	593	543	9.2%	0	0	557	501	19	21	16	21
Pennsylvania	519	720	-28.0%	0	0	467	650	15	15	38	56
East North Central	3,203	4,189	-23.5%	317	619	2,720	3,399	20	20	146	150
Illinois	1,319	1,490	-11.5%	5	4	1,313	1,486	NM	1	0	0
Indiana	626	889	-29.6%	36	31	582	848	2	2	7	7
Michigan	705	915	-22.9%	162	244	470	600	12	10	61	61
Ohio	265	248	6.9%	NM	2	235	219	1	1	26	26
Wisconsin	288	647	-55.5%	112	338	119	247	NM	7	52	56
West North Central	7,462	8,214	-9.1%	2,428	2,645	4,952	5,489	16	15	66	64
Iowa	2,224	2,217	0.3%	1,495	1,474	721	738	4	3	4	2
Kansas	1,788	1,759	1.7%	155	164	1,632	1,594	NM	1	0	0
Minnesota	1,227	1,546	-20.7%	262	341	899	1,137	4	5	62	62
Missouri	285	391	-27.1%	NM	2	275	384	6	5	0	0
Nebraska	597	631	-5.3%	21	27	575	603	1	1	0	0
North Dakota	1,065	1,352	-21.2%	409	539	655	812	0	0	NM	0
South Dakota	277	319	-13.3%	82	98	195	221	0	0	0	0
South Atlantic	2,601	2,874	-9.5%	353	426	1,304	1,475	32	45	912	928
Delaware	9	11	-19.9%	NM	1	NM	8	NM	1	1	1
District of Columbia	5	5	-4.2%	0	0	0	0	5	5	0	0
Florida	595	612	-2.8%	196	176	222	247	4	4	173	185
Georgia	515	536	-4.0%	15	11	154	178	NM	0	345	347
Maryland	113	127	-10.8%	NM	0	104	115	3	2	6	9
North Carolina	589	669	-11.9%	20	29	451	502	6	15	111	122
South Carolina	238	222	7.4%	28	36	66	56	0	0	144	130
Virginia	378	482	-21.7%	92	173	140	158	13	18	133	133
West Virginia	160	211	-24.1%	0	0	160	211	0	0	0	0
East South Central	589	638	-7.7%	13	12	73	98	NM	1	503	526
Alabama	314	348	-9.7%	NM	5	37	53	0	0	275	290
Kentucky	43	39	11.7%	11	7	NM	1	0	0	31	31
Mississippi	143	147	-2.5%	0	0	17	17	0	0	126	130
Tennessee	88	105	-15.5%	0	0	18	28	NM	1	70	76
West South Central	9,816	8,503	15.4%	136	132	9,216	7,904	9	8	455	460
Arkansas	144	131	10.1%	NM	0	19	13	1	1	125	117
Louisiana	235	239	-1.6%	NM	NM	NM	7	0	0	227	231
Oklahoma	2,552	2,196	16.2%	120	114	2,406	2,054	0	0	27	29
Texas	6,885	5,937	16.0%	17	17	6,784	5,830	8	7	77	83
Mountain	3,697	3,941	-6.2%	485	350	3,137	3,550	40	8	35	32
Arizona	286	310	-8.0%	30	34	255	275	NM	1	0	0
Colorado	1,094	1,041	5.0%	220	31	873	1,009	NM	1	0	0
Idaho	294	333	-11.9%	17	19	244	283	1	1	32	30
Montana	226	227	-0.5%	20	23	204	202	0	0	2	2
Nevada	607	760	-20.1%	2	2	569	754	37	4	0	0
New Mexico	611	561	9.0%	12	13	599	547	NM	0	0	0
Utah	204	259	-21.1%	24	35	179	223	1	1	0	0
Wyoming	376	449	-16.4%	160	192	216	257	0	0	0	0
Pacific Contiguous	5,084	4,201	21.0%	535	388	4,253	3,514	73	82	223	217
California	3,780	3,303	14.4%	136	114	3,509	3,063	69	79	65	47
Oregon	580	390	48.9%	64	51	464	290	3	3	50	46
Washington	724	509	42.2%	335	223	280	162	NM	1	108	123
Pacific Noncontiguous	127	134	-5.4%	14	17	91	99	22	18	NM	0
Alaska	15	18	-13.5%	8	9	NM	5	3	4	NM	0
Hawaii	112	117	-4.2%	7	9	87	94	18	14	0	0
U.S. Total	34,787	35,151	-1.0%	4,360	4,672	27,660	27,658	283	267	2,485	2,553

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 2018 are preliminary. Values for 2017 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 December 2018 and 2017 (Thousand Megawatthours)**

Census Division and State	All Sectors			Electric Power Sector				Commercial Sector		Industrial Sector	
	Generation at Utility Scale Facilities			Electric Utilities		Independent Power Producers		Generation at Utility Scale Facilities		Generation at Utility Scale Facilities	
	December 2018 YTD	December 2017 YTD	Percentage Change	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD
New England	11,885	11,308	5.1%	816	858	9,793	9,214	186	205	1,090	1,032
Connecticut	846	845	0.1%	3	3	841	841	NM	1	NM	0
Maine	4,951	5,042	-1.8%	0	0	3,799	3,919	68	94	1,085	1,029
Massachusetts	2,727	2,182	25.0%	88	76	2,572	2,047	62	55	5	3
New Hampshire	1,992	2,022	-1.5%	253	291	1,694	1,686	45	45	0	0
Rhode Island	411	366	12.4%	0	0	404	359	7	7	0	0
Vermont	958	852	12.4%	472	487	483	363	2	2	0	0
Middle Atlantic	15,415	14,580	5.7%	98	80	13,866	13,009	719	693	734	798
New Jersey	2,272	1,877	21.0%	98	80	1,833	1,485	330	305	11	8
New York	7,089	6,605	7.3%	0	0	6,666	6,182	235	233	188	189
Pennsylvania	6,055	6,098	-0.7%	0	0	5,366	5,343	154	155	535	601
East North Central	33,918	31,926	6.2%	3,953	3,710	28,085	26,393	251	232	1,629	1,591
Illinois	13,325	12,794	4.1%	56	38	13,260	12,751	9	5	0	0
Indiana	6,451	5,840	10.4%	471	407	5,879	5,332	22	21	79	80
Michigan	8,009	7,749	3.4%	1,960	1,899	5,249	5,066	127	135	673	649
Ohio	2,610	2,421	7.8%	40	23	2,265	2,089	14	15	290	293
Wisconsin	3,523	3,122	12.8%	1,427	1,342	1,431	1,154	78	57	586	569
West North Central	77,743	75,665	2.7%	24,324	24,783	52,520	50,011	178	174	722	698
Iowa	21,923	21,587	1.6%	14,205	14,231	7,643	7,283	40	33	35	41
Kansas	19,363	18,661	3.8%	1,845	1,653	17,503	16,996	15	15	0	-3
Minnesota	14,413	13,666	5.5%	2,910	3,053	10,769	9,908	55	51	680	655
Missouri	3,205	2,233	43.6%	58	41	3,092	2,130	53	58	3	3
Nebraska	5,302	5,197	2.0%	256	246	5,031	4,933	15	17	0	0
North Dakota	10,768	11,361	-5.2%	4,223	4,651	6,541	6,708	0	0	4	2
South Dakota	2,768	2,960	-6.5%	827	908	1,940	2,052	0	0	0	0
South Atlantic	36,668	31,101	17.9%	5,332	3,551	20,059	16,505	457	532	10,821	10,513
Delaware	132	118	11.6%	8	6	105	92	7	6	12	13
District of Columbia	57	47	19.9%	0	0	0	0	57	47	0	0
Florida	7,589	5,886	28.9%	2,703	1,175	2,828	2,694	51	47	2,006	1,969
Georgia	7,148	7,005	2.0%	315	252	2,744	2,762	4	3	4,085	3,987
Maryland	1,531	1,365	12.2%	10	9	1,394	1,225	34	15	93	116
North Carolina	10,199	8,397	21.5%	457	410	8,295	6,464	138	208	1,309	1,315
South Carolina	3,192	2,479	28.7%	426	410	1,006	489	0	0	1,761	1,580
Virginia	5,042	4,122	22.3%	1,413	1,289	1,909	1,097	166	205	1,554	1,531
West Virginia	1,779	1,682	5.7%	0	0	1,779	1,682	0	0	0	0
East South Central	7,356	6,767	8.7%	195	146	1,231	714	6	4	5,925	5,903
Alabama	3,827	3,606	6.1%	40	24	592	389	0	0	3,195	3,193
Kentucky	544	515	5.6%	155	122	14	12	0	0	375	380
Mississippi	1,795	1,563	14.9%	0	0	340	98	0	0	1,455	1,465
Tennessee	1,190	1,083	9.9%	0	0	285	214	6	4	900	865
West South Central	113,044	98,994	14.2%	1,594	1,612	106,157	92,060	96	83	5,197	5,240
Arkansas	1,659	1,468	13.0%	NM	2	299	128	6	6	1,352	1,332
Louisiana	2,728	2,769	-1.5%	NM	2	87	88	0	0	2,638	2,679
Oklahoma	27,986	23,930	16.9%	1,375	1,401	26,304	22,249	0	0	307	280
Texas	80,671	70,827	13.9%	214	207	79,466	69,595	91	77	900	949
Mountain	46,934	43,485	7.9%	3,926	3,720	42,473	39,304	163	128	372	333
Arizona	5,940	5,683	4.5%	672	626	5,260	5,034	8	23	0	0
Colorado	11,073	10,435	6.1%	504	297	10,544	10,121	21	14	3	3
Idaho	3,698	3,554	4.1%	182	183	3,159	3,053	11	12	345	306
Montana	2,240	2,190	2.3%	213	225	2,006	1,944	0	0	21	21
Nevada	8,717	7,857	10.9%	41	40	8,568	7,748	106	66	3	3
New Mexico	7,493	5,818	28.8%	259	252	7,232	5,563	NM	3	0	0
Utah	3,586	3,628	-1.2%	267	249	3,305	3,369	14	10	0	0
Wyoming	4,188	4,321	-3.1%	1,788	1,848	2,400	2,473	0	0	0	0
Pacific Contiguous	76,512	70,944	7.8%	7,853	7,463	65,066	60,043	935	968	2,658	2,470
California	58,404	54,544	7.1%	2,244	2,163	54,468	50,804	893	927	798	650
Oregon	8,950	7,576	18.1%	1,299	1,120	7,059	5,897	32	31	561	528
Washington	9,158	8,824	3.8%	4,309	4,180	3,540	3,343	10	10	1,299	1,292
Pacific Noncontiguous	1,573	1,507	4.4%	187	190	1,141	1,085	244	231	1	1
Alaska	191	185	3.2%	96	91	51	50	43	42	1	1
Hawaii	1,382	1,322	4.6%	90	98	1,090	1,034	201	189	0	0
U.S. Total	421,049	386,277	9.0%	48,278	46,111	340,390	308,338	3,234	3,251	29,147	28,578

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 2018 are preliminary. Values for 2017 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.A. Utility Scale Facility Net Generation from Hydroelectric (Pumped Storage) Power by State, by Sector, December 2018 and 2017 (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	
	December 2018	December 2017	Percentage Change	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017
New England	-36	-43	-16.9%	0	0	-36	-43	0	0	0	0
Connecticut	2	4	-51.9%	0	0	2	4	0	0	0	0
Maine	0	0	--	0	0	0	0	0	0	0	0
Massachusetts	-38	-47	-19.8%	0	0	-38	-47	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	-96	-101	-4.5%	-36	-45	-60	-56	0	0	0	0
New Jersey	0	-16	-98.3%	0	-16	0	0	0	0	0	0
New York	-36	-29	21.9%	-36	-29	0	0	0	0	0	0
Pennsylvania	-60	-56	7.9%	0	0	-60	-56	0	0	0	0
East North Central	-53	-49	9.2%	-53	-49	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	-53	-49	9.2%	-53	-49	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	11	-1	NM	11	-1	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	11	-1	NM	11	-1	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	-99	-306	-67.5%	-99	-306	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	30	-84	-135.5%	30	-84	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	-52	-110	-52.3%	-52	-110	0	0	0	0	0	0
Virginia	-77	-111	-31.0%	-77	-111	0	0	0	0	0	0
West Virginia	0	0	--	0	0	0	0	0	0	0	0
East South Central	-63	-49	27.1%	-63	-49	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	-63	-49	27.1%	-63	-49	0	0	0	0	0	0
West South Central	-2	-7	-75.4%	-2	-7	0	0	0	0	0	0
Arkansas	7	0	NM	7	0	0	0	0	0	0	0
Louisiana	0	0	--	0	0	0	0	0	0	0	0
Oklahoma	-9	-7	18.4%	-9	-7	0	0	0	0	0	0
Texas	0	0	--	0	0	0	0	0	0	0	0
Mountain	-32	-45	-27.6%	-32	-45	0	0	0	0	0	0
Arizona	-16	-17	-8.6%	-16	-17	0	0	0	0	0	0
Colorado	-17	-28	-39.3%	-17	-28	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	-152	-56	174.1%	-152	-56	0	0	0	0	0	0
California	-151	-55	172.7%	-151	-55	0	0	0	0	0	0
Oregon	0	0	--	0	0	0	0	0	0	0	0
Washington	-1	0	866.9%	-1	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	-522	-656	-20.4%	-426	-557	-96	-99	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.

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

Notes: See Glossary for definitions. Values for 2018 are preliminary. Values for 2017 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 December 2018 and 2017 (Thousand Megawatthours)

Census Division and State	All Sectors			Electric Power Sector				Commercial Sector		Industrial Sector	
	Generation at Utility Scale Facilities			Electric Utilities		Independent Power Producers		Generation at Utility Scale Facilities		Generation at Utility Scale Facilities	
	December 2018 YTD	December 2017 YTD	Percentage Change	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD
New England	-460	-441	4.3%	0	0	-460	-441	0	0	0	0
Connecticut	3	2	93.2%	0	0	3	2	0	0	0	0
Maine	0	0	--	0	0	0	0	0	0	0	0
Massachusetts	-464	-443	4.7%	0	0	-464	-443	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	-1,205	-1,183	1.9%	-546	-577	-659	-605	0	0	0	0
New Jersey	-115	-162	-28.9%	-115	-162	0	0	0	0	0	0
New York	-431	-416	3.6%	-431	-416	0	0	0	0	0	0
Pennsylvania	-659	-605	8.9%	0	0	-659	-605	0	0	0	0
East North Central	-698	-675	3.5%	-698	-675	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	-698	-675	3.5%	-698	-675	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	47	100	-53.0%	47	100	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	47	100	-53.0%	47	100	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	-2,485	-3,550	-30.0%	-2,485	-3,550	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	-489	-1,248	-60.8%	-489	-1,248	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	-705	-1,025	-31.2%	-705	-1,025	0	0	0	0	0	0
Virginia	-1,292	-1,278	1.1%	-1,292	-1,278	0	0	0	0	0	0
West Virginia	0	0	--	0	0	0	0	0	0	0	0
East South Central	-620	-686	-9.7%	-620	-686	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	-620	-686	-9.7%	-620	-686	0	0	0	0	0	0
West South Central	-95	-97	-2.4%	-95	-97	0	0	0	0	0	0
Arkansas	40	20	96.5%	40	20	0	0	0	0	0	0
Louisiana	0	0	--	0	0	0	0	0	0	0	0
Oklahoma	-135	-118	14.8%	-135	-118	0	0	0	0	0	0
Texas	0	0	--	0	0	0	0	0	0	0	0
Mountain	-267	-372	-28.2%	-267	-372	0	0	0	0	0	0
Arizona	-5	-46	-90.1%	-5	-46	0	0	0	0	0	0
Colorado	-263	-327	-19.6%	-263	-327	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	-120	410	-129.3%	-120	410	0	0	0	0	0	0
California	-149	407	-136.5%	-149	407	0	0	0	0	0	0
Oregon	0	0	--	0	0	0	0	0	0	0	0
Washington	28	3	842.8%	28	3	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	-5,905	-6,495	-9.1%	-4,785	-5,448	-1,119	-1,047	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.

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

Notes: See Glossary for definitions. Values for 2018 are preliminary. Values for 2017 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, December 2018 and 2017 (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	
	December 2018	December 2017	Percentage Change	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017
New England	151	158	-4.4%	0	0	132	138	6	8	13	13
Connecticut	36	48	-24.1%	0	0	36	48	0	0	0	0
Maine	33	36	-7.1%	0	0	14	15	6	8	13	13
Massachusetts	78	70	10.5%	0	0	78	70	0	0	0	0
New Hampshire	4	4	-7.2%	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	207	223	-7.1%	0	0	162	176	39	40	6	6
New Jersey	53	56	-5.4%	0	0	34	37	13	12	6	6
New York	78	82	-4.4%	0	0	61	63	17	19	0	0
Pennsylvania	76	85	-10.9%	0	0	67	76	9	9	0	0
East North Central	86	76	12.4%	1	1	10	9	13	11	62	55
Illinois	24	25	-2.4%	0	0	-1	-2	0	0	25	27
Indiana	35	27	27.7%	0	0	0	0	2	2	33	25
Michigan	25	22	9.7%	0	0	11	12	11	9	2	1
Ohio	0	0	-208.6%	0	0	0	-1	0	0	0	1
Wisconsin	3	2	36.2%	2	1	0	0	0	0	NM	1
West North Central	39	39	0.0%	19	17	13	13	NM	3	5	6
Iowa	0	0	--	0	0	0	0	0	0	0	0
Kansas	0	0	-1.2%	0	0	0	0	0	0	0	0
Minnesota	34	34	1.3%	15	13	13	13	NM	3	5	5
Missouri	0	0	-100.0%	0	0	0	0	0	0	0	0
Nebraska	0	0	--	0	0	0	0	0	0	0	0
North Dakota	4	4	-9.6%	4	4	0	0	0	0	0	0
South Dakota	0	0	--	0	0	0	0	0	0	0	0
South Atlantic	387	379	2.1%	0	0	209	182	11	16	166	181
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	267	266	0.7%	0	0	134	125	0	0	133	141
Georgia	8	9	-16.1%	0	0	0	0	0	0	8	9
Maryland	25	31	-18.5%	0	0	25	31	0	0	0	0
North Carolina	40	55	-26.3%	0	0	18	26	0	0	22	29
South Carolina	3	3	23.0%	0	0	1	1	0	0	3	2
Virginia	43	17	158.8%	0	0	32	0	11	16	0	0
West Virginia	0	-1	-59.4%	0	0	0	-1	0	0	0	0
East South Central	7	8	-17.6%	6	7	0	0	0	0	NM	1
Alabama	0	0	-100.0%	0	0	0	0	0	0	0	0
Kentucky	6	7	-18.1%	6	7	0	0	0	0	0	0
Mississippi	0	0	--	0	0	0	0	0	0	0	0
Tennessee	NM	1	NM	0	0	0	0	0	0	NM	1
West South Central	95	97	-2.5%	0	0	9	14	0	0	86	84
Arkansas	0	0	-100.0%	0	0	0	0	0	0	0	0
Louisiana	47	52	-9.8%	0	0	0	0	0	0	47	52
Oklahoma	5	6	-20.8%	0	0	5	6	0	0	0	0
Texas	43	39	11.1%	0	0	4	8	0	0	39	31
Mountain	69	61	12.7%	7	7	30	28	0	0	33	27
Arizona	0	0	59.7%	0	0	0	0	0	0	0	0
Colorado	5	5	1.5%	0	0	1	1	0	0	4	4
Idaho	5	7	-20.4%	0	0	0	0	0	0	5	7
Montana	29	26	7.8%	0	0	29	26	0	0	0	0
Nevada	2	3	-34.0%	2	3	0	0	0	0	0	0
New Mexico	0	0	-122.0%	0	0	0	0	0	0	0	0
Utah	22	14	51.4%	5	4	0	0	0	0	17	10
Wyoming	7	6	9.5%	0	0	0	0	0	0	7	6
Pacific Contiguous	73	76	-4.0%	0	1	17	27	0	0	56	48
California	67	67	0.7%	0	1	12	18	0	0	56	48
Oregon	0	4	-101.3%	0	0	0	4	0	0	0	0
Washington	5	5	3.0%	0	0	5	5	0	0	0	0
Pacific Noncontiguous	35	29	20.9%	17	16	0	0	18	13	0	0
Alaska	0	0	21.8%	0	0	0	0	0	0	0	0
Hawaii	35	29	20.9%	17	16	0	0	18	13	0	0
U.S. Total	1,147	1,146	0.1%	51	50	582	586	89	91	426	419

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 2018 are preliminary. Values for 2017 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 December 2018 and 2017 (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	
	December 2018 YTD	December 2017 YTD	Percentage Change	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD
New England	1,738	1,818	-4.4%	0	0	1,539	1,595	65	89	134	135
Connecticut	465	547	-15.0%	0	0	465	547	0	0	0	0
Maine	371	396	-6.4%	0	0	172	173	65	89	134	135
Massachusetts	855	827	3.4%	0	0	855	827	0	0	0	0
New Hampshire	48	49	-2.1%	0	0	48	49	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	2,246	2,391	-6.0%	0	1	1,781	1,873	441	450	25	67
New Jersey	552	583	-5.3%	0	1	392	372	136	144	25	67
New York	896	924	-3.0%	0	0	684	712	212	211	0	0
Pennsylvania	798	884	-9.7%	0	0	705	789	93	95	0	0
East North Central	860	842	2.1%	19	14	112	80	143	149	585	600
Illinois	231	254	-9.1%	0	0	-15	-25	0	0	246	278
Indiana	321	306	4.8%	0	0	0	0	21	19	300	287
Michigan	268	260	3.3%	0	0	127	114	122	129	18	16
Ohio	9	-4	-338.1%	-3	-3	0	-10	0	0	12	9
Wisconsin	32	27	19.6%	22	17	0	0	0	0	10	9
West North Central	456	458	-0.3%	230	220	141	148	29	34	57	56
Iowa	0	2	-100.0%	0	0	0	0	0	0	0	2
Kansas	5	5	5.9%	0	0	0	0	0	0	5	5
Minnesota	406	396	2.5%	184	165	141	148	29	34	52	48
Missouri	1	4	-79.0%	1	4	0	0	0	0	0	0
Nebraska	0	0	--	0	0	0	0	0	0	0	0
North Dakota	45	51	-12.8%	45	51	0	0	0	0	0	0
South Dakota	0	0	--	0	0	0	0	0	0	0	0
South Atlantic	4,439	4,305	3.1%	0	0	2,486	2,091	149	186	1,805	2,028
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	2,996	3,078	-2.7%	0	0	1,539	1,466	0	0	1,458	1,613
Georgia	80	87	-8.9%	0	0	0	0	0	0	80	87
Maryland	326	322	1.5%	0	0	326	322	0	0	0	0
North Carolina	535	577	-7.3%	0	0	302	284	0	0	233	294
South Carolina	42	41	1.1%	0	0	7	6	0	0	34	35
Virginia	471	213	120.9%	0	0	323	28	149	186	0	0
West Virginia	-11	-14	-17.4%	0	0	-11	-14	0	0	0	0
East South Central	73	68	7.9%	64	45	0	0	0	0	10	23
Alabama	0	0	-100.0%	0	0	0	0	0	0	0	0
Kentucky	64	45	42.2%	64	45	0	0	0	0	0	0
Mississippi	0	2	-100.0%	0	0	0	0	0	0	0	2
Tennessee	10	21	-54.2%	0	0	0	0	0	0	10	21
West South Central	783	1,213	-35.4%	0	0	-234	106	0	0	1,017	1,107
Arkansas	5	4	24.6%	0	0	0	0	0	0	5	4
Louisiana	625	632	-1.2%	0	0	0	0	0	0	625	632
Oklahoma	57	48	17.9%	0	0	54	47	0	0	3	1
Texas	96	528	-81.8%	0	0	-287	59	0	0	383	469
Mountain	771	708	9.0%	88	84	320	346	0	0	363	278
Arizona	-2	-1	82.7%	0	0	-2	-1	0	0	0	0
Colorado	59	57	4.6%	0	0	18	15	0	0	42	42
Idaho	64	68	-6.4%	0	0	0	0	0	0	64	68
Montana	305	332	-8.2%	0	0	305	332	0	0	0	0
Nevada	29	32	-8.8%	29	32	0	0	0	0	0	0
New Mexico	0	-1	-95.7%	0	-1	0	0	0	0	0	0
Utah	231	175	32.1%	59	53	0	0	0	0	172	122
Wyoming	86	46	86.5%	0	0	0	0	0	0	86	46
Pacific Contiguous	947	931	1.7%	-1	11	261	285	0	0	686	635
California	852	836	2.0%	0	12	166	188	0	0	686	635
Oregon	34	39	-13.1%	-1	-1	35	40	0	0	0	0
Washington	60	56	7.9%	0	-1	60	57	0	0	0	0
Pacific Noncontiguous	381	360	5.7%	188	177	0	1	193	182	0	0
Alaska	-2	-3	-10.4%	-2	-3	0	0	0	0	0	0
Hawaii	383	363	5.6%	190	180	0	1	193	182	0	0
U.S. Total	12,695	13,094	-3.0%	587	551	6,406	6,527	1,020	1,088	4,682	4,928

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 2018 are preliminary. Values for 2017 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, December 2018 and 2017 (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	
	December 2018	December 2017	Percentage Change	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017
New England	323	391	-17.4%	20	26	299	362	3	2	0	0
Connecticut	NM	1	NM	0	0	NM	1	0	0	0	0
Maine	218	265	-17.9%	0	0	218	265	0	0	0	0
Massachusetts	20	20	-0.2%	5	5	13	13	NM	2	0	0
New Hampshire	34	48	-29.4%	0	0	34	48	0	0	0	0
Rhode Island	16	16	-0.1%	0	0	15	15	1	0	0	0
Vermont	34	40	-15.1%	15	21	19	20	0	0	0	0
Middle Atlantic	687	840	-18.1%	0	0	687	839	NM	0	0	0
New Jersey	NM	2	NM	0	0	NM	2	0	0	0	0
New York	371	336	10.2%	0	0	370	336	NM	0	0	0
Pennsylvania	315	501	-37.2%	0	0	315	501	0	0	0	0
East North Central	2,687	3,666	-26.7%	243	545	2,433	3,112	NM	1	NM	7
Illinois	1,279	1,450	-11.8%	NM	1	1,277	1,448	NM	1	0	0
Indiana	567	838	-32.3%	0	0	567	838	0	0	0	0
Michigan	481	697	-31.0%	158	242	323	455	0	0	0	0
Ohio	198	180	9.9%	NM	1	190	172	0	0	NM	7
Wisconsin	161	500	-67.7%	82	300	76	199	NM	0	1	1
West North Central	7,208	7,983	-9.7%	2,380	2,598	4,824	5,379	NM	5	0	0
Iowa	2,203	2,201	0.1%	1,492	1,472	710	728	0	0	0	0
Kansas	1,783	1,754	1.6%	155	163	1,627	1,589	NM	1	0	0
Minnesota	1,028	1,358	-24.3%	228	305	797	1,050	NM	3	0	0
Missouri	265	377	-29.7%	0	0	265	377	0	0	0	0
Nebraska	588	621	-5.4%	14	20	574	601	0	0	0	0
North Dakota	1,065	1,351	-21.2%	409	539	655	812	0	0	0	0
South Dakota	277	319	-13.3%	82	98	195	221	0	0	0	0
South Atlantic	261	323	-19.4%	0	0	260	323	0	0	0	0
Delaware	0	0	9.4%	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	50	64	-21.6%	0	0	50	64	0	0	0	0
North Carolina	50	48	4.3%	0	0	50	48	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	160	211	-24.1%	0	0	160	211	0	0	0	0
East South Central	NM	4	NM	0	0	NM	4	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	NM	4	NM	0	0	NM	4	0	0	0	0
West South Central	9,082	7,791	16.6%	133	129	8,944	7,658	5	4	NM	1
Arkansas	0	0	--	0	0	0	0	0	0	0	0
Louisiana	0	0	--	0	0	0	0	0	0	0	0
Oklahoma	2,521	2,164	16.5%	117	112	2,404	2,052	0	0	0	0
Texas	6,561	5,627	16.6%	16	17	6,540	5,606	5	4	NM	1
Mountain	2,520	2,561	-1.6%	415	264	2,105	2,296	NM	0	0	0
Arizona	42	59	-28.7%	0	0	42	59	0	0	0	0
Colorado	1,027	969	5.9%	220	31	807	938	0	0	0	0
Idaho	219	265	-17.3%	16	18	203	247	0	0	0	0
Montana	222	224	-0.8%	20	23	202	201	0	0	0	0
Nevada	28	38	-25.9%	0	0	28	38	0	0	0	0
New Mexico	549	491	11.8%	0	0	549	491	NM	0	0	0
Utah	59	66	-10.7%	0	0	59	66	0	0	0	0
Wyoming	375	449	-16.6%	160	192	215	257	0	0	0	0
Pacific Contiguous	1,999	952	109.9%	406	234	1,592	718	1	0	0	0
California	970	358	170.9%	36	18	934	339	1	0	0	0
Oregon	449	273	64.4%	58	45	391	228	0	0	0	0
Washington	580	321	80.5%	313	171	267	151	0	0	0	0
Pacific Noncontiguous	54	64	-15.6%	8	9	47	55	0	0	0	0
Alaska	12	13	-12.2%	8	9	NM	5	0	0	0	0
Hawaii	42	51	-16.5%	0	0	42	51	0	0	0	0
U.S. Total	24,825	24,575	1.0%	3,606	3,805	21,194	20,747	17	14	9	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.

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

Notes: See Glossary for definitions. Values for 2018 are preliminary. Values for 2017 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.B. Utility Scale Facility Net Generation from Wind

by State, by Sector, Year-to-Date through December 2018 and 2017 (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	
	December 2018 YTD	December 2017 YTD	Percentage Change	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD
New England	3,652	3,444	6.0%	241	241	3,376	3,174	33	28	3	2
Connecticut	13	13	0.9%	0	0	13	13	0	0	0	0
Maine	2,412	2,333	3.4%	0	0	2,412	2,333	0	0	0	0
Massachusetts	238	233	2.3%	60	62	149	148	25	21	3	2
New Hampshire	434	412	5.4%	0	0	434	412	0	0	0	0
Rhode Island	163	149	9.3%	0	0	155	142	7	7	0	0
Vermont	393	305	28.8%	180	178	213	127	0	0	0	0
Middle Atlantic	8,022	7,749	3.5%	0	0	8,015	7,744	NM	4	3	1
New Jersey	23	22	1.4%	0	0	23	22	0	0	0	0
New York	4,383	4,136	6.0%	0	0	4,376	4,131	NM	4	3	1
Pennsylvania	3,615	3,591	0.7%	0	0	3,615	3,591	0	0	0	0
East North Central	27,471	25,778	6.6%	2,910	2,846	24,443	22,859	37	10	80	63
Illinois	12,812	12,268	4.4%	14	13	12,794	12,249	NM	5	0	0
Indiana	5,597	5,089	10.0%	0	0	5,597	5,089	0	1	0	0
Michigan	5,330	5,191	2.7%	1,852	1,836	3,478	3,355	0	0	0	0
Ohio	1,772	1,589	11.6%	14	12	1,682	1,518	3	4	73	55
Wisconsin	1,959	1,641	19.4%	1,030	984	893	649	29	0	7	7
West North Central	73,975	72,542	2.0%	23,732	24,237	50,199	48,259	45	46	0	0
Iowa	21,685	21,373	1.5%	14,166	14,206	7,516	7,163	3	4	0	0
Kansas	19,295	18,598	3.7%	1,842	1,651	17,438	16,932	15	15	0	0
Minnesota	11,346	11,137	1.9%	2,495	2,656	8,825	8,455	26	26	0	0
Missouri	2,941	2,032	44.7%	0	0	2,941	2,032	0	0	0	0
Nebraska	5,178	5,084	1.8%	178	166	5,000	4,918	0	0	0	0
North Dakota	10,764	11,359	-5.2%	4,223	4,651	6,541	6,708	0	0	0	0
South Dakota	2,766	2,958	-6.5%	827	908	1,938	2,050	0	0	0	0
South Atlantic	2,877	2,719	5.8%	0	0	2,872	2,714	5	5	0	0
Delaware	5	5	4.9%	0	0	0	0	5	5	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	550	561	-2.0%	0	0	550	561	0	0	0	0
North Carolina	543	471	15.3%	0	0	543	471	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	1,779	1,682	5.7%	0	0	1,779	1,682	0	0	0	0
East South Central	52	43	19.2%	0	0	52	43	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	52	43	19.2%	0	0	52	43	0	0	0	0
West South Central	103,346	90,660	14.0%	1,517	1,570	101,762	89,037	56	42	11	11
Arkansas	0	0	--	0	0	0	0	0	0	0	0
Louisiana	0	0	--	0	0	0	0	0	0	0	0
Oklahoma	27,593	23,599	16.9%	1,309	1,368	26,284	22,231	0	0	0	0
Texas	75,753	67,061	13.0%	208	202	75,478	66,806	56	42	11	11
Mountain	26,725	24,719	8.1%	2,668	2,539	24,048	22,173	NM	4	3	3
Arizona	586	570	2.8%	0	0	586	570	0	0	0	0
Colorado	9,819	9,315	5.4%	498	295	9,315	9,015	NM	1	3	3
Idaho	2,561	2,545	0.7%	169	171	2,392	2,374	0	0	0	0
Montana	2,181	2,155	1.2%	213	225	1,968	1,930	0	0	0	0
Nevada	368	361	1.7%	0	0	368	361	0	0	0	0
New Mexico	6,168	4,595	34.3%	0	0	6,165	4,592	NM	3	0	0
Utah	855	858	-0.4%	0	0	855	858	0	0	0	0
Wyoming	4,187	4,321	-3.1%	1,788	1,848	2,399	2,473	0	0	0	0
Pacific Contiguous	28,143	25,975	8.3%	5,998	5,544	22,134	20,420	6	6	5	5
California	13,650	12,823	6.5%	823	789	12,816	12,023	6	6	5	5
Oregon	7,137	6,227	14.6%	1,231	1,051	5,906	5,176	0	0	0	0
Washington	7,356	6,925	6.2%	3,944	3,704	3,412	3,221	0	0	0	0
Pacific Noncontiguous	690	674	2.4%	96	91	594	582	0	0	0	0
Alaska	147	142	3.9%	96	91	51	50	0	0	0	0
Hawaii	543	532	2.0%	0	0	543	532	0	0	0	0
U.S. Total	274,952	254,303	8.1%	37,162	37,068	237,494	217,006	191	144	105	84

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 2018 are preliminary. Values for 2017 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, December 2018 and 2017 (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	
	December 2018	December 2017	Percentage Change	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017
New England	557	646	-13.8%	49	51	406	483	13	14	90	97
Connecticut	56	73	-23.4%	0	0	56	73	0	0	0	0
Maine	207	266	-22.2%	0	0	111	161	6	8	90	97
Massachusetts	106	99	7.5%	0	0	104	96	2	2	0	0
New Hampshire	135	146	-7.8%	28	24	102	118	5	4	0	0
Rhode Island	18	19	-3.5%	0	0	18	19	0	0	0	0
Vermont	35	43	-18.8%	20	27	14	16	0	0	0	0
Middle Atlantic	481	499	-3.7%	0	0	380	374	47	48	54	76
New Jersey	81	86	-5.3%	0	0	66	72	15	14	0	0
New York	200	197	1.3%	0	0	165	156	18	20	16	21
Pennsylvania	200	216	-7.5%	0	0	148	146	14	14	37	56
East North Central	479	504	-4.9%	62	69	263	274	17	19	138	142
Illinois	38	37	3.0%	4	2	34	35	0	0	0	0
Indiana	41	42	-3.5%	28	29	4	4	2	2	7	7
Michigan	216	215	0.4%	0	0	144	145	12	10	61	61
Ohio	60	63	-5.2%	NM	0	39	43	1	1	19	19
Wisconsin	125	146	-14.8%	29	38	42	46	2	7	52	56
West North Central	186	202	-7.7%	47	46	61	81	12	10	66	64
Iowa	20	16	27.3%	NM	1	10	10	3	2	4	2
Kansas	NM	4	NM	0	0	NM	4	0	0	0	0
Minnesota	138	164	-15.8%	33	36	42	64	2	2	62	62
Missouri	14	10	45.0%	NM	2	NM	3	5	5	0	0
Nebraska	8	8	3.3%	7	7	0	0	1	1	0	0
North Dakota	NM	0	NM	0	0	0	0	0	0	NM	0
South Dakota	0	0	--	0	0	0	0	0	0	0	0
South Atlantic	1,633	1,766	-7.5%	153	223	543	579	25	35	912	928
Delaware	NM	5	NM	0	0	NM	4	0	0	1	1
District of Columbia	5	5	-4.2%	0	0	0	0	5	5	0	0
Florida	422	465	-9.2%	43	59	202	217	4	4	173	184
Georgia	418	449	-6.9%	0	0	73	102	0	0	345	347
Maryland	40	50	-19.7%	0	0	33	39	2	1	6	9
North Carolina	202	241	-16.2%	0	0	90	112	1	7	111	122
South Carolina	204	203	0.3%	28	36	32	37	0	0	144	130
Virginia	336	347	-3.1%	82	128	109	68	13	18	133	133
West Virginia	0	0	--	0	0	0	0	0	0	0	0
East South Central	541	556	-2.7%	NM	6	30	24	0	0	502	526
Alabama	296	306	-3.3%	0	0	21	17	0	0	275	290
Kentucky	41	37	10.9%	NM	6	NM	1	0	0	31	31
Mississippi	127	131	-3.1%	0	0	NM	2	0	0	126	130
Tennessee	76	81	-6.2%	0	0	NM	5	0	0	69	76
West South Central	525	536	-2.0%	0	0	66	73	4	4	455	459
Arkansas	134	129	3.6%	0	0	8	11	1	1	125	117
Louisiana	235	239	-1.5%	0	0	NM	7	0	0	227	231
Oklahoma	28	31	-7.6%	0	0	NM	2	0	0	27	29
Texas	128	137	-6.8%	0	0	49	52	3	3	76	82
Mountain	93	75	24.0%	NM	1	55	40	2	2	34	32
Arizona	15	3	434.0%	0	0	15	3	0	0	0	0
Colorado	15	14	6.6%	0	0	15	14	0	0	0	0
Idaho	47	44	6.9%	NM	1	12	12	1	1	32	30
Montana	2	2	4.9%	0	0	0	0	0	0	2	2
Nevada	NM	5	NM	0	0	NM	5	0	0	0	0
New Mexico	2	2	5.4%	0	0	2	2	0	0	0	0
Utah	NM	6	NM	0	0	NM	5	1	1	0	0
Wyoming	0	0	--	0	0	0	0	0	0	0	0
Pacific Contiguous	715	806	-11.3%	35	72	395	443	65	75	220	215
California	487	531	-8.3%	7	14	357	401	61	71	62	46
Oregon	85	86	-1.5%	NM	5	27	32	3	3	50	46
Washington	142	188	-24.2%	22	53	11	11	NM	1	108	123
Pacific Noncontiguous	30	28	8.7%	4	6	NM	4	22	18	NM	0
Alaska	3	4	-17.5%	0	0	0	0	3	4	NM	0
Hawaii	27	24	13.4%	4	6	NM	4	18	14	0	0
U.S. Total	5,239	5,616	-6.7%	359	474	2,204	2,376	205	224	2,471	2,541

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 2018 are preliminary. Values for 2017 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 December 2018 and 2017 (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	
	December 2018 YTD	December 2017 YTD	Percentage Change	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD
New England	6,629	6,917	-4.2%	498	559	4,901	5,160	146	170	1,085	1,029
Connecticut	714	792	-9.9%	0	0	714	792	0	0	0	0
Maine	2,527	2,704	-6.5%	0	0	1,375	1,580	68	94	1,085	1,029
Massachusetts	1,197	1,160	3.2%	0	0	1,167	1,132	30	29	0	0
New Hampshire	1,558	1,610	-3.2%	253	291	1,260	1,274	45	45	0	0
Rhode Island	211	203	4.0%	0	0	211	203	0	0	0	0
Vermont	421	448	-6.0%	245	268	174	178	2	2	0	0
Middle Atlantic	5,600	5,653	-0.9%	0	0	4,364	4,332	527	540	710	781
New Jersey	957	929	3.0%	0	0	799	763	158	166	0	0
New York	2,299	2,286	0.6%	0	0	1,888	1,873	225	225	185	188
Pennsylvania	2,345	2,438	-3.8%	0	0	1,676	1,696	144	149	525	593
East North Central	5,647	5,628	0.3%	773	706	3,123	3,176	204	220	1,547	1,526
Illinois	453	474	-4.5%	40	22	413	452	0	0	0	0
Indiana	472	473	-0.3%	322	324	49	49	22	20	79	80
Michigan	2,518	2,494	1.0%	0	0	1,717	1,711	127	135	673	649
Ohio	687	727	-5.4%	15	3	450	480	7	8	215	236
Wisconsin	1,517	1,460	3.9%	397	358	493	484	47	57	579	561
West North Central	2,294	2,443	-6.1%	568	534	873	1,086	131	126	722	698
Iowa	218	210	4.1%	26	21	121	120	37	28	35	41
Kansas	59	57	3.2%	0	0	59	60	0	0	0	-3
Minnesota	1,765	1,933	-8.7%	411	395	645	859	29	24	680	655
Missouri	155	144	7.4%	53	38	48	46	51	56	3	3
Nebraska	93	97	-4.2%	78	80	0	0	15	17	0	0
North Dakota	4	2	92.9%	0	0	0	0	0	0	4	2
South Dakota	0	0	--	0	0	0	0	0	0	0	0
South Atlantic	20,138	19,695	2.3%	2,282	2,029	6,742	6,760	298	395	10,816	10,511
Delaware	63	63	0.2%	0	0	51	50	0	0	12	13
District of Columbia	57	47	19.9%	0	0	0	0	57	47	0	0
Florida	5,111	5,009	2.0%	655	438	2,410	2,559	44	44	2,002	1,968
Georgia	4,979	5,018	-0.8%	0	0	894	1,031	0	0	4,085	3,987
Maryland	533	536	-0.6%	0	0	420	412	21	8	93	116
North Carolina	2,660	2,812	-5.4%	0	0	1,340	1,406	11	91	1,309	1,315
South Carolina	2,583	2,400	7.7%	423	410	400	409	0	0	1,761	1,580
Virginia	4,153	3,809	9.0%	1,204	1,180	1,228	893	166	205	1,554	1,531
West Virginia	0	0	--	0	0	0	0	0	0	0	0
East South Central	6,371	6,345	0.4%	104	103	349	339	0	0	5,918	5,903
Alabama	3,440	3,426	0.4%	0	0	246	232	0	0	3,195	3,193
Kentucky	490	495	-1.0%	104	103	11	12	0	0	375	380
Mississippi	1,467	1,477	-0.7%	0	0	12	12	0	0	1,455	1,465
Tennessee	974	948	2.8%	0	0	81	83	0	0	893	865
West South Central	6,077	6,079	0.0%	0	0	852	811	39	39	5,186	5,229
Arkansas	1,454	1,437	1.2%	0	0	96	99	6	6	1,352	1,332
Louisiana	2,726	2,767	-1.5%	0	0	87	88	0	0	2,638	2,679
Oklahoma	327	299	9.6%	0	0	21	19	0	0	307	280
Texas	1,570	1,577	-0.4%	0	0	649	606	33	33	889	938
Mountain	1,055	977	8.1%	13	12	651	616	25	22	366	327
Arizona	183	171	6.8%	0	0	183	171	0	0	0	0
Colorado	167	166	0.5%	0	0	167	166	0	0	0	0
Idaho	514	465	10.5%	13	12	145	136	11	12	345	306
Montana	21	21	0.7%	0	0	0	0	0	0	21	21
Nevada	69	58	19.4%	0	0	69	58	0	0	0	0
New Mexico	20	18	15.2%	0	0	20	18	0	0	0	0
Utah	81	78	4.2%	0	0	67	68	14	10	0	0
Wyoming	0	0	--	0	0	0	0	0	0	0	0
Pacific Contiguous	8,602	8,688	-1.0%	519	676	4,717	4,723	767	841	2,599	2,447
California	5,776	5,808	-0.6%	93	139	4,219	4,242	725	801	739	627
Oregon	1,029	981	4.9%	61	62	375	360	32	31	561	528
Washington	1,798	1,899	-5.3%	365	475	123	122	10	10	1,299	1,292
Pacific Noncontiguous	351	336	4.4%	53	55	53	49	244	231	1	1
Alaska	44	44	1.0%	0	0	0	0	43	42	1	1
Hawaii	307	293	4.9%	53	55	53	49	201	189	0	0
U.S. Total	62,765	62,762	0.0%	4,810	4,674	26,625	27,051	2,380	2,585	28,950	28,452

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 2018 are preliminary. Values for 2017 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 1.16.A. Utility Scale Facility Net Generation from Geothermal by State, by Sector, December 2018 and 2017 (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	
	December 2018	December 2017	Percentage Change	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017
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	416	540	-22.9%	24	35	358	505	33	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	7	12	-39.3%	0	0	7	12	0	0	0	0
Montana	0	0	--	0	0	0	0	0	0	0	0
Nevada	364	459	-20.6%	0	0	331	459	33	0	0	0
New Mexico	1	2	-11.5%	0	0	1	2	0	0	0	0
Utah	43	68	-36.3%	24	35	19	33	0	0	0	0
Wyoming	0	0	--	0	0	0	0	0	0	0	0
Pacific Contiguous	1,090	1,002	8.7%	71	54	1,019	948	0	0	0	0
California	1,072	988	8.6%	71	54	1,001	933	0	0	0	0
Oregon	17	15	18.8%	0	0	17	15	0	0	0	0
Washington	0	0	--	0	0	0	0	0	0	0	0
Pacific Noncontiguous	30	29	3.6%	0	0	30	29	0	0	0	0
Alaska	0	0	--	0	0	0	0	0	0	0	0
Hawaii	30	29	3.6%	0	0	30	29	0	0	0	0
U.S. Total	1,535	1,571	-2.3%	95	89	1,407	1,482	33	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 2018 are preliminary. Values for 2017 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 1.16.B. Utility Scale Facility Net Generation from Geothermal

by State, by Sector, Year-to-Date through December 2018 and 2017 (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	
	December 2018 YTD	December 2017 YTD	Percentage Change	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 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	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	4,191	3,870	8.3%	267	249	3,890	3,621	33	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	79	84	-6.5%	0	0	79	84	0	0	0	0
Montana	0	0	--	0	0	0	0	0	0	0	0
Nevada	3,630	3,292	10.3%	0	0	3,596	3,292	33	0	0	0
New Mexico	13	13	1.3%	0	0	13	13	0	0	0	0
Utah	469	481	-2.5%	267	249	202	232	0	0	0	0
Wyoming	0	0	--	0	0	0	0	0	0	0	0
Pacific Contiguous	12,215	11,734	4.1%	786	773	11,429	10,961	0	0	0	0
California	12,027	11,560	4.0%	786	771	11,241	10,789	0	0	0	0
Oregon	188	174	8.0%	0	2	188	173	0	0	0	0
Washington	0	0	--	0	0	0	0	0	0	0	0
Pacific Noncontiguous	322	323	-0.1%	0	0	322	323	0	0	0	0
Alaska	0	0	--	0	0	0	0	0	0	0	0
Hawaii	322	323	-0.1%	0	0	322	323	0	0	0	0
U.S. Total	16,728	15,927	5.0%	1,054	1,022	15,642	14,905	33	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 2018 are preliminary. Values for 2017 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, December 2018 and 2017 (Thousand Megawatthours)

Census Division and State	All Sectors						Electric Power Sector				Commercial Sector				Industrial Sector				Residential Sector							
	Estimated Generation From Utility and Small Scale Facilities			Generation at Utility Scale Facilities		Estimated Small Scale Generation		Generation at Utility Scale Facilities		Generation at Utility Scale Facilities		Estimated Generation From Utility and Small Scale Facilities		Generation at Utility Scale Facilities		Estimated Small Scale Generation		Estimated Small Scale Generation								
	December 2018	December 2017	Percentage Change	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017							
New England	234	160	46.6%	77	37	157	122	5	2	71	35	NM	72	NM	0	88	71	NM	6	0	7	6	62	45		
Connecticut	36	23	54.9%	8	2	29	22	0	0	7	2	NM	9	NM	0	12	9	NM	1	NM	0	1	1	15	11	
Maine	NM	3	NM	NM	0	3	2	0	0	NM	0	1	1	0	0	1	1	0	0	0	0	0	0	2	2	
Massachusetts	162	115	41.6%	58	31	104	84	NM	0	55	30	NM	56	NM	0	65	56	5	4	0	0	5	4	34	24	
New Hampshire	6	5	27.4%	0	0	6	5	0	0	0	0	2	1	0	0	2	1	0	0	0	0	0	0	4	3	
Rhode Island	NM	5	NM	NM	1	8	4	0	0	NM	1	6	2	0	0	6	2	0	0	0	0	0	0	3	2	
Vermont	15	9	58.9%	8	4	6	6	NM	1	6	2	2	2	0	0	2	2	NM	NM	0	0	NM	NM	4	3	
Middle Atlantic	294	219	34.5%	83	45	211	174	4	3	71	37	107	88	8	5	99	82	NM	12	NM	1	12	11	100	81	
New Jersey	166	127	31.2%	57	33	109	94	4	3	45	25	64	55	7	5	57	50	NM	7	NM	0	8	7	44	36	
New York	101	70	45.5%	22	9	79	61	0	0	22	9	NM	25	NM	0	34	24	1	1	0	0	1	1	44	35	
Pennsylvania	27	23	18.4%	4	3	22	20	0	0	NM	2	NM	8	NM	0	8	7	NM	3	NM	0	3	3	11	9	
East North Central	61	38	61.7%	37	20	24	18	12	5	24	14	NM	11	NM	0	14	11	1	1	0	0	1	1	9	6	
Illinois	8	6	29.5%	3	3	5	3	NM	0	2	3	NM	2	NM	0	3	2	0	NM	0	0	0	0	NM	2	1
Indiana	23	12	93.2%	18	9	5	3	8	3	10	6	3	2	0	0	3	2	0	0	0	0	0	0	1	1	
Michigan	11	6	96.5%	7	3	3	3	4	2	NM	0	2	2	0	0	2	2	0	NM	0	0	0	0	NM	2	1
Ohio	14	10	33.7%	7	4	7	6	NM	0	6	4	NM	5	NM	0	5	4	0	NM	0	0	0	0	NM	2	1
Wisconsin	NM	4	NM	NM	1	4	3	0	0	NM	1	NM	1	NM	0	1	1	1	1	1	0	0	1	1	2	1
West North Central	95	50	88.8%	68	29	27	21	NM	1	67	29	13	11	0	0	13	10	1	1	0	0	1	1	13	10	
Iowa	NM	5	NM	NM	0	7	5	NM	0	NM	0	4	3	0	0	4	3	0	0	0	0	0	0	0	2	2
Kansas	NM	2	NM	NM	0	2	1	NM	0	NM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	1
Minnesota	65	27	142.9%	60	24	4	3	NM	0	60	24	1	1	0	0	1	1	1	0	0	0	1	0	2	2	
Missouri	19	15	22.6%	5	4	14	12	0	0	5	4	6	6	0	0	6	6	0	0	0	0	0	0	0	7	6
Nebraska	NM	2	NM	NM	1	1	0	0	0	NM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
North Dakota	0	0	50.9%	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	NM	0	NM	NM	0	0	0	0	0	NM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
South Atlantic	853	894	-4.5%	708	780	146	114	200	197	501	572	50	45	7	9	44	36	NM	18	NM	0	20	17	82	61	
Delaware	NM	10	NM	NM	5	6	5	NM	1	NM	4	NM	2	NM	0	2	2	1	0	0	0	1	0	4	3	
District of Columbia	5	4	35.2%	0	0	5	4	0	0	0	0	3	2	0	0	3	2	0	0	0	0	0	0	2	1	
Florida	206	164	25.2%	173	142	33	23	153	111	19	30	NM	7	NM	0	8	6	NM	1	NM	0	1	1	25	16	
Georgia	114	103	11.0%	96	87	18	NM	15	11	81	76	NM	NM	0	3	NM	NM	NM	0	0	0	0	NM	NM	NM	NM
Maryland	67	51	31.4%	23	13	44	38	NM	0	21	12	NM	12	NM	0	14	12	2	2	0	0	2	2	28	25	
North Carolina	352	392	-10.1%	337	380	15	12	20	29	311	342	13	15	6	8	7	7	0	0	0	0	0	0	7	5	
South Carolina	51	30	73.8%	35	19	17	11	NM	0	34	19	5	3	0	0	5	3	2	1	0	0	2	1	11	7	
Virginia	48	140	-65.6%	41	135	7	5	10	45	31	90	2	2	0	0	2	2	0	0	0	0	0	0	4	3	
West Virginia	1	0	18.1%	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
East South Central	53	85	-37.9%	45	77	8	8	4	7	40	70	NM	6	NM	1	5	5	NM	0	NM	0	NM	0	3	2	
Alabama	NM	42	NM	18	41	NM	NM	NM	5	16	36	0	0	0	0	0	0	0	0	0	0	0	0	0	NM	NM
Kentucky	NM	3	NM	NM	2	2	1	NM	2	NM	0	1	1	0	0	1	1	0	0	0	0	0	0	0	1	1
Mississippi	16	16	0.5%	16	15	1	1	0	0	16	15	0	0	0	0	0	0	NM	NM	0	0	0	0	NM	0	0
Tennessee	14	24	-42.4%	9	19	5	5	0	0	8	18	NM	4	NM	1	4	3	NM	0	NM	0	NM	0	1	1	
West South Central	277	223	24.4%	209	176	68	47	NM	2	205	173	15	10	0	0	15	10	0	NM	0	0	0	0	NM	53	37
Arkansas	12	2	374.3%	10	2	2	1	NM	0	10	2	1	0	0	0	1	0	0	0	0	0	0	0	0	1	NM
Louisiana	NM	13	NM	NM	NM	14	13	NM	NM	0	0	1	1	0	0	1	1	0	0	0	0	0	0	0	13	12
Oklahoma	NM	2	NM	NM	2	1	0	NM	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Texas	247	206	20.2%	195	172	52	33	NM	0	195	172	13	9	0	0	13	9	0	NM	0	0	0	0	NM	39	25
Mountain	908	960	-5.4%	642	737	265	223	44	50	594	681	84	79	4	6	80	73	4	4	0	0	4	4	181	146	
Arizona	365	352	3.6%	214	224	151	128	30	34	183	189	NM	45	NM	1	49	43	1	1	0	0	1	1	101	83	
Colorado	88	91	-2.9%	52	58	36	33	NM	0	51	57	NM	14	NM	1	13	13	0	NM	0	0	0	0	NM	23	20
Idaho	22	14	64.6%	21	13	2	1	0	0	21	13	0	NM	0	0	0	0	0	0	0	0	0	0	0	1	1
Montana	NM	2	NM	NM	1	1	0	0	0	NM	1	0	NM	0	0	0	0	0	0	0	0	0	0	0	1	1
Nevada	231	281	-17.6%	199	255	32	25	2	2	194	249	9	10	3	4	6	6	2	2	0	0	2	2	24	17	
New Mexico	77	82	-5.0%	58	66	19	16	12	13	47	52	6	5	0	0	6	5	0	0	0	0	0	0	0	12	10
Utah	119	138	-14.0%	96	120	23	19	0	0	96	120	4	4	0	0	4	4	1	0	0	0	1	0	18	15	
Wyoming	1	0	359.3%	1	0	0	NM	0	0	1	0	0	NM	0	0	0	NM	0	0	0	0	0	0	0	0	0
Pacific Contiguous	2,007	2,027	-1.0%	1,214	1,352	793	676	23	28	1,180	1,315	210	175	8	7	202	168	NM	100	NM	1	113	98	477	410	
California	1,965	2,002	-1.9%	1,184	1,336	781	666	23	28	1,150	1,300	207	172	8	7	199	164	NM	99	NM	1	113	98	469	403	
Oregon	36	22	64.8%	29	16	7	6	NM	0	28	15	3	3	0	0	3	3	1	0	0	0	1	0	4	3	
Washington	NM	4	NM	NM	0	5	4	0	0	NM	0	1	1	0	0	1	1									

Table 1.17.B. Net Generation from Solar Photovoltaic by State, by Sector, Year-to-Date through December 2018 and 2017 (Thousand Megawatthours)

Census Division and State	All Sectors						Electric Power Sector				Commercial Sector						Industrial Sector						Residential Sector		
	Estimated Generation From Utility and Small Scale Facilities			Generation at Utility Scale Facilities			Estimated Small Scale Generation		Generation at Utility Scale Facilities		Generation at Utility Scale Facilities		Estimated Generation From Utility and Small Scale Facilities		Generation at Utility Scale Facilities		Estimated Small Scale Generation		Estimated Generation From Utility and Small Scale Facilities		Estimated Small Scale Generation				
	December 2018 YTD	December 2017 YTD	Percentage Change	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD				
New England	4,389	3,164	38.7%	1,604	947	2,784	2,217	78	58	1,516	880	1,532	1,169	8	7	1,524	1,162	116	99	2	1	114	97	1,146	958
Connecticut	611	447	36.6%	119	40	492	407	3	3	114	36	192	157	NM	1	191	156	25	21	NM	0	25	21	276	230
Maine	68	46	46.3%	13	5	55	41	0	0	13	5	19	14	0	0	19	14	0	0	0	0	0	0	36	27
Massachusetts	3,194	2,304	38.6%	1,292	788	1,902	1,516	28	14	1,256	767	1,189	905	6	6	1,182	899	81	70	2	1	79	69	641	547
New Hampshire	108	87	23.8%	0	0	108	87	0	0	0	0	32	26	0	0	32	26	7	5	0	0	7	5	69	56
Rhode Island	135	69	95.3%	38	14	97	55	0	0	38	14	53	27	0	0	53	27	0	0	0	0	0	0	44	28
Vermont	273	210	30.0%	143	99	130	111	47	41	96	58	47	40	0	0	47	40	2	2	0	0	2	2	80	70
Middle Atlantic	5,628	4,378	28.5%	1,793	1,178	3,835	3,199	98	80	1,487	934	1,923	1,594	188	149	1,735	1,445	222	191	21	16	202	174	1,898	1,580
New Jersey	3,219	2,586	24.5%	1,292	926	1,927	1,660	98	80	1,012	699	1,146	1,011	173	139	973	872	137	112	11	8	126	104	827	684
New York	1,899	1,364	39.2%	406	183	1,493	1,182	0	0	401	178	618	439	5	5	613	435	17	14	0	0	17	14	883	733
Pennsylvania	510	427	19.3%	95	70	415	357	0	0	75	56	159	144	10	6	149	138	69	64	10	8	59	56	207	163
East North Central	1,300	863	50.6%	800	520	500	343	269	157	519	358	319	208	10	3	309	205	27	22	2	2	25	20	166	118
Illinois	155	111	40.5%	60	52	95	58	2	2	53	50	66	38	NM	0	61	38	1	0	0	0	1	0	34	21
Indiana	480	313	53.5%	382	278	98	35	149	84	233	194	66	17	0	0	66	17	3	1	0	0	3	1	29	16
Michigan	241	129	86.9%	161	63	79	65	107	63	54	0	40	34	0	0	40	34	1	1	0	0	1	1	38	31
Ohio	302	234	29.0%	150	105	152	129	11	8	133	92	116	99	4	3	112	96	9	8	2	2	7	6	34	27
Wisconsin	122	77	58.1%	47	21	75	56	0	0	45	21	31	20	NM	0	30	20	14	11	0	0	14	11	32	24
West North Central	1,954	1,055	85.2%	1,474	680	480	376	24	12	1,448	666	236	195	2	2	235	193	18	10	0	0	18	10	227	173
Iowa	146	94	54.7%	20	5	126	89	13	5	6	0	80	56	0	0	80	56	4	3	0	0	4	3	43	31
Kansas	36	22	62.9%	9	5	27	17	NM	2	7	4	10	5	0	0	10	5	0	0	0	0	0	0	17	11
Minnesota	1,385	655	111.6%	1,302	596	83	59	4	2	1,299	594	30	24	0	0	30	24	10	5	0	0	10	5	43	30
Missouri	342	261	31.2%	110	56	232	204	5	3	103	52	112	108	2	2	111	106	4	1	0	0	4	1	117	97
Nebraska	42	21	102.3%	31	15	11	5	0	0	31	15	4	2	0	0	4	2	1	0	0	0	1	0	6	3
North Dakota	0	0	11.8%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
South Dakota	3	3	8.7%	NM	2	1	1	0	0	NM	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0
South Atlantic	15,893	10,461	51.9%	13,601	8,666	2,291	1,795	2,999	1,501	10,444	7,031	820	687	154	132	667	555	309	251	NM	2	305	249	1,320	990
Delaware	173	143	21.5%	64	50	110	92	8	6	54	42	34	30	NM	1	32	28	9	5	0	0	9	5	69	59
District of Columbia	71	52	37.1%	0	0	71	52	0	0	0	0	43	29	0	0	43	29	0	0	0	0	0	0	29	23
Florida	2,853	1,148	148.6%	2,426	855	427	293	1,997	715	418	135	114	96	7	3	108	93	15	11	NM	2	11	9	308	190
Georgia	2,439	2,212	10.2%	2,169	1,986	270	226	315	252	1,850	1,731	39	33	4	3	35	30	218	180	0	0	218	180	17	16
Maryland	1,298	1,002	29.6%	448	267	850	735	10	9	424	252	247	211	13	7	233	204	37	33	0	0	37	33	580	498
North Carolina	7,209	5,300	36.0%	6,997	5,114	212	186	457	410	6,412	4,587	244	229	128	118	117	112	7	7	0	0	7	7	89	67
South Carolina	858	217	294.9%	608	80	250	138	NM	0	605	80	65	33	0	0	65	33	22	13	0	0	22	13	163	92
Virginia	981	379	158.9%	889	313	92	66	208	109	681	204	32	24	0	0	32	24	2	1	0	0	2	1	58	41
West Virginia	10	8	20.8%	0	0	10	8	0	0	0	0	2	2	0	0	2	2	0	0	0	0	0	0	7	6
East South Central	1,078	509	112.0%	933	379	145	130	91	43	830	331	104	94	6	4	98	90	8	2	7	0	2	1	45	39
Alabama	397	189	110.6%	387	181	11	8	40	24	346	157	7	5	0	0	7	5	1	0	0	0	1	0	3	2
Kentucky	85	45	92.0%	54	20	32	25	51	19	NM	1	18	15	0	0	18	15	1	0	0	0	1	0	13	10
Mississippi	341	96	253.1%	329	86	12	11	0	0	329	86	7	6	0	0	7	6	0	1	0	0	0	1	5	3
Tennessee	255	179	42.3%	164	92	90	87	0	0	152	88	71	68	6	4	65	63	7	1	7	0	0	1	25	23
West South Central	4,596	2,947	56.0%	3,622	2,255	975	692	77	42	3,543	2,212	215	146	2	2	213	144	2	0	0	0	2	0	760	548
Arkansas	227	41	456.6%	205	31	22	10	NM	2	203	29	8	4	0	0	8	4	1	0	0	0	1	0	13	6
Louisiana	229	202	13.4%	NM	2	227	200	NM	2	0	0	14	8	0	0	14	8	0	0	0	0	0	0	212	192
Oklahoma	77	38	101.2%	66	33	11	6	66	33	0	0	4	1	0	0	4	1	0	0	0	0	0	0	7	4
Texas	4,063	2,665	52.4%	3,348	2,189	715	476	7	5	3,339	2,182	189	133	2	2	187	131	1	0	0	0	1	0	527	345
Mountain	17,982	16,400	9.6%	13,880	13,035	4,101	3,365	977	920	12,801	12,010	1,345	1,199	99	102	1,246	1,097	71	55	3	3	69	52	2,787	2,216
Arizona	6,701	6,111	9.7%	4,395	4,218	2,307	1,893	672	626	3,715	3,569	747	659	8	23	740	635	24	17	0	0	24	17	1,543	1,241
Colorado	1,674	1,485	12.7%	1,087	954	587	531	6	2	1,063	940	237	225	18	12	218	212	2	2	0	0	2	2	366	317
Idaho	576	476	21.2%	543	459	33	16	0	0	543	459	5	4	0	0	5	4	1	0	0	0	1	0	27	12
Montana	58	29	100.2%	38	14	20	15	0	0	38	14	6	4	0	0	6	4	0	0	0	0	0	0	14	11
Nevada	4,837	4,398	10.0%	4,344	3,986	493	412	41	40	4,228	3,877	177	167	73	66	104	100	35	27	3	3	32	25	357	287
New Mexico	1,553	1,397	11.1%	1,291	1,193	261	204	259	252	1,033	941	92	76	0	0	92	76	1	1	0	0	1	1	169	128
Utah	2,575	2,500	3.0%	2,181	2,211	395	289	0	0	2,181	2,211	79	63	0	0	79	63	8	8	0					

**Table 1.18.A. Utility Scale Facility Net Generation from Solar Thermal by State, by Sector, December 2018 and 2017 (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	
	December 2018	December 2017	Percentage Change	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017
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	1	6	-87.2%	1	6	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	1	6	-87.2%	1	6	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	25	27	-8.7%	0	0	25	27	0	0	0	0
Arizona	15	24	-39.2%	0	0	15	24	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	10	3	210.8%	0	0	10	3	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	66	90	-25.8%	0	0	66	90	0	0	0	0
California	66	90	-25.8%	0	0	66	90	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	92	123	-24.9%	1	6	91	117	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.  
 NM = Not meaningful due to large relative standard error or excessive percentage change.

Notes: See Glossary for definitions. Values for 2018 are preliminary. Values for 2017 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 December 2018 and 2017 (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	
	December 2018 YTD	December 2017 YTD	Percentage Change	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 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	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	51	22	139.0%	51	22	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	51	22	139.0%	51	22	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	1,082	884	22.4%	0	0	1,082	884	0	0	0	0
Arizona	776	724	7.2%	0	0	776	724	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	306	160	91.3%	0	0	306	160	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	2,458	2,364	4.0%	0	0	2,458	2,364	0	0	0	0
California	2,458	2,364	4.0%	0	0	2,458	2,364	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	3,592	3,269	9.9%	51	22	3,540	3,248	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.

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

Notes: See Glossary for definitions. Values for 2018 are preliminary. Values for 2017 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.



## Chapter 2

# Consumption of Fossil Fuels

**Table 2.1.A. Coal: Consumption for Electricity Generation, by Sector, 2008-December 2018 (Thousand Tons)**

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
<b>Annual Totals</b>					
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
2016	677,371	496,192	178,047	111	3,021
2017	663,911	484,389	176,643	95	2,783
2018	635,833	473,564	159,452	94	2,723
<b>Year 2016</b>					
January	61,983	45,395	16,319	12	258
February	50,516	37,538	12,717	13	248
March	39,864	30,983	8,616	13	252
April	39,065	28,614	10,238	7	206
May	45,032	33,712	11,064	6	249
June	63,186	46,191	16,721	7	266
July	74,132	53,946	19,894	7	285
August	73,798	53,681	19,827	8	282
Sept	62,335	44,665	17,407	8	254
October	54,537	39,319	14,974	8	237
November	48,076	35,090	12,758	10	218
December	64,847	47,058	17,512	12	266
<b>Year 2017</b>					
January	63,460	46,708	16,471	11	270
February	47,985	35,491	12,240	9	245
March	48,840	35,655	12,926	9	250
April	44,279	31,403	12,656	6	214
May	50,898	37,373	13,294	6	224
June	58,852	43,744	14,881	6	221
July	69,769	51,971	17,560	7	230
August	65,761	48,954	16,574	7	227
Sept	54,713	39,390	15,098	8	218
October	50,015	36,190	13,591	7	227
November	50,882	35,778	14,873	8	222
December	58,457	41,733	16,479	9	236
<b>Year 2018</b>					
January	64,517	47,706	16,524	12	274
February	45,655	33,933	11,470	9	243
March	44,388	32,273	11,864	8	243
April	40,554	30,358	9,980	6	210
May	47,470	35,222	12,012	6	230
June	56,031	42,467	13,339	6	219
July	63,805	48,286	15,283	7	230
August	63,710	47,867	15,612	9	223
Sept	53,945	40,309	13,416	8	212
October	48,488	35,607	12,682	7	191
November	51,720	38,008	13,488	7	216
December	55,549	41,527	13,782	8	232
<b>Year to Date</b>					
2016	677,371	496,192	178,047	111	3,021
2017	663,911	484,389	176,643	95	2,783
2018	635,833	473,564	159,452	94	2,723
<b>Rolling 12 Months Ending in December</b>					
2017	663,911	484,389	176,643	95	2,783
2018	635,833	473,564	159,452	94	2,723

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 2017 and prior years are final. Values for 2018 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, 2008-December 2018 (Thousand Tons)**

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
<b>Annual Totals</b>					
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
2016	16,586	2,979	1,336	572	11,700
2017	14,667	2,802	1,158	515	10,192
2018	13,721	2,321	1,162	493	9,745
<b>Year 2016</b>					
January	1,624	288	133	63	1,140
February	1,503	277	130	62	1,034
March	1,433	232	117	61	1,023
April	1,215	204	103	39	870
May	1,264	215	90	31	929
June	1,353	241	97	39	976
July	1,472	278	118	39	1,036
August	1,434	270	112	42	1,010
Sept	1,257	216	97	41	903
October	1,260	224	105	42	889
November	1,256	233	99	50	875
December	1,515	301	136	63	1,015
<b>Year 2017</b>					
January	1,470	300	117	59	995
February	1,198	213	104	48	832
March	1,292	238	106	57	892
April	1,129	221	78	36	794
May	1,137	209	75	34	819
June	1,153	211	84	34	823
July	1,202	254	96	40	812
August	1,214	256	100	36	823
Sept	1,103	207	86	38	773
October	1,223	223	94	35	871
November	1,260	263	98	44	855
December	1,285	208	119	56	903
<b>Year 2018</b>					
January	1,404	235	141	58	970
February	1,267	215	139	45	868
March	1,243	205	97	43	898
April	1,108	183	80	39	805
May	1,097	171	80	35	811
June	1,089	192	91	36	770
July	1,071	201	82	40	748
August	1,032	195	78	41	720
Sept	1,080	193	80	42	765
October	1,008	164	67	35	742
November	1,136	184	110	41	802
December	1,186	183	118	39	846
<b>Year to Date</b>					
2016	16,586	2,979	1,336	572	11,700
2017	14,667	2,802	1,158	515	10,192
2018	13,721	2,321	1,162	493	9,745
<b>Rolling 12 Months Ending in December</b>					
2017	14,667	2,802	1,158	515	10,192
2018	13,721	2,321	1,162	493	9,745

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 2017 and prior years are final. Values for 2018 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, 2008-December 2018 (Thousand Tons)**

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
<b>Annual Totals</b>					
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
2016	693,958	499,172	179,383	683	14,720
2017	678,578	487,192	177,801	610	12,975
2018	649,554	475,884	160,613	587	12,468
<b>Year 2016</b>					
January	63,607	45,683	16,452	75	1,397
February	52,019	37,815	12,846	75	1,282
March	41,297	31,215	8,733	74	1,275
April	40,280	28,818	10,341	46	1,076
May	46,297	33,928	11,154	37	1,178
June	64,539	46,432	16,818	46	1,243
July	75,604	54,224	20,012	46	1,321
August	75,232	53,951	19,938	49	1,292
Sept	63,592	44,881	17,504	50	1,157
October	55,798	39,543	15,079	50	1,126
November	49,331	35,322	12,857	60	1,093
December	66,362	47,359	17,648	75	1,280
<b>Year 2017</b>					
January	64,930	47,008	16,588	71	1,264
February	49,183	35,705	12,344	58	1,077
March	50,132	35,893	13,032	66	1,141
April	45,408	31,624	12,735	42	1,008
May	52,034	37,582	13,370	39	1,043
June	60,005	43,955	14,965	40	1,045
July	70,971	52,225	17,656	47	1,042
August	66,975	49,209	16,673	43	1,050
Sept	55,817	39,596	15,184	45	991
October	51,238	36,413	13,686	42	1,098
November	52,142	36,042	14,971	52	1,077
December	59,743	41,940	16,598	66	1,139
<b>Year 2018</b>					
January	65,921	47,941	16,665	70	1,245
February	46,922	34,148	11,609	54	1,111
March	45,631	32,478	11,961	51	1,140
April	41,662	30,541	10,060	45	1,016
May	48,567	35,393	12,092	41	1,041
June	57,119	42,659	13,430	42	989
July	64,876	48,487	15,364	47	978
August	64,743	48,061	15,690	49	942
Sept	55,025	40,502	13,496	51	977
October	49,496	35,772	12,749	42	933
November	52,856	38,191	13,598	48	1,018
December	56,735	41,710	13,900	47	1,078
<b>Year to Date</b>					
2016	693,958	499,172	179,383	683	14,720
2017	678,578	487,192	177,801	610	12,975
2018	649,554	475,884	160,613	587	12,468
<b>Rolling 12 Months Ending in December</b>					
2017	678,578	487,192	177,801	610	12,975
2018	649,554	475,884	160,613	587	12,468

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 2017 and prior years are final. Values for 2018 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, 2008-December 2018 (Thousand Barrels)**

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
<b>Annual Totals</b>					
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
2016	22,405	16,137	5,624	108	536
2017	21,696	15,567	5,461	191	476
2018	27,245	17,733	8,692	281	539
<b>Year 2016</b>					
January	2,472	1,727	685	12	48
February	2,230	1,474	698	12	46
March	1,495	1,096	355	4	40
April	1,421	1,055	320	8	38
May	1,662	1,212	386	8	56
June	1,693	1,275	364	7	48
July	2,287	1,711	514	11	52
August	2,231	1,644	537	10	39
Sept	1,620	1,128	441	7	44
October	1,629	1,156	423	7	43
November	1,672	1,249	372	11	40
December	1,995	1,410	530	12	43
<b>Year 2017</b>					
January	1,937	1,436	433	20	48
February	1,542	1,143	345	13	41
March	1,658	1,342	262	15	40
April	1,479	1,153	281	9	36
May	1,713	1,290	373	15	35
June	1,763	1,313	403	13	34
July	1,592	1,173	369	16	34
August	1,710	1,267	390	19	34
Sept	1,623	1,199	372	14	38
October	1,674	1,303	319	13	39
November	1,591	1,170	362	15	45
December	3,414	1,779	1,551	31	52
<b>Year 2018</b>					
January	9,046	4,361	4,541	66	78
February	1,369	1,090	219	15	44
March	1,409	1,058	297	12	42
April	1,529	1,128	349	16	37
May	1,780	1,297	421	20	42
June	1,826	1,343	421	19	43
July	1,691	1,177	430	28	56
August	1,816	1,258	495	25	38
Sept	1,775	1,346	372	20	37
October	1,732	1,318	359	17	38
November	1,654	1,207	384	23	40
December	1,618	1,150	405	20	43
<b>Year to Date</b>					
2016	22,405	16,137	5,624	108	536
2017	21,696	15,567	5,461	191	476
2018	27,245	17,733	8,692	281	539
<b>Rolling 12 Months Ending in December</b>					
2017	21,696	15,567	5,461	191	476
2018	27,245	17,733	8,692	281	539

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 2017 and prior years are final. Values for 2018 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, 2008-December 2018 (Thousand Barrels)**

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
<b>Annual Totals</b>					
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
2016	2,277	68	245	245	1,719
2017	2,012	72	220	238	1,482
2018	2,694	92	320	363	1,919
<b>Year 2016</b>					
January	231	12	24	43	153
February	316	17	39	27	233
March	178	3	28	7	140
April	174	3	16	17	138
May	198	3	18	14	163
June	181	6	13	14	149
July	185	2	12	28	142
August	153	3	15	18	117
Sept	143	3	14	9	117
October	174	3	18	9	144
November	167	4	14	35	113
December	178	9	33	26	110
<b>Year 2017</b>					
January	199	13	37	36	113
February	137	9	17	24	87
March	152	5	8	26	113
April	140	3	10	12	117
May	137	3	12	15	107
June	120	4	13	10	92
July	117	3	12	12	89
August	119	3	11	15	91
Sept	134	3	18	11	102
October	142	3	16	13	110
November	242	4	19	19	200
December	373	19	47	46	262
<b>Year 2018</b>					
January	717	49	107	108	453
February	147	5	10	26	107
March	165	4	13	22	126
April	147	4	12	19	113
May	164	3	17	17	126
June	221	5	14	16	187
July	175	3	11	30	131
August	167	4	12	25	127
Sept	170	6	12	17	135
October	169	5	16	17	131
November	182	2	16	30	133
December	270	3	80	36	151
<b>Year to Date</b>					
2016	2,277	68	245	245	1,719
2017	2,012	72	220	238	1,482
2018	2,694	92	320	363	1,919
<b>Rolling 12 Months Ending in December</b>					
2017	2,012	72	220	238	1,482
2018	2,694	92	320	363	1,919

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 2017 and prior years are final. Values for 2018 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, 2008-December 2018 (Thousand Barrels)**

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
<b>Annual Totals</b>					
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
2016	24,682	16,205	5,869	352	2,255
2017	23,708	15,640	5,681	429	1,958
2018	29,940	17,825	9,013	644	2,457
<b>Year 2016</b>					
January	2,702	1,739	709	55	200
February	2,546	1,491	737	38	279
March	1,673	1,099	383	12	180
April	1,594	1,058	337	24	175
May	1,860	1,216	403	22	219
June	1,875	1,281	377	21	197
July	2,472	1,713	527	38	194
August	2,384	1,647	552	28	156
Sept	1,763	1,131	455	16	161
October	1,803	1,159	441	16	187
November	1,838	1,254	386	46	153
December	2,173	1,419	563	37	154
<b>Year 2017</b>					
January	2,136	1,450	470	56	161
February	1,679	1,152	362	37	128
March	1,810	1,346	271	40	152
April	1,620	1,155	291	21	153
May	1,850	1,293	385	30	142
June	1,883	1,317	416	23	126
July	1,709	1,177	381	28	123
August	1,829	1,270	400	33	125
Sept	1,756	1,202	390	24	140
October	1,816	1,306	335	26	149
November	1,833	1,174	381	34	245
December	3,787	1,797	1,598	77	314
<b>Year 2018</b>					
January	9,764	4,410	4,648	175	531
February	1,516	1,095	229	40	151
March	1,574	1,062	310	35	168
April	1,676	1,132	361	35	149
May	1,944	1,300	438	37	169
June	2,048	1,348	435	36	229
July	1,865	1,180	441	58	187
August	1,984	1,262	508	50	165
Sept	1,945	1,352	384	36	173
October	1,900	1,323	375	34	168
November	1,836	1,210	400	53	173
December	1,888	1,153	485	57	194
<b>Year to Date</b>					
2016	24,682	16,205	5,869	352	2,255
2017	23,708	15,640	5,681	429	1,958
2018	29,940	17,825	9,013	644	2,457
<b>Rolling 12 Months Ending in December</b>					
2017	23,708	15,640	5,681	429	1,958
2018	29,940	17,825	9,013	644	2,457

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 2017 and prior years are final. Values for 2018 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, 2008-December 2018 (Thousand Tons)**

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
<b>Annual Totals</b>					
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
2016	4,253	3,427	591	2	233
2017	3,490	2,731	542	3	214
2018	3,311	2,740	388	2	181
<b>Year 2016</b>					
January	342	302	16	0	23
February	330	271	39	0	19
March	362	283	63	0	17
April	382	325	43	0	14
May	370	296	52	0	23
June	380	308	52	0	21
July	400	324	56	0	20
August	419	337	61	0	21
Sept	376	311	49	0	16
October	250	171	61	0	18
November	307	239	46	0	21
December	336	260	55	0	20
<b>Year 2017</b>					
January	368	301	51	0	15
February	277	217	44	0	15
March	265	214	31	0	20
April	168	110	41	0	16
May	329	264	49	0	16
June	350	282	48	0	20
July	344	271	51	0	22
August	300	226	52	0	22
Sept	276	209	50	0	16
October	228	171	40	0	18
November	293	234	40	0	18
December	292	231	44	0	16
<b>Year 2018</b>					
January	349	296	38	0	15
February	275	234	30	0	10
March	245	198	35	0	12
April	246	193	37	0	15
May	161	140	8	0	13
June	312	269	24	0	19
July	344	284	41	0	18
August	327	272	40	0	16
Sept	316	259	39	0	18
October	190	158	15	0	16
November	247	196	38	0	13
December	299	241	41	0	17
<b>Year to Date</b>					
2016	4,253	3,427	591	2	233
2017	3,490	2,731	542	3	214
2018	3,311	2,740	388	2	181
<b>Rolling 12 Months Ending in December</b>					
2017	3,490	2,731	542	3	214
2018	3,311	2,740	388	2	181

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 2017 and prior years are final. Values for 2018 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, 2008-December 2018 (Thousand Tons)**

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
<b>Annual Totals</b>					
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
2016	1,099	6	113	9	971
2017	977	11	115	15	836
2018	833	12	93	10	717
<b>Year 2016</b>					
January	86	1	11	2	73
February	95	0	10	2	83
March	85	0	11	2	72
April	73	1	7	0	66
May	96	0	7	0	89
June	100	0	9	0	91
July	101	1	9	1	91
August	101	1	10	0	91
Sept	75	1	10	0	64
October	92	1	11	0	80
November	99	0	10	0	89
December	95	1	10	2	83
<b>Year 2017</b>					
January	81	0	10	2	70
February	69	0	10	1	58
March	90	1	10	2	77
April	74	0	10	1	64
May	78	1	10	1	66
June	91	1	9	1	80
July	86	1	10	0	75
August	90	2	9	2	77
Sept	76	1	9	2	64
October	86	1	9	1	74
November	80	1	9	1	69
December	76	1	10	2	63
<b>Year 2018</b>					
January	72	1	9	2	60
February	63	1	8	2	53
March	62	1	9	1	50
April	78	1	10	1	66
May	64	1	6	0	57
June	66	1	1	0	63
July	72	1	9	0	62
August	68	1	9	0	58
Sept	72	1	7	1	63
October	75	0	9	1	64
November	65	1	8	2	55
December	76	1	8	2	65
<b>Year to Date</b>					
2016	1,099	6	113	9	971
2017	977	11	115	15	836
2018	833	12	93	10	717
<b>Rolling 12 Months Ending in December</b>					
2017	977	11	115	15	836
2018	833	12	93	10	717

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 2017 and prior years are final. Values for 2018 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, 2008-December 2018 (Thousand Tons)**

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
<b>Annual Totals</b>					
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
2016	5,352	3,433	705	10	1,204
2017	4,467	2,742	657	17	1,050
2018	4,144	2,752	481	12	898
<b>Year 2016</b>					
January	427	302	27	3	96
February	425	272	49	2	102
March	447	283	74	2	89
April	455	326	50	0	80
May	466	296	58	0	112
June	480	308	60	0	111
July	502	325	65	1	111
August	520	337	71	0	112
Sept	451	311	59	0	80
October	342	172	72	0	99
November	406	240	56	0	110
December	431	261	65	2	103
<b>Year 2017</b>					
January	449	301	61	2	85
February	347	218	54	1	74
March	355	215	41	2	97
April	242	110	51	1	80
May	406	265	59	1	82
June	441	283	57	1	100
July	430	272	60	0	98
August	390	228	61	2	99
Sept	352	211	60	2	80
October	314	172	49	2	92
November	373	235	49	1	87
December	368	233	54	2	80
<b>Year 2018</b>					
January	421	297	47	2	75
February	338	235	38	2	63
March	307	199	44	2	63
April	323	195	47	1	81
May	225	141	14	0	70
June	378	270	26	0	82
July	416	285	50	0	80
August	395	273	49	0	73
Sept	389	260	47	1	81
October	264	159	24	1	80
November	312	196	46	2	68
December	376	242	50	2	82
<b>Year to Date</b>					
2016	5,352	3,433	705	10	1,204
2017	4,467	2,742	657	17	1,050
2018	4,144	2,752	481	12	898
<b>Rolling 12 Months Ending in December</b>					
2017	4,467	2,742	657	17	1,050
2018	4,144	2,752	481	12	898

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 2017 and prior years are final. Values for 2018 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, 2008-December 2018 (Million Cubic Feet)**

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
<b>Annual Totals</b>					
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
2016	10,170,110	5,018,894	4,571,375	46,304	533,537
2017	9,507,760	4,754,883	4,161,987	50,060	540,830
2018	10,855,155	5,494,870	4,756,881	51,844	551,560
<b>Year 2016</b>					
January	786,040	390,246	347,970	3,499	44,325
February	702,082	352,877	304,311	3,344	41,550
March	758,344	377,953	333,147	3,493	43,751
April	734,600	362,063	327,542	3,278	41,717
May	819,345	407,178	365,297	3,620	43,251
June	985,722	497,616	439,024	4,109	44,973
July	1,157,589	569,028	535,036	5,188	48,337
August	1,168,337	564,916	549,161	5,384	48,875
Sept	932,041	451,574	431,159	4,223	45,086
October	760,610	368,087	345,831	3,675	43,017
November	679,004	333,973	298,069	2,944	44,018
December	686,396	343,384	294,829	3,547	44,637
<b>Year 2017</b>					
January	679,456	337,365	291,293	4,212	46,587
February	587,375	291,892	250,059	3,763	41,661
March	690,237	350,941	290,725	4,044	44,527
April	646,952	331,856	268,401	3,537	43,158
May	720,458	374,380	298,341	3,820	43,917
June	872,928	436,021	386,492	4,400	46,015
July	1,104,716	552,301	498,292	4,942	49,181
August	1,043,414	516,896	474,421	4,803	47,295
Sept	877,808	433,254	397,947	4,400	42,206
October	791,673	385,327	358,763	4,105	43,478
November	686,346	340,195	298,079	3,776	44,297
December	806,395	404,455	349,174	4,259	48,508
<b>Year 2018</b>					
January	804,466	420,245	332,392	4,152	47,678
February	717,482	356,680	314,828	3,965	42,008
March	770,858	387,882	336,121	4,114	42,741
April	726,713	369,332	309,650	3,908	43,822
May	872,155	456,439	367,191	4,104	44,420
June	972,150	510,445	411,715	4,433	45,557
July	1,254,838	641,395	559,827	5,135	48,481
August	1,216,432	606,866	555,026	5,164	49,377
Sept	1,064,493	536,030	477,656	4,666	46,142
October	914,106	458,225	406,569	4,288	45,024
November	777,300	384,952	340,874	3,818	47,656
December	764,161	366,377	345,032	4,098	48,654
<b>Year to Date</b>					
2016	10,170,110	5,018,894	4,571,375	46,304	533,537
2017	9,507,760	4,754,883	4,161,987	50,060	540,830
2018	10,855,155	5,494,870	4,756,881	51,844	551,560
<b>Rolling 12 Months Ending in December</b>					
2017	9,507,760	4,754,883	4,161,987	50,060	540,830
2018	10,855,155	5,494,870	4,756,881	51,844	551,560

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 2017 and prior years are final. Values for 2018 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, 2008-December 2018 (Million Cubic Feet)**

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
<b>Annual Totals</b>					
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
2016	1,151,866	38,096	356,905	80,943	675,922
2017	1,168,850	38,740	309,945	104,324	715,842
2018	1,235,703	41,038	332,905	103,286	758,474
<b>Year 2016</b>					
January	102,014	3,434	32,304	7,160	59,117
February	92,405	3,264	29,348	6,354	53,439
March	95,161	3,002	30,664	6,298	55,197
April	88,634	2,286	27,002	6,104	53,241
May	92,471	2,888	29,069	6,096	54,418
June	96,618	3,649	30,019	6,907	56,043
July	102,867	3,805	32,099	8,142	58,821
August	105,025	3,723	33,436	8,377	59,489
Sept	95,330	2,973	29,581	6,850	55,926
October	92,360	2,740	27,138	6,125	56,357
November	90,321	2,812	27,191	5,773	54,544
December	98,660	3,520	29,054	6,758	59,328
<b>Year 2017</b>					
January	101,360	3,704	27,262	9,905	60,489
February	90,127	3,216	23,614	8,341	54,956
March	97,233	3,489	27,021	8,120	58,603
April	89,236	2,985	23,807	6,830	55,614
May	92,148	3,093	24,244	7,223	57,587
June	95,359	2,722	25,799	8,475	58,363
July	103,932	3,441	27,792	9,956	62,744
August	101,846	3,216	27,487	9,983	61,161
Sept	97,464	2,980	25,078	8,964	60,443
October	97,666	3,046	25,407	8,647	60,566
November	95,578	3,119	24,763	8,391	59,305
December	106,899	3,729	27,671	9,488	66,010
<b>Year 2018</b>					
January	109,088	3,577	29,046	9,474	66,991
February	97,799	3,169	26,576	8,610	59,444
March	103,896	3,312	28,085	8,710	63,789
April	97,057	2,981	25,424	8,135	60,517
May	97,070	3,150	26,420	7,928	59,572
June	99,605	3,536	26,776	8,226	61,067
July	107,012	4,154	30,257	9,006	63,596
August	106,322	4,161	29,287	8,884	63,990
Sept	101,127	3,498	27,324	8,293	62,012
October	100,725	3,211	26,980	8,319	62,215
November	105,970	3,060	27,410	8,659	66,841
December	110,030	3,229	29,319	9,042	68,440
<b>Year to Date</b>					
2016	1,151,866	38,096	356,905	80,943	675,922
2017	1,168,850	38,740	309,945	104,324	715,842
2018	1,235,703	41,038	332,905	103,286	758,474
<b>Rolling 12 Months Ending in December</b>					
2017	1,168,850	38,740	309,945	104,324	715,842
2018	1,235,703	41,038	332,905	103,286	758,474

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 2017 and prior years are final. Values for 2018 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.C. Natural Gas: Consumption for Electricity Generation and Useful Thermal Output, by Sector, 2008-December 2018 (Million Cubic Feet)**

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
<b>Annual Totals</b>					
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
2016	11,321,975	5,056,990	4,928,280	127,246	1,209,459
2017	10,676,610	4,793,623	4,471,932	154,383	1,256,672
2018	12,090,858	5,535,908	5,089,786	155,131	1,310,034
<b>Year 2016</b>					
January	888,054	393,680	380,273	10,658	103,442
February	794,487	356,141	333,659	9,697	94,990
March	853,505	380,955	363,811	9,791	98,949
April	823,234	364,349	354,544	9,383	94,958
May	911,816	410,066	394,365	9,716	97,669
June	1,082,340	501,265	469,043	11,016	101,016
July	1,260,455	572,833	567,135	13,330	107,158
August	1,273,362	568,640	582,596	13,761	108,365
Sept	1,027,371	454,547	460,740	11,073	101,012
October	852,970	370,827	372,969	9,800	99,374
November	769,325	336,785	325,260	8,716	98,563
December	785,056	346,904	323,883	10,305	103,965
<b>Year 2017</b>					
January	780,816	341,068	318,555	14,116	107,077
February	677,502	295,109	273,673	12,104	96,617
March	787,471	354,430	317,746	12,165	103,130
April	736,188	334,841	292,208	10,367	98,772
May	812,607	377,474	322,585	11,043	101,504
June	968,287	438,743	412,291	12,875	104,377
July	1,208,649	555,742	526,084	14,898	111,925
August	1,145,261	520,111	501,908	14,786	108,456
Sept	975,272	436,234	423,025	13,364	102,649
October	889,339	388,373	384,170	12,752	104,044
November	781,924	343,314	322,841	12,167	103,602
December	913,294	408,184	376,845	13,747	114,519
<b>Year 2018</b>					
January	913,555	423,822	361,438	13,625	114,669
February	815,281	359,850	341,404	12,575	101,452
March	874,754	391,194	364,206	12,824	106,530
April	823,770	372,313	335,075	12,043	104,340
May	969,225	459,589	393,611	12,032	103,992
June	1,071,754	513,981	438,490	12,659	106,624
July	1,361,850	645,550	590,084	14,140	112,077
August	1,322,754	611,027	584,313	14,048	113,366
Sept	1,165,621	539,527	504,980	12,959	108,154
October	1,014,832	461,437	433,550	12,607	107,239
November	883,270	388,012	368,284	12,477	114,497
December	874,192	369,606	374,352	13,139	117,094
<b>Year to Date</b>					
2016	11,321,975	5,056,990	4,928,280	127,246	1,209,459
2017	10,676,610	4,793,623	4,471,932	154,383	1,256,672
2018	12,090,858	5,535,908	5,089,786	155,131	1,310,034
<b>Rolling 12 Months Ending in December</b>					
2017	10,676,610	4,793,623	4,471,932	154,383	1,256,672
2018	12,090,858	5,535,908	5,089,786	155,131	1,310,034

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 2017 and prior years are final. Values for 2018 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, 2008-December 2018 (Million Cubic Feet)**

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
<b>Annual Totals</b>					
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
2016	273,557	24,280	224,993	20,445	3,839
2017	278,112	25,074	229,050	20,121	3,866
2018	284,667	25,646	236,388	19,466	3,167
<b>Year 2016</b>					
January	22,612	2,036	18,360	1,865	351
February	21,859	2,088	17,744	1,705	323
March	23,337	2,187	19,021	1,786	343
April	22,556	2,080	18,805	1,340	331
May	23,744	2,120	19,554	1,717	354
June	22,668	1,896	18,683	1,768	320
July	23,052	1,950	19,047	1,734	321
August	23,038	2,011	18,978	1,726	324
Sept	21,757	2,010	17,792	1,678	278
October	20,377	1,922	16,583	1,610	263
November	24,047	1,941	20,036	1,762	307
December	24,510	2,041	20,392	1,753	324
<b>Year 2017</b>					
January	25,272	2,182	20,948	1,784	358
February	21,912	2,167	17,878	1,529	337
March	24,177	2,303	19,774	1,742	359
April	22,941	2,145	18,844	1,620	332
May	23,879	2,202	19,651	1,731	294
June	23,091	1,921	19,163	1,670	336
July	22,896	1,983	18,932	1,702	279
August	22,923	2,030	18,919	1,668	305
Sept	22,102	1,851	18,287	1,672	292
October	22,063	2,037	18,243	1,465	318
November	22,870	2,105	18,715	1,728	322
December	23,986	2,148	19,695	1,810	333
<b>Year 2018</b>					
January	25,148	2,570	20,492	1,782	305
February	23,593	2,396	19,225	1,661	311
March	25,276	2,604	20,497	1,847	327
April	23,720	2,353	19,467	1,593	307
May	23,568	2,195	19,632	1,474	267
June	23,693	2,007	19,930	1,504	252
July	23,948	2,006	20,218	1,492	232
August	24,699	2,059	20,932	1,494	214
Sept	21,204	1,702	17,849	1,454	198
October	23,068	1,909	19,210	1,704	246
November	22,951	1,907	19,077	1,715	252
December	23,800	1,940	19,859	1,746	255
<b>Year to Date</b>					
2016	273,557	24,280	224,993	20,445	3,839
2017	278,112	25,074	229,050	20,121	3,866
2018	284,667	25,646	236,388	19,466	3,167
<b>Rolling 12 Months Ending in December</b>					
2017	278,112	25,074	229,050	20,121	3,866
2018	284,667	25,646	236,388	19,466	3,167

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 2017 and prior years are final. Values for 2018 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, 2008-December 2018 (Million Cubic Feet)**

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
<b>Annual Totals</b>					
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
2016	4,163	3	2,339	1,034	788
2017	3,940	2	1,948	1,099	891
2018	4,032	8	2,242	911	871
<b>Year 2016</b>					
January	352	0	202	84	66
February	340	0	189	86	65
March	358	0	196	86	75
April	355	0	201	88	66
May	356	0	194	90	72
June	344	0	193	85	66
July	335	0	181	87	66
August	332	0	181	82	68
Sept	327	0	187	81	59
October	301	0	157	87	56
November	378	0	227	86	66
December	387	0	230	91	65
<b>Year 2017</b>					
January	352	0	171	94	87
February	329	0	156	92	81
March	353	0	177	92	84
April	346	0	153	107	87
May	299	0	134	85	80
June	329	0	165	89	75
July	312	0	176	85	51
August	348	0	172	98	78
Sept	330	0	169	98	62
October	319	0	170	93	56
November	298	0	140	85	73
December	324	0	165	81	77
<b>Year 2018</b>					
January	411	1	259	68	83
February	400	1	238	79	82
March	435	1	262	82	90
April	351	1	179	85	87
May	272	1	127	71	73
June	248	1	135	46	67
July	264	1	126	76	62
August	282	1	138	82	61
Sept	268	0	128	82	57
October	380	1	212	95	73
November	369	0	220	73	75
December	353	0	219	71	63
<b>Year to Date</b>					
2016	4,163	3	2,339	1,034	788
2017	3,940	2	1,948	1,099	891
2018	4,032	8	2,242	911	871
<b>Rolling 12 Months Ending in December</b>					
2017	3,940	2	1,948	1,099	891
2018	4,032	8	2,242	911	871

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 2017 and prior years are final. Values for 2018 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, 2008-December 2018 (Million Cubic Feet)**

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
<b>Annual Totals</b>					
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
2016	277,720	24,283	227,332	21,479	4,626
2017	282,051	25,076	230,998	21,220	4,757
2018	288,699	25,655	238,630	20,377	4,038
<b>Year 2016</b>					
January	22,964	2,036	18,562	1,949	417
February	22,200	2,088	17,933	1,791	388
March	23,694	2,187	19,217	1,873	417
April	22,911	2,081	19,005	1,428	397
May	24,100	2,120	19,748	1,807	425
June	23,012	1,896	18,876	1,853	386
July	23,387	1,950	19,229	1,822	386
August	23,370	2,011	19,159	1,808	392
Sept	22,084	2,010	17,978	1,759	337
October	20,678	1,922	16,740	1,697	319
November	24,425	1,941	20,263	1,848	373
December	24,897	2,042	20,622	1,845	388
<b>Year 2017</b>					
January	25,625	2,182	21,119	1,878	446
February	22,241	2,167	18,034	1,621	419
March	24,530	2,303	19,951	1,834	442
April	23,287	2,146	18,996	1,727	418
May	24,178	2,202	19,785	1,816	374
June	23,419	1,921	19,329	1,759	411
July	23,208	1,983	19,108	1,786	330
August	23,271	2,030	19,092	1,766	383
Sept	22,431	1,851	18,456	1,771	354
October	22,382	2,037	18,413	1,558	374
November	23,168	2,105	18,855	1,813	395
December	24,310	2,149	19,860	1,891	410
<b>Year 2018</b>					
January	25,560	2,571	20,751	1,850	388
February	23,993	2,396	19,463	1,740	393
March	25,710	2,605	20,759	1,929	417
April	24,071	2,353	19,645	1,679	394
May	23,839	2,195	19,759	1,545	340
June	23,941	2,008	20,064	1,550	319
July	24,212	2,007	20,344	1,568	293
August	24,981	2,059	21,071	1,576	275
Sept	21,471	1,702	17,978	1,536	255
October	23,449	1,909	19,421	1,799	319
November	23,320	1,908	19,297	1,788	327
December	24,153	1,940	20,078	1,817	318
<b>Year to Date</b>					
2016	277,720	24,283	227,332	21,479	4,626
2017	282,051	25,076	230,998	21,220	4,757
2018	288,699	25,655	238,630	20,377	4,038
<b>Rolling 12 Months Ending in December</b>					
2017	282,051	25,076	230,998	21,220	4,757
2018	288,699	25,655	238,630	20,377	4,038

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 2017 and prior years are final. Values for 2018 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, 2008-December 2018 (Thousand Tons)**

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
<b>Annual Totals</b>					
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
2016	16,994	464	13,953	2,566	11
2017	16,348	422	13,381	2,537	8
2018	16,557	467	13,702	2,379	9
<b>Year 2016</b>					
January	1,398	34	1,161	202	1
February	1,283	27	1,081	174	1
March	1,344	41	1,091	211	1
April	1,413	40	1,153	219	1
May	1,463	44	1,205	214	1
June	1,468	40	1,202	225	1
July	1,486	37	1,212	236	1
August	1,509	42	1,233	233	1
Sept	1,397	43	1,142	210	1
October	1,378	37	1,127	213	1
November	1,379	39	1,127	212	1
December	1,476	38	1,220	218	0
<b>Year 2017</b>					
January	1,434	35	1,194	205	0
February	1,244	19	1,034	191	0
March	1,330	36	1,091	204	0
April	1,288	35	1,044	209	0
May	1,410	36	1,147	226	1
June	1,421	38	1,175	207	1
July	1,440	41	1,172	226	1
August	1,453	47	1,182	223	1
Sept	1,321	41	1,072	207	1
October	1,317	33	1,065	218	1
November	1,311	30	1,074	207	1
December	1,378	32	1,132	214	1
<b>Year 2018</b>					
January	1,350	28	1,132	190	0
February	1,278	26	1,076	175	1
March	1,377	40	1,138	198	1
April	1,342	38	1,109	194	1
May	1,398	43	1,143	212	1
June	1,454	42	1,202	208	1
July	1,458	48	1,208	200	1
August	1,461	47	1,204	209	1
Sept	1,313	36	1,082	194	1
October	1,372	43	1,130	199	0
November	1,356	39	1,120	196	0
December	1,398	37	1,157	204	0
<b>Year to Date</b>					
2016	16,994	464	13,953	2,566	11
2017	16,348	422	13,381	2,537	8
2018	16,557	467	13,702	2,379	9
<b>Rolling 12 Months Ending in December</b>					
2017	16,348	422	13,381	2,537	8
2018	16,557	467	13,702	2,379	9

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 2017 and prior years are final. Values for 2018 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.B. Biogenic Municipal Solid Waste: Consumption for Useful Thermal Output, by Sector, 2008-December 2018 (Thousand Tons)**

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
<b>Annual Totals</b>					
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
2016	2,232	0	885	1,134	213
2017	2,124	0	814	1,102	208
2018	1,898	0	752	957	189
<b>Year 2016</b>					
January	191	0	80	92	18
February	189	0	87	88	14
March	219	0	96	104	19
April	181	0	65	98	18
May	182	0	70	96	17
June	172	0	73	81	18
July	186	0	74	96	16
August	191	0	71	96	23
Sept	176	0	64	95	18
October	179	0	65	95	19
November	180	0	68	94	17
December	185	0	71	98	16
<b>Year 2017</b>					
January	203	0	72	111	20
February	171	0	64	94	12
March	187	0	75	93	19
April	173	0	69	86	18
May	182	0	69	96	18
June	185	0	68	101	16
July	185	0	72	97	17
August	196	0	77	97	22
Sept	154	0	63	74	17
October	155	0	59	78	18
November	166	0	64	88	15
December	168	0	63	88	17
<b>Year 2018</b>					
January	170	0	64	90	17
February	151	0	60	80	12
March	155	0	64	79	12
April	147	0	54	77	16
May	161	0	59	86	16
June	163	0	65	80	18
July	164	0	65	83	17
August	168	0	66	80	21
Sept	134	0	58	58	17
October	150	0	61	73	16
November	162	0	66	82	14
December	172	0	70	90	13
<b>Year to Date</b>					
2016	2,232	0	885	1,134	213
2017	2,124	0	814	1,102	208
2018	1,898	0	752	957	189
<b>Rolling 12 Months Ending in December</b>					
2017	2,124	0	814	1,102	208
2018	1,898	0	752	957	189

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 2017 and prior years are final. Values for 2018 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.C. Biogenic Municipal Solid Waste: Consumption for Electricity Generation and

## Useful Thermal Output, by Sector, 2008-December 2018 (Thousand Tons)

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
Annual Totals					
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
2016	19,226	464	14,838	3,700	224
2017	18,473	422	14,195	3,639	216
2018	18,454	467	14,454	3,336	197
Year 2016					
January	1,589	34	1,241	295	19
February	1,472	27	1,167	262	15
March	1,563	41	1,188	315	19
April	1,594	40	1,218	317	18
May	1,646	44	1,274	310	18
June	1,640	40	1,275	305	19
July	1,673	37	1,286	332	17
August	1,700	42	1,304	330	25
Sept	1,573	43	1,206	305	19
October	1,557	37	1,192	308	20
November	1,559	39	1,195	306	18
December	1,661	38	1,291	316	16
Year 2017					
January	1,637	35	1,266	316	20
February	1,415	19	1,098	286	12
March	1,517	36	1,165	297	19
April	1,461	35	1,113	294	18
May	1,592	36	1,215	322	19
June	1,606	38	1,243	309	17
July	1,625	41	1,244	323	18
August	1,649	47	1,259	320	23
Sept	1,475	41	1,135	281	18
October	1,472	33	1,124	295	19
November	1,477	30	1,138	295	15
December	1,546	32	1,195	301	18
Year 2018					
January	1,521	28	1,196	279	17
February	1,429	26	1,136	255	13
March	1,532	40	1,202	277	13
April	1,489	38	1,163	271	17
May	1,559	43	1,202	297	17
June	1,617	42	1,267	289	19
July	1,622	48	1,273	283	18
August	1,629	47	1,270	290	22
Sept	1,447	36	1,141	252	18
October	1,521	43	1,191	271	16
November	1,518	39	1,187	278	14
December	1,570	37	1,227	293	13
Year to Date					
2016	19,226	464	14,838	3,700	224
2017	18,473	422	14,195	3,639	216
2018	18,454	467	14,454	3,336	197
Rolling 12 Months Ending in December					
2017	18,473	422	14,195	3,639	216
2018	18,454	467	14,454	3,336	197

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 2017 and prior years are final. Values for 2018 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, 2008-December 2018 (Billion Btus)**

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
<b>Annual Totals</b>					
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
2016	359,983	41,036	149,516	473	168,959
2017	363,971	42,806	151,877	460	168,828
2018	351,162	45,112	136,005	520	169,526
<b>Year 2016</b>					
January	31,835	4,082	13,250	40	14,463
February	30,721	3,797	13,249	41	13,634
March	30,380	3,388	13,073	23	13,897
April	25,323	2,547	10,177	31	12,569
May	26,827	2,497	10,522	14	13,794
June	29,961	3,835	11,762	59	14,305
July	32,167	4,067	13,230	51	14,818
August	33,526	4,113	14,559	72	14,782
Sept	30,502	3,489	13,145	51	13,817
October	27,598	2,574	11,139	29	13,857
November	29,176	2,597	12,211	20	14,349
December	31,967	4,051	13,200	42	14,674
<b>Year 2017</b>					
January	31,111	4,492	12,653	56	13,910
February	28,404	3,584	11,989	50	12,781
March	31,284	4,210	13,448	26	13,601
April	27,497	3,136	11,066	34	13,261
May	28,273	2,799	11,614	43	13,817
June	30,264	3,180	12,592	38	14,454
July	32,600	3,942	13,505	41	15,112
August	33,336	3,803	14,249	41	15,244
Sept	28,574	2,090	13,001	15	13,469
October	28,951	3,387	11,782	33	13,748
November	30,458	3,608	12,600	41	14,210
December	33,219	4,575	13,378	43	15,222
<b>Year 2018</b>					
January	31,979	4,532	12,715	63	14,669
February	28,612	3,645	11,446	42	13,478
March	30,009	4,010	11,542	36	14,422
April	25,684	2,208	9,889	16	13,570
May	30,567	3,455	12,161	32	14,920
June	30,862	4,157	12,369	53	14,283
July	31,531	4,337	12,285	59	14,851
August	30,192	4,299	11,379	69	14,444
Sept	27,655	3,607	10,584	52	13,412
October	27,526	3,491	10,643	27	13,365
November	27,289	3,610	9,892	20	13,767
December	29,256	3,760	11,100	51	14,345
<b>Year to Date</b>					
2016	359,983	41,036	149,516	473	168,959
2017	363,971	42,806	151,877	460	168,828
2018	351,162	45,112	136,005	520	169,526
<b>Rolling 12 Months Ending in December</b>					
2017	363,971	42,806	151,877	460	168,828
2018	351,162	45,112	136,005	520	169,526

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 2017 and prior years are final. Values for 2018 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, 2008-December 2018 (Billion Btus)**

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
<b>Annual Totals</b>					
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
2016	969,841	10,950	22,905	4,520	931,465
2017	1,036,427	11,656	22,986	4,522	997,263
2018	1,036,410	10,876	23,113	4,806	997,615
<b>Year 2016</b>					
January	84,483	1,087	2,270	460	80,665
February	79,157	1,150	2,299	415	75,293
March	79,225	1,084	1,926	288	75,928
April	74,954	732	1,780	353	72,089
May	78,419	949	1,753	280	75,437
June	79,180	707	1,832	415	76,225
July	80,796	943	1,826	384	77,644
August	81,164	931	1,794	442	77,998
Sept	75,314	513	1,918	395	72,488
October	76,347	508	1,450	347	74,041
November	80,391	1,132	1,898	340	77,021
December	100,410	1,214	2,159	401	96,636
<b>Year 2017</b>					
January	90,099	1,206	2,090	525	86,278
February	79,451	1,037	1,879	430	76,104
March	87,759	1,170	2,113	299	84,176
April	82,426	1,044	1,548	295	79,539
May	84,129	716	1,623	301	81,490
June	85,459	1,007	1,641	322	82,490
July	89,160	683	1,963	355	86,159
August	90,434	989	2,010	365	87,071
Sept	81,960	931	2,032	233	78,763
October	86,217	893	1,972	402	82,950
November	87,430	902	1,929	473	84,126
December	91,903	1,079	2,186	524	88,115
<b>Year 2018</b>					
January	88,492	859	2,066	454	85,114
February	83,159	832	2,113	474	79,741
March	85,663	994	2,038	493	82,138
April	84,822	913	1,804	339	81,765
May	84,790	946	1,812	319	81,712
June	85,430	968	1,799	402	82,261
July	88,879	914	2,037	382	85,545
August	90,762	847	2,033	417	87,465
Sept	82,313	918	1,647	336	79,411
October	86,305	979	1,956	329	83,042
November	85,248	749	1,879	343	82,278
December	90,548	957	1,930	518	87,143
<b>Year to Date</b>					
2016	969,841	10,950	22,905	4,520	931,465
2017	1,036,427	11,656	22,986	4,522	997,263
2018	1,036,410	10,876	23,113	4,806	997,615
<b>Rolling 12 Months Ending in December</b>					
2017	1,036,427	11,656	22,986	4,522	997,263
2018	1,036,410	10,876	23,113	4,806	997,615

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 2017 and prior years are final. Values for 2018 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.C. Wood / Wood Waste Biomass: Consumption for Electricity Generation and

## Useful Thermal Output, by Sector, 2008-December 2018 (Billion Btus)

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
Annual Totals					
2008	1,262,675	29,150	148,198	1,410	1,083,917
2009	1,136,729	29,565	150,481	1,408	955,276
2010	1,225,571	40,167	155,429	1,338	1,028,637
2011	1,240,937	35,474	146,684	1,504	1,057,275
2012	1,273,500	32,723	157,468	1,427	1,081,882
2013	1,317,560	43,363	164,063	1,486	1,108,647
2014	1,377,629	54,478	196,775	4,727	1,121,648
2015	1,350,612	53,269	190,587	4,219	1,102,537
2016	1,329,824	51,986	172,421	4,993	1,100,424
2017	1,400,397	54,462	174,862	4,982	1,166,091
2018	1,387,573	55,988	159,118	5,326	1,167,141
Year 2016					
January	116,318	5,169	15,520	500	95,128
February	109,878	4,947	15,548	456	88,928
March	109,606	4,471	14,999	311	89,825
April	100,276	3,279	11,956	384	84,657
May	105,246	3,446	12,275	294	89,231
June	109,140	4,542	13,594	474	90,530
July	112,964	5,010	15,056	435	92,462
August	114,690	5,044	16,353	514	92,780
Sept	105,816	4,002	15,063	446	86,306
October	103,946	3,083	12,589	376	87,898
November	109,567	3,729	14,108	360	91,370
December	132,377	5,265	15,360	443	111,310
Year 2017					
January	121,210	5,698	14,743	581	100,188
February	107,854	4,621	13,868	480	88,885
March	119,043	5,380	15,562	325	97,777
April	109,922	4,180	12,613	328	92,800
May	112,402	3,515	13,237	344	95,306
June	115,723	4,187	14,232	360	96,944
July	121,760	4,625	15,469	395	101,271
August	123,771	4,792	16,258	406	102,315
Sept	110,535	3,021	15,033	249	92,232
October	115,168	4,281	13,754	435	96,698
November	117,888	4,509	14,529	514	98,336
December	125,122	5,654	15,564	566	103,338
Year 2018					
January	120,471	5,391	14,781	517	99,783
February	111,770	4,477	13,559	516	93,218
March	115,672	5,004	13,579	528	96,560
April	110,506	3,122	11,693	356	95,336
May	115,358	4,401	13,973	351	96,632
June	116,292	5,124	14,167	455	96,545
July	120,410	5,251	14,322	441	100,396
August	120,953	5,146	13,412	486	101,909
Sept	109,968	4,525	12,231	388	92,823
October	113,831	4,470	12,599	356	96,406
November	112,538	4,359	11,771	363	96,045
December	119,804	4,717	13,030	569	101,488
Year to Date					
2016	1,329,824	51,986	172,421	4,993	1,100,424
2017	1,400,397	54,462	174,862	4,982	1,166,091
2018	1,387,573	55,988	159,118	5,326	1,167,141
Rolling 12 Months Ending in December					
2017	1,400,398	54,462	174,862	4,982	1,166,091
2018	1,387,573	55,988	159,118	5,326	1,167,141

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 2017 and prior years are final. Values for 2018 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, December 2018 and December 2017 (Thousand Tons)**

Census Division and State	Electric Power Sector										
	All Sectors			Electric Utilities		Independent Power Producers		Commercial Sector		Industrial Sector	
	December 2018	December 2017	Percentage Change	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017
New England	60	116	-48.0%	29	50	31	66	0	0	NM	0
Connecticut	29	64	-55.0%	0	0	29	64	0	0	0	0
Maine	2	1	38.0%	0	0	2	1	0	0	NM	0
Massachusetts	0	0	--	0	0	0	0	0	0	0	0
New Hampshire	29	50	-43.0%	29	50	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	2,263	2,788	-19.0%	0	0	2,258	2,782	0	0	5	7
New Jersey	44	52	-16.0%	0	0	44	52	0	0	0	0
New York	22	47	-54.0%	0	0	22	44	0	0	0	3
Pennsylvania	2,197	2,689	-18.0%	0	0	2,193	2,685	0	0	5	4
East North Central	11,916	12,965	-8.1%	7,221	8,041	4,625	4,865	1	2	70	57
Illinois	2,818	3,038	-7.2%	231	189	2,535	2,807	1	1	52	40
Indiana	3,335	3,514	-5.1%	3,132	3,371	204	142	0	1	0	0
Michigan	2,021	1,794	13.0%	2,002	1,774	17	19	0	0	2	1
Ohio	2,078	2,534	-18.0%	209	638	1,869	1,896	0	0	0	0
Wisconsin	1,663	2,085	-20.0%	1,648	2,069	0	0	0	0	16	16
West North Central	10,638	10,362	2.7%	10,539	10,245	0	0	2	3	98	115
Iowa	1,484	1,140	30.0%	1,446	1,101	0	0	2	2	37	38
Kansas	1,318	1,219	8.1%	1,318	1,219	0	0	0	0	0	0
Minnesota	1,354	1,291	4.9%	1,336	1,259	0	0	0	0	18	33
Missouri	3,081	3,444	-11.0%	3,080	3,444	0	0	0	1	0	0
Nebraska	1,283	1,197	7.1%	1,243	1,157	0	0	0	0	40	41
North Dakota	1,944	1,930	0.7%	1,940	1,926	0	0	0	0	4	4
South Dakota	175	140	25.0%	175	140	0	0	0	0	0	0
South Atlantic	6,775	7,404	-8.5%	6,071	6,333	680	1,051	2	2	22	18
Delaware	3	31	-89.0%	0	0	3	31	0	0	0	0
District of Columbia	0	0	--	0	0	0	0	0	0	0	0
Florida	1,076	1,076	0.0%	1,074	1,074	0	0	0	0	1	2
Georgia	1,433	1,312	9.2%	1,429	1,308	0	0	0	0	3	4
Maryland	249	398	-37.0%	0	0	247	396	0	0	1	2
North Carolina	942	1,113	-15.0%	936	1,104	2	5	2	2	2	3
South Carolina	622	614	1.3%	622	613	0	0	0	0	0	1
Virginia	395	397	-0.4%	366	359	16	31	0	0	14	7
West Virginia	2,056	2,464	-17.0%	1,645	1,875	411	589	0	0	0	0
East South Central	4,845	5,414	-11.0%	4,537	5,184	296	220	0	0	11	10
Alabama	1,083	1,435	-25.0%	1,082	1,434	0	0	0	0	1	1
Kentucky	2,509	2,207	14.0%	2,509	2,207	0	0	0	0	0	0
Mississippi	413	289	43.0%	116	69	296	220	0	0	0	0
Tennessee	840	1,484	-43.0%	830	1,474	0	0	0	0	9	10
West South Central	9,676	10,875	-11.0%	5,329	5,125	4,333	5,736	0	0	13	13
Arkansas	1,750	1,455	20.0%	1,481	1,204	268	250	0	0	1	1
Louisiana	619	659	-6.1%	360	415	259	244	0	0	0	0
Oklahoma	943	778	21.0%	806	638	125	128	0	0	12	12
Texas	6,364	7,983	-20.0%	2,682	2,869	3,682	5,113	0	0	0	0
Mountain	8,508	7,816	8.8%	7,520	6,708	978	1,098	0	0	9	10
Arizona	1,493	1,349	11.0%	1,493	1,349	0	0	0	0	0	0
Colorado	1,472	1,417	3.8%	1,471	1,417	0	0	0	0	0	0
Idaho	NM	1	NM	0	0	0	0	0	0	NM	1
Montana	856	969	-12.0%	27	1	829	968	0	0	0	0
Nevada	236	47	408.0%	165	0	72	47	0	0	0	0
New Mexico	797	688	16.0%	797	688	0	0	0	0	0	0
Utah	1,335	1,186	13.0%	1,304	1,149	30	37	0	0	0	0
Wyoming	2,318	2,161	7.3%	2,263	2,105	47	47	0	0	8	8
Pacific Contiguous	757	614	23.0%	249	24	503	584	0	0	5	6
California	5	5	-16.0%	0	0	0	0	0	0	5	5
Oregon	249	24	932.0%	249	24	0	0	0	0	0	0
Washington	504	584	-14.0%	0	0	503	584	0	0	1	0
Pacific Noncontiguous	112	102	9.1%	NM	22	76	77	3	3	0	0
Alaska	49	38	30.0%	NM	22	14	13	3	3	0	0
Hawaii	62	64	-3.2%	0	0	62	64	0	0	0	0
U.S. Total	55,549	58,457	-5.0%	41,527	41,733	13,782	16,479	8	9	232	236

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 2018 are preliminary. Values for 2017 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 December 2018 and December 2017 (Thousand Tons)**

Census Division and State	Electric Power Sector										
	All Sectors			Electric Utilities		Independent Power Producers		Commercial Sector		Industrial Sector	
	December 2018 YTD	December 2017 YTD	Percentage Change	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD
New England	523	846	-38.0%	287	134	233	709	0	0	3	3
Connecticut	221	137	60.0%	0	0	221	137	0	0	0	0
Maine	15	15	-0.8%	0	0	12	12	0	0	3	3
Massachusetts	0	559	-100.0%	0	0	0	559	0	0	0	0
New Hampshire	287	134	114.0%	287	134	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	23,970	25,114	-4.6%	0	0	23,908	24,988	0	0	63	126
New Jersey	504	513	-1.8%	0	0	504	513	0	0	0	0
New York	276	311	-11.0%	0	0	272	242	0	0	4	69
Pennsylvania	23,191	24,290	-4.5%	0	0	23,132	24,233	0	0	59	57
East North Central	144,552	143,842	0.5%	87,220	88,355	56,524	54,764	22	16	786	707
Illinois	36,084	34,770	3.8%	2,254	2,166	33,239	32,059	13	8	577	538
Indiana	39,097	35,450	10.0%	36,928	34,143	2,161	1,300	9	8	0	0
Michigan	24,570	24,028	2.3%	24,321	23,796	212	217	0	0	37	15
Ohio	25,149	28,524	-12.0%	4,236	7,335	20,912	21,188	0	0	1	1
Wisconsin	19,652	21,070	-6.7%	19,480	20,916	0	0	0	0	171	154
West North Central	118,551	115,350	2.8%	117,341	114,154	0	0	21	28	1,189	1,168
Iowa	16,191	14,259	14.0%	15,675	13,765	0	0	19	22	497	473
Kansas	13,136	12,542	4.7%	13,136	12,542	0	0	0	0	0	0
Minnesota	13,541	13,231	2.3%	13,282	12,957	0	0	0	1	258	273
Missouri	37,045	39,417	-6.0%	37,042	39,411	0	0	2	5	0	0
Nebraska	14,698	12,959	13.0%	14,307	12,570	0	0	0	0	391	388
North Dakota	22,465	21,654	3.7%	22,423	21,620	0	0	0	0	42	34
South Dakota	1,475	1,289	14.0%	1,475	1,289	0	0	0	0	0	0
South Atlantic	85,832	91,459	-6.2%	75,166	81,178	10,420	10,022	12	14	235	245
Delaware	167	186	-11.0%	0	0	167	186	0	0	0	0
District of Columbia	0	0	--	0	0	0	0	0	0	0	0
Florida	13,383	16,874	-21.0%	13,362	16,800	3	48	0	0	18	26
Georgia	16,977	16,808	1.0%	16,938	16,770	0	0	0	0	39	38
Maryland	4,382	3,675	19.0%	0	0	4,367	3,656	0	0	15	18
North Carolina	12,550	13,435	-6.6%	12,478	13,339	34	52	11	12	27	32
South Carolina	8,145	7,506	8.5%	8,141	7,502	0	0	0	0	3	5
Virginia	4,657	5,118	-9.0%	4,250	4,760	274	230	1	2	132	125
West Virginia	25,571	27,856	-8.2%	19,996	22,007	5,575	5,848	0	0	0	0
East South Central	59,618	61,865	-3.6%	56,470	59,294	2,996	2,419	0	0	152	152
Alabama	16,248	16,242	0.0%	16,234	16,231	0	0	0	0	15	10
Kentucky	28,368	27,484	3.2%	28,368	27,484	0	0	0	0	0	0
Mississippi	4,506	3,865	17.0%	1,510	1,446	2,996	2,419	0	0	0	0
Tennessee	10,496	14,274	-26.0%	10,359	14,132	0	0	0	0	137	142
West South Central	110,915	128,187	-13.0%	59,876	59,045	50,916	68,972	0	0	123	170
Arkansas	17,461	15,202	15.0%	14,617	13,238	2,835	1,956	0	0	8	8
Louisiana	8,110	8,397	-3.4%	5,339	5,035	2,771	3,362	0	0	0	0
Oklahoma	9,656	11,101	-13.0%	8,348	9,852	1,193	1,088	0	0	114	162
Texas	75,689	93,488	-19.0%	31,572	30,921	44,117	62,567	0	0	0	0
Mountain	86,039	91,354	-5.8%	75,996	80,973	9,934	10,236	0	0	109	145
Arizona	16,814	16,929	-0.7%	16,814	16,929	0	0	0	0	0	0
Colorado	15,269	16,630	-8.2%	15,266	16,628	0	0	0	0	3	2
Idaho	5	5	2.9%	0	0	0	0	0	0	5	5
Montana	8,697	8,946	-2.8%	233	217	8,461	8,726	0	0	2	2
Nevada	1,412	1,097	29.0%	816	535	596	562	0	0	0	0
New Mexico	7,262	10,494	-31.0%	7,262	10,494	0	0	0	0	0	0
Utah	12,332	12,482	-1.2%	11,927	12,026	405	412	0	0	0	44
Wyoming	24,249	24,770	-2.1%	23,678	24,144	472	535	0	0	98	91
Pacific Contiguous	4,587	4,720	-2.8%	895	1,031	3,628	3,623	0	0	63	66
California	57	59	-2.9%	0	0	0	0	0	0	57	59
Oregon	895	1,031	-13.0%	895	1,031	0	0	0	0	0	0
Washington	3,635	3,630	0.1%	0	0	3,628	3,623	0	0	7	7
Pacific Noncontiguous	1,245	1,173	6.2%	314	226	893	911	39	36	0	0
Alaska	511	414	23.0%	314	226	159	152	39	36	0	0
Hawaii	734	759	-3.2%	0	0	734	759	0	0	0	0
U.S. Total	635,833	663,911	-4.2%	473,564	484,389	159,452	176,643	94	95	2,723	2,783

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 2018 are preliminary. Values for 2017 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, December 2018 and December 2017 (Thousand Barrels)**

Census Division and State	Electric Power Sector										
	All Sectors			Electric Utilities		Independent Power Producers		Commercial Sector		Industrial Sector	
	December 2018	December 2017	Percentage Change	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017
New England	33	815	-96.0%	NM	91	NM	709	3	10	2	4
Connecticut	NM	237	NM	NM	5	NM	230	NM	2	0	0
Maine	3	156	-98.0%	0	0	2	151	0	1	NM	4
Massachusetts	NM	230	NM	NM	52	NM	174	NM	4	1	0
New Hampshire	3	113	-97.0%	NM	25	NM	86	2	2	0	0
Rhode Island	NM	69	NM	0	0	NM	69	0	0	0	0
Vermont	NM	10	NM	NM	10	0	0	0	0	0	0
Middle Atlantic	82	912	-91.0%	NM	332	60	563	NM	10	6	6
New Jersey	14	72	-81.0%	2	0	12	72	0	0	0	0
New York	NM	719	NM	NM	332	NM	372	NM	10	4	4
Pennsylvania	42	121	-65.0%	0	0	40	119	0	1	2	2
East North Central	72	87	-17.0%	39	57	32	25	1	1	1	4
Illinois	9	9	8.2%	NM	2	8	7	0	0	0	0
Indiana	12	21	-44.0%	11	15	0	2	0	0	1	3
Michigan	20	26	-23.0%	19	25	0	0	0	1	NM	0
Ohio	26	30	-12.0%	NM	14	23	16	0	0	0	0
Wisconsin	NM	2	NM	NM	2	0	0	0	0	NM	0
West North Central	43	78	-45.0%	42	70	NM	8	0	0	0	0
Iowa	7	16	-56.0%	7	16	NM	0	0	0	0	0
Kansas	7	13	-45.0%	7	13	0	0	0	0	0	0
Minnesota	NM	12	NM	NM	4	NM	8	0	0	0	0
Missouri	11	26	-58.0%	11	26	0	0	0	0	0	0
Nebraska	NM	2	NM	NM	2	0	0	0	0	0	0
North Dakota	13	8	66.0%	13	8	0	0	0	0	0	0
South Dakota	NM	0	NM	NM	0	0	0	NM	0	0	0
South Atlantic	260	381	-32.0%	186	266	51	92	12	9	10	14
Delaware	NM	29	NM	0	3	NM	26	0	0	0	0
District of Columbia	0	0	--	0	0	0	0	0	0	0	0
Florida	48	71	-33.0%	45	63	NM	6	0	0	3	2
Georgia	23	39	-40.0%	18	27	NM	2	0	1	4	9
Maryland	6	26	-76.0%	0	1	NM	25	NM	0	0	1
North Carolina	52	69	-25.0%	48	65	NM	3	NM	0	1	1
South Carolina	21	18	14.0%	20	17	0	1	NM	0	1	1
Virginia	72	111	-35.0%	25	73	34	30	12	8	1	1
West Virginia	30	17	79.0%	30	17	0	0	0	0	0	0
East South Central	50	63	-20.0%	40	61	9	1	0	0	1	1
Alabama	12	11	6.6%	3	10	9	1	0	0	NM	1
Kentucky	20	17	14.0%	20	17	0	0	0	0	0	0
Mississippi	4	5	-13.0%	4	4	0	0	0	0	0	0
Tennessee	14	30	-52.0%	14	29	0	0	0	0	1	0
West South Central	16	25	-38.0%	12	24	3	1	0	0	0	0
Arkansas	NM	9	NM	NM	9	1	0	0	0	0	0
Louisiana	NM	3	NM	NM	3	0	0	0	0	0	0
Oklahoma	2	4	-48.0%	2	4	0	0	0	0	0	0
Texas	8	9	-20.0%	5	8	3	1	0	0	0	0
Mountain	22	40	-45.0%	19	38	4	2	0	0	0	0
Arizona	4	11	-66.0%	4	11	0	0	0	0	0	0
Colorado	NM	3	NM	NM	3	0	0	0	0	0	0
Idaho	0	0	-99.0%	0	0	0	0	0	0	0	0
Montana	3	2	52.0%	NM	0	3	2	0	0	0	0
Nevada	2	1	203.0%	1	0	0	1	0	0	0	0
New Mexico	3	7	-56.0%	3	7	0	0	0	0	0	0
Utah	5	5	8.0%	5	5	0	0	0	0	0	0
Wyoming	3	12	-71.0%	3	12	0	0	0	0	0	0
Pacific Contiguous	11	10	6.6%	6	7	3	2	NM	0	2	1
California	8	7	15.0%	5	5	1	1	0	0	1	0
Oregon	NM	1	NM	0	1	0	0	NM	0	0	0
Washington	3	2	27.0%	NM	0	2	1	0	0	NM	1
Pacific Noncontiguous	1,030	1,002	2.8%	787	832	220	148	3	1	20	21
Alaska	140	138	1.0%	134	133	0	0	2	1	3	4
Hawaii	890	864	3.1%	652	699	220	148	1	1	17	17
U.S. Total	1,618	3,414	-53.0%	1,150	1,779	405	1,551	20	31	43	52

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 2018 are preliminary. Values for 2017 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 December 2018 and December 2017 (Thousand Barrels)**

Census Division and State	Electric Power Sector										
	All Sectors			Electric Utilities		Independent Power Producers		Commercial Sector		Industrial Sector	
	December 2018 YTD	December 2017 YTD	Percentage Change	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD
New England	2,204	1,362	62.0%	393	177	1,744	1,135	43	38	24	13
Connecticut	637	345	85.0%	NM	11	623	330	NM	4	1	1
Maine	331	272	22.0%	0	0	304	254	6	6	21	11
Massachusetts	804	479	68.0%	154	77	631	388	18	13	2	1
New Hampshire	304	163	86.0%	206	61	84	89	15	13	0	0
Rhode Island	NM	81	NM	0	5	NM	74	2	2	0	0
Vermont	NM	22	NM	NM	22	0	0	0	0	0	0
Middle Atlantic	3,912	1,693	131.0%	1,061	458	2,758	1,151	NM	26	55	58
New Jersey	407	126	223.0%	6	0	395	125	4	0	1	0
New York	2,488	1,018	144.0%	1,052	457	1,380	508	NM	16	35	38
Pennsylvania	1,017	549	85.0%	3	0	982	518	12	11	19	20
East North Central	1,080	996	8.4%	624	648	426	323	8	6	23	20
Illinois	143	104	37.0%	NM	19	118	85	0	0	0	0
Indiana	234	216	8.5%	214	197	1	2	1	0	18	16
Michigan	245	227	8.2%	238	221	0	0	6	5	1	1
Ohio	401	377	6.5%	93	139	305	235	1	1	3	2
Wisconsin	57	73	-23.0%	54	72	2	1	0	0	1	1
West North Central	625	552	13.0%	584	525	NM	25	2	2	1	1
Iowa	121	118	2.9%	119	116	2	2	0	0	0	0
Kansas	NM	121	NM	NM	121	0	0	0	0	0	0
Minnesota	85	76	11.0%	47	51	NM	23	2	1	1	1
Missouri	193	136	42.0%	193	136	0	0	0	0	0	0
Nebraska	18	16	7.1%	18	16	0	0	0	0	0	0
North Dakota	75	70	6.8%	75	70	0	0	0	0	0	0
South Dakota	15	15	-0.1%	15	15	0	0	NM	0	0	0
South Atlantic	5,506	3,270	68.0%	3,878	2,530	1,337	546	171	103	120	91
Delaware	247	50	391.0%	12	5	235	45	0	0	0	0
District of Columbia	0	0	--	0	0	0	0	0	0	0	0
Florida	1,020	926	10.0%	966	893	27	17	0	0	27	17
Georgia	389	239	63.0%	NM	174	NM	15	7	4	54	45
Maryland	517	243	113.0%	10	7	498	231	NM	3	3	2
North Carolina	977	486	101.0%	906	448	NM	23	NM	3	16	11
South Carolina	464	202	129.0%	407	190	45	3	NM	0	12	9
Virginia	1,603	916	75.0%	1,085	607	356	209	154	93	9	7
West Virginia	290	208	39.0%	264	206	26	2	0	0	0	0
East South Central	603	521	16.0%	520	503	68	7	0	0	15	10
Alabama	148	64	132.0%	70	50	67	7	0	0	10	7
Kentucky	177	189	-6.4%	177	189	0	0	0	0	0	0
Mississippi	54	25	112.0%	NM	24	0	0	0	0	3	2
Tennessee	225	243	-7.2%	223	241	0	1	0	0	2	1
West South Central	286	298	-3.9%	239	187	NM	104	1	1	8	5
Arkansas	61	85	-28.0%	NM	42	10	41	0	0	3	2
Louisiana	NM	44	NM	NM	44	0	0	0	0	0	0
Oklahoma	33	29	13.0%	31	27	0	0	0	0	2	1
Texas	107	140	-23.0%	74	73	NM	63	1	1	3	2
Mountain	366	409	-11.0%	321	369	44	40	0	0	0	0
Arizona	96	107	-10.0%	96	107	0	0	0	0	0	0
Colorado	30	23	29.0%	29	23	1	0	0	0	0	0
Idaho	0	0	-39.0%	0	0	0	0	0	0	0	0
Montana	37	31	17.0%	NM	1	36	30	0	0	0	0
Nevada	21	19	14.0%	16	12	5	7	0	0	0	0
New Mexico	41	81	-49.0%	41	81	0	0	0	0	0	0
Utah	62	66	-5.1%	60	63	2	2	0	0	0	0
Wyoming	78	83	-5.4%	78	83	0	0	0	0	0	0
Pacific Contiguous	169	150	13.0%	84	95	35	29	NM	1	49	24
California	121	94	29.0%	65	69	18	9	0	1	38	15
Oregon	NM	18	NM	9	18	0	0	NM	0	0	0
Washington	40	38	4.8%	10	8	18	20	0	0	11	9
Pacific Noncontiguous	12,494	12,444	0.4%	10,030	10,076	2,204	2,102	16	13	244	254
Alaska	1,391	1,585	-12.0%	1,328	1,517	0	0	6	5	57	62
Hawaii	11,103	10,859	2.2%	8,702	8,559	2,204	2,102	10	7	187	191
U.S. Total	27,245	21,696	26.0%	17,733	15,567	8,692	5,461	281	191	539	476

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 2018 are preliminary. Values for 2017 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 2.10.A. Consumption of Petroleum Coke for Electricity Generation by State, by Sector, December 2018 and December 2017 (Thousand Tons)**

Census Division and State	Electric Power Sector										
	All Sectors			Electric Utilities		Independent Power Producers		Commercial Sector		Industrial Sector	
	December 2018	December 2017	Percentage Change	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017
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	3	NM	0	0	0	0	0	0	NM	3
New Jersey	1	1	-19.0%	0	0	0	0	0	0	1	1
New York	0	0	--	0	0	0	0	0	0	0	0
Pennsylvania	NM	2	NM	0	0	0	0	0	0	NM	2
East North Central	79	73	8.6%	46	38	26	30	0	0	7	5
Illinois	0	0	--	0	0	0	0	0	0	0	0
Indiana	0	0	--	0	0	0	0	0	0	0	0
Michigan	49	36	35.0%	42	32	0	0	0	0	7	5
Ohio	26	30	-12.0%	0	0	26	30	0	0	0	0
Wisconsin	4	7	-40.0%	4	7	0	0	0	0	0	0
West North Central	0	1	-72.0%	0	0	0	0	0	0	0	1
Iowa	0	1	-72.0%	0	0	0	0	0	0	0	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	43	43	-0.3%	39	39	0	0	0	0	3	4
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	39	39	0.6%	39	39	0	0	0	0	0	0
Georgia	3	4	-10.0%	0	0	0	0	0	0	3	4
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	160	158	0.9%	155	154	0	0	0	0	5	4
Arkansas	0	0	--	0	0	0	0	0	0	0	0
Louisiana	156	155	1.0%	155	154	0	0	0	0	1	1
Oklahoma	0	0	--	0	0	0	0	0	0	0	0
Texas	4	4	-3.7%	0	0	0	0	0	0	4	4
Mountain	16	14	7.2%	0	0	16	14	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	16	14	7.2%	0	0	16	14	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	299	292	2.5%	241	231	41	44	0	0	17	16

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 2018 are preliminary. Values for 2017 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 2.10.B. Consumption of Petroleum Coke for Electricity Generation by State, by Sector, Year-to-Date through December 2018 and December 2017 (Thousand Tons)**

Census Division and State	Electric Power Sector										
	All Sectors			Electric Utilities		Independent Power Producers		Commercial Sector		Industrial Sector	
	December 2018 YTD	December 2017 YTD	Percentage Change	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 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	22	27	-16.0%	0	0	0	0	0	0	22	27
New Jersey	7	7	-6.7%	0	0	0	0	0	0	7	7
New York	0	0	--	0	0	0	0	0	0	0	0
Pennsylvania	16	19	-19.0%	0	0	0	0	0	0	16	19
East North Central	844	956	-12.0%	558	504	234	380	0	0	52	72
Illinois	0	0	--	0	0	0	0	0	0	0	0
Indiana	0	0	--	0	0	0	0	0	0	0	0
Michigan	564	527	7.0%	513	456	0	0	0	0	51	72
Ohio	235	380	-38.0%	0	0	234	380	0	0	1	0
Wisconsin	45	48	-7.9%	45	48	0	0	0	0	0	0
West North Central	7	8	-3.5%	0	0	0	0	2	3	5	5
Iowa	7	8	-3.5%	0	0	0	0	2	3	5	5
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	594	381	56.0%	559	347	0	0	0	0	36	34
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	559	347	61.0%	559	347	0	0	0	0	0	0
Georgia	36	34	5.0%	0	0	0	0	0	0	36	34
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	166	-100.0%	0	166	0	0	0	0	0	0
Alabama	0	0	--	0	0	0	0	0	0	0	0
Kentucky	0	166	-100.0%	0	166	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	1,689	1,791	-5.7%	1,624	1,714	0	0	0	0	65	77
Arkansas	0	0	--	0	0	0	0	0	0	0	0
Louisiana	1,646	1,747	-5.7%	1,624	1,714	0	0	0	0	23	32
Oklahoma	0	0	--	0	0	0	0	0	0	0	0
Texas	43	45	-3.8%	0	0	0	0	0	0	43	45
Mountain	154	162	-4.8%	0	0	154	162	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	154	162	-4.8%	0	0	154	162	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	3,311	3,490	-5.1%	2,740	2,731	388	542	2	3	181	214

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 2018 are preliminary. Values for 2017 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 2.11.A. Consumption of Natural Gas for Electricity Generation by State, by Sector, December 2018 and December 2017 (Million Cubic Feet)**

Census Division and State	Electric Power Sector										
	All Sectors			Electric Utilities		Independent Power Producers		Commercial Sector		Industrial Sector	
	December 2018	December 2017	Percentage Change	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017
New England	27,304	27,597	-1.1%	NM	119	26,177	26,426	394	442	665	609
Connecticut	12,736	10,783	18.0%	29	39	12,234	10,216	171	200	302	328
Maine	738	347	113.0%	0	0	609	285	11	12	119	50
Massachusetts	9,364	11,398	-18.0%	NM	62	9,017	11,008	193	208	117	119
New Hampshire	518	1,449	-64.0%	2	17	500	1,412	3	5	12	15
Rhode Island	3,947	3,618	9.1%	0	0	3,817	3,506	16	15	NM	97
Vermont	1	2	-51.0%	1	1	0	0	1	1	0	0
Middle Atlantic	92,740	90,043	3.0%	6,957	8,409	83,980	79,844	614	673	1,189	1,118
New Jersey	20,753	19,521	6.3%	NM	122	20,439	19,123	68	102	161	174
New York	28,165	28,758	-2.1%	6,866	8,283	20,452	19,744	496	487	351	244
Pennsylvania	43,822	41,764	4.9%	5	4	43,089	40,977	50	83	678	699
East North Central	74,034	82,030	-9.7%	22,705	31,153	48,429	47,781	714	664	2,186	2,433
Illinois	6,873	11,457	-40.0%	45	500	6,285	10,283	228	230	315	444
Indiana	15,054	16,311	-7.7%	4,966	7,907	8,864	7,040	61	84	1,163	1,279
Michigan	14,731	18,611	-21.0%	4,012	5,831	10,134	12,189	263	262	322	329
Ohio	27,517	24,740	11.0%	4,539	6,521	22,789	18,080	98	65	91	74
Wisconsin	9,859	10,912	-9.6%	9,143	10,394	358	189	63	23	295	306
West North Central	11,206	15,675	-29.0%	9,627	12,781	1,159	2,495	129	107	291	292
Iowa	3,464	3,824	-9.4%	3,257	3,597	0	14	41	41	166	173
Kansas	1,023	1,633	-37.0%	971	1,601	0	0	0	0	52	32
Minnesota	3,026	4,726	-36.0%	2,364	3,081	571	1,550	46	35	46	61
Missouri	2,668	4,166	-36.0%	2,029	3,193	588	931	39	29	11	13
Nebraska	NM	320	NM	NM	318	0	0	3	2	0	0
North Dakota	442	529	-16.0%	NM	516	0	0	0	0	15	13
South Dakota	NM	477	NM	NM	477	0	0	0	0	0	0
South Atlantic	186,573	193,519	-3.6%	155,303	158,160	28,333	32,288	753	757	2,184	2,314
Delaware	1,420	2,754	-48.0%	17	0	1,136	2,485	0	0	267	269
District of Columbia	58	34	67.0%	0	0	0	0	58	34	0	0
Florida	84,972	87,112	-2.5%	81,812	82,511	2,426	3,941	13	9	721	651
Georgia	26,460	32,560	-19.0%	20,696	25,577	5,436	6,655	0	0	328	329
Maryland	7,107	5,570	28.0%	1,631	642	4,872	4,278	586	611	18	39
North Carolina	24,563	26,960	-8.9%	20,154	23,662	4,252	3,139	85	96	71	63
South Carolina	10,013	10,368	-3.4%	8,229	9,509	1,693	776	0	0	91	83
Virginia	31,764	27,642	15.0%	22,755	16,005	8,433	10,918	10	7	566	713
West Virginia	216	518	-58.0%	9	254	NM	98	0	0	123	167
East South Central	62,039	76,979	-19.0%	41,001	51,284	19,761	24,413	58	98	1,220	1,184
Alabama	28,991	29,562	-1.9%	11,710	9,169	16,639	19,773	0	0	642	620
Kentucky	6,494	9,083	-28.0%	6,300	8,079	107	908	0	0	87	96
Mississippi	19,558	31,354	-38.0%	16,365	27,411	3,002	3,715	0	11	191	217
Tennessee	6,996	6,980	0.2%	6,625	6,626	13	16	58	86	300	252
West South Central	168,400	185,063	-9.0%	51,876	64,259	82,112	86,964	423	297	33,989	33,543
Arkansas	4,526	12,328	-63.0%	3,707	11,587	631	542	NM	42	152	158
Louisiana	29,155	35,817	-19.0%	13,629	20,213	1,712	1,988	45	55	13,769	13,561
Oklahoma	19,346	20,233	-4.4%	11,975	9,821	7,159	10,198	0	0	212	215
Texas	115,374	116,684	-1.1%	22,565	22,638	72,611	74,236	341	201	19,857	19,609
Mountain	65,171	53,918	21.0%	49,990	43,675	13,914	8,844	201	203	1,067	1,197
Arizona	22,875	15,875	44.0%	15,457	13,078	7,365	2,749	54	48	0	0
Colorado	9,896	8,664	14.0%	8,628	7,351	1,240	1,274	5	9	23	30
Idaho	2,370	3,056	-22.0%	1,500	1,809	796	1,174	15	15	59	58
Montana	590	422	40.0%	368	316	218	104	0	0	4	3
Nevada	13,320	14,661	-9.1%	11,821	13,105	1,356	1,346	20	24	123	185
New Mexico	9,227	6,314	46.0%	6,288	4,114	2,892	2,151	47	50	0	0
Utah	6,350	4,344	46.0%	5,789	3,728	47	45	60	57	455	513
Wyoming	543	582	-6.6%	141	174	0	0	0	0	403	407
Pacific Contiguous	74,173	78,863	-5.9%	26,357	31,930	41,167	40,119	813	1,017	5,836	5,796
California	56,820	54,648	4.0%	18,495	19,114	31,794	28,873	785	989	5,746	5,671
Oregon	12,593	14,476	-13.0%	4,844	7,071	7,679	7,327	21	18	49	61
Washington	4,761	9,739	-51.0%	3,018	5,745	1,694	3,919	7	10	42	64
Pacific Noncontiguous	2,519	2,710	-7.0%	2,493	2,686	0	0	0	0	26	23
Alaska	2,519	2,710	-7.0%	2,493	2,686	0	0	0	0	26	23
Hawaii	0	0	--	0	0	0	0	0	0	0	0
U.S. Total	764,161	806,395	-5.2%	366,377	404,455	345,032	349,174	4,098	4,259	48,654	48,508

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 2018 are preliminary. Values for 2017 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 2.11.B. Consumption of Natural Gas for Electricity Generation by State, by Sector, Year-to-Date through December 2018 and December 2017 (Million Cubic Feet)**

Census Division and State	Electric Power Sector										
	All Sectors			Electric Utilities		Independent Power Producers		Commercial Sector		Industrial Sector	
	December 2018 YTD	December 2017 YTD	Percentage Change	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD
New England	375,445	368,504	1.9%	2,858	3,061	359,573	352,211	4,917	5,358	8,097	7,873
Connecticut	140,210	113,830	23.0%	373	883	134,276	107,093	2,043	2,263	3,518	3,591
Maine	18,809	15,247	23.0%	0	0	17,003	13,717	148	152	1,658	1,377
Massachusetts	141,371	160,737	-12.0%	2,073	1,765	135,518	155,006	2,455	2,659	1,325	1,307
New Hampshire	21,790	26,204	-17.0%	400	400	21,163	25,575	32	43	195	186
Rhode Island	53,249	52,470	1.5%	0	0	51,613	50,820	235	237	1,401	1,412
Vermont	16	16	-2.9%	11	12	0	0	5	4	0	0
Middle Atlantic	1,230,715	1,160,599	6.0%	99,957	89,698	1,108,516	1,050,267	7,785	7,960	14,457	12,674
New Jersey	278,818	262,660	6.2%	NM	2,092	273,820	257,521	1,030	1,144	1,995	1,903
New York	405,525	370,211	9.5%	97,922	87,541	297,294	274,165	6,086	6,108	4,223	2,396
Pennsylvania	546,372	527,729	3.5%	62	64	537,402	518,581	670	708	8,239	8,376
East North Central	1,019,277	790,287	29.0%	363,559	282,945	623,155	475,972	8,542	7,996	24,021	23,374
Illinois	164,004	146,271	12.0%	13,905	8,355	142,776	130,450	2,858	2,487	4,465	4,980
Indiana	189,123	136,308	39.0%	80,247	57,187	96,310	66,883	870	988	11,696	11,251
Michigan	227,609	195,965	16.0%	83,218	70,122	137,741	119,546	3,061	2,957	3,589	3,340
Ohio	305,147	206,855	48.0%	66,507	54,016	236,398	150,795	1,186	1,227	1,056	818
Wisconsin	133,393	104,887	27.0%	119,683	93,264	9,929	8,299	567	339	3,215	2,985
West North Central	237,551	161,737	47.0%	205,896	139,274	26,498	18,079	1,588	1,463	3,569	2,921
Iowa	51,893	31,573	64.0%	49,168	29,265	NM	37	489	469	2,234	1,801
Kansas	32,897	20,816	58.0%	32,422	20,589	0	0	0	0	475	227
Minnesota	65,361	48,862	34.0%	54,462	39,170	9,842	8,574	479	491	578	628
Missouri	61,845	42,038	47.0%	44,459	31,921	16,654	9,468	586	490	146	159
Nebraska	10,487	6,181	70.0%	10,453	6,168	0	0	34	13	0	0
North Dakota	6,887	6,554	5.1%	6,751	6,448	0	0	0	0	136	106
South Dakota	8,180	5,713	43.0%	8,180	5,713	0	0	0	0	0	0
South Atlantic	2,694,674	2,414,067	12.0%	2,162,267	1,970,870	496,581	410,089	10,099	7,872	25,727	25,237
Delaware	39,000	49,376	-21.0%	282	186	34,553	44,696	0	0	4,165	4,494
District of Columbia	616	601	2.5%	0	0	0	0	616	601	0	0
Florida	1,285,083	1,192,463	7.8%	1,212,083	1,128,447	64,634	56,299	117	131	8,249	7,586
Georgia	380,939	373,297	2.0%	280,122	280,701	96,906	88,929	0	0	3,911	3,666
Maryland	108,696	55,973	94.0%	26,042	3,224	73,887	46,190	8,321	6,111	446	448
North Carolina	335,024	279,751	20.0%	280,903	240,963	52,444	37,277	965	970	712	541
South Carolina	171,240	133,271	28.0%	134,691	114,333	35,725	18,141	2	3	822	794
Virginia	361,935	316,918	14.0%	226,231	201,084	129,594	110,070	79	55	6,031	5,709
West Virginia	12,141	12,417	-2.2%	1,913	1,932	8,838	8,487	0	0	1,391	1,999
East South Central	1,003,948	871,880	15.0%	689,232	595,214	300,605	263,514	1,005	939	13,106	12,214
Alabama	420,175	370,297	13.0%	154,358	132,145	258,844	231,699	0	0	6,973	6,454
Kentucky	115,333	82,170	40.0%	106,876	76,539	7,616	4,669	0	0	841	961
Mississippi	364,650	340,928	7.0%	328,423	311,651	34,009	26,996	39	35	2,179	2,246
Tennessee	103,791	78,486	32.0%	99,576	74,880	136	150	966	903	3,113	2,553
West South Central	2,585,619	2,220,631	16.0%	973,158	799,638	1,225,522	1,041,646	4,576	4,395	382,362	374,952
Arkansas	137,822	123,423	12.0%	128,633	115,119	7,221	6,467	416	418	1,552	1,419
Louisiana	440,250	423,118	4.0%	263,565	244,478	30,138	29,680	725	598	145,822	148,362
Oklahoma	317,664	230,634	38.0%	203,015	141,470	111,483	87,099	0	0	3,166	2,065
Texas	1,689,883	1,443,455	17.0%	377,945	298,571	1,076,681	918,399	3,434	3,379	231,822	223,106
Mountain	810,726	668,947	21.0%	629,652	522,713	165,339	130,777	2,199	2,243	13,535	13,215
Arizona	287,576	224,548	28.0%	202,938	159,473	84,020	64,454	618	621	0	0
Colorado	125,066	94,180	33.0%	102,282	77,468	22,457	16,355	5	17	322	340
Idaho	22,840	21,694	5.3%	11,735	11,935	10,350	8,989	170	172	585	599
Montana	4,917	4,706	4.5%	3,718	3,700	1,182	987	0	0	17	19
Nevada	199,212	195,341	2.0%	181,026	177,493	15,129	15,110	258	250	2,800	2,489
New Mexico	97,169	75,991	28.0%	64,714	51,075	31,647	24,320	527	581	282	15
Utah	67,334	46,919	44.0%	61,108	40,275	541	549	622	602	5,063	5,493
Wyoming	6,612	5,569	19.0%	2,132	1,294	15	13	0	0	4,466	4,261
Pacific Contiguous	863,874	821,891	5.1%	335,239	322,537	451,091	419,433	11,131	11,812	66,413	68,109
California	667,081	641,500	4.0%	228,923	222,701	361,872	340,121	10,838	11,568	65,448	67,109
Oregon	121,954	103,763	18.0%	59,294	53,213	61,918	49,867	216	173	526	509
Washington	74,840	76,628	-2.3%	47,023	46,622	27,301	29,445	77	71	438	491
Pacific Noncontiguous	33,326	29,216	14.0%	33,050	28,933	0	0	3	22	273	261
Alaska	33,326	29,216	14.0%	33,050	28,933	0	0	3	22	273	261
Hawaii	0	0	--	0	0	0	0	0	0	0	0
U.S. Total	10,855,155	9,507,760	14.0%	5,494,870	4,754,883	4,756,881	4,161,987	51,844	50,060	551,560	540,830

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.

Notes: See Glossary for definitions. Values for 2018 are preliminary. Values for 2017 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.A. Consumption of Landfill Gas for Electricity Generation by State, by Sector, December 2018 and December 2017 (Million Cubic Feet)**

Census Division and State	Electric Power Sector										
	All Sectors			Electric Utilities		Independent Power Producers		Commercial Sector		Industrial Sector	
	December 2018	December 2017	Percentage Change	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017
New England	911	942	-3.3%	0	0	887	923	24	19	0	0
Connecticut	NM	38	NM	0	0	NM	38	0	0	0	0
Maine	NM	59	NM	0	0	NM	59	0	0	0	0
Massachusetts	NM	310	NM	0	0	NM	310	0	0	0	0
New Hampshire	100	133	-25.0%	0	0	NM	114	24	19	0	0
Rhode Island	365	379	-3.6%	0	0	365	379	0	0	0	0
Vermont	NM	22	NM	0	0	NM	22	0	0	0	0
Middle Atlantic	4,661	4,480	4.0%	0	0	4,501	4,299	NM	71	71	110
New Jersey	656	681	-3.7%	0	0	625	651	NM	30	0	0
New York	1,473	1,418	3.9%	0	0	1,473	1,418	0	0	0	0
Pennsylvania	2,532	2,380	6.3%	0	0	2,403	2,229	NM	41	71	110
East North Central	5,355	5,429	-1.4%	762	654	4,566	4,708	7	46	20	21
Illinois	825	966	-15.0%	NM	38	750	928	0	0	0	0
Indiana	786	718	9.5%	686	617	100	102	0	0	0	0
Michigan	1,910	1,688	13.0%	0	0	1,910	1,688	0	0	0	0
Ohio	911	986	-7.6%	0	0	911	986	0	0	0	0
Wisconsin	922	1,071	-14.0%	0	0	895	1,004	7	46	20	21
West North Central	1,048	801	31.0%	365	258	683	544	0	0	0	0
Iowa	216	218	-0.6%	0	0	216	218	0	0	0	0
Kansas	NM	93	NM	0	0	NM	93	0	0	0	0
Minnesota	327	223	47.0%	NM	51	NM	172	0	0	0	0
Missouri	NM	121	NM	NM	60	NM	61	0	0	0	0
Nebraska	NM	147	NM	NM	147	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	4,630	4,418	4.8%	450	384	3,870	3,660	146	201	164	173
Delaware	NM	109	NM	0	0	NM	99	0	0	NM	10
District of Columbia	0	0	--	0	0	0	0	0	0	0	0
Florida	773	923	-16.0%	142	137	632	786	0	0	0	0
Georgia	621	473	31.0%	0	0	617	442	0	0	3	30
Maryland	252	281	-10.0%	0	0	NM	182	98	98	0	0
North Carolina	959	894	7.2%	0	0	931	811	NM	83	0	0
South Carolina	490	406	21.0%	NM	242	NM	33	0	0	151	132
Virginia	1,419	1,333	6.5%	6	6	1,393	1,307	NM	19	0	0
West Virginia	0	0	--	0	0	0	0	0	0	0	0
East South Central	509	363	40.0%	NM	137	NM	226	0	0	0	0
Alabama	NM	74	NM	0	0	NM	74	0	0	0	0
Kentucky	NM	151	NM	NM	137	NM	14	0	0	0	0
Mississippi	NM	28	NM	0	0	NM	28	0	0	0	0
Tennessee	NM	111	NM	0	0	NM	111	0	0	0	0
West South Central	1,194	1,500	-20.0%	0	0	1,137	1,448	57	52	0	0
Arkansas	NM	171	NM	0	0	NM	171	0	0	0	0
Louisiana	0	0	--	0	0	0	0	0	0	0	0
Oklahoma	NM	46	NM	0	0	NM	46	0	0	0	0
Texas	1,012	1,283	-21.0%	0	0	955	1,231	57	52	0	0
Mountain	615	555	11.0%	NM	22	544	491	48	42	0	0
Arizona	NM	85	NM	0	0	NM	85	0	0	0	0
Colorado	NM	113	NM	0	0	NM	113	0	0	0	0
Idaho	NM	88	NM	NM	22	NM	47	17	19	0	0
Montana	0	0	--	0	0	0	0	0	0	0	0
Nevada	NM	137	NM	0	0	NM	137	0	0	0	0
New Mexico	NM	2	NM	0	0	NM	2	0	0	0	0
Utah	NM	131	NM	0	0	NM	108	31	23	0	0
Wyoming	0	0	--	0	0	0	0	0	0	0	0
Pacific Contiguous	4,812	5,421	-11.0%	NM	694	3,376	3,397	1,310	1,301	0	29
California	4,222	4,492	-6.0%	NM	258	2,944	2,945	1,269	1,260	0	29
Oregon	478	497	-3.9%	NM	122	319	334	NM	41	0	0
Washington	NM	432	NM	0	314	NM	117	0	0	0	0
Pacific Noncontiguous	64	78	-17.0%	0	0	0	0	64	78	0	0
Alaska	64	78	-17.0%	0	0	0	0	64	78	0	0
Hawaii	0	0	--	0	0	0	0	0	0	0	0
U.S. Total	23,800	23,986	-0.8%	1,940	2,148	19,859	19,695	1,746	1,810	255	333

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 2018 are preliminary. Values for 2017 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 December 2018 and December 2017 (Million Cubic Feet)**

Census Division and State	Electric Power Sector										
	All Sectors			Electric Utilities		Independent Power Producers		Commercial Sector		Industrial Sector	
	December 2018 YTD	December 2017 YTD	Percentage Change	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD
New England	10,577	10,719	-1.3%	0	0	10,336	10,477	240	242	0	0
Connecticut	472	443	6.4%	0	0	472	443	0	0	0	0
Maine	759	720	5.5%	0	0	759	720	0	0	0	0
Massachusetts	3,807	3,665	3.9%	0	0	3,807	3,665	0	0	0	0
New Hampshire	1,145	1,570	-27.0%	0	0	904	1,328	240	242	0	0
Rhode Island	4,133	4,061	1.8%	0	0	4,133	4,061	0	0	0	0
Vermont	261	260	0.1%	0	0	261	260	0	0	0	0
Middle Atlantic	55,560	53,390	4.1%	0	0	53,623	51,096	796	799	1,142	1,495
New Jersey	8,068	7,690	4.9%	0	0	7,755	7,362	313	328	0	0
New York	17,633	16,711	5.5%	0	0	17,633	16,711	0	0	0	0
Pennsylvania	29,859	28,988	3.0%	0	0	28,234	27,023	483	471	1,142	1,495
East North Central	63,582	63,452	0.2%	9,193	7,439	53,851	55,419	283	370	255	224
Illinois	10,135	12,581	-19.0%	843	437	9,293	12,143	0	0	0	0
Indiana	9,573	8,109	18.0%	8,351	6,963	1,223	1,145	0	0	0	0
Michigan	21,799	20,649	5.6%	0	0	21,799	20,649	0	0	0	0
Ohio	10,816	10,972	-1.4%	0	0	10,816	10,972	0	0	0	0
Wisconsin	11,258	11,141	1.1%	0	38	10,720	10,508	283	370	255	224
West North Central	12,500	10,845	15.0%	4,405	3,497	8,095	7,349	0	0	0	0
Iowa	2,547	2,577	-1.2%	0	0	2,547	2,577	0	0	0	0
Kansas	1,464	1,273	15.0%	0	0	1,464	1,273	0	0	0	0
Minnesota	3,890	3,157	23.0%	1,044	708	2,846	2,449	0	0	0	0
Missouri	2,758	2,072	33.0%	1,520	1,023	1,238	1,049	0	0	0	0
Nebraska	1,841	1,766	4.3%	1,841	1,766	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	55,050	53,675	2.6%	5,388	4,496	46,395	44,827	1,498	2,387	1,769	1,965
Delaware	1,376	1,261	9.1%	0	0	1,258	1,142	0	0	119	119
District of Columbia	0	0	--	0	0	0	0	0	0	0	0
Florida	9,217	10,526	-12.0%	1,737	1,615	7,480	8,912	0	0	0	0
Georgia	7,854	6,853	15.0%	0	0	7,759	6,536	0	0	95	317
Maryland	3,024	2,936	3.0%	0	0	1,999	1,906	1,025	1,030	0	0
North Carolina	11,162	11,503	-3.0%	0	0	10,890	10,383	272	1,121	0	0
South Carolina	5,595	4,712	19.0%	3,597	2,803	443	379	0	0	1,555	1,529
Virginia	16,821	15,884	5.9%	54	78	16,566	15,569	201	237	0	0
West Virginia	0	0	--	0	0	0	0	0	0	0	0
East South Central	6,122	5,716	7.1%	2,531	2,451	3,591	3,265	0	0	0	0
Alabama	1,114	1,061	5.0%	0	0	1,114	1,061	0	0	0	0
Kentucky	2,788	2,710	2.9%	2,531	2,451	257	259	0	0	0	0
Mississippi	261	221	18.0%	0	0	261	221	0	0	0	0
Tennessee	1,959	1,724	14.0%	0	0	1,959	1,724	0	0	0	0
West South Central	14,527	14,830	-2.0%	0	0	13,924	14,304	603	526	0	0
Arkansas	1,677	1,513	11.0%	0	0	1,677	1,513	0	0	0	0
Louisiana	0	0	--	0	0	0	0	0	0	0	0
Oklahoma	491	455	8.0%	0	0	491	455	0	0	0	0
Texas	12,359	12,863	-3.9%	0	0	11,756	12,336	603	526	0	0
Mountain	7,192	6,592	9.1%	274	253	6,365	5,881	554	458	0	0
Arizona	1,010	987	2.3%	0	0	1,010	987	0	0	0	0
Colorado	1,165	1,371	-15.0%	0	0	1,165	1,371	0	0	0	0
Idaho	891	1,001	-11.0%	274	253	418	543	199	205	0	0
Montana	0	0	--	0	0	0	0	0	0	0	0
Nevada	1,915	1,589	21.0%	0	0	1,915	1,589	0	0	0	0
New Mexico	NM	21	NM	0	0	NM	21	0	0	0	0
Utah	2,103	1,623	30.0%	0	0	1,749	1,370	354	253	0	0
Wyoming	0	0	--	0	0	0	0	0	0	0	0
Pacific Contiguous	58,757	58,104	1.1%	3,855	6,938	40,209	36,432	14,692	14,551	0	182
California	50,356	47,912	5.1%	924	2,168	35,165	31,481	14,267	14,081	0	182
Oregon	5,628	5,546	1.5%	1,369	1,382	3,833	3,694	426	470	0	0
Washington	2,773	4,646	-40.0%	1,562	3,389	1,211	1,257	0	0	0	0
Pacific Noncontiguous	801	788	1.7%	0	0	0	0	801	788	0	0
Alaska	801	788	1.7%	0	0	0	0	801	788	0	0
Hawaii	0	0	--	0	0	0	0	0	0	0	0
U.S. Total	284,667	278,112	2.4%	25,646	25,074	236,388	229,050	19,466	20,121	3,167	3,866

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 2018 are preliminary. Values for 2017 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, December 2018 and December 2017 (Thousand Tons)**

Census Division and State	Electric Power Sector										
	All Sectors			Electric Utilities		Independent Power Producers		Commercial Sector		Industrial Sector	
	December 2018	December 2017	Percentage Change	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017
New England	289	305	-5.4%	0	0	274	288	15	17	0	0
Connecticut	83	106	-22.0%	0	0	83	106	0	0	0	0
Maine	25	24	5.5%	0	0	11	7	15	17	0	0
Massachusetts	171	165	3.8%	0	0	171	165	0	0	0	0
New Hampshire	10	10	-7.0%	0	0	10	10	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	461	478	-3.6%	0	0	367	376	95	102	0	0
New Jersey	122	124	-1.6%	0	0	92	96	29	27	0	0
New York	173	181	-4.5%	0	0	133	131	40	51	0	0
Pennsylvania	166	174	-4.2%	0	0	141	149	25	24	0	0
East North Central	20	18	9.4%	2	2	0	0	17	16	0	0
Illinois	0	0	--	0	0	0	0	0	0	0	0
Indiana	2	2	10.0%	0	0	0	0	2	2	0	0
Michigan	16	14	9.3%	0	0	0	0	16	14	0	0
Ohio	0	0	--	0	0	0	0	0	0	0	0
Wisconsin	2	2	9.1%	2	2	0	0	0	0	0	0
West North Central	56	51	9.6%	35	30	21	20	0	1	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	56	51	9.6%	35	30	21	20	0	1	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	473	423	12.0%	0	0	437	378	35	45	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	317	315	0.6%	0	0	317	315	0	0	0	0
Georgia	0	0	--	0	0	0	0	0	0	0	0
Maryland	51	59	-14.0%	0	0	51	59	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	105	48	116.0%	0	0	70	4	35	45	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	1	-57.0%	0	0	0	0	0	0	0	1
Arkansas	0	0	--	0	0	0	0	0	0	0	0
Louisiana	0	0	--	0	0	0	0	0	0	0	0
Oklahoma	0	1	-57.0%	0	0	0	0	0	0	0	1
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	59	69	-15.0%	0	0	59	69	0	0	0	0
California	33	45	-25.0%	0	0	33	45	0	0	0	0
Oregon	11	10	6.5%	0	0	11	10	0	0	0	0
Washington	15	14	1.6%	0	0	15	14	0	0	0	0
Pacific Noncontiguous	41	34	23.0%	0	0	0	0	41	34	0	0
Alaska	0	0	--	0	0	0	0	0	0	0	0
Hawaii	41	34	23.0%	0	0	0	0	41	34	0	0
U.S. Total	1,398	1,378	1.5%	37	32	1,157	1,132	204	214	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. Notes: See Glossary for definitions. Values for 2018 are preliminary. Values for 2017 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.B. Consumption of Biogenic Municipal Solid Waste for Electricity Generation by State, by Sector, Year-to-Date through December 2018 and December 2017 (Thousand Tons)**

Census Division and State	Electric Power Sector										
	All Sectors			Electric Utilities		Independent Power Producers		Commercial Sector		Industrial Sector	
	December 2018 YTD	December 2017 YTD	Percentage Change	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD
New England	3,487	3,695	-5.6%	0	0	3,313	3,490	174	205	0	0
Connecticut	1,143	1,246	-8.3%	0	0	1,143	1,246	0	0	0	0
Maine	287	315	-9.0%	0	0	113	110	174	205	0	0
Massachusetts	1,935	2,008	-3.6%	0	0	1,935	2,008	0	0	0	0
New Hampshire	122	126	-2.6%	0	0	122	126	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	5,391	5,508	-2.1%	0	0	4,292	4,332	1,099	1,176	0	0
New Jersey	1,432	1,430	0.1%	0	0	1,088	1,082	344	348	0	0
New York	1,996	2,085	-4.3%	0	0	1,495	1,511	501	574	0	0
Pennsylvania	1,963	1,993	-1.5%	0	0	1,709	1,739	254	254	0	0
East North Central	234	235	-0.5%	34	35	0	0	200	200	0	0
Illinois	0	0	--	0	0	0	0	0	0	0	0
Indiana	20	18	11.0%	0	0	0	0	20	18	0	0
Michigan	180	182	-1.4%	0	0	0	0	180	182	0	0
Ohio	0	0	--	0	0	0	0	0	0	0	0
Wisconsin	34	35	-2.1%	34	35	0	0	0	0	0	0
West North Central	661	633	4.4%	433	387	228	234	0	12	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	661	633	4.4%	433	387	228	234	0	12	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	5,624	5,108	10.0%	0	0	5,172	4,587	452	521	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	3,802	3,877	-1.9%	0	0	3,802	3,877	0	0	0	0
Georgia	0	0	--	0	0	0	0	0	0	0	0
Maryland	648	639	1.4%	0	0	648	639	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	1,174	591	99.0%	0	0	722	70	452	521	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	9	8	9.4%	0	0	0	0	0	0	9	8
Arkansas	0	0	--	0	0	0	0	0	0	0	0
Louisiana	0	0	--	0	0	0	0	0	0	0	0
Oklahoma	9	8	9.4%	0	0	0	0	0	0	9	8
Texas	0	0	--	0	0	0	0	0	0	0	0
Mountain	0	0	-100.0%	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	-100.0%	0	0	0	0	0	0	0	0
Wyoming	0	0	--	0	0	0	0	0	0	0	0
Pacific Contiguous	698	738	-5.5%	0	0	698	738	0	0	0	0
California	427	468	-8.8%	0	0	427	468	0	0	0	0
Oregon	113	111	2.1%	0	0	113	111	0	0	0	0
Washington	158	160	-1.1%	0	0	158	160	0	0	0	0
Pacific Noncontiguous	454	424	7.2%	0	0	0	0	454	424	0	0
Alaska	0	0	--	0	0	0	0	0	0	0	0
Hawaii	454	424	7.2%	0	0	0	0	454	424	0	0
U.S. Total	16,557	16,348	1.3%	467	422	13,702	13,381	2,379	2,537	9	8

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 2018 are preliminary. Values for 2017 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 2.14.A. Consumption of Wood / Wood Waste Biomass for Electricity Generation by State, by Sector, December 2018 and December 2017 (Billion Btus)**

Census Division and State	Electric Power Sector										
	All Sectors			Electric Utilities		Independent Power Producers		Commercial Sector		Industrial Sector	
	December 2018	December 2017	Percentage Change	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017
New England	4,348	5,377	-19.0%	810	732	3,107	4,161	1	1	430	482
Connecticut	212	288	-26.0%	0	0	212	288	0	0	0	0
Maine	1,614	2,355	-31.0%	0	0	1,184	1,873	0	0	430	482
Massachusetts	173	188	-8.0%	0	0	173	188	0	0	0	0
New Hampshire	1,858	1,967	-5.5%	494	351	1,364	1,616	0	0	0	0
Rhode Island	0	0	--	0	0	0	0	0	0	0	0
Vermont	492	580	-15.0%	317	381	175	198	1	1	0	0
Middle Atlantic	883	1,239	-29.0%	0	0	606	595	0	0	277	644
New Jersey	0	0	--	0	0	0	0	0	0	0	0
New York	694	708	-2.0%	0	0	605	595	0	0	89	113
Pennsylvania	189	531	-64.0%	0	0	1	0	0	0	188	531
East North Central	2,064	2,170	-4.9%	398	474	1,011	1,017	0	0	655	679
Illinois	0	0	--	0	0	0	0	0	0	0	0
Indiana	0	0	--	0	0	0	0	0	0	0	0
Michigan	1,328	1,334	-0.4%	0	0	1,001	1,005	0	0	327	329
Ohio	94	98	-4.2%	0	0	10	12	0	0	84	86
Wisconsin	642	738	-13.0%	398	474	0	0	0	0	244	264
West North Central	570	960	-41.0%	141	210	118	442	38	31	272	276
Iowa	8	0	NM	0	0	0	0	8	0	0	0
Kansas	0	0	--	0	0	0	0	0	0	0	0
Minnesota	531	934	-43.0%	141	210	118	442	0	5	272	276
Missouri	30	26	16.0%	0	0	0	0	30	26	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	9,983	11,772	-15.0%	2,070	2,656	2,486	3,305	12	11	5,415	5,801
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	1,896	2,047	-7.3%	613	660	559	612	0	0	725	774
Georgia	2,779	3,300	-16.0%	0	0	677	1,029	0	0	2,102	2,271
Maryland	44	60	-26.0%	0	0	0	0	12	11	32	49
North Carolina	1,083	1,500	-28.0%	0	0	507	875	0	0	576	624
South Carolina	1,437	1,641	-12.0%	103	157	501	607	0	0	834	877
Virginia	2,743	3,225	-15.0%	1,355	1,839	243	180	0	0	1,145	1,206
West Virginia	0	0	--	0	0	0	0	0	0	0	0
East South Central	3,114	3,254	-4.3%	0	0	182	155	0	0	2,932	3,100
Alabama	2,029	2,126	-4.6%	0	0	182	155	0	0	1,847	1,971
Kentucky	149	140	6.8%	0	0	0	0	0	0	149	140
Mississippi	593	611	-2.9%	0	0	0	0	0	0	593	611
Tennessee	343	378	-9.3%	0	0	0	0	0	0	343	378
West South Central	2,597	2,521	3.0%	0	0	108	0	0	0	2,489	2,521
Arkansas	621	608	2.0%	0	0	0	0	0	0	621	608
Louisiana	1,327	1,364	-2.7%	0	0	0	0	0	0	1,327	1,364
Oklahoma	155	164	-5.5%	0	0	0	0	0	0	155	164
Texas	494	385	28.0%	0	0	108	0	0	0	386	385
Mountain	507	305	66.0%	0	0	339	150	0	0	168	155
Arizona	204	0	--	0	0	204	0	0	0	0	0
Colorado	108	124	-13.0%	0	0	108	124	0	0	0	0
Idaho	172	161	7.3%	0	0	27	26	0	0	145	134
Montana	23	21	8.2%	0	0	0	0	0	0	23	21
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	5,190	5,619	-7.6%	341	502	3,143	3,553	0	0	1,706	1,564
California	3,530	3,758	-6.1%	0	0	2,946	3,366	0	0	584	392
Oregon	583	570	2.3%	0	0	196	187	0	0	387	383
Washington	1,077	1,291	-17.0%	341	502	0	0	0	0	735	789
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	29,256	33,219	-12.0%	3,760	4,575	11,100	13,378	51	43	14,345	15,222

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 2018 are preliminary. Values for 2017 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 2.14.B. Consumption of Wood / Wood Waste Biomass for Electricity Generation by State, by Sector, Year-to-Date through December 2018 and December 2017 (Billion Btus)**

Census Division and State	Electric Power Sector										
	All Sectors			Electric Utilities		Independent Power Producers		Commercial Sector		Industrial Sector	
	December 2018 YTD	December 2017 YTD	Percentage Change	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD
New England	49,565	56,284	-12.0%	7,842	8,405	36,507	42,786	19	46	5,196	5,047
Connecticut	2,497	2,534	-1.5%	0	0	2,497	2,534	0	0	0	0
Maine	19,280	23,526	-18.0%	0	0	14,075	18,442	9	37	5,196	5,047
Massachusetts	2,015	2,279	-12.0%	0	0	2,015	2,279	0	0	0	0
New Hampshire	20,065	21,905	-8.4%	4,171	4,624	15,894	17,281	0	0	0	0
Rhode Island	0	0	--	0	0	0	0	0	0	0	0
Vermont	5,708	6,039	-5.5%	3,671	3,781	2,027	2,249	11	9	0	0
Middle Atlantic	11,478	13,198	-13.0%	0	0	6,903	6,773	0	0	4,576	6,425
New Jersey	0	0	--	0	0	0	0	0	0	0	0
New York	7,911	7,797	1.5%	0	0	6,900	6,771	0	0	1,011	1,026
Pennsylvania	3,567	5,400	-34.0%	0	0	3	1	0	0	3,565	5,399
East North Central	24,196	24,581	-1.6%	4,945	4,890	11,880	12,349	0	0	7,371	7,341
Illinois	0	0	--	0	0	0	0	0	0	0	0
Indiana	0	0	--	0	0	0	0	0	0	0	0
Michigan	15,382	15,749	-2.3%	0	0	11,737	12,202	0	0	3,645	3,547
Ohio	1,129	1,259	-10.0%	0	0	142	147	0	0	986	1,112
Wisconsin	7,685	7,572	1.5%	4,945	4,890	0	0	0	0	2,740	2,682
West North Central	8,728	10,950	-20.0%	1,788	1,939	3,579	5,759	364	358	2,997	2,894
Iowa	11	10	1.2%	0	0	0	0	11	10	0	0
Kansas	0	0	--	0	0	0	0	0	0	0	0
Minnesota	8,429	10,623	-21.0%	1,788	1,939	3,579	5,759	66	31	2,997	2,894
Missouri	288	317	-9.2%	0	0	0	0	288	317	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	123,964	124,661	-0.6%	26,554	23,272	32,397	36,913	136	56	64,878	64,420
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	22,671	20,481	11.0%	7,513	4,502	6,467	7,389	0	0	8,691	8,590
Georgia	32,926	33,876	-2.8%	0	0	7,922	9,542	0	0	25,004	24,334
Maryland	651	673	-3.3%	0	0	0	0	136	56	515	617
North Carolina	15,948	17,297	-7.8%	0	0	9,185	10,501	0	0	6,763	6,796
South Carolina	17,770	18,774	-5.4%	1,703	1,783	5,950	6,573	0	0	10,117	10,418
Virginia	33,999	33,559	1.3%	17,337	16,986	2,873	2,907	0	0	13,789	13,666
West Virginia	0	0	--	0	0	0	0	0	0	0	0
East South Central	36,670	37,044	-1.0%	0	0	2,128	2,119	0	0	34,542	34,925
Alabama	23,616	24,087	-2.0%	0	0	2,128	2,119	0	0	21,488	21,968
Kentucky	1,780	1,735	2.6%	0	0	0	0	0	0	1,780	1,735
Mississippi	6,851	6,935	-1.2%	0	0	0	0	0	0	6,851	6,935
Tennessee	4,424	4,286	3.2%	0	0	0	0	0	0	4,424	4,286
West South Central	30,696	29,778	3.1%	0	0	2,299	1,218	0	0	28,397	28,560
Arkansas	6,774	6,901	-1.8%	0	0	0	0	0	0	6,774	6,901
Louisiana	15,376	15,554	-1.1%	0	0	0	0	0	0	15,376	15,554
Oklahoma	1,778	1,607	11.0%	0	0	22	0	0	0	1,756	1,607
Texas	6,768	5,716	18.0%	0	0	2,277	1,218	0	0	4,491	4,498
Mountain	5,722	5,836	-1.9%	0	0	3,930	4,232	0	0	1,792	1,604
Arizona	2,370	2,600	-8.9%	0	0	2,370	2,600	0	0	0	0
Colorado	1,240	1,326	-6.4%	0	0	1,240	1,326	0	0	0	0
Idaho	1,862	1,662	12.0%	0	0	320	306	0	0	1,542	1,356
Montana	250	248	1.0%	0	0	0	0	0	0	250	248
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	60,143	61,639	-2.4%	3,983	4,300	36,384	39,727	0	0	19,776	17,612
California	40,573	42,056	-3.5%	0	0	34,064	37,376	0	0	6,509	4,679
Oregon	6,802	6,673	1.9%	0	0	2,320	2,351	0	0	4,483	4,322
Washington	12,767	12,910	-1.1%	3,983	4,300	0	0	0	0	8,784	8,610
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	351,162	363,971	-3.5%	45,112	42,806	136,005	151,877	520	460	169,526	168,828

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 2018 are preliminary. Values for 2017 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.

## Chapter 3

# Fossil-Fuel Stocks for Electricity Generation

Table 3.1. Stocks of Coal, Petroleum Liquids, and Petroleum Coke: Electric Power Sector, 2008 - December 2018

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									
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
2016	162,009	31,839	845	130,885	21,013	603	31,124	10,827	241
2017	137,687	29,294	864	114,782	20,253	692	22,905	9,041	171
2018	102,786	25,082	541	84,605	16,729	522	18,181	8,353	19
Year 2016, End of Month Stocks									
January	187,203	32,307	1,320	146,300	20,894	1,089	40,903	11,412	231
February	187,064	31,644	1,323	145,895	20,651	1,064	41,168	10,994	259
March	191,553	31,569	1,240	148,648	20,642	974	42,905	10,927	266
April	193,185	31,788	1,181	150,859	20,926	901	42,327	10,863	280
May	192,417	32,139	1,071	150,639	21,202	826	41,778	10,936	246
June	182,086	31,992	905	144,309	21,133	689	37,777	10,859	216
July	168,119	31,606	858	134,344	20,906	678	33,775	10,700	180
August	158,908	31,565	780	128,256	20,846	589	30,652	10,719	191
Sept	156,567	31,637	768	127,532	20,924	566	29,035	10,713	201
October	160,932	31,831	813	131,510	21,017	606	29,422	10,813	207
November	170,277	32,503	833	138,091	21,583	606	32,185	10,921	227
December	162,009	31,839	845	130,885	21,013	603	31,124	10,827	241
Year 2017, End of Month Stocks									
January	156,214	31,761	768	125,221	20,912	540	30,994	10,849	228
February	160,502	31,500	756	128,051	20,731	544	32,451	10,769	212
March	161,815	32,174	785	128,645	21,565	558	33,170	10,609	227
April	163,937	31,969	844	130,461	21,531	622	33,475	10,438	221
May	162,542	31,578	772	129,300	21,123	562	33,242	10,455	210
June	158,014	31,208	742	126,564	21,038	535	31,450	10,171	207
July	145,811	31,033	724	117,584	20,901	544	28,228	10,132	180
August	141,204	30,750	749	114,228	20,687	569	26,976	10,064	181
Sept	139,571	30,346	798	113,247	20,516	624	26,324	9,830	173
October	141,463	30,227	862	114,939	20,336	683	26,524	9,891	179
November	143,424	30,501	859	117,758	20,626	677	25,666	9,875	182
December	137,687	29,294	864	114,782	20,253	692	22,905	9,041	171
Year 2018, End of Month Stocks									
January	123,723	26,506	721	104,206	18,503	579	19,517	8,003	141
February	121,019	27,239	689	101,983	18,924	562	19,035	8,315	127
March	126,532	27,126	717	106,845	18,987	614	19,687	8,140	103
April	129,071	26,979	710	108,308	18,935	648	20,763	8,045	62
May	128,454	27,053	715	107,594	18,978	649	20,859	8,075	66
June	121,529	26,578	583	101,926	18,547	527	19,603	8,031	55
July	110,794	25,962	643	93,478	17,978	615	17,316	7,984	28
August	104,172	24,828	607	88,284	17,129	581	15,888	7,698	26
Sept	100,781	24,594	576	85,004	16,898	558	15,777	7,696	19
October	105,209	24,502	517	87,660	16,668	513	17,549	7,833	5
November	104,324	24,537	546	86,379	16,527	542	17,946	8,010	5
December	102,786	25,082	541	84,605	16,729	522	18,181	8,353	19

Notes: See Glossary for definitions. Values for 2017 and prior years are final. Values for 2018 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, December 2018 and 2017**

Census Division and State	Coal (Thousand Tons)			Petroleum Liquids (Thousand Barrels)			Petroleum Coke (Thousand Tons)		
	December 2018	December 2017	Percentage Change	December 2018	December 2017	Percentage Change	December 2018	December 2017	Percentage Change
New England	640	933	-31.4%	2,917	3,452	-15.5%	0	0	--
Connecticut	W	W	W	892	1,247	-28.5%	0	0	--
Maine	0	0	--	196	317	-38.2%	0	0	--
Massachusetts	W	W	W	1,279	1,444	-11.4%	0	0	--
New Hampshire	W	W	W	373	297	25.5%	0	0	--
Rhode Island	W	W	W	136	104	30.8%	0	0	--
Vermont	0	0	--	40	43	-7.6%	0	0	--
Middle Atlantic	3,519	3,876	-9.2%	4,843	5,176	-6.4%	0	0	--
New Jersey	W	311	W	605	675	-10.4%	0	0	--
New York	W	W	W	3,105	3,311	-6.2%	0	0	--
Pennsylvania	3,269	W	W	1,133	1,190	-4.8%	0	0	--
East North Central	21,073	28,906	-27.1%	957	1,144	-16.3%	W	W	W
Illinois	5,206	5,716	-8.9%	79	79	0.8%	0	0	--
Indiana	6,114	8,427	-27.4%	96	107	-10.1%	W	W	W
Michigan	4,146	6,080	-31.8%	285	343	-16.7%	W	W	W
Ohio	2,796	5,177	-46.0%	315	420	-25.0%	0	W	W
Wisconsin	2,811	3,506	-19.8%	181	196	-7.4%	W	W	W
West North Central	20,821	28,193	-26.1%	854	984	-13.1%	0	0	--
Iowa	3,767	6,840	-44.9%	123	147	-16.2%	0	0	--
Kansas	3,465	4,116	-15.8%	106	122	-13.1%	0	0	--
Minnesota	2,583	3,479	-25.8%	118	141	-16.3%	0	0	--
Missouri	7,177	8,507	-15.6%	334	372	-10.2%	0	0	--
Nebraska	2,110	3,352	-37.0%	105	122	-14.4%	0	0	--
North Dakota	W	W	W	25	29	-14.8%	0	0	--
South Dakota	W	W	W	44	51	-13.0%	0	0	--
South Atlantic	16,931	24,030	-29.5%	9,995	11,917	-16.1%	W	W	W
Delaware	W	W	W	360	411	-12.5%	0	0	--
District of Columbia	0	0	--	0	0	--	0	0	--
Florida	3,026	4,239	-28.6%	4,156	5,473	-24.1%	W	107	W
Georgia	3,193	5,116	-37.6%	686	774	-11.3%	0	0	--
Maryland	1,536	1,512	1.6%	729	701	4.0%	0	0	--
North Carolina	2,967	4,104	-27.7%	1,121	1,205	-6.9%	0	0	--
South Carolina	1,850	4,023	-54.0%	548	677	-19.0%	0	0	--
Virginia	782	W	W	2,256	2,546	-11.4%	0	0	--
West Virginia	W	3,828	W	139	131	5.8%	W	W	W
East South Central	10,001	12,266	-18.5%	1,288	1,729	-25.5%	0	W	W
Alabama	W	3,049	W	204	198	2.8%	0	0	--
Kentucky	4,881	6,063	-19.5%	231	262	-11.6%	0	W	W
Mississippi	W	911	W	179	489	-63.5%	0	0	--
Tennessee	2,417	2,244	7.7%	675	780	-13.5%	0	0	--
West South Central	13,131	19,583	-32.9%	1,510	1,675	-9.9%	W	W	W
Arkansas	2,282	2,972	-23.2%	156	181	-13.7%	0	0	--
Louisiana	1,867	2,297	-18.7%	340	384	-11.4%	W	W	W
Oklahoma	2,988	4,332	-31.0%	95	106	-10.2%	0	0	--
Texas	5,994	9,981	-39.9%	919	1,005	-8.6%	0	0	--
Mountain	15,715	18,782	-16.3%	376	410	-8.3%	W	W	W
Arizona	2,525	3,015	-16.3%	135	138	-2.1%	0	0	--
Colorado	3,964	4,388	-9.7%	125	140	-11.1%	0	0	--
Idaho	0	0	--	0	0	-28.0%	0	0	--
Montana	W	W	W	35	20	76.8%	W	W	W
Nevada	W	W	W	2	3	-42.2%	0	0	--
New Mexico	W	W	W	25	37	-34.4%	0	0	--
Utah	3,252	4,589	-29.1%	26	33	-22.1%	0	0	--
Wyoming	3,824	4,316	-11.4%	30	39	-23.5%	0	0	--
Pacific Contiguous	W	W	W	346	338	2.1%	0	0	--
California	0	0	--	183	159	14.9%	0	0	--
Oregon	W	W	W	70	77	-8.4%	0	0	--
Washington	W	W	W	93	103	-9.7%	0	0	--
Pacific Noncontiguous	W	W	W	1,997	2,468	-19.1%	0	0	--
Alaska	0	W	W	60	281	-78.6%	0	0	--
Hawaii	W	W	W	1,937	2,187	-11.5%	0	0	--
U.S. Total	102,786	137,687	-25.3%	25,082	29,294	-14.4%	541	864	-37.4%

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 2018 are preliminary. Values for 2017 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, December 2018 and 2017**

Census Division	Electric Power Sector			Electric Utilities		Independent Power Producers	
	December 2018	December 2017	Percentage Change	December 2018	December 2017	December 2018	December 2017
<b>Coal (Thousand Tons)</b>							
New England	640	933	-31.4%	W	W	W	W
Middle Atlantic	3,519	3,876	-9.2%	0	W	3,519	W
East North Central	21,073	28,906	-27.1%	W	19,532	W	9,374
West North Central	20,821	28,193	-26.1%	20,821	28,193	0	0
South Atlantic	16,931	24,030	-29.5%	14,523	21,746	2,408	2,284
East South Central	10,001	12,266	-18.5%	10,001	12,266	0	0
West South Central	13,131	19,583	-32.9%	9,723	14,040	3,407	5,543
Mountain	15,715	18,782	-16.3%	W	W	W	W
Pacific Contiguous	W	W	W	W	W	W	W
Pacific Noncontiguous	W	W	W	0	W	W	W
<b>U.S. Total</b>	<b>102,786</b>	<b>137,687</b>	<b>-25.3%</b>	<b>84,605</b>	<b>114,782</b>	<b>18,181</b>	<b>22,905</b>
<b>Petroleum Liquids (Thousand Barrels)</b>							
New England	2,917	3,452	-15.5%	476	589	2,440	2,864
Middle Atlantic	4,843	5,176	-6.4%	1,851	2,008	2,992	3,168
East North Central	957	1,144	-16.3%	653	788	304	356
West North Central	854	984	-13.1%	832	957	23	26
South Atlantic	9,995	11,917	-16.1%	7,990	9,891	2,005	2,026
East South Central	1,288	1,729	-25.5%	1,204	1,656	85	73
West South Central	1,510	1,675	-9.9%	1,189	1,314	320	361
Mountain	376	410	-8.3%	329	378	46	32
Pacific Contiguous	346	338	2.1%	253	235	93	104
Pacific Noncontiguous	1,997	2,468	-19.1%	1,952	2,436	44	32
<b>U.S. Total</b>	<b>25,082</b>	<b>29,294</b>	<b>-14.4%</b>	<b>16,729</b>	<b>20,253</b>	<b>8,353</b>	<b>9,041</b>
<b>Petroleum Coke (Thousand Tons)</b>							
New England	0	0	--	0	0	0	0
Middle Atlantic	0	0	--	0	0	0	0
East North Central	W	W	W	W	W	0	W
West North Central	0	0	--	0	0	0	0
South Atlantic	W	W	W	W	107	W	W
East South Central	0	W	W	0	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
<b>U.S. Total</b>	<b>541</b>	<b>864</b>	<b>-37.4%</b>	<b>522</b>	<b>692</b>	<b>19</b>	<b>171</b>

W = Withheld to avoid disclosure of individual company data.

Notes: See Glossary for definitions. Values for 2018 are preliminary. Values for 2017 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, 2008 - December 2018**

Period	Electric Power Sector			
	Bituminous Coal	Subbituminous Coal	Lignite Coal	Total
<b>End of Year Stocks</b>				
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
2016	67,241	90,376	4,393	162,009
2017	56,140	77,875	3,672	137,687
2018	42,006	57,742	3,039	102,786
<b>Year 2016, End of Month Stocks</b>				
January	76,919	105,641	4,643	187,203
February	76,373	106,153	4,537	187,064
March	79,664	107,076	4,813	191,553
April	81,390	106,720	5,075	193,185
May	82,185	105,068	5,164	192,417
June	78,216	98,822	5,048	182,086
July	71,287	92,104	4,727	168,119
August	67,462	87,040	4,406	158,908
Sept	65,962	86,411	4,194	156,567
October	67,250	89,666	4,016	160,932
November	70,537	95,428	4,313	170,277
December	67,241	90,376	4,393	162,009
<b>Year 2017, End of Month Stocks</b>				
January	65,797	86,082	4,335	156,214
February	67,752	88,326	4,424	160,502
March	67,783	89,381	4,651	161,815
April	68,195	90,736	5,005	163,937
May	68,333	89,005	5,204	162,542
June	66,591	86,722	4,701	158,014
July	60,766	80,765	4,281	145,811
August	59,208	77,758	4,238	141,204
Sept	58,453	77,173	3,945	139,571
October	59,122	78,821	3,519	141,463
November	59,427	79,916	4,081	143,424
December	56,140	77,875	3,672	137,687
<b>Year 2018, End of Month Stocks</b>				
January	48,395	72,254	3,074	123,723
February	48,130	69,980	2,909	121,019
March	49,518	73,801	3,213	126,532
April	50,964	74,782	3,324	129,071
May	51,794	73,448	3,212	128,454
June	48,853	69,484	3,191	121,529
July	44,916	63,030	2,847	110,794
August	42,779	58,578	2,816	104,172
Sept	40,787	57,150	2,845	100,781
October	43,017	59,176	3,016	105,209
November	42,833	58,383	3,108	104,324
December	42,006	57,742	3,039	102,786

Notes: See Glossary for definitions.

Values for 2017 and prior years are final. Values for 2018 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.

## Chapter 4

# Receipts and Cost of Fossil Fuels

Table 4.1. Receipts, Average Cost, and Quality of Fossil Fuels: Total (All Sectors), 2008 - December 2018

Period	Coal						Petroleum Liquids					
	Receipts		Average Cost				Receipts		Average Cost			
	(Billion Btu)	(Thousand Tons)	(Dollars per MMBtu)	(Dollars per Ton)	Average Sulfur Percent by Weight	Percentage of Consumption	(Billion Btu)	(Thousand Barrels)	(Dollars per MMBtu)	(Dollars per Barrel)	Average Sulfur Percent by Weight	Percentage of Consumption
Annual Totals												
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
2016	12,516,272	650,770	2.11	40.64	1.34	93.8	101,810	16,807	9.39	56.89	0.49	68.1
2017	12,261,029	642,364	2.06	39.27	1.28	94.7	96,977	16,127	11.86	71.35	0.49	68.0
2018	11,357,521	594,683	2.06	39.38	1.31	91.6	118,873	19,717	14.26	86.12	0.42	65.9
Year 2016												
January	1,035,315	54,397	2.12	40.35	1.32	85.5	9,096	1,519	7.96	47.76	0.48	56.2
February	981,062	50,919	2.11	40.62	1.40	97.9	8,023	1,323	7.00	42.51	0.47	52.0
March	896,983	45,720	2.17	42.66	1.46	110.7	6,912	1,140	6.92	41.99	0.45	68.2
April	807,001	41,015	2.16	42.44	1.45	101.8	8,592	1,414	8.37	50.85	0.42	88.7
May	871,890	44,729	2.16	42.13	1.44	96.6	9,231	1,536	9.82	59.07	0.45	82.6
June	1,022,903	53,300	2.10	40.25	1.35	82.6	7,612	1,262	10.41	62.76	0.50	67.3
July	1,155,747	60,545	2.11	40.30	1.28	80.1	9,030	1,466	11.83	72.83	0.51	59.3
August	1,254,473	65,150	2.11	40.61	1.32	86.6	9,118	1,492	9.46	57.81	0.51	62.6
Sept	1,156,705	60,441	2.12	40.58	1.30	95.0	8,154	1,342	9.40	57.14	0.51	76.1
October	1,141,983	59,814	2.07	39.59	1.28	107.2	8,387	1,390	10.01	60.48	0.54	77.1
November	1,097,110	57,377	2.08	39.83	1.29	116.3	9,715	1,599	10.09	61.31	0.50	87.0
December	1,095,100	57,362	2.08	39.64	1.32	86.4	7,939	1,323	10.78	64.72	0.48	60.9
Year 2017												
January	1,111,151	58,266	2.09	39.82	1.26	89.7	9,669	1,609	11.97	72.02	0.46	75.3
February	1,007,951	52,810	2.06	39.28	1.30	107.4	6,294	1,044	11.67	70.33	0.49	62.2
March	976,663	50,872	2.07	39.71	1.35	101.5	12,196	2,053	11.62	69.03	0.54	113.5
April	901,976	46,731	2.08	40.06	1.33	102.9	6,356	1,055	11.62	69.98	0.48	65.2
May	957,276	49,830	2.09	40.13	1.33	95.8	6,638	1,108	11.44	68.50	0.47	59.9
June	1,042,460	54,220	2.07	39.86	1.31	90.4	7,471	1,241	10.91	65.68	0.47	65.9
July	1,095,129	57,572	2.06	39.15	1.22	81.1	6,695	1,121	10.90	65.08	0.48	65.6
August	1,187,341	62,125	2.05	39.16	1.29	92.8	7,022	1,162	11.12	67.19	0.47	63.6
Sept	1,015,150	53,538	2.02	38.29	1.23	95.9	6,518	1,083	11.68	70.30	0.49	61.6
October	999,170	52,462	2.03	38.70	1.27	102.4	7,578	1,255	11.93	72.04	0.52	69.1
November	984,968	52,087	2.04	38.56	1.26	99.9	9,787	1,622	12.29	74.17	0.47	88.5
December	981,795	51,851	2.04	38.66	1.26	86.8	10,753	1,773	13.99	84.87	0.46	46.8
Year 2018												
January	951,750	50,275	2.07	39.16	1.24	76.3	29,693	4,947	13.68	82.51	0.48	50.7
February	849,609	44,615	2.07	39.43	1.26	95.1	10,931	1,797	12.60	76.84	0.47	118.6
March	939,471	48,770	2.04	39.36	1.33	106.9	7,265	1,210	13.39	80.46	0.42	76.8
April	818,670	42,632	2.07	39.74	1.32	102.3	6,423	1,060	13.73	83.20	0.41	63.2
May	892,834	46,150	2.05	39.61	1.37	95.0	8,730	1,441	14.29	86.69	0.34	74.1
June	931,118	48,533	2.05	39.26	1.35	85.0	8,103	1,346	15.01	90.40	0.32	65.8
July	991,966	52,164	2.06	39.10	1.28	80.4	6,858	1,129	14.69	89.18	0.33	60.6
August	1,075,669	56,419	2.06	39.28	1.30	87.1	6,522	1,079	15.26	92.25	0.38	54.4
Sept	945,615	49,944	2.05	38.87	1.25	90.8	7,457	1,240	15.31	92.07	0.38	63.8
October	1,000,696	52,323	2.05	39.19	1.35	105.7	8,675	1,435	15.61	94.37	0.42	75.5
November	948,007	49,881	2.06	39.21	1.32	94.4	7,922	1,325	15.73	94.08	0.46	72.2
December	1,012,118	52,977	2.12	40.45	1.30	93.4	10,295	1,708	13.83	83.38	0.47	90.5
Year to Date												
2016	12,516,272	650,770	2.11	40.64	1.34	93.8	101,810	16,807	9.39	56.89	0.49	68.1
2017	12,261,029	642,364	2.06	39.27	1.28	94.7	96,977	16,127	11.86	71.35	0.49	68.0
2018	11,357,521	594,683	2.06	39.38	1.31	91.6	118,873	19,717	14.26	86.12	0.42	65.9

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 2017 and prior years are final. Values for 2018 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 4.1. Receipts, Average Cost, and Quality of Fossil Fuels: Total (All Sectors), 2008 - December 2018 (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												
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
2016	116,942	4,166	1.65	46.30	5.40	77.9	10,619,105	10,271,180	2.87	2.97	90.7	2.47
2017	92,837	3,309	2.13	59.90	5.56	74.1	9,951,815	9,628,733	3.37	3.49	90.2	2.65
2018	85,122	3,010	2.54	71.76	5.74	72.6	10,366,144	10,039,232	3.55	3.67	83.0	2.80
Year 2016												
January	9,640	341	1.38	38.93	5.68	79.8	826,179	798,251	3.02	3.13	89.9	2.52
February	11,273	408	1.30	35.80	5.53	96.1	736,278	711,506	2.70	2.79	89.6	2.36
March	10,313	363	1.41	40.14	5.33	81.1	797,607	771,918	2.23	2.30	90.4	2.21
April	10,308	369	1.35	37.75	5.56	81.0	773,337	748,523	2.42	2.50	90.9	2.31
May	8,554	307	1.32	36.76	5.35	65.8	857,644	830,896	2.39	2.47	91.1	2.31
June	6,895	240	1.41	40.48	4.67	50.1	1,020,410	988,673	2.67	2.75	91.4	2.39
July	10,032	355	1.47	41.45	5.14	70.8	1,189,145	1,151,122	2.97	3.07	91.3	2.55
August	11,033	398	1.75	48.48	5.42	76.5	1,205,876	1,163,920	2.95	3.06	91.4	2.52
Sept	10,741	381	2.07	58.30	5.17	84.6	968,648	935,630	3.07	3.18	91.1	2.55
October	8,844	317	1.98	55.43	5.69	92.5	795,915	770,111	3.13	3.23	90.3	2.51
November	9,365	333	2.26	63.59	5.69	82.0	718,522	695,273	3.02	3.12	90.4	2.47
December	9,945	355	2.07	57.94	5.43	82.3	729,545	705,358	3.96	4.10	89.9	2.82
Year 2017												
January	7,058	251	2.14	60.16	5.67	55.9	715,582	691,578	4.11	4.25	88.6	2.88
February	7,593	271	2.00	56.03	5.85	78.1	628,949	608,845	3.56	3.67	89.9	2.63
March	8,628	309	2.06	57.51	5.29	87.2	734,674	711,169	3.35	3.46	90.3	2.66
April	5,835	208	2.00	55.96	5.34	86.1	689,233	667,137	3.38	3.49	90.6	2.65
May	6,776	242	2.05	57.46	5.57	59.6	766,572	742,712	3.48	3.59	91.4	2.70
June	8,657	308	2.11	59.32	5.55	69.9	910,687	881,511	3.29	3.40	91.0	2.64
July	8,498	302	2.09	58.85	5.50	70.1	1,133,095	1,095,411	3.21	3.32	90.6	2.64
August	7,972	284	2.08	58.24	5.47	72.8	1,076,917	1,041,412	3.13	3.23	90.9	2.56
Sept	7,915	284	2.10	58.73	5.43	80.6	910,005	879,186	3.16	3.27	90.2	2.56
October	8,347	297	2.31	64.88	5.61	94.6	823,614	797,394	3.13	3.24	89.7	2.54
November	7,469	266	2.49	69.77	5.67	71.4	720,648	697,890	3.35	3.46	89.3	2.62
December	8,088	287	2.17	60.99	5.74	78.0	841,838	814,486	3.63	3.75	89.2	2.80
Year 2018												
January	7,009	248	2.38	67.41	5.31	58.8	779,006	754,166	5.02	5.19	82.6	3.50
February	7,769	277	2.43	68.09	5.49	81.9	688,539	667,072	3.61	3.72	81.8	2.79
March	7,841	281	2.54	70.89	5.54	91.6	749,405	725,132	3.18	3.29	82.9	2.57
April	6,564	232	2.56	72.38	6.09	71.7	706,952	685,216	3.13	3.23	83.2	2.58
May	4,344	152	2.41	68.58	6.09	67.7	814,786	789,317	3.04	3.14	81.4	2.56
June	7,382	260	2.73	77.61	5.97	68.7	927,153	897,864	3.11	3.21	83.8	2.61
July	8,307	293	2.71	76.81	5.73	70.4	1,149,841	1,113,981	3.29	3.39	81.8	2.73
August	8,443	298	2.79	78.94	5.67	75.4	1,130,270	1,095,233	3.28	3.38	82.8	2.69
Sept	8,158	288	2.94	83.35	5.63	74.1	1,002,984	970,993	3.11	3.21	83.3	2.62
October	5,892	208	2.48	70.32	5.77	78.8	881,837	854,142	3.39	3.50	84.2	2.71
November	6,696	235	2.21	63.10	5.87	75.3	764,243	740,250	4.16	4.29	83.8	3.01
December	6,718	238	2.03	57.24	5.90	63.5	771,128	745,864	4.73	4.89	85.3	3.25
Year to Date												
2016	116,942	4,166	1.65	46.30	5.40	77.9	10,619,105	10,271,180	2.87	2.97	90.7	2.47
2017	92,837	3,309	2.13	59.90	5.56	74.1	9,951,815	9,628,733	3.37	3.49	90.2	2.65
2018	85,122	3,010	2.54	71.76	5.74	72.6	10,366,144	10,039,232	3.55	3.67	83.0	2.80

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 2017 and prior years are final. Values for 2018 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 4.2. Receipts, Average Cost, and Quality of Fossil Fuels: Electric Utilities, 2008 - December 2018

Period	Coal						Petroleum Liquids					
	Receipts		Average Cost				Receipts		Average Cost			
	(Billion Btu)	(Thousand Tons)	(Dollars per MMBtu)	(Dollars per Ton)	Average Sulfur Percent by Weight	Percentage of Consumption	(Billion Btu)	(Thousand Barrels)	(Dollars per MMBtu)	(Dollars per Barrel)	Average Sulfur Percent by Weight	Percentage of Consumption
Annual Totals												
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
2016	9,256,878	476,207	2.16	42.01	1.21	95.4	73,294	11,985	9.16	56.02	0.45	74.0
2017	9,011,629	467,595	2.12	40.81	1.16	96.0	70,422	11,640	11.60	70.19	0.47	74.4
2018	8,386,175	438,023	2.11	40.39	1.18	92.0	74,884	12,324	14.22	86.46	0.37	69.1
Year 2016												
January	750,914	39,064	2.17	41.71	1.18	85.5	6,190	1,022	7.88	47.74	0.44	58.8
February	722,024	37,129	2.16	41.95	1.23	98.2	5,814	955	6.92	42.16	0.41	64.1
March	685,422	34,609	2.19	43.49	1.34	110.9	5,223	851	6.69	41.07	0.40	77.5
April	612,742	30,953	2.19	43.39	1.31	107.4	6,897	1,126	8.35	51.19	0.37	106.4
May	655,166	33,408	2.17	42.60	1.25	98.5	6,742	1,114	9.12	55.16	0.40	91.7
June	775,536	39,900	2.15	41.79	1.24	85.9	5,511	908	10.51	63.80	0.44	70.9
July	849,005	43,981	2.17	41.99	1.15	81.1	7,117	1,142	11.54	71.91	0.52	66.7
August	925,332	47,610	2.17	42.19	1.19	88.3	6,737	1,090	9.15	56.57	0.51	66.2
Sept	851,137	43,822	2.18	42.34	1.18	97.6	5,514	896	9.00	55.39	0.49	79.2
October	842,651	43,693	2.12	40.99	1.16	110.5	5,205	851	9.80	59.94	0.52	73.4
November	805,502	41,615	2.13	41.25	1.20	117.8	6,780	1,106	9.80	60.07	0.48	88.2
December	781,447	40,423	2.13	41.17	1.21	85.4	5,565	925	10.71	64.43	0.44	65.2
Year 2017												
January	797,433	41,477	2.14	41.15	1.14	88.2	6,680	1,100	11.15	67.71	0.44	75.9
February	737,614	38,372	2.11	40.53	1.20	107.5	4,658	770	11.60	70.11	0.46	66.9
March	706,986	36,570	2.12	41.05	1.20	101.9	10,582	1,778	11.59	68.99	0.53	132.1
April	650,562	33,339	2.14	41.82	1.22	105.4	4,760	788	11.41	68.97	0.46	68.2
May	702,581	36,058	2.16	42.07	1.21	95.9	4,694	778	11.40	68.79	0.45	60.1
June	786,845	40,393	2.13	41.51	1.20	91.9	5,771	951	10.93	66.29	0.47	72.2
July	821,488	42,591	2.11	40.78	1.11	81.6	4,826	803	10.96	65.87	0.45	68.3
August	890,849	46,092	2.11	40.79	1.18	93.7	5,210	855	11.12	67.72	0.46	67.4
Sept	741,814	38,857	2.08	39.69	1.10	98.1	4,823	792	11.80	71.87	0.48	65.9
October	733,109	38,175	2.09	40.12	1.15	104.8	5,030	825	12.05	73.47	0.49	63.2
November	726,042	38,128	2.11	40.23	1.13	105.8	7,044	1,156	12.00	73.12	0.41	98.5
December	716,306	37,543	2.11	40.20	1.11	89.5	6,345	1,043	12.93	78.67	0.42	58.0
Year 2018												
January	690,227	36,292	2.08	39.64	1.11	75.7	12,565	2,096	13.91	83.50	0.43	47.5
February	638,278	33,348	2.10	40.24	1.16	97.7	8,008	1,303	12.43	76.46	0.46	119.0
March	699,005	36,379	2.10	40.26	1.17	112.0	5,017	827	13.19	79.99	0.36	77.9
April	605,929	31,436	2.12	40.90	1.22	102.9	5,034	826	13.61	83.01	0.36	73.0
May	658,792	34,012	2.09	40.57	1.23	96.1	6,271	1,028	14.30	87.27	0.29	79.0
June	693,365	36,117	2.10	40.34	1.20	84.7	5,985	986	14.68	89.15	0.28	73.1
July	745,064	39,045	2.10	40.14	1.14	80.5	5,128	836	14.29	87.66	0.27	70.9
August	806,053	42,128	2.11	40.46	1.18	87.7	4,686	769	15.08	91.87	0.34	60.9
Sept	701,123	36,855	2.12	40.31	1.14	91.0	5,414	897	15.44	93.24	0.35	66.3
October	718,353	37,512	2.10	40.23	1.21	104.9	5,772	942	15.64	95.78	0.39	71.2
November	688,957	36,216	2.10	40.01	1.17	94.8	4,765	789	15.74	94.99	0.41	65.3
December	741,030	38,682	2.17	41.58	1.17	92.7	6,239	1,026	13.70	83.32	0.43	89.0
Year to Date												
2016	9,256,878	476,207	2.16	42.01	1.21	95.4	73,294	11,985	9.16	56.02	0.45	74.0
2017	9,011,629	467,595	2.12	40.81	1.16	96.0	70,422	11,640	11.60	70.19	0.47	74.4
2018	8,386,175	438,023	2.11	40.39	1.18	92.0	74,884	12,324	14.22	86.46	0.37	69.1

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 2017 and prior years are final. Values for 2018 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 4.2. Receipts, Average Cost, and Quality of Fossil Fuels: Electric Utilities, 2008 - December 2018 (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												
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
2016	99,706	3,538	1.52	42.85	5.38	103.1	5,075,337	4,907,538	3.15	3.26	97.0	2.54
2017	90,481	3,224	2.15	60.31	5.55	117.6	4,794,383	4,640,827	3.62	3.74	96.8	2.68
2018	83,211	2,940	2.56	72.34	5.74	106.8	4,976,093	4,822,698	3.69	3.81	87.1	2.76
Year 2016												
January	7,935	278	1.15	32.96	5.67	91.8	394,925	382,074	3.27	3.38	97.1	2.57
February	9,837	356	1.13	31.18	5.53	131.0	356,803	344,669	2.96	3.06	96.8	2.43
March	8,402	294	1.21	34.47	5.28	103.8	383,424	371,055	2.53	2.61	97.4	2.33
April	8,436	300	1.14	31.95	5.58	92.1	367,155	355,539	2.72	2.80	97.6	2.42
May	7,842	281	1.22	34.16	5.35	94.9	412,465	399,342	2.68	2.77	97.4	2.40
June	6,325	220	1.33	38.34	4.59	71.4	501,782	485,899	2.88	2.97	96.9	2.46
July	9,587	340	1.43	40.50	5.10	104.6	571,042	552,828	3.20	3.31	96.5	2.62
August	9,306	335	1.62	45.01	5.45	99.4	571,170	551,024	3.23	3.34	96.9	2.59
Sept	9,059	320	2.00	56.51	5.12	102.8	457,872	442,147	3.43	3.55	97.3	2.64
October	7,088	253	1.87	52.47	5.71	146.9	370,666	358,541	3.53	3.65	96.7	2.58
November	7,871	279	2.22	62.85	5.74	116.3	339,777	328,019	3.36	3.48	97.4	2.54
December	8,017	284	1.99	56.17	5.39	108.8	348,255	336,401	4.15	4.30	97.0	2.78
Year 2017												
January	7,058	251	2.14	60.16	5.67	83.3	337,596	326,324	4.31	4.46	95.7	2.82
February	7,593	271	2.00	56.03	5.85	124.3	294,616	285,401	3.80	3.92	96.7	2.62
March	8,628	309	2.06	57.51	5.29	143.9	355,096	343,820	3.53	3.64	97.0	2.67
April	5,835	208	2.00	55.96	5.34	188.7	338,000	327,213	3.52	3.63	97.7	2.65
May	6,776	242	2.05	57.46	5.57	91.5	383,433	371,812	3.68	3.80	98.5	2.73
June	8,386	298	2.14	60.07	5.55	105.5	442,214	428,256	3.55	3.66	97.6	2.67
July	8,245	292	2.11	59.61	5.49	107.5	554,383	536,001	3.45	3.57	96.5	2.68
August	7,676	273	2.11	59.17	5.45	119.8	519,749	502,748	3.42	3.53	96.7	2.62
Sept	7,658	274	2.12	59.07	5.42	130.2	435,093	420,539	3.54	3.66	96.4	2.65
October	7,454	265	2.37	66.84	5.58	154.2	389,312	377,140	3.54	3.66	97.1	2.63
November	7,084	252	2.52	70.93	5.66	107.1	342,138	331,585	3.64	3.76	96.6	2.66
December	8,088	287	2.17	60.99	5.74	123.5	402,754	389,987	3.71	3.83	95.5	2.74
Year 2018												
January	7,009	248	2.38	67.41	5.31	83.4	386,450	374,413	5.13	5.29	88.3	3.29
February	7,769	277	2.43	68.09	5.49	117.9	330,518	320,418	3.81	3.93	89.0	2.76
March	7,841	281	2.54	70.89	5.54	141.5	360,699	349,214	3.48	3.60	89.3	2.61
April	6,564	232	2.56	72.38	6.09	119.0	342,450	332,235	3.30	3.40	89.2	2.60
May	4,344	152	2.41	68.58	6.09	108.3	400,819	388,233	3.24	3.35	84.5	2.60
June	7,382	260	2.73	77.61	5.97	96.2	464,827	450,427	3.27	3.38	87.6	2.63
July	8,147	287	2.73	77.48	5.73	100.4	552,025	534,990	3.28	3.38	82.9	2.65
August	8,183	288	2.82	80.03	5.67	105.4	534,991	518,832	3.34	3.45	84.9	2.65
Sept	7,493	263	3.05	86.74	5.59	101.2	476,033	460,962	3.28	3.39	85.4	2.65
October	5,415	191	2.55	72.24	5.80	120.4	421,712	408,928	3.56	3.67	88.6	2.71
November	6,524	229	2.23	63.55	5.88	116.4	355,558	345,025	4.25	4.38	88.9	2.89
December	6,541	232	2.04	57.52	5.91	96.0	350,009	339,020	4.95	5.11	91.7	3.12
Year to Date												
2016	99,706	3,538	1.52	42.85	5.38	103.1	5,075,337	4,907,538	3.15	3.26	97.0	2.54
2017	90,481	3,224	2.15	60.31	5.55	117.6	4,794,383	4,640,827	3.62	3.74	96.8	2.68
2018	83,211	2,940	2.56	72.34	5.74	106.8	4,976,093	4,822,698	3.69	3.81	87.1	2.76

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 2017 and prior years are final. Values for 2018 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 4.3. Receipts, Average Cost, and Quality of Fossil Fuels: Independent Power Producers, 2008 - December 2018

Period	Coal						Petroleum Liquids					
	Receipts		Average Cost				Receipts		Average Cost			
	(Billion Btu)	(Thousand Tons)	(Dollars per MMBtu)	(Dollars per Ton)	Average Sulfur Percent by Weight	Percentage of Consumption	(Billion Btu)	(Thousand Barrels)	(Dollars per MMBtu)	(Dollars per Barrel)	Average Sulfur Percent by Weight	Percentage of Consumption
Annual Totals												
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
2016	3,047,358	164,648	1.93	35.69	1.73	91.8	25,975	4,410	9.93	58.56	0.48	75.1
2017	3,056,215	165,567	1.85	34.19	1.64	93.1	24,704	4,190	12.67	74.73	0.46	73.8
2018	2,805,911	148,687	1.89	35.76	1.70	92.6	41,671	7,021	14.38	85.59	0.45	77.9
Year 2016												
January	264,906	14,431	1.94	35.56	1.72	87.7	2,670	459	7.86	45.79	0.42	64.8
February	241,497	12,970	1.92	35.76	1.91	101.0	1,867	313	6.94	41.57	0.47	42.4
March	192,217	10,216	2.04	38.36	1.89	117.0	1,484	256	7.49	43.48	0.47	66.8
April	178,203	9,323	1.99	38.00	1.97	90.2	1,473	252	8.28	48.34	0.50	74.9
May	200,347	10,560	2.08	39.52	2.05	94.7	2,331	396	11.84	69.75	0.48	98.3
June	228,760	12,535	1.87	34.19	1.72	74.5	1,842	312	10.09	59.54	0.47	82.9
July	288,156	15,689	1.89	34.68	1.67	78.4	1,828	310	12.96	76.40	0.45	58.9
August	309,421	16,607	1.89	35.21	1.71	83.3	2,262	383	10.26	60.58	0.48	69.4
Sept	289,363	15,859	1.91	34.96	1.65	90.6	2,478	420	10.16	59.98	0.49	92.3
October	280,681	15,236	1.88	34.66	1.62	101.0	2,885	492	10.39	61.12	0.49	111.5
November	276,435	15,051	1.91	35.16	1.53	117.1	2,652	446	10.79	64.16	0.47	115.5
December	297,372	16,171	1.91	35.08	1.60	91.6	2,202	370	10.76	64.01	0.50	65.7
Year 2017												
January	297,849	16,042	1.92	35.75	1.59	96.7	2,862	488	13.96	82.04	0.47	103.9
February	254,381	13,690	1.88	34.92	1.59	110.9	1,514	254	11.89	70.84	0.50	70.2
March	251,712	13,439	1.88	35.27	1.75	103.1	1,436	247	11.97	69.71	0.44	91.2
April	235,324	12,633	1.85	34.48	1.66	99.2	1,436	242	12.28	72.85	0.44	83.2
May	238,355	12,976	1.86	34.11	1.67	97.1	1,790	306	11.55	67.69	0.45	79.3
June	239,687	13,070	1.86	34.15	1.67	87.3	1,559	267	10.88	63.53	0.42	64.2
July	257,789	14,218	1.85	33.64	1.55	80.5	1,775	303	10.73	62.88	0.48	79.4
August	279,845	15,249	1.83	33.52	1.64	91.5	1,702	289	11.16	65.68	0.43	72.3
Sept	258,366	13,963	1.82	33.65	1.63	92.0	1,543	267	11.35	65.70	0.42	68.5
October	250,339	13,545	1.83	33.87	1.60	99.0	2,399	406	11.71	69.17	0.50	121.1
November	243,578	13,224	1.79	33.00	1.64	88.3	2,544	434	13.15	77.15	0.56	113.8
December	248,991	13,519	1.83	33.70	1.68	81.5	4,145	688	15.82	95.35	0.43	43.1
Year 2018												
January	246,150	13,243	2.00	37.16	1.60	79.5	16,721	2,787	13.51	81.73	0.48	60.0
February	197,472	10,603	1.94	36.08	1.58	91.3	2,735	465	13.30	78.46	0.44	202.6
March	225,377	11,669	1.85	35.75	1.83	97.6	2,014	345	14.02	81.94	0.43	111.2
April	199,704	10,574	1.88	35.52	1.61	105.1	1,236	210	14.27	83.89	0.44	58.3
May	219,931	11,454	1.87	36.00	1.78	94.7	2,311	389	14.24	85.04	0.48	88.7
June	223,656	11,737	1.85	35.21	1.84	87.4	2,011	344	16.11	94.38	0.43	79.1
July	232,451	12,416	1.88	35.17	1.73	80.8	1,592	271	15.97	93.81	0.45	61.5
August	256,223	13,648	1.87	35.05	1.68	87.0	1,701	288	15.85	93.45	0.41	56.8
Sept	232,368	12,512	1.82	33.92	1.56	92.7	1,887	318	15.00	88.95	0.39	82.9
October	270,387	14,235	1.89	35.93	1.72	111.7	2,723	464	15.61	91.70	0.40	123.7
November	245,201	12,983	1.92	36.34	1.73	95.5	2,951	503	15.83	93.00	0.42	125.6
December	256,990	13,613	1.95	36.83	1.68	97.9	3,789	639	14.06	83.33	0.46	131.7
Year to Date												
2016	3,047,358	164,648	1.93	35.69	1.73	91.8	25,975	4,410	9.93	58.56	0.48	75.1
2017	3,056,215	165,567	1.85	34.19	1.64	93.1	24,704	4,190	12.67	74.73	0.46	73.8
2018	2,805,911	148,687	1.89	35.76	1.70	92.6	41,671	7,021	14.38	85.59	0.45	77.9

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 2017 and prior years are final. Values for 2018 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 4.3. Receipts, Average Cost, and Quality of Fossil Fuels: Independent Power Producers, 2008 - December 2018 (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												
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	3.52
2015	14,550	524	2.45	68.22	5.26	67.3	4,683,291	4,530,195	2.94	3.04	93.2	2.57
2016	13,573	492	2.50	68.88	5.44	69.9	4,791,729	4,634,518	2.54	2.63	94.0	2.29
2017	0	0	--	--	--	0.0	4,346,156	4,201,573	3.08	3.19	94.0	2.54
2018	0	0	--	--	--	0.0	4,608,011	4,456,582	3.41	3.52	87.6	2.82
Year 2016												
January	1,305	49	2.50	66.52	5.70	182.6	366,954	353,940	2.80	2.91	93.1	2.41
February	1,314	47	2.50	69.23	5.44	97.1	322,866	312,018	2.43	2.52	93.5	2.20
March	1,337	48	2.50	69.56	5.37	65.3	353,542	341,974	1.89	1.95	94.0	1.97
April	1,203	44	2.50	68.64	5.30	88.5	345,599	334,192	2.07	2.14	94.3	2.06
May	506	18	2.50	70.60	5.28	30.6	384,972	373,040	2.04	2.11	94.6	2.10
June	348	12	2.50	70.36	5.32	20.5	457,044	442,942	2.41	2.49	94.4	2.22
July	223	8	2.50	70.91	5.67	12.1	552,956	535,139	2.66	2.75	94.4	2.38
August	1,510	55	2.50	68.75	5.24	77.3	569,120	549,584	2.62	2.71	94.3	2.34
Sept	1,483	53	2.50	69.56	5.43	90.7	448,820	433,556	2.61	2.70	94.1	2.32
October	1,549	56	2.50	68.82	5.59	78.5	362,466	350,675	2.60	2.69	94.0	2.28
November	1,294	47	2.50	69.55	5.43	83.4	313,867	304,227	2.59	2.67	93.5	2.27
December	1,501	55	2.50	68.05	5.50	84.2	313,521	303,233	3.83	3.95	93.6	2.82
Year 2017												
January	0	0	--	--	--	0.0	308,232	297,759	3.99	4.13	93.5	2.92
February	0	0	--	--	--	0.0	266,747	257,955	3.34	3.45	94.3	2.58
March	0	0	--	--	--	0.0	308,990	298,914	3.22	3.33	94.1	2.58
April	0	0	--	--	--	0.0	284,267	275,005	3.20	3.31	94.1	2.55
May	0	0	--	--	--	0.0	315,859	305,704	3.21	3.31	94.8	2.58
June	0	0	--	--	--	0.0	401,526	388,362	2.93	3.02	94.2	2.49
July	0	0	--	--	--	0.0	510,414	493,178	2.88	2.98	93.8	2.50
August	0	0	--	--	--	0.0	490,671	474,207	2.74	2.84	94.5	2.37
Sept	0	0	--	--	--	0.0	411,228	396,942	2.66	2.75	93.8	2.30
October	0	0	--	--	--	0.0	370,640	358,457	2.60	2.69	93.3	2.29
November	0	0	--	--	--	0.0	310,865	300,737	3.03	3.13	93.2	2.47
December	0	0	--	--	--	0.0	366,717	354,352	3.64	3.77	94.0	2.91
Year 2018												
January	0	0	--	--	--	0.0	323,796	313,096	5.25	5.43	86.6	3.95
February	0	0	--	--	--	0.0	297,893	288,320	3.36	3.48	84.5	2.78
March	0	0	--	--	--	0.0	328,275	317,199	2.86	2.96	87.1	2.44
April	0	0	--	--	--	0.0	303,547	293,740	2.94	3.04	87.7	2.49
May	0	0	--	--	--	0.0	351,345	340,277	2.77	2.86	86.5	2.43
June	0	0	--	--	--	0.0	397,507	384,422	2.87	2.96	87.7	2.49
July	0	0	--	--	--	0.0	530,641	513,551	3.34	3.45	87.0	2.85
August	0	0	--	--	--	0.0	527,203	510,315	3.21	3.32	87.3	2.74
Sept	0	0	--	--	--	0.0	460,133	444,978	2.88	2.98	88.1	2.51
October	0	0	--	--	--	0.0	395,265	382,024	3.16	3.27	88.1	2.64
November	0	0	--	--	--	0.0	338,095	326,516	4.09	4.24	88.7	3.15
December	0	0	--	--	--	0.0	354,311	342,143	4.48	4.64	91.4	3.37
Year to Date												
2016	13,573	492	2.50	68.88	5.44	69.9	4,791,729	4,634,518	2.54	2.63	94.0	2.29
2017	0	0	--	--	--	0.0	4,346,156	4,201,573	3.08	3.19	94.0	2.54
2018	0	0	--	--	--	0.0	4,608,011	4,456,582	3.41	3.52	87.6	2.82

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 2017 and prior years are final. Values for 2018 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, 2008 - December 2018

Period	Coal						Petroleum Liquids					
	Receipts		Average Cost				Receipts		Average Cost			
	(Billion Btu)	(Thousand Tons)	(Dollars per MMBtu)	(Dollars per Ton)	Average Sulfur Percent by Weight	Percentage of Consumption	(Billion Btu)	(Thousand Barrels)	(Dollars per MMBtu)	(Dollars per Barrel)	Average Sulfur Percent by Weight	Percentage of Consumption
Annual Totals												
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	3.12	70.30	2.50	17.1	0	0	--	--	--	0.0
2015	2,439	109	2.85	63.90	2.55	13.6	0	0	--	--	--	0.0
2016	1,288	57	2.69	60.89	3.03	8.3	0	0	--	--	--	0.0
2017	548	24	2.78	63.31	2.99	3.9	0	0	--	--	--	0.0
2018	290	13	2.94	66.52	3.04	2.2	0	0	--	--	--	0.0
Year 2016												
January	139	6	2.70	61.16	2.87	8.1	0	0	--	--	--	0.0
February	124	5	2.70	61.18	2.84	7.2	0	0	--	--	--	0.0
March	163	7	2.70	61.02	3.03	9.7	0	0	--	--	--	0.0
April	9	0	2.65	60.00	2.98	0.9	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	2.68	60.89	3.09	8.2	0	0	--	--	--	0.0
Sept	153	7	2.68	60.94	3.14	13.5	0	0	--	--	--	0.0
October	159	7	2.68	60.76	3.15	14.1	0	0	--	--	--	0.0
November	237	10	2.68	60.68	3.04	17.6	0	0	--	--	--	0.0
December	214	9	2.68	60.81	3.05	12.5	0	0	--	--	--	0.0
Year 2017												
January	111	5	2.77	62.82	2.99	6.9	0	0	--	--	--	0.0
February	91	4	2.77	63.46	2.95	6.9	0	0	--	--	--	0.0
March	104	5	2.77	63.24	3.02	7.0	0	0	--	--	--	0.0
April	1	0	2.77	63.60	2.96	0.1	0	0	--	--	--	0.0
May	11	0	2.77	63.54	3.23	1.2	0	0	--	--	--	0.0
June	17	1	2.77	63.65	3.02	1.8	0	0	--	--	--	0.0
July	0	0	--	--	--	0.0	0	0	--	--	--	0.0
August	4	0	2.77	63.24	2.77	0.4	0	0	--	--	--	0.0
Sept	72	3	2.77	63.24	2.96	6.9	0	0	--	--	--	0.0
October	35	2	2.79	64.50	2.96	3.6	0	0	--	--	--	0.0
November	13	1	2.79	63.70	3.04	1.1	0	0	--	--	--	0.0
December	89	4	2.79	63.31	3.01	6.0	0	0	--	--	--	0.0
Year 2018												
January	95	4	2.92	66.58	3.11	6.0	0	0	--	--	--	0.0
February	31	1	2.92	66.05	3.19	2.5	0	0	--	--	--	0.0
March	5	0	2.92	66.20	3.16	0.4	0	0	--	--	--	0.0
April	0	0	--	--	--	0.0	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	0	0	--	--	--	0.0	0	0	--	--	--	0.0
Sept	0	0	--	--	--	0.0	0	0	--	--	--	0.0
October	52	2	2.94	66.53	2.87	5.4	0	0	--	--	--	0.0
November	62	3	2.94	66.44	2.99	5.6	0	0	--	--	--	0.0
December	46	2	2.97	66.83	3.05	4.3	0	0	--	--	--	0.0
Year to Date												
2016	1,288	57	2.69	60.89	3.03	8.3	0	0	--	--	--	0.0
2017	548	24	2.78	63.31	2.99	3.9	0	0	--	--	--	0.0
2018	290	13	2.94	66.52	3.04	2.2	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 2017 and prior years are final. Values for 2018 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, 2008 - December 2018 (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												
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	5.42	5.47	4.9	4.47
2015	0	0	--	--	--	0.0	6,499	6,371	4.11	4.19	5.5	3.76
2016	0	0	--	--	--	0.0	8,005	7,766	3.85	3.97	6.1	3.69
2017	0	0	--	--	--	0.0	7,841	7,593	3.82	3.95	4.9	3.75
2018	0	0	--	--	--	0.0	9,090	8,823	3.49	3.59	5.7	3.47
Year 2016												
January	0	0	--	--	--	0.0	1,241	1,203	3.68	3.79	11.3	3.58
February	0	0	--	--	--	0.0	488	477	3.85	3.94	4.9	3.62
March	0	0	--	--	--	0.0	620	610	3.86	3.93	6.2	3.62
April	0	0	--	--	--	0.0	578	567	3.82	3.89	6.1	3.80
May	0	0	--	--	--	0.0	599	587	3.82	3.89	6.1	3.82
June	0	0	--	--	--	0.0	599	585	3.82	3.91	5.3	3.82
July	0	0	--	--	--	0.0	691	667	3.76	3.89	5.0	3.76
August	0	0	--	--	--	0.0	802	765	3.80	3.98	5.6	3.68
Sept	0	0	--	--	--	0.0	610	591	3.92	4.05	5.3	3.68
October	0	0	--	--	--	0.0	598	575	3.98	4.13	5.9	3.70
November	0	0	--	--	--	0.0	613	589	4.09	4.26	6.8	3.70
December	0	0	--	--	--	0.0	568	549	4.05	4.18	5.3	3.67
Year 2017												
January	0	0	--	--	--	0.0	662	639	4.02	4.17	4.5	3.84
February	0	0	--	--	--	0.0	646	624	4.01	4.15	5.2	3.86
March	0	0	--	--	--	0.0	680	662	3.96	4.06	5.4	3.80
April	0	0	--	--	--	0.0	502	490	3.90	3.99	4.7	3.89
May	0	0	--	--	--	0.0	497	483	3.92	4.04	4.4	3.90
June	0	0	--	--	--	0.0	615	595	3.82	3.95	4.6	3.79
July	0	0	--	--	--	0.0	636	613	3.64	3.77	4.1	3.64
August	0	0	--	--	--	0.0	809	778	3.70	3.85	5.3	3.70
Sept	0	0	--	--	--	0.0	707	685	3.72	3.84	5.1	3.63
October	0	0	--	--	--	0.0	605	588	3.77	3.88	4.6	3.72
November	0	0	--	--	--	0.0	749	725	3.72	3.84	6.0	3.70
December	0	0	--	--	--	0.0	734	711	3.77	3.89	5.2	3.67
Year 2018												
January	0	0	--	--	--	0.0	844	818	3.63	3.74	6.0	3.56
February	0	0	--	--	--	0.0	709	688	3.72	3.84	5.5	3.69
March	0	0	--	--	--	0.0	768	746	3.59	3.69	5.8	3.58
April	0	0	--	--	--	0.0	732	713	3.49	3.58	5.9	3.49
May	0	0	--	--	--	0.0	776	758	3.47	3.55	6.3	3.47
June	0	0	--	--	--	0.0	670	650	3.57	3.67	5.1	3.57
July	0	0	--	--	--	0.0	790	760	3.39	3.52	5.4	3.39
August	0	0	--	--	--	0.0	786	764	3.42	3.52	5.4	3.42
Sept	0	0	--	--	--	0.0	744	723	3.38	3.48	5.6	3.38
October	0	0	--	--	--	0.0	792	770	3.36	3.45	6.1	3.33
November	0	0	--	--	--	0.0	723	701	3.41	3.52	5.6	3.37
December	0	0	--	--	--	0.0	756	732	3.41	3.52	5.6	3.39
Year to Date												
2016	0	0	--	--	--	0.0	8,005	7,766	3.85	3.97	6.1	3.69
2017	0	0	--	--	--	0.0	7,841	7,593	3.82	3.95	4.9	3.75
2018	0	0	--	--	--	0.0	9,090	8,823	3.49	3.59	5.7	3.47

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 2017 and prior years are final. Values for 2018 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, 2008 - December 2018

Period	Coal						Petroleum Liquids					
	Receipts		Average Cost				Receipts		Average Cost			
	(Billion Btu)	(Thousand Tons)	(Dollars per MMBtu)	(Dollars per Ton)	Average Sulfur Percent by Weight	Percentage of Consumption	(Billion Btu)	(Thousand Barrels)	(Dollars per MMBtu)	(Dollars per Barrel)	Average Sulfur Percent by Weight	Percentage of Consumption
Annual Totals												
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	2.97	64.15	1.33	68.4	2,290	373	17.91	109.99	1.43	15.6
2015	263,630	12,132	2.72	59.17	1.35	71.4	2,359	385	13.45	82.47	1.42	16.9
2016	210,749	9,859	2.67	57.01	1.30	67.0	2,541	412	10.51	64.79	1.27	18.3
2017	192,637	9,178	2.49	52.29	1.35	70.7	1,850	297	11.18	69.57	1.42	15.2
2018	165,145	7,960	2.49	51.58	1.24	63.8	2,319	372	13.46	83.97	1.35	15.1
Year 2016												
January	19,357	897	2.69	58.07	1.36	64.2	237	38	11.34	71.47	1.49	18.7
February	17,418	814	2.68	57.44	1.42	63.5	342	55	8.70	53.76	1.16	19.8
March	19,181	888	2.77	59.80	1.29	69.7	205	33	8.74	54.10	1.18	18.5
April	16,048	739	2.69	58.41	1.43	68.7	222	36	9.38	57.17	1.36	20.8
May	16,376	761	2.67	57.42	1.39	64.6	158	26	11.79	72.81	1.49	11.7
June	18,607	865	2.66	57.25	1.25	69.6	259	42	10.38	64.15	1.45	21.3
July	18,586	875	2.64	56.18	1.23	66.2	85	14	11.10	68.65	1.14	7.1
August	19,629	929	2.64	55.84	1.16	71.9	119	19	11.84	73.14	1.11	12.4
Sept	16,052	753	2.67	56.87	1.20	65.1	162	27	11.67	71.25	1.12	16.5
October	18,491	879	2.64	55.55	1.25	78.1	297	48	10.34	63.78	1.20	25.7
November	14,936	701	2.62	55.77	1.27	64.1	283	47	10.57	63.80	1.30	30.7
December	16,067	759	2.61	55.34	1.33	59.3	172	28	13.49	83.67	1.12	18.0
Year 2017												
January	15,758	742	2.51	53.37	1.38	58.7	128	21	11.64	72.27	1.06	12.8
February	15,865	744	2.57	54.74	1.18	69.1	121	19	11.56	72.24	1.36	15.1
March	17,861	858	2.48	51.66	1.34	75.2	178	29	10.66	66.36	1.22	18.7
April	16,089	759	2.62	55.59	1.23	75.3	160	26	11.82	74.12	1.27	16.7
May	16,329	796	2.44	50.13	1.16	76.3	155	25	11.19	69.26	1.21	17.7
June	15,911	757	2.41	50.55	1.37	72.5	142	23	10.34	64.95	1.11	17.9
July	15,852	763	2.46	51.07	1.30	73.3	95	15	10.75	66.88	1.30	12.4
August	16,644	784	2.51	53.36	1.36	74.7	110	18	10.55	65.94	1.55	14.1
Sept	14,897	715	2.52	52.38	1.17	72.2	151	24	11.07	69.03	1.51	17.3
October	15,687	741	2.52	53.40	1.36	67.5	149	24	11.43	71.09	1.58	16.1
November	15,335	734	2.46	51.43	1.43	68.2	199	32	11.67	72.03	1.71	13.2
December	16,408	785	2.40	50.09	1.89	68.9	263	42	11.14	69.14	1.79	13.5
Year 2018												
January	15,278	735	2.47	51.33	1.12	59.1	408	65	12.64	79.32	1.32	12.2
February	13,828	662	2.49	52.04	1.26	59.6	187	30	11.38	71.32	1.20	19.7
March	15,083	722	2.52	52.66	1.24	63.3	234	38	12.59	78.52	1.32	22.4
April	13,037	622	2.53	53.03	1.29	61.3	153	24	13.24	83.77	1.23	16.2
May	14,112	684	2.53	52.15	1.18	65.7	149	24	14.33	87.27	1.47	14.5
June	14,097	679	2.50	51.83	1.23	68.7	107	17	13.54	84.39	1.48	7.5
July	14,451	703	2.42	49.82	1.26	71.8	138	22	14.64	89.87	1.42	12.0
August	13,393	643	2.50	52.09	1.23	68.2	135	22	14.45	89.97	1.39	13.2
Sept	12,124	578	2.55	53.48	1.28	59.1	155	25	14.38	89.73	1.12	14.4
October	11,903	574	2.47	51.33	1.30	61.5	180	29	14.50	91.01	1.37	17.0
November	13,787	679	2.52	51.10	1.08	66.7	206	33	14.01	87.74	1.58	19.0
December	14,052	680	2.35	48.52	1.41	63.0	268	43	13.75	85.58	1.46	22.2
Year to Date												
2016	210,749	9,859	2.67	57.01	1.30	67.0	2,541	412	10.51	64.79	1.27	18.3
2017	192,637	9,178	2.49	52.29	1.35	70.7	1,850	297	11.18	69.57	1.42	15.2
2018	165,145	7,960	2.49	51.58	1.24	63.8	2,319	372	13.46	83.97	1.35	15.1

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 2017 and prior years are final. Values for 2018 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, 2008 - December 2018 (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												
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	2.56	69.67	5.83	23.2	742,347	718,360	4.54	4.69	62.7	4.12
2015	8,189	304	1.73	46.72	5.50	24.1	765,964	740,975	2.83	2.93	60.6	2.82
2016	3,664	135	2.00	54.12	5.84	11.2	744,034	721,358	2.65	2.74	59.6	2.68
2017	2,356	85	1.59	44.08	5.84	8.1	803,435	778,741	3.18	3.28	62.0	3.06
2018	1,911	71	1.75	47.47	5.74	7.9	772,950	751,129	3.36	3.46	57.3	3.23
Year 2016												
January	400	15	2.18	59.67	5.94	15.3	63,059	61,034	2.47	2.55	59.0	2.55
February	122	4	1.77	49.53	6.10	4.3	56,120	54,342	2.28	2.35	57.2	2.40
March	574	21	1.92	52.02	5.88	23.8	60,020	58,279	1.96	2.01	58.9	2.17
April	669	25	1.97	53.48	5.81	31.0	60,005	58,224	2.21	2.28	61.3	2.33
May	206	8	2.00	52.87	5.64	7.0	59,608	57,927	2.15	2.21	59.3	2.28
June	222	8	1.89	53.54	5.94	7.0	60,985	59,247	2.43	2.50	58.7	2.50
July	222	8	1.88	53.32	5.94	7.0	64,456	62,488	2.93	3.02	58.3	2.87
August	217	8	2.04	55.00	5.81	7.2	64,784	62,548	2.87	2.97	57.7	2.83
Sept	200	8	2.11	54.50	5.64	9.6	61,346	59,335	3.01	3.11	58.7	2.95
October	207	8	2.06	54.37	5.66	7.9	62,185	60,320	3.08	3.18	60.7	3.01
November	200	8	2.10	54.36	5.47	7.0	64,265	62,438	2.81	2.89	63.4	2.80
December	427	16	2.01	54.48	5.99	15.4	67,201	65,176	3.49	3.60	62.7	3.34
Year 2017												
January	0	0	--	--	--	0.0	69,093	66,857	3.62	3.75	62.4	3.43
February	0	0	--	--	--	0.0	66,939	64,865	3.19	3.29	67.1	3.08
March	0	0	--	--	--	0.0	69,909	67,773	2.90	3.00	65.7	2.83
April	0	0	--	--	--	0.0	66,465	64,429	3.26	3.36	65.2	3.15
May	0	0	--	--	--	0.0	66,784	64,714	3.30	3.41	63.8	3.15
June	271	9	1.25	35.84	5.75	9.5	66,331	64,299	3.26	3.36	61.6	3.10
July	253	9	1.25	34.50	5.85	9.4	67,662	65,619	3.21	3.31	58.6	3.07
August	296	11	1.25	34.50	5.85	10.9	65,688	63,679	3.08	3.17	58.7	2.97
Sept	257	9	1.77	48.91	5.85	11.7	62,978	61,019	3.10	3.20	59.4	3.00
October	893	32	1.77	48.91	5.85	35.3	63,058	61,209	3.08	3.17	58.8	2.97
November	386	14	1.77	48.91	5.85	16.1	66,895	64,843	3.01	3.11	62.6	2.93
December	0	0	--	--	--	0.0	71,633	69,435	3.11	3.21	60.6	3.00
Year 2018												
January	0	0	--	--	--	0.0	67,916	65,839	3.57	3.69	57.4	3.42
February	0	0	--	--	--	0.0	59,419	57,646	3.42	3.52	56.8	3.26
March	0	0	--	--	--	0.0	59,663	57,973	2.85	2.93	54.4	2.81
April	0	0	--	--	--	0.0	60,223	58,528	2.92	3.00	56.1	2.87
May	0	0	--	--	--	0.0	61,846	60,048	2.98	3.07	57.7	2.92
June	0	0	--	--	--	0.0	64,149	62,365	3.13	3.22	58.5	3.03
July	160	6	1.70	45.10	5.83	7.5	66,384	64,680	3.02	3.10	57.7	2.93
August	260	10	1.78	46.99	5.55	13.4	67,289	65,321	3.11	3.21	57.6	3.03
Sept	664	25	1.78	47.54	6.02	30.8	66,074	64,330	3.11	3.19	59.5	3.04
October	477	17	1.76	48.96	5.45	21.3	64,068	62,421	3.40	3.49	58.2	3.27
November	172	6	1.69	46.62	5.85	9.2	69,866	68,008	3.97	4.07	59.4	3.75
December	178	6	1.70	47.00	5.53	7.8	66,052	63,969	4.70	4.85	54.6	4.31
Year to Date												
2016	3,664	135	2.00	54.12	5.84	11.2	744,034	721,358	2.65	2.74	59.6	2.68
2017	2,356	85	1.59	44.08	5.84	8.1	803,435	778,741	3.18	3.28	62.0	3.06
2018	1,911	71	1.75	47.47	5.74	7.9	772,950	751,129	3.36	3.46	57.3	3.23

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 2017 and prior years are final. Values for 2018 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 4.6.A. Receipts of Coal Delivered for Electricity Generation by State, December 2018 and 2017  
(Thousand Tons)**

Census Division and State	Electric Power Sector										
	All Sectors			Electric Utilities		Independent Power Producers		Commercial Sector		Industrial Sector	
	December 2018	December 2017	Percentage Change	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017
New England	58	7	691.0%	49	0	9	7	0	0	0	0
Connecticut	0	0	--	0	0	0	0	0	0	0	0
Maine	9	7	24.0%	0	0	9	7	0	0	0	0
Massachusetts	0	0	--	0	0	0	0	0	0	0	0
New Hampshire	49	0	--	49	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	1,984	2,068	-4.1%	0	0	1,962	2,049	0	0	22	19
New Jersey	76	70	9.3%	0	0	76	70	0	0	0	0
New York	71	21	240.0%	0	0	71	13	0	0	0	8
Pennsylvania	1,837	1,977	-7.1%	0	0	1,814	1,966	0	0	22	11
East North Central	11,744	11,356	3.4%	6,942	6,959	4,606	4,186	0	0	196	212
Illinois	3,303	3,332	-0.9%	409	604	2,700	2,528	0	0	193	199
Indiana	2,537	2,612	-2.8%	2,357	2,500	181	111	0	0	0	0
Michigan	2,301	1,560	47.0%	2,279	1,527	18	33	0	0	4	0
Ohio	2,057	2,080	-1.1%	350	567	1,707	1,513	0	0	0	0
Wisconsin	1,547	1,772	-13.0%	1,547	1,760	0	0	0	0	0	12
West North Central	9,728	10,320	-5.7%	9,451	9,988	0	0	2	4	276	329
Iowa	1,433	1,360	5.3%	1,248	1,177	0	0	0	0	185	183
Kansas	1,091	1,133	-3.6%	1,091	1,133	0	0	0	0	0	0
Minnesota	1,167	1,168	-0.1%	1,167	1,101	0	0	0	0	0	67
Missouri	2,891	3,365	-14.0%	2,889	3,361	0	0	2	4	0	0
Nebraska	1,136	1,133	0.3%	1,045	1,054	0	0	0	0	91	79
North Dakota	1,816	2,023	-10.0%	1,816	2,023	0	0	0	0	0	0
South Dakota	194	139	40.0%	194	139	0	0	0	0	0	0
South Atlantic	6,678	6,385	4.6%	5,763	5,395	839	906	0	0	76	85
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	1,030	988	4.3%	1,030	968	0	0	0	0	0	20
Georgia	1,407	1,097	28.0%	1,393	1,090	0	0	0	0	14	7
Maryland	432	348	24.0%	0	0	415	329	0	0	17	18
North Carolina	921	890	3.5%	887	859	11	8	0	0	23	23
South Carolina	635	439	45.0%	635	439	0	0	0	0	0	0
Virginia	355	380	-6.6%	287	271	45	92	0	0	22	17
West Virginia	1,898	2,244	-15.0%	1,531	1,768	367	476	0	0	0	0
East South Central	5,218	4,337	20.0%	4,878	4,052	296	220	0	0	44	65
Alabama	1,149	1,288	-11.0%	1,149	1,288	0	0	1,149	0	0	0
Kentucky	2,981	2,242	33.0%	2,981	2,242	0	0	0	0	0	0
Mississippi	425	276	54.0%	129	56	296	220	0	0	0	0
Tennessee	663	531	25.0%	619	466	0	0	0	0	44	65
West South Central	9,202	9,727	-5.4%	4,815	4,933	4,367	4,773	0	0	21	21
Arkansas	1,750	1,419	23.0%	1,498	1,133	245	280	0	0	6	6
Louisiana	637	569	12.0%	473	371	163	198	0	0	0	0
Oklahoma	732	891	-18.0%	596	788	121	87	0	0	15	15
Texas	6,083	6,848	-11.0%	2,247	2,640	3,836	4,208	0	0	0	0
Mountain	7,467	7,086	5.4%	6,568	6,078	899	1,008	0	0	0	0
Arizona	1,343	1,207	11.0%	1,343	1,207	0	0	0	0	0	0
Colorado	1,268	1,143	11.0%	1,268	1,143	0	0	0	0	0	0
Idaho	0	0	--	0	0	0	0	0	0	0	0
Montana	802	894	-10.0%	26	0	776	893	0	0	0	0
Nevada	127	30	321.0%	82	0	46	30	0	0	0	0
New Mexico	835	735	14.0%	835	735	0	0	0	0	0	0
Utah	1,012	940	7.7%	982	903	30	37	0	0	0	0
Wyoming	2,080	2,137	-2.7%	2,033	2,090	47	47	0	0	0	0
Pacific Contiguous	811	426	90.0%	190	121	577	250	0	0	44	54
California	44	54	-19.0%	0	0	0	0	0	0	44	54
Oregon	190	121	57.0%	190	121	0	0	0	0	0	0
Washington	577	250	130.0%	0	0	577	250	0	0	0	0
Pacific Noncontiguous	86	138	-38.0%	27	17	58	121	0	0	0	0
Alaska	27	17	64.0%	27	17	0	0	0	0	0	0
Hawaii	58	121	-52.0%	0	0	58	121	0	0	0	0
U.S. Total	52,977	51,851	2.2%	38,682	37,543	13,613	13,519	2	4	680	785

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 2017 are final. Values for 2018 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) December 2018 and 2017  
(Thousand Tons)**

Census Division and State	Electric Power Sector										
	All Sectors			Electric Utilities		Independent Power Producers		Commercial Sector		Industrial Sector	
	December 2018 YTD	December 2017 YTD	Percentage Change	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD
New England	276	198	40.0%	94	45	182	153	0	0	0	0
Connecticut	105	0	--	0	0	105	0	0	0	0	0
Maine	62	66	-6.0%	0	0	62	66	0	0	0	0
Massachusetts	0	87	-100.0%	0	0	0	87	0	0	0	0
New Hampshire	94	45	109.0%	94	45	0	0	0	0	0	0
Rhode Island	15	0	--	0	0	15	0	0	0	0	0
Vermont	0	0	--	0	0	0	0	0	0	0	0
Middle Atlantic	19,742	23,135	-15.0%	0	119	19,635	22,734	0	0	108	282
New Jersey	603	656	-8.1%	0	0	603	656	0	0	0	0
New York	356	281	27.0%	0	0	347	109	0	0	9	172
Pennsylvania	18,783	22,198	-15.0%	0	119	18,684	21,968	0	0	99	110
East North Central	134,589	138,487	-2.8%	78,964	84,753	53,644	51,281	0	0	1,980	2,452
Illinois	41,941	40,231	4.3%	7,544	7,794	32,505	30,210	0	0	1,892	2,227
Indiana	29,733	28,961	2.7%	27,693	27,465	2,040	1,496	0	0	0	0
Michigan	21,873	23,611	-7.4%	21,624	23,331	241	272	0	0	9	8
Ohio	22,770	25,965	-12.0%	3,912	6,662	18,858	19,303	0	0	0	0
Wisconsin	18,272	19,719	-7.3%	18,193	19,502	0	0	0	0	80	217
West North Central	114,084	116,890	-2.4%	110,846	113,553	0	0	13	24	3,226	3,313
Iowa	15,309	15,347	-0.3%	13,080	13,186	0	0	0	0	2,228	2,162
Kansas	12,466	12,272	1.6%	12,466	12,272	0	0	0	0	0	0
Minnesota	12,578	12,946	-2.8%	12,399	12,569	0	0	0	0	178	377
Missouri	35,369	37,752	-6.3%	35,356	37,728	0	0	13	24	0	0
Nebraska	12,877	13,654	-5.7%	12,058	12,880	0	0	0	0	819	774
North Dakota	24,023	23,540	2.0%	24,023	23,540	0	0	0	0	0	0
South Dakota	1,463	1,379	6.1%	1,463	1,379	0	0	0	0	0	0
South Atlantic	78,302	88,271	-11.0%	66,966	76,688	10,437	10,561	0	0	899	1,022
Delaware	35	200	-82.0%	0	0	35	200	0	0	0	0
District of Columbia	0	0	--	0	0	0	0	0	0	0	0
Florida	11,702	15,139	-23.0%	11,625	14,947	0	26	0	0	77	167
Georgia	14,953	16,943	-12.0%	14,814	16,832	0	0	0	0	139	111
Maryland	4,637	3,851	20.0%	0	0	4,450	3,652	0	0	188	198
North Carolina	11,080	13,214	-16.0%	10,761	12,832	69	90	0	0	251	292
South Carolina	6,077	6,499	-6.5%	6,067	6,473	0	0	0	0	11	26
Virginia	4,515	5,520	-18.0%	3,760	4,662	520	631	0	0	235	228
West Virginia	25,302	26,906	-6.0%	19,939	20,943	5,363	5,963	0	0	0	0
East South Central	57,134	59,231	-3.5%	53,298	55,871	2,993	2,417	0	0	843	943
Alabama	14,648	15,754	-7.0%	14,648	15,754	0	0	0	0	0	0
Kentucky	32,038	31,490	1.7%	32,038	31,490	0	0	0	0	0	0
Mississippi	4,600	3,845	20.0%	1,607	1,428	2,993	2,417	0	0	0	0
Tennessee	5,848	8,142	-28.0%	5,005	7,199	0	0	0	0	843	943
West South Central	104,112	120,958	-14.0%	55,291	56,200	48,517	64,327	0	0	304	431
Arkansas	16,828	14,285	18.0%	13,988	12,442	2,762	1,776	0	0	78	67
Louisiana	7,252	8,029	-9.7%	4,736	5,025	2,515	3,003	0	0	0	0
Oklahoma	8,774	10,586	-17.0%	7,436	9,180	1,112	1,043	0	0	226	364
Texas	71,259	88,058	-19.0%	29,131	29,553	42,128	58,506	0	0	0	0
Mountain	80,622	89,478	-9.9%	71,541	79,315	9,082	10,052	0	0	0	111
Arizona	16,162	16,406	-1.5%	16,162	16,406	0	0	0	0	0	0
Colorado	14,505	16,284	-11.0%	14,505	16,284	0	0	0	0	0	0
Idaho	0	0	--	0	0	0	0	0	0	0	0
Montana	7,859	8,759	-10.0%	239	215	7,619	8,544	0	0	0	0
Nevada	1,167	743	57.0%	582	182	585	561	0	0	0	0
New Mexico	7,520	10,608	-29.0%	7,520	10,608	0	0	0	0	0	0
Utah	10,975	11,981	-8.4%	10,570	11,458	405	412	0	0	0	111
Wyoming	22,435	24,697	-9.2%	21,962	24,161	472	535	0	0	0	0
Pacific Contiguous	4,833	4,815	0.4%	764	877	3,469	3,313	0	0	600	625
California	600	625	-3.9%	0	0	0	0	0	0	600	625
Oregon	764	877	-13.0%	764	877	0	0	0	0	0	0
Washington	3,469	3,313	4.7%	0	0	3,469	3,313	0	0	0	0
Pacific Noncontiguous	987	902	9.5%	260	173	727	728	0	0	0	0
Alaska	260	173	50.0%	260	173	0	0	0	0	0	0
Hawaii	727	728	-0.2%	0	0	727	728	0	0	0	0
U.S. Total	594,683	642,364	-7.4%	438,023	467,595	148,687	165,567	13	24	7,960	9,178

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 2017 are final. Values for 2018 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, December 2018 and 2017  
(Thousand Barrels)**

Census Division and State	Electric Power Sector										
	All Sectors			Electric Utilities		Independent Power Producers		Commercial Sector		Industrial Sector	
	December 2018	December 2017	Percentage Change	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017
New England	89	91	-2.8%	51	5	38	87	0	0	0	0
Connecticut	3	5	-37.0%	0	0	3	5	0	0	0	0
Maine	35	2	NM	0	0	35	2	0	0	0	0
Massachusetts	0	12	-100.0%	0	2	0	10	0	0	0	0
New Hampshire	51	69	-26.0%	51	3	0	66	0	0	0	0
Rhode Island	0	5	-100.0%	0	0	0	5	0	0	0	0
Vermont	0	0	--	0	0	0	0	0	0	0	0
Middle Atlantic	237	417	-43.0%	85	23	143	387	0	0	9	7
New Jersey	0	5	-93.0%	0	0	0	5	0	0	0	0
New York	150	365	-59.0%	85	23	63	341	0	0	3	0
Pennsylvania	86	47	84.0%	0	0	80	40	0	0	7	7
East North Central	68	90	-25.0%	36	57	29	31	0	0	2	2
Illinois	8	10	-19.0%	1	1	8	9	0	0	0	0
Indiana	13	21	-36.0%	13	18	0	2	0	0	0	0
Michigan	21	22	-5.2%	21	22	0	0	0	0	0	0
Ohio	24	33	-26.0%	1	13	21	18	0	0	2	2
Wisconsin	1	4	-82.0%	1	3	0	1	0	0	0	0
West North Central	44	65	-32.0%	44	65	0	0	0	0	0	0
Iowa	8	12	-34.0%	8	12	0	0	0	0	0	0
Kansas	9	16	-45.0%	9	16	0	0	0	0	0	0
Minnesota	6	7	-6.8%	6	7	0	0	0	0	0	0
Missouri	9	24	-61.0%	9	24	0	0	0	0	0	0
Nebraska	0	1	-100.0%	0	1	0	0	0	0	0	0
North Dakota	11	5	131.0%	11	5	0	0	0	0	0	0
South Dakota	0	0	--	0	0	0	0	0	0	0	0
South Atlantic	386	167	132.0%	119	101	236	32	0	0	32	33
Delaware	4	4	0.1%	0	0	4	4	0	0	0	0
District of Columbia	0	0	--	0	0	0	0	0	0	0	0
Florida	21	17	22.0%	10	13	0	0	0	0	11	5
Georgia	35	47	-27.0%	24	21	0	3	0	0	10	24
Maryland	153	9	NM	0	0	153	9	0	0	0	0
North Carolina	35	33	6.5%	27	29	0	2	0	0	8	2
South Carolina	34	15	125.0%	24	13	11	0	0	0	0	2
Virginia	64	29	118.0%	1	13	60	16	0	0	3	1
West Virginia	41	12	237.0%	32	12	9	0	0	0	0	0
East South Central	55	41	36.0%	35	40	20	1	0	0	0	0
Alabama	22	9	148.0%	2	8	20	1	0	0	0	0
Kentucky	23	13	70.0%	23	13	0	0	0	0	0	0
Mississippi	4	2	92.0%	4	2	0	0	0	0	0	0
Tennessee	6	16	-64.0%	6	16	0	0	0	0	0	0
West South Central	7	13	-46.0%	6	11	1	1	0	0	0	0
Arkansas	0	2	-99.0%	0	2	0	0	0	0	0	0
Louisiana	2	2	-14.0%	2	2	0	0	0	0	0	0
Oklahoma	0	1	-100.0%	0	1	0	0	0	0	0	0
Texas	5	7	-36.0%	3	6	1	1	0	0	0	0
Mountain	26	37	-31.0%	25	36	1	1	0	0	0	0
Arizona	5	14	-64.0%	5	14	0	0	0	0	0	0
Colorado	6	1	546.0%	6	1	0	0	0	0	0	0
Idaho	0	0	--	0	0	0	0	0	0	0	0
Montana	0	0	-4.2%	0	0	0	0	0	0	0	0
Nevada	1	1	54.0%	1	0	0	1	0	0	0	0
New Mexico	7	6	13.0%	7	6	0	0	0	0	0	0
Utah	3	4	-16.0%	3	4	0	0	0	0	0	0
Wyoming	4	12	-67.0%	4	12	0	0	0	0	0	0
Pacific Contiguous	2	1	76.0%	0	0	2	1	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	2	1	76.0%	0	0	2	1	0	0	0	0
Pacific Noncontiguous	795	852	-6.8%	625	704	170	148	0	0	0	0
Alaska	2	0	604.0%	2	0	0	0	0	0	0	0
Hawaii	792	852	-7.0%	623	704	170	148	0	0	0	0
U.S. Total	1,708	1,773	-3.7%	1,026	1,043	639	688	0	0	43	42

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 2017 are final. Values for 2018 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.

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) December 2018 and 2017  
(Thousand Barrels)**

Census Division and State	Electric Power Sector										
	All Sectors			Electric Utilities		Independent Power Producers		Commercial Sector		Industrial Sector	
	December 2018 YTD	December 2017 YTD	Percentage Change	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD
New England	1,389	502	177.0%	223	24	1,166	478	0	0	0	0
Connecticut	193	30	553.0%	0	0	193	30	0	0	0	0
Maine	298	178	68.0%	0	0	298	178	0	0	0	0
Massachusetts	433	189	129.0%	17	10	416	179	0	0	0	0
New Hampshire	365	80	358.0%	206	14	160	66	0	0	0	0
Rhode Island	100	27	275.0%	0	0	100	27	0	0	0	0
Vermont	0	0	--	0	0	0	0	0	0	0	0
Middle Atlantic	3,389	1,159	193.0%	925	210	2,369	860	0	0	96	88
New Jersey	220	18	NM	0	0	220	18	0	0	0	0
New York	2,202	714	208.0%	925	210	1,256	483	0	0	21	21
Pennsylvania	967	426	127.0%	0	0	893	359	0	0	75	67
East North Central	808	888	-9.1%	443	512	335	352	0	0	30	24
Illinois	92	116	-21.0%	6	5	86	111	0	0	0	0
Indiana	207	203	2.0%	206	201	1	2	0	0	0	0
Michigan	157	154	2.4%	149	144	0	0	0	0	8	9
Ohio	300	363	-17.0%	41	110	237	238	0	0	21	15
Wisconsin	51	53	-4.0%	41	52	11	1	0	0	0	0
West North Central	486	453	7.4%	486	453	0	0	0	0	0	0
Iowa	117	101	15.0%	117	101	0	0	0	0	0	0
Kansas	95	115	-18.0%	95	115	0	0	0	0	0	0
Minnesota	37	49	-26.0%	37	49	0	0	0	0	0	0
Missouri	151	108	40.0%	151	108	0	0	0	0	0	0
Nebraska	5	5	-13.0%	5	5	0	0	0	0	0	0
North Dakota	77	69	11.0%	77	69	0	0	0	0	0	0
South Dakota	6	5	13.0%	6	5	0	0	0	0	0	0
South Atlantic	3,838	3,222	19.0%	2,469	2,622	1,127	423	0	0	242	178
Delaware	89	19	375.0%	0	0	89	19	0	0	0	0
District of Columbia	0	0	--	0	0	0	0	0	0	0	0
Florida	453	1,447	-69.0%	402	1,407	0	0	0	0	51	40
Georgia	279	253	10.0%	193	162	25	19	0	0	61	73
Maryland	628	233	170.0%	0	0	628	233	0	0	0	0
North Carolina	798	340	134.0%	739	290	0	18	0	0	59	32
South Carolina	342	148	131.0%	245	130	54	0	0	0	43	18
Virginia	952	601	58.0%	636	451	288	135	0	0	28	15
West Virginia	299	182	64.0%	254	182	44	0	0	0	0	0
East South Central	511	368	39.0%	427	355	79	6	0	0	5	6
Alabama	145	51	186.0%	66	44	79	6	0	0	0	0
Kentucky	147	169	-13.0%	147	169	0	0	0	0	0	0
Mississippi	37	15	140.0%	37	15	0	0	0	0	0	0
Tennessee	183	133	38.0%	178	126	0	0	0	0	5	6
West South Central	167	231	-28.0%	131	132	36	99	0	0	0	0
Arkansas	46	81	-43.0%	33	36	13	45	0	0	0	0
Louisiana	9	6	56.0%	9	6	0	0	0	0	0	0
Oklahoma	30	18	65.0%	30	18	0	0	0	0	0	0
Texas	81	126	-35.0%	58	71	23	54	0	0	0	0
Mountain	298	351	-15.0%	266	322	32	29	0	0	0	0
Arizona	94	89	5.7%	94	89	0	0	0	0	0	0
Colorado	14	5	177.0%	14	5	0	0	0	0	0	0
Idaho	0	0	--	0	0	0	0	0	0	0	0
Montana	25	19	29.0%	0	0	25	19	0	0	0	0
Nevada	20	18	15.0%	15	11	5	7	0	0	0	0
New Mexico	34	72	-52.0%	34	72	0	0	0	0	0	0
Utah	56	66	-16.0%	54	63	2	3	0	0	0	0
Wyoming	55	82	-33.0%	55	82	0	0	0	0	0	0
Pacific Contiguous	20	35	-44.0%	5	18	15	17	0	0	0	0
California	0	0	--	0	0	0	0	0	0	0	0
Oregon	0	14	-100.0%	0	14	0	0	0	0	0	0
Washington	20	22	-8.7%	5	4	15	17	0	0	0	0
Pacific Noncontiguous	8,810	8,917	-1.2%	6,948	6,993	1,862	1,924	0	0	0	0
Alaska	14	1	831.0%	14	1	0	0	0	0	0	0
Hawaii	8,796	8,916	-1.3%	6,935	6,992	1,862	1,924	0	0	0	0
U.S. Total	19,717	16,127	22.0%	12,324	11,640	7,021	4,190	0	0	372	297

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 2017 are final. Values for 2018 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.

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, December 2018 and 2017  
(Thousand Tons)**

Census Division and State	Electric Power Sector										
	All Sectors			Electric Utilities		Independent Power Producers		Commercial Sector		Industrial Sector	
	December 2018	December 2017	Percentage Change	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017
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	73	66	10.0%	73	66	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	68	62	9.2%	68	62	0	0	0	0	0	0
Ohio	0	0	--	0	0	0	0	0	0	0	0
Wisconsin	5	4	28.0%	5	4	0	0	0	0	0	0
West North Central	6	0	--	0	0	0	0	0	0	6	0
Iowa	6	0	--	0	0	0	0	0	0	6	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	38	38	-1.7%	38	38	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	38	38	-1.7%	38	38	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	122	183	-34.0%	122	183	0	0	0	0	0	0
Arkansas	0	0	--	0	0	0	0	0	0	0	0
Louisiana	122	183	-34.0%	122	183	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	238	287	-17.0%	232	287	0	0	0	0	6	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:

See Glossary for definitions. Values for 2017 are final. Values for 2018 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.

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) December 2018 and 2017  
(Thousand Tons)**

Census Division and State	Electric Power Sector										
	All Sectors			Electric Utilities		Independent Power Producers		Commercial Sector		Industrial Sector	
	December 2018 YTD	December 2017 YTD	Percentage Change	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 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	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	599	559	7.2%	599	559	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	539	504	6.8%	539	504	0	0	0	0	0	0
Ohio	0	0	--	0	0	0	0	0	0	0	0
Wisconsin	60	54	10.0%	60	54	0	0	0	0	0	0
West North Central	71	85	-17.0%	0	0	0	0	0	0	71	85
Iowa	71	85	-17.0%	0	0	0	0	0	0	71	85
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	784	663	18.0%	784	663	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	784	663	18.0%	784	663	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	117	-100.0%	0	117	0	0	0	0	0	0
Alabama	0	0	--	0	0	0	0	0	0	0	0
Kentucky	0	117	-100.0%	0	117	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	1,557	1,885	-17.0%	1,557	1,885	0	0	0	0	0	0
Arkansas	0	0	--	0	0	0	0	0	0	0	0
Louisiana	1,557	1,885	-17.0%	1,557	1,885	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	3,010	3,309	-9.0%	2,940	3,224	0	0	0	0	71	85

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 2017 are final. Values for 2018 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.

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, December 2018 and 2017**  
(Million Cubic Feet)

Census Division and State	Electric Power Sector										
	All Sectors			Electric Utilities		Independent Power Producers		Commercial Sector		Industrial Sector	
	December 2018	December 2017	Percentage Change	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017
New England	24,033	26,651	-9.8%	28	38	24,005	26,613	0	0	0	0
Connecticut	12,175	10,115	20.0%	0	0	12,175	10,115	0	0	0	0
Maine	436	284	53.0%	0	0	436	284	0	0	0	0
Massachusetts	8,232	11,311	-27.0%	26	21	8,207	11,290	0	0	0	0
New Hampshire	508	1,435	-65.0%	2	17	506	1,419	0	0	0	0
Rhode Island	2,682	3,506	-23.0%	0	0	2,682	3,506	0	0	0	0
Vermont	0	0	--	0	0	0	0	0	0	0	0
Middle Atlantic	88,020	87,115	1.0%	6,663	8,073	80,391	78,320	0	0	966	721
New Jersey	20,262	20,393	-0.6%	0	0	20,262	20,393	0	0	0	0
New York	26,007	26,871	-3.2%	6,663	8,073	18,654	18,317	0	0	690	480
Pennsylvania	41,751	39,851	4.8%	0	0	41,475	39,610	0	0	276	241
East North Central	68,345	78,754	-13.0%	21,009	28,922	45,357	47,888	577	561	1,402	1,383
Illinois	2,523	9,900	-75.0%	45	454	2,478	9,440	0	0	0	6
Indiana	13,511	14,635	-7.7%	4,588	7,647	8,923	6,988	0	0	0	0
Michigan	15,337	18,559	-17.0%	3,207	4,104	10,983	13,286	577	561	570	609
Ohio	27,647	24,925	11.0%	4,512	6,497	22,566	17,956	0	0	568	472
Wisconsin	9,327	10,735	-13.0%	8,656	10,219	407	219	0	0	264	297
West North Central	9,154	16,240	-44.0%	8,111	13,967	533	1,790	155	150	355	333
Iowa	4,065	5,679	-28.0%	3,710	5,349	0	0	0	0	354	330
Kansas	909	1,412	-36.0%	909	1,412	0	0	0	0	0	0
Minnesota	1,505	3,878	-61.0%	1,504	2,912	0	962	0	1	1	3
Missouri	2,519	3,995	-37.0%	1,831	3,018	533	827	155	150	0	0
Nebraska	86	314	-73.0%	86	314	0	0	0	0	0	0
North Dakota	70	563	-88.0%	70	563	0	0	0	0	0	0
South Dakota	0	400	-100.0%	0	400	0	0	0	0	0	0
South Atlantic	180,103	186,296	-3.3%	149,964	152,637	26,759	30,314	0	0	3,380	3,345
Delaware	1,108	2,385	-54.0%	0	0	1,108	2,385	0	0	0	0
District of Columbia	0	0	--	0	0	0	0	0	0	0	0
Florida	81,085	80,089	1.2%	79,520	77,381	1,152	2,530	0	0	413	177
Georgia	25,846	33,068	-22.0%	19,862	25,545	5,225	6,634	0	0	760	889
Maryland	6,682	4,574	46.0%	1,715	0	4,779	4,322	0	0	188	251
North Carolina	24,052	27,109	-11.0%	19,967	23,659	3,807	3,175	0	0	278	274
South Carolina	10,701	10,103	5.9%	8,290	9,520	2,287	399	0	0	124	185
Virginia	29,994	27,843	7.7%	20,587	16,195	8,347	10,778	0	0	1,060	871
West Virginia	635	1,126	-44.0%	22	337	55	91	0	0	558	698
East South Central	62,360	78,865	-21.0%	39,896	52,765	20,378	24,069	0	0	2,086	2,031
Alabama	28,115	28,504	-1.4%	10,850	8,872	17,265	19,631	0	0	0	0
Kentucky	6,246	8,939	-30.0%	6,139	8,030	107	908	0	0	0	0
Mississippi	19,535	32,766	-40.0%	16,528	29,237	3,006	3,529	0	0	0	0
Tennessee	8,464	8,657	-2.2%	6,378	6,626	0	0	0	0	2,086	2,031
West South Central	192,213	221,509	-13.0%	45,671	62,901	93,720	99,887	0	0	52,822	58,721
Arkansas	4,726	12,701	-63.0%	3,264	11,395	1,217	1,038	0	0	245	268
Louisiana	32,080	43,995	-27.0%	11,575	19,772	2,150	2,474	0	0	18,355	21,749
Oklahoma	18,872	20,402	-7.5%	11,449	10,058	7,165	10,100	0	0	257	243
Texas	136,535	144,412	-5.5%	19,383	21,676	83,188	86,275	0	0	33,964	36,461
Mountain	58,365	49,779	17.0%	47,236	42,517	11,086	7,049	0	0	44	213
Arizona	22,144	15,828	40.0%	14,810	13,078	7,334	2,749	0	0	0	0
Colorado	9,476	8,368	13.0%	8,494	7,300	983	1,068	0	0	0	0
Idaho	1,398	2,738	-49.0%	1,398	1,564	0	1,174	0	0	0	0
Montana	337	262	28.0%	337	262	0	0	0	0	0	0
Nevada	11,831	13,148	-10.0%	11,831	13,148	0	0	0	0	0	0
New Mexico	7,734	5,726	35.0%	4,964	3,669	2,769	2,057	0	0	0	0
Utah	5,300	3,540	50.0%	5,256	3,327	0	0	0	0	44	213
Wyoming	146	169	-14.0%	146	169	0	0	0	0	0	0
Pacific Contiguous	63,252	67,880	-6.8%	20,425	26,770	39,912	38,423	0	0	2,915	2,687
California	49,753	46,123	7.9%	15,424	15,861	31,415	27,575	0	0	2,915	2,687
Oregon	10,880	13,164	-17.0%	3,247	5,931	7,634	7,234	0	0	0	0
Washington	2,619	8,592	-70.0%	1,755	4,979	863	3,614	0	0	0	0
Pacific Noncontiguous	19	1,397	-99.0%	19	1,397	0	0	0	0	0	0
Alaska	19	1,397	-99.0%	19	1,397	0	0	0	0	0	0
Hawaii	0	0	--	0	0	0	0	0	0	0	0
U.S. Total	745,864	814,486	-8.4%	339,020	389,987	342,143	354,352	732	711	63,969	69,435

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 2017 are final. Values for 2018 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.

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) December 2018 and 2017**  
(Million Cubic Feet)

Census Division and State	Electric Power Sector										
	All Sectors			Electric Utilities		Independent Power Producers		Commercial Sector		Industrial Sector	
	December 2018 YTD	December 2017 YTD	Percentage Change	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD
New England	310,014	352,098	-12.0%	957	1,455	309,057	350,643	0	0	0	0
Connecticut	126,975	103,957	22.0%	0	0	126,975	103,957	0	0	0	0
Maine	10,708	13,735	-22.0%	0	0	10,708	13,735	0	0	0	0
Massachusetts	117,187	157,628	-26.0%	556	1,055	116,631	156,573	0	0	0	0
New Hampshire	21,600	26,062	-17.0%	400	400	21,199	25,662	0	0	0	0
Rhode Island	33,545	50,716	-34.0%	0	0	33,545	50,716	0	0	0	0
Vermont	0	0	--	0	0	0	0	0	0	0	0
Middle Atlantic	1,114,595	1,122,972	-0.7%	88,876	84,110	1,015,216	1,034,150	0	0	10,503	4,711
New Jersey	255,164	268,581	-5.0%	0	0	255,164	268,581	0	0	0	0
New York	350,284	350,206	0.0%	88,876	84,110	253,803	263,642	0	0	7,605	2,454
Pennsylvania	509,148	504,185	1.0%	0	0	506,249	501,928	0	0	2,899	2,257
East North Central	845,948	736,347	15.0%	289,588	260,580	534,889	455,532	6,707	5,952	14,763	14,283
Illinois	70,050	107,309	-35.0%	6,528	7,779	63,486	99,475	0	0	37	54
Indiana	160,563	122,867	31.0%	65,654	54,979	94,909	67,888	0	0	0	0
Michigan	228,443	198,703	15.0%	65,099	55,318	150,349	131,445	6,707	5,952	6,288	5,988
Ohio	277,561	206,172	35.0%	56,390	53,674	215,423	147,666	0	0	5,748	4,831
Wisconsin	109,330	101,296	7.9%	95,917	88,829	10,722	9,057	0	0	2,691	3,410
West North Central	159,905	171,237	-6.6%	136,858	148,131	15,852	17,324	2,116	1,641	5,079	4,141
Iowa	59,823	49,009	22.0%	54,821	45,009	0	0	0	0	5,002	4,000
Kansas	19,735	17,988	9.7%	19,735	17,988	0	0	0	0	0	0
Minnesota	33,185	45,644	-27.0%	31,981	36,715	1,118	8,782	10	7	77	140
Missouri	43,908	40,569	8.2%	27,067	30,393	14,735	8,542	2,106	1,634	0	0
Nebraska	2,440	6,035	-60.0%	2,440	6,035	0	0	0	0	0	0
North Dakota	815	7,226	-89.0%	815	7,226	0	0	0	0	0	0
South Dakota	0	4,765	-100.0%	0	4,765	0	0	0	0	0	0
South Atlantic	2,486,066	2,370,929	4.9%	2,025,494	1,950,240	424,142	385,848	0	0	36,430	34,841
Delaware	30,420	42,418	-28.0%	0	0	30,420	42,418	0	0	0	0
District of Columbia	0	0	--	0	0	0	0	0	0	0	0
Florida	1,204,458	1,153,819	4.4%	1,155,217	1,111,591	44,919	40,092	0	0	4,322	2,135
Georgia	330,659	378,227	-13.0%	248,628	280,741	73,210	88,413	0	0	8,821	9,074
Maryland	89,953	46,548	93.0%	22,077	0	65,098	44,107	0	0	2,778	2,441
North Carolina	313,889	279,167	12.0%	271,165	239,655	39,943	37,436	0	0	2,781	2,075
South Carolina	165,879	131,328	26.0%	128,130	113,766	36,793	16,308	0	0	956	1,254
Virginia	335,327	320,733	4.6%	198,419	202,464	126,576	108,595	0	0	10,332	9,674
West Virginia	15,482	18,689	-17.0%	1,858	2,023	7,184	8,479	0	0	6,440	8,187
East South Central	956,381	886,080	7.9%	633,832	602,975	302,245	264,995	0	0	20,304	18,110
Alabama	385,451	364,506	5.7%	124,895	131,177	260,556	233,329	0	0	0	0
Kentucky	106,503	81,265	31.0%	98,887	76,497	7,616	4,769	0	0	0	0
Mississippi	350,916	346,830	1.2%	316,843	319,933	34,073	26,897	0	0	0	0
Tennessee	113,512	93,479	21.0%	93,207	75,369	0	0	0	0	20,304	18,110
West South Central	2,743,172	2,633,752	4.2%	802,144	779,185	1,306,538	1,183,929	0	0	634,491	670,638
Arkansas	126,049	126,300	-0.2%	109,990	112,269	13,448	11,930	0	0	2,612	2,101
Louisiana	460,739	535,301	-14.0%	226,220	237,120	32,905	34,771	0	0	201,614	263,411
Oklahoma	292,080	230,111	27.0%	177,948	140,961	109,692	86,876	0	0	4,440	2,274
Texas	1,864,304	1,742,040	7.0%	287,986	288,836	1,150,493	1,050,352	0	0	425,825	402,852
Mountain	722,961	622,145	16.0%	591,875	510,586	130,482	110,246	0	0	604	1,312
Arizona	275,159	224,021	23.0%	191,511	159,622	83,648	64,399	0	0	0	0
Colorado	116,715	90,410	29.0%	99,700	76,803	17,015	13,606	0	0	0	0
Idaho	7,551	19,169	-61.0%	7,551	10,181	0	8,989	0	0	0	0
Montana	2,737	3,157	-13.0%	2,737	3,140	0	17	0	0	0	0
Nevada	180,306	178,129	1.2%	180,306	178,129	0	0	0	0	0	0
New Mexico	82,962	68,683	21.0%	53,157	45,461	29,805	23,222	0	0	0	0
Utah	55,974	37,307	50.0%	55,369	35,995	0	0	0	0	604	1,312
Wyoming	1,558	1,268	23.0%	1,543	1,255	15	13	0	0	0	0
Pacific Contiguous	699,262	717,877	-2.6%	252,148	288,268	418,159	398,905	0	0	28,955	30,705
California	556,755	556,012	0.1%	188,473	202,241	339,328	323,067	0	0	28,955	30,705
Oregon	98,334	94,868	3.7%	37,205	45,243	61,129	49,625	0	0	0	0
Washington	44,172	66,997	-34.0%	26,470	40,784	17,703	26,213	0	0	0	0
Pacific Noncontiguous	926	15,297	-94.0%	926	15,297	0	0	0	0	0	0
Alaska	926	15,297	-94.0%	926	15,297	0	0	0	0	0	0
Hawaii	0	0	--	0	0	0	0	0	0	0	0
U.S. Total	10,039,232	9,628,733	4.3%	4,822,698	4,640,827	4,456,582	4,201,573	8,823	7,593	751,129	778,741

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 2017 are final. Values for 2018 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.

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, December 2018 and 2017**  
(Dollars per MMBtu)

Census Division and State	Electric Power Sector			Electric Utilities		Independent Power Producers	
	December 2018	December 2017	Percentage Change	December 2018	December 2017	December 2018	December 2017
New England	W	W	W	4.12	--	W	W
Connecticut	--	--	--	--	--	--	--
Maine	W	W	W	--	--	W	W
Massachusetts	--	--	--	--	--	--	--
New Hampshire	4.12	--	--	4.12	--	--	--
Rhode Island	--	--	--	--	--	--	--
Vermont	--	--	--	--	--	--	--
Middle Atlantic	2.17	2.06	5.3%	--	--	2.17	2.06
New Jersey	W	W	W	--	--	W	W
New York	W	W	W	--	--	W	W
Pennsylvania	W	W	W	--	--	W	W
East North Central	2.04	1.99	2.5%	2.12	2.09	1.93	1.84
Illinois	1.92	1.73	11.0%	1.93	1.80	1.91	1.71
Indiana	W	W	W	2.12	2.12	W	W
Michigan	W	W	W	2.10	2.25	W	W
Ohio	W	W	W	1.85	1.75	W	W
Wisconsin	2.28	2.12	7.5%	2.28	2.12	--	--
West North Central	1.71	1.75	-2.3%	1.71	1.75	--	--
Iowa	1.54	1.62	-4.9%	1.54	1.62	--	--
Kansas	1.72	1.67	3.0%	1.72	1.67	--	--
Minnesota	2.25	2.14	5.1%	2.25	2.14	--	--
Missouri	1.75	1.87	-6.4%	1.75	1.87	--	--
Nebraska	1.24	1.39	-11.0%	1.24	1.39	--	--
North Dakota	1.61	1.61	0.0%	1.61	1.61	--	--
South Dakota	1.82	2.05	-11.0%	1.82	2.05	--	--
South Atlantic	2.74	2.65	3.4%	2.80	2.71	2.37	2.27
Delaware	--	--	--	--	--	--	--
District of Columbia	--	--	--	--	--	--	--
Florida	3.07	2.95	4.1%	3.07	2.95	--	--
Georgia	2.73	2.82	-3.2%	2.73	2.82	--	--
Maryland	2.54	W	W	--	--	2.54	W
North Carolina	W	2.98	W	3.35	2.97	W	4.13
South Carolina	3.35	3.39	-1.2%	3.35	3.39	--	--
Virginia	W	W	W	2.67	2.58	W	W
West Virginia	W	2.16	W	2.17	2.25	W	1.81
East South Central	W	W	W	2.12	2.06	W	W
Alabama	2.38	2.11	13.0%	2.38	2.11	--	--
Kentucky	1.97	2.02	-2.5%	1.97	2.02	--	--
Mississippi	W	W	W	3.03	2.55	W	W
Tennessee	2.27	2.10	8.1%	2.27	2.10	--	--
West South Central	2.12	1.97	7.6%	2.43	2.36	1.76	1.53
Arkansas	W	W	W	2.06	1.93	W	W
Louisiana	W	W	W	5.82	7.02	W	W
Oklahoma	W	W	W	1.82	1.84	W	W
Texas	1.86	1.70	9.4%	2.11	2.06	1.71	1.46
Mountain	W	W	W	1.98	1.83	W	W
Arizona	2.48	2.21	12.0%	2.48	2.21	--	--
Colorado	1.58	1.66	-4.8%	1.58	1.66	--	--
Idaho	--	--	--	--	--	--	--
Montana	W	W	W	1.92	1.36	W	W
Nevada	W	W	W	3.34	--	W	W
New Mexico	2.39	1.78	34.0%	2.39	1.78	--	--
Utah	1.97	1.90	3.7%	1.97	1.90	--	--
Wyoming	W	W	W	1.65	1.66	W	W
Pacific Contiguous	W	W	W	2.56	2.28	W	W
California	--	--	--	--	--	--	--
Oregon	2.56	2.28	12.0%	2.56	2.28	--	--
Washington	W	W	W	--	--	W	W
Pacific Noncontiguous	W	W	W	3.30	3.30	W	W
Alaska	3.30	3.30	0.0%	3.30	3.30	--	--
Hawaii	W	W	W	--	--	W	W
U.S. Total	2.11	2.04	3.4%	2.17	2.11	1.95	1.83

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 2017 are final. Values for 2018 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 4.10.B. Average Cost of Coal Delivered for Electricity Generation by State, (Year-to-Date) December 2018 and 2017  
(Dollars per MMBtu)**

Census Division and State	Electric Power Sector			Electric Utilities		Independent Power Producers	
	December 2018 YTD	December 2017 YTD	Percentage Change	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD
New England	4.37	W	W	3.87	4.34	4.64	W
Connecticut	W	--	W	--	--	W	--
Maine	W	W	W	--	--	W	W
Massachusetts	--	W	W	--	--	--	W
New Hampshire	3.87	4.34	-11.0%	3.87	4.34	--	--
Rhode Island	W	--	W	--	--	W	--
Vermont	--	--	--	--	--	--	--
Middle Atlantic	2.22	1.94	14.0%	--	1.66	2.22	1.94
New Jersey	W	W	W	--	--	W	W
New York	W	W	W	--	--	W	W
Pennsylvania	2.16	1.88	15.0%	--	1.66	2.16	1.88
East North Central	1.99	2.02	-1.5%	2.11	2.10	1.82	1.88
Illinois	1.77	W	W	1.88	1.85	1.75	W
Indiana	W	W	W	2.11	2.15	W	W
Michigan	W	W	W	2.12	2.17	W	W
Ohio	W	1.92	W	1.77	1.74	W	1.98
Wisconsin	2.28	2.22	2.7%	2.28	2.22	--	--
West North Central	1.71	1.75	-2.3%	1.71	1.75	--	--
Iowa	1.63	1.66	-1.8%	1.63	1.66	--	--
Kansas	1.71	1.72	-0.6%	1.71	1.72	--	--
Minnesota	2.19	2.09	4.8%	2.19	2.09	--	--
Missouri	1.80	1.87	-3.7%	1.80	1.87	--	--
Nebraska	1.25	1.37	-8.8%	1.25	1.37	--	--
North Dakota	1.55	1.59	-2.5%	1.55	1.59	--	--
South Dakota	1.89	2.19	-14.0%	1.89	2.19	--	--
South Atlantic	2.64	2.69	-1.9%	2.70	2.72	2.30	2.45
Delaware	W	W	W	--	--	W	W
District of Columbia	--	--	--	--	--	--	--
Florida	2.88	W	W	2.88	2.95	--	W
Georgia	2.75	2.77	-0.7%	2.75	2.77	--	--
Maryland	2.53	2.67	-5.2%	--	--	2.53	2.67
North Carolina	W	2.97	W	3.15	2.97	W	3.75
South Carolina	3.33	3.30	0.9%	3.33	3.30	--	--
Virginia	W	W	W	2.67	2.73	W	W
West Virginia	W	2.20	W	2.14	2.21	W	2.14
East South Central	W	W	W	2.08	2.09	W	W
Alabama	2.27	2.16	5.1%	2.27	2.16	--	--
Kentucky	1.96	1.99	-1.5%	1.96	1.99	--	--
Mississippi	W	W	W	2.69	2.66	W	W
Tennessee	2.16	2.28	-5.3%	2.16	2.28	--	--
West South Central	1.89	1.85	2.2%	2.07	2.10	1.66	1.61
Arkansas	W	W	W	1.98	2.03	W	W
Louisiana	W	W	W	3.12	2.95	W	W
Oklahoma	W	W	W	1.77	1.83	W	W
Texas	1.78	1.74	2.3%	2.03	2.08	1.60	1.57
Mountain	W	W	W	2.02	1.90	W	W
Arizona	2.43	2.23	9.0%	2.43	2.23	--	--
Colorado	1.64	1.77	-7.3%	1.64	1.77	--	--
Idaho	--	--	--	--	--	--	--
Montana	W	W	W	2.01	1.76	W	W
Nevada	W	W	W	3.07	3.08	W	W
New Mexico	2.48	1.96	27.0%	2.48	1.96	--	--
Utah	2.02	1.96	3.1%	2.02	1.96	--	--
Wyoming	W	W	W	1.74	1.66	W	W
Pacific Contiguous	W	W	W	2.34	2.32	W	W
California	--	--	--	--	--	--	--
Oregon	2.34	2.32	0.9%	2.34	2.32	--	--
Washington	W	W	W	--	--	W	W
Pacific Noncontiguous	W	W	W	3.28	3.08	W	W
Alaska	3.28	3.08	6.5%	3.28	3.08	--	--
Hawaii	W	W	W	--	--	W	W
U.S. Total	2.06	2.05	0.5%	2.11	2.12	1.89	1.85

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 2017 are final. Values for 2018 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 4.11.A. Average Cost of Petroleum Liquids Delivered for Electricity Generation by State, December 2018 and 2017**  
(Dollars per MMBtu)

Census Division and State	Electric Power Sector			Electric Utilities		Independent Power Producers	
	December 2018	December 2017	Percentage Change	December 2018	December 2017	December 2018	December 2017
New England	13.36	W	W	11.08	12.11	16.62	W
Connecticut	W	W	W	--	--	W	W
Maine	W	W	W	--	--	W	W
Massachusetts	--	W	W	--	13.48	--	W
New Hampshire	11.08	W	W	11.08	11.24	--	W
Rhode Island	--	W	W	--	--	--	W
Vermont	--	--	--	--	--	--	--
Middle Atlantic	W	18.19	W	10.29	16.49	W	18.29
New Jersey	W	W	W	--	--	W	W
New York	W	18.49	W	10.29	16.49	W	18.62
Pennsylvania	14.44	W	W	--	--	14.44	W
East North Central	13.50	15.25	-11.0%	13.32	14.97	13.72	15.81
Illinois	W	W	W	13.88	15.13	W	W
Indiana	13.45	W	W	13.45	14.69	--	W
Michigan	13.22	14.66	-9.8%	13.22	14.66	--	--
Ohio	W	15.76	W	13.65	15.89	W	15.67
Wisconsin	13.06	W	W	13.06	14.86	--	W
West North Central	13.59	14.61	-7.0%	13.59	14.61	--	--
Iowa	14.02	14.40	-2.6%	14.02	14.40	--	--
Kansas	14.08	14.25	-1.2%	14.08	14.25	--	--
Minnesota	14.44	15.25	-5.3%	14.44	15.25	--	--
Missouri	13.17	14.75	-11.0%	13.17	14.75	--	--
Nebraska	--	14.82	--	--	14.82	--	--
North Dakota	12.78	14.74	-13.0%	12.78	14.74	--	--
South Dakota	--	--	--	--	--	--	--
South Atlantic	W	14.13	W	14.15	14.74	W	12.17
Delaware	W	W	W	--	--	W	W
District of Columbia	--	--	--	--	--	--	--
Florida	14.16	15.57	-9.1%	14.16	15.57	--	--
Georgia	13.24	W	W	13.24	14.12	--	W
Maryland	12.21	W	W	--	--	12.21	W
North Carolina	13.64	W	W	13.64	14.69	--	W
South Carolina	W	14.72	W	14.83	14.72	W	--
Virginia	W	W	W	15.60	14.20	W	W
West Virginia	W	15.67	W	14.74	15.67	W	--
East South Central	W	W	W	13.42	14.51	W	W
Alabama	W	W	W	13.50	15.76	W	W
Kentucky	13.57	14.48	-6.3%	13.57	14.48	--	--
Mississippi	12.81	13.81	-7.2%	12.81	13.81	--	--
Tennessee	13.23	13.98	-5.4%	13.23	13.98	--	--
West South Central	W	W	W	13.03	14.39	W	W
Arkansas	W	14.18	W	--	14.18	W	--
Louisiana	12.90	13.55	-4.8%	12.90	13.55	--	--
Oklahoma	--	15.43	--	--	15.43	--	--
Texas	W	W	W	13.11	14.63	W	W
Mountain	W	W	W	17.48	16.33	W	W
Arizona	19.11	14.93	28.0%	19.11	14.93	--	--
Colorado	14.85	16.55	-10.0%	14.85	16.55	--	--
Idaho	--	--	--	--	--	--	--
Montana	W	W	W	--	--	W	W
Nevada	W	W	W	14.33	--	W	W
New Mexico	18.68	19.57	-4.5%	18.68	19.57	--	--
Utah	15.80	15.74	0.4%	15.80	15.74	--	--
Wyoming	19.34	16.62	16.0%	19.34	16.62	--	--
Pacific Contiguous	W	W	W	--	--	W	W
California	--	--	--	--	--	--	--
Oregon	--	--	--	--	--	--	--
Washington	W	W	W	--	--	W	W
Pacific Noncontiguous	W	W	W	14.21	12.02	W	W
Alaska	18.21	18.19	0.1%	18.21	18.19	--	--
Hawaii	W	W	W	14.19	12.02	W	W
U.S. Total	13.83	14.07	-1.7%	13.70	12.93	14.06	15.82

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 2017 are final. Values for 2018 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.

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) December 2018 and 2017 (Dollars per MMBtu)**

Census Division and State	Electric Power Sector			Electric Utilities		Independent Power Producers	
	December 2018 YTD	December 2017 YTD	Percentage Change	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD
New England	W	12.25	W	11.58	14.05	W	12.16
Connecticut	16.95	14.18	20.0%	--	--	16.95	14.18
Maine	9.78	W	W	--	--	9.78	W
Massachusetts	W	W	W	15.43	14.55	W	W
New Hampshire	W	W	W	11.29	13.71	W	W
Rhode Island	W	W	W	--	--	W	W
Vermont	--	--	--	--	--	--	--
Middle Atlantic	13.72	14.97	-8.4%	12.10	10.16	14.51	16.19
New Jersey	15.08	W	W	--	--	15.08	W
New York	13.14	15.89	-17.0%	12.10	10.16	13.98	18.38
Pennsylvania	15.38	W	W	--	--	15.38	W
East North Central	16.31	W	W	16.27	13.21	16.38	W
Illinois	W	14.33	W	16.39	13.39	W	14.38
Indiana	W	W	W	16.34	12.98	W	W
Michigan	15.69	13.01	21.0%	15.69	13.01	--	--
Ohio	16.38	W	W	16.47	14.15	16.36	W
Wisconsin	17.80	W	W	17.80	12.68	--	W
West North Central	16.13	13.10	23.0%	16.13	13.10	--	--
Iowa	16.27	13.09	24.0%	16.27	13.09	--	--
Kansas	16.40	13.19	24.0%	16.40	13.19	--	--
Minnesota	16.21	13.18	23.0%	16.21	13.18	--	--
Missouri	16.05	13.37	20.0%	16.05	13.37	--	--
Nebraska	16.38	12.94	27.0%	16.38	12.94	--	--
North Dakota	15.56	12.61	23.0%	15.56	12.61	--	--
South Dakota	17.49	11.98	46.0%	17.49	11.98	--	--
South Atlantic	14.44	12.23	18.0%	14.71	12.27	13.83	11.95
Delaware	W	W	W	--	--	W	W
District of Columbia	--	--	--	--	--	--	--
Florida	16.39	12.50	31.0%	16.39	12.50	--	--
Georgia	W	12.12	W	15.38	12.36	W	9.49
Maryland	14.01	11.67	20.0%	--	--	14.01	11.67
North Carolina	16.83	W	W	16.83	12.88	--	W
South Carolina	W	12.99	W	16.60	12.99	W	--
Virginia	W	W	W	10.05	10.60	W	W
West Virginia	W	13.25	W	16.62	13.25	W	--
East South Central	W	W	W	15.98	12.67	W	W
Alabama	W	W	W	16.25	13.52	W	W
Kentucky	15.67	12.78	23.0%	15.67	12.78	--	--
Mississippi	15.60	12.17	28.0%	15.60	12.17	--	--
Tennessee	16.21	12.28	32.0%	16.21	12.28	--	--
West South Central	W	12.80	W	16.01	12.89	W	12.67
Arkansas	W	W	W	16.52	12.79	W	W
Louisiana	14.55	13.78	5.6%	14.55	13.78	--	--
Oklahoma	16.20	14.71	10.0%	16.20	14.71	--	--
Texas	W	W	W	15.85	12.39	W	W
Mountain	W	14.27	W	18.21	14.32	W	13.81
Arizona	17.24	13.89	24.0%	17.24	13.89	--	--
Colorado	16.41	14.69	12.0%	16.41	14.69	--	--
Idaho	--	--	--	--	--	--	--
Montana	W	W	W	--	--	W	W
Nevada	W	W	W	18.47	12.34	W	W
New Mexico	19.37	14.40	35.0%	19.37	14.40	--	--
Utah	W	W	W	19.21	14.90	W	W
Wyoming	18.53	14.48	28.0%	18.53	14.48	--	--
Pacific Contiguous	W	W	W	17.24	13.87	W	W
California	--	--	--	--	--	--	--
Oregon	--	12.71	--	--	12.71	--	--
Washington	W	W	W	17.24	17.51	W	W
Pacific Noncontiguous	W	W	W	13.91	11.00	W	W
Alaska	17.79	16.06	11.0%	17.79	16.06	--	--
Hawaii	W	W	W	13.90	11.00	W	W
U.S. Total	14.28	11.88	20.0%	14.22	11.60	14.38	12.67

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 2017 are final. Values for 2018 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.

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, December 2018 and 2017**  
(Dollars per MMBtu)

Census Division and State	Electric Power Sector			Electric Utilities		Independent Power Producers	
	December 2018	December 2017	Percentage Change	December 2018	December 2017	December 2018	December 2017
New England	--	--	--	--	--	--	--
Connecticut	--	--	--	--	--	--	--
Maine	--	--	--	--	--	--	--
Massachusetts	--	--	--	--	--	--	--
New Hampshire	--	--	--	--	--	--	--
Rhode Island	--	--	--	--	--	--	--
Vermont	--	--	--	--	--	--	--
Middle Atlantic	--	--	--	--	--	--	--
New Jersey	--	--	--	--	--	--	--
New York	--	--	--	--	--	--	--
Pennsylvania	--	--	--	--	--	--	--
East North Central	1.48	1.34	10.0%	1.48	1.34	--	--
Illinois	--	--	--	--	--	--	--
Indiana	--	--	--	--	--	--	--
Michigan	1.45	1.31	11.0%	1.45	1.31	--	--
Ohio	--	--	--	--	--	--	--
Wisconsin	1.85	1.77	4.5%	1.85	1.77	--	--
West North Central	--	--	--	--	--	--	--
Iowa	--	--	--	--	--	--	--
Kansas	--	--	--	--	--	--	--
Minnesota	--	--	--	--	--	--	--
Missouri	--	--	--	--	--	--	--
Nebraska	--	--	--	--	--	--	--
North Dakota	--	--	--	--	--	--	--
South Dakota	--	--	--	--	--	--	--
South Atlantic	2.61	3.17	-18.0%	2.61	3.17	--	--
Delaware	--	--	--	--	--	--	--
District of Columbia	--	--	--	--	--	--	--
Florida	2.61	3.17	-18.0%	2.61	3.17	--	--
Georgia	--	--	--	--	--	--	--
Maryland	--	--	--	--	--	--	--
North Carolina	--	--	--	--	--	--	--
South Carolina	--	--	--	--	--	--	--
Virginia	--	--	--	--	--	--	--
West Virginia	--	--	--	--	--	--	--
East South Central	--	--	--	--	--	--	--
Alabama	--	--	--	--	--	--	--
Kentucky	--	--	--	--	--	--	--
Mississippi	--	--	--	--	--	--	--
Tennessee	--	--	--	--	--	--	--
West South Central	2.19	2.24	-2.2%	2.19	2.24	--	--
Arkansas	--	--	--	--	--	--	--
Louisiana	2.19	2.24	-2.2%	2.19	2.24	--	--
Oklahoma	--	--	--	--	--	--	--
Texas	--	--	--	--	--	--	--
Mountain	--	--	--	--	--	--	--
Arizona	--	--	--	--	--	--	--
Colorado	--	--	--	--	--	--	--
Idaho	--	--	--	--	--	--	--
Montana	--	--	--	--	--	--	--
Nevada	--	--	--	--	--	--	--
New Mexico	--	--	--	--	--	--	--
Utah	--	--	--	--	--	--	--
Wyoming	--	--	--	--	--	--	--
Pacific Contiguous	--	--	--	--	--	--	--
California	--	--	--	--	--	--	--
Oregon	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--
Pacific Noncontiguous	--	--	--	--	--	--	--
Alaska	--	--	--	--	--	--	--
Hawaii	--	--	--	--	--	--	--
U.S. Total	2.04	2.17	-6.0%	2.04	2.17	--	--

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 2017 are final. Values for 2018 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.

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) December 2018 and 2017 (Dollars per MMBtu)**

Census Division and State	Electric Power Sector			Electric Utilities		Independent Power Producers	
	December 2018 YTD	December 2017 YTD	Percentage Change	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD
New England	--	--	--	--	--	--	--
Connecticut	--	--	--	--	--	--	--
Maine	--	--	--	--	--	--	--
Massachusetts	--	--	--	--	--	--	--
New Hampshire	--	--	--	--	--	--	--
Rhode Island	--	--	--	--	--	--	--
Vermont	--	--	--	--	--	--	--
Middle Atlantic	--	--	--	--	--	--	--
New Jersey	--	--	--	--	--	--	--
New York	--	--	--	--	--	--	--
Pennsylvania	--	--	--	--	--	--	--
East North Central	1.51	1.48	2.0%	1.51	1.48	--	--
Illinois	--	--	--	--	--	--	--
Indiana	--	--	--	--	--	--	--
Michigan	1.48	1.44	2.8%	1.48	1.44	--	--
Ohio	--	--	--	--	--	--	--
Wisconsin	1.79	1.79	0.0%	1.79	1.79	--	--
West North Central	--	--	--	--	--	--	--
Iowa	--	--	--	--	--	--	--
Kansas	--	--	--	--	--	--	--
Minnesota	--	--	--	--	--	--	--
Missouri	--	--	--	--	--	--	--
Nebraska	--	--	--	--	--	--	--
North Dakota	--	--	--	--	--	--	--
South Dakota	--	--	--	--	--	--	--
South Atlantic	3.14	2.66	18.0%	3.14	2.66	--	--
Delaware	--	--	--	--	--	--	--
District of Columbia	--	--	--	--	--	--	--
Florida	3.14	2.66	18.0%	3.14	2.66	--	--
Georgia	--	--	--	--	--	--	--
Maryland	--	--	--	--	--	--	--
North Carolina	--	--	--	--	--	--	--
South Carolina	--	--	--	--	--	--	--
Virginia	--	--	--	--	--	--	--
West Virginia	--	--	--	--	--	--	--
East South Central	--	1.50	--	--	1.50	--	--
Alabama	--	--	--	--	--	--	--
Kentucky	--	1.50	--	--	1.50	--	--
Mississippi	--	--	--	--	--	--	--
Tennessee	--	--	--	--	--	--	--
West South Central	2.65	2.20	20.0%	2.65	2.20	--	--
Arkansas	--	--	--	--	--	--	--
Louisiana	2.65	2.20	20.0%	2.65	2.20	--	--
Oklahoma	--	--	--	--	--	--	--
Texas	--	--	--	--	--	--	--
Mountain	--	--	--	--	--	--	--
Arizona	--	--	--	--	--	--	--
Colorado	--	--	--	--	--	--	--
Idaho	--	--	--	--	--	--	--
Montana	--	--	--	--	--	--	--
Nevada	--	--	--	--	--	--	--
New Mexico	--	--	--	--	--	--	--
Utah	--	--	--	--	--	--	--
Wyoming	--	--	--	--	--	--	--
Pacific Contiguous	--	--	--	--	--	--	--
California	--	--	--	--	--	--	--
Oregon	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--
Pacific Noncontiguous	--	--	--	--	--	--	--
Alaska	--	--	--	--	--	--	--
Hawaii	--	--	--	--	--	--	--
U.S. Total	2.56	2.15	19.0%	2.56	2.15	--	--

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 2017 are final. Values for 2018 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.

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, December 2018 and 2017**  
(Dollars per MMBtu)

Census Division and State	Electric Power Sector			Electric Utilities		Independent Power Producers	
	December 2018	December 2017	Percentage Change	December 2018	December 2017	December 2018	December 2017
New England	7.74	7.08	9.3%	6.99	12.22	7.74	7.07
Connecticut	7.19	5.70	26.0%	--	--	7.19	5.70
Maine	--	W	W	--	--	--	W
Massachusetts	W	8.46	W	6.58	10.09	W	8.45
New Hampshire	W	W	W	12.30	14.97	W	W
Rhode Island	W	6.16	W	--	--	W	6.16
Vermont	--	--	--	--	--	--	--
Middle Atlantic	4.20	4.40	-4.5%	6.15	4.95	4.02	4.33
New Jersey	3.83	5.08	-25.0%	--	--	3.83	5.08
New York	5.24	4.98	5.2%	6.15	4.95	4.84	4.99
Pennsylvania	3.78	3.74	1.1%	--	--	3.78	3.74
East North Central	3.98	2.97	34.0%	3.94	2.99	3.99	2.96
Illinois	W	W	W	4.63	4.00	W	W
Indiana	W	W	W	3.76	3.12	W	W
Michigan	4.14	3.00	38.0%	4.51	3.17	4.03	2.95
Ohio	3.98	2.84	40.0%	3.92	2.79	4.00	2.87
Wisconsin	3.84	2.91	32.0%	3.84	2.91	--	--
West North Central	W	W	W	4.34	4.18	W	W
Iowa	3.51	4.87	-28.0%	3.51	4.87	--	--
Kansas	5.34	4.20	27.0%	5.34	4.20	--	--
Minnesota	5.69	W	W	5.69	3.48	--	W
Missouri	W	W	W	4.34	3.22	W	W
Nebraska	4.94	5.71	-13.0%	4.94	5.71	--	--
North Dakota	6.67	5.42	23.0%	6.67	5.42	--	--
South Dakota	--	4.19	--	--	4.19	--	--
South Atlantic	5.29	4.17	27.0%	5.40	4.27	4.48	3.49
Delaware	--	--	--	--	--	--	--
District of Columbia	--	--	--	--	--	--	--
Florida	W	4.46	W	5.91	4.47	W	3.58
Georgia	W	3.36	W	4.67	3.45	W	3.00
Maryland	W	4.80	W	6.38	--	W	4.80
North Carolina	W	W	W	4.93	4.50	W	W
South Carolina	W	W	W	4.13	3.50	W	W
Virginia	W	W	W	5.05	4.72	W	W
West Virginia	4.71	3.31	42.0%	4.13	3.16	4.94	3.85
East South Central	4.50	3.15	43.0%	4.57	3.18	4.33	3.06
Alabama	W	W	W	4.79	3.18	W	W
Kentucky	W	W	W	4.94	4.00	W	W
Mississippi	W	W	W	4.38	2.98	W	W
Tennessee	4.35	3.04	43.0%	4.35	3.04	--	--
West South Central	3.88	2.96	31.0%	3.94	3.09	3.85	2.85
Arkansas	W	W	W	4.65	3.13	W	W
Louisiana	W	W	W	4.57	3.19	W	W
Oklahoma	W	W	W	3.96	2.99	W	W
Texas	3.76	2.90	30.0%	3.43	3.03	3.86	2.86
Mountain	W	3.39	W	4.55	3.36	W	4.19
Arizona	W	W	W	3.75	3.40	W	W
Colorado	W	W	W	4.25	3.42	W	W
Idaho	5.43	3.25	67.0%	5.43	3.25	--	--
Montana	1.15	1.90	-39.0%	1.15	1.90	--	--
Nevada	6.23	3.33	87.0%	6.23	3.33	--	--
New Mexico	2.33	3.48	-33.0%	2.33	3.48	--	--
Utah	5.71	3.24	76.0%	5.71	3.24	--	--
Wyoming	W	3.18	W	3.85	3.18	W	--
Pacific Contiguous	6.02	W	W	6.44	3.56	5.69	W
California	6.18	3.74	65.0%	6.37	4.03	6.03	3.48
Oregon	W	W	W	6.96	2.48	W	W
Washington	W	W	W	6.05	3.37	W	W
Pacific Noncontiguous	7.72	7.18	7.5%	7.72	7.18	--	--
Alaska	7.72	7.18	7.5%	7.72	7.18	--	--
Hawaii	--	--	--	--	--	--	--
U.S. Total	4.73	3.68	29.0%	4.95	3.71	4.48	3.64

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 2017 are final. Values for 2018 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.

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) December 2018 and 2017  
(Dollars per MMBtu)**

Census Division and State	Electric Power Sector			Electric Utilities		Independent Power Producers	
	December 2018 YTD	December 2017 YTD	Percentage Change	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD
New England	W	3.85	W	4.59	3.68	W	3.85
Connecticut	4.61	4.25	8.5%	--	--	4.61	4.25
Maine	W	W	W	--	--	W	W
Massachusetts	4.84	3.62	34.0%	3.60	3.45	4.85	3.62
New Hampshire	W	W	W	5.95	4.26	W	W
Rhode Island	W	3.53	W	--	--	W	3.53
Vermont	--	--	--	--	--	--	--
Middle Atlantic	3.27	2.85	15.0%	4.11	3.50	3.18	2.79
New Jersey	3.15	2.75	15.0%	--	--	3.15	2.75
New York	3.74	3.35	12.0%	4.11	3.50	3.58	3.30
Pennsylvania	3.02	2.56	18.0%	--	--	3.02	2.56
East North Central	3.20	3.10	3.2%	3.30	3.19	3.14	3.05
Illinois	3.26	3.26	0.0%	3.25	3.68	3.26	3.22
Indiana	3.26	W	W	3.39	3.22	3.18	W
Michigan	3.25	3.18	2.2%	3.49	3.38	3.15	3.10
Ohio	3.09	2.90	6.6%	3.10	2.87	3.09	2.91
Wisconsin	3.22	W	W	3.22	3.20	--	W
West North Central	W	W	W	3.08	3.43	W	W
Iowa	2.79	3.03	-7.9%	2.79	3.03	--	--
Kansas	3.21	3.73	-14.0%	3.21	3.73	--	--
Minnesota	W	W	W	3.51	3.81	W	W
Missouri	W	W	W	2.95	3.26	W	W
Nebraska	3.74	3.96	-5.6%	3.74	3.96	--	--
North Dakota	5.48	3.83	43.0%	5.48	3.83	--	--
South Dakota	--	3.07	--	--	3.07	--	--
South Atlantic	4.19	3.88	8.0%	4.29	3.98	3.60	3.14
Delaware	--	--	--	--	--	--	--
District of Columbia	--	--	--	--	--	--	--
Florida	W	4.20	W	4.37	4.21	W	3.76
Georgia	W	3.47	W	3.80	3.55	W	3.18
Maryland	3.86	3.49	11.0%	3.64	--	3.93	3.49
North Carolina	W	W	W	4.39	4.03	W	W
South Carolina	W	W	W	3.77	3.51	W	W
Virginia	4.19	3.32	26.0%	4.67	3.59	3.11	2.51
West Virginia	W	W	W	3.22	3.00	W	W
East South Central	3.31	3.24	2.2%	3.30	3.24	3.34	3.25
Alabama	W	W	W	3.40	3.34	W	W
Kentucky	W	W	W	3.57	3.64	W	W
Mississippi	W	W	W	3.22	3.14	W	W
Tennessee	3.14	3.04	3.3%	3.14	3.04	--	--
West South Central	3.08	3.13	-1.6%	3.04	3.23	3.11	3.04
Arkansas	W	W	W	3.17	3.30	W	W
Louisiana	W	W	W	3.31	3.27	W	W
Oklahoma	W	W	W	2.72	3.18	W	W
Texas	3.09	3.08	0.3%	2.97	3.19	3.13	3.05
Mountain	3.12	W	W	3.09	3.45	3.43	W
Arizona	W	W	W	2.92	3.61	W	W
Colorado	W	W	W	3.62	3.44	W	W
Idaho	3.60	3.33	8.1%	3.60	3.33	--	--
Montana	1.30	W	W	1.30	1.78	--	W
Nevada	3.16	3.37	-6.2%	3.16	3.37	--	--
New Mexico	2.42	3.41	-29.0%	2.42	3.41	--	--
Utah	3.11	3.32	-6.3%	3.11	3.32	--	--
Wyoming	W	W	W	3.17	3.89	W	W
Pacific Contiguous	4.23	3.44	23.0%	4.03	3.63	4.41	3.24
California	4.64	3.65	27.0%	4.44	4.02	4.79	3.33
Oregon	W	W	W	2.71	2.45	W	W
Washington	W	W	W	3.33	3.37	W	W
Pacific Noncontiguous	8.03	7.05	14.0%	8.03	7.05	--	--
Alaska	8.03	7.05	14.0%	8.03	7.05	--	--
Hawaii	--	--	--	--	--	--	--
U.S. Total	3.57	3.39	5.3%	3.69	3.62	3.41	3.08

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 2017 are final. Values for 2018 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.

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, December 2018

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	58	0.49	7.7	0	--	--	0	--	--
Connecticut	0	--	--	0	--	--	0	--	--
Maine	9	0.76	8.8	0	--	--	0	--	--
Massachusetts	0	--	--	0	--	--	0	--	--
New Hampshire	49	0.43	7.5	0	--	--	0	--	--
Rhode Island	0	--	--	0	--	--	0	--	--
Vermont	0	--	--	0	--	--	0	--	--
Middle Atlantic	1,589	2.93	8.8	0	--	--	0	--	--
New Jersey	76	1.79	7.8	0	--	--	0	--	--
New York	71	2.83	8.7	0	--	--	0	--	--
Pennsylvania	1,442	2.99	8.9	0	--	--	0	--	--
East North Central	4,942	3.29	10.0	6,803	0.25	4.6	0	--	--
Illinois	701	3.59	18.1	2,602	0.22	4.6	0	--	--
Indiana	2,219	2.91	8.9	319	0.23	4.5	0	--	--
Michigan	84	1.94	7.3	2,216	0.29	4.6	0	--	--
Ohio	1,937	3.65	9.0	120	0.20	4.5	0	--	--
Wisconsin	0	--	--	1,547	0.24	4.8	0	--	--
West North Central	87	2.97	9.7	7,825	0.28	5.0	1,816	0.76	10.5
Iowa	52	2.77	8.6	1,381	0.25	4.8	0	--	--
Kansas	17	3.79	13.6	1,074	0.32	5.0	0	--	--
Minnesota	0	--	--	1,167	0.35	6.2	0	--	--
Missouri	18	2.75	9.0	2,873	0.24	4.7	0	--	--
Nebraska	0	--	--	1,136	0.29	5.0	0	--	--
North Dakota	0	--	--	0	--	--	1,816	0.76	10.5
South Dakota	0	--	--	194	0.33	5.3	0	--	--
South Atlantic	5,771	2.47	9.9	874	0.30	4.6	0	--	--
Delaware	0	--	--	0	--	--	0	--	--
District of Columbia	0	--	--	0	--	--	0	--	--
Florida	1,030	2.39	8.6	0	--	--	0	--	--
Georgia	533	2.59	8.7	874	0.30	4.6	0	--	--
Maryland	432	2.30	9.8	0	--	--	0	--	--
North Carolina	921	1.77	9.8	0	--	--	0	--	--
South Carolina	635	1.81	9.6	0	--	--	0	--	--
Virginia	355	2.91	19.6	0	--	--	0	--	--
West Virginia	1,865	3.02	9.7	0	--	--	0	--	--
East South Central	3,432	2.75	9.0	1,490	0.26	5.1	296	0.44	13.2
Alabama	395	1.44	10.0	754	0.26	5.2	0	--	--
Kentucky	2,427	3.08	9.1	555	0.24	4.9	0	--	--
Mississippi	49	0.44	6.4	80	0.34	5.2	296	0.44	13.2
Tennessee	561	2.39	8.4	102	0.29	5.4	0	--	--
West South Central	55	2.32	12.8	6,956	0.27	5.0	2,192	1.21	16.9
Arkansas	6	0.41	8.8	1,744	0.23	4.8	0	--	--
Louisiana	39	2.81	9.2	490	0.28	5.1	108	0.64	14.6
Oklahoma	10	0.66	63.5	722	0.23	4.7	0	--	--
Texas	0	--	--	4,000	0.29	5.1	2,084	1.24	17.0
Mountain	2,092	0.51	12.2	5,318	0.49	8.7	26	0.65	9.7
Arizona	646	0.51	10.3	696	0.56	10.2	0	--	--
Colorado	106	0.44	11.3	1,162	0.33	5.7	0	--	--
Idaho	0	--	--	0	--	--	0	--	--
Montana	0	--	--	776	0.66	9.2	26	0.65	9.7
Nevada	0	--	--	127	0.39	7.7	0	--	--
New Mexico	381	0.64	21.2	454	0.72	21.1	0	--	--
Utah	959	0.48	10.3	23	0.77	9.3	0	--	--
Wyoming	0	--	--	2,080	0.44	7.2	0	--	--
Pacific Contiguous	44	0.54	10.6	763	0.36	8.3	0	--	--
California	44	0.54	10.6	0	--	--	0	--	--
Oregon	0	--	--	190	0.26	4.9	0	--	--
Washington	0	--	--	573	0.39	9.4	0	--	--
Pacific Noncontiguous	0	--	--	58	0.16	3.7	17	0.14	8.8
Alaska	0	--	--	0	--	--	17	0.14	8.8
Hawaii	0	--	--	58	0.16	3.7	0	--	--
U.S. Total	18,070	2.57	9.9	30,087	0.31	5.7	4,347	0.96	13.9

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 2018 are preliminary. Values for 2017 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 4.15. Receipts and Quality of Coal by Rank Delivered for Electricity Generation: Electric Utilities by State, December 2018

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	49	0.43	7.5	0	--	--	0	--	--
Connecticut	0	--	--	0	--	--	0	--	--
Maine	0	--	--	0	--	--	0	--	--
Massachusetts	0	--	--	0	--	--	0	--	--
New Hampshire	49	0.43	7.5	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	2,494	3.00	8.8	4,447	0.26	4.6	0	--	--
Illinois	163	3.25	9.7	246	0.21	4.5	0	--	--
Indiana	2,038	2.86	8.8	319	0.23	4.5	0	--	--
Michigan	63	2.33	7.6	2,216	0.29	4.6	0	--	--
Ohio	230	4.11	8.6	120	0.20	4.5	0	--	--
Wisconsin	0	--	--	1,547	0.24	4.8	0	--	--
West North Central	33	3.27	11.4	7,601	0.28	5.1	1,816	0.76	10.5
Iowa	0	--	--	1,248	0.26	4.8	0	--	--
Kansas	17	3.79	13.6	1,074	0.32	5.0	0	--	--
Minnesota	0	--	--	1,167	0.35	6.2	0	--	--
Missouri	16	2.71	9.0	2,873	0.24	4.7	0	--	--
Nebraska	0	--	--	1,045	0.30	5.1	0	--	--
North Dakota	0	--	--	0	--	--	1,816	0.76	10.5
South Dakota	0	--	--	194	0.33	5.3	0	--	--
South Atlantic	4,890	2.48	10.1	874	0.30	4.6	0	--	--
Delaware	0	--	--	0	--	--	0	--	--
District of Columbia	0	--	--	0	--	--	0	--	--
Florida	1,030	2.39	8.6	0	--	--	0	--	--
Georgia	519	2.63	8.7	874	0.30	4.6	0	--	--
Maryland	0	--	--	0	--	--	0	--	--
North Carolina	887	1.82	9.9	0	--	--	0	--	--
South Carolina	635	1.81	9.6	0	--	--	0	--	--
Virginia	287	3.55	22.9	0	--	--	0	--	--
West Virginia	1,531	2.99	9.9	0	--	--	0	--	--
East South Central	3,388	2.78	9.1	1,490	0.26	5.1	0	--	--
Alabama	395	1.44	10.0	754	0.26	5.2	0	--	--
Kentucky	2,427	3.08	9.1	555	0.24	4.9	0	--	--
Mississippi	49	0.44	6.4	80	0.34	5.2	0	--	--
Tennessee	517	2.52	8.4	102	0.29	5.4	0	--	--
West South Central	39	2.81	9.2	4,079	0.25	4.9	697	1.82	20.1
Arkansas	0	--	--	1,498	0.23	4.8	0	--	--
Louisiana	39	2.81	9.2	327	0.27	5.2	108	0.64	14.6
Oklahoma	0	--	--	596	0.23	4.6	0	--	--
Texas	0	--	--	1,658	0.26	4.9	589	2.08	21.3
Mountain	2,092	0.51	12.2	4,449	0.46	8.7	26	0.65	9.7
Arizona	646	0.51	10.3	696	0.56	10.2	0	--	--
Colorado	106	0.44	11.3	1,162	0.33	5.7	0	--	--
Idaho	0	--	--	0	--	--	0	--	--
Montana	0	--	--	0	--	--	26	0.65	9.7
Nevada	0	--	--	82	0.39	9.1	0	--	--
New Mexico	381	0.64	21.2	454	0.72	21.1	0	--	--
Utah	959	0.48	10.3	23	0.77	9.3	0	--	--
Wyoming	0	--	--	2,033	0.45	7.2	0	--	--
Pacific Contiguous	0	--	--	190	0.26	4.9	0	--	--
California	0	--	--	0	--	--	0	--	--
Oregon	0	--	--	190	0.26	4.9	0	--	--
Washington	0	--	--	0	--	--	0	--	--
Pacific Noncontiguous	0	--	--	0	--	--	17	0.14	8.8
Alaska	0	--	--	0	--	--	17	0.14	8.8
Hawaii	0	--	--	0	--	--	0	--	--
U.S. Total	12,985	2.36	9.9	23,131	0.30	5.6	2,556	1.02	12.9

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 2018 are preliminary. Values for 2017 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, December 2018

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	9	0.76	8.8	0	--	--	0	--	--
Connecticut	0	--	--	0	--	--	0	--	--
Maine	9	0.76	8.8	0	--	--	0	--	--
Massachusetts	0	--	--	0	--	--	0	--	--
New Hampshire	0	--	--	0	--	--	0	--	--
Rhode Island	0	--	--	0	--	--	0	--	--
Vermont	0	--	--	0	--	--	0	--	--
Middle Atlantic	1,567	2.94	8.8	0	--	--	0	--	--
New Jersey	76	1.79	7.8	0	--	--	0	--	--
New York	71	2.83	8.7	0	--	--	0	--	--
Pennsylvania	1,419	3.01	8.9	0	--	--	0	--	--
East North Central	2,314	3.58	11.3	2,292	0.22	4.6	0	--	--
Illinois	408	3.72	26.3	2,292	0.22	4.6	0	--	--
Indiana	181	3.49	9.9	0	--	--	0	--	--
Michigan	18	0.47	5.3	0	--	--	0	--	--
Ohio	1,707	3.59	9.1	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	806	2.55	9.0	0	--	--	0	--	--
Delaware	0	--	--	0	--	--	0	--	--
District of Columbia	0	--	--	0	--	--	0	--	--
Florida	0	--	--	0	--	--	0	--	--
Georgia	0	--	--	0	--	--	0	--	--
Maryland	415	2.31	9.4	0	--	--	0	--	--
North Carolina	11	0.70	5.8	0	--	--	0	--	--
South Carolina	0	--	--	0	--	--	0	--	--
Virginia	45	0.83	9.9	0	--	--	0	--	--
West Virginia	334	3.13	8.4	0	--	--	0	--	--
East South Central	0	--	--	0	--	--	296	0.44	13.2
Alabama	0	--	--	0	--	--	0	--	--
Kentucky	0	--	--	0	--	--	0	--	--
Mississippi	0	--	--	0	--	--	296	0.44	13.2
Tennessee	0	--	--	0	--	--	0	--	--
West South Central	10	0.66	63.5	2,862	0.30	5.2	1,495	0.95	15.6
Arkansas	0	--	--	245	0.21	5.1	0	--	--
Louisiana	0	--	--	163	0.30	4.8	0	--	--
Oklahoma	10	0.66	63.5	111	0.24	4.7	0	--	--
Texas	0	--	--	2,341	0.32	5.3	1,495	0.95	15.6
Mountain	0	--	--	869	0.63	8.7	0	--	--
Arizona	0	--	--	0	--	--	0	--	--
Colorado	0	--	--	0	--	--	0	--	--
Idaho	0	--	--	0	--	--	0	--	--
Montana	0	--	--	776	0.66	9.2	0	--	--
Nevada	0	--	--	46	0.39	5.0	0	--	--
New Mexico	0	--	--	0	--	--	0	--	--
Utah	0	--	--	0	--	--	0	--	--
Wyoming	0	--	--	47	0.35	5.3	0	--	--
Pacific Contiguous	0	--	--	573	0.39	9.4	0	--	--
California	0	--	--	0	--	--	0	--	--
Oregon	0	--	--	0	--	--	0	--	--
Washington	0	--	--	573	0.39	9.4	0	--	--
Pacific Noncontiguous	0	--	--	58	0.16	3.7	0	--	--
Alaska	0	--	--	0	--	--	0	--	--
Hawaii	0	--	--	58	0.16	3.7	0	--	--
U.S. Total	4,706	3.16	10.0	6,653	0.32	5.8	1,791	0.88	15.3

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 2018 are preliminary. Values for 2017 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, December 2018**

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	2	3.05	8.6	0	--	--	0	--	--
Iowa	0	--	--	0	--	--	0	--	--
Kansas	0	--	--	0	--	--	0	--	--
Minnesota	0	--	--	0	--	--	0	--	--
Missouri	2	3.05	8.6	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	2	3.05	8.6	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 2018 are preliminary. Values for 2017 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, December 2018**

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	22	2.28	8.1	0	--	--	0	--	--
New Jersey	0	--	--	0	--	--	0	--	--
New York	0	--	--	0	--	--	0	--	--
Pennsylvania	22	2.28	8.1	0	--	--	0	--	--
East North Central	133	3.61	8.5	63	0.38	5.0	0	--	--
Illinois	130	3.70	8.5	63	0.38	5.0	0	--	--
Indiana	0	--	--	0	--	--	0	--	--
Michigan	4	0.87	9.6	0	--	--	0	--	--
Ohio	0	--	--	0	--	--	0	--	--
Wisconsin	0	--	--	0	--	--	0	--	--
West North Central	52	2.77	8.6	224	0.20	4.4	0	--	--
Iowa	52	2.77	8.6	133	0.20	4.4	0	--	--
Kansas	0	--	--	0	--	--	0	--	--
Minnesota	0	--	--	0	--	--	0	--	--
Missouri	0	--	--	0	--	--	0	--	--
Nebraska	0	--	--	91	0.21	4.4	0	--	--
North Dakota	0	--	--	0	--	--	0	--	--
South Dakota	0	--	--	0	--	--	0	--	--
South Atlantic	76	1.07	10.4	0	--	--	0	--	--
Delaware	0	--	--	0	--	--	0	--	--
District of Columbia	0	--	--	0	--	--	0	--	--
Florida	0	--	--	0	--	--	0	--	--
Georgia	14	1.16	10.6	0	--	--	0	--	--
Maryland	17	2.01	21.5	0	--	--	0	--	--
North Carolina	23	0.78	7.0	0	--	--	0	--	--
South Carolina	0	--	--	0	--	--	0	--	--
Virginia	22	0.74	7.1	0	--	--	0	--	--
West Virginia	0	--	--	0	--	--	0	--	--
East South Central	44	0.95	7.8	0	--	--	0	--	--
Alabama	0	--	--	0	--	--	0	--	--
Kentucky	0	--	--	0	--	--	0	--	--
Mississippi	0	--	--	0	--	--	0	--	--
Tennessee	44	0.95	7.8	0	--	--	0	--	--
West South Central	6	0.41	8.8	15	0.23	4.9	0	--	--
Arkansas	6	0.41	8.8	0	--	--	0	--	--
Louisiana	0	--	--	0	--	--	0	--	--
Oklahoma	0	--	--	15	0.23	4.9	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	0.54	10.6	0	--	--	0	--	--
California	44	0.54	10.6	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	378	2.12	9.1	302	0.24	4.6	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 2018 are preliminary. Values for 2017 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."

## Chapter 5

# Sales to Ultimate Consumers, Revenue and Average Price of Electricity to Ultimate Consumers

**Table 5.1. Sales of Electricity to Ultimate Customers:  
Total by End-Use Sector, 2008 - December 2018 (Thousand Megawatthours)**

Period	Residential	Commercial	Industrial	Transportation	All Sectors
<b>Annual Totals</b>					
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
2016	1,411,058	1,367,191	976,715	7,497	3,762,462
2017	1,378,648	1,352,888	984,298	7,523	3,723,356
2018	1,464,373	1,376,741	953,076	7,738	3,801,928
<b>Year 2016</b>					
January	130,972	110,410	78,848	660	320,890
February	115,959	103,452	76,748	646	296,806
March	100,227	105,739	79,237	609	285,812
April	88,244	102,045	78,647	595	269,531
May	94,198	108,437	81,491	581	284,708
June	125,211	120,363	83,672	631	329,878
July	154,409	130,038	87,076	648	372,172
August	156,442	135,019	89,101	631	381,192
Sept	129,363	123,493	83,259	637	336,752
October	101,508	112,963	81,597	613	296,681
November	93,244	105,060	78,421	592	277,317
December	121,281	110,172	78,616	653	310,722
<b>Year 2017</b>					
January	129,212	109,488	78,809	667	318,177
February	100,968	99,640	74,534	635	275,777
March	103,096	107,173	80,530	645	291,444
April	90,725	102,589	78,899	589	272,801
May	98,281	109,872	83,134	583	291,871
June	122,543	120,013	85,399	628	328,583
July	149,900	129,277	87,806	630	367,613
August	142,007	128,481	89,134	640	360,263
Sept	118,779	118,789	83,540	618	321,726
October	102,811	113,287	82,815	626	299,539
November	98,321	104,973	79,456	598	283,347
December	122,005	109,306	80,242	664	312,216
<b>Year 2018</b>					
January	148,978	114,618	76,061	751	340,408
February	113,383	102,001	71,948	643	287,975
March	106,939	107,886	76,811	625	292,262
April	95,128	102,922	75,241	608	273,898
May	103,395	112,597	81,461	591	298,044
June	129,478	121,578	81,527	628	333,212
July	153,031	130,916	85,041	640	369,629
August	152,951	134,479	89,632	686	377,748
Sept	128,459	121,581	81,192	648	331,881
October	106,638	115,861	81,023	636	304,157
November	103,372	104,622	76,927	622	285,543
December	122,620	107,678	76,213	660	307,171
<b>Year to Date</b>					
2016	1,411,058	1,367,191	976,715	7,497	3,762,462
2017	1,378,648	1,352,888	984,298	7,523	3,723,356
2018	1,464,373	1,376,741	953,076	7,738	3,801,928
<b>Rolling 12 Months Ending in December</b>					
2017	1,378,648	1,352,888	984,298	7,523	3,723,356
2018	1,464,373	1,376,741	953,076	7,738	3,801,928

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 2017 and prior years are final. Values for 2018 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-861M (formerly EIA-826), Monthly Electric Industry Power Report.

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, 2008 - December 2018 (Million Dollars)**

Period	Residential	Commercial	Industrial	Transportation	All Sectors
<b>Annual Totals</b>					
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	391,341
2016	177,077	142,643	66,068	722	386,509
2017	177,661	144,242	67,691	728	390,322
2018	188,742	146,696	66,090	756	402,283
<b>Year 2016</b>					
January	15,704	11,133	5,080	63	31,980
February	14,076	10,605	4,927	62	29,670
March	12,593	10,815	5,122	58	28,587
April	10,967	10,398	5,065	57	26,486
May	12,048	11,184	5,357	54	28,643
June	15,942	12,828	5,879	62	34,710
July	19,575	13,891	6,294	64	39,823
August	20,157	14,530	6,440	63	41,191
Sept	16,652	13,298	5,947	64	35,961
October	12,648	11,914	5,491	59	30,111
November	11,886	10,840	5,225	55	28,007
December	14,830	11,206	5,242	62	31,339
<b>Year 2017</b>					
January	15,781	11,183	5,190	63	32,216
February	12,911	10,442	4,941	60	28,354
March	13,289	11,208	5,407	61	29,965
April	11,536	10,669	5,209	56	27,470
May	12,843	11,638	5,639	56	30,176
June	16,171	13,209	6,141	64	35,585
July	19,606	14,184	6,416	64	40,269
August	18,679	14,141	6,435	64	39,320
Sept	15,772	13,104	5,992	62	34,930
October	13,164	12,208	5,725	60	31,157
November	12,721	11,016	5,345	57	29,139
December	15,189	11,239	5,249	62	31,739
<b>Year 2018</b>					
January	18,252	12,023	5,292	71	35,638
February	14,353	10,860	4,899	63	30,176
March	13,893	11,315	5,118	59	30,386
April	12,256	10,746	4,954	58	28,013
May	13,600	11,821	5,553	56	31,029
June	16,889	13,156	5,854	64	35,963
July	20,094	14,370	6,243	65	40,773
August	20,306	14,794	6,464	66	41,631
Sept	16,710	12,986	5,757	67	35,519
October	13,720	12,452	5,596	63	31,830
November	13,384	11,051	5,293	60	29,789
December	15,285	11,122	5,066	64	31,538
<b>Year to Date</b>					
2016	177,077	142,643	66,068	722	386,509
2017	177,661	144,242	67,691	728	390,322
2018	188,742	146,696	66,090	756	402,283
<b>Rolling 12 Months Ending in December</b>					
2017	177,661	144,242	67,691	728	390,322
2018	188,742	146,696	66,090	756	402,283

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 2017 and prior years are final. Values for 2018 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-861M (formerly EIA-826), Monthly Electric Industry Power Report.

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, 2008 - December 2018 (Cents per Kilowatthour)**

Period	Residential	Commercial	Industrial	Transportation	All Sectors
<b>Annual Totals</b>					
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
2016	12.55	10.43	6.76	9.63	10.27
2017	12.89	10.66	6.88	9.68	10.48
2018	12.89	10.66	6.93	9.77	10.58
<b>Year 2016</b>					
January	11.99	10.08	6.44	9.52	9.97
February	12.14	10.25	6.42	9.61	10.00
March	12.56	10.23	6.46	9.56	10.00
April	12.43	10.19	6.44	9.53	9.83
May	12.79	10.31	6.57	9.28	10.06
June	12.73	10.66	7.03	9.75	10.52
July	12.68	10.68	7.23	9.84	10.70
August	12.88	10.76	7.23	10.04	10.81
Sept	12.87	10.77	7.14	10.00	10.68
October	12.46	10.55	6.73	9.62	10.15
November	12.75	10.32	6.66	9.22	10.10
December	12.23	10.17	6.67	9.49	10.09
<b>Year 2017</b>					
January	12.21	10.21	6.59	9.39	10.13
February	12.79	10.48	6.63	9.50	10.28
March	12.89	10.46	6.71	9.49	10.28
April	12.72	10.40	6.60	9.46	10.07
May	13.07	10.59	6.78	9.61	10.34
June	13.20	11.01	7.19	10.18	10.83
July	13.08	10.97	7.31	10.12	10.95
August	13.15	11.01	7.22	10.06	10.91
Sept	13.28	11.03	7.17	9.99	10.86
October	12.80	10.78	6.91	9.57	10.40
November	12.94	10.49	6.73	9.50	10.28
December	12.45	10.28	6.54	9.35	10.17
<b>Year 2018</b>					
January	12.25	10.49	6.96	9.44	10.47
February	12.66	10.65	6.81	9.84	10.48
March	12.99	10.49	6.66	9.43	10.40
April	12.88	10.44	6.58	9.48	10.23
May	13.15	10.50	6.82	9.46	10.41
June	13.04	10.82	7.18	10.16	10.79
July	13.13	10.98	7.34	10.19	11.03
August	13.28	11.00	7.21	9.69	11.02
Sept	13.01	10.68	7.09	10.30	10.70
October	12.87	10.75	6.91	9.84	10.46
November	12.95	10.56	6.88	9.72	10.43
December	12.47	10.33	6.65	9.72	10.27
<b>Year to Date</b>					
2016	12.55	10.43	6.76	9.63	10.27
2017	12.89	10.66	6.88	9.68	10.48
2018	12.89	10.66	6.93	9.77	10.58
<b>Rolling 12 Months Ending in December</b>					
2017	12.89	10.66	6.88	9.68	10.48
2018	12.89	10.66	6.93	9.77	10.58

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 2017 and prior years are final. Values for 2018 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-861M (formerly EIA-826), Monthly Electric Industry Power Report.

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, December 2018 and 2017 (Thousand Megawatthours)**

Census Division and State	Residential		Commercial		Industrial		Transportation		All Sectors	
	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017
New England	4,117	4,413	4,182	4,372	1,296	1,358	51	51	9,644	10,195
Connecticut	1,182	1,239	975	1,023	234	251	17	15	2,408	2,527
Maine	401	422	337	294	240	203	0	0	978	918
Massachusetts	1,652	1,810	2,038	2,209	486	573	31	33	4,208	4,625
New Hampshire	431	444	369	378	152	150	0	0	953	971
Rhode Island	251	294	298	300	59	55	2	2	610	652
Vermont	200	205	164	169	124	128	0	0	488	502
Middle Atlantic	11,701	11,715	12,778	12,988	6,329	6,059	329	328	31,137	31,089
New Jersey	2,273	2,368	3,117	3,235	600	609	25	27	6,015	6,239
New York	4,314	4,222	6,170	6,181	1,604	1,515	241	234	12,329	12,152
Pennsylvania	5,114	5,124	3,491	3,573	4,125	3,935	63	67	12,794	12,699
East North Central	16,734	17,676	14,955	15,035	14,841	15,563	57	63	46,586	48,337
Illinois	3,884	4,047	4,290	4,265	3,451	3,619	51	56	11,676	11,987
Indiana	3,045	3,234	1,906	1,859	3,295	3,411	2	2	8,247	8,506
Michigan	3,022	3,150	3,100	3,116	2,322	2,523	1	1	8,445	8,790
Ohio	4,788	5,150	3,689	3,792	3,841	4,056	4	4	12,323	13,002
Wisconsin	1,994	2,095	1,969	2,003	1,932	1,953	0	0	5,895	6,051
West North Central	9,822	9,739	8,523	8,647	7,187	7,650	5	5	25,537	26,041
Iowa	1,357	1,325	1,039	1,076	1,884	1,921	0	0	4,281	4,322
Kansas	1,106	1,104	1,195	1,256	868	940	0	0	3,169	3,300
Minnesota	2,087	2,128	1,975	1,989	1,739	1,871	2	2	5,804	5,990
Missouri	3,278	3,208	2,473	2,499	909	1,019	2	2	6,663	6,728
Nebraska	985	938	797	791	797	894	0	0	2,579	2,623
North Dakota	530	566	614	628	761	766	0	0	1,905	1,959
South Dakota	479	471	429	409	228	238	0	0	1,136	1,118
South Atlantic	30,928	30,599	24,216	24,725	10,783	11,480	118	116	66,044	66,920
Delaware	427	424	334	353	169	183	0	0	930	959
District of Columbia	214	189	636	674	36	17	30	28	917	909
Florida	8,892	8,703	7,157	7,276	1,295	1,356	7	6	17,351	17,342
Georgia	5,005	4,745	3,580	3,629	2,441	2,642	14	15	11,040	11,031
Maryland	2,535	2,681	2,366	2,444	315	316	50	51	5,265	5,492
North Carolina	5,354	5,414	3,803	3,794	1,996	2,190	2	0	11,154	11,398
South Carolina	2,687	2,598	1,652	1,662	2,046	2,140	0	0	6,385	6,400
Virginia	4,605	4,581	4,059	4,247	1,297	1,441	15	15	9,977	10,284
West Virginia	1,208	1,264	628	646	1,188	1,195	0	0	3,024	3,105
East South Central	10,668	10,135	7,099	6,984	7,819	8,237	0	0	25,586	25,356
Alabama	2,834	2,765	1,715	1,762	2,625	2,788	0	0	7,174	7,315
Kentucky	2,472	2,503	1,542	1,561	2,263	2,308	0	0	6,277	6,372
Mississippi	1,541	1,411	1,006	1,063	1,391	1,343	0	0	3,938	3,818
Tennessee	3,821	3,455	2,836	2,598	1,540	1,797	0	0	8,197	7,850
West South Central	17,077	16,156	14,895	14,954	14,420	16,198	15	16	46,407	47,323
Arkansas	1,595	1,388	875	897	1,370	1,386	0	0	3,839	3,671
Louisiana	2,434	2,298	1,823	1,894	2,778	3,152	1	1	7,035	7,344
Oklahoma	2,015	1,852	1,497	1,697	1,553	1,511	0	0	5,065	5,059
Texas	11,033	10,619	10,701	10,466	8,720	10,149	14	15	30,468	31,249
Mountain	8,196	7,887	7,747	7,698	6,713	6,567	14	14	22,670	22,166
Arizona	2,370	2,188	2,131	2,162	1,105	1,153	1	1	5,606	5,504
Colorado	1,678	1,633	1,703	1,711	1,290	1,283	8	8	4,679	4,635
Idaho	945	959	566	569	539	512	0	0	2,050	2,040
Montana	533	539	431	441	401	358	0	0	1,366	1,338
Nevada	919	892	913	844	1,017	981	1	1	2,850	2,717
New Mexico	628	550	696	685	680	644	0	0	2,003	1,879
Utah	824	826	978	952	774	765	4	4	2,581	2,548
Wyoming	299	300	329	333	907	871	0	0	1,535	1,504
Pacific Contiguous	12,960	13,257	12,814	13,423	6,424	6,736	71	73	32,269	33,489
California	7,081	6,887	8,878	9,281	3,474	3,646	68	70	19,501	19,884
Oregon	2,103	2,236	1,409	1,467	944	1,050	2	2	4,459	4,756
Washington	3,776	4,133	2,526	2,675	2,006	2,040	1	1	8,309	8,849
Pacific Noncontiguous	417	427	471	480	402	394	0	0	1,290	1,300
Alaska	200	211	230	242	111	120	0	0	542	573
Hawaii	217	216	241	238	291	274	0	0	749	727
U.S. Total	122,620	122,005	107,678	109,306	76,213	80,242	660	664	307,171	312,216

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 2017 are final. Values for 2018 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-861M (formerly EIA-826), Monthly Electric Power Industry Report.

**Table 5.4.B. Sales of Electricity to Ultimate Customers by End-Use Sector, by State, Year-to-Date through December 2018 and 2017 (Thousand Megawatthours)**

Census Division and State	Residential		Commercial		Industrial		Transportation		All Sectors	
	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD
New England	47,837	45,849	52,250	52,190	16,047	16,867	571	553	116,705	115,458
Connecticut	13,063	12,380	12,367	12,335	3,070	3,244	195	177	28,695	28,136
Maine	4,640	4,639	4,011	3,917	2,816	2,658	0	0	11,468	11,214
Massachusetts	20,254	19,338	25,733	25,968	6,080	6,859	349	348	52,416	52,513
New Hampshire	4,634	4,441	4,436	4,390	1,952	1,956	0	0	11,022	10,787
Rhode Island	3,124	3,028	3,696	3,603	735	726	27	28	7,582	7,385
Vermont	2,120	2,023	2,008	1,977	1,394	1,424	0	0	5,522	5,424
Middle Atlantic	137,533	128,567	158,058	155,927	73,029	73,044	3,968	3,828	372,587	361,366
New Jersey	29,584	27,762	38,591	37,971	7,071	7,343	310	307	75,556	73,383
New York	52,044	49,081	76,306	75,333	17,367	17,811	2,955	2,767	148,671	144,992
Pennsylvania	55,905	51,724	43,161	42,623	48,591	47,889	703	755	148,360	142,991
East North Central	193,282	179,275	186,149	181,770	186,082	192,154	616	586	566,129	553,784
Illinois	47,367	43,717	51,147	49,988	42,489	42,971	551	520	141,554	137,196
Indiana	34,072	31,552	24,453	23,657	41,333	43,737	21	20	99,879	98,966
Michigan	34,973	32,977	39,115	38,325	29,808	30,591	7	6	103,903	101,899
Ohio	54,464	49,796	47,389	46,158	47,934	50,651	36	39	149,823	146,644
Wisconsin	22,406	21,233	24,046	23,641	24,518	24,205	0	0	70,970	69,079
West North Central	108,534	100,529	104,393	101,871	88,473	93,190	49	47	301,449	295,637
Iowa	14,530	13,722	12,397	12,135	23,270	23,065	0	0	50,197	48,922
Kansas	14,122	13,013	15,880	15,739	10,939	11,535	0	0	40,941	40,288
Minnesota	22,412	21,574	23,288	23,274	20,918	22,281	26	24	66,643	67,153
Missouri	37,118	33,051	31,536	30,177	11,584	13,211	24	23	80,262	76,461
Nebraska	10,376	9,668	9,658	9,293	10,531	11,398	0	0	30,565	30,359
North Dakota	5,050	4,848	6,601	6,530	8,457	8,762	0	0	20,108	20,140
South Dakota	4,926	4,653	5,032	4,723	2,774	2,938	0	0	12,732	12,314
South Atlantic	372,613	349,290	316,382	309,752	139,435	140,374	1,331	1,301	829,761	800,717
Delaware	5,050	4,663	4,348	4,185	2,172	2,281	0	0	11,570	11,129
District of Columbia	2,592	2,395	8,236	8,006	193	180	337	335	11,358	10,916
Florida	124,230	121,463	95,483	95,004	16,465	16,602	83	86	236,261	233,155
Georgia	59,968	54,771	47,613	46,265	31,832	32,251	170	169	139,583	133,457
Maryland	28,098	26,084	29,535	28,893	3,801	3,798	530	529	61,964	59,304
North Carolina	61,205	56,134	49,452	47,890	26,757	27,393	13	4	137,427	131,421
South Carolina	32,022	29,225	21,999	21,758	27,040	27,114	0	0	81,061	78,097
Virginia	47,774	43,982	51,933	50,201	16,993	17,169	199	178	116,899	111,530
West Virginia	11,673	10,573	7,783	7,549	14,182	13,586	0	0	33,638	31,709
East South Central	125,149	111,800	94,041	90,020	97,254	102,125	0	0	316,444	303,945
Alabama	33,334	30,181	23,032	22,744	33,704	33,317	0	0	90,071	86,242
Kentucky	27,755	24,883	19,715	19,293	26,749	28,459	0	0	74,219	72,634
Mississippi	19,563	17,444	14,109	14,256	16,968	16,129	0	0	50,639	47,829
Tennessee	44,497	39,293	37,184	33,727	19,833	24,220	0	0	101,514	97,240
West South Central	230,747	212,638	201,224	194,398	180,020	192,433	201	196	612,192	599,664
Arkansas	19,167	17,027	12,225	11,913	17,776	17,146	0	0	49,168	46,086
Louisiana	32,325	29,532	25,128	24,500	34,312	37,161	13	13	91,778	91,206
Oklahoma	24,295	21,838	20,835	20,499	18,480	18,156	0	0	63,609	60,492
Texas	154,961	144,242	143,037	137,486	109,453	119,970	187	182	407,637	401,880
Mountain	100,191	98,536	98,453	97,122	82,849	82,211	161	145	281,654	278,014
Arizona	34,701	34,251	29,671	29,681	13,677	13,706	8	8	78,056	77,646
Colorado	19,330	18,615	20,619	20,641	16,018	15,501	93	73	56,060	54,830
Idaho	8,390	8,728	6,399	6,421	8,837	8,645	0	0	23,626	23,794
Montana	5,138	5,225	4,968	4,970	4,548	4,515	0	0	14,653	14,710
Nevada	13,428	12,937	12,075	11,123	12,074	12,590	8	9	37,586	36,658
New Mexico	6,930	6,497	9,155	8,784	8,027	7,728	0	0	24,112	23,010
Utah	9,538	9,511	11,854	11,739	9,303	9,283	51	56	30,746	30,589
Wyoming	2,736	2,772	3,712	3,762	10,365	10,244	0	0	16,814	16,778
Pacific Contiguous	143,790	147,472	160,092	164,053	84,978	86,868	842	867	389,701	399,260
California	89,197	90,124	114,111	117,682	48,614	48,627	808	835	252,730	257,268
Oregon	19,137	20,066	16,505	16,571	11,835	13,382	26	25	47,502	50,044
Washington	35,455	37,283	29,477	29,800	24,529	24,859	8	7	89,469	91,948
Pacific Noncontiguous	4,698	4,690	5,700	5,787	4,909	5,033	0	0	15,307	15,510
Alaska	1,988	2,060	2,686	2,705	1,324	1,421	0	0	5,999	6,186
Hawaii	2,710	2,630	3,013	3,082	3,585	3,613	0	0	9,308	9,324
U.S. Total	1,464,373	1,378,648	1,376,741	1,352,888	953,076	984,298	7,738	7,523	3,801,928	3,723,356

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 2017 are final. Values for 2018 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-861M (formerly EIA-826), Monthly Electric Power Industry Report.

**Table 5.5.A. Revenue from Sales of Electricity to Ultimate Customers by End-Use Sector, by State, December 2018 and 2017 (Million Dollars)**

Census Division and State	Residential		Commercial		Industrial		Transportation		All Sectors	
	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017
New England	852	846	692	680	171	175	4	5	1,720	1,706
Connecticut	246	243	172	164	33	32	2	2	453	441
Maine	65	66	42	37	22	20	0	0	129	123
Massachusetts	363	363	342	351	72	82	2	3	779	798
New Hampshire	85	86	59	57	21	20	0	0	165	163
Rhode Island	56	53	52	46	10	8	0	0	119	108
Vermont	36	36	25	25	13	13	0	0	75	73
Middle Atlantic	1,794	1,803	1,495	1,523	427	412	37	35	3,752	3,773
New Jersey	351	368	374	376	61	57	2	2	788	803
New York	748	717	810	832	90	89	29	29	1,677	1,666
Pennsylvania	694	717	312	315	277	266	5	5	1,288	1,303
East North Central	2,151	2,280	1,472	1,491	1,030	1,083	4	4	4,658	4,858
Illinois	478	509	370	375	232	229	4	3	1,083	1,116
Indiana	362	375	197	193	236	252	0	0	795	821
Michigan	456	476	342	340	168	179	0	0	966	995
Ohio	575	630	357	370	253	279	0	0	1,185	1,280
Wisconsin	281	291	208	213	141	144	0	0	630	647
West North Central	1,064	1,081	767	777	489	491	0	0	2,321	2,349
Iowa	150	149	90	91	101	104	0	0	342	343
Kansas	132	140	117	127	64	64	0	0	314	331
Minnesota	269	262	195	186	132	115	0	0	596	563
Missouri	313	328	203	211	57	70	0	0	572	609
Nebraska	97	96	68	68	56	63	0	0	221	227
North Dakota	51	53	53	55	63	56	0	0	167	164
South Dakota	53	53	40	39	17	19	0	0	110	111
South Atlantic	3,463	3,453	2,258	2,315	679	725	10	8	6,409	6,501
Delaware	52	55	33	34	13	14	0	0	99	103
District of Columbia	28	25	81	79	3	1	3	2	115	108
Florida	1,055	1,007	691	684	101	104	1	1	1,847	1,795
Georgia	465	507	311	362	128	150	1	1	904	1,020
Maryland	336	355	256	265	26	27	4	4	621	650
North Carolina	577	548	326	310	122	130	0	0	1,025	989
South Carolina	316	321	167	175	127	133	0	0	610	629
Virginia	507	493	338	346	88	88	1	1	934	928
West Virginia	126	143	55	60	71	77	0	0	252	280
East South Central	1,167	1,111	752	738	461	478	0	0	2,379	2,327
Alabama	329	325	192	202	154	164	0	0	676	691
Kentucky	256	265	150	152	126	129	0	0	532	546
Mississippi	171	152	109	109	87	79	0	0	367	340
Tennessee	410	368	302	276	93	106	0	0	804	750
West South Central	1,782	1,676	1,160	1,215	746	844	1	1	3,689	3,737
Arkansas	144	135	64	74	70	81	0	0	278	290
Louisiana	219	210	161	167	149	164	0	0	529	541
Oklahoma	182	176	112	128	78	80	0	0	372	384
Texas	1,238	1,156	824	845	448	519	1	1	2,511	2,522
Mountain	939	910	695	701	398	393	1	1	2,033	2,006
Arizona	291	267	206	212	66	66	0	0	562	545
Colorado	200	193	164	162	90	91	1	1	455	446
Idaho	93	96	42	44	31	29	0	0	166	169
Montana	58	58	44	44	23	19	0	0	125	121
Nevada	108	110	69	68	49	51	0	0	226	229
New Mexico	76	68	68	66	37	36	0	0	181	170
Utah	82	85	72	74	43	42	0	0	197	201
Wyoming	32	33	30	31	59	59	0	0	122	124
Pacific Contiguous	1,955	1,916	1,707	1,686	565	560	7	6	4,234	4,168
California	1,377	1,282	1,362	1,326	414	409	7	6	3,159	3,023
Oregon	225	235	125	128	57	61	0	0	407	424
Washington	353	399	220	231	94	91	0	0	668	721
Pacific Noncontiguous	119	111	123	113	101	89	0	0	343	313
Alaska	44	45	45	45	18	20	0	0	108	110
Hawaii	75	66	78	69	83	68	0	0	236	203
U.S. Total	15,285	15,189	11,122	11,239	5,066	5,249	64	62	31,538	31,739

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 2017 are final. Values for 2018 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-861M (formerly EIA-826), Monthly Electric Power Industry Report.



**Table 5.5.B. Revenue from Sales of Electricity to Ultimate Customers by End-Use Sector, by State, Year-to-Date through December 2018 and 2017 (Million Dollars)**

Census Division and State	Residential		Commercial		Industrial		Transportation		All Sectors	
	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD
New England	9,821	8,897	8,507	8,080	2,079	2,114	51	46	20,457	19,138
Connecticut	2,770	2,512	2,078	1,981	426	425	24	19	5,298	4,938
Maine	748	741	495	475	255	245	0	0	1,498	1,460
Massachusetts	4,369	3,879	4,319	4,138	882	952	22	22	9,592	8,991
New Hampshire	910	853	700	650	255	241	0	0	1,866	1,744
Rhode Island	642	555	609	548	113	106	5	5	1,369	1,213
Vermont	381	358	305	289	147	145	0	0	833	792
Middle Atlantic	22,009	20,552	19,631	19,601	5,060	5,040	444	431	47,145	45,624
New Jersey	4,578	4,344	4,710	4,663	715	743	28	27	10,031	9,777
New York	9,642	8,849	11,067	11,111	1,049	1,055	362	350	22,120	21,366
Pennsylvania	7,790	7,359	8,854	8,826	3,296	3,242	54	54	14,994	14,481
East North Central	25,439	23,951	18,812	18,465	13,049	13,598	43	39	57,343	56,053
Illinois	5,943	5,662	4,577	4,543	2,827	2,782	37	33	13,385	13,020
Indiana	4,094	3,878	2,534	2,495	2,960	3,298	2	2	9,591	9,673
Michigan	5,440	5,078	4,369	4,217	2,170	2,201	1	1	11,981	11,496
Ohio	6,725	6,287	4,706	4,640	3,212	3,503	3	3	14,646	14,433
Wisconsin	3,236	3,046	2,626	2,571	1,879	1,814	0	0	7,741	7,430
West North Central	13,027	12,190	10,152	9,995	6,505	6,685	4	4	29,689	28,874
Iowa	1,841	1,693	1,215	1,148	1,532	1,432	0	0	4,587	4,273
Kansas	1,854	1,732	1,657	1,667	816	870	0	0	4,327	4,270
Minnesota	2,999	2,814	2,433	2,439	1,625	1,643	2	2	7,059	6,898
Missouri	4,118	3,844	2,908	2,858	807	968	2	2	7,835	7,672
Nebraska	1,120	1,060	863	822	794	873	0	0	2,777	2,756
North Dakota	523	499	600	600	716	669	0	0	1,838	1,768
South Dakota	572	548	477	460	216	230	0	0	1,265	1,238
South Atlantic	43,783	41,439	29,622	29,092	9,041	9,128	105	102	82,551	79,761
Delaware	637	622	422	414	168	177	0	0	1,227	1,214
District of Columbia	333	310	986	933	16	15	32	30	1,366	1,288
Florida	14,425	14,098	8,926	8,882	1,277	1,299	7	7	24,635	24,286
Georgia	6,829	6,517	4,594	4,667	1,857	1,922	9	9	13,289	13,115
Maryland	3,744	3,641	3,081	3,107	313	318	40	41	7,178	7,106
North Carolina	6,900	6,138	4,296	4,043	1,666	1,699	1	0	12,863	11,881
South Carolina	3,970	3,804	2,242	2,301	1,668	1,677	0	0	7,880	7,783
Virginia	5,629	5,079	4,349	4,023	1,164	1,118	16	14	11,158	10,234
West Virginia	1,315	1,230	725	723	914	903	0	0	2,954	2,855
East South Central	13,935	12,633	9,838	9,546	5,696	6,058	0	0	29,469	28,236
Alabama	4,086	3,787	2,600	2,638	2,047	2,052	0	0	8,733	8,476
Kentucky	2,901	2,700	1,885	1,900	1,476	1,627	0	0	6,262	6,227
Mississippi	2,201	1,933	1,483	1,449	1,037	966	0	0	4,721	4,348
Tennessee	4,747	4,214	3,870	3,559	1,135	1,413	0	0	9,753	9,185
West South Central	25,024	22,828	16,393	16,221	9,793	10,485	16	16	51,227	49,550
Arkansas	1,875	1,750	937	1,014	969	1,041	0	0	3,781	3,805
Louisiana	3,011	2,875	2,193	2,193	1,816	2,036	1	1	7,021	7,105
Oklahoma	2,485	2,317	1,644	1,662	951	984	0	0	5,080	4,963
Texas	17,653	15,886	11,619	11,352	6,058	6,424	15	15	35,345	33,678
Mountain	12,024	11,717	9,508	9,333	5,314	5,388	15	14	26,862	26,452
Arizona	4,455	4,259	3,186	3,115	903	884	1	1	8,544	8,259
Colorado	2,346	2,265	2,084	2,041	1,162	1,163	8	7	5,600	5,476
Idaho	856	876	507	513	574	576	0	0	1,937	1,965
Montana	574	572	505	503	239	237	0	0	1,319	1,312
Nevada	1,593	1,550	948	886	734	775	1	1	3,276	3,212
New Mexico	884	837	930	895	459	476	0	0	2,273	2,208
Utah	1,006	1,042	991	1,015	548	569	5	6	2,550	2,632
Wyoming	311	315	357	365	695	709	0	0	1,363	1,389
Pacific Contiguous	22,361	22,240	22,818	22,573	8,386	8,135	77	75	53,642	53,023
California	16,857	16,501	18,781	18,552	6,491	6,190	74	72	42,204	41,315
Oregon	2,090	2,139	1,471	1,468	734	801	2	2	4,297	4,409
Washington	3,413	3,601	2,566	2,553	1,161	1,144	1	1	7,140	7,299
Pacific Noncontiguous	1,319	1,214	1,415	1,336	1,165	1,060	0	0	3,898	3,610
Alaska	439	438	511	511	229	232	0	0	1,178	1,181
Hawaii	880	776	904	825	936	828	0	0	2,720	2,429
U.S. Total	188,742	177,661	146,696	144,242	66,090	67,691	756	728	402,283	390,322

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 2017 are final. Values for 2018 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-861M (formerly EIA-826), Monthly Electric Power Industry Report.

**Table 5.6.A. Average Price of Electricity to Ultimate Customers by End-Use Sector, by State, December 2018 and 2017 (Cents per Kilowatthour)**

Census Division and State	Residential		Commercial		Industrial		Transportation		All Sectors	
	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017
New England	20.70	19.18	16.55	15.55	13.19	12.89	8.89	9.44	17.83	16.74
Connecticut	20.84	19.61	17.66	16.06	14.12	12.85	12.14	11.39	18.83	17.46
Maine	16.11	15.67	12.47	12.64	9.20	9.81	--	--	13.16	13.41
Massachusetts	21.99	20.05	16.78	15.88	14.71	14.30	6.58	8.04	18.51	17.26
New Hampshire	19.78	19.41	15.93	15.17	13.70	13.15	--	--	17.32	16.79
Rhode Island	22.51	18.01	17.40	15.34	17.09	15.16	16.75	16.82	19.47	16.54
Vermont	18.06	17.36	15.44	14.48	10.75	10.26	--	--	15.32	14.58
Middle Atlantic	15.33	15.39	11.70	11.72	6.75	6.80	11.11	10.79	12.05	12.13
New Jersey	15.45	15.55	12.00	11.61	10.10	9.37	8.80	8.18	13.10	12.87
New York	17.34	16.99	13.12	13.46	5.61	5.85	12.10	12.21	13.60	13.71
Pennsylvania	13.58	13.99	8.92	8.82	6.70	6.76	8.24	6.90	10.07	10.26
East North Central	12.86	12.90	9.85	9.92	6.94	6.96	7.21	6.45	10.00	10.05
Illinois	12.30	12.58	8.62	8.79	6.72	6.32	7.07	6.18	9.27	9.31
Indiana	11.89	11.59	10.33	10.41	7.15	7.40	10.14	11.27	9.64	9.65
Michigan	15.10	15.09	11.02	10.92	7.24	7.08	10.36	11.55	11.44	11.31
Ohio	12.00	12.24	9.67	9.75	6.59	6.89	7.15	6.91	9.61	9.84
Wisconsin	14.06	13.87	10.54	10.61	7.32	7.36	13.78	14.50	10.68	10.69
West North Central	10.83	11.10	9.00	8.98	6.80	6.42	7.95	8.15	9.09	9.02
Iowa	11.08	11.21	8.70	8.47	5.36	5.41	--	--	7.98	7.95
Kansas	11.96	12.64	9.81	10.12	7.38	6.86	--	--	9.89	10.03
Minnesota	12.87	12.33	9.89	9.34	7.57	6.14	9.08	9.38	10.26	9.40
Missouri	9.54	10.22	8.19	8.45	6.22	6.87	6.71	6.82	8.59	9.05
Nebraska	9.81	10.26	8.54	8.58	7.04	7.01	--	--	8.56	8.65
North Dakota	9.54	9.33	8.69	8.71	8.24	7.37	--	--	8.75	8.36
South Dakota	11.05	11.32	9.38	9.63	7.44	7.78	--	--	9.69	9.95
South Atlantic	11.20	11.29	9.32	9.36	6.30	6.31	8.07	7.20	9.70	9.71
Delaware	12.27	12.91	10.01	9.53	7.83	7.81	--	--	10.65	10.70
District of Columbia	13.15	13.28	12.67	11.72	8.66	8.00	10.18	7.75	12.54	11.85
Florida	11.86	11.57	9.66	9.40	7.77	7.64	8.23	8.64	10.65	10.35
Georgia	9.29	10.69	8.69	9.99	5.24	5.68	4.75	4.82	8.19	9.25
Maryland	13.24	13.23	10.81	10.85	8.36	8.46	7.64	7.02	11.80	11.84
North Carolina	10.78	10.13	8.58	8.18	6.09	5.94	7.95	8.73	9.19	8.68
South Carolina	11.77	12.34	10.11	10.54	6.20	6.21	--	--	9.56	9.82
Virginia	11.01	10.76	8.32	8.14	6.78	6.11	8.39	8.61	9.36	9.02
West Virginia	10.41	11.29	8.75	9.23	6.01	6.48	--	--	8.34	9.01
East South Central	10.93	10.96	10.59	10.57	5.89	5.80	--	--	9.30	9.18
Alabama	11.62	11.77	11.19	11.46	5.87	5.87	--	--	9.42	9.45
Kentucky	10.36	10.60	9.69	9.71	5.56	5.58	--	--	8.47	8.56
Mississippi	11.12	10.75	10.80	10.25	6.29	5.89	--	--	9.33	8.90
Tennessee	10.72	10.66	10.64	10.61	6.04	5.92	--	--	9.81	9.56
West South Central	10.44	10.38	7.79	8.13	5.17	5.21	6.37	8.39	7.95	7.90
Arkansas	9.01	9.70	7.29	8.30	5.14	5.85	10.93	13.05	7.24	7.90
Louisiana	9.01	9.14	8.81	8.82	5.36	5.20	8.10	9.54	7.52	7.37
Oklahoma	9.02	9.48	7.51	7.55	5.02	5.29	--	--	7.35	7.58
Texas	11.22	10.89	7.70	8.08	5.14	5.12	6.25	8.30	8.24	8.07
Mountain	11.46	11.54	8.97	9.11	5.92	5.98	9.40	9.51	8.97	9.05
Arizona	12.26	12.18	9.66	9.82	5.96	5.72	8.70	8.79	10.03	9.90
Colorado	11.90	11.80	9.62	9.46	7.01	7.09	9.01	9.10	9.72	9.63
Idaho	9.83	10.03	7.44	7.82	5.67	5.60	--	--	8.08	8.30
Montana	10.93	10.78	10.13	10.00	5.77	5.22	--	--	9.16	9.03
Nevada	11.72	12.34	7.59	8.05	4.78	5.21	7.17	8.53	7.92	8.43
New Mexico	12.04	12.40	9.75	9.59	5.48	5.65	--	--	9.02	9.06
Utah	9.97	10.29	7.34	7.73	5.51	5.46	10.64	10.51	7.64	7.89
Wyoming	10.84	11.13	9.21	9.45	6.51	6.80	--	--	7.93	8.25
Pacific Contiguous	15.08	14.45	13.32	12.56	8.80	8.32	9.51	8.93	13.12	12.45
California	19.44	18.62	15.34	14.29	11.91	11.21	9.53	8.91	16.20	15.20
Oregon	10.68	10.52	8.87	8.74	6.04	5.77	9.05	9.30	9.13	8.92
Washington	9.35	9.64	8.71	8.65	4.71	4.45	9.87	9.48	8.04	8.15
Pacific Noncontiguous	28.46	26.11	26.18	23.65	25.18	22.48	--	--	26.61	24.10
Alaska	21.99	21.36	19.66	18.54	16.46	16.75	--	--	19.86	19.21
Hawaii	34.43	30.76	32.42	28.85	28.52	25.00	--	--	31.49	27.96
U.S. Total	12.47	12.45	10.33	10.28	6.65	6.54	9.72	9.35	10.27	10.17

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 2017 are final. Values for 2018 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-861M (formerly EIA-826), Monthly Electric Power Industry Report.

**Table 5.6.B. Average Price of Electricity to Ultimate Customers by End-Use Sector, by State, Year-to-Date through December 2018 and 2017 (Cents per Kilowatthour)**

Census Division and State	Residential		Commercial		Industrial		Transportation		All Sectors	
	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD	December 2018 YTD	December 2017 YTD
New England	20.53	19.41	16.28	15.48	12.96	12.54	8.87	8.28	17.53	16.58
Connecticut	21.20	20.29	16.81	16.06	13.89	13.10	12.19	10.95	18.46	17.55
Maine	16.12	15.97	12.35	12.12	9.06	9.20	--	--	13.07	13.02
Massachusetts	21.57	20.06	16.78	15.93	14.51	13.88	6.38	6.22	18.30	17.12
New Hampshire	19.64	19.20	15.79	14.81	13.08	12.34	--	--	16.93	16.17
Rhode Island	20.55	18.32	16.48	15.20	15.37	14.57	17.03	17.08	18.05	16.42
Vermont	17.98	17.68	15.19	14.61	10.55	10.21	--	--	15.09	14.60
Middle Atlantic	16.00	15.99	12.42	12.57	6.93	6.90	11.19	11.27	12.65	12.63
New Jersey	15.47	15.65	12.21	12.28	10.11	10.12	9.03	8.81	13.28	13.32
New York	18.53	18.03	14.50	14.75	6.04	5.92	12.25	12.67	14.88	14.74
Pennsylvania	13.93	14.23	8.93	8.98	6.78	6.77	7.68	7.16	10.11	10.13
East North Central	13.16	13.36	10.11	10.16	7.01	7.08	6.99	6.65	10.13	10.12
Illinois	12.55	12.95	8.95	9.09	6.65	6.47	6.79	6.35	9.46	9.49
Indiana	12.02	12.29	10.36	10.54	7.16	7.54	10.44	11.23	9.60	9.77
Michigan	15.56	15.40	11.17	11.00	7.28	7.19	10.76	11.99	11.53	11.28
Ohio	12.35	12.63	9.93	10.05	6.70	6.92	7.34	7.50	9.78	9.84
Wisconsin	14.44	14.35	10.92	10.87	7.66	7.49	13.86	14.31	10.91	10.76
West North Central	12.00	12.13	9.73	9.81	7.35	7.17	9.07	9.01	9.85	9.77
Iowa	12.67	12.34	9.80	9.46	6.58	6.21	--	--	9.14	8.73
Kansas	13.13	13.31	10.43	10.59	7.46	7.54	--	--	10.57	10.60
Minnesota	13.38	13.04	10.45	10.48	7.77	7.37	9.58	9.56	10.59	10.27
Missouri	11.10	11.63	9.22	9.47	6.96	7.33	8.50	8.42	9.76	10.03
Nebraska	10.80	10.97	8.93	8.85	7.54	7.66	--	--	9.09	9.08
North Dakota	10.35	10.29	9.09	9.19	8.46	7.63	--	--	9.14	8.78
South Dakota	11.62	11.77	9.47	9.74	7.77	7.84	--	--	9.93	10.05
South Atlantic	11.75	11.86	9.36	9.39	6.48	6.50	7.88	7.84	9.95	9.96
Delaware	12.62	13.35	9.71	9.89	7.72	7.78	--	--	10.61	10.90
District of Columbia	12.84	12.94	11.97	11.66	8.29	8.23	9.48	8.90	12.03	11.80
Florida	11.61	11.61	9.35	9.35	7.76	7.83	7.95	8.62	10.43	10.42
Georgia	11.39	11.90	9.65	10.09	5.83	5.96	5.52	5.35	9.52	9.83
Maryland	13.33	13.96	10.43	10.75	8.23	8.37	7.46	7.74	11.58	11.98
North Carolina	11.27	10.94	8.69	8.44	6.23	6.20	8.02	8.55	9.36	9.04
South Carolina	12.40	13.02	10.19	10.57	6.17	6.19	--	--	9.72	9.97
Virginia	11.78	11.55	8.37	8.01	6.85	6.51	8.28	8.11	9.55	9.18
West Virginia	11.26	11.63	9.32	9.58	6.44	6.64	--	--	8.78	9.00
East South Central	11.13	11.30	10.46	10.60	5.86	5.93	--	--	9.31	9.29
Alabama	12.26	12.55	11.29	11.60	6.07	6.16	--	--	9.70	9.83
Kentucky	10.45	10.85	9.56	9.85	5.52	5.72	--	--	8.44	8.57
Mississippi	11.25	11.08	10.51	10.17	6.11	5.99	--	--	9.32	9.09
Tennessee	10.67	10.72	10.41	10.55	5.73	5.83	--	--	9.61	9.45
West South Central	10.84	10.74	8.15	8.34	5.44	5.45	8.16	8.28	8.37	8.26
Arkansas	9.78	10.28	7.67	8.51	5.45	6.07	11.36	12.26	7.69	8.26
Louisiana	9.32	9.74	8.73	8.95	5.29	5.48	9.21	9.93	7.65	7.79
Oklahoma	10.23	10.61	7.89	8.11	5.15	5.42	--	--	7.99	8.20
Texas	11.39	11.01	8.12	8.26	5.54	5.35	8.08	8.16	8.67	8.38
Mountain	12.00	11.89	9.66	9.61	6.41	6.55	9.53	9.88	9.54	9.51
Arizona	12.84	12.44	10.74	10.50	6.60	6.45	10.03	9.65	10.95	10.64
Colorado	12.14	12.17	10.11	9.89	7.25	7.50	9.00	9.77	9.99	9.99
Idaho	10.20	10.04	7.93	7.98	6.49	6.66	--	--	8.20	8.26
Montana	11.18	10.95	10.17	10.12	5.26	5.25	--	--	9.00	8.92
Nevada	11.86	11.99	7.85	7.96	6.08	6.15	8.31	8.61	8.71	8.76
New Mexico	12.75	12.88	10.16	10.19	5.72	6.15	--	--	9.43	9.59
Utah	10.54	10.95	8.36	8.64	5.89	6.13	10.59	10.26	8.30	8.60
Wyoming	11.36	11.37	9.63	9.70	6.71	6.92	--	--	8.11	8.28
Pacific Contiguous	15.55	15.08	14.25	13.76	9.87	9.36	9.20	8.71	13.76	13.28
California	18.90	18.31	16.46	15.76	13.35	12.73	9.19	8.68	16.70	16.06
Oregon	10.92	10.66	8.91	8.86	6.20	5.98	9.16	9.35	9.05	8.81
Washington	9.63	9.66	8.70	8.57	4.73	4.60	9.36	9.18	7.98	7.94
Pacific Noncontiguous	28.07	25.89	24.82	23.09	23.73	21.06	--	--	25.47	23.28
Alaska	22.06	21.27	19.01	18.89	17.28	16.34	--	--	19.64	19.10
Hawaii	32.48	29.50	30.00	26.77	26.11	22.92	--	--	29.22	26.05
U.S. Total	12.89	12.89	10.66	10.66	6.93	6.88	9.77	9.68	10.58	10.48

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 2017 are final. Values for 2018 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-861M (formerly EIA-826), Monthly Electric Power Industry Report.

**Table 5.7. Number of Ultimate Customers Served by Sector:  
2008 - December 2018**

Period	Residential	Commercial	Industrial	Transportation	All Sectors
<b>Annual Totals</b>					
2008	125,037,837	17,582,382	774,808	726	143,395,753
2009	125,208,829	17,562,235	757,537	704	143,529,305
2010	125,717,935	17,674,338	747,747	239	144,140,259
2011	126,143,072	17,638,062	727,920	92	144,509,146
2012	126,832,343	17,729,029	732,385	83	145,293,840
2013	127,777,153	17,679,562	831,790	75	146,288,580
2014	128,680,416	17,853,995	839,212	79	147,373,702
2015	129,811,718	17,985,690	835,536	78	148,633,022
2016	131,068,760	18,148,353	838,059	86	150,055,258
2017	132,579,747	18,359,427	840,329	86	151,779,589
<b>Year 2016</b>					
January	130,327,243	18,001,806	829,287	78	149,158,414
February	130,114,828	18,022,657	825,209	81	148,962,775
March	131,333,340	18,185,531	835,990	86	150,354,947
April	130,452,160	18,064,005	823,879	82	149,340,126
May	131,002,108	18,133,949	840,080	85	149,976,222
June	131,282,771	18,174,804	853,646	86	150,311,307
July	131,086,905	18,130,289	847,849	83	150,065,126
August	131,346,501	18,227,261	859,607	83	150,433,452
Sept	131,374,997	18,207,555	846,336	83	150,428,971
October	131,318,899	18,203,386	838,393	84	150,360,762
November	131,325,418	18,183,746	824,510	84	150,333,758
December	131,859,453	18,244,491	832,403	84	150,936,431
<b>Year 2017</b>					
January	131,977,307	18,289,356	828,464	84	151,095,211
February	131,437,253	18,199,541	817,642	84	150,454,520
March	132,851,616	18,384,031	836,953	84	152,072,684
April	131,902,166	18,225,046	821,828	86	150,949,126
May	132,559,481	18,375,746	847,817	86	151,783,130
June	132,866,506	18,402,963	856,760	85	152,126,314
July	132,345,053	18,354,033	851,042	85	151,550,213
August	133,013,535	18,437,269	867,301	85	152,318,190
Sept	132,461,398	18,354,295	845,776	85	151,661,554
October	133,126,174	18,435,264	846,549	85	152,408,072
November	133,093,866	18,430,836	830,580	85	152,355,367
December	133,321,574	18,423,574	833,004	85	152,578,237
<b>Year 2018</b>					
January	133,344,237	18,511,591	796,731	83	152,652,642
February	132,950,019	18,387,369	773,724	83	152,111,195
March	133,912,760	18,524,464	784,718	83	153,222,025
April	133,452,513	18,481,484	784,792	83	152,718,872
May	134,227,643	18,565,843	808,290	83	153,601,859
June	134,050,605	18,566,686	816,627	83	153,434,001
July	133,981,066	18,548,375	819,030	86	153,348,557
August	134,537,841	18,621,883	825,213	88	153,985,025
Sept	133,925,550	18,535,656	802,444	88	153,263,738
October	134,471,360	18,650,412	806,702	88	153,928,562
November	134,278,555	18,571,446	788,374	86	153,638,461
December	134,390,512	18,618,535	793,306	86	153,802,439
<b>Rolling 12 Months Ending in December</b>					
2017	132,579,661	18,359,330	840,310	85	151,779,385
2018	133,960,222	18,548,645	799,996	85	153,308,948

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 2017 and prior years are final. Values for 2018 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-861M (formerly EIA-826), Monthly Electric Industry Power Report; 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:  
December 2018 and 2017**

Census Division and State	Residential		Commercial		Industrial		Transportation		All Sectors	
	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017
New England	6,220,937	6,319,984	882,476	884,036	19,538	22,748	6	6	7,122,957	7,226,774
Connecticut	1,508,523	1,500,414	153,088	153,563	4,132	4,326	3	3	1,665,746	1,658,306
Maine	701,401	713,090	98,595	100,282	3,025	3,143	0	0	803,021	816,515
Massachusetts	2,635,187	2,749,877	406,377	408,413	7,333	10,233	2	2	3,048,899	3,168,525
New Hampshire	624,770	620,178	108,103	107,380	3,161	3,155	0	0	736,034	730,713
Rhode Island	435,532	422,524	59,294	57,674	1,750	1,705	1	1	496,577	481,904
Vermont	315,524	313,901	57,019	56,724	137	186	0	0	372,680	370,811
Middle Atlantic	16,217,996	16,089,247	2,348,824	2,324,789	29,692	41,246	20	20	18,596,532	18,455,302
New Jersey	3,585,092	3,547,192	523,044	523,914	11,856	11,759	6	6	4,119,998	4,082,871
New York	7,222,823	7,167,741	1,110,056	1,099,641	6,611	6,944	8	8	8,339,498	8,274,334
Pennsylvania	5,410,081	5,374,314	715,724	701,234	11,225	22,543	6	6	6,137,036	6,098,097
East North Central	20,321,359	20,136,945	2,509,203	2,490,941	46,649	53,913	9	9	22,877,220	22,681,808
Illinois	5,322,740	5,283,851	618,451	614,624	4,045	5,662	3	3	5,945,239	5,904,140
Indiana	2,875,035	2,850,320	353,899	353,262	15,141	17,868	1	1	3,244,076	3,221,451
Michigan	4,401,652	4,360,578	550,867	541,879	NM	6,129	2	2	4,958,050	4,908,588
Ohio	4,996,172	4,950,929	628,285	628,327	16,916	18,539	2	2	5,641,375	5,597,797
Wisconsin	2,725,760	2,691,267	357,701	352,849	NM	5,715	1	1	3,088,480	3,049,832
West North Central	9,570,359	9,469,352	1,467,749	1,446,743	113,057	123,912	3	3	11,151,168	11,040,010
Iowa	1,400,725	1,382,803	245,483	238,723	NM	7,757	0	0	1,653,053	1,629,283
Kansas	1,276,634	1,262,837	236,727	232,775	24,915	23,949	0	0	1,538,276	1,519,561
Minnesota	2,419,474	2,412,743	291,902	293,782	NM	8,997	1	1	2,719,599	2,715,523
Missouri	2,823,151	2,782,619	384,038	383,092	6,680	8,112	2	2	3,213,871	3,173,825
Nebraska	863,545	847,323	161,434	152,107	55,185	62,786	0	0	1,080,164	1,062,216
North Dakota	381,535	382,081	74,152	74,684	8,175	8,430	0	0	463,862	465,195
South Dakota	405,295	398,946	74,013	71,580	NM	3,881	0	0	482,343	474,407
South Atlantic	28,218,413	27,824,544	3,829,047	3,764,675	77,884	82,806	13	13	32,125,357	31,672,038
Delaware	432,101	428,368	54,722	54,248	585	849	0	0	487,408	483,465
District of Columbia	279,010	269,947	26,473	26,199	1	1	3	3	305,487	296,150
Florida	9,518,974	9,428,094	1,246,633	1,227,100	20,244	20,924	2	2	10,785,853	10,676,120
Georgia	4,415,807	4,319,333	587,881	575,490	19,255	22,807	1	1	5,022,944	4,917,631
Maryland	2,343,937	2,323,159	254,744	254,079	8,763	8,767	5	5	2,607,449	2,586,010
North Carolina	4,600,786	4,517,076	711,587	684,295	9,778	9,978	1	1	5,322,152	5,211,350
South Carolina	2,311,870	2,264,249	369,815	375,883	4,204	4,330	0	0	2,685,889	2,644,462
Virginia	3,456,289	3,414,160	432,164	422,788	3,726	3,679	1	1	3,892,180	3,840,628
West Virginia	859,639	860,158	145,028	144,593	11,328	11,471	0	0	1,015,995	1,016,222
East South Central	8,495,591	8,339,966	1,407,395	1,399,961	22,065	27,334	0	0	9,925,051	9,767,261
Alabama	2,266,004	2,217,194	371,790	371,000	8,189	8,046	0	0	2,645,983	2,596,240
Kentucky	2,008,592	1,979,484	305,218	305,995	5,441	6,930	0	0	2,319,251	2,292,409
Mississippi	1,320,205	1,286,026	240,282	236,230	7,597	11,193	0	0	1,568,084	1,533,449
Tennessee	2,900,790	2,857,262	490,105	486,736	838	1,165	0	0	3,391,733	3,345,163
West South Central	16,223,420	16,050,804	2,315,558	2,272,965	194,168	186,992	6	6	18,733,152	18,510,767
Arkansas	1,399,676	1,383,858	193,544	192,578	34,671	35,158	2	2	1,627,893	1,611,596
Louisiana	2,103,146	2,076,202	293,298	291,153	18,154	19,388	1	1	2,414,599	2,386,744
Oklahoma	1,794,873	1,758,305	287,440	282,193	17,844	18,668	0	0	2,100,157	2,059,166
Texas	10,925,725	10,832,439	1,541,276	1,507,041	123,499	113,778	3	3	12,590,503	12,453,261
Mountain	9,897,384	9,850,967	1,402,652	1,403,934	86,348	93,352	5	5	11,386,389	11,348,258
Arizona	2,828,280	2,795,979	325,024	321,777	6,177	7,894	2	2	3,159,483	3,125,652
Colorado	2,343,270	2,305,731	364,998	371,168	14,123	15,759	1	1	2,722,392	2,692,659
Idaho	750,436	735,240	111,124	109,753	28,451	28,117	0	0	890,011	873,110
Montana	515,228	506,712	111,024	107,976	NM	8,599	0	0	632,819	623,287
Nevada	1,192,432	1,275,899	165,545	164,098	NM	3,258	1	1	1,361,164	1,443,256
New Mexico	906,938	884,656	140,269	143,429	8,460	9,205	0	0	1,055,667	1,037,290
Utah	1,085,526	1,074,894	125,908	127,982	9,556	9,567	1	1	1,220,991	1,212,444
Wyoming	275,274	271,856	58,760	57,751	9,828	10,953	0	0	343,862	340,560
Pacific Contiguous	18,499,044	18,518,058	2,341,855	2,321,826	201,682	198,539	24	23	21,042,605	21,038,446
California	13,670,760	13,731,258	1,704,337	1,704,764	146,971	147,607	16	15	15,522,084	15,583,644
Oregon	1,766,959	1,734,913	243,855	235,074	26,471	23,198	2	2	2,037,287	1,993,187
Washington	3,061,325	3,051,887	393,663	381,988	28,240	27,734	6	6	3,483,234	3,461,615
Pacific Noncontiguous	726,009	721,707	113,776	113,704	NM	NM	0	0	842,008	837,573
Alaska	289,464	286,400	54,088	53,570	NM	NM	0	0	344,957	341,354
Hawaii	436,545	435,307	59,688	60,134	818	778	0	0	497,051	496,219
U.S. Total	134,390,512	133,321,574	18,618,535	18,423,574	793,306	833,004	86	85	153,802,439	152,578,237

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 2017 are final. Values for 2018 are preliminary estimates based on a cutoff model sample.

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

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-861M (formerly EIA-826), Monthly Electric Power Industry Report.

# Chapter 6

## Capacity

Table 6.1. Electric Generating Summer Capacity Changes (MW), November 2018 to December 2018

Technology	Capacity Source	Activity During December 2018 as Reported to EIA			Net Change in Capacity - Current Month and Prior Periods			Changes in and Total Net Summer Capacity -- Outlook Based on Reports to EIA								
		As of End of November 2018	Activity During December 2018 as Reported to EIA		As of End of December 2018	Net Change in Capacity - Current Month and Prior Periods			Planned Capacity Additions		Planned Capacity Reductions		Planned Net Change		Planned Total Net Summer	
		Total In-Service Capacity	Actual Capacity Additions	Actual Capacity Reductions	Total In-Service Capacity	Current Month	Year to Date	Past 12 Months	Next Month	Next 12 Months	Next Month	Next 12 Months	Next Month	Next 12 Months	At End of Next Month	At End of Next 12 Months
..... Onshore Wind (Summer Capacity)	Utility Scale Facilities	90,431.9	3,834.1	0.0	94,266.0	3,834.1	6,697.8	6,697.8	1,683.6	11,316.7	0.0	0.0	1,683.6	11,316.7	95,949.6	105,582.7
..... Offshore Wind (Summer Capacity)	Utility Scale Facilities	29.3	0.0	0.0	29.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	29.3	29.3
..... Wind (Summer Capacity)	Utility Scale Facilities	90,461.2	3,834.1	0.0	94,295.3	3,834.1	6,697.8	6,697.8	1,683.6	11,316.7	0.0	0.0	1,683.6	11,316.7	95,978.9	105,612.0
..... Solar Photovoltaic	Utility Scale Facilities	28,630.8	1,539.7	0.0	30,170.5	1,539.7	4,961.5	4,961.5	751.8	4,892.8	0.0	1.2	751.8	4,891.6	30,922.3	35,062.7
..... Solar Thermal without Energy Storage	Utility Scale Facilities	1,352.5	0.0	0.0	1,352.5	0.0	0.0	0.0	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	30,388.7	1,539.7	0.0	31,928.4	1,539.7	4,961.5	4,961.5	751.8	4,892.8	0.0	1.2	751.8	4,891.6	32,680.2	36,820.0
..... Conventional Hydroelectric	Utility Scale Facilities	79,896.7	1.2	4.8	79,893.1	-3.6	98.6	98.6	14.8	124.2	0.0	109.9	14.8	14.3	79,907.9	79,907.4
..... Wood/Wood Waste Biomass	Utility Scale Facilities	8,754.7	0.0	0.0	8,754.7	0.0	-76.2	-76.2	8.5	167.0	0.0	24.8	8.5	142.2	8,763.2	8,896.9
..... Landfill Gas	Utility Scale Facilities	2,067.4	0.0	0.0	2,067.4	0.0	-32.0	-32.0	1.0	6.2	0.0	11.7	1.0	-5.5	2,068.4	2,061.9
..... Municipal Solid Waste	Utility Scale Facilities	2,235.0	0.0	0.0	2,235.0	0.0	-10.0	-10.0	0.0	0.0	0.0	0.0	0.0	0.0	2,235.0	2,235.0
..... Other Waste Biomass	Utility Scale Facilities	773.5	0.0	0.4	773.1	-0.4	-12.0	-12.0	0.0	48.0	0.0	0.0	0.0	48.0	773.1	821.1
..... Biomass Sources Subtotal	Utility Scale Facilities	13,830.6	0.0	0.4	13,830.2	-0.4	-130.2	-130.2	9.5	221.2	0.0	36.5	9.5	184.7	13,839.7	14,014.9
..... Geothermal	Utility Scale Facilities	2,499.3	44.0	2.5	2,540.8	41.5	57.5	57.5	7.9	7.9	0.0	7.9	7.9	7.9	2,548.7	2,548.7
... Renewable Sources Subtotal	Utility Scale Facilities	217,076.5	5,419.0	7.7	222,487.8	5,411.3	11,685.2	11,685.2	2,467.6	16,562.8	0.0	147.6	2,467.6	16,415.2	224,955.4	238,903.0
..... Natural Gas Fired Combined Cycle	Utility Scale Facilities	260,796.1	2,999.0	34.5	263,760.6	2,964.5	17,088.6	17,088.6	0.0	5,919.0	121.0	171.0	-121.0	5,748.0	263,639.6	269,508.6
..... Natural Gas Fired Combustion Turbine	Utility Scale Facilities	127,306.8	527.5	14.0	127,820.3	513.5	1,559.5	1,559.5	204.7	1,555.3	0.0	129.9	204.7	1,425.4	128,025.0	129,245.7
..... Natural Gas Steam Turbine	Utility Scale Facilities	75,583.2	0.0	844.0	74,739.2	-844.0	-3,808.5	-3,808.5	0.0	1.0	3.8	1,760.7	-3.8	-1,759.7	74,735.4	72,979.5
..... Natural Gas Internal Combustion Engine	Utility Scale Facilities	4,632.2	2.0	0.0	4,634.2	2.0	335.2	335.2	75.0	328.3	0.0	4.3	75.0	324.0	4,709.2	4,958.2
..... 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	122.0	0.0	0.0	122.0	0.0	-0.1	-0.1	3.7	44.4	0.0	0.0	3.7	44.4	125.7	166.4
..... Natural Gas Subtotal	Utility Scale Facilities	468,550.3	3,528.5	892.5	471,186.3	2,636.0	15,174.7	15,174.7	283.4	7,848.0	124.8	2,065.9	158.6	5,782.1	471,344.9	476,968.4
..... Conventional Steam Coal	Utility Scale Facilities	244,358.7	0.0	1,640.9	242,717.8	-1,640.9	-13,073.5	-13,073.5	0.0	17.0	15.2	4,031.8	-15.2	-4,014.8	242,702.6	238,703.0
..... Coal Integrated Gasification Combined Cycle	Utility Scale Facilities	756.0	0.0	0.0	756.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	756.0	756.0
..... Coal Subtotal	Utility Scale Facilities	245,114.7	0.0	1,640.9	243,473.8	-1,640.9	-13,073.5	-13,073.5	0.0	17.0	15.2	4,031.8	-15.2	-4,014.8	243,458.6	239,459.0
..... Petroleum Coke	Utility Scale Facilities	1,527.9	0.0	0.0	1,527.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1,527.9	1,527.9
..... Petroleum Liquids	Utility Scale Facilities	31,526.3	0.0	0.0	31,526.3	0.0	-252.5	-252.5	4.8	27.3	2.4	14.1	2.4	13.2	31,528.7	31,539.5
..... Other Gases	Utility Scale Facilities	2,375.8	0.0	0.0	2,375.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2,375.8	2,375.8
... Fossil Fuels Subtotal	Utility Scale Facilities	749,095.0	3,528.5	2,533.4	750,090.1	995.1	1,848.7	1,848.7	288.2	7,892.3	142.4	6,111.8	145.8	1,780.5	750,235.9	751,870.6
..... Hydroelectric Pumped Storage	Utility Scale Facilities	22,855.4	0.0	0.0	22,855.4	0.0	45.0	45.0	0.0	93.6	0.0	0.0	0.0	93.6	22,855.4	22,949.0
..... Flywheels	Utility Scale Facilities	47.0	0.0	0.0	47.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	47.0	47.0	
..... Batteries	Utility Scale Facilities	793.7	48.3	0.0	842.0	48.3	177.1	177.1	13.9	107.3	0.0	13.9	107.3	855.9	949.3	
... Energy Storage Subtotal	Utility Scale Facilities	23,696.1	48.3	0.0	23,744.4	48.3	222.1	222.1	13.9	200.9	0.0	0.0	13.9	200.9	23,758.3	23,945.3
... Nuclear	Utility Scale Facilities	99,354.9	0.0	0.0	99,354.9	0.0	-274.0	-274.0	0.0	155.0	0.0	1,481.8	0.0	-1,326.8	99,354.9	98,028.1
... All Other	Utility Scale Facilities	2,181.3	0.0	0.0	2,181.3	0.0	6.9	6.9	0.0	47.9	0.0	0.0	0.0	47.9	2,181.3	2,229.2
<b>TOTAL</b>	<b>UTILITY SCALE FACILITIES</b>	<b>1,091,403.8</b>	<b>8,995.8</b>	<b>2,541.1</b>	<b>1,097,858.5</b>	<b>6,454.7</b>	<b>13,488.9</b>	<b>13,488.9</b>	<b>2,769.7</b>	<b>24,858.9</b>	<b>142.4</b>	<b>7,741.2</b>	<b>2,627.3</b>	<b>17,117.7</b>	<b>1,100,485.8</b>	<b>1,114,976.2</b>
..... Estimated Small Scale Solar Photovoltaic	Small Scale Facilities	19,278.1			19,521.5	243.3	3,373.7	3,373.7								
..... Estimated Total Solar Photovoltaic	All Facilities	47,908.9			49,692.0	1,783.0	8,335.2	8,335.2								
... Estimated Total Solar	All Facilities	49,666.8			51,449.9	1,783.0	8,335.2	8,335.2								

NOTES:  
 Planned Capacity Additions reflect plans to begin operating new units and plans to uprate existing units.  
 Planned Capacity Reductions reflect plans to retire or derate existing units.  
 Actual Capacity Additions reflect new units, uprates to existing units, corrections to previously reported capacities, and additions not previously reported.  
 Actual Capacity Reductions reflect retirements of and derates to existing units, corrections to previously reported capacities, and reductions not previously reported.  
 Capacity from facilities with a total generator nameplate capacity less than 1 MW are excluded from this table.

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 small scale solar photovoltaic capacity is based on data from Form EIA-861M, Form EIA-861 and from estimation methods described in the technical notes.

**Table 6.1.A. Estimated Net Summer Solar Photovoltaic Capacity From Utility and Small Scale Facilities (Megawatts)  
2008 - December 2018**

Period	Utility Solar Photovoltaic	Estimated Small Scale Solar Photovoltaic	Estimated Total Solar Photovoltaic
<b>Annual Totals</b>			
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
2016	20,192.9	12,765.1	32,958.0
2017	25,209.0	16,147.8	41,356.8
<b>Year 2016</b>			
January	12,470.5	9,865.6	22,336.1
February	12,615.2	10,123.1	22,738.3
March	12,822.0	10,440.2	23,262.2
April	13,298.0	10,687.8	23,985.8
May	13,419.8	10,927.9	24,347.7
June	13,635.3	11,185.2	24,820.5
July	14,360.4	11,385.3	25,745.7
August	15,297.1	11,670.6	26,967.7
Sept	16,064.3	11,913.3	27,977.6
October	16,477.2	12,156.4	28,633.6
November	17,192.0	12,446.4	29,638.4
December	20,192.9	12,765.1	32,958.0
<b>Year 2017</b>			
January	20,603.7	12,970.1	33,573.8
February	20,792.6	13,272.0	34,064.6
March	21,177.9	13,558.9	34,736.8
April	21,700.6	13,815.1	35,515.7
May	22,006.1	14,115.3	36,121.4
June	22,242.6	14,401.8	36,644.4
July	22,356.4	14,670.8	37,027.2
August	22,547.7	15,018.7	37,566.4
Sept	22,762.8	15,216.3	37,979.1
October	23,095.3	15,456.6	38,551.9
November	23,660.0	15,719.9	39,379.9
December	25,209.0	16,147.8	41,356.8
<b>Year 2018</b>			
January	25,983.4	16,496.2	42,479.6
February	26,073.2	16,757.7	42,830.9
March	26,576.0	17,048.0	43,624.0
April	26,854.0	17,306.3	44,160.3
May	27,275.1	17,600.7	44,875.8
June	27,432.9	17,887.4	45,320.3
July	27,556.8	18,145.8	45,702.6
August	27,635.9	18,426.4	46,062.3
Sept	27,951.5	18,712.4	46,663.9
October	28,103.5	19,000.5	47,104.0
November	28,630.8	19,278.1	47,908.9
December	30,170.5	19,521.5	49,692.0

Values for 2017 are final. Values for 2018 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 small scale solar photovoltaic capacity is based on data from Form EIA-861M, Form EIA-861, and from estimation methods described in the technical notes.



**Table 6.1.B. Estimated Net Summer Solar Photovoltaic Capacity From Small Scale Facilities by Sector (Megawatts): 2014 - December 2018**

Period	Residential	Commercial	Industrial	Total
<b>Annual Totals</b>				
2014	3,346.3	3,279.7	700.6	7,326.6
2015	5,191.5	3,706.7	880.3	9,778.5
2016	7,527.0	4,022.8	1,215.3	12,765.1
2017	9,626.8	5,155.8	1,365.1	16,147.8
<b>Year 2016</b>				
January	5,428.5	3,419.8	1,017.3	9,865.6
February	5,627.1	3,458.3	1,037.7	10,123.1
March	5,852.7	3,521.8	1,065.8	10,440.2
April	6,051.1	3,552.6	1,084.1	10,687.8
May	6,238.7	3,589.1	1,100.0	10,927.9
June	6,432.3	3,640.4	1,112.5	11,185.2
July	6,592.9	3,660.7	1,131.7	11,385.3
August	6,785.8	3,734.2	1,150.5	11,670.6
Sept	6,957.7	3,794.2	1,161.5	11,913.3
October	7,147.1	3,837.6	1,171.8	12,156.4
November	7,332.8	3,930.7	1,182.9	12,446.4
December	7,527.0	4,022.8	1,215.3	12,765.1
<b>Year 2017</b>				
January	7,754.9	4,071.5	1,143.7	12,970.1
February	7,946.3	4,110.9	1,214.8	13,272.0
March	8,115.3	4,203.6	1,240.0	13,558.9
April	8,269.3	4,293.6	1,252.2	13,815.1
May	8,453.2	4,381.8	1,280.4	14,115.3
June	8,618.2	4,481.8	1,301.9	14,401.8
July	8,778.3	4,565.3	1,327.2	14,670.8
August	8,961.3	4,711.5	1,346.0	15,018.7
Sept	9,113.0	4,738.4	1,364.9	15,216.3
October	9,265.2	4,826.7	1,364.7	15,456.6
November	9,429.8	4,924.9	1,365.1	15,719.9
December	9,626.8	5,155.8	1,365.1	16,147.8
<b>Year 2018</b>				
January	9,818.4	5,312.1	1,365.7	16,496.2
February	9,985.1	5,398.4	1,374.2	16,757.7
March	10,155.4	5,501.2	1,391.4	17,048.0
April	10,313.9	5,580.1	1,412.2	17,306.3
May	10,492.1	5,676.2	1,432.4	17,600.7
June	10,660.0	5,778.0	1,449.5	17,887.4
July	10,828.8	5,858.8	1,458.2	18,145.8
August	11,011.0	5,945.3	1,470.2	18,426.4
Sept	11,178.8	6,026.4	1,507.2	18,712.4
October	11,373.1	6,105.2	1,522.1	19,000.5
November	11,552.4	6,176.0	1,549.7	19,278.1
December	11,664.4	6,285.8	1,571.3	19,521.5

Values for 2017 are final. Values for 2018 are preliminary.

Improved renewable data reporting has resulted in realignment of the commercial and industrial sectors.

Estimated small scale solar photovoltaic capacity is based on data from Form EIA-861M, 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, December 2018 and 2017 (Megawatts)

Census Division and State	Renewable Sources		Fossil Fuels		Hydroelectric Pumped Storage		Other Energy Storage		Nuclear		All Other Sources		All Sources	
	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017
New England	5,814.9	5,668.3	22,803.1	21,234.7	1,797.4	1,797.4	31.8	24.7	4,018.2	4,014.1	320.9	320.9	34,786.3	33,060.1
Connecticut	410.3	361.2	6,999.8	6,125.4	29.4	29.4	1.6	1.6	2,087.8	2,087.8	298.9	298.9	9,827.8	8,904.3
Maine	2,345.6	2,345.6	2,540.5	2,536.5	0.0	0.0	16.2	16.2	0.0	0.0	22.0	22.0	4,924.3	4,920.3
Massachusetts	1,356.4	1,289.4	9,070.9	8,380.9	1,768.0	1,768.0	11.0	4.9	679.0	677.2	0.0	0.0	12,885.3	12,120.4
New Hampshire	928.9	928.9	2,262.9	2,262.9	0.0	0.0	0.0	0.0	1,251.4	1,249.1	0.0	0.0	4,443.2	4,440.9
Rhode Island	119.3	113.3	1,831.1	1,831.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1,950.4	1,944.4
Vermont	654.4	629.9	97.9	97.9	0.0	0.0	3.0	2.0	0.0	0.0	0.0	0.0	755.3	729.8
Middle Atlantic	11,138.6	10,856.0	73,077.1	68,017.0	3,409.8	3,409.8	93.7	72.4	18,702.5	19,295.6	420.9	420.9	106,842.6	102,071.7
New Jersey	967.5	911.9	12,415.4	12,370.9	420.0	420.0	22.3	1.0	3,500.2	4,107.9	11.2	11.2	17,336.6	17,822.9
New York	7,314.8	7,067.5	26,697.4	26,026.8	1,406.8	1,406.8	21.0	21.0	5,405.3	5,390.7	221.7	221.7	41,067.0	40,134.5
Pennsylvania	2,856.3	2,876.6	33,964.3	29,619.3	1,583.0	1,583.0	50.4	50.4	9,797.0	9,797.0	188.0	188.0	48,439.0	44,114.3
East North Central	12,476.0	11,631.1	112,551.1	114,316.8	2,179.0	2,134.0	168.7	167.4	19,029.4	19,024.4	188.1	188.1	146,592.3	147,461.8
Illinois	4,761.9	4,447.9	29,051.9	28,931.1	0.0	0.0	112.7	112.4	11,577.4	11,577.4	78.0	78.0	45,581.9	45,146.8
Indiana	2,662.7	2,442.8	23,890.4	23,159.4	0.0	0.0	22.0	22.0	0.0	0.0	89.0	89.0	26,664.1	25,713.2
Michigan	2,659.0	2,590.8	20,774.1	20,790.1	2,179.0	2,134.0	1.0	0.0	4,122.2	4,119.8	0.0	0.0	29,735.3	29,634.7
Ohio	1,151.3	923.1	25,999.6	26,910.3	0.0	0.0	33.0	33.0	2,134.0	2,134.0	0.0	0.0	29,317.9	30,000.4
Wisconsin	1,241.1	1,226.5	12,835.1	14,525.9	0.0	0.0	0.0	0.0	1,195.8	1,193.2	21.1	21.1	15,293.1	16,966.7
West North Central	28,694.5	26,508.1	59,101.7	60,565.5	657.0	657.0	4.0	3.2	5,443.4	5,443.4	24.5	24.5	93,925.1	93,201.7
Iowa	8,437.2	7,147.7	9,801.5	9,921.7	0.0	0.0	0.0	0.0	601.4	601.4	0.0	0.0	18,840.1	17,670.8
Kansas	5,356.2	5,136.2	8,999.0	9,775.8	0.0	0.0	0.0	0.0	1,225.0	1,225.0	0.8	0.8	15,581.0	16,137.8
Minnesota	5,135.6	4,902.1	10,171.6	10,000.7	0.0	0.0	1.0	1.0	1,657.0	1,657.0	18.4	18.4	16,983.6	16,579.2
Missouri	1,581.4	1,567.9	17,647.0	18,391.5	657.0	657.0	2.2	2.2	1,190.0	1,190.0	0.0	0.0	21,077.6	21,808.6
Nebraska	1,966.5	1,724.6	6,157.7	6,148.4	0.0	0.0	0.0	0.0	770.0	770.0	0.0	0.0	8,894.2	8,643.0
North Dakota	3,740.8	3,592.8	4,633.6	4,635.6	0.0	0.0	0.0	0.0	0.0	0.0	5.3	5.3	8,379.7	8,233.7
South Dakota	2,476.8	2,436.8	1,691.3	1,691.8	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	4,168.9	4,128.6
South Atlantic	20,137.9	18,369.8	163,411.9	159,357.6	7,905.2	7,905.2	98.5	80.5	24,602.6	24,602.6	452.7	446.7	216,608.8	210,762.4
Delaware	48.3	46.1	3,331.4	3,331.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3,379.7	3,377.5
District of Columbia	23.0	23.0	9.0	9.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	32.0	32.0
Florida	2,809.6	1,865.2	52,596.6	53,176.0	0.0	0.0	14.0	0.0	3,572.0	3,572.0	348.7	348.7	59,340.9	58,961.9
Georgia	3,964.5	3,927.5	26,964.0	26,973.7	1,862.2	1,862.2	1.0	1.0	4,061.0	4,061.0	44.0	44.0	36,896.7	36,869.4
Maryland	1,166.9	1,090.1	11,837.3	10,278.7	0.0	0.0	13.0	13.0	1,707.8	1,707.8	6.0	0.0	14,731.0	13,089.6
North Carolina	6,759.1	6,133.3	22,130.3	21,644.3	86.0	86.0	1.0	1.0	5,117.6	5,117.6	54.0	54.0	34,148.0	33,036.2
South Carolina	2,206.5	2,152.4	12,134.7	11,435.2	2,716.0	2,716.0	4.0	0.0	6,576.2	6,576.2	0.0	0.0	23,637.4	22,879.8
Virginia	2,132.9	2,105.1	20,627.3	18,746.0	3,241.0	3,241.0	0.0	0.0	3,568.0	3,568.0	0.0	0.0	29,569.2	27,660.1
West Virginia	1,027.1	1,027.1	13,781.3	13,763.3	0.0	0.0	65.5	65.5	0.0	0.0	0.0	0.0	14,873.9	14,855.9
East South Central	8,849.7	8,769.9	64,821.3	65,250.8	1,616.3	1,616.3	1.0	1.0	11,294.1	10,984.1	1.4	1.4	86,583.8	86,623.5
Alabama	4,170.7	4,156.0	20,482.4	20,507.4	0.0	0.0	1.0	1.0	5,370.4	5,060.4	0.0	0.0	30,024.5	29,724.8
Kentucky	1,245.4	1,245.4	18,874.3	18,874.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20,119.7	20,119.7
Mississippi	435.3	435.3	13,274.3	13,989.9	0.0	0.0	0.0	0.0	1,401.0	1,401.0	1.4	1.4	15,112.0	15,827.6
Tennessee	2,998.3	2,933.2	12,190.3	11,879.2	1,616.3	1,616.3	0.0	0.0	4,522.7	4,522.7	0.0	0.0	21,327.6	20,951.4
West South Central	38,636.1	35,070.8	140,178.1	143,692.2	286.0	286.0	99.8	78.5	8,910.7	8,910.7	512.7	512.7	188,623.4	188,550.9
Arkansas	1,695.2	1,613.3	11,193.0	11,183.0	28.0	28.0	0.0	0.0	1,817.8	1,817.8	0.0	0.0	14,734.0	14,642.1
Louisiana	683.2	683.2	20,596.7	20,600.7	0.0	0.0	0.5	0.5	2,132.9	2,132.9	288.7	288.7	23,702.0	23,706.0
Oklahoma	9,041.0	7,856.0	18,577.0	18,577.0	258.0	258.0	0.0	0.0	0.0	0.0	0.0	0.0	27,876.0	26,691.0
Texas	27,216.7	24,918.3	89,811.4	93,331.5	0.0	0.0	99.3	78.0	4,960.0	4,960.0	224.0	224.0	122,311.4	123,511.8
Mountain	27,242.3	26,098.8	62,320.4	62,321.3	778.8	778.8	40.6	23.6	3,937.0	3,937.0	127.2	126.3	94,446.3	93,285.8
Arizona	5,090.8	5,014.4	19,407.3	19,407.3	216.3	216.3	32.0	20.0	3,937.0	3,937.0	0.0	0.0	28,683.4	28,595.0
Colorado	5,005.1	4,283.1	11,119.2	11,161.2	562.5	562.5	5.0	1.0	0.0	0.0	9.3	9.3	16,701.1	16,017.1
Idaho	4,011.9	4,011.9	1,127.6	1,127.6	0.0	0.0	0.0	0.0	0.0	0.0	14.8	14.8	5,154.3	5,154.3
Montana	3,552.8	3,446.3	2,741.9	2,740.4	0.0	0.0	0.0	0.0	0.0	0.0	44.0	44.0	6,338.7	6,230.7
Nevada	3,630.1	3,572.5	7,821.6	7,791.6	0.0	0.0	0.0	0.0	0.0	0.0	6.5	6.5	11,458.2	11,370.6
New Mexico	2,464.7	2,375.7	5,964.4	5,966.8	0.0	0.0	3.6	2.6	0.0	0.0	0.0	0.0	8,432.7	8,345.1
Utah	1,600.5	1,600.5	7,360.2	7,348.2	0.0	0.0	0.0	0.0	0.0	0.0	40.2	40.2	9,000.9	8,988.9
Wyoming	1,886.4	1,794.4	6,778.2	6,778.2	0.0	0.0	0.0	0.0	0.0	0.0	12.4	11.5	8,677.0	8,584.1
Pacific Contiguous	68,293.3	66,701.5	47,603.9	49,262.9	4,225.9	4,225.9	243.7	171.9	3,417.0	3,417.0	106.3	106.3	123,890.1	123,885.5
California	31,163.2	29,810.9	38,526.0	40,185.0	3,911.9	3,911.9	231.3	159.5	2,240.0	2,240.0	106.3	106.3	76,178.7	76,413.6
Oregon	12,286.9	12,191.8	4,318.1	4,318.1	0.0	0.0	5.0	5.0	0.0	0.0	0.0	0.0	16,610.0	16,514.9
Washington	24,843.2	24,698.8	4,759.8	4,759.8	314.0	314.0	7.4	7.4	1,177.0	1,177.0	0.0	0.0	31,101.4	30,957.0
Pacific Noncontiguous	1,204.5	1,128.3	4,221.5	4,222.6	0.0	0.0	107.2	88.7	0.0	0.0	26.6	26.6	5,559.8	5,466.2
Alaska	538.2	538.2	2,163.2	2,164.3	0.0	0.0	46.2	46.2	0.0	0.0	0.0	0.0	2,747.6	2,748.7
Hawaii	666.3	590.1	2,058.3	2,058.3	0.0	0.0	61.0	42.5	0.0	0.0	26.6	26.6	2,812.2	2,717.5
U.S. Total	222,487.8	210,802.6	750,090.1	748,241.4	22,855.4	22,810.4	889.0	711.9	99,354.9	99,628.9	2,181.3	2,174.4	1,097,858.5	1,084,369.6

NM = Not meaningful due to large relative standard error.  
Values for 2017 are final. Values for 2018 are preliminary.

## NOTES:

Capacity from facilities with a total generator nameplate capacity less than 1 MW are excluded from this report. This exclusion may represent a significant portion of capacity for some technologies such as solar photovoltaic generation. Concentrated Solar Power Energy Storage is included in 'Renewable sources'; it is not included in 'Other Energy Storage'

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.'

Table 6.2.B. Net Summer Capacity Using Primarily Renewable Energy Sources and by State, December 2018 and 2017 (Megawatts)

Census Division and State	Summer Capacity at Utility Scale Facilities														Small Scale Capacity		Capacity From Utility and Small Scale Facilities			
	Wind		Solar Photovoltaic		Solar Thermal		Conventional Hydroelectric		Biomass Sources		Geothermal		Total Renewable Sources		Estimated Solar Photovoltaic		Estimated Total Solar Photovoltaic		Estimated Total Solar	
	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017
New England	1,402.1	1,400.6	921.9	776.8	0.0	0.0	1,960.7	1,960.7	1,530.2	1,530.2	0.0	0.0	5,814.9	5,668.3	2,194.8	1,792.0	3,116.7	2,568.8	3,116.7	2,568.8
Connecticut	1.0	1.0	83.6	34.5	0.0	0.0	122.2	122.2	203.5	203.5	0.0	0.0	410.3	361.2	416.9	332.6	500.5	367.1	500.5	367.1
Maine	921.6	921.6	5.6	5.6	0.0	0.0	732.4	732.4	686.0	686.0	0.0	0.0	2,345.6	2,345.6	43.6	32.0	49.2	37.6	49.2	37.6
Massachusetts	94.4	92.9	709.3	643.8	0.0	0.0	267.4	267.4	285.3	285.3	0.0	0.0	1,356.4	1,289.4	1,446.8	1,215.4	2,156.1	1,859.2	2,156.1	1,859.2
New Hampshire	183.1	183.1	0.0	0.0	0.0	0.0	504.8	504.8	241.0	241.0	0.0	0.0	928.9	928.9	83.7	70.3	83.7	70.3	83.7	70.3
Rhode Island	51.8	51.8	24.7	18.7	0.0	0.0	2.7	2.7	40.1	40.1	0.0	0.0	119.3	113.3	101.6	51.4	126.3	70.1	126.3	70.1
Vermont	150.2	150.2	98.7	74.2	0.0	0.0	331.2	331.2	74.3	74.3	0.0	0.0	654.4	629.9	102.3	90.3	201.0	164.5	201.0	164.5
Middle Atlantic	3,363.9	3,205.6	1,025.5	879.4	0.0	0.0	5,469.2	5,466.2	1,280.0	1,304.8	0.0	0.0	11,138.6	10,856.0	3,046.6	2,529.8	4,072.1	3,409.2	4,072.1	3,409.2
New Jersey	7.6	7.6	720.3	664.7	0.0	0.0	12.3	12.3	227.3	227.3	0.0	0.0	967.5	911.9	1,474.7	1,271.0	2,195.0	1,935.7	2,195.0	1,935.7
New York	1,984.5	1,826.2	248.9	162.9	0.0	0.0	4,557.3	4,554.3	524.1	524.1	0.0	0.0	7,314.8	7,067.5	1,249.9	983.5	1,498.8	1,146.4	1,498.8	1,146.4
Pennsylvania	1,371.8	1,371.8	56.3	51.8	0.0	0.0	899.6	899.6	528.6	553.4	0.0	0.0	2,856.3	2,876.6	322.0	275.3	378.3	327.1	378.3	327.1
East North Central	9,896.1	9,096.7	454.0	392.3	0.0	0.0	857.3	857.3	1,268.6	1,284.8	0.0	0.0	12,476.0	11,631.1	389.8	293.7	843.8	686.0	843.8	686.0
Illinois	4,592.9	4,261.8	34.9	34.8	0.0	0.0	34.1	34.1	100.0	117.2	0.0	0.0	4,761.9	4,447.9	78.7	49.9	113.6	84.7	113.6	84.7
Indiana	2,309.8	2,109.4	216.2	196.7	0.0	0.0	60.4	60.4	76.3	76.3	0.0	0.0	2,662.7	2,442.8	73.9	45.6	290.1	242.3	290.1	242.3
Michigan	1,735.8	1,691.8	97.2	73.0	0.0	0.0	266.9	266.9	559.1	559.1	0.0	0.0	2,659.0	2,590.8	61.4	52.8	158.6	125.8	158.6	125.8
Ohio	818.4	604.4	83.6	69.4	0.0	0.0	101.9	101.9	147.4	147.4	0.0	0.0	1,151.3	923.1	118.7	100.6	202.3	170.0	202.3	170.0
Wisconsin	439.2	429.3	22.1	18.4	0.0	0.0	394.0	394.0	385.8	384.8	0.0	0.0	1,241.1	1,226.5	57.2	44.8	79.3	63.2	79.3	63.2
West North Central	24,061.1	22,078.6	839.3	580.4	0.0	0.0	3,291.7	3,291.7	502.4	557.4	0.0	0.0	28,694.5	26,508.1	340.3	262.2	1,179.6	842.6	1,179.6	842.6
Iowa	8,260.2	6,972.2	9.2	7.7	0.0	0.0	146.4	146.4	21.4	21.4	0.0	0.0	8,437.2	7,147.7	93.1	70.0	102.3	77.7	102.3	77.7
Kansas	5,336.0	5,116.0	4.2	4.2	0.0	0.0	7.0	7.0	9.0	9.0	0.0	0.0	5,356.2	5,136.2	18.7	11.2	22.9	15.4	22.9	15.4
Minnesota	3,752.5	3,707.9	747.2	503.3	0.0	0.0	205.9	205.9	430.0	485.0	0.0	0.0	5,135.6	4,902.1	69.2	45.7	816.4	549.0	816.4	549.0
Missouri	954.3	954.3	62.1	48.6	0.0	0.0	548.5	548.5	16.5	16.5	0.0	0.0	1,581.4	1,567.9	150.8	130.4	212.9	179.0	212.9	179.0
Nebraska	1,659.3	1,417.4	15.6	15.6	0.0	0.0	275.9	275.9	15.7	15.7	0.0	0.0	1,966.5	1,724.6	7.5	4.2	23.1	19.8	23.1	19.8
North Dakota	3,221.0	3,073.0	0.0	0.0	0.0	0.0	510.0	510.0	9.8	9.8	0.0	0.0	3,740.8	3,592.8	0.3	0.2	0.3	0.2	0.3	0.2
South Dakota	877.8	837.8	1.0	1.0	0.0	0.0	1,598.0	1,598.0	0.0	0.0	0.0	0.0	2,476.8	2,436.8	0.6	0.5	1.6	1.5	1.6	1.5
South Atlantic	1,086.3	1,086.3	7,529.7	5,644.2	0.0	0.0	7,224.4	7,268.2	4,297.5	4,371.1	0.0	0.0	20,137.9	18,369.8	1,701.7	1,355.1	9,231.4	6,999.3	9,231.4	6,999.3
Delaware	2.0	2.0	34.1	31.9	0.0	0.0	0.0	0.0	12.2	12.2	0.0	0.0	48.3	46.1	78.9	69.5	113.0	101.4	113.0	101.4
District of Columbia	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	23.0	23.0	0.0	0.0	23.0	23.0	50.7	37.7	50.7	37.7	50.7	37.7
Florida	0.0	0.0	1,524.3	513.9	0.0	0.0	54.5	54.5	1,230.8	1,296.8	0.0	0.0	2,809.6	1,865.2	280.3	192.3	1,804.6	706.2	1,804.6	706.2
Georgia	0.0	0.0	1,011.9	974.9	0.0	0.0	2,047.2	2,047.2	905.4	905.4	0.0	0.0	3,984.5	3,927.5	168.4	NM	1,180.3	NM	1,180.3	NM
Maryland	190.0	190.0	246.9	168.1	0.0	0.0	590.0	590.0	140.0	142.0	0.0	0.0	1,166.9	1,090.1	713.5	617.0	960.4	785.1	960.4	785.1
North Carolina	208.0	208.0	3,981.9	3,355.0	0.0	0.0	2,002.0	2,002.0	567.2	568.3	0.0	0.0	6,759.1	6,133.3	140.1	114.9	4,122.0	3,469.9	4,122.0	3,469.9
South Carolina	0.0	0.0	356.1	253.7	0.0	0.0	1,323.9	1,367.7	526.5	531.0	0.0	0.0	2,206.5	2,152.4	195.8	123.7	551.9	377.4	551.9	377.4
Virginia	0.0	0.0	374.5	346.7	0.0	0.0	866.0	866.0	892.4	892.4	0.0	0.0	2,132.9	2,105.1	67.1	46.5	441.6	393.2	441.6	393.2
West Virginia	686.3	686.3	0.0	0.0	0.0	0.0	340.8	340.8	0.0	0.0	0.0	0.0	1,027.1	1,027.1	6.8	5.8	6.8	5.8	6.8	5.8
East South Central	29.1	29.1	542.3	455.5	0.0	0.0	7,049.3	7,056.3	1,229.0	1,229.0	0.0	0.0	8,849.7	8,769.9	94.9	87.1	637.2	542.6	637.2	542.6
Alabama	0.0	0.0	194.0	179.3	0.0	0.0	3,290.8	3,290.8	685.9	685.9	0.0	0.0	4,170.7	4,156.0	NM	NM	NM	NM	NM	NM
Kentucky	0.0	0.0	26.3	26.3	0.0	0.0	1,146.9	1,146.9	72.2	72.2	0.0	0.0	1,245.4	1,245.4	23.5	17.0	49.8	43.3	49.8	43.3
Mississippi	0.0	0.0	160.6	160.6	0.0	0.0	0.0	0.0	274.7	274.7	0.0	0.0	435.3	435.3	7.6	10.3	168.2	170.9	168.2	170.9
Tennessee	29.1	29.1	161.4	89.3	0.0	0.0	2,611.6	2,618.6	196.2	196.2	0.0	0.0	2,998.3	2,933.2	56.7	54.6	218.1	143.9	218.1	143.9
West South Central	32,255.6	29,480.9	2,080.4	1,280.8	0.0	0.0	2,989.5	2,987.5	1,310.6	1,321.6	0.0	0.0	38,636.1	35,070.8	636.9	441.5	2,717.3	1,722.3	2,717.3	1,722.3
Arkansas	0.0	0.0	100.0	19.0	0.0	0.0	1,263.9	1,263.9	331.3	330.4	0.0	0.0	1,695.2	1,613.3	15.3	7.3	115.3	26.3	115.3	26.3
Louisiana	0.0	0.0	1.1	1.1	0.0	0.0	192.0	192.0	490.1	490.1	0.0	0.0	683.2	683.2	139.7	121.2	140.8	122.3	140.8	122.3
Oklahoma	8,070.7	6,897.7	30.5	20.5	0.0	0.0	863.6	861.6	76.2	76.2	0.0	0.0	9,041.0	7,856.0	7.3	3.9	37.8	24.4	37.8	24.4
Texas	24,184.9	22,583.2	1,948.8	1,240.2	0.0	0.0	670.0	670.0	413.0	424.9	0.0	0.0	27,216.7	24,918.3	474.7	309.1	2,423.5	1,549.3	2,423.5	1,549.3
Mountain	9,620.9	8,812.5	5,773.0	5,480.9	473.9	473.9	10,575.9	10,574.4	174.3	174.3	624.3	582.8	27,242.3	26,098.8	2,338.6	1,957.8	8,111.6	7,438.7	8,585.5	7,912.6
Arizona	267.3	267.3	1,776.5	1,700.1	295.4	295.4	2,720.9	2,720.9	30.7	30.7	0.0	0.0	5,090.8	5,014.4	1,262.9	1,068.6	3,039.4	2,768.7	3,334.8	3,064.1
Colorado	3,758.7	3,106.2	530.3	460.8	0.0	0.0	687.4	687.4	28.7	28.7	0.0	0.0	5,005.1	4,283.1	352.3	327.3	882.6	788.1	882.6	788.1
Idaho	970.5	970.5	240.0	240.0	0.0	0.0	2,707.5	2,707.5	83.9	83.9	10.0	10.0	4,011.9	4,011.9	26.3	13.4	266.3	253.4	266.3	253.4
Montana	783.5	678.5	17.0	17.0	0.0	0.0	2,749.3	2,747.8	3.0	3.0	0.0	0.0	3,552.8	3,446.3	13.9	11.2	30.9	25.2	30.9	25.2
Nevada	150.0	150.0	1,707.7	1,684.6	178.5	178.5	1,051.4	1,051.4	9.8	9.8	532.7	498.2	3,630.1	3,572.5	299.1	227.3	2,006.8	1,911.9	2,185.3	2,090.4
New Mexico																				

Table 6.2.C. Net Summer Capacity of Utility Scale Units Using Primarily Fossil Fuels and by State, December 2018 and 2017 (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	
	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017	December 2018	December 2017
	New England	13,359.6	11,884.4	1,210.9	1,118.8	1,606.8	1,605.7	917.3	917.3	0.0	0.0	5,708.5	5,708.5	0.0	0.0	22,803.1
Connecticut	3,140.2	2,356.9	567.6	477.6	873.5	872.4	383.4	383.4	0.0	0.0	2,035.1	2,035.1	0.0	0.0	6,999.8	6,125.4
Maine	1,250.0	1,250.0	301.1	297.1	108.5	108.5	0.0	0.0	0.0	0.0	880.9	880.9	0.0	0.0	2,540.5	2,536.5
Massachusetts	5,951.2	5,259.3	331.6	333.5	199.7	199.7	0.0	0.0	0.0	0.0	2,588.4	2,588.4	0.0	0.0	9,070.9	8,380.9
New Hampshire	1,231.0	1,231.0	3.8	3.8	400.2	400.2	533.9	533.9	0.0	0.0	94.0	94.0	0.0	0.0	2,262.9	2,262.9
Rhode Island	1,787.2	1,787.2	6.8	6.8	24.9	24.9	0.0	0.0	0.0	0.0	12.2	12.2	0.0	0.0	1,831.1	1,831.1
Vermont	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	97.9	97.9	0.0	0.0	97.9	97.9
Middle Atlantic	31,549.9	26,068.9	7,805.5	7,682.3	14,677.5	15,129.1	13,477.8	13,530.2	78.6	78.6	5,358.6	5,398.7	129.2	129.2	73,077.1	68,017.0
New Jersey	8,530.4	8,158.0	2,959.9	2,845.0	47.1	497.7	609.0	609.0	11.6	11.6	234.0	226.2	23.4	23.4	12,415.4	12,370.9
New York	8,691.4	7,977.3	3,164.4	3,157.0	9,685.5	9,688.5	1,640.2	1,640.2	0.0	0.0	3,515.9	3,563.8	0.0	0.0	26,697.4	26,026.8
Pennsylvania	14,328.1	9,933.6	1,681.2	1,680.3	4,944.9	4,942.9	11,228.6	11,281.0	67.0	67.0	1,608.7	1,608.7	105.8	105.8	33,964.3	29,619.3
East North Central	21,597.0	18,862.0	26,753.6	26,579.8	4,206.4	4,212.9	56,181.0	60,678.3	247.6	247.6	2,472.6	2,643.3	1,092.9	1,092.9	112,551.1	114,316.8
Illinois	3,580.2	3,580.2	10,497.1	10,385.3	289.9	289.9	13,974.0	13,966.0	0.0	0.0	674.2	674.2	36.5	36.5	29,051.9	28,931.1
Indiana	3,807.0	2,406.0	3,355.8	3,405.8	729.1	729.1	15,279.4	15,761.4	0.0	0.0	99.8	237.8	619.3	619.3	23,890.4	23,159.4
Michigan	4,421.0	4,421.0	3,969.2	3,970.8	2,383.5	2,394.0	9,216.7	9,216.7	47.2	47.2	486.5	490.4	250.0	250.0	20,774.1	20,790.1
Ohio	7,038.0	5,704.0	5,559.2	5,446.1	189.2	189.2	12,274.4	14,605.4	142.0	142.0	609.7	636.5	187.1	187.1	25,999.6	26,910.3
Wisconsin	2,750.8	2,750.8	3,372.3	3,371.8	614.7	611.7	5,436.5	7,128.8	58.4	58.4	604.2	604.4	0.0	0.0	12,835.1	14,525.9
West North Central	6,633.1	6,633.1	11,730.9	11,523.4	3,642.8	4,378.2	33,180.1	34,116.0	32.0	32.0	3,874.4	3,874.4	8.4	8.4	59,101.7	60,565.5
Iowa	1,772.6	1,772.6	1,258.2	1,265.7	420.5	532.8	5,497.9	5,497.9	32.0	32.0	820.3	820.7	0.0	0.0	9,801.5	9,921.7
Kansas	266.0	266.0	2,148.3	2,148.3	1,376.7	2,096.7	4,653.2	4,714.2	0.0	0.0	554.8	550.6	0.0	0.0	8,999.0	9,775.8
Minnesota	2,172.0	2,172.0	2,671.4	2,456.4	363.1	275.8	4,174.7	4,309.4	0.0	0.0	790.4	787.1	0.0	0.0	10,171.6	10,000.7
Missouri	1,789.9	1,789.9	3,399.6	3,399.6	836.4	836.1	10,520.6	11,260.8	0.0	0.0	1,100.5	1,105.1	0.0	0.0	17,647.0	18,391.5
Nebraska	342.6	342.6	1,150.8	1,150.8	525.8	525.8	3,817.3	3,817.3	0.0	0.0	321.2	321.2	0.0	0.0	6,157.7	6,148.4
North Dakota	0.0	0.0	408.0	408.0	111.6	111.6	4,042.4	4,042.4	0.0	0.0	63.2	65.2	8.4	8.4	4,633.6	4,635.6
South Dakota	290.0	290.0	694.6	694.6	8.7	8.7	474.0	474.0	0.0	0.0	224.0	224.5	0.0	0.0	1,691.3	1,691.8
South Atlantic	59,507.3	53,188.3	31,931.6	31,786.6	7,329.6	7,308.6	53,986.3	56,389.3	142.8	142.8	10,379.3	10,407.0	135.0	135.0	163,411.9	159,357.6
Delaware	1,512.0	1,512.0	317.2	317.2	843.1	843.1	410.0	410.0	0.0	0.0	114.1	114.1	135.0	135.0	3,331.4	3,331.4
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	29,589.8	27,953.7	7,762.6	7,890.1	2,422.2	2,481.2	7,804.0	9,822.0	59.0	59.0	4,959.0	4,970.0	0.0	0.0	52,596.6	53,176.0
Georgia	7,954.2	7,963.9	7,787.2	7,787.2	832.9	832.9	9,360.5	9,360.5	83.8	83.8	945.4	945.4	0.0	0.0	26,964.0	26,973.7
Maryland	2,844.6	976.0	1,965.6	1,957.6	1,494.2	1,414.2	4,327.0	4,712.0	0.0	0.0	1,205.9	1,218.9	0.0	0.0	11,837.3	10,278.7
North Carolina	5,210.8	4,724.8	6,045.1	6,045.1	0.0	0.0	10,536.8	10,536.8	0.0	0.0	337.6	337.6	0.0	0.0	22,130.3	21,644.3
South Carolina	3,152.0	2,399.0	2,761.3	2,814.8	546.0	546.0	5,212.0	5,212.0	0.0	0.0	463.4	463.4	0.0	0.0	12,134.7	11,435.2
Virginia	9,243.9	7,658.9	4,194.3	3,894.3	1,068.2	1,068.2	3,778.0	3,778.0	0.0	0.0	2,342.9	2,346.6	0.0	0.0	20,627.3	18,746.0
West Virginia	0.0	0.0	1,089.3	1,071.3	123.0	123.0	12,558.0	12,558.0	0.0	0.0	11.0	11.0	0.0	0.0	13,781.3	13,763.3
East South Central	21,684.2	20,632.1	12,640.1	12,646.9	5,329.0	6,053.8	25,015.2	25,756.2	0.0	0.0	133.0	142.0	19.8	19.8	64,821.3	65,250.8
Alabama	9,618.4	9,618.4	2,532.2	2,532.2	2,766.3	2,791.3	5,503.1	5,503.1	0.0	0.0	42.6	42.6	19.8	19.8	20,482.4	20,507.4
Kentucky	1,763.0	1,763.0	4,976.6	4,976.6	260.0	260.0	11,862.8	11,862.8	0.0	0.0	11.9	11.9	0.0	0.0	18,874.3	18,874.3
Mississippi	7,847.7	7,847.7	1,350.8	1,357.6	2,236.5	2,936.3	1,804.0	1,804.0	0.0	0.0	35.3	44.3	0.0	0.0	13,274.3	13,989.9
Tennessee	2,455.1	1,403.0	3,780.5	3,780.5	66.2	66.2	5,845.3	6,586.3	0.0	0.0	43.2	43.2	0.0	0.0	12,190.3	11,879.2
West South Central	60,499.8	60,410.1	14,418.4	13,977.4	31,886.1	31,660.5	31,585.8	35,856.2	957.9	957.9	174.8	174.8	655.3	655.3	140,178.1	143,692.2
Arkansas	4,566.0	4,566.0	702.8	702.8	802.0	802.0	5,110.0	5,100.0	0.0	0.0	12.2	12.2	0.0	0.0	11,193.0	11,183.0
Louisiana	7,533.0	7,537.0	2,357.9	2,357.9	6,528.4	6,528.4	2,832.6	2,832.6	894.1	894.1	43.3	43.3	407.4	407.4	20,596.7	20,600.7
Oklahoma	7,247.6	7,247.6	1,684.9	1,684.9	5,235.5	5,235.5	4,334.6	4,334.6	0.0	0.0	74.4	74.4	0.0	0.0	18,577.0	18,577.0
Texas	41,153.2	41,059.5	9,672.8	9,231.8	19,320.2	19,094.6	19,308.6	23,589.0	63.8	63.8	44.9	44.9	247.9	247.9	89,811.4	93,331.5
Mountain	22,513.8	22,483.8	8,638.9	8,638.9	3,693.9	3,693.9	26,815.5	26,989.0	52.0	52.0	353.9	356.3	107.4	107.4	62,320.4	62,321.3
Arizona	9,891.6	9,891.6	2,367.6	2,367.6	1,478.6	1,303.6	5,579.0	5,754.0	0.0	0.0	90.5	90.5	0.0	0.0	19,407.3	19,407.3
Colorado	3,240.5	3,240.5	2,572.3	2,572.3	639.0	681.0	4,499.0	4,499.0	0.0	0.0	168.4	168.4	0.0	0.0	11,119.2	11,161.2
Idaho	547.7	547.7	552.0	552.0	14.0	14.0	8.5	8.5	0.0	0.0	5.4	5.4	0.0	0.0	1,127.6	1,127.6
Montana	0.0	0.0	321.6	321.6	72.2	72.2	2,294.6	2,293.1	52.0	52.0	0.0	0.0	1.5	1.5	2,741.9	2,740.4
Nevada	5,445.0	5,415.0	1,185.6	1,185.6	444.6	444.6	740.4	740.4	0.0	0.0	6.0	6.0	0.0	0.0	7,821.6	7,791.6
New Mexico	1,465.0	1,465.0	966.0	966.0	849.4	849.4	2,634.0	2,634.0	0.0	0.0	50.0	52.4	0.0	0.0	5,964.4	5,966.8
Utah	1,830.0	1,830.0	520.2	520.2	328.2	316.2	4,654.0	4,654.0	0.0	0.0	27.8	27.8	0.0	0.0	7,360.2	7,348.2
Wyoming	94.0	94.0	153.6	153.6	12.9	12.9	6,406.0	6,406.0	0.0	0.0	5.8	5.8	105.9	105.9	6,778.2	6,778.2
Pacific Contiguous	25,936.7	26,030.1	12,064.1	11,680.4	6,913.3	8,861.1	1,982.0	1,982.0	17.0	17.0	469.4	470.9	221.4	221.4	47,603.9	49,262.9
California	19,908.2	20,001.6	11,210.9	10,827.2	6,657.3	8,605.1	57.0	57.0	17.0	17.0	454.2	455.7	221.4	221.4	38,526.0	40,185.0
Oregon	3,374.9	3,374.9	133.8	133.8	224.4	224.4	585.0	585.0	0.0	0.0	0.0	0.0	0.0	0.0	4,318.1	4,318.1
Washington	2,653.6	2,653.6	719.4	719.4	31.6	31.6	1,340.0	1,340.0	0.0	0.0	15.2	15.2	0.0	0.0	4,759.8	4,759.8
Pacific Noncontiguous	479.2	479.2	626.3	626.3	175.0	175.0	332.8	332.8	0.0	0.0	2,601.8	2,602.9	6.4	6.4	4,221.5	4,222.6
Alaska	479.2	479.2	626.3	626.3	175.0	175.0	15									

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

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
2018	1	60118	83WI 8ME, LLC	IPP	Midway Solar Farm 1	CA	60336	MSF1	50.0	Solar Photovoltaic	SUN	PV
2018	1	221	Alaska Village Elec Coop, Inc	Electric Utility	Brevig Mission	AK	60260	3A	0.4	Petroleum Liquids	DFO	IC
2018	1	56769	Consolidated Edison Development Inc.	IPP	Panoche Valley Solar Farm	CA	57340	1	240.0	Solar Photovoltaic	SUN	PV
2018	1	4254	Consumers Energy Co	Electric Utility	Cross Winds Energy Park	MI	58830	CWEP2	44.0	Onshore Wind Turbine	WND	WT
2018	1	61060	Cypress Creek Renewables	IPP	LeSun CSG, LLC	MN	61544	GEN1	5.0	Solar Photovoltaic	SUN	PV
2018	1	61060	Cypress Creek Renewables	IPP	WrightSun CSG, LLC	MN	61547	GEN1	5.0	Solar Photovoltaic	SUN	PV
2018	1	60370	DG AMP Solar, LLC	IPP	DG AMP Solar Versailles	OH	61437	AMPVS	1.8	Solar Photovoltaic	SUN	PV
2018	1	61187	DG Minnesota CSG, LLC	IPP	Scandia CSG	MN	61585	40802	1.0	Solar Photovoltaic	SUN	PV
2018	1	61187	DG Minnesota CSG, LLC	IPP	Scandia CSG	MN	61585	40803	1.0	Solar Photovoltaic	SUN	PV
2018	1	61187	DG Minnesota CSG, LLC	IPP	Scandia CSG	MN	61585	40804	1.0	Solar Photovoltaic	SUN	PV
2018	1	61187	DG Minnesota CSG, LLC	IPP	Scandia CSG	MN	61585	40805	1.0	Solar Photovoltaic	SUN	PV
2018	1	61187	DG Minnesota CSG, LLC	IPP	Scandia CSG	MN	61585	40806	1.0	Solar Photovoltaic	SUN	PV
2018	1	61111	DG New Jersey Solar, LLC	IPP	DG New Jersey Solar RLS Logistics	NJ	61507	RLSNJ	4.0	Solar Photovoltaic	SUN	PV
2018	1	61610	Delaware River Solar, LLC	IPP	Baer Road CSG	NY	62034	7	2.0	Solar Photovoltaic	SUN	PV
2018	1	56215	E ON Climate Renewables N America LLC	IPP	Inadale Wind Farm LLC	TX	56984	INABT	9.9	Batteries	MWH	BA
2018	1	56215	E ON Climate Renewables N America LLC	IPP	Pyron Wind Farm LLC	TX	56981	PYRBT	9.9	Batteries	MWH	BA
2018	1	57249	EPP Renewable Energy	IPP	Haworth Water Treatment Plant	NJ	56701	GEN5	3.9	Petroleum Liquids	DFO	IC
2018	1	57249	EPP Renewable Energy	IPP	Haworth Water Treatment Plant	NJ	56701	GEN6	3.9	Petroleum Liquids	DFO	IC
2018	1	60853	ET CAP OR HOLDINGS LLC	IPP	OR Solar 5, LLC	OR	61423	PV1	8.0	Solar Photovoltaic	SUN	PV
2018	1	61015	ETCAP NES CS MN 08 LLC	IPP	Johnson Solar CSG	MN	61380	JOHN1	1.0	Solar Photovoltaic	SUN	PV
2018	1	61015	ETCAP NES CS MN 08 LLC	IPP	Johnson Solar CSG	MN	61380	JOHN2	1.0	Solar Photovoltaic	SUN	PV
2018	1	61015	ETCAP NES CS MN 08 LLC	IPP	Johnson Solar CSG	MN	61380	JOHN3	1.0	Solar Photovoltaic	SUN	PV
2018	1	61015	ETCAP NES CS MN 08 LLC	IPP	Johnson Solar CSG	MN	61380	JOHN4	1.0	Solar Photovoltaic	SUN	PV
2018	1	61015	ETCAP NES CS MN 08 LLC	IPP	Johnson Solar CSG	MN	61380	JOHN5	1.0	Solar Photovoltaic	SUN	PV
2018	1	59218	East Michigan Univ. Heating Plant	Commercial	East Michigan Univ. Heating Plant	MI	59452	COGN2	6.8	Natural Gas Fired Combustion Turbine	NG	GT
2018	1	58135	Ecos Energy LLC	IPP	Jefferson Solar	CT	62024	JEFRS	1.0	Solar Photovoltaic	SUN	PV
2018	1	6452	Florida Power & Light Co	Electric Utility	Coral Farms Solar Energy Center	FL	61022	1	74.5	Solar Photovoltaic	SUN	PV
2018	1	6452	Florida Power & Light Co	Electric Utility	Horizon Solar Energy Center	FL	61021	1	74.5	Solar Photovoltaic	SUN	PV
2018	1	6452	Florida Power & Light Co	Electric Utility	Indian River Solar Center	FL	61020	1	74.5	Solar Photovoltaic	SUN	PV
2018	1	6452	Florida Power & Light Co	Electric Utility	Wildflower Solar Energy Center	FL	61050	1	74.5	Solar Photovoltaic	SUN	PV
2018	1	7140	Georgia Power Co	Electric Utility	Comer Solar	GA	61554	1	2.0	Solar Photovoltaic	SUN	PV
2018	1	59462	Heelstone Energy Holdings, LLC	IPP	Chiloquin Solar, LLC	OR	61631	CHILO	9.9	Solar Photovoltaic	SUN	PV
2018	1	12341	MidAmerican Energy Co	IPP	Prairie Wind Farm	IA	60873	PWE	168.0	Onshore Wind Turbine	WND	WT
2018	1	61227	Nautilus Solar Solutions	IPP	Kilroy Solar	CA	61628	KILRO	1.1	Solar Photovoltaic	SUN	PV
2018	1	60644	OEE XXIV LLC	Industrial	Whirlpool Corporation - Ottawa Wind Farm	OH	61004	W1	1.5	Onshore Wind Turbine	WND	WT
2018	1	49748	ORCAL Geothermal, Inc	IPP	Heber Geothermal	CA	54689	4	16.0	Geothermal	GEO	BT
2018	1	60882	Red Dirt Wind Project, LLC	IPP	Red Dirt Wind Project	OK	61270	RDDRT	299.3	Onshore Wind Turbine	WND	WT
2018	1	60520	SoCore Energy LLC	IPP	Gopher CSG	MN	61426	PV1	5.0	Solar Photovoltaic	SUN	PV
2018	1	60520	SoCore Energy LLC	IPP	Lahr 1, LLC	MN	61203	PV1	5.0	Solar Photovoltaic	SUN	PV
2018	1	60520	SoCore Energy LLC	IPP	Nesvold Watertown Solar	MN	60958	PV1	1.0	Solar Photovoltaic	SUN	PV
2018	1	60520	SoCore Energy LLC	IPP	Nesvold Watertown Solar	MN	60958	PV2	1.0	Solar Photovoltaic	SUN	PV
2018	1	60520	SoCore Energy LLC	IPP	Nesvold Watertown Solar	MN	60958	PV3	1.0	Solar Photovoltaic	SUN	PV
2018	1	60520	SoCore Energy LLC	IPP	Nesvold Watertown Solar	MN	60958	PV4	1.0	Solar Photovoltaic	SUN	PV
2018	1	60520	SoCore Energy LLC	IPP	Nesvold Watertown Solar	MN	60958	PV5	1.0	Solar Photovoltaic	SUN	PV
2018	1	60520	SoCore Energy LLC	IPP	New Auburn DPC Solar	WI	60936	PV1	2.5	Solar Photovoltaic	SUN	PV
2018	1	60520	SoCore Energy LLC	IPP	Taylor's Falls CSG	MN	61428	PV1	5.0	Solar Photovoltaic	SUN	PV
2018	1	60871	Stuttgart Solar, LLC	IPP	Stuttgart Solar	AR	61262	STGRT	81.0	Solar Photovoltaic	SUN	PV
2018	1	60881	Thunder Ranch Wind Project, LLC	IPP	Thunder Ranch Wind Project	OK	61269	WT1	297.8	Onshore Wind Turbine	WND	WT
2018	1	24431	Utah Municipal Power Agency	Electric Utility	Provo Power Plant	UT	61508	1	2.4	Natural Gas Internal Combustion Engine	NG	IC
2018	1	24431	Utah Municipal Power Agency	Electric Utility	Provo Power Plant	UT	61508	2	2.4	Natural Gas Internal Combustion Engine	NG	IC
2018	1	24431	Utah Municipal Power Agency	Electric Utility	Provo Power Plant	UT	61508	3	2.4	Natural Gas Internal Combustion Engine	NG	IC
2018	1	24431	Utah Municipal Power Agency	Electric Utility	Provo Power Plant	UT	61508	4	2.4	Natural Gas Internal Combustion Engine	NG	IC
2018	1	24431	Utah Municipal Power Agency	Electric Utility	Provo Power Plant	UT	61508	5	2.4	Natural Gas Internal Combustion Engine	NG	IC
2018	1	61361	Walton Solar	IPP	Gratis Road Solar Facility	GA	61740	GR01	3.0	Solar Photovoltaic	SUN	PV
2018	2	61105	ABEC #2 LLC	IPP	ABEC #2 dba West-Star Dairy	CA	61501	GEN1	1.0	Other Waste Biomass	OBG	IC
2018	2	61106	ABEC #3 LLC	IPP	ABEC #3 dba Lakeview Dairy	CA	61502	GEN1	1.0	Other Waste Biomass	OBG	IC
2018	2	61107	ABEC #4 LLC	IPP	ABEC #4 dba CE&S Dairy	CA	61503	GEN1	1.0	Other Waste Biomass	OBG	IC
2018	2	60571	AEP Onsite Partners	IPP	Porter Way Community Solar Garden	MN	61500	PV1	3.0	Solar Photovoltaic	SUN	PV
2018	2	61344	Advanced Microgrid Solutions	IPP	HEBT Irvine 2	CA	61723	IRV2W	3.3	Batteries	MWH	BA
2018	2	59247	Bearford Solar II, LLC	IPP	Bearford Solar II	NC	59488	BEARF	4.9	Solar Photovoltaic	SUN	PV
2018	2	61006	Bearkat TE Partnership LLC	IPP	Bearkat	TX	59972	BRKAT	196.7	Onshore Wind Turbine	WND	WT
2018	2	60827	Carina Community Solar	IPP	Carina Community Solar	MN	61179	JCCS1	0.9	Solar Photovoltaic	SUN	PV
2018	2	60827	Carina Community Solar	IPP	Carina Community Solar	MN	61179	JCCS2	0.9	Solar Photovoltaic	SUN	PV
2018	2	60827	Carina Community Solar	IPP	Carina Community Solar	MN	61179	JCCS3	0.9	Solar Photovoltaic	SUN	PV
2018	2	60827	Carina Community Solar	IPP	Carina Community Solar	MN	61179	JCCS4	0.9	Solar Photovoltaic	SUN	PV
2018	2	56769	Consolidated Edison Development Inc.	IPP	Big Timber Wind Farm	MT	61155	BT-MT	25.0	Onshore Wind Turbine	WND	WT
2018	2	60370	DG AMP Solar, LLC	IPP	DG AMP Solar Coldwater	MI	61435	AMPCW	1.3	Solar Photovoltaic	SUN	PV

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

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
2018	2	60370	DG AMP Solar, LLC	IPP	DG AMP Solar Jackson Center	OH	61438	AMPJC	1.6	Solar Photovoltaic	SUN	PV
2018	2	60370	DG AMP Solar, LLC	IPP	DG AMP Solar Orrville 3	OH	61436	AMPO3	2.3	Solar Photovoltaic	SUN	PV
2018	2	57249	EPP Renewable Energy	IPP	Pennsauken Solar	NJ	56883	GEN10	2.4	Solar Photovoltaic	SUN	PV
2018	2	7140	Georgia Power Co	Electric Utility	Marine Corps Logistics Base Solar	GA	59876	1	31.0	Solar Photovoltaic	SUN	PV
2018	2	61171	Lake Waconia Solar IV LLC	IPP	Lake Waconia IV Community Solar Garden	MN	61573	40926	1.0	Solar Photovoltaic	SUN	PV
2018	2	61170	Lake Waconia Solar LLC	IPP	Lake Waconia Community Solar Garden	MN	61572	38610	1.0	Solar Photovoltaic	SUN	PV
2018	2	60830	Lyra Community Solar	IPP	Lyra Community Solar	MN	61182	RLCS1	0.9	Solar Photovoltaic	SUN	PV
2018	2	60830	Lyra Community Solar	IPP	Lyra Community Solar	MN	61182	RLCS2	0.9	Solar Photovoltaic	SUN	PV
2018	2	60830	Lyra Community Solar	IPP	Lyra Community Solar	MN	61182	RLCS3	0.9	Solar Photovoltaic	SUN	PV
2018	2	61156	NMRD Data Center, LLC	IPP	Facebook 2 Solar Energy Center	NM	61557	FB2	10.0	Solar Photovoltaic	SUN	PV
2018	2	14063	Oklahoma Gas & Electric Co	Electric Utility	Covington Solar Farm	OK	61759	CVS1	10.0	Solar Photovoltaic	SUN	PV
2018	2	17470	PUD 1 of Snohomish County	Electric Utility	Calligan Creek Hydroelectric Project	WA	60418	CC6MW	6.0	Conventional Hydroelectric	WAT	HY
2018	2	17470	PUD 1 of Snohomish County	Electric Utility	Hancock Creek Hydroelectric Project	WA	60517	HY1	6.0	Conventional Hydroelectric	WAT	HY
2018	2	60755	Phelps 158 Solar Farm, LLC	IPP	Phelps 158 Solar Farm	NC	61134	15800	5.0	Solar Photovoltaic	SUN	PV
2018	2	60947	Tesla Inc.	IPP	Greene County Meter #1	NY	60463	PV1	1.6	Solar Photovoltaic	SUN	PV
2018	2	61168	Veseli Solar I LLC	IPP	Veseli Community Solar Garden	MN	61570	40921	1.0	Solar Photovoltaic	SUN	PV
2018	2	61144	WasecaSun, LLC	IPP	WasecaSun	MN	61142	0000H	3.4	Solar Photovoltaic	SUN	PV
2018	2	61144	WasecaSun, LLC	IPP	WasecaSun	MN	61142	WASE2	1.0	Solar Photovoltaic	SUN	PV
2018	2	61144	WasecaSun, LLC	IPP	WasecaSun	MN	61142	WASE3	1.0	Solar Photovoltaic	SUN	PV
2018	2	61144	WasecaSun, LLC	IPP	WasecaSun	MN	61142	WASE4	1.0	Solar Photovoltaic	SUN	PV
2018	2	61144	WasecaSun, LLC	IPP	WasecaSun	MN	61142	WASE5	1.0	Solar Photovoltaic	SUN	PV
2018	3	60571	AEP Onsite Partners	IPP	Sherburne Community Solar	MN	61672	PV1	5.0	Solar Photovoltaic	SUN	PV
2018	3	60831	Argo Navis Community Solar	IPP	Argo Navis Community Solar	MN	61183	UACS1	0.9	Solar Photovoltaic	SUN	PV
2018	3	61889	Barre Solar III LLC	IPP	Barre Solar III LLC	MA	62363	BSPV	1.0	Solar Photovoltaic	SUN	PV
2018	3	60922	Belchertown Renewables, LLC	IPP	Belchertown Renewables Community Solar	MA	61295	02675	4.0	Solar Photovoltaic	SUN	PV
2018	3	61927	Bell Bay Solar Farm	Electric Utility	Bell Bay Solar Farm	SC	62395	1	1.6	Solar Photovoltaic	SUN	PV
2018	3	61060	Cypress Creek Renewables	IPP	Gaston Solar I - SC	SC	61530	GEN1	10.2	Solar Photovoltaic	SUN	PV
2018	3	60968	Delphinus Community Solar	IPP	Delphinus Community Solar	MN	61329	QDCS1	0.9	Solar Photovoltaic	SUN	PV
2018	3	60968	Delphinus Community Solar	IPP	Delphinus Community Solar	MN	61329	QDCS2	0.9	Solar Photovoltaic	SUN	PV
2018	3	5310	Doswell Ltd Partnership	IPP	Doswell Energy Center	VA	52019	GEN8	150.0	Natural Gas Fired Combustion Turbine	NG	GT
2018	3	61228	Dundas Solar Holdings LLC	IPP	Dundas Solar Holdings LLC CSG	MN	61626	DU	5.0	Solar Photovoltaic	SUN	PV
2018	3	60853	ET CAP OR HOLDINGS LLC	IPP	OR Solar 8, LLC	OR	61424	PV1	10.0	Solar Photovoltaic	SUN	PV
2018	3	60904	ETCAP NES CS MN 06 LLC	IPP	Armstrong Solar	MN	61138	0000A	3.0	Solar Photovoltaic	SUN	PV
2018	3	58970	Ecoplexus, Inc	IPP	Cottage Grove CSG, LLC	MN	61483	CTGR1	1.0	Solar Photovoltaic	SUN	PV
2018	3	58970	Ecoplexus, Inc	IPP	Cottage Grove CSG, LLC	MN	61483	CTGR2	1.0	Solar Photovoltaic	SUN	PV
2018	3	58970	Ecoplexus, Inc	IPP	Cottage Grove CSG, LLC	MN	61483	CTGR3	1.0	Solar Photovoltaic	SUN	PV
2018	3	58970	Ecoplexus, Inc	IPP	Cottage Grove CSG, LLC	MN	61483	CTGR4	1.0	Solar Photovoltaic	SUN	PV
2018	3	58970	Ecoplexus, Inc	IPP	Cottage Grove CSG, LLC	MN	61483	CTGR5	1.0	Solar Photovoltaic	SUN	PV
2018	3	58970	Ecoplexus, Inc	IPP	Fox CSG, LLC	MN	61484	FOX1	1.0	Solar Photovoltaic	SUN	PV
2018	3	58970	Ecoplexus, Inc	IPP	Fox CSG, LLC	MN	61484	FOX2	1.0	Solar Photovoltaic	SUN	PV
2018	3	58970	Ecoplexus, Inc	IPP	Fox CSG, LLC	MN	61484	FOX3	1.0	Solar Photovoltaic	SUN	PV
2018	3	58970	Ecoplexus, Inc	IPP	Fox CSG, LLC	MN	61484	FOX4	1.0	Solar Photovoltaic	SUN	PV
2018	3	58970	Ecoplexus, Inc	IPP	Fox CSG, LLC	MN	61484	FOX5	1.0	Solar Photovoltaic	SUN	PV
2018	3	58970	Ecoplexus, Inc	IPP	SunE Stolee CSG, LLC	MN	61485	STOL1	1.0	Solar Photovoltaic	SUN	PV
2018	3	58970	Ecoplexus, Inc	IPP	SunE Stolee CSG, LLC	MN	61485	STOL2	1.0	Solar Photovoltaic	SUN	PV
2018	3	58970	Ecoplexus, Inc	IPP	SunE Stolee CSG, LLC	MN	61485	STOL3	1.0	Solar Photovoltaic	SUN	PV
2018	3	58970	Ecoplexus, Inc	IPP	Wyoming 2 CSG, LLC	MN	61486	WY01	1.0	Solar Photovoltaic	SUN	PV
2018	3	58970	Ecoplexus, Inc	IPP	Wyoming 2 CSG, LLC	MN	61486	WY02	1.0	Solar Photovoltaic	SUN	PV
2018	3	58970	Ecoplexus, Inc	IPP	Wyoming 2 CSG, LLC	MN	61486	WY03	1.0	Solar Photovoltaic	SUN	PV
2018	3	58970	Ecoplexus, Inc	IPP	Wyoming 2 CSG, LLC	MN	61486	WY04	1.0	Solar Photovoltaic	SUN	PV
2018	3	58970	Ecoplexus, Inc	IPP	Wyoming 2 CSG, LLC	MN	61486	WY05	1.0	Solar Photovoltaic	SUN	PV
2018	3	58135	Ecos Energy LLC	IPP	Adams Solar	CT	62026	ADAMS	1.0	Solar Photovoltaic	SUN	PV
2018	3	58135	Ecos Energy LLC	IPP	Franklin Solar	CT	62021	FRANK	1.0	Solar Photovoltaic	SUN	PV
2018	3	58135	Ecos Energy LLC	IPP	Hamilton Solar	CT	62025	HAMLT	1.0	Solar Photovoltaic	SUN	PV
2018	3	58135	Ecos Energy LLC	IPP	Wilson Solar	CT	62023	WILSN	1.0	Solar Photovoltaic	SUN	PV
2018	3	6452	Florida Power & Light Co	Electric Utility	Babcock Solar Energy Center	FL	59993	BA	10.0	Batteries	MWH	BA
2018	3	6452	Florida Power & Light Co	Electric Utility	Barefoot Bay Solar Energy Center	FL	61051	1	74.5	Solar Photovoltaic	SUN	PV
2018	3	6452	Florida Power & Light Co	Electric Utility	Blue Cypress Solar Energy Center	FL	61029	1	74.5	Solar Photovoltaic	SUN	PV
2018	3	6452	Florida Power & Light Co	Electric Utility	Citrus Solar Energy Center	FL	60061	BA	4.0	Batteries	MWH	BA
2018	3	6452	Florida Power & Light Co	Electric Utility	Hammock Solar	FL	61024	1	74.5	Solar Photovoltaic	SUN	PV
2018	3	6452	Florida Power & Light Co	Electric Utility	Loggerhead Solar Energy Center	FL	61052	1	74.5	Solar Photovoltaic	SUN	PV
2018	3	60556	Fusion Solar Centre, L.L.C	IPP	Fusion Solar Center LLC	CT	58876	PV	20.0	Solar Photovoltaic	SUN	PV
2018	3	59633	Great Bay Solar I LLC	IPP	Great Bay Solar 1	MD	59851	GBS01	57.0	Solar Photovoltaic	SUN	PV
2018	3	61693	Griffin Road Solar, LLC	IPP	Griffin Road Solar, LLC	MA	62198	2639	2.0	Solar Photovoltaic	SUN	PV
2018	3	49893	Invenergy Services LLC	IPP	Lackawanna Energy Center	PA	60357	GEN1	465.0	Natural Gas Fired Combined Cycle	NG	CS
2018	3	58764	Origis Energy USA, Inc	IPP	MA Solar Storage 1	MA	61730	SCSS1	1.1	Solar Photovoltaic	SUN	PV
2018	3	58764	Origis Energy USA, Inc	IPP	MA Solar Storage 1	MA	61730	SCSS2	1.1	Solar Photovoltaic	SUN	PV

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

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
2018	3	58764	Origis Energy USA, Inc	IPP	MA Solar Storage 1	MA	61730	SCSS3	1.1	Solar Photovoltaic	SUN	PV
2018	3	61323	PowerFin ASL 1, LLC	IPP	PowerFin Kingsbery	TX	61700	PFFKB	2.6	Solar Photovoltaic	SUN	PV
2018	3	61069	RE Gaskell West LLC	IPP	RE Gaskell West 1 LLC	CA	61445	PV1	20.0	Solar Photovoltaic	SUN	PV
2018	3	61491	ReNew Petra Integrators, LLC	IPP	Bartow Solar Energy LLC	FL	61879	PV	7.3	Solar Photovoltaic	SUN	PV
2018	3	16181	Rochester Public Utilities	Electric Utility	Westside Energy Station	MN	60564	WES1	9.3	Natural Gas Internal Combustion Engine	NG	IC
2018	3	16181	Rochester Public Utilities	Electric Utility	Westside Energy Station	MN	60564	WES2	9.3	Natural Gas Internal Combustion Engine	NG	IC
2018	3	16181	Rochester Public Utilities	Electric Utility	Westside Energy Station	MN	60564	WES3	9.3	Natural Gas Internal Combustion Engine	NG	IC
2018	3	16181	Rochester Public Utilities	Electric Utility	Westside Energy Station	MN	60564	WES4	9.3	Natural Gas Internal Combustion Engine	NG	IC
2018	3	16181	Rochester Public Utilities	Electric Utility	Westside Energy Station	MN	60564	WES5	9.3	Natural Gas Internal Combustion Engine	NG	IC
2018	3	60520	SoCore Energy LLC	IPP	Carrizozo Solar	NM	61662	PV1	3.0	Solar Photovoltaic	SUN	PV
2018	3	40580	Southern Minnesota Mun P Agny	Electric Utility	Owatonna Energy Station	MN	60254	UNIT1	9.7	Natural Gas Internal Combustion Engine	NG	IC
2018	3	40580	Southern Minnesota Mun P Agny	Electric Utility	Owatonna Energy Station	MN	60254	UNIT2	9.7	Natural Gas Internal Combustion Engine	NG	IC
2018	3	40580	Southern Minnesota Mun P Agny	Electric Utility	Owatonna Energy Station	MN	60254	UNIT3	9.7	Natural Gas Internal Combustion Engine	NG	IC
2018	3	40580	Southern Minnesota Mun P Agny	Electric Utility	Owatonna Energy Station	MN	60254	UNIT4	9.7	Natural Gas Internal Combustion Engine	NG	IC
2018	3	60822	Taurus Community Solar	IPP	Taurus Community Solar	MN	61174	ETCS3	0.9	Solar Photovoltaic	SUN	PV
2018	3	60822	Taurus Community Solar	IPP	Taurus Community Solar	MN	61174	ETCS4	0.9	Solar Photovoltaic	SUN	PV
2018	3	60947	Tesla Inc.	IPP	Intel - Ocotillo Campus Solar	AZ	60822	PV2	1.4	Solar Photovoltaic	SUN	PV
2018	3	60947	Tesla Inc.	IPP	Onondaga County- Jamesville	NY	60232	PV1	2.0	Solar Photovoltaic	SUN	PV
2018	3	60947	Tesla Inc.	IPP	Town of Rocky Hill	CT	61541	PV1	1.0	Solar Photovoltaic	SUN	PV
2018	3	60947	Tesla Inc.	IPP	Town of Rocky Hill	CT	61541	PV2	1.0	Solar Photovoltaic	SUN	PV
2018	3	60947	Tesla Inc.	IPP	Town of Rocky Hill	CT	61541	PV3	1.0	Solar Photovoltaic	SUN	PV
2018	3	60947	Tesla Inc.	IPP	US GSA - Sacramento	CA	60846	PV1	1.1	Solar Photovoltaic	SUN	PV
2018	3	60923	Theodore Drive Solar, LLC	IPP	Theodore Drive Community Solar	MA	61296	02529	1.5	Solar Photovoltaic	SUN	PV
2018	3	61397	Town of Otis	Commercial	Town of Otis Wind Energy Project	MA	61775	OT196	1.5	Onshore Wind Turbine	WND	WT
2018	3	57081	WGL Energy Systems, Inc	IPP	Bowie State Solar	MD	61915	SO285	1.3	Solar Photovoltaic	SUN	PV
2018	3	57081	WGL Energy Systems, Inc	IPP	Danville	VA	61849	SO291	6.0	Solar Photovoltaic	SUN	PV
2018	3	61229	Waterville Solar Holdings LLC	IPP	Waterville Solar Holdings LLC	MN	61627	WA	5.0	Solar Photovoltaic	SUN	PV
2018	4	221	Alaska Village Elec Coop, Inc	Electric Utility	Hooper Bay	AK	6319	3B	0.4	Petroleum Liquids	DFO	IC
2018	4	221	Alaska Village Elec Coop, Inc	Electric Utility	Pilot Station	AK	57058	1	0.5	Petroleum Liquids	DFO	IC
2018	4	58889	Dominion Cove Point LNG, LP	Commercial	Cove Point LNG Terminal	MD	59073	5501	3.0	All Other	OTH	OT
2018	4	58889	Dominion Cove Point LNG, LP	Commercial	Cove Point LNG Terminal	MD	59073	5502	1.3	All Other	OTH	OT
2018	4	58889	Dominion Cove Point LNG, LP	Commercial	Cove Point LNG Terminal	MD	59073	5511	1.7	All Other	OTH	OT
2018	4	58889	Dominion Cove Point LNG, LP	Commercial	Cove Point LNG Terminal	MD	59073	5EG	1.0	Petroleum Liquids	DFO	IC
2018	4	58889	Dominion Cove Point LNG, LP	Commercial	Cove Point LNG Terminal	MD	59073	5STA	40.0	Natural Gas Steam Turbine	NG	ST
2018	4	58889	Dominion Cove Point LNG, LP	Commercial	Cove Point LNG Terminal	MD	59073	5STB	40.0	Natural Gas Steam Turbine	NG	ST
2018	4	5310	Doswell Ltd Partnership	IPP	Doswell Energy Center	VA	52019	GEN9	150.0	Natural Gas Fired Combustion Turbine	NG	GT
2018	4	5416	Duke Energy Carolinas, LLC	Electric Utility	W S Lee	SC	3264	CT11	216.0	Natural Gas Fired Combined Cycle	NG	CT
2018	4	5416	Duke Energy Carolinas, LLC	Electric Utility	W S Lee	SC	3264	CT12	216.0	Natural Gas Fired Combined Cycle	NG	CT
2018	4	5416	Duke Energy Carolinas, LLC	Electric Utility	W S Lee	SC	3264	ST10	321.0	Natural Gas Fired Combined Cycle	NG	CA
2018	4	60905	ETCAP NES CS MN 03 LLC	IPP	Marmas Solar CSG	MN	61139	0000C	5.0	Solar Photovoltaic	SUN	PV
2018	4	60905	ETCAP NES CS MN 03 LLC	IPP	Marmas Solar CSG	MN	61139	MARM2	1.0	Solar Photovoltaic	SUN	PV
2018	4	60905	ETCAP NES CS MN 03 LLC	IPP	Marmas Solar CSG	MN	61139	MARM3	1.0	Solar Photovoltaic	SUN	PV
2018	4	60905	ETCAP NES CS MN 03 LLC	IPP	Marmas Solar CSG	MN	61139	MARM4	1.0	Solar Photovoltaic	SUN	PV
2018	4	60905	ETCAP NES CS MN 03 LLC	IPP	Marmas Solar CSG	MN	61139	MARM5	1.0	Solar Photovoltaic	SUN	PV
2018	4	61124	Great Valley Solar Portfolio Holdings, LLC	IPP	Great Valley Solar Portfolio Holdings, LLC	CA	59940	TQ8	200.0	Solar Photovoltaic	SUN	PV
2018	4	61620	IOS II LLC	IPP	First Baptist Church of Glenarden	MD	62043	FBCG1	1.6	Solar Photovoltaic	SUN	PV
2018	4	9273	Indianapolis Power & Light Co	Electric Utility	Eagle Valley (IN)	IN	991	GT1	207.0	Natural Gas Fired Combined Cycle	NG	CT
2018	4	9273	Indianapolis Power & Light Co	Electric Utility	Eagle Valley (IN)	IN	991	GT2	207.0	Natural Gas Fired Combined Cycle	NG	CT
2018	4	9273	Indianapolis Power & Light Co	Electric Utility	Eagle Valley (IN)	IN	991	STG1	230.0	Natural Gas Fired Combined Cycle	NG	CA
2018	4	61417	Lavio Solar, LLC	IPP	Lavio Solar	CA	61792	5002	1.0	Solar Photovoltaic	SUN	PV
2018	4	61017	Lindstrom CSG 1, LLC	IPP	Lindstrom Solar CSG	MN	61382	LIND1	1.0	Solar Photovoltaic	SUN	PV
2018	4	61017	Lindstrom CSG 1, LLC	IPP	Lindstrom Solar CSG	MN	61382	LIND2	1.0	Solar Photovoltaic	SUN	PV
2018	4	61017	Lindstrom CSG 1, LLC	IPP	Lindstrom Solar CSG	MN	61382	LIND3	1.0	Solar Photovoltaic	SUN	PV
2018	4	61102	Minnesota Solar CSG 8, LLC	IPP	Carver Gladden CSG	MN	61495	42254	1.0	Solar Photovoltaic	SUN	PV
2018	4	61102	Minnesota Solar CSG 8, LLC	IPP	Carver Gladden CSG	MN	61495	42255	1.0	Solar Photovoltaic	SUN	PV
2018	4	61102	Minnesota Solar CSG 8, LLC	IPP	Carver Gladden CSG	MN	61495	42256	1.0	Solar Photovoltaic	SUN	PV
2018	4	61156	NMRD Data Center, LLC	IPP	Facebook 3 Solar Energy Center	NM	61558	FB3	10.0	Solar Photovoltaic	SUN	PV
2018	4	61169	New Germany Solar I LLC	IPP	New Germany Community Solar Garden	MN	61571	39062	1.0	Solar Photovoltaic	SUN	PV
2018	4	13781	Northern States Power Co - Minnesota	Electric Utility	Black Dog	MN	1904	6-1	215.0	Natural Gas Fired Combustion Turbine	NG	GT
2018	4	40229	Old Dominion Electric Coop	Electric Utility	Wildcat Point Generation Facility	MD	59220	CT1	310.3	Natural Gas Fired Combined Cycle	NG	CT
2018	4	40229	Old Dominion Electric Coop	Electric Utility	Wildcat Point Generation Facility	MD	59220	CT2	310.3	Natural Gas Fired Combined Cycle	NG	CT
2018	4	40229	Old Dominion Electric Coop	Electric Utility	Wildcat Point Generation Facility	MD	59220	ST1	493.0	Natural Gas Fired Combined Cycle	NG	CA
2018	4	60584	Onyx Asset Services Group	IPP	Amsterdam North	NY	61904	10044	2.0	Solar Photovoltaic	SUN	PV
2018	4	60584	Onyx Asset Services Group	IPP	Amsterdam South	NY	61905	10045	2.0	Solar Photovoltaic	SUN	PV
2018	4	60584	Onyx Asset Services Group	IPP	Broadalbin	NY	61847	10046	2.0	Solar Photovoltaic	SUN	PV
2018	4	60584	Onyx Asset Services Group	IPP	Duanesburg	NY	61863	10048	2.0	Solar Photovoltaic	SUN	PV
2018	4	60584	Onyx Asset Services Group	IPP	Johnstown	NY	61888	10049	2.0	Solar Photovoltaic	SUN	PV

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

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
2018	4	58764	Origis Energy USA, Inc	IPP	MA Solar Storage 1	MA	61730	61730	1.0	Batteries	MWH	BA
2018	4	61295	Pinal Central Energy Center, LLC	IPP	Pinal Central Energy Center	AZ	61678	BA1	10.0	Batteries	MWH	BA
2018	4	61295	Pinal Central Energy Center, LLC	IPP	Pinal Central Energy Center	AZ	61678	PCEC	20.0	Solar Photovoltaic	SUN	PV
2018	4	61494	Radian Generation	IPP	Hanover Solar, LLC	NC	61877	HAN01	5.0	Solar Photovoltaic	SUN	PV
2018	4	17164	Sierra Pacific Industries Inc	Industrial	Sierra Pacific Sonora	CA	54517	GEN3	6.0	Wood/Wood Waste Biomass	WDS	ST
2018	4	57109	St Joseph Energy Center LLC	IPP	St Joseph Energy Center	IN	57794	CT1	229.0	Natural Gas Fired Combined Cycle	NG	CT
2018	4	57109	St Joseph Energy Center LLC	IPP	St Joseph Energy Center	IN	57794	CT2	229.0	Natural Gas Fired Combined Cycle	NG	CT
2018	4	57109	St Joseph Energy Center LLC	IPP	St Joseph Energy Center	IN	57794	ST1	245.0	Natural Gas Fired Combined Cycle	NG	CA
2018	4	61418	Stage Gulch Solar, LLC	IPP	Stage Gulch Solar	CA	61791	5001	0.8	Solar Photovoltaic	SUN	PV
2018	4	61019	SunE St. Cloud 1, LLC	IPP	St. Cloud Solar CSG	MN	61384	STCL1	1.0	Solar Photovoltaic	SUN	PV
2018	4	61019	SunE St. Cloud 1, LLC	IPP	St. Cloud Solar CSG	MN	61384	STCL2	1.0	Solar Photovoltaic	SUN	PV
2018	4	61019	SunE St. Cloud 1, LLC	IPP	St. Cloud Solar CSG	MN	61384	STCL3	1.0	Solar Photovoltaic	SUN	PV
2018	4	61019	SunE St. Cloud 1, LLC	IPP	St. Cloud Solar CSG	MN	61384	STCL4	1.0	Solar Photovoltaic	SUN	PV
2018	4	61019	SunE St. Cloud 1, LLC	IPP	St. Cloud Solar CSG	MN	61384	STCL5	1.0	Solar Photovoltaic	SUN	PV
2018	4	18642	Tennessee Valley Authority	Electric Utility	Allen	TN	3393	CTG1	311.9	Natural Gas Fired Combined Cycle	NG	CT
2018	4	18642	Tennessee Valley Authority	Electric Utility	Allen	TN	3393	CTG2	311.9	Natural Gas Fired Combined Cycle	NG	CT
2018	4	18642	Tennessee Valley Authority	Electric Utility	Allen	TN	3393	STG1	428.3	Natural Gas Fired Combined Cycle	NG	CA
2018	4	60059	ZGlobal Inc	IPP	Merced 1 PV	CA	61420	MRC01	3.0	Solar Photovoltaic	SUN	PV
2018	4	61172	Zumbro Solar LLC	IPP	Zumbro Community Solar Garden	MN	61574	38674	1.0	Solar Photovoltaic	SUN	PV
2018	5	60571	AEP Onsite Partners	IPP	Imboden Solar Garden	CO	61753	PV1	1.5	Solar Photovoltaic	SUN	PV
2018	5	60571	AEP Onsite Partners	IPP	Imboden Solar Garden	CO	61753	PV2	1.5	Solar Photovoltaic	SUN	PV
2018	5	60571	AEP Onsite Partners	IPP	Ohio Northern University Solar Site	OH	60913	PV2	1.0	Solar Photovoltaic	SUN	PV
2018	5	60571	AEP Onsite Partners	IPP	Quincy II Solar Garden	CO	61752	PV1	1.5	Solar Photovoltaic	SUN	PV
2018	5	61344	Advanced Microgrid Solutions	IPP	HEBT Irvine 1	CA	61722	IRV01	1.0	Batteries	MWH	BA
2018	5	61344	Advanced Microgrid Solutions	IPP	HEBT Irvine 1	CA	61722	IRV1W	4.5	Batteries	MWH	BA
2018	5	60831	Argo Navis Community Solar	IPP	Argo Navis Community Solar	MN	61183	UACS2	0.9	Solar Photovoltaic	SUN	PV
2018	5	56267	Bayonne Energy Center LLC	IPP	Bayonne Energy Center	NJ	56964	GT10	59.5	Natural Gas Fired Combustion Turbine	NG	GT
2018	5	56267	Bayonne Energy Center LLC	IPP	Bayonne Energy Center	NJ	56964	GT9	59.5	Natural Gas Fired Combustion Turbine	NG	GT
2018	5	59777	Buckthorn Westex, LLC	IPP	Buckthorn Solar 1	TX	60044	BKTH1	202.0	Solar Photovoltaic	SUN	PV
2018	5	19002	CPV Towantic, LLC	IPP	CPV Towantic Energy Center	CT	56047	CTG1	233.6	Natural Gas Fired Combined Cycle	NG	CT
2018	5	19002	CPV Towantic, LLC	IPP	CPV Towantic Energy Center	CT	56047	CTG2	233.6	Natural Gas Fired Combined Cycle	NG	CT
2018	5	19002	CPV Towantic, LLC	IPP	CPV Towantic Energy Center	CT	56047	STG	277.8	Natural Gas Fired Combined Cycle	NG	CA
2018	5	56204	CPV Valley, LLC	IPP	CPV Valley Energy Center	NY	56940	CTG1	198.2	Natural Gas Fired Combined Cycle	NG	CT
2018	5	56204	CPV Valley, LLC	IPP	CPV Valley Energy Center	NY	56940	CTG2	198.2	Natural Gas Fired Combined Cycle	NG	CT
2018	5	56204	CPV Valley, LLC	IPP	CPV Valley Energy Center	NY	56940	STG	308.7	Natural Gas Fired Combined Cycle	NG	CA
2018	5	14203	City of Osawatomie - (KS)	Electric Utility	Osawatomie Power Plant North Sub	KS	60751	CAT1	2.0	Petroleum Liquids	DFO	IC
2018	5	14203	City of Osawatomie - (KS)	Electric Utility	Osawatomie Power Plant North Sub	KS	60751	CAT2	2.0	Petroleum Liquids	DFO	IC
2018	5	14203	City of Osawatomie - (KS)	Electric Utility	Osawatomie Power Plant North Sub	KS	60751	CAT3	2.0	Petroleum Liquids	DFO	IC
2018	5	61481	Dignity - San Martin	IPP	Dignity - San Martin	NV	61862	PV1	1.7	Solar Photovoltaic	SUN	PV
2018	5	61442	Dignity - Siena Campus	IPP	Dignity - Siena Campus	NV	61825	PV1	1.4	Solar Photovoltaic	SUN	PV
2018	5	59928	Footprint Salem Harbor Development LP	IPP	Salem Harbor Station NGCC	MA	60903	1	147.5	Natural Gas Fired Combined Cycle	NG	CA
2018	5	59928	Footprint Salem Harbor Development LP	IPP	Salem Harbor Station NGCC	MA	60903	2	147.5	Natural Gas Fired Combined Cycle	NG	CA
2018	5	59928	Footprint Salem Harbor Development LP	IPP	Salem Harbor Station NGCC	MA	60903	3	217.5	Natural Gas Fired Combined Cycle	NG	CT
2018	5	59928	Footprint Salem Harbor Development LP	IPP	Salem Harbor Station NGCC	MA	60903	4	217.5	Natural Gas Fired Combined Cycle	NG	CT
2018	5	61303	Grimm CSG LLC	IPP	Grimm Community Solar	MN	61689	PV1	1.0	Solar Photovoltaic	SUN	PV
2018	5	61109	Huneke I CSG LLC	IPP	Huneke I CSG	MN	61505	HUNE1	1.0	Solar Photovoltaic	SUN	PV
2018	5	61110	Krause CSG LLC	IPP	Krause CSG	MN	61506	KRAUS	1.0	Solar Photovoltaic	SUN	PV
2018	5	56990	NJR Clean Energy Ventures Corporation	IPP	Raritan Solar - 53 Highway	NJ	61601	RARIT	8.4	Solar Photovoltaic	SUN	PV
2018	5	59124	NTE Ohio LLC	IPP	Middletown Energy Center	OH	59326	MEC1	257.0	Natural Gas Fired Combined Cycle	NG	CT
2018	5	59124	NTE Ohio LLC	IPP	Middletown Energy Center	OH	59326	MEC2	227.0	Natural Gas Fired Combined Cycle	NG	CA
2018	5	60584	Onyx Asset Services Group	IPP	SeaWorld Aquatica	CA	61843	10276	1.0	Solar Photovoltaic	SUN	PV
2018	5	60584	Onyx Asset Services Group	IPP	Sharon Springs	NY	61903	10116	2.0	Solar Photovoltaic	SUN	PV
2018	5	61756	Otis Elevator Company	IPP	Otis Elevator Company Solar	SC	62228	O1614	1.0	Solar Photovoltaic	SUN	PV
2018	5	61114	School Sisters CSG LLC	IPP	School Sisters CSG	MN	61516	SCHOO	1.0	Solar Photovoltaic	SUN	PV
2018	5	17164	Sierra Pacific Industries Inc	Industrial	Sierra Pacific Quincy Facility	CA	50112	GEN3	24.0	Wood/Wood Waste Biomass	WDS	ST
2018	5	60712	South Maui Renewable Resources LLC	IPP	Kihei Solar Farm	HI	61099	KIHEI	2.9	Solar Photovoltaic	SUN	PV
2018	5	60653	Stafford St Solar 2, LLC	IPP	Stafford St 2 Community Solar	MA	61017	STAF2	2.0	Solar Photovoltaic	SUN	PV
2018	5	61210	Stenner Creek Solar LLC	Commercial	Stenner Creek Solar	CA	61607	CPOLY	4.5	Solar Photovoltaic	SUN	PV
2018	5	60822	Taurus Community Solar	IPP	Taurus Community Solar	MN	61174	ETCS1	0.9	Solar Photovoltaic	SUN	PV
2018	5	60822	Taurus Community Solar	IPP	Taurus Community Solar	MN	61174	ETCS2	0.9	Solar Photovoltaic	SUN	PV
2018	5	60947	Tesla Inc.	IPP	Time Warner Cable - Knowles	NY	60904	PV1	2.0	Solar Photovoltaic	SUN	PV
2018	5	61123	Upton County Solar 2 LLC	IPP	Castle Gap Solar	TX	60123	CGAP	180.0	Solar Photovoltaic	SUN	PV
2018	5	56927	Wallingford Energy LLC	IPP	Wallingford Energy	CT	55517	CTG6	45.0	Natural Gas Fired Combustion Turbine	NG	GT
2018	5	56927	Wallingford Energy LLC	IPP	Wallingford Energy	CT	55517	CTG7	45.0	Natural Gas Fired Combustion Turbine	NG	GT
2018	6	60824	Antares Community Solar	IPP	Antares Community Solar	MN	61176	FACS1	0.9	Solar Photovoltaic	SUN	PV
2018	6	60824	Antares Community Solar	IPP	Antares Community Solar	MN	61176	FACS2	0.9	Solar Photovoltaic	SUN	PV
2018	6	60824	Antares Community Solar	IPP	Antares Community Solar	MN	61176	FACS3	0.9	Solar Photovoltaic	SUN	PV



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

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
2018	6	803	Arizona Public Service Co	Electric Utility	Punkin Center Battery Storage	AZ	61913	B1	2.0	Batteries	MWH	BA
2018	6	58519	Clean Energy Collective LLC	IPP	SCE&G Nimitz CSG	SC	61433	SCNM1	8.0	Solar Photovoltaic	SUN	PV
2018	6	58519	Clean Energy Collective LLC	IPP	SCE&G Springfield CSG	SC	61434	SCSP1	6.1	Solar Photovoltaic	SUN	PV
2018	6	61187	DG Minnesota CSG, LLC	IPP	Big Lake Project CSG	MN	61817	BIGLA	5.0	Solar Photovoltaic	SUN	PV
2018	6	61406	Delta Solar Power I, LLC	IPP	Delta Solar Power I	MI	61954	DSPI	7.7	Solar Photovoltaic	SUN	PV
2018	6	61435	EGP Stillwater Solar PV II, LLC	IPP	EGP Stillwater Solar PV II, LLC	NV	61809	STWII	20.0	Solar Photovoltaic	SUN	PV
2018	6	61538	Ecogy Delaware II LLC.	IPP	WHA Southbridge Solar Park	DE	61934	2	1.0	Solar Photovoltaic	SUN	PV
2018	6	61443	Good Fellow Solar 1 PH1, LLC	IPP	RPUWD Scheuer Well Solar PV Project	CA	61824	RPU2	3.0	Solar Photovoltaic	SUN	PV
2018	6	60886	Gray Hawk Solar, LLC	IPP	Gray Hawk Solar	AZ	61272	GHS	55.0	Solar Photovoltaic	SUN	PV
2018	6	7601	Green Mountain Power Corp	Electric Utility	GMP Solar - Pantan	VT	60562	GMPBP	1.0	Batteries	MWH	BA
2018	6	19547	Hawaiian Electric Co Inc	Electric Utility	Schofield Generating Station	HI	60328	S1	8.4	Other Waste Biomass	OBL	IC
2018	6	19547	Hawaiian Electric Co Inc	Electric Utility	Schofield Generating Station	HI	60328	S2	8.4	Other Waste Biomass	OBL	IC
2018	6	19547	Hawaiian Electric Co Inc	Electric Utility	Schofield Generating Station	HI	60328	S3	8.4	Other Waste Biomass	OBL	IC
2018	6	19547	Hawaiian Electric Co Inc	Electric Utility	Schofield Generating Station	HI	60328	S4	8.4	Other Waste Biomass	OBL	IC
2018	6	19547	Hawaiian Electric Co Inc	Electric Utility	Schofield Generating Station	HI	60328	S5	8.4	Other Waste Biomass	OBL	IC
2018	6	19547	Hawaiian Electric Co Inc	Electric Utility	Schofield Generating Station	HI	60328	S6	8.4	Other Waste Biomass	OBL	IC
2018	6	61409	Heyer CSG LLC	IPP	Heyer CSG	MN	61793	HEYER	1.0	Solar Photovoltaic	SUN	PV
2018	6	57389	IKEA Property Inc	Commercial	IKEA Oak Creek Rooftop PV System	WI	61816	PV1	1.2	Solar Photovoltaic	SUN	PV
2018	6	49893	Invenergy Services LLC	IPP	Bishop Hill III	IL	61787	BHIII	119.0	Onshore Wind Turbine	WND	WT
2018	6	61369	Kimball Wind, LLC	Electric Utility	Kimball Wind	NE	56106	KIM01	30.0	Onshore Wind Turbine	WND	WT
2018	6	58822	MC Power Companies Inc	IPP	El Dorado Springs Solar Farm	MO	61566	EDSF1	2.5	Solar Photovoltaic	SUN	PV
2018	6	58822	MC Power Companies Inc	IPP	Independence II Solar Farm	MO	61588	1	4.1	Solar Photovoltaic	SUN	PV
2018	6	58822	MC Power Companies Inc	IPP	Independence II Solar Farm	MO	61588	2	4.4	Solar Photovoltaic	SUN	PV
2018	6	61211	Montgomery County Solar	Commercial	Montgomery County Solar	MD	61608	1	1.9	Solar Photovoltaic	SUN	PV
2018	6	56990	NJR Clean Energy Ventures Corporation	IPP	New Road Solar, LLC	NJ	61599	NEWRD	10.0	Solar Photovoltaic	SUN	PV
2018	6	54913	NSTAR Electric Company	Electric Utility	Plymouth Solar	MA	62266	LG400	1.1	Solar Photovoltaic	SUN	PV
2018	6	60635	Northern Cardinal Solar LLC	IPP	Northern Cardinal Solar	NC	60992	NCARD	2.0	Solar Photovoltaic	SUN	PV
2018	6	15147	PSEG Fossil LLC	IPP	PSEG Swaren Generating Station	NJ	2411	701	328.0	Natural Gas Fired Combined Cycle	NG	CT
2018	6	15147	PSEG Fossil LLC	IPP	PSEG Swaren Generating Station	NJ	2411	702	196.5	Natural Gas Fired Combined Cycle	NG	CA
2018	6	60162	Panda Hummel Station LLC	IPP	Panda Hummel Station LLC	PA	60368	CTG1	226.3	Natural Gas Fired Combined Cycle	NG	CT
2018	6	60162	Panda Hummel Station LLC	IPP	Panda Hummel Station LLC	PA	60368	CTG2	226.3	Natural Gas Fired Combined Cycle	NG	CT
2018	6	60162	Panda Hummel Station LLC	IPP	Panda Hummel Station LLC	PA	60368	CTG3	226.3	Natural Gas Fired Combined Cycle	NG	CT
2018	6	60162	Panda Hummel Station LLC	IPP	Panda Hummel Station LLC	PA	60368	STG	417.6	Natural Gas Fired Combined Cycle	NG	CA
2018	6	61298	Pine Gate Renewables	IPP	Sadiebrook Solar, LLC	SC	60719	SADIE	5.0	Solar Photovoltaic	SUN	PV
2018	6	61285	RJC II CSG LLC	IPP	RJC II Community Solar Garden	MN	61670	RJCII	1.0	Solar Photovoltaic	SUN	PV
2018	6	61641	Sadiebrook Solar LLC	IPP	Sadiebrook NC Solar	NC	62102	PGRF1	5.0	Solar Photovoltaic	SUN	PV
2018	6	60520	SoCore Energy LLC	IPP	Red Maple Solar	MN	60962	PV1	1.0	Solar Photovoltaic	SUN	PV
2018	6	60520	SoCore Energy LLC	IPP	Red Maple Solar	MN	60962	PV2	1.0	Solar Photovoltaic	SUN	PV
2018	6	60520	SoCore Energy LLC	IPP	Red Maple Solar	MN	60962	PV3	1.0	Solar Photovoltaic	SUN	PV
2018	6	61376	SunSelect 1	Industrial	SunSelect1	CA	61754	1	2.0	Natural Gas Internal Combustion Engine	NG	IC
2018	6	60947	Tesla Inc.	IPP	Broome County	NY	60507	NORTH	2.0	Solar Photovoltaic	SUN	PV
2018	6	60947	Tesla Inc.	IPP	Broome County	NY	60507	SOUTH	2.0	Solar Photovoltaic	SUN	PV
2018	6	60947	Tesla Inc.	IPP	Oswego County - Fulton Solar	NY	60818	PV1	2.0	Solar Photovoltaic	SUN	PV
2018	6	60947	Tesla Inc.	IPP	Town of Branford	CT	62076	PV1	1.1	Solar Photovoltaic	SUN	PV
2018	6	2144	Town of Braintree - (MA)	Electric Utility	Station 9 Energy Storage System	MA	62257	ESS1	2.0	Batteries	MWH	BA
2018	6	61522	Viridity Energy Solutions, Inc.	IPP	Viridity Energy Solutions ACUA	NJ	61923	VACUA	1.0	Batteries	MWH	BA
2018	6	61277	Vista Energy Storage, LLC	IPP	Vista Energy Storage System	CA	61661	VISTA	40.0	Batteries	MWH	BA
2018	7	61012	AES Distributed Energy	IPP	Anheuser-Busch Baldwinsville	NY	61575	BAL01	2.0	Solar Photovoltaic	SUN	PV
2018	7	61012	AES Distributed Energy	IPP	Call Farms 1	NY	61470	CFM11	2.0	Solar Photovoltaic	SUN	PV
2018	7	61012	AES Distributed Energy	IPP	Call Farms 3	NY	61471	CFM31	2.0	Solar Photovoltaic	SUN	PV
2018	7	61012	AES Distributed Energy	IPP	Columbia University - Johnson Farms	NY	61576	JF01	2.0	Solar Photovoltaic	SUN	PV
2018	7	61012	AES Distributed Energy	IPP	Columbia University - Minisink	NY	61578	MIN01	2.0	Solar Photovoltaic	SUN	PV
2018	7	61012	AES Distributed Energy	IPP	Lichtenthal	NY	61469	LIC01	2.0	Solar Photovoltaic	SUN	PV
2018	7	61012	AES Distributed Energy	IPP	St. Lawrence University - Sutton	NY	61579	SUT01	2.0	Solar Photovoltaic	SUN	PV
2018	7	61012	AES Distributed Energy	IPP	Time Warner Cable Enterprises - Martino	NY	61577	MRT01	2.0	Solar Photovoltaic	SUN	PV
2018	7	61103	Adams Solar Center LLC	IPP	Adams Solar Center	OR	61496	ADAMS	10.0	Solar Photovoltaic	SUN	PV
2018	7	60146	Ameresco Federal Solutions	IPP	Fort Bliss (DEA EPIC)	TX	61887	DEPIC	2.0	Solar Photovoltaic	SUN	PV
2018	7	60831	Argo Navis Community Solar	IPP	Argo Navis Community Solar	MN	61183	UACS3	0.9	Solar Photovoltaic	SUN	PV
2018	7	61692	Ashby Solar, LLC	IPP	Ashby Solar, LLC	MA	62199	4472	1.8	Solar Photovoltaic	SUN	PV
2018	7	59474	BQ Energy LLC	IPP	Sunlight Beacon	NY	61922	BEACO	2.0	Solar Photovoltaic	SUN	PV
2018	7	60655	Bullock Road Solar 1, LLC	IPP	Bullock Road Solar 1	MA	61010	BULLO	3.9	Solar Photovoltaic	SUN	PV
2018	7	5063	City of Denton - (TX)	Electric Utility	Denton Energy Center	TX	61643	DEC1	18.8	Natural Gas Internal Combustion Engine	NG	IC
2018	7	5063	City of Denton - (TX)	Electric Utility	Denton Energy Center	TX	61643	DEC10	18.8	Natural Gas Internal Combustion Engine	NG	IC
2018	7	5063	City of Denton - (TX)	Electric Utility	Denton Energy Center	TX	61643	DEC11	18.8	Natural Gas Internal Combustion Engine	NG	IC
2018	7	5063	City of Denton - (TX)	Electric Utility	Denton Energy Center	TX	61643	DEC12	18.8	Natural Gas Internal Combustion Engine	NG	IC
2018	7	5063	City of Denton - (TX)	Electric Utility	Denton Energy Center	TX	61643	DEC2	18.8	Natural Gas Internal Combustion Engine	NG	IC
2018	7	5063	City of Denton - (TX)	Electric Utility	Denton Energy Center	TX	61643	DEC3	18.8	Natural Gas Internal Combustion Engine	NG	IC

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

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
2018	7	5063	City of Denton - (TX)	Electric Utility	Denton Energy Center	TX	61643	DEC4	18.8	Natural Gas Internal Combustion Engine	NG	IC
2018	7	5063	City of Denton - (TX)	Electric Utility	Denton Energy Center	TX	61643	DEC5	18.8	Natural Gas Internal Combustion Engine	NG	IC
2018	7	5063	City of Denton - (TX)	Electric Utility	Denton Energy Center	TX	61643	DEC6	18.8	Natural Gas Internal Combustion Engine	NG	IC
2018	7	5063	City of Denton - (TX)	Electric Utility	Denton Energy Center	TX	61643	DEC7	18.8	Natural Gas Internal Combustion Engine	NG	IC
2018	7	5063	City of Denton - (TX)	Electric Utility	Denton Energy Center	TX	61643	DEC8	18.8	Natural Gas Internal Combustion Engine	NG	IC
2018	7	5063	City of Denton - (TX)	Electric Utility	Denton Energy Center	TX	61643	DEC9	18.8	Natural Gas Internal Combustion Engine	NG	IC
2018	7	61060	Cypress Creek Renewables	IPP	Old Caroleen Solar Farm	NC	61534	GEN1	2.0	Solar Photovoltaic	SUN	PV
2018	7	60370	DG AMP Solar, LLC	IPP	DG AMP Solar Smyrna	DE	61800	AMPSM	1.2	Solar Photovoltaic	SUN	PV
2018	7	61407	Delta Solar Power II, LLC	IPP	Delta Solar Power II	MI	61955	DSPII	15.2	Solar Photovoltaic	SUN	PV
2018	7	61304	Foreman's Hill CSG LLC	IPP	Foreman's Hill Community Solar	MN	61690	FOREM	5.0	Solar Photovoltaic	SUN	PV
2018	7	61499	Georgia-Pacific Wood Products LLC	Industrial	Georgia-Pacific Taylorsville Plywood	MS	61927	CTG1	6.2	Natural Gas Fired Combustion Turbine	NG	GT
2018	7	49893	Invenergy Services LLC	IPP	Shoreham Solar Commons	NY	60045	GEN1	24.9	Solar Photovoltaic	SUN	PV
2018	7	61520	Kearsarge Oppenheim LLC	IPP	Kearsarge Oppenheim CSG	NY	61917	OPPEN	1.4	Solar Photovoltaic	SUN	PV
2018	7	11161	Loma Linda University	Commercial	Loma Linda University Cogen	CA	10206	GEN5	1.0	Petroleum Liquids	DFO	IC
2018	7	61383	MN Solar Community, LLC	IPP	Sherburne North Project CSG	MN	61762	SHERB	5.0	Solar Photovoltaic	SUN	PV
2018	7	61461	Mustang Solar LLC	IPP	Mustang Solar	NC	61533	GEN1	5.0	Solar Photovoltaic	SUN	PV
2018	7	54888	NRG Texas Power LLC	IPP	Bacliff	TX	60264	BCGT1	54.0	Natural Gas Fired Combustion Turbine	NG	GT
2018	7	54888	NRG Texas Power LLC	IPP	Bacliff	TX	60264	BCGT2	54.0	Natural Gas Fired Combustion Turbine	NG	GT
2018	7	54888	NRG Texas Power LLC	IPP	Bacliff	TX	60264	BCGT3	54.0	Natural Gas Fired Combustion Turbine	NG	GT
2018	7	54888	NRG Texas Power LLC	IPP	Bacliff	TX	60264	BCGT4	54.0	Natural Gas Fired Combustion Turbine	NG	GT
2018	7	54888	NRG Texas Power LLC	IPP	Bacliff	TX	60264	BCGT5	54.0	Natural Gas Fired Combustion Turbine	NG	GT
2018	7	54888	NRG Texas Power LLC	IPP	Bacliff	TX	60264	BCGT6	54.0	Natural Gas Fired Combustion Turbine	NG	GT
2018	7	60685	Novel Energy Solutions	IPP	Novel - OYA of Mapleton	MN	61060	00001	3.5	Solar Photovoltaic	SUN	PV
2018	7	60685	Novel Energy Solutions	IPP	Novel OYA of Osakis	MN	61059	0000G	5.0	Solar Photovoltaic	SUN	PV
2018	7	60100	PSEG Keys Energy Center, LLC	IPP	Keys Energy Center	MD	60302	10	327.0	Natural Gas Fired Combined Cycle	NG	CA
2018	7	60100	PSEG Keys Energy Center, LLC	IPP	Keys Energy Center	MD	60302	11	214.0	Natural Gas Fired Combined Cycle	NG	CT
2018	7	60100	PSEG Keys Energy Center, LLC	IPP	Keys Energy Center	MD	60302	12	214.0	Natural Gas Fired Combined Cycle	NG	CT
2018	7	61288	Perennial Wind, LLC	IPP	Perennial Windfarm	NE	61677	T-1	2.3	Onshore Wind Turbine	WND	WT
2018	7	61288	Perennial Wind, LLC	IPP	Perennial Windfarm	NE	61677	T-2	2.3	Onshore Wind Turbine	WND	WT
2018	7	61288	Perennial Wind, LLC	IPP	Perennial Windfarm	NE	61677	T-3	2.3	Onshore Wind Turbine	WND	WT
2018	7	61108	RJC I CSG LLC	IPP	RJC I CSG	MN	61504	RCJ1	1.0	Solar Photovoltaic	SUN	PV
2018	7	61494	Radian Generation	IPP	Arthur Solar, LLC	NC	62136	ART01	5.0	Solar Photovoltaic	SUN	PV
2018	7	61284	Scandia CSG LLC	IPP	Scandia Community Solar Garden	MN	61669	SCAND	2.5	Solar Photovoltaic	SUN	PV
2018	7	60163	Soltage LLC	IPP	Kelly Solar, LLC	NC	61219	KELLY	5.0	Solar Photovoltaic	SUN	PV
2018	7	17650	Southern Power Co	IPP	Cactus Flats Wind Energy Project	TX	61001	WT1	150.0	Onshore Wind Turbine	WND	WT
2018	7	59138	SunPower Corporation, Systems	IPP	Santa Rosa Junior College Petaluma Solar	CA	62039	SRJCP	1.1	Solar Photovoltaic	SUN	PV
2018	7	58658	Sunlight Partners	IPP	Heedeh Solar	NC	60157	PV1	4.5	Solar Photovoltaic	SUN	PV
2018	7	61188	West Texas A&M University	Commercial	UL Advanced Wind Turbine Test Facility	TX	61589	UT-1	3.4	Onshore Wind Turbine	WND	WT
2018	8	61344	Advanced Microgrid Solutions	IPP	HEBT Irvine 2	CA	61723	IRV06	2.5	Batteries	MWH	BA
2018	8	58261	Arkwright Summit Wind Farm LLC	IPP	Arkwright Summit Wind Farm LLC	NY	61673	WT	78.4	Onshore Wind Turbine	WND	WT
2018	8	15399	Avangrid Renewables LLC	IPP	WyEast Solar	OR	61345	PV1	10.0	Solar Photovoltaic	SUN	PV
2018	8	59474	BQ Energy LLC	IPP	Annapolis Solar Park, LLC	MD	60681	ASP12	12.0	Solar Photovoltaic	SUN	PV
2018	8	61256	Betcher CSG LLC	IPP	Betcher Community Solar Garden	MN	61671	BETCH	1.0	Solar Photovoltaic	SUN	PV
2018	8	61644	Bladenboro Farm 2 LLC	IPP	Bladenboro Solar 2	NC	62101	PGRF6	4.5	Solar Photovoltaic	SUN	PV
2018	8	61410	Broad Street Fuel Cell, LLC	IPP	Trinity College Fuel Cell	CT	61786	MB-22	1.4	Other Natural Gas	NG	FC
2018	8	6175	City of Falls City - (NE)	Electric Utility	Falls City	NE	2237	9	9.3	Natural Gas Internal Combustion Engine	NG	IC
2018	8	60609	Clean Focus Renewables, Inc.	IPP	BHE Pueblo 2 Community Solar Array	CO	60801	PUEB2	1.5	Solar Photovoltaic	SUN	PV
2018	8	61060	Cypress Creek Renewables	IPP	Antanavica Solar	MA	61526	GEN1	1.0	Solar Photovoltaic	SUN	PV
2018	8	61104	Elbe Solar Center LLC	IPP	Elbe Solar Center	OR	61497	ELBE	10.0	Solar Photovoltaic	SUN	PV
2018	8	61070	Foundation CA Fund IX Manager, LLC	IPP	Foundation California Training Facility	CA	61442	WTG1	1.8	Onshore Wind Turbine	WND	WT
2018	8	61070	Foundation CA Fund IX Manager, LLC	IPP	Foundation Salinas Valley State Prison	CA	61444	WTG1	1.8	Onshore Wind Turbine	WND	WT
2018	8	60849	Green Beanworks C, LLC	IPP	Green Beanworks C PV	CA	61215	GBWXC	3.0	Solar Photovoltaic	SUN	PV
2018	8	60850	Green Beanworks D, LLC	IPP	Green Beanworks D PV	CA	61216	GBWXD	3.0	Solar Photovoltaic	SUN	PV
2018	8	61287	Johnson I CSG LLC	IPP	Johnson 1 Community Solar	MN	61686	PV1	1.0	Solar Photovoltaic	SUN	PV
2018	8	61346	Lisbon East	IPP	COU Solar I, LLC	NY	61720	LECOU	1.5	Solar Photovoltaic	SUN	PV
2018	8	61345	Lisbon West	IPP	CJ Solar I, LLC	NY	61719	LWCJ1	2.0	Solar Photovoltaic	SUN	PV
2018	8	59675	Moxie Freedom LLC	IPP	Moxie Freedom Generation Plant	PA	59906	GEN1	490.0	Natural Gas Fired Combined Cycle	NG	CS
2018	8	56990	NJR Clean Energy Ventures Corporation	IPP	Old Bridge Solar Farm	NJ	61600	OLDBR	8.8	Solar Photovoltaic	SUN	PV
2018	8	54913	NSTAR Electric Company	Electric Utility	Lee Site 31 Solar	MA	62265	LG370	1.9	Solar Photovoltaic	SUN	PV
2018	8	54913	NSTAR Electric Company	Electric Utility	Ludlow Site 72 - Conti	MA	62097	LG390	1.9	Solar Photovoltaic	SUN	PV
2018	8	54913	NSTAR Electric Company	Electric Utility	Pittsfield 44 - M&W PV	MA	62264	LG400	1.2	Solar Photovoltaic	SUN	PV
2018	8	59123	NTE Carolinas, LLC	IPP	Kings Mountain Energy Center	NC	59325	KMEC1	259.0	Natural Gas Fired Combined Cycle	NG	CT
2018	8	59123	NTE Carolinas, LLC	IPP	Kings Mountain Energy Center	NC	59325	KMEC2	227.0	Natural Gas Fired Combined Cycle	NG	CA
2018	8	61348	PCS Energy, LLC	Industrial	Aerolease	CA	61718	APLEX	1.1	Solar Photovoltaic	SUN	PV
2018	8	61575	Pacific Ethanol Madera	Industrial	Pacific Ethanol Madera Solar Array	CA	61989	PV	3.9	Solar Photovoltaic	SUN	PV
2018	8	61494	Radian Generation	IPP	Church Road Solar LLC	NC	62168	CHU01	5.0	Solar Photovoltaic	SUN	PV
2018	8	60748	Salisbury Solar, LLC	IPP	Salisbury Solar	NC	61128	12349	3.8	Solar Photovoltaic	SUN	PV

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

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
2018	8	57081	WGL Energy Systems, Inc	IPP	Cornillie	MN	61977	SO334	1.0	Solar Photovoltaic	SUN	PV
2018	9	61012	AES Distributed Energy	IPP	Broadalbin-Perth Solar	NY	61958	BAP1	1.5	Solar Photovoltaic	SUN	PV
2018	9	60281	Altus Power America Management, LLC	IPP	Big George PV CSG	MA	61429	12344	1.0	Solar Photovoltaic	SUN	PV
2018	9	60146	Ameresco Federal Solutions	IPP	MCRD Parris Island PV	SC	61956	GRDMT	4.4	Solar Photovoltaic	SUN	PV
2018	9	1015	Austin Energy	Electric Utility	Kingsberry Energy Storage System	TX	61741	KBESS	1.5	Batteries	MWH	BA
2018	9	60899	Bear Creek Solar Center, LLC	IPP	Bear Creek Solar Center	OR	61281	BCRSC	10.0	Solar Photovoltaic	SUN	PV
2018	9	4254	Consumers Energy Co	Electric Utility	Parkview Battery	MI	61909	PKVWB	1.0	Batteries	MWH	BA
2018	9	60370	DG AMP Solar, LLC	IPP	DG AMP Solar Piqua Staunton	OH	61805	AMPPS	1.8	Solar Photovoltaic	SUN	PV
2018	9	58970	Ecoplexus, Inc	IPP	SunE Feely 1 CSG, LLC	MN	61478	FELY1	1.0	Solar Photovoltaic	SUN	PV
2018	9	58970	Ecoplexus, Inc	IPP	SunE Feely 1 CSG, LLC	MN	61478	FELY2	1.0	Solar Photovoltaic	SUN	PV
2018	9	58970	Ecoplexus, Inc	IPP	SunE Feely 1 CSG, LLC	MN	61478	FELY3	1.0	Solar Photovoltaic	SUN	PV
2018	9	58970	Ecoplexus, Inc	IPP	SunE Feely 1 CSG, LLC	MN	61478	FELY4	1.0	Solar Photovoltaic	SUN	PV
2018	9	58970	Ecoplexus, Inc	IPP	SunE Feely 1 CSG, LLC	MN	61478	FELY5	1.0	Solar Photovoltaic	SUN	PV
2018	9	60844	Flat Top Wind I, LLC	IPP	Flat Top Wind I	TX	61212	FTWI	200.0	Onshore Wind Turbine	WND	WT
2018	9	57484	Foundation CA Fund V Manager, LLC	IPP	Foundation NWNA	CA	58114	WTG3	1.9	Onshore Wind Turbine	WND	WT
2018	9	60025	Greenbacker Renewable Energy Corporation	IPP	Midway Solar Farm III	CA	60315	MSF3	20.0	Solar Photovoltaic	SUN	PV
2018	9	60268	Hartz Solar LLC	Commercial	46 Meadowlands Parkway	NJ	62325	1	1.5	Solar Photovoltaic	SUN	PV
2018	9	60268	Hartz Solar LLC	Commercial	77 Metro Way	NJ	62326	1	1.0	Solar Photovoltaic	SUN	PV
2018	9	61620	IOS II LLC	IPP	Cuyahoga County Landfill	OH	62041	CCBO1	3.7	Solar Photovoltaic	SUN	PV
2018	9	61309	Johnson II CSG LLC	IPP	Johnson II Community Solar	MN	61695	PV1	1.0	Solar Photovoltaic	SUN	PV
2018	9	61642	Lane Solar Farm LLC	IPP	Lane Solar	NC	62104	PGRF2	5.0	Solar Photovoltaic	SUN	PV
2018	9	58822	MC Power Companies Inc	IPP	Farmington Solar Farm	MO	61450	FSF1	2.5	Solar Photovoltaic	SUN	PV
2018	9	59675	Moxie Freedom LLC	IPP	Moxie Freedom Generation Plant	PA	59906	GEN2	490.0	Natural Gas Fired Combined Cycle	NG	CS
2018	9	60471	Mt. Tom Solar, LLC	IPP	Mt. Tom Solar Project	MA	60906	BA1	3.1	Batteries	MWH	BA
2018	9	61209	NC 102 Project LLC	IPP	NC 102 Project LLC	NC	61610	NC102	74.8	Solar Photovoltaic	SUN	PV
2018	9	54913	NSTAR Electric Company	Electric Utility	Sunderland Solar PV	MA	62090	REC34	1.1	Solar Photovoltaic	SUN	PV
2018	9	59098	Northwest Ohio Wind, LLC	IPP	Northwest Ohio Wind	OH	59296	NWOH1	100.0	Onshore Wind Turbine	WND	WT
2018	9	59098	Northwest Ohio Wind, LLC	IPP	Northwest Ohio Wind	OH	59296	NWOH2	105.0	Onshore Wind Turbine	WND	WT
2018	9	61598	Novel Solar Three, LLC	IPP	Gibbon Solar	MN	62010	PGRK1	3.3	Solar Photovoltaic	SUN	PV
2018	9	60996	OEE XXV LLC	Industrial	Valfilm Wind Project	OH	61356	W1	1.5	Onshore Wind Turbine	WND	WT
2018	9	60996	OEE XXV LLC	Industrial	Valfilm Wind Project	OH	61356	W2	1.5	Onshore Wind Turbine	WND	WT
2018	9	61278	OEE XXVI LLC	IPP	Whirlpool Corp-Greenville Wind Farm	OH	61660	WTG1	1.5	Onshore Wind Turbine	WND	WT
2018	9	61278	OEE XXVI LLC	IPP	Whirlpool Corp-Greenville Wind Farm	OH	61660	WTG2	1.5	Onshore Wind Turbine	WND	WT
2018	9	61278	OEE XXVI LLC	IPP	Whirlpool Corp-Greenville Wind Farm	OH	61660	WTG3	1.5	Onshore Wind Turbine	WND	WT
2018	9	61495	Persimmon Creek Wind Farm 1, LLC	IPP	Persimmon Creek Wind Farm 1, LLC	OK	61876	PCWF1	198.6	Onshore Wind Turbine	WND	WT
2018	9	61298	Pine Gate Renewables	IPP	Soluga Farms IV	NC	59934	SFIV	4.9	Solar Photovoltaic	SUN	PV
2018	9	61494	Radian Generation	IPP	County Home Solar LLC	NC	62167	COU01	7.5	Solar Photovoltaic	SUN	PV
2018	9	61494	Radian Generation	IPP	NorWest Energy 9 LLC	OR	62241	NWE9	8.0	Solar Photovoltaic	SUN	PV
2018	9	60443	Rattlesnake Power, LLC	IPP	Rattlesnake Power, LLC	TX	60743	WT1	160.0	Onshore Wind Turbine	WND	WT
2018	9	18454	Tampa Electric Co	Electric Utility	Balm Solar	FL	61654	PV1	74.4	Solar Photovoltaic	SUN	PV
2018	9	18454	Tampa Electric Co	Electric Utility	Payne Creek Solar	FL	61665	GEN1	70.3	Solar Photovoltaic	SUN	PV
2018	9	19876	Virginia Electric & Power Co	Electric Utility	Hollyfield	VA	61023	1	6.8	Solar Photovoltaic	SUN	PV
2018	9	57081	WGL Energy Systems, Inc	IPP	Eichtens II CSG	MN	62137	SO340	1.0	Solar Photovoltaic	SUN	PV
2018	9	57081	WGL Energy Systems, Inc	IPP	Guse CSG	MN	62195	SO371	1.0	Solar Photovoltaic	SUN	PV
2018	9	57081	WGL Energy Systems, Inc	IPP	Huneke II CSG	MN	62139	SO346	1.1	Solar Photovoltaic	SUN	PV
2018	9	57081	WGL Energy Systems, Inc	IPP	Susquehanna University Solar	PA	61914	SO829	3.0	Solar Photovoltaic	SUN	PV
2018	10	60146	Ameresco Federal Solutions	IPP	MCRD Parris Island PV	SC	61956	CARPT	1.6	Solar Photovoltaic	SUN	PV
2018	10	60533	Carl Friedrich Gauss Solar LLC	IPP	Carl Friedrich Gauss Solar	NC	60882	GAUSS	5.0	Solar Photovoltaic	SUN	PV
2018	10	18445	City of Tallahassee - (FL)	Electric Utility	Sub 12	FL	61080	IC1	9.3	Natural Gas Internal Combustion Engine	NG	IC
2018	10	18445	City of Tallahassee - (FL)	Electric Utility	Sub 12	FL	61080	IC2	9.3	Natural Gas Internal Combustion Engine	NG	IC
2018	10	60170	Clean Energy Future-Lordstown, LLC	IPP	Clean Energy Future-Lordstown, LLC	OH	60376	CTG1	263.0	Natural Gas Fired Combined Cycle	NG	CT
2018	10	60170	Clean Energy Future-Lordstown, LLC	IPP	Clean Energy Future-Lordstown, LLC	OH	60376	CTG2	263.0	Natural Gas Fired Combined Cycle	NG	CT
2018	10	60170	Clean Energy Future-Lordstown, LLC	IPP	Clean Energy Future-Lordstown, LLC	OH	60376	STG1	324.0	Natural Gas Fired Combined Cycle	NG	CA
2018	10	56769	Consolidated Edison Development Inc.	IPP	Aurora County Wind	SD	61745	ACSD	20.0	Onshore Wind Turbine	WND	WT
2018	10	56769	Consolidated Edison Development Inc.	IPP	Brule County Wind	SD	61746	BCSD	20.0	Onshore Wind Turbine	WND	WT
2018	10	60825	Corvus Community Solar	IPP	Corvus Community Solar	MN	61177	GCCS1	0.9	Solar Photovoltaic	SUN	PV
2018	10	60825	Corvus Community Solar	IPP	Corvus Community Solar	MN	61177	GCCS2	0.9	Solar Photovoltaic	SUN	PV
2018	10	60825	Corvus Community Solar	IPP	Corvus Community Solar	MN	61177	GCCS3	0.9	Solar Photovoltaic	SUN	PV
2018	10	60825	Corvus Community Solar	IPP	Corvus Community Solar	MN	61177	GCCS4	0.9	Solar Photovoltaic	SUN	PV
2018	10	60825	Corvus Community Solar	IPP	Corvus Community Solar	MN	61177	GCCS5	0.9	Solar Photovoltaic	SUN	PV
2018	10	61060	Cypress Creek Renewables	IPP	Brantley Solar	NC	60623	PV1	50.2	Solar Photovoltaic	SUN	PV
2018	10	61060	Cypress Creek Renewables	IPP	Saint Albans Solar	VT	61928	GEN1	4.9	Solar Photovoltaic	SUN	PV
2018	10	61187	DG Minnesota CSG, LLC	IPP	Cottage Grove Project CSG	MN	61983	COTG	4.9	Solar Photovoltaic	SUN	PV
2018	10	5199	Devon Energy Production Co	Industrial	Beaver Creek Gas Plant	WY	55278	STG-1	0.9	All Other	WH	ST
2018	10	58468	Dominion Renewable Energy	IPP	Puller Solar	VA	62140	PULL	15.0	Solar Photovoltaic	SUN	PV
2018	10	6455	Duke Energy Florida, LLC	Electric Utility	Crystal River	FL	628	1GTA	251.7	Natural Gas Fired Combined Cycle	NG	CT
2018	10	6455	Duke Energy Florida, LLC	Electric Utility	Crystal River	FL	628	1GTB	251.7	Natural Gas Fired Combined Cycle	NG	CT

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

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
2018	10	6455	Duke Energy Florida, LLC	Electric Utility	Crystal River	FL	628	CC1ST	316.7	Natural Gas Fired Combined Cycle	NG	CA
2018	10	5701	El Paso Electric Co	Electric Utility	Holloman Solar Facility	NM	60301	HPV1	5.0	Solar Photovoltaic	SUN	PV
2018	10	60399	GASNA 6P, LLC	IPP	San Joaquin Solar	CA	60678	SJ1A	18.5	Solar Photovoltaic	SUN	PV
2018	10	49893	Invenergy Services LLC	IPP	Lackawanna Energy Center	PA	60357	GEN2	465.0	Natural Gas Fired Combined Cycle	NG	CS
2018	10	60713	Ku'ia Solar LLC	IPP	Ku'ia Solar	HI	61101	KUIA	2.9	Solar Photovoltaic	SUN	PV
2018	10	11208	Los Angeles Department of Water & Power	Electric Utility	Beacon BESS 1	CA	61431	BCNB1	20.0	Batteries	MWH	BA
2018	10	12341	MidAmerican Energy Co	Electric Utility	Beaver Creek II Wind	IA	62134	GT1	170.0	Onshore Wind Turbine	WND	WT
2018	10	61681	Minisink Solar 1 LLC	IPP	Minisink Solar 1 LLC	NY	62145	MINI1	1.8	Solar Photovoltaic	SUN	PV
2018	10	61101	Minnesota Solar CSG 1, LLC	IPP	Wright Cuddyer CSG	MN	61494	41327	1.0	Solar Photovoltaic	SUN	PV
2018	10	61101	Minnesota Solar CSG 1, LLC	IPP	Wright Cuddyer CSG	MN	61494	41328	1.0	Solar Photovoltaic	SUN	PV
2018	10	61101	Minnesota Solar CSG 1, LLC	IPP	Wright Cuddyer CSG	MN	61494	41329	1.0	Solar Photovoltaic	SUN	PV
2018	10	61101	Minnesota Solar CSG 1, LLC	IPP	Wright Cuddyer CSG	MN	61494	41330	1.0	Solar Photovoltaic	SUN	PV
2018	10	12199	Montana-Dakota Utilities Co	Electric Utility	Thunder Spirit Wind, LLC	ND	58965	2	48.0	Onshore Wind Turbine	WND	WT
2018	10	56990	NJR Clean Energy Ventures Corporation	IPP	Quakertown Solar Farm, LLC	NJ	61965	QKRTN	8.8	Solar Photovoltaic	SUN	PV
2018	10	56990	NJR Clean Energy Ventures Corporation	IPP	Springfield Solar Project	NJ	61907	NJLND	7.5	Solar Photovoltaic	SUN	PV
2018	10	54913	NSTAR Electric Company	Electric Utility	East Springfield Solar PV	MA	62093	REC34	1.4	Solar Photovoltaic	SUN	PV
2018	10	54913	NSTAR Electric Company	Electric Utility	Montague Site 36-Grosolar	MA	62092	REC34	4.1	Solar Photovoltaic	SUN	PV
2018	10	61724	New Mexico Renewable Development LLC	IPP	CNMEC Solar Energy Center	NM	62191	CNMEC	2.0	Solar Photovoltaic	SUN	PV
2018	10	56545	Pattern Operators LP	IPP	Stillwater Wind, LLC	MT	61858	WT	80.0	Onshore Wind Turbine	WND	WT
2018	10	60520	SoCore Energy LLC	IPP	Anoka County MN CONX	MN	62061	PV1	3.4	Solar Photovoltaic	SUN	PV
2018	10	60520	SoCore Energy LLC	IPP	Hampton MN GRE	MN	62060	PV1	2.0	Solar Photovoltaic	SUN	PV
2018	10	61582	USS Kasch Solar LLC	IPP	USS Kasch Solar CSG	MN	61999	USSKA	1.0	Solar Photovoltaic	SUN	PV
2018	10	57081	WGL Energy Systems, Inc	IPP	Barone CSG	MN	62138	SO328	1.0	Solar Photovoltaic	SUN	PV
2018	10	57081	WGL Energy Systems, Inc	IPP	Winegar CSG	MN	62193	SO377	1.0	Solar Photovoltaic	SUN	PV
2018	10	61744	Westminster Renewables, LLC	IPP	Westminster Renewables, LLC	MA	62226	2479	1.5	Solar Photovoltaic	SUN	PV
2018	11	55963	AE Power Services LLC	IPP	Rolling Thunder Wind Farm	SD	57045	2	0.8	Batteries	MWH	BA
2018	11	61012	AES Distributed Energy	IPP	Mattas Farms	NY	62303	MF01	2.0	Solar Photovoltaic	SUN	PV
2018	11	61633	AVS Phase 2 LLC	IPP	Lancaster	CA	62056	LANC	3.0	Solar Photovoltaic	SUN	PV
2018	11	61529	Adams Nielson Solar, LLC	IPP	Adams Nielson Solar	WA	61933	ADAMS	19.2	Solar Photovoltaic	SUN	PV
2018	11	60476	Bluebell Solar, LLC	IPP	Bluebell Solar	TX	60789	UNIT1	30.0	Solar Photovoltaic	SUN	PV
2018	11	61230	CD Arevon USA, Inc.	IPP	Mount Signal Solar Farm 3	CA	61202	MTSG3	252.3	Solar Photovoltaic	SUN	PV
2018	11	61531	Casa Mesa Wind, LLC	IPP	Casa Mesa Wind Energy Center	NM	61925	CMNM	50.9	Onshore Wind Turbine	WND	WT
2018	11	61531	Casa Mesa Wind, LLC	IPP	Casa Mesa Wind Energy Center	NM	61925	CMNMB	1.0	Batteries	MWH	BA
2018	11	61060	Cypress Creek Renewables	IPP	Buckleberry Solar	NC	61693	GEN	52.1	Solar Photovoltaic	SUN	PV
2018	11	61060	Cypress Creek Renewables	IPP	Eddy II	TX	61874	GEN1	10.0	Solar Photovoltaic	SUN	PV
2018	11	61060	Cypress Creek Renewables	IPP	Fox Creek Solar	NC	60624	PV1	50.2	Solar Photovoltaic	SUN	PV
2018	11	61060	Cypress Creek Renewables	IPP	Sterling Solar (TX)	TX	61871	GEN1	10.0	Solar Photovoltaic	SUN	PV
2018	11	61060	Cypress Creek Renewables	IPP	Yellow Jacket	TX	61873	GEN1	5.0	Solar Photovoltaic	SUN	PV
2018	11	61187	DG Minnesota CSG, LLC	IPP	Monticello Project CSG	MN	62105	MONTI	5.0	Solar Photovoltaic	SUN	PV
2018	11	61187	DG Minnesota CSG, LLC	IPP	Schultz CSG	MN	62088	SCHUL	1.8	Solar Photovoltaic	SUN	PV
2018	11	6455	Duke Energy Florida, LLC	Electric Utility	Crystal River	FL	628	2GTA	244.0	Natural Gas Fired Combined Cycle	NG	CT
2018	11	6455	Duke Energy Florida, LLC	Electric Utility	Crystal River	FL	628	2GTB	244.0	Natural Gas Fired Combined Cycle	NG	CT
2018	11	6455	Duke Energy Florida, LLC	Electric Utility	Crystal River	FL	628	CC2ST	328.0	Natural Gas Fired Combined Cycle	NG	CA
2018	11	60252	Friendswood Energy Genco, LLC	IPP	Friendswood Energy	TX	60468	GT-1	117.0	Natural Gas Fired Combustion Turbine	NG	GT
2018	11	61334	Libra Community Solar Garden, LLC	IPP	Libra Community Solar	MN	61709	LIBR	1.0	Solar Photovoltaic	SUN	PV
2018	11	61381	Meadow Lake Wind Farm VI LLC	IPP	Meadow Lake Wind Farm VI LLC	IN	61756	MWLV1	200.4	Onshore Wind Turbine	WND	WT
2018	11	61682	Minisink Solar 2 LLC	IPP	Minisink Community Solar 2 LLC	NY	62146	MINI2	2.0	Solar Photovoltaic	SUN	PV
2018	11	58489	OCI Solar Power	IPP	Ivory Solar	TX	61697	IVORY	50.0	Solar Photovoltaic	SUN	PV
2018	11	61726	Oak Leaf Solar XXVII LLC	IPP	Oak Leaf Solar XXVII LLC	CO	62224	53971	1.5	Solar Photovoltaic	SUN	PV
2018	11	14624	PUD No 2 of Grant County	Electric Utility	Wanapum	WA	3888	8A	122.0	Conventional Hydroelectric	WAT	HY
2018	11	61640	Quarter Horse Farm LLC	IPP	Quarter Horse Solar	NC	62095	PGRF5	4.5	Solar Photovoltaic	SUN	PV
2018	11	61677	Sol Systems	IPP	Red Toad 4451 Buffalo Road, LLC	NC	62131	G4451	2.0	Solar Photovoltaic	SUN	PV
2018	11	61677	Sol Systems	IPP	Red Toad 5840 Buffalo Road, LLC	NC	62204	G5840	2.0	Solar Photovoltaic	SUN	PV
2018	11	17633	Southern Indiana Gas & Elec Co	Electric Utility	Oak Hill Solar Array	IN	61333	OHSA1	2.0	Solar Photovoltaic	SUN	PV
2018	11	17633	Southern Indiana Gas & Elec Co	Electric Utility	Volkman Road Solar Array	IN	61334	VRSA1	2.0	Solar Photovoltaic	SUN	PV
2018	11	60910	Sun Farm V, LLC	IPP	Sun Farm V, LLC	NC	61287	SF5PV	4.8	Solar Photovoltaic	SUN	PV
2018	11	61441	Sun Farm VI, LLC	IPP	Sun Farm VI, LLC	NC	61842	PV1	4.8	Solar Photovoltaic	SUN	PV
2018	11	58658	Sunlight Partners	IPP	Kathleen Solar	NC	60180	PV1	5.0	Solar Photovoltaic	SUN	PV
2018	11	61685	Syncarpha Eagle Nest I, LLC	IPP	Syncarpha Eagle Nest	NM	62149	SYEN1	1.0	Solar Photovoltaic	SUN	PV
2018	11	57081	WGL Energy Systems, Inc	IPP	Bolduan CSG	MN	62194	SO360	1.0	Solar Photovoltaic	SUN	PV
2018	12	60571	AEP Onsite Partners	IPP	Trout Creek Solar	CO	62260	44901	2.0	Solar Photovoltaic	SUN	PV
2018	12	61012	AES Distributed Energy	IPP	Richmond NMCA	RI	62301	RNM02	4.0	Solar Photovoltaic	SUN	PV
2018	12	61812	AES LA FIT Francisco LLC	Commercial	Francisco St. Solar	CA	62287	W7190	1.0	Solar Photovoltaic	SUN	PV
2018	12	61811	AES LA FIT Sun Valley LLC	Commercial	Xebec 1	CA	62286	W7188	1.9	Solar Photovoltaic	SUN	PV
2018	12	60691	AES LAWAI SOLAR, LLC	IPP	AES LAWAI SOLAR	HI	61068	LAWA1	20.0	Solar Photovoltaic	SUN	PV
2018	12	60691	AES LAWAI SOLAR, LLC	IPP	AES LAWAI SOLAR	HI	61068	LAWA2	20.0	Batteries	MWH	BA
2018	12	61542	Abbot Solar, LLC	IPP	Abbot Solar	SC	61936	2	2.0	Solar Photovoltaic	SUN	PV

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

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
2018	12	61514	Agilitas Energy, LLC	IPP	Blydenburgh Solar Project	NY	61900	BLYD	1.5	Solar Photovoltaic	SUN	PV
2018	12	61514	Agilitas Energy, LLC	IPP	Lincoln Ave Solar Project	NY	61899	LINC	2.0	Solar Photovoltaic	SUN	PV
2018	12	60146	Ameresco Federal Solutions	IPP	MCRD Parris Island PV	SC	61956	TBESS	4.0	Batteries	MWH	BA
2018	12	60876	Antelope Expansion 2, LLC	IPP	Antelope Expansion 2	CA	61264	ANTX2	105.0	Solar Photovoltaic	SUN	PV
2018	12	61327	Arcturus Community Solar Garden, LLC	IPP	Arcturus Community Solar	MN	61705	ARCT	1.0	Solar Photovoltaic	SUN	PV
2018	12	61530	Armadillo Flats Wind Project, LLC	IPP	Armadillo Flats Wind Project, LLC	OK	61926	ARM	247.3	Onshore Wind Turbine	WND	WT
2018	12	61838	Aulander Holloman Solar, LLC	IPP	Aulander Holloman Solar, LLC	NC	62340	HOLLO	80.0	Solar Photovoltaic	SUN	PV
2018	12	61328	Auriga Community Solar Garden, LLC	IPP	Auriga Community Solar	MN	61706	AURI	1.0	Solar Photovoltaic	SUN	PV
2018	12	59359	BHE Renewables, LLC	IPP	Walnut Ridge Wind Farm	IL	58694	1	212.0	Onshore Wind Turbine	WND	WT
2018	12	61895	BWC Gibbs Brook, LLC	IPP	BWC Gibbs Brook	MA	62369	62595	4.0	Solar Photovoltaic	SUN	PV
2018	12	61897	BWC Harlow Brook, LLC	IPP	BWC Harlow Brook	MA	62371	62592	1.5	Solar Photovoltaic	SUN	PV
2018	12	61894	BWC Origination 18, LLC	IPP	BWC Origination 18	MA	62368	62591	4.8	Solar Photovoltaic	SUN	PV
2018	12	61898	BWC Pocasset River, LLC	IPP	BWC Pocasset River	MA	62372	62594	1.5	Solar Photovoltaic	SUN	PV
2018	12	61896	BWC Wareham River, LLC	IPP	BWC Wareham River	MA	62370	62593	1.0	Solar Photovoltaic	SUN	PV
2018	12	61703	Ballston Solar LLC	IPP	Ballston Solar LLC	OR	62170	BSPV1	2.2	Solar Photovoltaic	SUN	PV
2018	12	61545	Blacktip Solar, LLC	IPP	Blacktip Solar	SC	61939	5	2.0	Solar Photovoltaic	SUN	PV
2018	12	61799	Bly Solar Center	IPP	Bly Solar Center	OR	62272	BLY	8.0	Solar Photovoltaic	SUN	PV
2018	12	61547	Bond Solar, LLC	IPP	Bond Solar	SC	61941	7	2.0	Solar Photovoltaic	SUN	PV
2018	12	59365	Capital Power Corporation	IPP	New Frontier Wind	ND	59903	GEN	100.0	Onshore Wind Turbine	WND	WT
2018	12	61571	Clara City CSG I, LLC	IPP	Syncarpha Clara City CSG I (Stamer)	MN	61980	SCSG1	1.0	Solar Photovoltaic	SUN	PV
2018	12	56769	Consolidated Edison Development Inc.	IPP	Wistaria Ranch Solar	CA	61750	WICA	100.0	Solar Photovoltaic	SUN	PV
2018	12	60396	Constellation New Energy Inc.	IPP	NIST Solar	MD	62208	PV1	4.0	Solar Photovoltaic	SUN	PV
2018	12	61540	Coolidge Solar I, LLC	IPP	Coolidge Solar 1, LLC	VT	61959	COLS	19.6	Solar Photovoltaic	SUN	PV
2018	12	58840	Copenhagen Wind Farm, LLC	IPP	Copenhagen Wind Farm	NY	58979	CPHGN	79.9	Onshore Wind Turbine	WND	WT
2018	12	58695	Coronal Development Services	IPP	Latitude Solar Center	TN	61412	LATSC	15.0	Solar Photovoltaic	SUN	PV
2018	12	61528	Cumberland Land Holdings, LLC	IPP	Cumberland Land Holdings, LLC	AL	61924	CUMB	14.7	Solar Photovoltaic	SUN	PV
2018	12	61060	Cypress Creek Renewables	IPP	Atood II	SC	61960	GEN1	2.0	Solar Photovoltaic	SUN	PV
2018	12	61060	Cypress Creek Renewables	IPP	Bar D	CO	61886	GEN1	4.0	Solar Photovoltaic	SUN	PV
2018	12	61060	Cypress Creek Renewables	IPP	Bovine	TX	61867	GEN1	10.0	Solar Photovoltaic	SUN	PV
2018	12	61060	Cypress Creek Renewables	IPP	Bronson	TX	61868	GEN1	10.0	Solar Photovoltaic	SUN	PV
2018	12	61060	Cypress Creek Renewables	IPP	Chisum	TX	61810	GEN1	10.0	Solar Photovoltaic	SUN	PV
2018	12	61060	Cypress Creek Renewables	IPP	Copperfield	NC	61882	GEN1	2.0	Solar Photovoltaic	SUN	PV
2018	12	61060	Cypress Creek Renewables	IPP	Gaston II	SC	61961	GEN1	7.5	Solar Photovoltaic	SUN	PV
2018	12	61060	Cypress Creek Renewables	IPP	Hopewell Friends	NC	61883	GEN1	1.3	Solar Photovoltaic	SUN	PV
2018	12	61060	Cypress Creek Renewables	IPP	Morning View	NC	61881	GEN1	2.0	Solar Photovoltaic	SUN	PV
2018	12	61060	Cypress Creek Renewables	IPP	Pinesage	NC	61978	GEN1	5.0	Solar Photovoltaic	SUN	PV
2018	12	61060	Cypress Creek Renewables	IPP	Staunton	IN	61885	GEN1	4.0	Solar Photovoltaic	SUN	PV
2018	12	61060	Cypress Creek Renewables	IPP	West Moore Solar II	TX	61625	GEN1	5.0	Solar Photovoltaic	SUN	PV
2018	12	60370	DG AMP Solar, LLC	IPP	DG AMP Solar Brewster	OH	61818	AMPBR	1.9	Solar Photovoltaic	SUN	PV
2018	12	61187	DG Minnesota CSG, LLC	IPP	Hammer CSG	MN	62099	HAMME	4.8	Solar Photovoltaic	SUN	PV
2018	12	61187	DG Minnesota CSG, LLC	IPP	Tiller CSG	MN	62098	TILLE	5.0	Solar Photovoltaic	SUN	PV
2018	12	5416	Duke Energy Carolinas, LLC	Electric Utility	Woodleaf Solar Facility	NC	62304	PV1	6.0	Solar Photovoltaic	SUN	PV
2018	12	6455	Duke Energy Florida, LLC	Electric Utility	Hamilton Solar Power Plant	FL	61807	PV1	74.9	Solar Photovoltaic	SUN	PV
2018	12	56215	E ON Climate Renewables N America LLC	IPP	Stella Wind Farm	TX	59063	WT1	201.0	Onshore Wind Turbine	WND	WT
2018	12	58970	Ecoplexus, Inc	IPP	Manning PV 1	NC	59520	MANN	5.0	Solar Photovoltaic	SUN	PV
2018	12	60147	Enerparc Solar Development, LLC	IPP	Gastonia Solar Center	NC	60359	60916	4.3	Solar Photovoltaic	SUN	PV
2018	12	61579	FL Solar 5, LLC	IPP	Citrus Ridge Solar	FL	61988	FL501	52.0	Solar Photovoltaic	SUN	PV
2018	12	61548	Gary Solar, LLC	IPP	Gary Solar	SC	61942	8	2.0	Solar Photovoltaic	SUN	PV
2018	12	61443	Good Fellow Solar 1 PH1, LLC	IPP	Target Woodland Solar Project	CA	62246	TWSP	1.8	Solar Photovoltaic	SUN	PV
2018	12	60878	Green Beanworks B, LLC	IPP	Green Beanworks B PV	CA	61339	GBWXB	3.0	Solar Photovoltaic	SUN	PV
2018	12	61674	Greenskies	IPP	Roseville Solar	CA	62114	ROSE	1.0	Solar Photovoltaic	SUN	PV
2018	12	61214	Heartland Divide Wind Project, LLC	IPP	Heartland Divide Wind Project, LLC	IA	61609	1	103.5	Onshore Wind Turbine	WND	WT
2018	12	9234	Indiana Municipal Power Agency	Electric Utility	Rensselaer Solar Site 2	IN	61799	SREN2	4.0	Solar Photovoltaic	SUN	PV
2018	12	9234	Indiana Municipal Power Agency	Electric Utility	Richmond Solar Site 2	IN	61729	SRIC2	7.5	Solar Photovoltaic	SUN	PV
2018	12	49893	Invenergy Services LLC	IPP	Lackawanna Energy Center	PA	60357	GEN3	465.0	Natural Gas Fired Combined Cycle	NG	CS
2018	12	49893	Invenergy Services LLC	IPP	Upstream Wind Energy LLC	NE	61784	UWE	202.5	Onshore Wind Turbine	WND	WT
2018	12	61694	John Laing US Solar Corp.	IPP	Innovative Solar 54	NC	59669	IS054	50.0	Solar Photovoltaic	SUN	PV
2018	12	61694	John Laing US Solar Corp.	IPP	Innovative Solar 67	NC	59678	IS067	33.3	Solar Photovoltaic	SUN	PV
2018	12	61798	Kern Highschool District Solar, LLC	Commercial	Frontier HS Solar Project	CA	62275	FHSSP	1.4	Solar Photovoltaic	SUN	PV
2018	12	61798	Kern Highschool District Solar, LLC	Commercial	Liberty HS Solar Project	CA	62274	LHSSP	1.2	Solar Photovoltaic	SUN	PV
2018	12	61704	Labish Solar LLC	IPP	Labish Solar LLC	OR	62171	LSPV2	2.2	Solar Photovoltaic	SUN	PV
2018	12	61342	Leo Community Solar, LLC	IPP	Leo Community Solar	MN	61713	LEO	1.0	Solar Photovoltaic	SUN	PV
2018	12	58581	Lightning Dock Geothermal HI-01, LLC	IPP	Lightning Dock Geothermal HI-01, LLC	NM	58629	GEN-5	7.0	Geothermal	GEO	BT
2018	12	61133	Lorenzo Wind, LLC	IPP	Lorenzo Wind	TX	59244	FIBE1	80.0	Onshore Wind Turbine	WND	WT
2018	12	11208	Los Angeles Department of Water & Power	IPP	CFW Solar X LLC - Vaughn	CA	62378	VSCFW	1.6	Solar Photovoltaic	SUN	PV
2018	12	61373	MERIT SI	IPP	Rotor Clip	NJ	61751	RCLIP	2.7	Solar Photovoltaic	SUN	PV
2018	12	12341	MidAmerican Energy Co	Electric Utility	Arbor Hill Wind Farm	IA	62132	WT1	250.0	Onshore Wind Turbine	WND	WT

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

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
2018	12	12341	MidAmerican Energy Co	Electric Utility	Ivester Wind Farm	IA	61911	WT1	90.8	Onshore Wind Turbine	WND	WT
2018	12	12341	MidAmerican Energy Co	Electric Utility	North English	IA	62133	GT1	200.0	Onshore Wind Turbine	WND	WT
2018	12	12341	MidAmerican Energy Co	Electric Utility	Orient Wind Farm	IA	61077	1	102.0	Onshore Wind Turbine	WND	WT
2018	12	61004	Midway Solar LLC	IPP	Midway Solar - TX	TX	61368	PV1	182.0	Solar Photovoltaic	SUN	PV
2018	12	61458	Minco Wind IV, LLC	IPP	Minco Wind IV, LLC	OK	61836	MIV	130.0	Onshore Wind Turbine	WND	WT
2018	12	61487	Montevideo Solar LLC	IPP	Montevideo Solar LLC, CSG	MN	61870	MONTE	5.0	Solar Photovoltaic	SUN	PV
2018	12	58847	NRG California Peaker Operations LLC	IPP	Carlsbad Energy Center	CA	59002	CEC 6	105.5	Natural Gas Fired Combustion Turbine	NG	GT
2018	12	58847	NRG California Peaker Operations LLC	IPP	Carlsbad Energy Center	CA	59002	CEC 7	105.5	Natural Gas Fired Combustion Turbine	NG	GT
2018	12	58847	NRG California Peaker Operations LLC	IPP	Carlsbad Energy Center	CA	59002	CEC 8	105.5	Natural Gas Fired Combustion Turbine	NG	GT
2018	12	58847	NRG California Peaker Operations LLC	IPP	Carlsbad Energy Center	CA	59002	CEC 9	105.5	Natural Gas Fired Combustion Turbine	NG	GT
2018	12	58847	NRG California Peaker Operations LLC	IPP	Carlsbad Energy Center	CA	59002	CEC10	105.5	Natural Gas Fired Combustion Turbine	NG	GT
2018	12	54913	NSTAR Electric Company	Electric Utility	Hatfield Solar PV	MA	62091	LG395	3.6	Solar Photovoltaic	SUN	PV
2018	12	54913	NSTAR Electric Company	Electric Utility	Wareham Solar PV	MA	62055	LG395	3.3	Solar Photovoltaic	SUN	PV
2018	12	61080	North Smithfield Solar Power 1, LLC	IPP	North Smithfield Solar Power 1	RI	61461	NSS01	2.0	Solar Photovoltaic	SUN	PV
2018	12	61763	Oak Leaf Solar XXI	IPP	Oak Leaf Solar XXI	CO	62243	53964	1.5	Solar Photovoltaic	SUN	PV
2018	12	61765	Oak Leaf Solar XXV LLC	IPP	Oak Leaf Solar XXV LLC	CO	62245	53968	1.5	Solar Photovoltaic	SUN	PV
2018	12	61761	Oak Leaf Solar XXX LLC	IPP	Oak Leaf Solar XXX LLC, Community Solar Garden	CO	62239	53963	1.5	Solar Photovoltaic	SUN	PV
2018	12	61764	Oak Leaf Solar XXXI LLC	IPP	Oak Leaf Solar XXXI LLC, Community Solar Garden	CO	62244	53977	1.5	Solar Photovoltaic	SUN	PV
2018	12	34691	Ormat Nevada Inc	Commercial	McGinness Hills 3	NV	61912	OEC31	17.0	Geothermal	GEO	BT
2018	12	34691	Ormat Nevada Inc	Commercial	McGinness Hills 3	NV	61912	OEC32	20.0	Geothermal	GEO	BT
2018	12	61603	Page Solar Farm, LLC	IPP	Page Solar	NC	62018	PGR1	1.6	Solar Photovoltaic	SUN	PV
2018	12	61815	Palmer's Creek Wind Farm, LLC	IPP	Palmer's Creek Wind Farm, LLC	MN	62291	PCWF	44.6	Onshore Wind Turbine	WND	WT
2018	12	59771	Pecan Solar LLC	IPP	Pecan Solar	NC	60030	PECAN	74.9	Solar Photovoltaic	SUN	PV
2018	12	61566	Peony Solar, LLC	IPP	Peony Solar	SC	61976	PGRG1	39.0	Solar Photovoltaic	SUN	PV
2018	12	61353	Philadelphia Authority for Industrial Development	IPP	Navy Yard Peaker Station	PA	61737	GEN4	2.0	Natural Gas Internal Combustion Engine	NG	IC
2018	12	61845	Polk County Renewables, LLC	IPP	Polk County Renewables, LLC	NE	62333	T-1	2.5	Onshore Wind Turbine	WND	WT
2018	12	15248	Portland General Electric Co	Electric Utility	Timothy Lake Powerhouse	OR	60868	1	1.2	Conventional Hydroelectric	WAT	HY
2018	12	61537	Pratt Wind, LLC	IPP	Pratt Wind, LLC	KS	61957	PW	220.0	Onshore Wind Turbine	WND	WT
2018	12	61573	Prinsburg CSG I, LLC	IPP	Syncarpha Prinsburg CSG (Ledeboer)	MN	61979	SYPRN	1.0	Solar Photovoltaic	SUN	PV
2018	12	15466	Public Service Co of Colorado	Electric Utility	Rush Creek Wind	CO	60619	GEN1	576.0	Onshore Wind Turbine	WND	WT
2018	12	61494	Radian Generation	IPP	NorWest Energy 4, LLC	OR	62268	NWE4	5.6	Solar Photovoltaic	SUN	PV
2018	12	61554	River Solar, LLC	IPP	River Solar	SC	61947	12	2.0	Solar Photovoltaic	SUN	PV
2018	12	61691	SR Jonesborough II, LLC	IPP	SR Jonesborough	TN	62173	JONES	4.4	Solar Photovoltaic	SUN	PV
2018	12	60334	SR Millington, LLC	IPP	Millington Solar Farm	TN	60560	MILL	53.0	Solar Photovoltaic	SUN	PV
2018	12	61675	SS PA II PSU LLC	IPP	University Park Solar	PA	62119	PSUPV	1.5	Solar Photovoltaic	SUN	PV
2018	12	61333	Sagitta Community Solar Garden, LLC	IPP	Sagitta Community Solar	MN	61708	SAGI	1.0	Solar Photovoltaic	SUN	PV
2018	12	61555	Sapphire Solar, LLC	IPP	Sapphire Solar	SC	61948	17	2.0	Solar Photovoltaic	SUN	PV
2018	12	60520	SoCore Energy LLC	IPP	Athens MN CONX	MN	62062	PV1	6.6	Solar Photovoltaic	SUN	PV
2018	12	61677	Sol Systems	IPP	Bay Branch Solar	NC	60601	BBSOL	5.0	Solar Photovoltaic	SUN	PV
2018	12	61677	Sol Systems	IPP	Nickelson Solar, LLC	NC	62205	GNICK	5.3	Solar Photovoltaic	SUN	PV
2018	12	61677	Sol Systems	IPP	Shelter Solar	NC	60156	PV1	5.0	Solar Photovoltaic	SUN	PV
2018	12	61766	Solar Star California LXIII, LLC	IPP	County of San Diego SBRC	CA	62242	SBRC	1.3	Solar Photovoltaic	SUN	PV
2018	12	61591	Solar University, LLC	IPP	UC Merced Solar	CA	61995	UCMBA	0.5	Batteries	MWH	BA
2018	12	61591	Solar University, LLC	IPP	UC Merced Solar	CA	61995	UCMPV	4.3	Solar Photovoltaic	SUN	PV
2018	12	61556	South Solar, LLC	IPP	South Solar	SC	61949	13	2.0	Solar Photovoltaic	SUN	PV
2018	12	61506	Stryker 22, L.L.C.	IPP	Stryker 22, L.L.C.	NJ	61891	EDGRD	19.8	Batteries	MWH	BA
2018	12	60495	Sunpin Holdings, LLC	IPP	Colgreen North Shore Solar Farm	CA	60825	CNS1	74.8	Solar Photovoltaic	SUN	PV
2018	12	61005	Sweetwater Solar LLC	IPP	Sweetwater Solar	WY	61369	PV1	92.0	Solar Photovoltaic	SUN	PV
2018	12	61527	Tahoka Wind, LLC	IPP	Tahoka Wind	TX	61921	TAH	300.0	Onshore Wind Turbine	WND	WT
2018	12	18454	Tampa Electric Co	Electric Utility	Grange Hall Solar	FL	61656	PV1	61.0	Solar Photovoltaic	SUN	PV
2018	12	18454	Tampa Electric Co	Electric Utility	Lithia Solar	FL	61663	GEN1	74.5	Solar Photovoltaic	SUN	PV
2018	12	60249	Tenaska Pennsylvania Partners, LLC	IPP	Tenaska Westmoreland Generating Station	PA	60464	CTG1	276.0	Natural Gas Fired Combined Cycle	NG	CT
2018	12	60249	Tenaska Pennsylvania Partners, LLC	IPP	Tenaska Westmoreland Generating Station	PA	60464	CTG2	276.0	Natural Gas Fired Combined Cycle	NG	CT
2018	12	60249	Tenaska Pennsylvania Partners, LLC	IPP	Tenaska Westmoreland Generating Station	PA	60464	STG1	374.0	Natural Gas Fired Combined Cycle	NG	CA
2018	12	2770	Terra-Gen Operating Co LLC	IPP	Voyager Wind II	CA	61582	VYGR2	128.7	Onshore Wind Turbine	WND	WT
2018	12	2770	Terra-Gen Operating Co LLC	IPP	Voyager Wind III	CA	61583	VYGR3	43.2	Onshore Wind Turbine	WND	WT
2018	12	2770	Terra-Gen Operating Co LLC	IPP	Voyager Wind IV	CA	61584	VYGR4	21.6	Onshore Wind Turbine	WND	WT
2018	12	61436	Titan Solar, LLC	IPP	Titan Solar	CO	61811	PCEC	50.0	Solar Photovoltaic	SUN	PV
2018	12	59056	Tri Global Energy, LLC	IPP	Blue Cloud Renewable Energy Project, LLC	TX	60270	WT1	148.4	Onshore Wind Turbine	WND	WT
2018	12	61330	Turtle Creek Wind Farm LLC	IPP	Turtle Creek Wind Farm LLC	IA	61638	TC1	200.1	Onshore Wind Turbine	WND	WT
2018	12	61580	USS Big Lake 1 LLC	IPP	USS Big Lake 1 Solar CSG	MN	61997	USSBL	1.0	Solar Photovoltaic	SUN	PV
2018	12	61626	USS Dubhe Solar LLC	IPP	USS Dubhe Solar CSG	MN	62048	USSDB	1.0	Solar Photovoltaic	SUN	PV
2018	12	61581	USS Good Solar LLC	IPP	USS Good Solar CSG	MN	61998	USSGO	1.0	Solar Photovoltaic	SUN	PV
2018	12	61628	USS Nillie Corn Solar LLC	IPP	USS Nillie Corn Solar CSG	MN	62046	USSNC	1.0	Solar Photovoltaic	SUN	PV
2018	12	61583	USS Rockpoint Solar LLC	IPP	USS Rockpoint Solar CSG	MN	62000	USSRP	1.0	Solar Photovoltaic	SUN	PV
2018	12	61630	USS Solar Dawn LLC	IPP	USS Solar Dawn CSG	MN	62044	USSSD	1.0	Solar Photovoltaic	SUN	PV

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

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
2018	12	19499	United Power, Inc	Electric Utility	I25 Battery Storage	CO	62373	I25BA	4.0	Batteries	MWH	BA
2018	12	60597	Violet Solar, LLC	IPP	Violet Solar	NC	60961	PV1	5.0	Solar Photovoltaic	SUN	PV
2018	12	19876	Virginia Electric & Power Co	Electric Utility	Greensville County Power Station	VA	59913	CT01	324.4	Natural Gas Fired Combined Cycle	NG	CT
2018	12	19876	Virginia Electric & Power Co	Electric Utility	Greensville County Power Station	VA	59913	CT02	324.4	Natural Gas Fired Combined Cycle	NG	CT
2018	12	19876	Virginia Electric & Power Co	Electric Utility	Greensville County Power Station	VA	59913	CT03	324.4	Natural Gas Fired Combined Cycle	NG	CT
2018	12	19876	Virginia Electric & Power Co	Electric Utility	Greensville County Power Station	VA	59913	ST01	611.8	Natural Gas Fired Combined Cycle	NG	CA
2018	12	61645	Warrenton Solar I LLC	IPP	Warrenton I Solar	NC	62100	PGR14	4.9	Solar Photovoltaic	SUN	PV
2018	12	61291	Wildcat Ranch Wind Project, LLC	IPP	Wildcat Ranch Wind Project	TX	61674	WT	150.0	Onshore Wind Turbine	WND	WT
2018	12	61560	Willis Solar, LLC	IPP	Willis Solar	SC	61953	16	2.0	Solar Photovoltaic	SUN	PV
2018	12	61366	Woods Hill Solar, LLC	IPP	Woods Hill Solar	CT	61736	PV1	20.0	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, Month, and Year

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
2018	1	221	Alaska Village Elec Coop, Inc	Electric Utility	Brevig Mission	AK	60260	3	0.5	Petroleum Liquids	DFO	IC
2018	1	4329	Copper Valley Elec Assn, Inc	Electric Utility	Valdez	AK	6306	7	2.8	Petroleum Liquids	DFO	GT
2018	1	9617	JEA	Electric Utility	St Johns River Power Park	FL	207	1	626.0	Conventional Steam Coal	BIT	ST
2018	1	9617	JEA	Electric Utility	St Johns River Power Park	FL	207	2	626.0	Conventional Steam Coal	BIT	ST
2018	1	55983	Luminant Generation Company LLC	IPP	Monticello	TX	6147	1	535.0	Conventional Steam Coal	SUB	ST
2018	1	55983	Luminant Generation Company LLC	IPP	Monticello	TX	6147	2	535.0	Conventional Steam Coal	SUB	ST
2018	1	55983	Luminant Generation Company LLC	IPP	Monticello	TX	6147	3	795.0	Conventional Steam Coal	SUB	ST
2018	1	55983	Luminant Generation Company LLC	IPP	Sandow No 4	TX	6648	4	600.0	Conventional Steam Coal	LIG	ST
2018	1	55983	Luminant Generation Company LLC	IPP	Sandow No 5	TX	52071	5	600.0	Conventional Steam Coal	LIG	ST
2018	1	58247	National Centers for Animal Health	Commercial	NCAH Central Utility Plant	IA	58265	S-7A	1.0	Natural Gas Fired Combustion Turbine	NG	GT
2018	1	17887	St Joseph's Hospital	Commercial	St Josephs Hospital	FL	54534	0001	1.6	Natural Gas Internal Combustion Engine	NG	IC
2018	1	5677	Waste Energy Services Inc	Electric CHP	Waste Energy Services	MI	50077	CAT1	0.5	Landfill Gas	LFG	IC
2018	1	5677	Waste Energy Services Inc	Electric CHP	Waste Energy Services	MI	50077	CAT2	0.3	Landfill Gas	LFG	IC
2018	1	5677	Waste Energy Services Inc	Electric CHP	Waste Energy Services	MI	50077	CAT3	0.3	Landfill Gas	LFG	IC
2018	1	5677	Waste Energy Services Inc	Electric CHP	Waste Energy Services	MI	50077	CAT4	0.3	Landfill Gas	LFG	IC
2018	2	7011	Gas Recovery Services-IL Inc	IPP	Mallard Lake Electric	IL	55592	1	3.8	Landfill Gas	LFG	CT
2018	2	7011	Gas Recovery Services-IL Inc	IPP	Mallard Lake Electric	IL	55592	2	3.8	Landfill Gas	LFG	CT
2018	2	7011	Gas Recovery Services-IL Inc	IPP	Mallard Lake Electric	IL	55592	4	7.6	Landfill Gas	LFG	CA
2018	2	55983	Luminant Generation Company LLC	IPP	Big Brown	TX	3497	1	606.0	Conventional Steam Coal	SUB	ST
2018	2	55983	Luminant Generation Company LLC	IPP	Big Brown	TX	3497	2	602.0	Conventional Steam Coal	SUB	ST
2018	2	15908	NRG California South LP	IPP	Mandalay	CA	345	03	130.0	Natural Gas Fired Combustion Turbine	NG	GT
2018	2	15908	NRG California South LP	IPP	Mandalay	CA	345	1	215.0	Natural Gas Steam Turbine	NG	ST
2018	2	15908	NRG California South LP	IPP	Mandalay	CA	345	2	215.0	Natural Gas Steam Turbine	NG	ST
2018	2	17633	Southern Indiana Gas & Elec Co	Electric Utility	Broadway (IN)	IN	1011	1	50.0	Natural Gas Fired Combustion Turbine	NG	GT
2018	2	56772	TX LFG Energy, LP	IPP	Atascosita	TX	55526	GEN1	1.7	Landfill Gas	LFG	IC
2018	2	56772	TX LFG Energy, LP	IPP	Atascosita	TX	55526	GEN2	1.7	Landfill Gas	LFG	IC
2018	2	56772	TX LFG Energy, LP	IPP	Atascosita	TX	55526	GEN3	1.7	Landfill Gas	LFG	IC
2018	2	56772	TX LFG Energy, LP	IPP	Atascosita	TX	55526	GEN4	1.7	Landfill Gas	LFG	IC
2018	2	56772	TX LFG Energy, LP	IPP	Atascosita	TX	55526	GEN5	1.7	Landfill Gas	LFG	IC
2018	2	56772	TX LFG Energy, LP	IPP	Atascosita	TX	55526	GEN6	1.7	Landfill Gas	LFG	IC
2018	2	57305	Wright Patterson AFB	Commercial	Heat Plant 770	OH	57926	HP	0.0	Natural Gas Steam Turbine	NG	ST
2018	2	57305	Wright Patterson AFB	Commercial	Heat Plant 770	OH	57926	LP	0.0	Natural Gas Steam Turbine	NG	ST
2018	3	16873	City of Sebewaing - (MI)	Electric Utility	Pine Street	MI	7806	1	1.0	Natural Gas Internal Combustion Engine	NG	IC
2018	3	16873	City of Sebewaing - (MI)	Electric Utility	Pine Street	MI	7806	2	1.0	Natural Gas Internal Combustion Engine	NG	IC
2018	3	16873	City of Sebewaing - (MI)	Electric Utility	Pine Street	MI	7806	3	1.0	Petroleum Liquids	DFO	IC
2018	3	16873	City of Sebewaing - (MI)	Electric Utility	Pine Street	MI	7806	4	1.0	Petroleum Liquids	DFO	IC
2018	3	16873	City of Sebewaing - (MI)	Electric Utility	Pine Street	MI	7806	5	1.2	Natural Gas Internal Combustion Engine	NG	IC
2018	3	16873	City of Sebewaing - (MI)	Electric Utility	Pine Street	MI	7806	6	1.2	Natural Gas Internal Combustion Engine	NG	IC
2018	3	12686	Mississippi Power Co	Electric Utility	Jack Watson	MS	2049	3	107.0	Natural Gas Steam Turbine	NG	ST
2018	3	12199	Montana-Dakota Utilities Co	Electric Utility	Portable Generator 1	ND	59196	IC1	2.0	Petroleum Liquids	DFO	IC
2018	3	17164	Sierra Pacific Industries Inc	Industrial	Sierra Pacific Sonora	CA	54517	GEN2	6.0	Wood/Wood Waste Biomass	WDS	ST
2018	3	18642	Tennessee Valley Authority	Electric Utility	Allen	TN	3393	1	247.0	Conventional Steam Coal	SUB	ST
2018	3	18642	Tennessee Valley Authority	Electric Utility	Allen	TN	3393	2	247.0	Conventional Steam Coal	SUB	ST
2018	3	18642	Tennessee Valley Authority	Electric Utility	Allen	TN	3393	3	247.0	Conventional Steam Coal	SUB	ST
2018	4	221	Alaska Village Elec Coop, Inc	Electric Utility	Hooper Bay	AK	6319	3A	0.3	Petroleum Liquids	DFO	IC
2018	4	221	Alaska Village Elec Coop, Inc	Electric Utility	Pilot Station	AK	57058	UNIT1	0.4	Petroleum Liquids	DFO	IC
2018	4	3913	City of Colby - (KS)	Electric Utility	Colby City of	KS	1272	3	1.8	Petroleum Liquids	DFO	IC
2018	4	11460	City of Macon - (MO)	Electric Utility	Macon	MO	2141	3	4.6	Petroleum Liquids	DFO	IC
2018	4	59936	Georgia-Pacific Consumer Operations (Camas) LLC	Industrial	Consumer Operations LLC	WA	57759	STG1	16.3	Wood/Wood Waste Biomass	BLQ	ST
2018	4	20847	Wisconsin Electric Power Co	Electric Utility	Pleasant Prairie	WI	6170	1	594.0	Conventional Steam Coal	RC	ST
2018	4	20847	Wisconsin Electric Power Co	Electric Utility	Pleasant Prairie	WI	6170	2	594.0	Conventional Steam Coal	RC	ST
2018	4	20847	Wisconsin Electric Power Co	Electric Utility	Pleasant Prairie	WI	6170	3	2.0	Petroleum Liquids	DFO	IC
2018	5	1515	City of Bellevue - (IA)	Electric Utility	Bellevue	IA	1126	1	0.5	Petroleum Liquids	DFO	IC
2018	5	57017	DOE National Renewable Energy Laboratory	Commercial	DOE Golden NWTC Turbine Side	CO	57693	ALSTO	3.0	Onshore Wind Turbine	WND	WT
2018	5	5416	Duke Energy Carolinas, LLC	Electric Utility	Great Falls (SC)	SC	3259	3	3.0	Conventional Hydroelectric	WAT	HY
2018	5	5416	Duke Energy Carolinas, LLC	Electric Utility	Great Falls (SC)	SC	3259	4	3.0	Conventional Hydroelectric	WAT	HY
2018	5	5416	Duke Energy Carolinas, LLC	Electric Utility	Great Falls (SC)	SC	3259	7	3.0	Conventional Hydroelectric	WAT	HY
2018	5	5416	Duke Energy Carolinas, LLC	Electric Utility	Great Falls (SC)	SC	3259	8	3.0	Conventional Hydroelectric	WAT	HY
2018	5	5416	Duke Energy Carolinas, LLC	Electric Utility	Rocky Creek	SC	3266	1	2.9	Conventional Hydroelectric	WAT	HY
2018	5	5416	Duke Energy Carolinas, LLC	Electric Utility	Rocky Creek	SC	3266	2	2.9	Conventional Hydroelectric	WAT	HY
2018	5	5416	Duke Energy Carolinas, LLC	Electric Utility	Rocky Creek	SC	3266	3	2.9	Conventional Hydroelectric	WAT	HY
2018	5	5416	Duke Energy Carolinas, LLC	Electric Utility	Rocky Creek	SC	3266	4	2.9	Conventional Hydroelectric	WAT	HY
2018	5	5416	Duke Energy Carolinas, LLC	Electric Utility	Rocky Creek	SC	3266	5	4.8	Conventional Hydroelectric	WAT	HY
2018	5	5416	Duke Energy Carolinas, LLC	Electric Utility	Rocky Creek	SC	3266	6	4.8	Conventional Hydroelectric	WAT	HY
2018	5	5416	Duke Energy Carolinas, LLC	Electric Utility	Rocky Creek	SC	3266	7	2.9	Conventional Hydroelectric	WAT	HY
2018	5	5416	Duke Energy Carolinas, LLC	Electric Utility	Rocky Creek	SC	3266	8	2.9	Conventional Hydroelectric	WAT	HY
2018	5	3046	Duke Energy Progress - (NC)	Electric Utility	Darlington County	SC	3250	5	51.0	Natural Gas Fired Combustion Turbine	NG	GT



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

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
2018	5	57400	Evergreen Community Power, LLC	Industrial	Evergreen Community Power	PA	58023	ECP	25.0	Wood/Wood Waste Biomass	WDS	ST
2018	5	9205	Illinois Electrical Gen Partn	IPP	Morris Genco LLC	IL	55774	MO4	1.0	Landfill Gas	LFG	IC
2018	5	9205	Illinois Electrical Gen Partn	IPP	Morris Genco LLC	IL	55774	MO5	1.0	Landfill Gas	LFG	IC
2018	5	10071	Kauai Island Utility Cooperative	Electric Utility	KRS II Koloa Solar	HI	58640	BESS3	1.5	Batteries	MWH	BA
2018	5	15908	NRG California South LP	IPP	Etiwanda Generating Station	CA	331	3	320.0	Natural Gas Steam Turbine	NG	ST
2018	5	15908	NRG California South LP	IPP	Etiwanda Generating Station	CA	331	4	320.0	Natural Gas Steam Turbine	NG	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	60415	CP Crane Power, LLC	IPP	CP Crane Power, LLC	MD	1552	1	190.0	Conventional Steam Coal	SUB	ST
2018	6	60415	CP Crane Power, LLC	IPP	CP Crane Power, LLC	MD	1552	2	195.0	Conventional Steam Coal	SUB	ST
2018	6	60415	CP Crane Power, LLC	IPP	CP Crane Power, LLC	MD	1552	GT1	14.0	Petroleum Liquids	DFO	GT
2018	6	4922	Dayton Power & Light Co	Electric Utility	J M Stuart	OH	2850	2	577.0	Conventional Steam Coal	BIT	ST
2018	6	4922	Dayton Power & Light Co	Electric Utility	J M Stuart	OH	2850	3	577.0	Conventional Steam Coal	BIT	ST
2018	6	4922	Dayton Power & Light Co	Electric Utility	J M Stuart	OH	2850	4	577.0	Conventional Steam Coal	BIT	ST
2018	6	4922	Dayton Power & Light Co	Electric Utility	J M Stuart	OH	2850	D1	2.2	Petroleum Liquids	DFO	IC
2018	6	4922	Dayton Power & Light Co	Electric Utility	J M Stuart	OH	2850	D2	2.2	Petroleum Liquids	DFO	IC
2018	6	4922	Dayton Power & Light Co	Electric Utility	J M Stuart	OH	2850	D3	2.2	Petroleum Liquids	DFO	IC
2018	6	4922	Dayton Power & Light Co	Electric Utility	J M Stuart	OH	2850	D4	2.2	Petroleum Liquids	DFO	IC
2018	6	4922	Dayton Power & Light Co	Electric Utility	Killen Station	OH	6031	2	600.0	Conventional Steam Coal	BIT	ST
2018	6	4922	Dayton Power & Light Co	Electric Utility	Killen Station	OH	6031	GT1	18.0	Petroleum Liquids	DFO	GT
2018	6	15470	Duke Energy Indiana, LLC	Electric Utility	Connersville	IN	1002	1	37.0	Petroleum Liquids	DFO	GT
2018	6	15470	Duke Energy Indiana, LLC	Electric Utility	Connersville	IN	1002	2	37.0	Petroleum Liquids	DFO	GT
2018	6	15470	Duke Energy Indiana, LLC	Electric Utility	Miami Wabash	IN	1006	1	14.0	Petroleum Liquids	DFO	GT
2018	6	15470	Duke Energy Indiana, LLC	Electric Utility	Miami Wabash	IN	1006	2	12.0	Petroleum Liquids	DFO	GT
2018	6	15470	Duke Energy Indiana, LLC	Electric Utility	Miami Wabash	IN	1006	3	12.0	Petroleum Liquids	DFO	GT
2018	6	15470	Duke Energy Indiana, LLC	Electric Utility	Miami Wabash	IN	1006	5	14.0	Petroleum Liquids	DFO	GT
2018	6	15470	Duke Energy Indiana, LLC	Electric Utility	Miami Wabash	IN	1006	6	12.0	Petroleum Liquids	DFO	GT
2018	6	12685	Entergy Mississippi Inc	Electric Utility	Baxter Wilson	MS	2050	2	530.7	Natural Gas Steam Turbine	NG	ST
2018	6	12685	Entergy Mississippi Inc	Electric Utility	Rex Brown	MS	2053	3	29.3	Natural Gas Steam Turbine	NG	ST
2018	6	3303	Florida Power Development	IPP	Florida Power Development	FL	10333	GEN1	66.0	Other Waste Biomass	OBS	ST
2018	6	7651	Greenwood Utilities Comm	Electric Utility	Henderson	MS	2062	1	11.0	Natural Gas Steam Turbine	NG	ST
2018	6	7651	Greenwood Utilities Comm	Electric Utility	Henderson	MS	2062	3	17.9	Natural Gas Steam Turbine	NG	ST
2018	6	7651	Greenwood Utilities Comm	Electric Utility	Henderson	MS	2062	H10	1.3	Natural Gas Internal Combustion Engine	NG	IC
2018	6	7651	Greenwood Utilities Comm	Electric Utility	Henderson	MS	2062	H11	1.3	Natural Gas Internal Combustion Engine	NG	IC
2018	6	7651	Greenwood Utilities Comm	Electric Utility	Henderson	MS	2062	H2	13.0	Natural Gas Fired Combustion Turbine	NG	GT
2018	6	7651	Greenwood Utilities Comm	Electric Utility	Henderson	MS	2062	H4	1.8	Petroleum Liquids	DFO	IC
2018	6	7651	Greenwood Utilities Comm	Electric Utility	Henderson	MS	2062	H5	1.8	Petroleum Liquids	DFO	IC
2018	6	7651	Greenwood Utilities Comm	Electric Utility	Henderson	MS	2062	H6	1.8	Petroleum Liquids	DFO	IC
2018	6	7651	Greenwood Utilities Comm	Electric Utility	Henderson	MS	2062	H7	1.8	Petroleum Liquids	DFO	IC
2018	6	7651	Greenwood Utilities Comm	Electric Utility	Henderson	MS	2062	H8	1.8	Petroleum Liquids	DFO	IC
2018	6	7651	Greenwood Utilities Comm	Electric Utility	Henderson	MS	2062	H9	1.3	Natural Gas Internal Combustion Engine	NG	IC
2018	6	8631	Hillsdale Board of Public Wks	Electric Utility	Hillsdale	MI	1829	2	1.9	Petroleum Liquids	DFO	IC
2018	6	8631	Hillsdale Board of Public Wks	Electric Utility	Hillsdale	MI	1829	3	2.4	Natural Gas Internal Combustion Engine	NG	IC
2018	6	8631	Hillsdale Board of Public Wks	Electric Utility	Hillsdale	MI	1829	4	3.7	Natural Gas Internal Combustion Engine	NG	IC
2018	6	9397	International Turbine Res Inc	IPP	Dinosaur Point	CA	10005	WTGS	17.0	Onshore Wind Turbine	WND	WT
2018	6	9417	Interstate Power and Light Co	Electric Utility	Milton L Kapp	IA	1048	2	112.5	Natural Gas Steam Turbine	NG	ST
2018	6	9417	Interstate Power and Light Co	Electric Utility	Red Cedar	IA	7595	1	13.0	Natural Gas Fired Combustion Turbine	NG	GT
2018	6	11217	Los Angeles County Sanitation	IPP	Commerce Refuse To Energy	CA	10090	GEN1	10.0	Municipal Solid Waste	MSW	ST
2018	6	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	6	56516	Morris Energy Operations Company, LLC	Electric CHP	Bayonne Plant Holding LLC	NJ	50497	GTG2		Natural Gas Fired Combined Cycle	NG	CT
2018	6	56516	Morris Energy Operations Company, LLC	Electric CHP	Bayonne Plant Holding LLC	NJ	50497	GTG3		Natural Gas Fired Combined Cycle	NG	CT
2018	6	56516	Morris Energy Operations Company, LLC	Electric CHP	Bayonne Plant Holding LLC	NJ	50497	STG1		Natural Gas Fired Combined Cycle	NG	CA
2018	6	13756	Northern Indiana Pub Serv Co	Electric Utility	Bailly	IN	995	7	160.0	Conventional Steam Coal	BIT	ST
2018	6	13756	Northern Indiana Pub Serv Co	Electric Utility	Bailly	IN	995	8	320.0	Conventional Steam Coal	BIT	ST
2018	7	58384	Clemson University - Main Campus	Commercial	Central Energy Facility	SC	58400	GT02	2.5	Natural Gas Fired Combustion Turbine	NG	GT
2018	7	57101	FC Landfill Energy	IPP	FC Landfill Energy	MD	57786	UNIT1	1.0	Landfill Gas	LFG	IC
2018	7	57101	FC Landfill Energy	IPP	FC Landfill Energy	MD	57786	UNIT2	1.0	Landfill Gas	LFG	IC
2018	7	7833	Gwitchyaa Zhee Utility Co	Electric Utility	Gwitchyaa Zhee	AK	7174	1	0.3	Petroleum Liquids	DFO	IC
2018	7	56772	TX LFG Energy, LP	IPP	Coastal Plains	TX	55554	UNT2	1.7	Landfill Gas	LFG	IC
2018	8	58416	California State University, Northridge	Commercial	CSU Northridge Plant	CA	58422	63	0.3	Other Natural Gas	NG	FC
2018	8	58416	California State University, Northridge	Commercial	CSU Northridge Plant	CA	58422	64	0.3	Other Natural Gas	NG	FC
2018	8	58416	California State University, Northridge	Commercial	CSU Northridge Plant	CA	58422	65	0.3	Other Natural Gas	NG	FC
2018	8	58416	California State University, Northridge	Commercial	CSU Northridge Plant	CA	58422	67	0.3	Other Natural Gas	NG	FC
2018	9	2872	Auburndale Peaker Energy Center LLC	IPP	Auburndale Peaker Energy Center	FL	55833	CTP	117.0	Natural Gas Fired Combustion Turbine	NG	GT
2018	9	55951	Exelon Nuclear	IPP	Oyster Creek	NJ	2388	1	607.7	Nuclear	NUC	ST

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

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
2018	9	8927	Hunterdon Cogeneration LP	Commercial	Hunterdon Cogen Facility	NJ	54707	1	4.1	Natural Gas Fired Combustion Turbine	NG	GT
2018	9	57032	UTAS Aerostructures	Industrial	Rohr Inc., a Collins Aerospace Company	CA	57713	151	3.2	Natural Gas Internal Combustion Engine	NG	IC
2018	9	57032	UTAS Aerostructures	Industrial	Rohr Inc., a Collins Aerospace Company	CA	57713	152	3.2	Natural Gas Internal Combustion Engine	NG	IC
2018	9	57032	UTAS Aerostructures	Industrial	Rohr Inc., a Collins Aerospace Company	CA	57713	153	3.2	Natural Gas Internal Combustion Engine	NG	IC
2018	9	20856	Wisconsin Power & Light Co	Electric Utility	Edgewater	WI	4050	4	294.4	Conventional Steam Coal	SUB	ST
2018	10	745	Applied Energy Inc	Electric CHP	NTC/MCRD Energy Facility	CA	10810	GEN1	21.6	Natural Gas Fired Combined Cycle	NG	CT
2018	10	745	Applied Energy Inc	Electric CHP	NTC/MCRD Energy Facility	CA	10810	GEN2	2.2	Natural Gas Fired Combined Cycle	NG	CA
2018	10	745	Applied Energy Inc	Electric CHP	Naval Station Energy Facility	CA	10811	GEN1	36.7	Natural Gas Fired Combined Cycle	NG	CT
2018	10	745	Applied Energy Inc	Electric CHP	Naval Station Energy Facility	CA	10811	GEN2	9.8	Natural Gas Fired Combined Cycle	NG	CA
2018	10	745	Applied Energy Inc	Electric CHP	Naval Station Energy Facility	CA	10811	GEN3	4.8	Natural Gas Fired Combined Cycle	NG	CA
2018	10	745	Applied Energy Inc	Electric CHP	North Island Energy Facility	CA	10812	GEN1	38.0	Natural Gas Fired Combined Cycle	NG	CT
2018	10	745	Applied Energy Inc	Electric CHP	North Island Energy Facility	CA	10812	GEN2	3.5	Natural Gas Fired Combined Cycle	NG	CA
2018	10	11560	City of Manassas - (VA)	Electric Utility	Church Street Plant	VA	7438	C1	0.8	Petroleum Liquids	DFO	IC
2018	10	11560	City of Manassas - (VA)	Electric Utility	Church Street Plant	VA	7438	C2	0.8	Petroleum Liquids	DFO	IC
2018	10	11560	City of Manassas - (VA)	Electric Utility	Church Street Plant	VA	7438	C4	1.0	Petroleum Liquids	DFO	IC
2018	10	18445	City of Tallahassee - (FL)	Electric Utility	S O Purdom	FL	689	GT2	10.0	Natural Gas Fired Combustion Turbine	NG	GT
2018	10	23102	FreePort-McMoRan-Corp-Cobre Mines	Industrial	Freeport McMoRan Cobre Mining	NM	55312	1	0.8	Petroleum Liquids	DFO	IC
2018	10	23102	FreePort-McMoRan-Corp-Cobre Mines	Industrial	Freeport McMoRan Cobre Mining	NM	55312	2	0.8	Petroleum Liquids	DFO	IC
2018	10	23102	FreePort-McMoRan-Corp-Cobre Mines	Industrial	Freeport McMoRan Cobre Mining	NM	55312	3	0.8	Petroleum Liquids	DFO	IC
2018	10	10005	Kansas Gas & Electric Co	Electric Utility	Gordon Evans Energy Center	KS	1240	1	154.0	Natural Gas Steam Turbine	NG	ST
2018	10	10005	Kansas Gas & Electric Co	Electric Utility	Gordon Evans Energy Center	KS	1240	2	376.0	Natural Gas Steam Turbine	NG	ST
2018	10	56703	MP Durham LLC	IPP	MP Durham LLC	NC	57365	1C	1.1	Landfill Gas	LFG	IC
2018	10	13582	NRG Astoria Gas Turbine Operations Inc	IPP	Astoria Gas Turbines	NY	55243	10	0.0	Petroleum Liquids	KER	GT
2018	10	13582	NRG Astoria Gas Turbine Operations Inc	IPP	Astoria Gas Turbines	NY	55243	8	0.0	Petroleum Liquids	KER	GT
2018	10	22500	Westar Energy Inc	Electric Utility	Tecumseh Energy Center	KS	1252	7	61.0	Conventional Steam Coal	SUB	ST
2018	10	20860	Wisconsin Public Service Corp	Electric Utility	Pulliam	WI	4072	7	76.1	Conventional Steam Coal	SUB	ST
2018	10	20860	Wisconsin Public Service Corp	Electric Utility	Pulliam	WI	4072	8	133.8	Conventional Steam Coal	SUB	ST
2018	11	6306	Benson Power, LLC.	IPP	Benson Power Biomass Plant	MN	55867	G1	55.0	Wood/Wood Waste Biomass	WDS	ST
2018	11	18445	City of Tallahassee - (FL)	Electric Utility	Arvah B Hopkins	FL	688	1	76.0	Natural Gas Steam Turbine	NG	ST
2018	11	6443	Florida Keys El Coop Assn, Inc	Electric Utility	Marathon Generating Plant	FL	696	3	3.0	Petroleum Liquids	DFO	IC
2018	11	6443	Florida Keys El Coop Assn, Inc	Electric Utility	Marathon Generating Plant	FL	696	4	3.0	Petroleum Liquids	DFO	IC
2018	11	6443	Florida Keys El Coop Assn, Inc	Electric Utility	Marathon Generating Plant	FL	696	6	2.5	Petroleum Liquids	DFO	IC
2018	11	6443	Florida Keys El Coop Assn, Inc	Electric Utility	Marathon Generating Plant	FL	696	7	2.5	Petroleum Liquids	DFO	IC
2018	11	4361	Ingredion Inc - Stockton	Industrial	Ingredion Stockton	CA	52115	GEN1	2.8	Natural Gas Fired Combustion Turbine	NG	GT
2018	11	4361	Ingredion Inc - Stockton	Industrial	Ingredion Stockton	CA	52115	GEN2	6.5	Natural Gas Fired Combustion Turbine	NG	GT
2018	11	10005	Kansas Gas & Electric Co	Electric Utility	Murray Gill	KS	1242	3	104.0	Natural Gas Steam Turbine	NG	ST
2018	11	10005	Kansas Gas & Electric Co	Electric Utility	Murray Gill	KS	1242	4	86.0	Natural Gas Steam Turbine	NG	ST
2018	11	13833	Northeastern Power Co	Electric CHP	Kline Township Cogen Facility	PA	50039	GEN1	51.0	Conventional Steam Coal	WC	ST
2018	12	12647	ALLETE, Inc.	Electric Utility	Clay Boswell	MN	1893	1	67.3	Conventional Steam Coal	SUB	ST
2018	12	12647	ALLETE, Inc.	Electric Utility	Clay Boswell	MN	1893	2	67.4	Conventional Steam Coal	SUB	ST
2018	12	59173	City of Tulare Water Pollution Control	Commercial	City of Tulare Water Facility	CA	59395	C2550	0.4	Other Waste Biomass	OBG	IC
2018	12	5416	Duke Energy Carolinas, LLC	Electric Utility	99 Islands	SC	3272	5	2.4	Conventional Hydroelectric	WAT	HY
2018	12	5416	Duke Energy Carolinas, LLC	Electric Utility	99 Islands	SC	3272	6	2.4	Conventional Hydroelectric	WAT	HY
2018	12	6455	Duke Energy Florida, LLC	Electric Utility	Crystal River	FL	628	1	324.0	Conventional Steam Coal	BIT	ST
2018	12	6455	Duke Energy Florida, LLC	Electric Utility	Crystal River	FL	628	2	442.0	Conventional Steam Coal	BIT	ST
2018	12	8785	Homestretch Geothermal LLC	IPP	Wabuska	NV	55988	1	0.4	Geothermal	GEO	ST
2018	12	8785	Homestretch Geothermal LLC	IPP	Wabuska	NV	55988	2	0.4	Geothermal	GEO	ST
2018	12	8785	Homestretch Geothermal LLC	IPP	Wabuska	NV	55988	3	0.1	Geothermal	GEO	ST
2018	12	8785	Homestretch Geothermal LLC	IPP	Wabuska	NV	55988	4	0.4	Geothermal	GEO	ST
2018	12	8785	Homestretch Geothermal LLC	IPP	Wabuska	NV	55988	5	0.4	Geothermal	GEO	ST
2018	12	8785	Homestretch Geothermal LLC	IPP	Wabuska	NV	55988	6	0.4	Geothermal	GEO	ST
2018	12	8785	Homestretch Geothermal LLC	IPP	Wabuska	NV	55988	7	0.4	Geothermal	GEO	ST
2018	12	56211	KCP&L Greater Missouri Operations Co	Electric Utility	Sibley	MO	2094	2	42.1	Conventional Steam Coal	SUB	ST
2018	12	56211	KCP&L Greater Missouri Operations Co	Electric Utility	Sibley	MO	2094	3	364.1	Conventional Steam Coal	SUB	ST
2018	12	10000	Kansas City Power & Light Co	Electric Utility	Montrose	MO	2080	2	164.0	Conventional Steam Coal	SUB	ST
2018	12	10000	Kansas City Power & Light Co	Electric Utility	Montrose	MO	2080	3	170.0	Conventional Steam Coal	SUB	ST
2018	12	13582	NRG Astoria Gas Turbine Operations Inc	IPP	Astoria Gas Turbines	NY	55243	12	0.0	Petroleum Liquids	KER	GT
2018	12	13582	NRG Astoria Gas Turbine Operations Inc	IPP	Astoria Gas Turbines	NY	55243	13	0.0	Petroleum Liquids	KER	GT
2018	12	13582	NRG Astoria Gas Turbine Operations Inc	IPP	Astoria Gas Turbines	NY	55243	5	0.0	Petroleum Liquids	KER	GT
2018	12	13582	NRG Astoria Gas Turbine Operations Inc	IPP	Astoria Gas Turbines	NY	55243	7	0.0	Petroleum Liquids	KER	GT
2018	12	13960	NRG Cabrillo Power Ops Inc	IPP	Encina	CA	302	2	104.0	Natural Gas Steam Turbine	NG	ST
2018	12	13960	NRG Cabrillo Power Ops Inc	IPP	Encina	CA	302	3	110.0	Natural Gas Steam Turbine	NG	ST
2018	12	13960	NRG Cabrillo Power Ops Inc	IPP	Encina	CA	302	4	300.0	Natural Gas Steam Turbine	NG	ST
2018	12	13960	NRG Cabrillo Power Ops Inc	IPP	Encina	CA	302	5	330.0	Natural Gas Steam Turbine	NG	ST
2018	12	13960	NRG Cabrillo Power Ops Inc	IPP	Encina	CA	302	GT1	14.0	Natural Gas Fired Combustion Turbine	NG	GT
2018	12	59528	Veolia - Kendall Green Energy	Electric CHP	Kendall Square Station	MA	1595	1	14.8	Natural Gas Fired Combined Cycle	NG	CA
2018	12	59528	Veolia - Kendall Green Energy	Electric CHP	Kendall Square Station	MA	1595	2	19.7	Natural Gas Fired Combined Cycle	NG	CA

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

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
------	-------	-----------	-------------	---------------------	------------	-------------	----------	--------------	--------------------------	------------	--------------------	------------------

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 6.5. 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)
2019	1	61012	AES Distributed Energy	IPP	Palmer	MA	62135	PAL01	3.5	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	3.5
2019	1	61608	Agilon Energy Holdings II, LLC	IPP	Victoria Port Power LLC	TX	61242	VP-1	50.0	Natural Gas Fired Combustion Turbine	NG	GT	(V) Under construction, more than 50 percent complete	50.0
2019	1	61608	Agilon Energy Holdings II, LLC	IPP	Victoria Port Power LLC	TX	61242	VP-2	50.0	Natural Gas Fired Combustion Turbine	NG	GT	(V) Under construction, more than 50 percent complete	50.0
2019	1	60281	Altus Power America Management, LLC	IPP	Corcoran CSG	MN	61971	201	1.0	Solar Photovoltaic	SUN	PV	(TS) Construction complete, but not yet in commercial operation	1.0
2019	1	60281	Altus Power America Management, LLC	IPP	Corcoran CSG	MN	61971	202	1.0	Solar Photovoltaic	SUN	PV	(TS) Construction complete, but not yet in commercial operation	1.0
2019	1	60281	Altus Power America Management, LLC	IPP	Corcoran CSG	MN	61971	203	1.0	Solar Photovoltaic	SUN	PV	(TS) Construction complete, but not yet in commercial operation	1.0
2019	1	60281	Altus Power America Management, LLC	IPP	Corcoran CSG	MN	61971	204	1.0	Solar Photovoltaic	SUN	PV	(TS) Construction complete, but not yet in commercial operation	1.0
2019	1	60281	Altus Power America Management, LLC	IPP	Corcoran CSG	MN	61971	205	1.0	Solar Photovoltaic	SUN	PV	(TS) Construction complete, but not yet in commercial operation	1.0
2019	1	803	Arizona Public Service Co	Electric Utility	Ocotillo	AZ	116	GT7	104.7	Natural Gas Fired Combustion Turbine	NG	GT	(V) Under construction, more than 50 percent complete	161.9
2019	1	61563	Blue Summit II Wind, LLC	IPP	Blue Summit II Wind, LLC	TX	61970	BSII	99.4	Onshore Wind Turbine	WND	WT	(TS) Construction complete, but not yet in commercial operation	99.4
2019	1	61230	CD Arevon USA, Inc.	IPP	CA Flats Solar 150, LLC	CA	60034	GEN01	150.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	150.0
2019	1	61260	Capricornus Community Solar Garden, LLC	IPP	Capricornus Community Solar Garden	MN	61651	CAPR	1.0	Solar Photovoltaic	SUN	PV	(U) Under construction, less than or equal to 50 percent complete	1.0
2019	1	3037	City of Carlyle - (IL)	Electric Utility	Carlyle	IL	936	11	2.8	Petroleum Liquids	DFC	IC	(OT) Other	2.8
2019	1	18445	City of Tallahassee - (FL)	Electric Utility	Arvah B Hopkins	FL	688	IC1	18.5	Natural Gas Internal Combustion Engine	NG	IC	(V) Under construction, more than 50 percent complete	18.8
2019	1	18445	City of Tallahassee - (FL)	Electric Utility	Arvah B Hopkins	FL	688	IC2	18.5	Natural Gas Internal Combustion Engine	NG	IC	(V) Under construction, more than 50 percent complete	18.8
2019	1	18445	City of Tallahassee - (FL)	Electric Utility	Arvah B Hopkins	FL	688	IC3	18.5	Natural Gas Internal Combustion Engine	NG	IC	(V) Under construction, more than 50 percent complete	18.8
2019	1	18445	City of Tallahassee - (FL)	Electric Utility	Arvah B Hopkins	FL	688	IC4	18.5	Natural Gas Internal Combustion Engine	NG	IC	(V) Under construction, more than 50 percent complete	18.8
2019	1	18947	City of Tipton - (IA)	Electric Utility	Tipton	IA	8106	7	2.0	Petroleum Liquids	DFC	IC	(V) Under construction, more than 50 percent complete	2.0
2019	1	56769	Consolidated Edison Development Inc.	IPP	Blackwell Solar Park	CA	59524	FRBSP	20.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	20.0
2019	1	61338	Crux Community Solar Gardens, LLC	IPP	Crux Community Solar	MN	61712	CRUX	1.0	Solar Photovoltaic	SUN	PV	(U) Under construction, less than or equal to 50 percent complete	1.0
2019	1	5109	DTE Electric Company	Electric Utility	Pine River Wind Park	MI	61106	1	161.3	Onshore Wind Turbine	WND	WT	(V) Under construction, more than 50 percent complete	161.3
2019	1	61610	Delaware River Solar, LLC	IPP	Breesport Road Community Solar Farm	NY	62157	235	2.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	2.0
2019	1	61610	Delaware River Solar, LLC	IPP	Hospital Rd Community Solar Farm	NY	62155	9	1.4	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	1.4
2019	1	61610	Delaware River Solar, LLC	IPP	Pool Brook Rd Community Solar Farm	NY	62156	15	2.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	2.0
2019	1	61610	Delaware River Solar, LLC	IPP	Sacket Lake Rd #1 Community Solar Farm	NY	62158	11	2.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	2.0
2019	1	61610	Delaware River Solar, LLC	IPP	Sacket Lake Rd #2 Community Solar Farm	NY	62159	20	1.7	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	1.7
2019	1	61610	Delaware River Solar, LLC	IPP	Turner Rd Community Solar Project	NY	62160	300	2.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	2.0
2019	1	57170	EDF Renewable Asset Holdings, Inc.	IPP	Stoneray Power Partners, LLC	MN	62269	STNRY	100.0	Onshore Wind Turbine	WND	WT	(V) Under construction, more than 50 percent complete	100.0
2019	1	61688	ENGIE Generation North America LLC	IPP	Goose Lake MN DFC-GM	MN	62148	PV1	1.5	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	1.5
2019	1	58970	Ecoplexus, Inc	IPP	Folsom SP and CSP Sacramento	CA	61698	FOLSM	1.3	Solar Photovoltaic	SUN	PV	(U) Under construction, less than or equal to 50 percent complete	1.3
2019	1	61404	Edenton Solar	IPP	Edenton Solar	NC	61781	EDE	5.0	Solar Photovoltaic	SUN	PV	(U) Under construction, less than or equal to 50 percent complete	5.0
2019	1	61413	Enel Green Power Diamond Vista Wind Project, LLC	IPP	Diamond Vista Wind Project, LLC	KS	61789	DV	299.3	Onshore Wind Turbine	WND	WT	(V) Under construction, more than 50 percent complete	299.3
2019	1	59735	Enerparc CA2, LLC	IPP	Cloverdale Solar Center	CA	60813	ECA02	1.0	Solar Photovoltaic	SUN	PV	(U) Under construction, less than or equal to 50 percent complete	1.0
2019	1	56201	Engie North America	IPP	Live Oak Wind Project	TX	61782	WTGS	199.5	Onshore Wind Turbine	WND	WT	(TS) Construction complete, but not yet in commercial operation	199.5
2019	1	6452	Florida Power & Light Co	Electric Utility	Interstate Solar Energy Center	FL	61768	1	74.5	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	74.5
2019	1	6452	Florida Power & Light Co	Electric Utility	Miami Dade Solar Energy Center	FL	61766	1	74.5	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	74.5
2019	1	6452	Florida Power & Light Co	Electric Utility	Pioneer Trail Solar Energy Center	FL	61767	1	74.5	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	74.5
2019	1	6452	Florida Power & Light Co	Electric Utility	Sunshine Gateway Solar Energy Center	FL	61763	1	74.5	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	74.5
2019	1	61518	Frontenac Holdco LLC	IPP	Frontenac Holdco LLC, CSG	MN	61919	FRONT	5.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	5.0
2019	1	60399	GASNA 6P, LLC	IPP	San Joaquin Solar	CA	60678	SJ1B	1.5	Solar Photovoltaic	SUN	PV	(U) Under construction, less than or equal to 50 percent complete	1.5
2019	1	7019	Gay & Robinson Inc	Industrial	Gay Robinson	HI	50333	HYD3	6.5	Conventional Hydroelectric	WAT	HY	(V) Under construction, more than 50 percent complete	6.5
2019	1	60428	Green City Recovery, LLC	IPP	Green City Recovery, LLC	KY	60703	2	1.0	Landfill Gas	LFG	IC	(TS) Construction complete, but not yet in commercial operation	1.0
2019	1	61365	Hilltopper Wind Project, LLC	IPP	Hilltopper Wind Project	IL	61735	WT1	185.0	Onshore Wind Turbine	WND	WT	(V) Under construction, more than 50 percent complete	185.0
2019	1	61907	JBAB Solar I, LLC	IPP	JBAB - Washington DC	DC	62374	PV1	5.9	Solar Photovoltaic	SUN	PV	(TS) Construction complete, but not yet in commercial operation	5.9
2019	1	61289	Kaus Community Solar Garden, LLC	IPP	Kaus Community Solar	MN	61716	KAUS	1.0	Solar Photovoltaic	SUN	PV	(U) Under construction, less than or equal to 50 percent complete	1.0
2019	1	61679	MSC-GreyCloud01 LLC	IPP	MSC-GreyCloud01	MN	62143	52785	1.0	Solar Photovoltaic	SUN	PV	(TS) Construction complete, but not yet in commercial operation	1.0
2019	1	61680	MSC-Scandia01 LLC	IPP	MSC-Scandia01	MN	62144	52741	1.0	Solar Photovoltaic	SUN	PV	(TS) Construction complete, but not yet in commercial operation	1.0
2019	1	11806	Massachusetts Mun Wholes Electric Co	Electric Utility	Ashburnham Energy Storage Project	MA	62219	AMPLB	3.0	Batteries	MWH	BA	(V) Under construction, more than 50 percent complete	3.0
2019	1	61740	NJ Solar 1, LLC	IPP	Hunterdon Health System Solar Project	NJ	62225	PV1	1.5	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	1.5
2019	1	54913	NSTAR Electric Company	Electric Utility	East Longmeadow Solar PV	MA	62059	LG400	5.0	Solar Photovoltaic	SUN	PV	(TS) Construction complete, but not yet in commercial operation	5.0
2019	1	54913	NSTAR Electric Company	Electric Utility	Greenfield Solar PV	MA	62063	LG400	2.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	2.0
2019	1	54913	NSTAR Electric Company	Electric Utility	Hinsdale Solar PV	MA	62064	LG400	2.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	2.0
2019	1	54913	NSTAR Electric Company	Electric Utility	Savoy Solar PV	MA	62065	LG400	2.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	2.0
2019	1	54913	NSTAR Electric Company	Electric Utility	Southampton Solar PV	MA	62066	LG400	2.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	2.0
2019	1	54913	NSTAR Electric Company	Electric Utility	Southwick Solar PV	MA	62082	REC34	5.0	Solar Photovoltaic	SUN	PV	(TS) Construction complete, but not yet in commercial operation	5.0
2019	1	54913	NSTAR Electric Company	Electric Utility	Springfield Solar PV	MA	62072	LG395	4.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	4.0
2019	1	61776	Oak Leaf Solar XXII LLC	IPP	Oak Leaf Solar XXII LLC	CO	62252	53965	1.5	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	1.5
2019	1	61777	Oak Leaf Solar XXIII LLC	IPP	Oak Leaf Solar XXIII LLC	CO	62256	53966	1.5	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	1.5
2019	1	61780	Oak Leaf Solar XXIV LLC	IPP	Oak Leaf Solar XXIV LLC	CO	62253	53967	1.5	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	1.5
2019	1	61779	Oak Leaf Solar XXV LLC	IPP	Oak Leaf Solar XXV LLC	CO	62254	53970	1.5	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	1.5
2019	1	61414	Rattlesnake Creek Wind Project, LLC	IPP	Rattlesnake Creek Wind Project	NE	59292	RCWP	318.1	Onshore Wind Turbine	WND	WT	(V) Under construction, more than 50 percent complete	318.1
2019	1	16191	Robbins Lumber Inc	Industrial	Robbins Lumber	ME	50230	WEG	8.5	Wood/Wood Waste Biomass	WDS	ST	(TS) Construction complete, but not yet in commercial operation	10.0
2019	1	61614	Rollingstone Holdco LLC	IPP	Rollingstone Holdco CSG	MN	62037	ROLLI	5.0	Solar Photovoltaic	SUN	PV	(U) Under construction, less than or equal to 50 percent complete	5.0
2019	1	61587	Sagittarius Community Solar Gardens LLC	IPP	Sagittarius Community Solar Gardens LLC	MN	61994	CRUX	1.0	Solar Photovoltaic	SUN	PV	(U) Under construction, less than or equal to 50 percent complete	1.0
2019	1	17633	Southern Indiana Gas & Elec Co	Electric Utility	Volkman Road Solar Array	IN	61334	VRSA2	1.0	Batteries	MWH	BA	(TS) Construction complete, but not yet in commercial operation	1.0
2019	1	60403	TRS Fuel Cell, LLC	Electric CHP	TRS Fuel Cell	CT	60683	MMH1	3.7	Other Natural Gas	NG	FC	(TS) Construction complete, but not yet in commercial operation	3.7
2019	1	18454	Tampa Electric Co	Electric Utility	Bonnie Mine Solar	FL	61655	PV1	35.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	35.0
2019	1	18454	Tampa Electric Co	Electric Utility	Peace Creek Solar	FL	61666	GEN	56.6	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	56.6
2019	1	60947	Tesla Inc.	IPP	Blue Shid Of Cal- El Dorado Hills Mtr B	CA	62077	PV1	2.1	Solar Photovoltaic	SUN	PV	(TS) Construction complete, but not yet in commercial operation	2.1
2019	1	60947	Tesla Inc.	IPP	Estrella Mountain PV	AZ	60230	PV1	1.8	Solar Photovoltaic	SUN	PV	(TS) Construction complete, but not yet in commercial operation	1.8
2019	1	61562	Torreclillas Wind Energy, LLC	IPP	Torreclillas Wind Energy, LLC	TX	61969	TWE	300.0	Onshore Wind Turbine	WND	WT	(TS) Construction complete, but not yet in commercial operation	300.0
2019	1	61625	USS Brockway Solar LLC	IPP	USS Brockway Solar CSG	MN	62049	USSBR	1.0	Solar Photovoltaic	SUN	PV	(TS) Construction complete, but not yet in commercial operation	1.0
2019	1	61627	USS JJ Solar LLC	IPP	USS JJ Solar CSG	MN	62047	USSJJ	1.0	Solar Photovoltaic	SUN	PV	(TS) Construction complete, but not yet in commercial operation	1.0
2019	1	61629	USS Norelius Solar LLC	IPP	USS Norelius Solar CSG	MN	62045	USSNO	1.0	Solar Photovoltaic	SUN	PV	(TS) Construction complete, but not yet in commercial operation	1.0
2019	1	61631	USS Solar Rapids LLC	IPP	USS Solar Rapids CSG	MN	62042	USSSR	1.0	Solar Photovoltaic	SUN	PV	(TS) Construction complete, but not yet in commercial operation	1.0
2019	1	61123	Upton County Solar 2 LLC	IPP	Castle Gap Solar	TX	60123	BAT1	9.9	Batteries	MWH	BA	(TS) Construction complete, but not yet in commercial operation	9.9
2019	1	61666	WED GW Solar, LLC	IPP	WED GW Solar, LLC	RI	62118	GWSOL	3.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	3.0
2019	1	61648	WED Green Hill, LLC	IPP	WED Green Hill, LLC	RI	62106	GHILL	3.0	Onshore Wind Turbine	WND	WT	(TS) Construction complete, but not yet in commercial operation	3.0
2019	1	61649	WED Plainfield II, LLC	IPP	WED Plainfield II, LLC	RI	62107	PLA12	3.0	Onshore Wind Turbine	WND	WT	(V) Under construction, more than 50 percent complete	3.0
2019	1	61650	WED Plainfield III, LLC	IPP	WED Plainfield III, LLC	RI	62108	PLA13	3.0	Onshore Wind Turbine	WND	WT	(V) Under construction, more than 50 percent complete	3.0
2019	1	61651	WED Plainfield, LLC	IPP	WED Plainfield, LLC	RI	62109	PLA11	3.0	Onshore Wind Turbine	WND	WT	(V) Under construction, more than 50 percent complete	3.0
2019	1	61652	WED Shun I, LLC	IPP	WED Shun I, LLC	RI	62110	SHUN1	3.0	Onshore Wind Turbine	WND	WT	(TS) Construction complete, but not yet in commercial operation	3.0
2019	1	61653	WED Shun II, LLC	IPP	WED Shun II, LLC	RI	62111	SHUN2	3.0	Onshore Wind Turbine	WND	WT	(TS) Construction complete, but not yet in commercial operation	3.0
2019	1	61654	WED Shun III, LLC	IPP	WED Shun III, LLC	RI	62112	SHUN3	3.0	Onshore Wind Turbine	WND	WT	(TS) Construction complete, but not yet in commercial operation	3.0
2019	1	61672	Willow Spring Solar LLC	IPP	Willow Spring Solar, LLC	CA	60324	GEN01	100.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	100.0
2019	2	61565		IPP	Techren	NV	61611	TECH1	100.0	Solar Photovoltaic	SUN	PV	(TS) Construction complete, but not yet in commercial operation	100.0
2019	2	61012	AES Distributed Energy	IPP	Williamsburg	MA	62202	WIL01	4.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	4.0
2019	2	61482	AES ES GILBERT, LLC	IPP	AES ES GILBERT	AZ	61861	SRP	10.0	Batteries	MWH	BA	(V) Under construction, more than 50 percent complete	10.0
2019	2	61344	Advanced Microgrid Solutions	IPP	HEBT WLA 1	CA	61721	WLA01	1.0	Batteries	MWH	BA	(TS) Construction complete, but not yet in commercial operation	1.0
2019	2	61344												

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)
2019	2	61344	Advanced Microgrid Solutions	IPP	HEBT WLA 1	CA	61721	WLA1C	11.8	Batteries	MWH	BA	(TS) Construction complete, but not yet in commercial operation	11.8
2019	2	61608	Agilon Energy Holdings II, LLC	IPP	Victoria City Power LLC	TX	61241	VC-1	43.0	Natural Gas Fired Combustion Turbine	NG	GT	(V) Under construction, more than 50 percent complete	50.0
2019	2	61608	Agilon Energy Holdings II, LLC	IPP	Victoria City Power LLC	TX	61241	VC-2	43.0	Natural Gas Fired Combustion Turbine	NG	GT	(V) Under construction, more than 50 percent complete	50.0
2019	2	61259	Altair Community Solar Garden, LLC	IPP	Altair Community Solar Garden	MN	61645	ALTA	1.0	Solar Photovoltaic	SUN	PV	(U) Under construction, less than or equal to 50 percent complete	1.0
2019	2	61325	Aquarius Community Solar Gardens, LLC	IPP	Aquarius Community Solar	MN	61710	AQUA	1.0	Solar Photovoltaic	SUN	PV	(U) Under construction, less than or equal to 50 percent complete	1.0
2019	2	61326	Aquila Community Solar Gardens, LLC	IPP	Aquila Community Solar	MN	61704	AQUI	1.0	Solar Photovoltaic	SUN	PV	(U) Under construction, less than or equal to 50 percent complete	1.0
2019	2	803	Arizona Public Service Co	Electric Utility	Ocotillo	AZ	116	GT6	104.7	Natural Gas Fired Combustion Turbine	NG	GT	(V) Under construction, more than 50 percent complete	161.9
2019	2	59474	BQ Energy LLC	IPP	Kings Park Solar I	NY	59880	KIPS1	2.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	2.0
2019	2	59474	BQ Energy LLC	IPP	Kings Park Solar II	NY	59881	KIPS2	2.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	2.0
2019	2	61705	Boring Solar LLC	IPP	Boring Solar LLC	OR	62169	BSPV2	2.2	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	2.2
2019	2	56608	Calpine Mid-Merit LLC	IPP	York Energy Center	PA	55524	CTG5	216.3	Natural Gas Fired Combined Cycle	NG	CT	(U) Under construction, less than or equal to 50 percent complete	234.9
2019	2	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
2019	2	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
2019	2	61329	Canopus Community Solar Garden, LLC	IPP	Canopus Community Solar	MN	61707	CANO	1.0	Solar Photovoltaic	SUN	PV	(U) Under construction, less than or equal to 50 percent complete	1.0
2019	2	61337	Cassiopeia Community Solar Garden, LLC	IPP	Cassiopeia Community Solar	MN	61711	CASS	1.0	Solar Photovoltaic	SUN	PV	(U) Under construction, less than or equal to 50 percent complete	1.0
2019	2	61467	Central CA Fuel Cell 2, LLC	IPP	Tulare WWTP BioMat Fuel Cell	CA	61846	MM27	2.8	Other Natural Gas	NG	FC	(V) Under construction, more than 50 percent complete	2.8
2019	2	61568	Chisago Holdco LLC	IPP	Chisago Holdco LLC, CSG	MN	61968	CHIS	3.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	3.0
2019	2	61419	Constellation Solar MC, LLC	IPP	Gateway Solar	MD	61794	GTWYN	5.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	5.0
2019	2	61419	Constellation Solar MC, LLC	IPP	Gateway Solar	MD	61794	GTWYS	2.6	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	2.6
2019	2	61187	DG Minnesota CSG, LLC	IPP	Held Solar Project	MN	62267	HELD	5.0	Solar Photovoltaic	SUN	PV	(TS) Construction complete, but not yet in commercial operation	5.0
2019	2	61567	DP-C2 Episode 1 LLC	IPP	Blackville Solar II	SC	61973	C2BV	20.0	Solar Photovoltaic	SUN	PV	(TS) Construction complete, but not yet in commercial operation	20.0
2019	2	61339	Deneb Community Solar Garden, LLC	IPP	Deneb Community Solar	MN	61715	DENE	1.0	Solar Photovoltaic	SUN	PV	(U) Under construction, less than or equal to 50 percent complete	1.0
2019	2	6035	Exelon Power	IPP	Exelon West Medway II LLC	MA	59882	4	97.4	Natural Gas Fired Combustion Turbine	NG	GT	(V) Under construction, more than 50 percent complete	100.0
2019	2	6035	Exelon Power	IPP	Exelon West Medway II LLC	MA	59882	5	97.4	Natural Gas Fired Combustion Turbine	NG	GT	(V) Under construction, more than 50 percent complete	100.0
2019	2	61550	Jessamine Solar, LLC	IPP	Jessamine Solar, LLC	SC	61944	10	1.9	Solar Photovoltaic	SUN	PV	(TS) Construction complete, but not yet in commercial operation	1.9
2019	2	61396	Midway Wind, LLC	IPP	Midway Wind, LLC	TX	61776	MIDWY	162.9	Onshore Wind Turbine	WND	WT	(V) Under construction, more than 50 percent complete	162.9
2019	2	61292	NC State University, Energy Systems	Commercial	NCSU CCUP Cogeneration Plant	NC	61675	CTG1	5.6	Natural Gas Fired Combustion Turbine	NG	GT	(V) Under construction, more than 50 percent complete	5.6
2019	2	61292	NC State University, Energy Systems	Commercial	NCSU CCUP Cogeneration Plant	NC	61675	STG	1.0	Natural Gas Steam Turbine	NG	ST	(V) Under construction, more than 50 percent complete	1.0
2019	2	60018	NET Power, LLC	IPP	NET Power La Porte Station	TX	60910	NPLPS	25.5	Other Natural Gas	NG	OT	(TS) Construction complete, but not yet in commercial operation	25.5
2019	2	61778	Oak Leaf Solar XXVIII LLC	IPP	Oak Leaf Solar XXVIII LLC	CO	62255	53973	1.5	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	1.5
2019	2	61775	Oak Leaf Solar XXXII	IPP	Oak Leaf Solar XXXII	CO	62251	53975	1.5	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	1.5
2019	2	61612	Panda Solar NC 1, LLC	IPP	Panda Solar NC 1, LLC	NC	62089	20002	1.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	1.0
2019	2	61655	Panda Solar NC 2, LLC	IPP	Panda Solar NC 2, LLC	NC	62120	20003	2.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	2.0
2019	2	61585	Pisces Community Solar Garden LLC	IPP	Pisces Community Solar Garden	MN	61992	CRUX	1.0	Solar Photovoltaic	SUN	PV	(U) Under construction, less than or equal to 50 percent complete	1.0
2019	2	61507	Plumsted 537 LLC	IPP	Plumsted 537 LLC	NJ	61892	PLMST	19.8	Batteries	MWH	BA	(TS) Construction complete, but not yet in commercial operation	19.8
2019	2	60693	Saratoga Wind Energy LLC	IPP	Saratoga Wind Farm	IA	61070	SWE	66.0	Onshore Wind Turbine	WND	WT	(U) Under construction, less than or equal to 50 percent complete	66.0
2019	2	61613	Sartell Holdco LLC	IPP	Sartell Holdco CSG	MN	62036	SARTE	5.0	Solar Photovoltaic	SUN	PV	(U) Under construction, less than or equal to 50 percent complete	5.0
2019	2	61616	Solar Provider Group MN I LLC	IPP	Syncarpha Dodge 1	MN	62053	SPGD1	1.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	1.0
2019	2	60947	Tesla Inc.	IPP	Bd of Educ of Queen Anne's Cnty, Cnty HS	MD	62074	PV1	1.7	Solar Photovoltaic	SUN	PV	(TS) Construction complete, but not yet in commercial operation	1.7
2019	2	60947	Tesla Inc.	IPP	Pima Community College	AZ	62075	PV1	1.1	Solar Photovoltaic	SUN	PV	(TS) Construction complete, but not yet in commercial operation	1.1
2019	2	61839	USS Kost Trail Solar LLC	IPP	USS Kost Trail Solar CSG	MN	62339	USSKT	1.0	Solar Photovoltaic	SUN	PV	(U) Under construction, less than or equal to 50 percent complete	1.0
2019	2	19511	University of Alaska	Commercial	University of Alaska Fairbanks	AK	50711	GEN5	17.0	Conventional Steam Coal	SUB	ST	(TS) Construction complete, but not yet in commercial operation	17.0
2019	3	60146	Ameresco Federal Solutions	IPP	MCRD Parris Island PV	SC	61956	BAKUP	2.5	Petroleum Liquids	DFO	IC	(U) Under construction, less than or equal to 50 percent complete	2.5
2019	3	60146	Ameresco Federal Solutions	IPP	MCRD Parris Island PV	SC	61956	BLKST	1.0	Petroleum Liquids	DFO	IC	(U) Under construction, less than or equal to 50 percent complete	1.0
2019	3	60146	Ameresco Federal Solutions	IPP	MCRD Parris Island PV	SC	61956	CHPP	3.5	Natural Gas Fired Combustion Turbine	NG	GT	(U) Under construction, less than or equal to 50 percent complete	3.5
2019	3	803	Arizona Public Service Co	Electric Utility	Ocotillo	AZ	116	GT5	104.7	Natural Gas Fired Combustion Turbine	NG	GT	(V) Under construction, more than 50 percent complete	161.9
2019	3	61546	Bloom Solar, LLC	IPP	Bloom Solar	SC	61940	6	2.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	2.0
2019	3	59492	Chattanooga Metropolitan Airport	Commercial	Chattanooga Metropolitan Airport Solar	TN	58515	GEN3	0.4	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	0.6
2019	3	16873	City of Sebawing - (MI)	Electric Utility	Pine Street	MI	7806	7	4.4	Natural Gas Internal Combustion Engine	NG	IC	(U) Under construction, less than or equal to 50 percent complete	4.4
2019	3	16873	City of Sebawing - (MI)	Electric Utility	Pine Street	MI	7806	8	3.3	Natural Gas Internal Combustion Engine	NG	IC	(U) Under construction, less than or equal to 50 percent complete	3.3
2019	3	61060	Cypress Creek Renewables	IPP	Cascade Solar (TX)	TX	61875	GEN1	10.0	Solar Photovoltaic	SUN	PV	(U) Under construction, less than or equal to 50 percent complete	10.0
2019	3	61610	Delaware River Solar, LLC	IPP	Kelly Bridge Road Community Solar Farm	NY	62154	12	2.0	Solar Photovoltaic	SUN	PV	(U) Under construction, less than or equal to 50 percent complete	2.0
2019	3	57202	E&E Enterprises LLC	IPP	Allendorf	IA	56215	ET	1.8	Onshore Wind Turbine	WND	WT	(TS) Construction complete, but not yet in commercial operation	2.0
2019	3	61420	ENGIE Storage Services NA LLC	Commercial	Pacific Union College BESS	CA	61795	12649	1.0	Batteries	MWH	BA	(V) Under construction, more than 50 percent complete	1.0
2019	3	58970	Ecoplexus, Inc	IPP	Felton CSG PV1-5	MN	62210	FELT1	1.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	1.0
2019	3	58970	Ecoplexus, Inc	IPP	Felton CSG PV1-5	MN	62210	FELT2	1.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	1.0
2019	3	58970	Ecoplexus, Inc	IPP	Felton CSG PV1-5	MN	62210	FELT3	1.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	1.0
2019	3	58970	Ecoplexus, Inc	IPP	Felton CSG PV1-5	MN	62210	FELT4	1.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	1.0
2019	3	58970	Ecoplexus, Inc	IPP	Felton CSG PV1-5	MN	62210	FELT5	1.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	1.0
2019	3	58970	Ecoplexus, Inc	IPP	Randolph CSG PV1-5	MN	62209	RAND1	1.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	1.0
2019	3	58970	Ecoplexus, Inc	IPP	Randolph CSG PV1-5	MN	62209	RAND2	1.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	1.0
2019	3	58970	Ecoplexus, Inc	IPP	Randolph CSG PV1-5	MN	62209	RAND3	1.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	1.0
2019	3	58970	Ecoplexus, Inc	IPP	Randolph CSG PV1-5	MN	62209	RAND4	1.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	1.0
2019	3	58970	Ecoplexus, Inc	IPP	Randolph CSG PV1-5	MN	62209	RAND5	1.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	1.0
2019	3	61070	Foundation CA Fund IX Manager, LLC	IPP	Foundation Mann Packing	CA	61443	WTG1	1.8	Onshore Wind Turbine	WND	WT	(V) Under construction, more than 50 percent complete	1.8
2019	3	60251	GRP Franklin Renewable Energy Facility, LLC	IPP	GRP Franklin Renewable Energy Facility	GA	60550	GEN	93.5	Wood/Wood Waste Biomass	WDS	ST	(V) Under construction, more than 50 percent complete	93.5
2019	3	60846	GRP Madison Renewable Energy Facility, LLC	IPP	GRP Madison Renewable Energy Facility	GA	61213	GEN	65.0	Wood/Wood Waste Biomass	WDS	ST	(V) Under construction, more than 50 percent complete	65.0
2019	3	61872	Gavilan District College Solar Project	IPP	Gavilan District College Solar Project	CA	61993	GDCBA	0.5	Batteries	MWH	BA	(U) Under construction, less than or equal to 50 percent complete	0.5
2019	3	61549	Goldenrod Solar, LLC	IPP	Goldenrod Solar	SC	61943	9	2.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	2.0
2019	3	61456	Hope Farm Solar, LLC	IPP	Hope Farm Solar, LLC	RI	61840	HOPE	10.0	Solar Photovoltaic	SUN	PV	(U) Under construction, less than or equal to 50 percent complete	10.0
2019	3	61001	Hu Honua Bioenergy, LLC	IPP	Hu Honua Bioenergy Facility	HI	61364	HHB	32.0	Other Waste Biomass	OBS	ST	(U) Under construction, less than or equal to 50 percent complete	36.0
2019	3	9417	Interstate Power and Light Co	Electric Utility	English Farms	IA	61565	1	169.9	Onshore Wind Turbine	WND	WT	(V) Under construction, more than 50 percent complete	169.9
2019	3	9417	Interstate Power and Light Co	Electric Utility	Upland Prairie	IA	61564	1	299.3	Onshore Wind Turbine	WND	WT	(V) Under construction, more than 50 percent complete	299.3
2019	3	59898	Kawaihoa Solar, LLC	IPP	Kawaihoa Solar	HI	60125	KAWS	49.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	49.0
2019	3	60987	Lanikuhana Solar LLC	IPP	Lanikuhana Solar LLC	HI	58281	1	14.7	Solar Photovoltaic	SUN	PV	(TS) Construction complete, but not yet in commercial operation	14.7
2019	3	61606	Lindstrom Solar LLC	IPP	Nautilus Lindstrom Solar CSG	MN	62030	LI	2.0	Solar Photovoltaic	SUN	PV	(U) Under construction, less than or equal to 50 percent complete	2.0
2019	3	13484	New York Methodist Hospital	IPP	New York Methodist Hospital	NY	52091	CCHEG	1.5	Petroleum Liquids	DFO	IC	(TS) Construction complete, but not yet in commercial operation	1.5
2019	3	61743	Patriot Wind Farm, LLC	IPP	Patriot Wind Farm, LLC	TX	58614	PAT1	178.5	Onshore Wind Turbine	WND	WT	(V) Under construction, more than 50 percent complete	178.5
2019	3	61552	Pelzer Solar I, LLC	IPP	Pelzer Solar I	SC	61945	19	1.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	1.0
2019	3	59967	Phoenix Energy											

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)
2019	3	18454	Tampa Electric Co	Electric Utility	Mountain View Solar (FL)	FL	61664	GEN1	55.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	55.0
2019	3	61557	Vincent Solar, LLC	IPP	Vincent Solar	SC	61950	14	2.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	2.0
2019	3	59764	Waipio PV, LLC	IPP	Waipio Solar	HI	60024	WPO	45.9	Solar Photovoltaic	SUN	PV	(TS) Construction complete, but not yet in commercial operation	45.9
2019	3	61558	Watauga Solar, LLC	IPP	Watauga Solar	SC	61951	15	2.0	Solar Photovoltaic	SUN	PV	(U) Under construction, less than or equal to 50 percent complete	2.0
2019	3	60154	White Street Renewables LLC	IPP	White Street Renewables	NC	60364	WSLFG	1.6	Landfill Gas	LFG	IC	(TS) Construction complete, but not yet in commercial operation	1.6
2019	3	61559	Whitt Solar, LLC	IPP	Whitt Solar	SC	61952	20	2.0	Solar Photovoltaic	SUN	PV	(TS) Construction complete, but not yet in commercial operation	2.0
2019	3	61609	Winsted Solar LLC	IPP	Nautilus Winsted Solar CSG	MN	62032	WS	3.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	3.0
2019	3	60875	Wolf Run Energy LLC	IPP	Wolf Run Energy	PA	61263	GEN1	4.4	Natural Gas Internal Combustion Engine	NG	IC	(V) Under construction, more than 50 percent complete	4.4
2019	3	60875	Wolf Run Energy LLC	IPP	Wolf Run Energy	PA	61263	GEN2	4.4	Natural Gas Internal Combustion Engine	NG	IC	(V) Under construction, more than 50 percent complete	4.4
2019	3	60875	Wolf Run Energy LLC	IPP	Wolf Run Energy	PA	61263	GEN3	4.4	Natural Gas Internal Combustion Engine	NG	IC	(V) Under construction, more than 50 percent complete	4.4
2019	3	60875	Wolf Run Energy LLC	IPP	Wolf Run Energy	PA	61263	GEN4	4.4	Natural Gas Internal Combustion Engine	NG	IC	(V) Under construction, more than 50 percent complete	4.4
2019	3	60875	Wolf Run Energy LLC	IPP	Wolf Run Energy	PA	61263	GEN5	4.4	Natural Gas Internal Combustion Engine	NG	IC	(V) Under construction, more than 50 percent complete	4.4
2019	3	61902	Wright Kirby 1-5 CSG	IPP	Wright Kirby 1-5 CSG	MN	62365	WK1	1.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	1.0
2019	3	61902	Wright Kirby 1-5 CSG	IPP	Wright Kirby 1-5 CSG	MN	62365	WK2	1.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	1.0
2019	3	61902	Wright Kirby 1-5 CSG	IPP	Wright Kirby 1-5 CSG	MN	62365	WK3	1.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	1.0
2019	3	61902	Wright Kirby 1-5 CSG	IPP	Wright Kirby 1-5 CSG	MN	62365	WK4	1.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	1.0
2019	3	61902	Wright Kirby 1-5 CSG	IPP	Wright Kirby 1-5 CSG	MN	62365	WK5	1.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	1.0
2019	4	61012	AES Distributed Energy	IPP	Founders Homestead Farms Solar	RI	62302	RFH01	4.5	Solar Photovoltaic	SUN	PV	(TS) Construction complete, but not yet in commercial operation	4.5
2019	4	803	Arizona Public Service Co	Electric Utility	Ocotillo	AZ	116	GT4	104.7	Natural Gas Fired Combustion Turbine	NG	GT	(U) Under construction, less than or equal to 50 percent complete	161.9
2019	4	61848	Camden Dam Solar, LLC	IPP	Camden Dam Solar, LLC	NC	62330	CMDND	5.0	Solar Photovoltaic	SUN	PV	(U) Under construction, less than or equal to 50 percent complete	5.0
2019	4	60609	Clean Focus Renewables, Inc.	IPP	Rugged Solar LLC	CA	57960	1	80.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	80.0
2019	4	61060	Cypress Creek Renewables	IPP	SCE&G Curie CSG	SC	61432	SCCU1	2.0	Solar Photovoltaic	SUN	PV	(U) Under construction, less than or equal to 50 percent complete	2.0
2019	4	61567	DP-C2 Episode 1 LLC	IPP	Diamond Solar II	SC	61974	C2BV	8.2	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	8.2
2019	4	61567	DP-C2 Episode 1 LLC	IPP	Edison Solar II	SC	61975	C2BV	4.8	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	4.8
2019	4	60496	Neenach Solar Center	IPP	Neenach Solar Center	CA	60826	ECA03	1.5	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	1.5
2019	4	59745	First Solar Asset Management	IPP	North Rosamond Solar LLC	CA	59879	GEN01	150.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	150.0
2019	4	58959	Freeport LNG Development LP	Industrial	Freeport LP Pretreatment Facility	TX	59145	65GTG	77.5	Natural Gas Fired Combustion Turbine	NG	GT	(V) Under construction, more than 50 percent complete	97.0
2019	4	60195	Groton Station Fuel Cell, LLC	IPP	Naval Sub Base New London Fuel Cell	CT	61743	MMH2	3.7	Other Natural Gas	NG	FC	(U) Under construction, less than or equal to 50 percent complete	3.7
2019	4	19547	Hawaiian Electric Co Inc	Electric Utility	West Loch Solar One	HI	61987	WLS1	20.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	20.0
2019	4	61849	Jamesville Road Solar, LLC	IPP	Jamesville Road Solar, LLC	NC	62329	JMVLK	5.0	Solar Photovoltaic	SUN	PV	(U) Under construction, less than or equal to 50 percent complete	5.0
2019	4	61928	Jamison Solar Farm	Electric Utility	Jamison Solar Farm	SC	62396	1	1.1	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	1.1
2019	4	59458	Landfill Energy Systems Florida	IPP	Sarasota County LFGTE Facility	FL	59686	LESF4	1.6	Landfill Gas	LFG	IC	(L) Regulatory approvals pending. Not under construction	1.6
2019	4	58849	Mariah del Este LLC	IPP	Mariah East	TX	59006	MARN	152.5	Onshore Wind Turbine	WND	WT	(U) Under construction, less than or equal to 50 percent complete	152.5
2019	4	61850	Mill Pond Solar, LLC	IPP	Mill Pond Solar, LLC	NC	62328	MLLPD	5.0	Solar Photovoltaic	SUN	PV	(U) Under construction, less than or equal to 50 percent complete	5.0
2019	4	61663	Panda Solar NC 10, LLC	IPP	Panda Solar NC 10, LLC	NC	62128	20031	2.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	2.0
2019	4	61664	Panda Solar NC 11, LLC	IPP	Panda Solar NC 11, LLC	NC	62129	20032	2.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	2.0
2019	4	61656	Panda Solar NC 3, LLC	IPP	Panda Solar NC 3, LLC	NC	62121	20011	2.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	2.0
2019	4	61657	Panda Solar NC 4, LLC	IPP	Panda Solar NC 4, LLC	NC	62122	20009	2.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	2.0
2019	4	61660	Panda Solar NC 6, LLC	IPP	Panda Solar NC 6, LLC	NC	62124	20028	1.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	1.0
2019	4	61659	Panda Solar NC 7, LLC	IPP	Panda Solar NC 7, LLC	NC	62125	20038	1.5	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	1.5
2019	4	61661	Panda Solar NC 8, LLC	IPP	Panda Solar NC 8, LLC	NC	62126	20052	2.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	2.0
2019	4	61662	Panda Solar NC 9, LLC	IPP	Panda Solar NC 9, LLC	NC	62127	20022	2.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	2.0
2019	4	61677	Sol Systems	IPP	Warren Solar Farm LLC	NC	62223	10423	5.0	Solar Photovoltaic	SUN	PV	(U) Under construction, less than or equal to 50 percent complete	5.0
2019	4	61841	USS Lake Patterson Solar	IPP	USS Lake Patterson Solar CSG	MN	62337	USLP	1.0	Solar Photovoltaic	SUN	PV	(U) Under construction, less than or equal to 50 percent complete	1.0
2019	4	61029	Upper Michigan Energy Resources Company	Electric Utility	A.J. Mihm Generating Station	MI	61391	M1	18.3	Natural Gas Internal Combustion Engine	NG	IC	(V) Under construction, more than 50 percent complete	18.8
2019	4	61029	Upper Michigan Energy Resources Company	Electric Utility	A.J. Mihm Generating Station	MI	61391	M2	18.3	Natural Gas Internal Combustion Engine	NG	IC	(V) Under construction, more than 50 percent complete	18.8
2019	4	61029	Upper Michigan Energy Resources Company	Electric Utility	A.J. Mihm Generating Station	MI	61391	M3	18.3	Natural Gas Internal Combustion Engine	NG	IC	(V) Under construction, more than 50 percent complete	18.8
2019	4	61029	Upper Michigan Energy Resources Company	Electric Utility	F.D. Kuester Generating Station	MI	61392	K1	18.3	Natural Gas Internal Combustion Engine	NG	IC	(V) Under construction, more than 50 percent complete	18.8
2019	4	61029	Upper Michigan Energy Resources Company	Electric Utility	F.D. Kuester Generating Station	MI	61392	K2	18.3	Natural Gas Internal Combustion Engine	NG	IC	(V) Under construction, more than 50 percent complete	18.8
2019	4	61029	Upper Michigan Energy Resources Company	Electric Utility	F.D. Kuester Generating Station	MI	61392	K3	18.3	Natural Gas Internal Combustion Engine	NG	IC	(V) Under construction, more than 50 percent complete	18.8
2019	4	61029	Upper Michigan Energy Resources Company	Electric Utility	F.D. Kuester Generating Station	MI	61392	K4	18.3	Natural Gas Internal Combustion Engine	NG	IC	(V) Under construction, more than 50 percent complete	18.8
2019	4	61029	Upper Michigan Energy Resources Company	Electric Utility	F.D. Kuester Generating Station	MI	61392	K5	18.3	Natural Gas Internal Combustion Engine	NG	IC	(V) Under construction, more than 50 percent complete	18.8
2019	4	61029	Upper Michigan Energy Resources Company	Electric Utility	F.D. Kuester Generating Station	MI	61392	K6	18.3	Natural Gas Internal Combustion Engine	NG	IC	(V) Under construction, more than 50 percent complete	18.8
2019	4	61029	Upper Michigan Energy Resources Company	Electric Utility	F.D. Kuester Generating Station	MI	61392	K7	18.3	Natural Gas Internal Combustion Engine	NG	IC	(V) Under construction, more than 50 percent complete	18.8
2019	5	803	Arizona Public Service Co	Electric Utility	Ocotillo	AZ	116	GT3	104.7	Natural Gas Fired Combustion Turbine	NG	GT	(U) Under construction, less than or equal to 50 percent complete	161.9
2019	5	60672	Birdsboro Power LLC	IPP	Birdsboro Power	PA	61035	GEN1	476.0	Natural Gas Fired Combined Cycle	NG	CS	(V) Under construction, more than 50 percent complete	525.0
2019	5	58871	Citizens Enterprises Corporation	IPP	Two Mile Desert Project	NC	60510	PV1	16.2	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	16.2
2019	5	3913	City of Colby - (KS)	Electric Utility	Colby City of	KS	1272	9	3.0	Petroleum Liquids	DFO	IC	(P) Planned for installation, but regulatory approvals not initiated	3.0
2019	5	3265	Cleco Power LLC	Electric Utility	St. Mary Clean Energy Center	LA	60610	1	47.9	All Other	WH	OT	(V) Under construction, more than 50 percent complete	58.2
2019	5	61567	DP-C2 Episode 1 LLC	IPP	Richardson Solar II	SC	61972	C2BV	3.6	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	3.6
2019	5	56201	Engie North America	IPP	Seymour Hills Wind Project, LLC	TX	62227	WTGS	30.2	Onshore Wind Turbine	WND	WT	(U) Under construction, less than or equal to 50 percent complete	30.2
2019	5	60195	Groton Station Fuel Cell, LLC	IPP	Naval Sub Base New London Fuel Cell	CT	61743	MMH3	3.7	Other Natural Gas	NG	FC	(U) Under construction, less than or equal to 50 percent complete	3.7
2019	5	9130	Hutchinson Utilities Comm	Electric Utility	Hutchinson Plant #1	MN	1980	11	9.8	Natural Gas Internal Combustion Engine	NG	IC	(V) Under construction, more than 50 percent complete	9.8
2019	5	9130	Hutchinson Utilities Comm	Electric Utility	Hutchinson Plant #1	MN	1980	12	9.8	Natural Gas Internal Combustion Engine	NG	IC	(V) Under construction, more than 50 percent complete	9.8
2019	5	54769	INEOS USA LLC	Industrial	Power Island	TX	10154	GEN2	50.0	Natural Gas Fired Combustion Turbine	NG	GT	(U) Under construction, less than or equal to 50 percent complete	50.0
2019	5	54769	INEOS USA LLC	Industrial	Power Island	TX	10154	GEN3	50.0	Natural Gas Fired Combustion Turbine	NG	GT	(U) Under construction, less than or equal to 50 percent complete	50.0
2019	5	56990	NJR Clean Energy Ventures Corporation	IPP	IFF Union Beach Project	NJ	62306	IFFUB	5.5	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	5.5
2019	5	13206	Nantucket Electric Co	Electric Utility	Nantucket	MA	1615	18	13.5	Petroleum Liquids	DFO	GT	(V) Under construction, more than 50 percent complete	15.4
2019	5	13206	Nantucket Electric Co	Electric Utility	Nantucket	MA	1615	19	1.0	Petroleum Liquids	DFO	IC	(V) Under construction, more than 50 percent complete	1.0
2019	5	13902	NorthWestern Energy	Electric Utility	Hauser	MT	2185	HAU7	3.4	Conventional Hydroelectric	WAT	HY	(V) Under construction, more than 50 percent complete	3.5
2019	5	56545	Pattern Operators LP	IPP	Grady Wind Energy Center, LLC	NM	60317	1	220.5	Onshore Wind Turbine	WND	WT	(V) Under construction, more than 50 percent complete	220.5
2019	5	61699	SR Meridian II	IPP	Meridian II	MS	62164	MRDII	5.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	5.0
2019	5	59598	Tooele Army Depot	IPP	Tooele Army Depot	UT	59817	PV1	1.5	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	1.5
2019	5	61882	USS Eggo Solar CSG	IPP	USS Eggo Solar CSG	MN	62359	USEGG	1.0	Solar Photovoltaic	SUN	PV	(U) Under construction, less than or equal to 50 percent complete	1.0
2019	5	61842	USS Webster Solar	IPP	USS Webster Solar CSG	MN	62336	USWEB	1.0	Solar Photovoltaic	SUN	PV	(U) Under construction, less than or equal to 50 percent complete	1.0
2019	5	19564	University of Notre Dame	Commercial	University of Notre Dame	IN	50366	GT1	5.6	Natural Gas Fired Combustion Turbine	NG	GT	(U) Under construction, less than or equal to 50 percent complete	5.4
2019	5	19564	University of Notre Dame	Commercial	University of Notre Dame	IN	50366	GT2	5.6	Natural Gas Fired Combustion Turbine	NG	GT	(U) Under construction, less than or equal to 50 percent complete	5.4
2019	6	61565		IPP	Techren Solar II LLC	NV	61930	TECH2	200.0	Solar Photovoltaic	SUN	PV	(U) Under construction, less than or equal to 50 percent complete	200.0
2019	6	59474	BQ Energy LLC	IPP	Yeoman Creek	IL	61910	YEOM	8.8	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	8.8
2019	6	60366												

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)
2019	6	58135	Ecos Energy LLC	IPP	Lake Perris Solar	CA	60973	LKPR	1.5	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	1.5
2019	6	58135	Ecos Energy LLC	IPP	San Jacinto Solar	CA	60972	SJAC	1.5	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	1.5
2019	6	11241	Entergy Louisiana LLC	Electric Utility	St. Charles Power Station (LA)	LA	60926	1A	250.0	Natural Gas Fired Combined Cycle	NG	CT	(V) Under construction, more than 50 percent complete	250.0
2019	6	11241	Entergy Louisiana LLC	Electric Utility	St. Charles Power Station (LA)	LA	60926	1B	250.0	Natural Gas Fired Combined Cycle	NG	CT	(V) Under construction, more than 50 percent complete	250.0
2019	6	11241	Entergy Louisiana LLC	Electric Utility	St. Charles Power Station (LA)	LA	60926	1C	500.0	Natural Gas Fired Combined Cycle	NG	CA	(V) Under construction, more than 50 percent complete	500.0
2019	6	56625	Flat Water Wind Farm LLC	IPP	Flat Water Wind Farm LLC	NE	57283	WTG2	10.5	Onshore Wind Turbine	WND	WT	(P) Planned for installation, but regulatory approvals not initiated	10.5
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	(V) Under construction, more than 50 percent complete	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	(U) Under construction, less than or equal to 50 percent complete	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	(U) Under construction, less than or equal to 50 percent complete	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	(U) Under construction, less than or equal to 50 percent complete	593.3
2019	6	61037	Foard City Wind, LLC	IPP	Foard City Wind	TX	61402	FOARD	352.8	Onshore Wind Turbine	WND	WT	(L) Regulatory approvals pending. Not under construction	352.8
2019	6	60747	Gamble Solar, LLC	IPP	Gamble Solar	NC	61127	12348	3.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	3.0
2019	6	7140	Georgia Power Co	Electric Utility	Guyton Community Solar	GA	62392	1	3.6	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	3.6
2019	6	60040	Hale Wind Energy	IPP	Hale Community Wind Farm	TX	59247	HALE1	478.0	Onshore Wind Turbine	WND	WT	(V) Under construction, more than 50 percent complete	478.0
2019	6	57389	IKEA Property Inc	Commercial	IKEA Live Oak Rooftop PV System	TX	62152	570	1.7	Solar Photovoltaic	SUN	PV	(U) Under construction, less than or equal to 50 percent complete	1.7
2019	6	57389	IKEA Property Inc	Commercial	IKEA Norfolk Rooftop PV System	VA	62355	569PV	1.3	Solar Photovoltaic	SUN	PV	(U) Under construction, less than or equal to 50 percent complete	1.3
2019	6	49893	Inenergy Services LLC	IPP	Santa Rita East	TX	62038	STRAE	302.4	Onshore Wind Turbine	WND	WT	(U) Under construction, less than or equal to 50 percent complete	302.4
2019	6	59678	KDC Solar PR1, LLC	IPP	KDC Solar PR1, LLC	NJ	59910	SF	22.0	Onshore Wind Turbine	SUN	PV	(V) Under construction, more than 50 percent complete	22.0
2019	6	11664	Mark Technologies Corp	IPP	Alta Mesa Project Phase IV	CA	55352	GEN1	40.0	Onshore Wind Turbine	WND	WT	(U) Under construction, less than or equal to 50 percent complete	40.0
2019	6	61708	NRG Canal 3 Development LLC	IPP	Canal	MA	1599	3	330.0	Natural Gas Fired Combustion Turbine	NG	GT	(V) Under construction, more than 50 percent complete	330.0
2019	6	61844	OneEnergy Blue Star Solar, LLC	IPP	Blue Star	MD	62332	BLUES	7.5	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	7.5
2019	6	58764	Origen Energy USA, Inc	IPP	OR Solar 2, LLC	OR	61200	ORSR2	10.0	Solar Photovoltaic	SUN	PV	(OT) Other	10.0
2019	6	15452	PSEG Power Connecticut LLC	IPP	Bridgeport Station	CT	568	501	375.7	Natural Gas Fired Combined Cycle	NG	CT	(V) Under construction, more than 50 percent complete	375.7
2019	6	15452	PSEG Power Connecticut LLC	IPP	Bridgeport Station	CT	568	502	200.6	Natural Gas Fired Combined Cycle	NG	CA	(V) Under construction, more than 50 percent complete	200.6
2019	6	61658	Panda Solar NC 5, LLC	IPP	Panda Solar NC 5, LLC	NC	62123	20007	1.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	1.0
2019	6	60389	Rabbit Hill Energy Storage Project	IPP	Rabbit Hill Energy Storage Project	TX	60649	1	9.9	Batteries	MWH	BA	(V) Under construction, more than 50 percent complete	9.9
2019	6	61485	Rio Bravo Windpower, LLC	IPP	Rio Bravo Windpower, LLC	TX	61865	1	237.6	Onshore Wind Turbine	WND	WT	(U) Under construction, less than or equal to 50 percent complete	237.6
2019	6	61588	San Pablo Raceway, LLC	IPP	San Pablo Raceway	CA	62004	SPRWY	100.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	100.0
2019	6	61843	Sol Phoenix Solar, LLC	IPP	Sol Phoenix	MD	62331	SOLPH	2.5	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	2.5
2019	6	17650	Southern Power Co	IPP	Mankato Energy Center	MN	56104	CTG1	200.0	Natural Gas Fired Combined Cycle	NG	CT	(U) Under construction, less than or equal to 50 percent complete	210.0
2019	6	61916	Spencer-Tioga Solar, LLC	IPP	Pasto Solar	NY	62389	PASTO	16.0	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	16.0
2019	6	61492	StraightUp Solar	IPP	John A Logan College Solar	IL	61878	JALC	1.6	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	1.9
2019	6	58658	Sunlight Partners	IPP	Alexis Solar	NC	60139	PV1	5.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	5.0
2019	6	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
2019	6	58658	Sunlight Partners	IPP	Brooke Solar	NC	60140	PV1	4.5	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	4.5
2019	6	58658	Sunlight Partners	IPP	Cash Solar	NC	60178	PV1	5.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	5.0
2019	6	58658	Sunlight Partners	IPP	Eagle Solar	NC	60161	PV1	4.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	4.0
2019	6	58658	Sunlight Partners	IPP	Grove Solar	NC	60181	PV1	5.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	5.0
2019	6	58658	Sunlight Partners	IPP	Higgins Solar	NC	60166	PV1	5.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	5.0
2019	6	58658	Sunlight Partners	IPP	Icarus Solar	NC	60169	PV1	3.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	3.0
2019	6	58658	Sunlight Partners	IPP	Iga Solar	NC	60170	PV1	5.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	5.0
2019	6	58658	Sunlight Partners	IPP	Izia Solar	NC	60141	PV1	5.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	5.0
2019	6	58658	Sunlight Partners	IPP	June Solar	NC	60158	PV1	4.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	4.0
2019	6	58658	Sunlight Partners	IPP	Longleaf Solar	NC	60173	PV1	5.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	5.0
2019	6	58658	Sunlight Partners	IPP	Robin Solar	NC	60165	PV1	5.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	5.0
2019	6	58658	Sunlight Partners	IPP	Roman Solar	NC	60159	PV1	5.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	5.0
2019	6	58658	Sunlight Partners	IPP	Tate Solar	NC	60160	PV1	5.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	5.0
2019	6	58658	Sunlight Partners	IPP	Wilfork Solar	NC	60162	PV1	5.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	5.0
2019	6	61881	USS King 2 CSG	IPP	USS King 2 CSG	MN	62358	USK12	1.0	Solar Photovoltaic	SUN	PV	(U) Under construction, less than or equal to 50 percent complete	1.0
2019	6	59731	Windham Solar LLC	IPP	Lebanon Solar 1	CT	59991	LEB1	2.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	2.0
2019	6	59731	Windham Solar LLC	IPP	Lebanon Solar 2	CT	59992	LEB2	2.0	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	2.0
2019	7	61466	Bakersfield Fuel Cell 1, LLC	IPP	Bolthouse Farms Fuel Cell	CA	61845	MM28	2.5	Other Natural Gas	NG	FC	(P) Planned for installation, but regulatory approvals not initiated	2.5
2019	7	61466	Bakersfield Fuel Cell 1, LLC	IPP	Bolthouse Farms Fuel Cell	CA	61845	MM29	2.5	Other Natural Gas	NG	FC	(P) Planned for installation, but regulatory approvals not initiated	2.5
2019	7	61745	Burgaw Solar, LLC	IPP	Burgaw Solar, LLC	NC	62240	1072	5.0	Solar Photovoltaic	SUN	PV	(U) Under construction, less than or equal to 50 percent complete	5.0
2019	7	61060	Cypress Creek Renewables	IPP	Lampwick	TX	61872	GEN1	7.5	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	7.5
2019	7	60147	Enerparc 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
2019	7	56201	Engie North America	IPP	Solomon Forks Wind Project, LLC	KS	61984	WTGS	275.6	Onshore Wind Turbine	WND	WT	(U) Under construction, less than or equal to 50 percent complete	275.6
2019	7	54913	NSTAR Electric Company	Electric Utility	Hampden Solar PV	MA	62073	LG390	3.5	Solar Photovoltaic	SUN	PV	(V) Under construction, more than 50 percent complete	3.5
2019	7	61929	Runway Solar Farm	Electric Utility	Runway Solar Farm	SC	62397	1	2.0	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	2.0
2019	7	60975	SR Innovation, LLC	IPP	SR Innovation - NIKE PV	TN	61332	NIKE2	1.7	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	1.7
2019	7	61502	Sholes Wind Energy Center, LLC	IPP	Sholes Wind Energy Center	NE	61889	WSN1	160.0	Onshore Wind Turbine	WND	WT	(U) Under construction, less than or equal to 50 percent complete	160.0
2019	7	61276	West Liberty Renewables LLC	IPP	West Liberty Wind Farm	IA	61057	T1	2.5	Onshore Wind Turbine	WND	WT	(P) Planned for installation, but regulatory approvals not initiated	2.5
2019	7	61276	West Liberty Renewables LLC	IPP	West Liberty Wind Farm	IA	61057	T2	2.5	Onshore Wind Turbine	WND	WT	(P) Planned for installation, but regulatory approvals not initiated	2.5
2019	8	61608	Agilon Energy Holdings II, LLC	IPP	Victoria Port Power II LLC	TX	61966	VP2-1	43.0	Natural Gas Fired Combustion Turbine	NG	GT	(L) Regulatory approvals pending. Not under construction	50.0
2019	8	61608	Agilon Energy Holdings II, LLC	IPP	Victoria Port Power II LLC	TX	61966	VP2-2	43.0	Natural Gas Fired Combustion Turbine	NG	GT	(L) Regulatory approvals pending. Not under construction	50.0
2019	8	60877	Antelope DSR 3, LLC	IPP	Antelope DSR 3	CA	61265	ADSR3	20.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	20.0
2019	8	59714	Antrim Wind Energy LLC	IPP	Antrim Wind	NH	59953	AWND1	28.4	Onshore Wind Turbine	WND	WT	(U) Under construction, less than or equal to 50 percent complete	28.8
2019	8	59550	Croda Inc.	Industrial	Croda Atlas Point CHP	DE	59783	91199	2.0	Landfill Gas	LFG	IC	(P) Planned for installation, but regulatory approvals not initiated	2.0
2019	8	61521	Pegasus Wind, LLC	IPP	Pegasus Wind	MI	61916	PWEC	141.1	Onshore Wind Turbine	WND	WT	(U) Under construction, less than or equal to 50 percent complete	141.1
2019	8	16534	Sacramento Municipal Util Dist	Electric Utility	White Rock/Slab Creek	CA	435	H3	2.7	Conventional Hydroelectric	WAT	HY	(U) Under construction, less than or equal to 50 percent complete	2.7
2019	8	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
2019	8	60410	Tanager Holdings, LLC	IPP	Tanager Holdings	NC	60691	PV1	5.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	5.0
2019	9	60328	Big Level Wind LLC	IPP	Big Level Wind	PA	60551	BLW01	90.0	Onshore Wind Turbine	WND	WT	(U) Under construction, less than or equal to 50 percent complete	90.0
2019	9	59365	Capital Power Corporation	IPP	Black Fork Wind Energy Project	OH	59907	GEN	200.0	Onshore Wind Turbine	WND	WT	(P) Planned for installation, but regulatory approvals not initiated	200.0
2019	9	58970	Ecoplexus, Inc	IPP	Everett PV1	NC	60997	EVRT1	10.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	10.0
2019	9	61054	Fluvanna Wind Energy 2 LLC	IPP	Gopher Creek Wind Farm	TX	61417	GCWF	158.0	Onshore Wind Turbine	WND	WT	(U) Under construction, less than or equal to 50 percent complete	158.0
2019	9	61374	Foxtail Wind, LLC	Electric Utility	Foxtail Wind, LLC	ND	61747	1	150.0	Onshore Wind Turbine	WND	WT	(U) Under construction, less than or equal to 50 percent complete	150.0
2019	9	7601	Green Mountain Power Corp	Electric Utility	GMP Solar/Storage-Essex	VT	62383	GMPBE	2.0	Batteries	MWH	BA	(P) Planned for installation, but regulatory approvals not initiated	2.0
2019	9	7601	Green Mountain Power Corp	Electric Utility	GMP Solar/Storage-Essex	VT	62383	GMPSE	4.5	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	4.5
2019	9	7601	Green Mountain Power Corp	Electric Utility	GMP Solar/Storage-Ferrisburgh	VT	62382	GMPBF	2.0	Batteries	MWH	BA	(P) Planned for installation, but regulatory approvals not initiated	2.0
2019	9	7601	Green Mountain Power Corp	Electric Utility	GMP									

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)
2019	10	61465	Brush Solar Center	IPP	Brush Solar Center	OR	61844	BRUSH	2.8	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	2.8
2019	10	60259	Green River Wind Farm, LLC	IPP	Green River Wind Farm	IL	60471	GRNRV	212.0	Onshore Wind Turbine	WND	WT	(U) Under construction, less than or equal to 50 percent complete	212.0
2019	10	61473	Morgan Solar Center	IPP	Morgan Solar Center	OR	61855	MORGN	3.0	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	3.0
2019	10	16657	San Jose/Santa Clara Water P C	Commercial	SJ/SC WPCP	CA	56080	EG4	3.5	Other Waste Biomass	OBG	IC	(U) Under construction, less than or equal to 50 percent complete	3.5
2019	10	16657	San Jose/Santa Clara Water P C	Commercial	SJ/SC WPCP	CA	56080	EG5	3.5	Other Waste Biomass	OBG	IC	(U) Under construction, less than or equal to 50 percent complete	3.5
2019	10	16657	San Jose/Santa Clara Water P C	Commercial	SJ/SC WPCP	CA	56080	EG6	3.5	Other Waste Biomass	OBG	IC	(U) Under construction, less than or equal to 50 percent complete	3.5
2019	10	16657	San Jose/Santa Clara Water P C	Commercial	SJ/SC WPCP	CA	56080	EG7	3.5	Other Waste Biomass	OBG	IC	(U) Under construction, less than or equal to 50 percent complete	3.5
2019	10	61884	USS Brude Solar CSG	IPP	USS Brude Solar CSG	MN	62361	USBRU	1.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	1.0
2019	10	61883	USS DVL Solar CSG	IPP	USS DVL Solar CSG	MN	62360	USDVL	1.0	Solar Photovoltaic	SUN	PV	(U) Under construction, less than or equal to 50 percent complete	1.0
2019	10	61472	Vale Solar Center	IPP	Vale Solar Center	OR	61856	VALE	3.0	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	3.0
2019	10	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
2019	11	61541	1634 Solar, LLC	IPP	1634 Solar	SC	61935	3	2.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	2.0
2019	11	61544	Bani Solar, LLC	IPP	Bani Solar	SC	61938	4	2.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	2.0
2019	11	61519	Blackville Solar Farm, LLC	IPP	Blackville Solar Farm, LLC	SC	61918	1	7.2	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	7.2
2019	11	60656	Chestnut Solar LLC	IPP	Chestnut Solar	NC	61011	PV1	74.9	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	74.9
2019	11	3046	Duke Energy Progress - (NC)	Electric Utility	Asheville	NC	2706	CT5	191.2	Natural Gas Fired Combined Cycle	NG	CT	(V) Under construction, more than 50 percent complete	191.2
2019	11	3046	Duke Energy Progress - (NC)	Electric Utility	Asheville	NC	2706	CT7	191.2	Natural Gas Fired Combined Cycle	NG	CT	(V) Under construction, more than 50 percent complete	191.2
2019	11	3046	Duke Energy Progress - (NC)	Electric Utility	Asheville	NC	2706	ST6	102.0	Natural Gas Fired Combined Cycle	NG	CA	(V) Under construction, more than 50 percent complete	102.0
2019	11	3046	Duke Energy Progress - (NC)	Electric Utility	Asheville	NC	2706	ST8	102.0	Natural Gas Fired Combined Cycle	NG	CA	(V) Under construction, more than 50 percent complete	102.0
2019	11	61857	Five Forks Solar	IPP	Five Forks Solar	NC	59951	5FRK	20.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	20.0
2019	11	9234	Indiana Municipal Power Agency	Electric Utility	Tipton Solar Park	IN	62305	STIP	5.3	Solar Photovoltaic	SUN	PV	(U) Under construction, less than or equal to 50 percent complete	5.3
2019	11	61401	North 301 Solar	IPP	North 301 Solar	NC	61778	N301	26.9	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	26.9
2019	11	59770	Shorthorn Holdings, LLC	IPP	Shorthorn Holdings	SC	60028	PV1	15.4	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	15.4
2019	11	2770	Terra-Gen Operating Co LLC	IPP	Voyager Wind 1	CA	60594	VYGR1	131.1	Onshore Wind Turbine	WND	WT	(U) Under construction, less than or equal to 50 percent complete	131.1
2019	11	61885	USS East Hauer Watt Solar CSG	IPP	USS East Hauer Watt CSG	MN	62362	USEHW	1.0	Solar Photovoltaic	SUN	PV	(U) Under construction, less than or equal to 50 percent complete	1.0
2019	12	60600	Adams Solar, LLC	IPP	Adams Solar	NC	60949	PV1	2.0	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	2.0
2019	12	61617	Alpha Value Solar, LLC	IPP	Alpha Value Solar	NC	62054	AVS01	5.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	5.0
2019	12	61118	Ameresco, Inc - Candlewood	IPP	Candlewood Solar	CT	61517	CANDL	25.0	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	25.0
2019	12	15399	Avangrid Renewables LLC	IPP	Coyote Ridge	SD	61047	WT1	98.0	Onshore Wind Turbine	WND	WT	(T) Regulatory approvals received. Not under construction	98.0
2019	12	15399	Avangrid Renewables LLC	IPP	Karankawa Wind LLC	TX	61343	WT1	200.0	Onshore Wind Turbine	WND	WT	(P) Planned for installation, but regulatory approvals not initiated	200.0
2019	12	15399	Avangrid Renewables LLC	IPP	Montague Wind Power Facility LLC	OR	58099	1	200.0	Onshore Wind Turbine	WND	WT	(P) Planned for installation, but regulatory approvals not initiated	200.0
2019	12	15399	Avangrid Renewables LLC	IPP	Otter Creek Wind Farm LLC	IL	61344	WT1	129.0	Onshore Wind Turbine	WND	WT	(P) Planned for installation, but regulatory approvals not initiated	129.0
2019	12	15399	Avangrid Renewables LLC	IPP	Tatanka Ridge	SD	61046	WT1	98.0	Onshore Wind Turbine	WND	WT	(U) Under construction, less than or equal to 50 percent complete	98.0
2019	12	61474	Baker City Solar	IPP	Baker City Solar	OR	61854	BAKER	15.0	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	15.0
2019	12	60289	Blazing Star Wind Farm, LLC	IPP	Blazing Star Wind Farm 1	MN	60504	BLZG1	200.0	Onshore Wind Turbine	WND	WT	(T) Regulatory approvals received. Not under construction	200.0
2019	12	60719	Broadlands Wind Farm LLC	IPP	Broadlands Wind Farm	IL	61161	GEN01	300.0	Onshore Wind Turbine	WND	WT	(L) Regulatory approvals pending. Not under construction	300.0
2019	12	60714	Burke Wind LLC	IPP	Burke Wind, LLC	ND	61100	GE23	199.4	Onshore Wind Turbine	WND	WT	(P) Planned for installation, but regulatory approvals not initiated	199.4
2019	12	59365	Capital Power Corporation	IPP	Garrison Butte Wind, LLC	ND	60066	GEN	150.0	Onshore Wind Turbine	WND	WT	(P) Planned for installation, but regulatory approvals not initiated	150.0
2019	12	58508	Carolina Solar Energy II LLC	IPP	Cabaniss Solar	NC	60430	PV1	4.2	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	4.2
2019	12	58508	Carolina Solar Energy II LLC	IPP	McGrigor Farm Solar	NC	60440	PV1	5.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	5.0
2019	12	58508	Carolina Solar Energy II LLC	IPP	Sellers Farm Solar	NC	60439	PV1	5.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	5.0
2019	12	58508	Carolina Solar Energy II LLC	IPP	Tides Lane Farm	NC	60429	PV1	3.7	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	3.7
2019	12	61773	Childress Solar Park LLC	IPP	Misae Solar	TX	62249	77777	240.0	Solar Photovoltaic	SUN	PV	(U) Under construction, less than or equal to 50 percent complete	240.0
2019	12	58391	Chilocco Wind Farm LLC	IPP	Chilocco Wind Farm	OK	58406	1	200.0	Onshore Wind Turbine	WND	WT	(U) Under construction, less than or equal to 50 percent complete	200.0
2019	12	61817	Collard Holdings, LLC	IPP	Collard Holdings Solar	NC	62317	PV	10.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	10.0
2019	12	56769	Consolidated Edison Development Inc.	IPP	Burt County Wind	NE	61511	BCNE	75.0	Onshore Wind Turbine	WND	WT	(L) Regulatory approvals pending. Not under construction	75.0
2019	12	60290	Crocker Wind Farm, LLC	IPP	Crocker Wind Farm	SD	60505	CRCKR	200.0	Onshore Wind Turbine	WND	WT	(L) Regulatory approvals pending. Not under construction	200.0
2019	12	61416	Crowned Ridge Wind, LLC	IPP	Cattle Ridge Wind Farm 1	SD	60503	CTLL1	200.0	Onshore Wind Turbine	WND	WT	(P) Planned for installation, but regulatory approvals not initiated	200.0
2019	12	59464	Current Energy Group	IPP	Hickory	NC	59829	5515	5.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	5.0
2019	12	61060	Cypress Creek Renewables	IPP	Willard Solar	NC	60287	PV1	4.9	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	5.0
2019	12	5109	DTE Electric Company	Electric Utility	Dearborn Energy Center	MI	62289	GTG-1	12.0	Natural Gas Fired Combined Cycle	NG	CT	(U) Under construction, less than or equal to 50 percent complete	15.0
2019	12	5109	DTE Electric Company	Electric Utility	Dearborn Energy Center	MI	62289	GTG-2	12.0	Natural Gas Fired Combined Cycle	NG	CT	(U) Under construction, less than or equal to 50 percent complete	15.0
2019	12	5109	DTE Electric Company	Electric Utility	Dearborn Energy Center	MI	62289	STG-1	5.0	Natural Gas Fired Combined Cycle	NG	CA	(U) Under construction, less than or equal to 50 percent complete	5.0
2019	12	58468	Dominion Renewable Energy	Electric Utility	Colonial Trail West	VA	61985	CTWS	142.4	Solar Photovoltaic	SUN	PV	(U) Under construction, less than or equal to 50 percent complete	142.4
2019	12	61911	Dougherty County Solar, LLC	IPP	Dougherty County Solar, LLC	GA	62375	PV1	120.0	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	120.0
2019	12	56215	E ON Climate Renewables N America LLC	IPP	Vici Wind Farm	OK	59062	VICI	180.0	Onshore Wind Turbine	WND	WT	(P) Planned for installation, but regulatory approvals not initiated	180.0
2019	12	57170	EDF Renewable Asset Holdings, Inc.	IPP	Valentine Solar, LLC	CA	62288	VAL01	111.2	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	111.2
2019	12	61785	EDP Renewables North America LLC	IPP	Saddle Mountain East Wind Farm	WA	62263	GEN1	126.0	Onshore Wind Turbine	WND	WT	(P) Planned for installation, but regulatory approvals not initiated	126.0
2019	12	56987	East Blackland Solar Project 1 LLC	IPP	Plugerville Solar Farm	TX	57659	PSF	144.0	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	144.0
2019	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
2019	12	58970	Ecoplexus, Inc	IPP	High Shoals PV1	NC	59997	HISHO	16.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	16.0
2019	12	58970	Ecoplexus, Inc	IPP	Underwood PV2	NC	60998	UNWD2	16.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	16.0
2019	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
2019	12	58135	Ecos Energy LLC	IPP	Weybridge 1 Solar	VT	61038	WEY1	3.0	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	3.0
2019	12	61915	Emmons-Logan Wind, LLC	IPP	Emmons-Logan Wind, LLC	ND	62380	ELLCC	300.0	Onshore Wind Turbine	WND	WT	(T) Regulatory approvals received. Not under construction	300.0
2019	12	60147	Enerparc 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
2019	12	58672	Everpower Wind Holdings Inc	IPP	Mason Dixon Wind Farm	PA	60212	1	79.9	Onshore Wind Turbine	WND	WT	(L) Regulatory approvals pending. Not under construction	79.9
2019	12	59745	First Solar Asset Management	IPP	Twiggs Solar	GA	61696	TWIGG	200.0	Solar Photovoltaic	SUN	PV	(U) Under construction, less than or equal to 50 percent complete	200.0
2019	12	56615	First Solar Project Development	IPP	Sunshine Valley Solar	NV	59826	GEN01	103.4	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	103.4
2019	12	56615	First Solar Project Development	IPP	Windhub Solar A LLC	CA	59878	GEN01	20.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	20.0
2019	12	6541	Formosa Plastics Corp	Industrial	Formosa Utility Venture Ltd	TX	10554	3ST1	38.0	Natural Gas Fired Combined Cycle	NG	CA	(U) Under construction, less than or equal to 50 percent complete	40.0
2019	12	6541	Formosa Plastics Corp	Industrial	Formosa Utility Venture Ltd	TX	10554	3TBG1	97.0	Natural Gas Fired Combined Cycle	NG	CT	(U) Under construction, less than or equal to 50 percent complete	102.0
2019	12	6541	Formosa Plastics Corp	Industrial	Formosa Utility Venture Ltd	TX	10554	3TBG2	97.0	Natural Gas Fired Combined Cycle	NG	CT	(U) Under construction, less than or equal to 50 percent complete	102.0
2019	12	7140	Georgia Power Co	Electric Utility	Robins Air Force Base Solar	GA	61648	1	139.0	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	139.0
2019	12	61611	Glaciers Edge Wind Project LLC	IPP	Glaciers Edge Wind Project	IA	62035	GEW	202.7	Onshore Wind Turbine	WND	WT	(L) Regulatory approvals pending. Not under construction	202.7
2019	12	61888	Gloversville Community Solar LLC	IPP	Gloversville Landfill Solar	NY	62357	08158	5.0	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	5.0
2019	12	61912	Grazing Yak Solar, LLC	IPP	Grazing Yak Solar	CO	62376	PV1	35.0	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	35.0
2019	12	61166	Green Power Energy LLC	IPP	Cody Road Wind Farm	NY	61592	WT1	2.4	Onshore Wind Turbine	WND	WT	(U) Under construction, less than or equal to 50 percent complete	2.4
2019	12	61166	Green Power Energy LLC	IPP	Cody Road Wind Farm	NY	61592	WT2	2.4	Onshore Wind Turbine	WND	WT	(U) Under construction, less than or equal to 50 percent complete	2.4
2019</														



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)
2019	12	61770	Mesteno Wind	IPP	Mesteno	TX	62258	MES	200.0	Onshore Wind Turbine	WND	WT	(T) Regulatory approvals received. Not under construction	201.6
2019	12	12341	MidAmerican Energy Co	Electric Utility	Orient Wind Farm	IA	61077	2	398.8	Onshore Wind Turbine	WND	WT	(P) Planned for installation, but regulatory approvals not initiated	398.8
2019	12	61459	Minco Wind V, LLC	IPP	Minco Wind V, LLC	OK	61837	MV	220.0	Onshore Wind Turbine	WND	WT	(P) Planned for installation, but regulatory approvals not initiated	220.0
2019	12	60952	Mt. Jackson Solar LLC	IPP	Mt. Jackson Solar	VA	61318	SOLAR	15.7	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	15.7
2019	12	56622	NextEra Energy Resources	IPP	Shaw Creek Solar, LLC	SC	61790	SHAWC	74.9	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	74.9
2019	12	61480	Ontario Solar Center	IPP	Ontario Solar Center	OR	61860	ONTRO	3.0	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	3.0
2019	12	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
2019	12	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
2019	12	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
2019	12	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
2019	12	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
2019	12	56545	Pattern Operators LP	IPP	Crazy Mountain Wind LLC	MT	61859	WT	80.0	Onshore Wind Turbine	WND	WT	(U) Under construction, less than or equal to 50 percent complete	80.0
2019	12	61758	Prevailing Wind Park, LLC	IPP	Prevailing Wind Park	SD	62247	PWPSD	220.0	Onshore Wind Turbine	WND	WT	(L) Regulatory approvals pending. Not under construction	220.0
2019	12	61586	Rankin Solar Center, LLC	IPP	Rankin Solar Center, LLC	SC	61996	RANKI	10.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	10.0
2019	12	60466	Rowan Solar NC LLC	IPP	Rowan Solar NC LLC	NC	60780	PV1	2.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	2.0
2019	12	61899	SR Arlington II, LLC	IPP	SR Arlington II	GA	62367	ARLII	102.5	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	102.5
2019	12	61635	SR Hazlehurst III, LLC	IPP	Hazlehurst III	GA	62057	HZIII	40.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	40.0
2019	12	61701	SR Meridian III	IPP	Meridian III	MS	62163	MRDIII	52.5	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	52.5
2019	12	61634	SR Terrell, LLC	IPP	SR Terrell	GA	62058	TERRL	74.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	74.0
2019	12	60897	Salinas Valley Solid Waste Authority	IPP	Crazy Horse Solar Project	CA	61285	PV1	2.0	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	2.0
2019	12	16609	San Diego Gas & Electric Co	Electric Utility	Top Gun Energy Storage	CA	61366	TGES	30.0	Batteries	MWH	BA	(P) Planned for installation, but regulatory approvals not initiated	30.0
2019	12	61455	Scituate RI Solar, LLC	IPP	Scituate RI Solar, LLC	RI	61841	SCITU	10.0	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	10.0
2019	12	61321	Seabrook Solar, LLC	IPP	Seabrook Solar, LLC	SC	61701	GEN1	70.5	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	72.5
2019	12	17650	Southern Power Co	IPP	Reading Wind Project	KS	60999	READW	200.1	Onshore Wind Turbine	WND	WT	(P) Planned for installation, but regulatory approvals not initiated	200.1
2019	12	17650	Southern Power Co	IPP	Wildhorse Mountain Wind Facility	OK	61866	1	100.0	Onshore Wind Turbine	WND	WT	(P) Planned for installation, but regulatory approvals not initiated	100.0
2019	12	61668	Strauss Wind LLC	IPP	Strauss Wind Farm	CA	62113	ST-CA	98.8	Onshore Wind Turbine	WND	WT	(P) Planned for installation, but regulatory approvals not initiated	98.8
2019	12	18454	Tampa Electric Co	Electric Utility	Wimauma Solar	FL	61667	1	74.5	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	74.5
2019	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
2019	12	61847	USS Centerfield Solar LLC	IPP	USS Centerfield Solar CSG	MN	62335	USCEN	1.0	Solar Photovoltaic	SUN	PV	(U) Under construction, less than or equal to 50 percent complete	1.0
2019	12	61846	USS Hockey Pad Solar LLC	IPP	USS Hockey Pad Solar CSG	MN	62334	USHP	1.0	Solar Photovoltaic	SUN	PV	(U) Under construction, less than or equal to 50 percent complete	1.0
2019	12	61840	USS Rapidan Solar	IPP	USS Rapidan Solar CSG	MN	62338	USRAP	1.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	1.0
2019	12	60599	Washington Solar, LLC	IPP	Washington Solar	NC	60948	PV1	5.0	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	5.0
2019	12	59316	Whitetail Solar LLC	IPP	Whitetail Solar	SC	59569	PV1	10.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	10.0
2020	1	60278	64KT 8me LLC	IPP	Springbok 3 Solar Farm	CA	60491	SB3SF	90.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	90.0
2020	1	55918	Acciona Wind Energy USA LLC	IPP	Palmas Wind, LLC	TX	61773	PW	142.6	Onshore Wind Turbine	WND	WT	(L) Regulatory approvals pending. Not under construction	144.9
2020	1	60667	Aksamit Energy Development	IPP	Monument Road	NE	61033	MR001	66.0	Onshore Wind Turbine	WND	WT	(L) Regulatory approvals pending. Not under construction	66.0
2020	1	59365	Capital Power Corporation	IPP	Salt Springs Wind Farm	KS	60807	WT	200.0	Onshore Wind Turbine	WND	WT	(P) Planned for installation, but regulatory approvals not initiated	200.0
2020	1	56534	Cricket Valley Energy Center LLC	IPP	Cricket Valley Energy	NY	57185	U001	345.0	Natural Gas Fired Combined Cycle	NG	CC	(V) Under construction, more than 50 percent complete	390.0
2020	1	61060	Cypress Creek Renewables	IPP	Thigpen Farms Solar, LLC	NC	60850	PV1	5.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	5.0
2020	1	13478	Entergy New Orleans, LLC	Electric Utility	New Orleans Power	LA	60928	1	250.0	Natural Gas Fired Combustion Turbine	NG	GT	(L) Regulatory approvals pending. Not under construction	250.0
2020	1	56615	First Solar Project Development	IPP	White Wing Solar	AZ	60572	GEN01	200.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	200.0
2020	1	6452	Florida Power & Light Co	Electric Utility	Sweetbay Solar Center	FL	62394	1	74.5	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	74.5
2020	1	61594	Highlander Solar Station 1 LLC	IPP	Highlander Solar Station 1	VA	62014	HLND1	165.0	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	165.0
2020	1	18454	Tampa Electric Co	Electric Utility	Alafia Solar	FL	61653	PV1	50.3	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	50.0
2020	1	59056	Tri Global Energy, LLC	IPP	Changing Winds	TX	59243	CHAN1	288.0	Onshore Wind Turbine	WND	WT	(P) Planned for installation, but regulatory approvals not initiated	288.0
2020	1	20323	Wellhead Energy, LLC	IPP	Stanton Energy Reliability Center	CA	60698	GT1	45.9	Natural Gas Fired Combustion Turbine	NG	GT	(P) Planned for installation, but regulatory approvals not initiated	60.5
2020	1	20323	Wellhead Energy, LLC	IPP	Stanton Energy Reliability Center	CA	60698	GT2	45.9	Natural Gas Fired Combustion Turbine	NG	GT	(P) Planned for installation, but regulatory approvals not initiated	60.5
2020	1	20856	Wisconsin Power & Light Co	Electric Utility	Riverside Energy Center	WI	55641	CTG3	225.0	Natural Gas Fired Combined Cycle	NG	CT	(U) Under construction, less than or equal to 50 percent complete	232.9
2020	1	20856	Wisconsin Power & Light Co	Electric Utility	Riverside Energy Center	WI	55641	CTG4	225.0	Natural Gas Fired Combined Cycle	NG	CT	(U) Under construction, less than or equal to 50 percent complete	232.9
2020	1	20856	Wisconsin Power & Light Co	Electric Utility	Riverside Energy Center	WI	55641	PV1	2.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	2.0
2020	1	20856	Wisconsin Power & Light Co	Electric Utility	Riverside Energy Center	WI	55641	STG2	250.0	Natural Gas Fired Combined Cycle	NG	CA	(U) Under construction, less than or equal to 50 percent complete	260.1
2020	2	56534	Cricket Valley Energy Center LLC	IPP	Cricket Valley Energy	NY	57185	U002	345.0	Natural Gas Fired Combined Cycle	NG	CC	(V) Under construction, more than 50 percent complete	390.0
2020	2	58970	Ecoplexus, Inc	IPP	Boykin PV1	NC	59996	BOYK1	17.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	17.0
2020	2	59010	Rhubarb One LLC	IPP	Rhubarb One SC	SC	59596	PV1	20.0	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	20.0
2020	3	61670	AES Huntington Beach Energy, LLC	IPP	AES Huntington Beach Energy Project	CA	62116	1A	226.0	Natural Gas Fired Combined Cycle	NG	CT	(U) Under construction, less than or equal to 50 percent complete	231.0
2020	3	61670	AES Huntington Beach Energy, LLC	IPP	AES Huntington Beach Energy Project	CA	62116	1B	226.0	Natural Gas Fired Combined Cycle	NG	CT	(U) Under construction, less than or equal to 50 percent complete	231.0
2020	3	61670	AES Huntington Beach Energy, LLC	IPP	AES Huntington Beach Energy Project	CA	62116	1S	192.0	Natural Gas Fired Combined Cycle	NG	CA	(U) Under construction, less than or equal to 50 percent complete	231.0
2020	3	61006	Bearkat TE Partnership LLC	IPP	Bearkat	TX	59972	BRKA2	103.4	Onshore Wind Turbine	WND	WT	(P) Planned for installation, but regulatory approvals not initiated	103.4
2020	3	60350	CPV Fairview, LLC	IPP	CPV Fairview Energy Center	PA	60589	GEN1	1,100.0	Natural Gas Fired Combined Cycle	NG	CC	(U) Under construction, less than or equal to 50 percent complete	1,100.0
2020	3	59365	Capital Power Corporation	IPP	Cardinal Point LLC	IL	59902	GEN	150.0	Onshore Wind Turbine	WND	WT	(P) Planned for installation, but regulatory approvals not initiated	150.0
2020	3	56534	Cricket Valley Energy Center LLC	IPP	Cricket Valley Energy	NY	57185	U003	345.0	Natural Gas Fired Combined Cycle	NG	CC	(V) Under construction, more than 50 percent complete	390.0
2020	3	5109	DTE Electric Company	Electric Utility	Polaris Wind Park	MI	62290	1	168.6	Onshore Wind Turbine	WND	WT	(T) Regulatory approvals received. Not under construction	2.5
2020	3	6455	Duke Energy Florida, LLC	Electric Utility	Columbia Solar Power Plant	FL	61982	PV	74.9	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	74.9
2020	3	60718	Energy Resources USA, Inc.	IPP	Tom Bevill Lock and Dam Hydroelectric	AL	61749	GEN1	4.0	Conventional Hydroelectric	WAT	HY	(P) Planned for installation, but regulatory approvals not initiated	4.0
2020	3	60718	Energy Resources USA, Inc.	IPP	Tom Bevill Lock and Dam Hydroelectric	AL	61749	GEN2	4.0	Conventional Hydroelectric	WAT	HY	(P) Planned for installation, but regulatory approvals not initiated	4.0
2020	3	60718	Energy Resources USA, Inc.	IPP	Tom Bevill Lock and Dam Hydroelectric	AL	61749	GEN3	4.0	Conventional Hydroelectric	WAT	HY	(P) Planned for installation, but regulatory approvals not initiated	4.0
2020	3	60688	FGE Goodnight, 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
2020	3	9417	Interstate Power and Light Co	Electric Utility	Golden Plains	IA	62081	1	198.8	Onshore Wind Turbine	WND	WT	(T) Regulatory approvals received. Not under construction	198.8
2020	3	61251	LA3 West Baton Rouge, L.L.C.	IPP	LA3 West Baton Rouge Solar Facility	LA	61646	LA3WB	50.0	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	50.0
2020	3	60971	NYC ENERGY LLC	IPP	NISA Electric Generation Project	NY	61331	GEN1	59.7	Natural Gas Fired Combined Cycle	NG	CT	(T) Regulatory approvals received. Not under construction	70.5
2020	3	60971	NYC ENERGY LLC	IPP	NISA Electric Generation Project	NY	61331	STG1	20.2	Natural Gas Fired Combined Cycle	NG	CA	(T) Regulatory approvals received. Not under construction	22.0
2020	3	58718	Na Pua Makani Power Partners LLC	IPP	Na Pua Makani Wind Project	HI	58837	WT1	25.0	Onshore Wind Turbine	WND	WT	(L) Regulatory approvals pending. Not under construction	25.0
2020	3	59056	Tri Global Energy, LLC	IPP	Crosby County Wind Farm, LLC	TX	60273	WT1	120.0	Onshore Wind Turbine	WND	WT	(P) Planned for installation, but regulatory approvals not initiated	120.0
2020	3	24211	Tucson Electric Power Co	Electric Utility	H Wilson Sundt Generating Station	AZ	126	RIC1	18.2	Natural Gas Internal Combustion Engine	NG	IC	(U) Under construction, less than or equal to 50 percent complete	23.5
2020	3	24211	Tucson Electric Power Co	Electric Utility	H Wilson Sundt Generating Station	AZ	126	RIC10	18.2	Natural Gas Internal Combustion Engine	NG	IC	(U) Under construction, less than or equal to 50 percent complete	23.5
2020	3	24211	Tucson Electric Power Co	Electric Utility	H Wilson Sundt Generating Station	AZ	126	RIC2	18.2	Natural Gas Internal Combustion Engine	NG	IC	(U) Under construction, less than or equal to 50 percent complete	23.5
2020	3	24211	Tucson Electric Power Co	Electric Utility	H Wilson Sundt Generating Station	AZ	126	RIC3	18.2	Natural Gas Internal Combustion Engine	NG	IC	(U) Under construction, less than or equal to 50 percent complete	23.5
2020	3	24211	Tucson Electric Power Co	Electric Utility	H Wilson Sundt Generating Station	AZ	126	RIC4	18.2	Natural Gas Internal Combustion Engine	NG	IC	(U) Under construction, less than or equal to 50 percent complete	23.5
2020	3	24211	Tucson Electric Power Co	Electric Utility	H Wilson Sundt Generating Station	AZ	126	RIC5	18.2	Natural Gas Internal Combustion Engine	NG	IC	(U) Under construction, less than or equal to 50 percent complete	23.5
2020	3	24211	Tucson Electric Power Co</											

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	4	60167	Concord Blue Eagar, LLC	IPP	Concord Blue Eagar, LLC	AZ	60374	CB002	0.6	Other Waste Biomass	OBG	IC	(L) Regulatory approvals pending. Not under construction	0.6
2020	4	58695	Coronal Development Services	IPP	Casper Solar Center	MD	61320	CSPSC	36.7	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	36.7
2020	4	56201	Engie North America	IPP	East Fork Wind Project, LLC	KS	62200	WTGS	195.8	Onshore Wind Turbine	WND	WT	(U) Under construction, less than or equal to 50 percent complete	195.8
2020	4	6452	Florida Power & Light Co	Electric Utility	Hibiscus Solar Energy Center	FL	62206		74.5	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	74.5
2020	4	61592	Pleinmont Solar 1 LLC	IPP	Pleinmont Solar 1	VA	62012	PLNM1	75.0	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	75.0
2020	4	58798	Shell Chemical Appalachia LLC	Industrial	Shell Chemical Appalachia LLC	PA	58933	GTG1	41.0	Natural Gas Fired Combined Cycle	NG	CT	(U) Under construction, less than or equal to 50 percent complete	41.0
2020	5	61683	Amadeus Wind LLC	IPP	Amadeus Wind Farm	TX	62142	AM-TX	250.0	Onshore Wind Turbine	WND	WT	(P) Planned for installation, but regulatory approvals not initiated	250.0
2020	5	1752	Biola University	Commercial	Biola University	CA	54296	EG-1H	1.5	Natural Gas Internal Combustion Engine	NG	IC	(P) Planned for installation, but regulatory approvals not initiated	1.5
2020	5	1752	Biola University	Commercial	Biola University	CA	54296	EG-2H	1.5	Natural Gas Internal Combustion Engine	NG	IC	(P) Planned for installation, but regulatory approvals not initiated	1.5
2020	5	7140	Georgia Power Co	Electric Utility	Moody Air Force Base Solar	GA	62377		49.5	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	49.5
2020	5	60383	Henrietta D Energy Storage LLC	IPP	Henrietta D Energy Storage LLC	CA	60641	HDES1	10.0	Batteries	MWH	BA	(L) Regulatory approvals pending. Not under construction	10.0
2020	5	60379	Howardtown Farm, LLC	IPP	Howardtown Farm	NC	60630	PV1	10.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	10.0
2020	5	55768	RC Cape May Holdings LLC	IPP	B L England	NJ	2378		282.0	Natural Gas Fired Combined Cycle	NG	CT	(T) Regulatory approvals received. Not under construction	321.0
2020	5	58798	Shell Chemical Appalachia LLC	Industrial	Shell Chemical Appalachia LLC	PA	58933	GTG2	41.0	Natural Gas Fired Combined Cycle	NG	CT	(U) Under construction, less than or equal to 50 percent complete	41.0
2020	5	58798	Shell Chemical Appalachia LLC	Industrial	Shell Chemical Appalachia LLC	PA	58933	GTG3	41.0	Natural Gas Fired Combined Cycle	NG	CT	(U) Under construction, less than or equal to 50 percent complete	41.0
2020	6	61524	226HC 8me LLC	IPP	Holstein 1 Solar Farm	TX	61962	HSP01	200.0	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	200.0
2020	6	59272	41MB 8me, LLC	IPP	Borden Solar Farm	CA	59531	BRDN	50.0	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	50.0
2020	6	60798	69SV 8me LLC	IPP	Eland 2 Solar Farm	CA	61169	69SV8	200.0	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	200.0
2020	6	61711	Ashley Solar (SC)	IPP	Ashley Solar (SC)	SC	62179		2.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	2.0
2020	6	61712	Atlantic Solar	IPP	Atlantic Solar	SC	62180		1.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	1.0
2020	6	61713	B & K Solar	IPP	B & K Solar	SC	62181		63.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	63.0
2020	6	61714	Battle Solar	IPP	Battle Solar	SC	62182		2.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	2.0
2020	6	61715	Bell Solar	IPP	Bell Solar	SC	62183		6.1	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	6.1
2020	6	61716	Big Fork Solar	IPP	Big Fork Solar	SC	62184		74.9	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	74.9
2020	6	61717	Birch Solar	IPP	Birch Solar	SC	62185		2.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	2.0
2020	6	59844	Blythe Solar III, LLC	IPP	Blythe Solar III, LLC	CA	60094	BLCK1	31.2	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	31.2
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	61718	Chapman Solar	IPP	Chapman Solar	SC	62186		2.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	2.0
2020	6	60270	Clark Canyon Hydro, LLC	IPP	Clark Canyon Hydro-Electric Facility	MT	60483	FRNS1	2.4	Conventional Hydroelectric	WAT	HY	(P) Planned for installation, but regulatory approvals not initiated	2.4
2020	6	60270	Clark Canyon Hydro, LLC	IPP	Clark Canyon Hydro-Electric Facility	MT	60483	FRNS2	2.4	Conventional Hydroelectric	WAT	HY	(P) Planned for installation, but regulatory approvals not initiated	2.4
2020	6	61719	Clark Solar	IPP	Clark Solar	SC	62187		2.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	2.0
2020	6	61720	Colleton Solar	IPP	Colleton Solar	SC	62188		75.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	75.0
2020	6	61721	Collins Farm Solar	IPP	Collins Farm Solar	SC	62189		5.4	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	5.4
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	61722	Crossroads Solar	IPP	Crossroads Solar	SC	62190		32	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	67.7
2020	6	61729	Culpepper Solar	IPP	Culpepper Solar	SC	62221		33	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	69.5
2020	6	61730	Dadswell Solar	IPP	Dadswell Solar	SC	62222		34	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	1.0
2020	6	61731	Denmark Solar	IPP	Denmark Solar	SC	62211		35	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	6.0
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	HCCT1	319.1	Natural Gas Fired Combined Cycle	NG	CT	(P) Planned for installation, but regulatory approvals not initiated	371.5
2020	6	11241	Entergy Louisiana LLC	Electric Utility	Lake Charles Power	LA	60927	1A	250.0	Natural Gas Fired Combined Cycle	NG	CT	(U) Under construction, less than or equal to 50 percent complete	250.0
2020	6	11241	Entergy Louisiana LLC	Electric Utility	Lake Charles Power	LA	60927	1B	250.0	Natural Gas Fired Combined Cycle	NG	CT	(U) Under construction, less than or equal to 50 percent complete	250.0
2020	6	11241	Entergy Louisiana LLC	Electric Utility	Lake Charles Power	LA	60927	1C	500.0	Natural Gas Fired Combined Cycle	NG	CA	(U) Under construction, less than or equal to 50 percent complete	500.0
2020	6	61732	Fairfield Solar	IPP	Fairfield Solar	SC	62212		36	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	10.0
2020	6	56615	First Solar Project Development	IPP	Morada del Sol, LLC	TX	61049	PV1	239.3	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	247.0
2020	6	61733	Fishwater Solar	IPP	Fishwater Solar	SC	62213		37	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	2.0
2020	6	58692	Florey Knob LLC	IPP	Florey Knobb	PA	58821	GEN1	4.2	Natural Gas Internal Combustion Engine	NG	IC	(T) Regulatory approvals received. Not under construction	4.4
2020	6	58692	Florey Knob LLC	IPP	Florey Knobb	PA	58821	GEN2	4.2	Natural Gas Internal Combustion Engine	NG	IC	(T) Regulatory approvals received. Not under construction	4.4
2020	6	58692	Florey Knob LLC	IPP	Florey Knobb	PA	58821	GEN3	4.2	Natural Gas Internal Combustion Engine	NG	IC	(T) Regulatory approvals received. Not under construction	4.4
2020	6	58692	Florey Knob LLC	IPP	Florey Knobb	PA	58821	GEN4	4.2	Natural Gas Internal Combustion Engine	NG	IC	(T) Regulatory approvals received. Not under construction	4.4
2020	6	58692	Florey Knob LLC	IPP	Florey Knobb	PA	58821	GEN5	4.2	Natural Gas Internal Combustion Engine	NG	IC	(T) Regulatory approvals received. Not under construction	4.4
2020	6	61735	Foreman Solar	IPP	Foreman Solar	SC	62215		39	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	6.4
2020	6	61737	GEB Solar	IPP	GEB Solar	SC	62217		40	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	60.0
2020	6	61736	Gaines Solar	IPP	Gaines Solar	SC	62216		41	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	2.0
2020	6	61738	Gedosh Solar II	IPP	Gedosh Solar II	SC	62218		42	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	2.0
2020	6	60050	Halyard Energy Henderson, LLC	IPP	Halyard Henderson Energy Center	TX	60268	TBN1	210.0	Natural Gas Fired Combustion Turbine	NG	GT	(T) Regulatory approvals received. Not under construction	232.0
2020	6	60050	Halyard Energy Henderson, LLC	IPP	Halyard Henderson Energy Center	TX	60268	TBN2	210.0	Natural Gas Fired Combustion Turbine	NG	GT	(T) Regulatory approvals received. Not under construction	232.0
2020	6	60002	Halyard Energy Wharton, LLC	IPP	Halyard Wharton Energy Center	TX	60221	TBN1	162.0	Natural Gas Fired Combustion Turbine	NG	GT	(T) Regulatory approvals received. Not under construction	177.0
2020	6	60002	Halyard Energy Wharton, LLC	IPP	Halyard Wharton Energy Center	TX	60221	TBN2	162.0	Natural Gas Fired Combustion Turbine	NG	GT	(T) Regulatory approvals received. Not under construction	177.0
2020	6	60659	Hickory Run Energy, LLC	IPP	Hickory Run Energy Station	PA	61028	CTG1	283.0	Natural Gas Fired Combined Cycle	NG	CT	(T) Regulatory approvals received. Not under construction	311.0
2020	6	60659	Hickory Run Energy, LLC	IPP	Hickory Run Energy Station	PA	61028	CTG2	283.0	Natural Gas Fired Combined Cycle	NG	CT	(T) Regulatory approvals received. Not under construction	311.0
2020	6	60659	Hickory Run Energy, LLC	IPP	Hickory Run Energy Station	PA	61028	STG1	437.0	Natural Gas Fired Combined Cycle	NG	CA	(T) Regulatory approvals received. Not under construction	450.0
2020	6	61746	Holiday Solar I	IPP	Holiday Solar I	SC	62229		43	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	75.0
2020	6	60986	Imperial Valley Solar 2, LLC	IPP	Mount Signal Solar 2	CA	61353	IVS2	153.5	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	153.5
2020	6	56167	Imperial Valley Solar, LLC	IPP	Imperial Valley Solar, LLC	CA	56917		2	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	400.0
2020	6	61747	Indigo Solar	IPP	Indigo Solar	SC	62230		44	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	2.0
2020	6	61748	Ion Solar	IPP	Ion Solar	SC	62231		45	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	5.0
2020	6	61749	Jackson Solar	IPP	Jackson Solar	SC	62232		46	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	14.0
2020	6	61750	Jefferson Solar	IPP	Jefferson Solar	SC	62233		47	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	8.2
2020	6	61751	Juniper Solar	IPP	Juniper Solar	SC	62234		48	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	65.5
2020	6	61752	Lone Star Solar	IPP	Lone Star Solar	SC	62235		49	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	66.0
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	55983	Luminant Generation 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	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	55983	Luminant Generation 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	6	61753	Luz Solar	IPP	Luz Solar	SC	62236		50	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	2.0
2020	6	61754	Madison Solar	IPP	Madison Solar	SC	62237		51	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	10.9
2020	6	61755	Marshall Solar	IPP	Marshall Solar	SC	62238		52	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	2.0
2020	6	61796	Martin Central Solar	IPP	Martin Central Solar	SC	62285		53	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	2.0
2020	6	61787	Martin East Solar	IPP	Martin East Solar	SC	62276		54	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	2.0
2020	6	61788	Martin West Solar	IPP	Martin West Solar	SC	62277		55	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	2.0
2020														

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	59357	Navasota 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
2020	6	59357	Navasota 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
2020	6	59357	Navasota 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
2020	6	59357	Navasota 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
2020	6	59357	Navasota 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
2020	6	13402	Nevada Irrigation District	IPP	Loma Rica Hydroelectric Powerhouse	CA	60988	HY1	1.4	Conventional Hydroelectric	WAT	HY	(P) Planned for installation, but regulatory approvals not initiated	1.4
2020	6	61793	Pee Dee Solar I	IPP	Pee Dee Solar I	SC	62282	60	2.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	2.0
2020	6	61794	Pee Dee Solar II	IPP	Pee Dee Solar II	SC	62283	61	2.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	2.0
2020	6	61795	Power Solar	IPP	Power Solar	SC	62284	62	3.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	3.0
2020	6	61804	Pruger Solar I	IPP	Pruger Solar I	SC	62292	63	2.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	2.0
2020	6	61805	Pruger Solar II	IPP	Pruger Solar II	SC	62293	64	2.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	2.0
2020	6	61806	Pruger Solar III	IPP	Pruger Solar III	SC	62294	65	2.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	2.0
2020	6	61807	Quest Solar	IPP	Quest Solar	SC	62299	66	40.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	40.0
2020	6	60982	RE Maplewood LLC	IPP	RE Maplewood	TX	61346	PV1	250.0	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	250.0
2020	6	61808	Rollins Solar	IPP	Rollins Solar	SC	62295	67	63.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	63.0
2020	6	61809	Ross Solar	IPP	Ross Solar	SC	62296	68	75.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	75.0
2020	6	61810	Rutledge Solar	IPP	Rutledge Solar	SC	62297	69	2.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	2.0
2020	6	61814	Sandifer Solar	IPP	Sandifer Solar	SC	62298	70	2.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	2.0
2020	6	61828	Scarlet Solar	IPP	Scarlet Solar	SC	62307	71	2.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	2.0
2020	6	61829	Shem Solar	IPP	Shem Solar	SC	62308	72	2.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	2.0
2020	6	61830	Shining Sun Solar	IPP	Shining Sun Solar	SC	62309	73	40.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	40.0
2020	6	61831	Shorthorn Solar	IPP	Shorthorn Solar	SC	62310	74	60.5	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	60.5
2020	6	61832	Snoopy Solar	IPP	Snoopy Solar	SC	62311	75	2.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	2.0
2020	6	61833	Southard Solar	IPP	Southard Solar	SC	62312	76	6.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	6.0
2020	6	61834	Stamey Solar	IPP	Stamey Solar	SC	62313	77	1.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	2.0
2020	6	18414	TES Filer City Station LP	Electric CHP	TES Filer City Station	MI	50835	GEN2	228.0	Natural Gas Fired Combined Cycle	NG	CT	(P) Planned for installation, but regulatory approvals not initiated	253.0
2020	6	61835	Tarpon Solar I	IPP	Tarpon Solar I	SC	62314	78	2.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	2.0
2020	6	61836	Tedder Solar	IPP	Tedder Solar	SC	62315	79	2.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	2.0
2020	6	61837	Ten Governors Solar	IPP	Ten Governors Solar	SC	62316	80	28.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	28.0
2020	6	61862	Thomas Solar	IPP	Thomas Solar	SC	62352	81	2.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	2.0
2020	6	61861	Topaz Solar	IPP	Topaz Solar (SC)	SC	62349	82	2.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	2.0
2020	6	61860	Trask East Solar	IPP	Trask East Solar	SC	62346	83	12.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	12.0
2020	6	59056	Tri Global Energy, LLC	IPP	Canyon Wind Project, LLC	TX	60271	WT1	360.0	Onshore Wind Turbine	WND	WT	(P) Planned for installation, but regulatory approvals not initiated	360.0
2020	6	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
2020	6	61859	Ulmer Solar	IPP	Ulmer Solar	SC	62343	85	22.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	22.0
2020	6	61868	WSW Solar	IPP	WSW Solar	SC	62350	86	30.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	30.0
2020	6	20159	Washington Parish Engy Ctr 1 LLC	IPP	Washington Parish Energy Center	LA	55486	CTG1	172.0	Natural Gas Fired Combustion Turbine	NG	GT	(U) Under construction, less than or equal to 50 percent complete	200.0
2020	6	20159	Washington Parish Engy Ctr 1 LLC	IPP	Washington Parish Energy Center	LA	55486	CTG2	172.0	Natural Gas Fired Combustion Turbine	NG	GT	(U) Under construction, less than or equal to 50 percent complete	200.0
2020	6	61863	Washington Solar (SC)	IPP	Washington Solar (SC)	SC	62342	87	2.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	2.0
2020	6	61864	Washington Solar II (SC)	IPP	Washington Solar II (SC)	SC	62344	88	2.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	2.0
2020	6	61865	Wayfair Solar	IPP	Wayfair Solar	SC	62345	89	2.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	2.0
2020	6	61866	Weaver Solar	IPP	Weaver Solar	SC	62347	90	2.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	2.0
2020	6	58761	White Camp Solar LLC	IPP	White Camp Solar	TX	58888	WCAMP	100.0	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	100.0
2020	6	60519	Williams Solar, LLC	IPP	Williams Solar, LLC	TX	60859	PV1	20.0	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	20.0
2020	6	61869	Wysong Solar	IPP	Wysong Solar	SC	62351	92	2.3	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	2.3
2020	6	61870	Yemassee Solar	IPP	Yemassee Solar	SC	62353	93	10.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	10.0
2020	6	61871	York Solar	IPP	York Solar	SC	62354	94	2.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	2.0
2020	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
2020	7	59137	Palmer Renewable Energy	IPP	Palmer Renewable Energy	MA	59336	PRE	42.0	Wood/Wood Waste Biomass	WDS	ST	(T) Regulatory approvals received. Not under construction	42.0
2020	7	61678	RE Rambler LLC	IPP	Rambler	TX	62141	RMBLR	200.0	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	200.0
2020	8	60776	Aksamit Resource Management	IPP	Milligan III Wind Farm	NE	61159	M3001	73.4	Onshore Wind Turbine	WND	WT	(T) Regulatory approvals received. Not under construction	73.4
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	8	58146	Gaelectric LLC	IPP	Jawbone Wind Project	MT	58175	JWPI	80.0	Onshore Wind Turbine	WND	WT	(U) Under construction, less than or equal to 50 percent complete	80.0
2020	8	14232	Otter Tail Power Co	Electric Utility	Merricourt Wind Project	ND	57048	1	150.0	Onshore Wind Turbine	WND	WT	(P) Planned for installation, but regulatory approvals not initiated	150.0
2020	8	58798	Shell Chemical Appalachia LLC	Industrial	Shell Chemical Appalachia LLC	PA	58933	STG1	75.0	Natural Gas Fired Combined Cycle	NG	CA	(U) Under construction, less than or equal to 50 percent complete	75.0
2020	8	58798	Shell Chemical Appalachia LLC	Industrial	Shell Chemical Appalachia LLC	PA	58933	STG2	75.0	Natural Gas Fired Combined Cycle	NG	CA	(U) Under construction, less than or equal to 50 percent complete	75.0
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	9	7277	Calpine Corporation	IPP	Wild Horse Power Plant	CA	57181	1	40.0	Geothermal	GEO	ST	(L) Regulatory approvals pending. Not under construction	48.0
2020	9	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
2020	9	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
2020	9	9417	Interstate Power and Light Co	Electric Utility	Richland	IA	62080	1	130.1	Onshore Wind Turbine	WND	WT	(T) Regulatory approvals received. Not under construction	130.1
2020	9	60388	Mission Rock Energy Center, LLC	IPP	Mission Rock Energy Center	CA	60650	GT1	275.0	Natural Gas Fired Combustion Turbine	NG	GT	(L) Regulatory approvals pending. Not under construction	275.0
2020	9	61534	Techren Solar III LLC	IPP	Techren Solar III LLC	NV	61931	TECH3	25.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	25.0
2020	9	61535	Techren Solar IV LLC	IPP	Techren Solar IV LLC	NV	61932	TECH4	25.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	25.0
2020	9	61890	Tenaska Nobles 2 Power Partners, LLC	IPP	Nobles 2 Wind Project	MN	62364	WT1	250.0	Onshore Wind Turbine	WND	WT	(P) Planned for installation, but regulatory approvals not initiated	250.0
2020	9	20856	Wisconsin Power & Light Co	Electric Utility	Kossuth	IA	62103	1	150.5	Onshore Wind Turbine	WND	WT	(T) Regulatory approvals received. Not under construction	150.5
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	59319	Cotton Solar, LLC	IPP	Cotton Solar	SC	59572	PV1	16.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	16.0
2020	10	58468	Dominion Renewable Energy	Electric Utility	Spring Grove I	VA	61986	SGIS	97.9	Solar Photovoltaic	SUN	PV	(U) Under construction, less than or equal to 50 percent complete	97.9
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	10	58672	Everpower Wind Holdings Inc	IPP	Scioto Ridge Wind Farm	OH	58780	1	189.2	Onshore Wind Turbine	WND	WT	(T) Regulatory approvals received. Not under construction	189.2
2020	10	61734	Flip Solar	IPP	Flip Solar	SC	62214	38	15.8	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	15.8
2020	10	61697	Hillcrest Solar I, LLC	IPP	Hillcrest Solar	OH	62200	HILLC	200.0	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	200.0
2020	10	58901	Hydro Green Energy	IPP	Braddock Lock and Dam	PA	59091	GEN1	5.3	Conventional Hydroelectric	WAT	HY	(OT) Other	5.3
2020	10	60569	Lincoln Land Wind, LLC	IPP	Lincoln Land Wind	IL	58925	SAN1	30.0	Onshore Wind Turbine	WND	WT	(P) Planned for installation, but regulatory approvals not initiated	30.0
2020	10	61593	Pleinmont Solar 2 LLC	IPP	Pleinmont Solar 2	VA	62013	PLNM2	240.0	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	240.0
2020	10	61590	Richmond Spider Solar LLC	IPP	Richmond Spider Solar	VA	62011	RMDSS	20.0	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	20.0
2020	10	60568	Sugar Creek Wind One LLC	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
2020	10	61637	TUUSSO Energy, LLC	IPP	Camas Solar Project	WA	62071	CAMAS	5.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	5.0
2020</														

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	11	58804	Lake Erie Energy Development Corp	IPP	Icebreaker Offshore Wind Farm	OH	58941	WTG5	3.0	Offshore Wind Turbine	WND	WS	(L) Regulatory approvals pending. Not under construction	3.0
2020	11	58804	Lake Erie Energy Development Corp	IPP	Icebreaker Offshore Wind Farm	OH	58941	WTG6	3.0	Offshore Wind Turbine	WND	WS	(L) Regulatory approvals pending. Not under construction	3.0
2020	11	61331	Poplar Camp Wind Farm LLC	IPP	Poplar Camp Wind Farm	VA	61111	PC1	72.0	Onshore Wind Turbine	WND	WT	(P) Planned for installation, but regulatory approvals not initiated	72.0
2020	11	61516	Stratford Solar Center, LLC	IPP	Stratford Solar Center, LLC	VA	61908	STRAT	15.0	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	15.0
2020	11	19539	University of Iowa	Commercial	University of Iowa Main Power Plant	IA	54775	GEN12	5.8	Natural Gas Steam Turbine	NG	ST	(L) Regulatory approvals pending. Not under construction	5.8
2020	11	19539	University of Iowa	Commercial	University of Iowa Main Power Plant	IA	54775	GEN13	10.0	Natural Gas Steam Turbine	NG	ST	(L) Regulatory approvals pending. Not under construction	10.0
2020	12	60526	Alternative Power Development Northwest, LLC	IPP	Carter Solar One, LLC	ID	60896	CRTON	20.0	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	20.0
2020	12	60526	Alternative Power Development Northwest, LLC	IPP	Jackpot Solar East, LLC	ID	60899	JPTEA	20.0	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	20.0
2020	12	60526	Alternative Power Development Northwest, LLC	IPP	Jackpot Solar North, LLC	ID	60897	JPTNO	20.0	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	20.0
2020	12	60526	Alternative Power Development Northwest, LLC	IPP	Jackpot Solar South, LLC	ID	60898	JPTSO	20.0	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	20.0
2020	12	60526	Alternative Power Development Northwest, LLC	IPP	Jackpot Solar West, LLC	ID	60900	JPTWE	20.0	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	20.0
2020	12	15399	Avangrid Renewables LLC	IPP	La Joya NM	NM	61044	WT1	166.0	Onshore Wind Turbine	WND	WT	(U) Under construction, less than or equal to 50 percent complete	166.0
2020	12	15399	Avangrid Renewables LLC	IPP	Roaring Brook, LLC	NY	61041	WT1	78.0	Onshore Wind Turbine	WND	WT	(T) Regulatory approvals received. Not under construction	78.0
2020	12	60560	Big Blue Wind Farm, LLC (TX)	IPP	Big Blue River Wind Farm	IN	60907	WT1	200.0	Onshore Wind Turbine	WND	WT	(P) Planned for installation, but regulatory approvals not initiated	200.0
2020	12	61257	Blazing Star 2 LLC	IPP	Blazing Star 2 Wind Farm	MN	61650	BLZS2	200.0	Onshore Wind Turbine	WND	WT	(L) Regulatory approvals pending. Not under construction	200.0
2020	12	61030	Bluegrove Wind, LLC	IPP	Bluegrove Wind	TX	61400	BLUGR	100.0	Onshore Wind Turbine	WND	WT	(L) Regulatory approvals pending. Not under construction	100.0
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	61031	Byers Wind, LLC	IPP	Byers Wind	TX	61401	BYERS	200.0	Onshore Wind Turbine	WND	WT	(L) Regulatory approvals pending. Not under construction	200.0
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	59365	Capital Power Corporation	IPP	Tisch Mills Wind	WI	60674	TISCH	150.0	Onshore Wind Turbine	WND	WT	(P) Planned for installation, but regulatory approvals not initiated	150.0
2020	12	59432	Clear Creek Power	IPP	Highland Park Project	CO	59659	HPWT	181.0	Onshore Wind Turbine	WND	WT	(P) Planned for installation, but regulatory approvals not initiated	181.0
2020	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
2020	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
2020	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
2020	12	58695	Coronal Development Services	IPP	Biggs Ford Solar Center	MD	61321	BFSC	15.0	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	15.0
2020	12	61302	Depot Solar Center, LLC	IPP	Depot Solar Center, LLC	VA	61691	DEPOT	15.0	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	15.0
2020	12	61709	Desert Harvest, LLC	IPP	Desert Harvest, LLC	CA	62177	DH001	80.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	80.0
2020	12	58672	Everpower Wind Holdings Inc	IPP	Baron Winds Farm	NY	60596	1	272.0	Onshore Wind Turbine	WND	WT	(L) Regulatory approvals pending. Not under construction	272.0
2020	12	58672	Everpower Wind Holdings Inc	IPP	Cassadaga Wind Farm	NY	58777	1	126.0	Onshore Wind Turbine	WND	WT	(L) Regulatory approvals pending. Not under construction	126.0
2020	12	58672	Everpower Wind Holdings Inc	IPP	Coyote Crest Wind Farm	WA	58778	1	127.5	Onshore Wind Turbine	WND	WT	(L) Regulatory approvals pending. Not under construction	127.5
2020	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
2020	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
2020	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
2020	12	56615	First Solar Project Development	IPP	Aiya Solar Project	NV	59669	GEN01	100.0	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	100.0
2020	12	56615	First Solar Project Development	IPP	American Kings Solar, LLC	CA	60777	GEN01	123.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	123.0
2020	12	56615	First Solar Project Development	IPP	Snow Mountain Solar, LLC	NV	59935	GEN01	101.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	100.0
2020	12	56615	First Solar Project Development	IPP	Willow Spring Solar 3, LLC	CA	60325	GEN01	50.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	50.0
2020	12	56615	First Solar Project Development	IPP	Windhub Solar B, LLC	CA	59669	GEN01	20.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	20.0
2020	12	60888	GCL New Energy, Inc.	IPP	Pioneer Solar (CO), LLC	CO	61991	PI-QF	80.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	80.0
2020	12	60040	Hale Wind Energy	IPP	Hale Community Wind Farm	TX	59247	HALE2	240.0	Onshore Wind Turbine	WND	WT	(P) Planned for installation, but regulatory approvals not initiated	240.0
2020	12	61638	Harrison Power LLC	Industrial	Cadiz Power Plant	OH	62153	GEN 1	550.0	Natural Gas Fired Combined Cycle	NG	CS	(P) Planned for installation, but regulatory approvals not initiated	660.0
2020	12	61638	Harrison Power LLC	Industrial	Cadiz Power Plant	OH	62153	GEN 2	550.0	Natural Gas Fired Combined Cycle	NG	CS	(P) Planned for installation, but regulatory approvals not initiated	660.0
2020	12	61421	LeGore Bridge Solar Center, LLC	IPP	LeGore Bridge Solar Center	MD	61796	LGBSC	20.0	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	20.0
2020	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
2020	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
2020	12	11208	Los Angeles Department of Water & Power	Electric Utility	Scattergood	CA	404	8	218.0	Natural Gas Fired Combined Cycle	NG	CT	(P) Planned for installation, but regulatory approvals not initiated	230.0
2020	12	11208	Los Angeles Department of Water & Power	Electric Utility	Scattergood	CA	404	9	110.0	Natural Gas Fired Combined Cycle	NG	CA	(P) Planned for installation, but regulatory approvals not initiated	116.0
2020	12	61422	Mason Dixon Solar Center, LLC	IPP	Mason Dixon Solar Center	MD	61797	PV	20.0	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	20.0
2020	12	61710	Maverick Solar, LLC	IPP	Maverick Solar, LLC	CA	62178	MAV01	225.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	225.0
2020	12	61010	Ord Mountain Solar, LLC	IPP	Ord Mountain Solar	CA	61372	ORDMT	60.0	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	60.0
2020	12	56545	Pattern Operators LP	IPP	Summit Ridge 1 Wind Farm	OR	58894	SRWF	192.0	Onshore Wind Turbine	WND	WT	(P) Planned for installation, but regulatory approvals not initiated	192.0
2020	12	61826	Pawcatuck Solar Center, LLC	IPP	Pawcatuck Solar Center, LLC	CT	62318	PAWCA	15.0	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	15.0
2020	12	58842	Power Company of Wyoming LLC	IPP	Chokecherry and Sierra Madre Wind	WY	58987	I-A	687.0	Onshore Wind Turbine	WND	WT	(P) Planned for installation, but regulatory approvals not initiated	687.0
2020	12	61069	RE Gaskell West LLC	IPP	RE Gaskell West 2 LLC	CA	61446	PV2	45.0	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	45.0
2020	12	61069	RE Gaskell West LLC	IPP	RE Gaskell West 3 LLC	CA	61447	PV3	20.0	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	20.0
2020	12	61069	RE Gaskell West LLC	IPP	RE Gaskell West 4 LLC	CA	61448	PV4	20.0	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	20.0
2020	12	61069	RE Gaskell West LLC	IPP	RE Gaskell West 5 LLC	CA	61449	PV5	20.0	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	20.0
2020	12	61589	RE Mustang Two LLC	IPP	Mustang Two	CA	62015	M2BAR	50.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	50.0
2020	12	61589	RE Mustang Two LLC	IPP	Mustang Two	CA	62015	M2WHI	100.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	100.0
2020	12	61727	Rejoj del Sol Wind Farm LLC	IPP	Rejoj del Sol Wind Farm	TX	62207	RELOJ	209.4	Onshore Wind Turbine	WND	WT	(P) Planned for installation, but regulatory approvals not initiated	209.4
2020	12	61624	SR Snipesville	IPP	Snipesville	GA	62165	SNIFE	61.0	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	61.0
2020	12	60523	Springfield Project Development LLC	IPP	Homestead Wind LLC	IL	60871	HOMES	50.0	Onshore Wind Turbine	WND	WT	(P) Planned for installation, but regulatory approvals not initiated	50.0
2020	12	2782	Terra-Gen Operating Company	IPP	Dixie Valley Power Partnership	NV	10681	GEN1	25.0	Geothermal	GEO	ST	(P) Planned for installation, but regulatory approvals not initiated	28.0
2020	12	59056	Tri Global Energy, LLC	IPP	Cone Renewable Energy Project, LLC	TX	60272	WT1	300.0	Onshore Wind Turbine	WND	WT	(P) Planned for installation, but regulatory approvals not initiated	300.0
2020	12	59056	Tri Global Energy, LLC	IPP	Easter	TX	59971	ESTR1	300.0	Onshore Wind Turbine	WND	WT	(U) Under construction, less than or equal to 50 percent complete	300.0
2020	12	56633	Trishe Wind Minnesota	IPP	Trishe Wind Minnesota	MN	57255	1	40.0	Onshore Wind Turbine	WND	WT	(P) Planned for installation, but regulatory approvals not initiated	40.0
2020	12	19316	Two Elk Generation Partners LP	IPP	Two Elk Generating Station	WY	55360	GEN1	275.0	Conventional Steam Coal	WC	ST	(U) Under construction, less than or equal to 50 percent complete	320.0
2020	12	60694	Washburn Wind Energy LLC	IPP	Washburn Wind Farm	IA	61071	WASH	70.0	Onshore Wind Turbine	WND	WT	(U) Under construction, less than or equal to 50 percent complete	70.0
2020	12	60847	West Fork Wind, LLC	IPP	West Fork Wind	IN	61214	WT1	150.0	Onshore Wind Turbine	WND	WT	(L) Regulatory approvals pending. Not under construction	150.0
2020	12	60932	Wrighter Energy LLC	IPP	Wrighter Energy	PA	61302	GEN1	4.2	Natural Gas Internal Combustion Engine	NG	IC	(P) Planned for installation, but regulatory approvals not initiated	4.4
2020	12	60932	Wrighter Energy LLC	IPP	Wrighter Energy	PA	61302	GEN2	4.2	Natural Gas Internal Combustion Engine	NG	IC	(P) Planned for installation, but regulatory approvals not initiated	4.4
2020	12	60932	Wrighter Energy LLC	IPP	Wrighter Energy	PA	61302	GEN3	4.2	Natural Gas Internal Combustion Engine	NG	IC	(P) Planned for installation, but regulatory approvals not initiated	4.4
2020	12	60932	Wrighter Energy LLC	IPP	Wrighter Energy	PA	61302	GEN4	4.2	Natural Gas Internal Combustion Engine	NG	IC	(P) Planned for installation, but regulatory approvals not initiated	4.4
2020	12	60932	Wrighter Energy LLC	IPP	Wrighter Energy	PA	61302	GEN5	4.2	Natural Gas Internal Combustion Engine	NG	IC	(P) Planned for installation, but regulatory approvals not initiated	4.4
2021	1	61033	Boswell Wind Project I, LLC	IPP	Boswell Wind I	WY	61393	BOSW1	80.0	Onshore Wind Turbine	WND	WT	(P) Planned for installation, but regulatory approvals not initiated	80.0
2021	1	61034	Boswell Wind Project II, LLC	IPP	Boswell Wind II	WY	61394	BOSW2	80.0	Onshore Wind Turbine	WND	WT	(P) Planned for installation, but regulatory approvals not initiated	80.0
2021	1	61035	Boswell Wind Project III, LLC	IPP	Boswell Wind III	WY	61395	BOSW3	80.0	Onshore Wind Turbine	WND	WT	(P) Planned for installation, but regulatory approvals not initiated	80.0
2021	1	61036	Boswell Wind Project IV, LLC	IPP	Boswell Wind IV	WY	61396	BOSW4	80.0					

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)
2021	3	56615	First Solar Project Development	IPP	Desert Quartzite	CA	59871	GEN01	450.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	580.0
2021	3	60229	Quail Holdings, LLC	IPP	Quail Holdings	NC	60434	PV1	25.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	25.0
2021	3	16609	San Diego Gas & Electric Co	Electric Utility	Fallbrook Energy Storage	CA	61365	FBES	40.0	Batteries	MWH	BA	(P) Planned for installation, but regulatory approvals not initiated	40.0
2021	3	60387	Skylar Resources, LP	IPP	Townsite Solar Project	NV	60654	GEN01	160.0	Solar Photovoltaic	SUN	PV	(T) Regulatory approvals received. Not under construction	180.0
2021	3	60387	Skylar Resources, LP	IPP	Townsite Solar Project	NV	60654	GEN02	20.0	Batteries	MWH	BA	(T) Regulatory approvals received. Not under construction	20.0
2021	3	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
2021	4	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
2021	4	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
2021	4	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
2021	4	14232	Otter Tail Power Co	Electric Utility	Astoria Station	SD	61144	1	260.0	Natural Gas Fired Combustion Turbine	NG	GT	(P) Planned for installation, but regulatory approvals not initiated	260.0
2021	4	56789	TBE Montgomery LLC	IPP	TBE-Montgomery LLC	NY	57472	CTG	11.6	Other Waste Biomass	OBS	CT	(U) Under construction, less than or equal to 50 percent complete	12.0
2021	4	56789	TBE Montgomery LLC	IPP	TBE-Montgomery LLC	NY	57472	STG	7.4	Other Waste Biomass	OBS	CA	(U) Under construction, less than or equal to 50 percent complete	9.0
2021	5	14605	City of Peabody - (MA)	Electric Utility	Waters River	MA	1678	3	55.0	Natural Gas Fired Combustion Turbine	NG	GT	(P) Planned for installation, but regulatory approvals not initiated	60.0
2021	5	60340	M&G Resins USA, LLC	Industrial	M&G Resins USA	TX	60642	1	11.7	All Other	WH	OT	(P) Planned for installation, but regulatory approvals not initiated	14.3
2021	5	60340	M&G Resins USA, LLC	Industrial	M&G Resins USA	TX	60642	2	11.7	All Other	WH	OT	(P) Planned for installation, but regulatory approvals not initiated	14.3
2021	5	59677	Middlesex Energy Center LLC	IPP	Middlesex Energy Center LLC	NJ	59909	CT001	570.0	Natural Gas Fired Combined Cycle	NG	CC	(P) Planned for installation, but regulatory approvals not initiated	570.0
2021	6	61523	225DD 8me LLC	IPP	Galloway Solar Farm	TX	61920	GSM01	360.0	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	360.0
2021	6	61525	231RC 8me LLC	IPP	Norton Solar Farm	TX	61967	NSM01	125.0	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	125.0
2021	6	61825	Antelope Expansion 1B, LLC	IPP	Antelope Expansion 1B	CA	62320	ANE1B	17.0	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	17.0
2021	6	60395	California Ethanol Power, LLC	Industrial	CE&P Imperial Valley 1	CA	60670	1	50.0	All Other	OTH	CC	(T) Regulatory approvals received. Not under construction	50.0
2021	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
2021	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
2021	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
2021	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
2021	6	59965	ESC Tioga County Power	IPP	ESC Tioga County Power	PA	60205	TCCT1	253.1	Natural Gas Fired Combined Cycle	NG	CT	(P) Planned for installation, but regulatory approvals not initiated	280.5
2021	6	59965	ESC Tioga County Power	IPP	ESC Tioga County Power	PA	60205	TCCT2	253.1	Natural Gas Fired Combined Cycle	NG	CT	(P) Planned for installation, but regulatory approvals not initiated	280.5
2021	6	58597	Environmics, Inc	IPP	La Paz Solar Tower	AZ	58652	1	200.0	Solar Thermal without Energy Storage	SUN	OT	(P) Planned for installation, but regulatory approvals not initiated	200.0
2021	6	55937	Entergy Texas Inc.	Electric Utility	Montgomery County	TX	60925	1A	250.0	Natural Gas Fired Combined Cycle	NG	CT	(L) Regulatory approvals pending. Not under construction	250.0
2021	6	55937	Entergy Texas Inc.	Electric Utility	Montgomery County	TX	60925	1B	250.0	Natural Gas Fired Combined Cycle	NG	CT	(L) Regulatory approvals pending. Not under construction	250.0
2021	6	55937	Entergy Texas Inc.	Electric Utility	Montgomery County	TX	60925	1C	500.0	Natural Gas Fired Combined Cycle	NG	CA	(L) Regulatory approvals pending. Not under construction	500.0
2021	6	56615	First Solar Project Development	IPP	Portal Ridge Solar A, LLC	CA	60309	GEN01	18.5	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	18.5
2021	6	58880	Gallegos Wind Farm LLC	IPP	Gallegos Wind Farm, Phase 1	NM	59047	GEN 1	180.0	Onshore Wind Turbine	WND	WT	(U) Under construction, less than or equal to 50 percent complete	180.0
2021	6	61395	Indeck Niles, LLC	IPP	Indeck Niles Energy Center	MI	55460	CT1	386.8	Natural Gas Fired Combined Cycle	NG	CT	(T) Regulatory approvals received. Not under construction	386.8
2021	6	61395	Indeck Niles, LLC	IPP	Indeck Niles Energy Center	MI	55460	CT2	386.8	Natural Gas Fired Combined Cycle	NG	CT	(T) Regulatory approvals received. Not under construction	386.8
2021	6	61395	Indeck Niles, LLC	IPP	Indeck Niles Energy Center	MI	55460	ST1	397.8	Natural Gas Fired Combined Cycle	NG	CA	(T) Regulatory approvals received. Not under construction	397.8
2021	6	60836	NTE Connecticut, LLC	IPP	Killingly Energy Center	CT	61239	KEC	338.9	Natural Gas Fired Combined Cycle	NG	CT	(P) Planned for installation, but regulatory approvals not initiated	406.0
2021	6	60836	NTE Connecticut, LLC	IPP	Killingly Energy Center	CT	61239	KEC2	249.4	Natural Gas Fired Combined Cycle	NG	CA	(L) Regulatory approvals pending. Not under construction	297.5
2021	6	59489	Perennial-Wind Chaser LLC	IPP	Perennial Wind Chaser Station	OR	59721	GT1	98.7	Natural Gas Fired Combustion Turbine	NG	GT	(T) Regulatory approvals received. Not under construction	106.0
2021	6	59489	Perennial-Wind Chaser LLC	IPP	Perennial Wind Chaser Station	OR	59721	GT2	98.7	Natural Gas Fired Combustion Turbine	NG	GT	(T) Regulatory approvals received. Not under construction	106.0
2021	6	59489	Perennial-Wind Chaser LLC	IPP	Perennial Wind Chaser Station	OR	59721	GT3	98.7	Natural Gas Fired Combustion Turbine	NG	GT	(T) Regulatory approvals received. Not under construction	106.0
2021	6	59489	Perennial-Wind Chaser LLC	IPP	Perennial Wind Chaser Station	OR	59721	GT4	98.7	Natural Gas Fired Combustion Turbine	NG	GT	(T) Regulatory approvals received. Not under construction	106.0
2021	6	60982	RE Maplewood LLC	IPP	RE Maplewood	TX	61346	PV2	250.0	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	250.0
2021	6	18454	Tampa Electric Co	Electric Utility	Big Bend	FL	645	GT5	360.0	Natural Gas Fired Combustion Turbine	NG	GT	(P) Planned for installation, but regulatory approvals not initiated	392.0
2021	6	18454	Tampa Electric Co	Electric Utility	Big Bend	FL	645	GT6	360.0	Natural Gas Fired Combustion Turbine	NG	GT	(P) Planned for installation, but regulatory approvals not initiated	392.0
2021	7	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
2021	7	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
2021	7	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
2021	7	58766	FGE Texas II LLC	IPP	FGE Texas II	TX	58930	CA1	249.9	Natural Gas Fired Combined Cycle	NG	CA	(T) Regulatory approvals received. Not under construction	265.2
2021	7	58766	FGE Texas II LLC	IPP	FGE Texas II	TX	58930	GT1	226.7	Natural Gas Fired Combined Cycle	NG	CT	(T) Regulatory approvals received. Not under construction	238.9
2021	7	58766	FGE Texas II LLC	IPP	FGE Texas II	TX	58930	GT2	226.7	Natural Gas Fired Combined Cycle	NG	CT	(T) Regulatory approvals received. Not under construction	238.9
2021	7	56615	First Solar Project Development	IPP	Sun Streams, LLC	AZ	60827	GEN01	150.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	150.0
2021	10	60720	Martinsdale Wind Farm LLC	IPP	Martinsdale Wind Farm	MT	61108	MTD	80.0	Onshore Wind Turbine	WND	WT	(P) Planned for installation, but regulatory approvals not initiated	80.0
2021	11	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
2021	11	61797	Hecate Energy LLC	IPP	Hecate Energy Columbia County Solar	NY	62273	HECC1	60.0	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	60.0
2021	11	61762	Long Ridge Energy Generation LLC	IPP	Hannibal Port Power Project	OH	61322	HPPP1	485.0	Natural Gas Fired Combined Cycle	NG	CC	(P) Planned for installation, but regulatory approvals not initiated	485.0
2021	12	61477	325MK 8me LLC	IPP	Eagle Shadow Mountain Solar Farm	NV	61852	ESMSF	300.0	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	300.0
2021	12	61783	Alabama Ledge Wind Farm LLC	IPP	Alabama Ledge Wind Farm LLC	NY	62261	GEN1	79.8	Onshore Wind Turbine	WND	WT	(P) Planned for installation, but regulatory approvals not initiated	79.8
2021	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
2021	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
2021	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
2021	12	60927	Anchor Energy LLC	IPP	Anchor Energy	PA	61304	GEN1	4.2	Natural Gas Internal Combustion Engine	NG	IC	(P) Planned for installation, but regulatory approvals not initiated	4.4
2021	12	60927	Anchor Energy LLC	IPP	Anchor Energy	PA	61304	GEN2	4.2	Natural Gas Internal Combustion Engine	NG	IC	(P) Planned for installation, but regulatory approvals not initiated	4.4
2021	12	60927	Anchor Energy LLC	IPP	Anchor Energy	PA	61304	GEN3	4.2	Natural Gas Internal Combustion Engine	NG	IC	(P) Planned for installation, but regulatory approvals not initiated	4.4
2021	12	60927	Anchor Energy LLC	IPP	Anchor Energy	PA	61304	GEN4	4.2	Natural Gas Internal Combustion Engine	NG	IC	(P) Planned for installation, but regulatory approvals not initiated	4.4
2021	12	60927	Anchor Energy LLC	IPP	Anchor Energy	PA	61304	GEN5	4.2	Natural Gas Internal Combustion Engine	NG	IC	(P) Planned for installation, but regulatory approvals not initiated	4.4
2021	12	61768	Arrow Canyon Solar LLC	IPP	Arrow Canyon Solar	NV	62248	1	200.0	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	200.0
2021	12	15399	Avangrid Renewables LLC	IPP	Lund Hill	WA	61045	WT1	60.0	Onshore Wind Turbine	WND	WT	(U) Under construction, less than or equal to 50 percent complete	60.0
2021	12	60711	Battle Mountain SP, LLC	IPP	Battle Mountain Solar Project	NV	61098	BMSF	101.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	101.0
2021	12	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
2021	12	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
2021	12	59380	Enel Green Power NA, Inc.	IPP	Pomerado Energy Storage, LLC	CA	61390	PMRDO	3.0	Batteries	MWH	BA	(P) Planned for installation, but regulatory approvals not initiated	3.0
2021	12	58672	Everpower Wind Holdings Inc	IPP	Buckeye Wind Farm	OH	58776	1	99.0	Onshore Wind Turbine	WND	WT	(L) Regulatory approvals pending. Not under construction	99.0
2021	12	60405	FDS Coke Plant, LLC	Electric CHP	FDS Co-Generation Facility	OH	60693	1	110.0	Other Gases	OG	ST	(P) Planned for installation, but regulatory approvals not initiated	135.0
2021	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
2021	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
2021	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
2021	12	58378	Jordan Hydroelectric LTD PTP	IPP	Flannagan Hydroelectric Project	VA	58827	LEFT	0.9	Conventional Hydroelectric	WAT	HY	(L) Regulatory approvals pending. Not under construction	0.9
2021	12	58378	Jordan Hydroelectric LTD PTP	IPP	Flannagan Hydroelectric Project	VA	58827	RGHT	0.9	Conventional Hydroelectric	WAT	HY	(L) Regulatory approvals pending. Not under construction	0.9
2021	12	60349	Juneau Hydropower, Inc	IPP	Sweetheart Lake Hydroelectric Facility	AK	60588	JHI01	6.6	Conventional Hydroelectric	WAT	HY	(P) Planned for installation, but regulatory approvals not initiated	6.6
2021	12	60349	Juneau Hydropower, Inc	IPP	Sweetheart Lake Hydroelectric Facility									

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)
2022	4	5109	DTE Electric Company	Electric Utility	Blue Water Energy Center	MI	62192	11	359.0	Natural Gas Fired Combined Cycle	NG	CT	(U) Under construction, less than or equal to 50 percent complete	394.4
2022	4	5109	DTE Electric Company	Electric Utility	Blue Water Energy Center	MI	62192	12	359.0	Natural Gas Fired Combined Cycle	NG	CT	(U) Under construction, less than or equal to 50 percent complete	394.4
2022	4	5109	DTE Electric Company	Electric Utility	Blue Water Energy Center	MI	62192	1S	428.0	Natural Gas Fired Combined Cycle	NG	CA	(U) Under construction, less than or equal to 50 percent complete	478.6
2022	4	61596	Lincoln Land Energy Center LLC	IPP	Lincoln Land Energy Center	IL	62022	GEN1	520.0	Natural Gas Fired Combined Cycle	NG	CS	(P) Planned for installation, but regulatory approvals not initiated	638.4
2022	4	61596	Lincoln Land Energy Center LLC	IPP	Lincoln Land Energy Center	IL	62022	GEN2	520.0	Natural Gas Fired Combined Cycle	NG	CS	(P) Planned for installation, but regulatory approvals not initiated	638.4
2022	4	59487	Moundsville Power, LLC	IPP	Moundsville Power	WV	59720	MPCA1	319.0	Natural Gas Fired Combined Cycle	NG	CA	(L) Regulatory approvals pending. Not under construction	321.6
2022	4	59487	Moundsville Power, LLC	IPP	Moundsville Power	WV	59720	MPCT1	177.3	Natural Gas Fired Combined Cycle	NG	CT	(L) Regulatory approvals pending. Not under construction	195.5
2022	4	59487	Moundsville Power, LLC	IPP	Moundsville Power	WV	59720	MPCT2	177.3	Natural Gas Fired Combined Cycle	NG	CT	(L) Regulatory approvals pending. Not under construction	195.5
2022	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
2022	6	61386	C4GT, LLC	IPP	C4GT	VA	61760	C4GT	1,060.0	Natural Gas Fired Combined Cycle	NG	CC	(T) Regulatory approvals received. Not under construction	1,060.0
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	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	1,022.9
2022	7	60835	NTE Carolinas II, LLC	IPP	Reidsville Energy Center	NC	61240	REC	259.0	Natural Gas Fired Combined Cycle	NG	CT	(T) Regulatory approvals received. Not under construction	310.2
2022	7	60835	NTE Carolinas II, LLC	IPP	Reidsville Energy Center	NC	61240	REC2	227.0	Natural Gas Fired Combined Cycle	NG	CA	(T) Regulatory approvals received. Not under construction	233.7
2022	9	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
2022	9	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
2022	10	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
2022	10	61906	Rye Development	IPP	Grays Landing L&D Hydroelectric Project	PA	62388	NA1	4.5	Conventional Hydroelectric	WAT	HY	(P) Planned for installation, but regulatory approvals not initiated	6.0
2022	10	61906	Rye Development	IPP	KY No. 11 L&D Hydroelectric Project	KY	62390	NA1	0.3	Conventional Hydroelectric	WAT	HY	(P) Planned for installation, but regulatory approvals not initiated	0.5
2022	10	61906	Rye Development	IPP	Maxwell L&D Hydroelectric Project	PA	62385	NA1	4.5	Conventional Hydroelectric	WAT	HY	(P) Planned for installation, but regulatory approvals not initiated	6.0
2022	10	61906	Rye Development	IPP	Morgantown L&D Hydroelectric Project	WV	62387	NA1	1.5	Conventional Hydroelectric	WAT	HY	(P) Planned for installation, but regulatory approvals not initiated	2.5
2022	10	61906	Rye Development	IPP	Opekiska L&D Hydroelectric Project	WV	62386	NA1	2.0	Conventional Hydroelectric	WAT	HY	(P) Planned for installation, but regulatory approvals not initiated	3.0
2022	10	61906	Rye Development	IPP	Overton Hydroelectric Project	LA	62391	NA1	5.5	Conventional Hydroelectric	WAT	HY	(P) Planned for installation, but regulatory approvals not initiated	8.1
2022	10	61906	Rye Development	IPP	Point Marion L&D Hydroelectric Project	PA	62384	NA1	1.5	Conventional Hydroelectric	WAT	HY	(P) Planned for installation, but regulatory approvals not initiated	2.5
2022	11	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
2022	11	61906	Rye Development	IPP	Grays Landing L&D Hydroelectric Project	PA	62388	NA2	4.5	Conventional Hydroelectric	WAT	HY	(P) Planned for installation, but regulatory approvals not initiated	6.0
2022	11	61906	Rye Development	IPP	KY No. 11 L&D Hydroelectric Project	KY	62390	NA2	0.3	Conventional Hydroelectric	WAT	HY	(P) Planned for installation, but regulatory approvals not initiated	0.5
2022	11	61906	Rye Development	IPP	KY No. 11 L&D Hydroelectric Project	KY	62390	NA3	0.3	Conventional Hydroelectric	WAT	HY	(P) Planned for installation, but regulatory approvals not initiated	0.5
2022	11	61906	Rye Development	IPP	KY No. 11 L&D Hydroelectric Project	KY	62390	NA4	0.3	Conventional Hydroelectric	WAT	HY	(P) Planned for installation, but regulatory approvals not initiated	0.5
2022	11	61906	Rye Development	IPP	KY No. 11 L&D Hydroelectric Project	KY	62390	NA5	0.3	Conventional Hydroelectric	WAT	HY	(P) Planned for installation, but regulatory approvals not initiated	0.5
2022	11	61906	Rye Development	IPP	Maxwell L&D Hydroelectric Project	PA	62385	NA2	4.5	Conventional Hydroelectric	WAT	HY	(P) Planned for installation, but regulatory approvals not initiated	6.0
2022	11	61906	Rye Development	IPP	Morgantown L&D Hydroelectric Project	WV	62387	NA2	1.5	Conventional Hydroelectric	WAT	HY	(P) Planned for installation, but regulatory approvals not initiated	2.5
2022	11	61906	Rye Development	IPP	Opekiska L&D Hydroelectric Project	WV	62386	NA2	2.0	Conventional Hydroelectric	WAT	HY	(P) Planned for installation, but regulatory approvals not initiated	3.0
2022	11	61906	Rye Development	IPP	Overton Hydroelectric Project	LA	62391	NA2	5.5	Conventional Hydroelectric	WAT	HY	(P) Planned for installation, but regulatory approvals not initiated	8.1
2022	11	61906	Rye Development	IPP	Overton Hydroelectric Project	LA	62391	NA3	5.5	Conventional Hydroelectric	WAT	HY	(P) Planned for installation, but regulatory approvals not initiated	8.1
2022	11	61906	Rye Development	IPP	Overton Hydroelectric Project	LA	62391	NA4	5.5	Conventional Hydroelectric	WAT	HY	(P) Planned for installation, but regulatory approvals not initiated	8.1
2022	11	61906	Rye Development	IPP	Overton Hydroelectric Project	LA	62391	NA5	5.5	Conventional Hydroelectric	WAT	HY	(P) Planned for installation, but regulatory approvals not initiated	8.1
2022	11	61906	Rye Development	IPP	Overton Hydroelectric Project	LA	62391	NA6	5.5	Conventional Hydroelectric	WAT	HY	(P) Planned for installation, but regulatory approvals not initiated	8.1
2022	11	61906	Rye Development	IPP	Point Marion L&D Hydroelectric Project	PA	62384	NA2	1.5	Conventional Hydroelectric	WAT	HY	(P) Planned for installation, but regulatory approvals not initiated	2.5
2022	12	56771	Black Hills Service Company LLC	Electric Utility	Cheyenne Prairie Generating Station	WY	57703	02B	40.0	Natural Gas Fired Combustion Turbine	NG	GT	(OT) Other	40.0
2022	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	(OT) Other	40.0
2022	12	59380	Enel Green Power NA, Inc.	IPP	Cascade Energy Storage, LLC	CA	61801	10002	25.0	Batteries	MWH	BA	(L) Regulatory approvals pending. Not under construction	25.0
2022	12	59380	Enel Green Power NA, Inc.	IPP	Sierra Energy Storage, LLC	CA	61803	10003	10.0	Batteries	MWH	BA	(L) Regulatory approvals pending. Not under construction	10.0
2022	12	60411	Friesian Holdings, LLC	IPP	Friesian Holdings	NC	60692	PV1	75.0	Solar Photovoltaic	SUN	PV	(L) Regulatory approvals pending. Not under construction	75.0
2023	5	16572	Salt River Project	Electric Utility	Copper Crossing Energy Center	AZ	58413	CCGS3	226.0	Natural Gas Fired Combustion Turbine	NG	GT	(P) Planned for installation, but regulatory approvals not initiated	241.0
2023	10	61914	Juwi Inc	IPP	Spanish Peaks Solar	CO	62379	47301	100.0	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	100.0
2023	12	60064	Clean Path Energy Center, LLC	IPP	Clean Path Energy Center	NM	60289	CPEC1	680.0	Natural Gas Fired Combined Cycle	NG	CC	(P) Planned for installation, but regulatory approvals not initiated	680.0
2023	12	60064	Clean Path Energy Center, LLC	IPP	Clean Path Energy Center	NM	60289	FVGEN	55.0	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	55.0
2023	12	59380	Enel Green Power NA, Inc.	IPP	Kingston Energy Storage, LLC	CA	61802	10001	50.0	Batteries	MWH	BA	(L) Regulatory approvals pending. Not under construction	50.0
2023	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
2024	1	2719	CalWind Resources Inc	IPP	Tehachapi Wind Resource II	CA	54909	PLAN	15.5	Onshore Wind Turbine	WND	WT	(P) Planned for installation, but regulatory approvals not initiated	15.5
2024	5	16572	Salt River Project	Electric Utility	Copper Crossing Energy Center	AZ	58413	CCGS1	98.0	Natural Gas Fired Combustion Turbine	NG	GT	(P) Planned for installation, but regulatory approvals not initiated	116.0
2024	5	16572	Salt River Project	Electric Utility	Copper Crossing Energy Center	AZ	58413	CCGS2	98.0	Natural Gas Fired Combustion Turbine	NG	GT	(P) Planned for installation, but regulatory approvals not initiated	116.0
2024	5	16572	Salt River Project	Electric Utility	Copper Crossing Energy Center	AZ	58413	CCGS4	226.0	Natural Gas Fired Combustion Turbine	NG	GT	(P) Planned for installation, but regulatory approvals not initiated	241.0
2024	5	16572	Salt River Project	Electric Utility	Copper Crossing Energy Center	AZ	58413	CCGS5	226.0	Natural Gas Fired Combustion Turbine	NG	GT	(P) Planned for installation, but regulatory approvals not initiated	241.0
2024	12	60799	33UI 8me LLC	IPP	Long Ridge Solar Farm	UT	61170	33U18	300.0	Solar Photovoltaic	SUN	PV	(P) Planned for installation, but regulatory approvals not initiated	300.0
2024	12	56814	Black Creek Renewable Energy LLC	IPP	Sampson County Disposal	NC	57492	GEN7	1.6	Landfill Gas	LFG	IC	(T) Regulatory approvals received. Not under construction	1.6
2024	12	56814	Black Creek Renewable Energy LLC	IPP	Sampson County Disposal	NC	57492	GEN8	1.6	Landfill Gas	LFG	IC	(T) Regulatory approvals received. Not under construction	1.6
2024	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
2025	1	7189	Gila Bend Power Partners LLC	IPP	Gila Bend Power Generation Station	AZ	55507	1	156.0	Natural Gas Fired Combined Cycle	NG	CT	(L) Regulatory approvals pending. Not under construction	170.0
2025	2	7189	Gila Bend Power Partners LLC	IPP	Gila Bend Power Generation Station	AZ	55507	2	156.0	Natural Gas Fired Combined Cycle	NG	CT	(L) Regulatory approvals pending. Not under construction	170.0
2025	2	7189	Gila Bend Power Partners LLC	IPP	Gila Bend Power Generation Station	AZ	55507	3	156.0	Natural Gas Fired Combined Cycle	NG	CT	(L) Regulatory approvals pending. Not under construction	170.0
2025	2	7189	Gila Bend Power Partners LLC	IPP	Gila Bend Power Generation Station	AZ	55507	4	390.0	Natural Gas Fired Combined Cycle	NG	CA	(L) Regulatory approvals pending. Not under construction	390.0
2025	5	16572	Salt River Project	Electric Utility	Copper Crossing Energy Center	AZ	58413	CCGS6	226.0	Natural Gas Fired Combustion Turbine	NG	GT	(P) Planned for installation, but regulatory approvals not initiated	241.0
2025	5	16572	Salt River Project	Electric Utility	Copper Crossing Energy Center	AZ	58413	CCGS7	226.0	Natural Gas Fired Combustion Turbine	NG	GT	(P) Planned for installation, but regulatory approvals not initiated	241.0
2025	5	16572	Salt River Project	Electric Utility	Copper Crossing Energy Center	AZ	58413	CCGS8	226.0	Natural Gas Fired Combustion Turbine	NG	GT	(P) Planned for installation, but regulatory approvals not initiated	241.0
2026	5	40575	Utah Associated Mun Power Sys	Electric Utility	UAMPS Carbon Free Power Plant	ID	61075	NPM1	47.5	Nuclear	NUC	ST	(P) Planned for installation, but regulatory approvals not initiated	50.0
2026	6	40575	Utah Associated Mun Power Sys	Electric Utility	UAMPS Carbon Free Power Plant	ID	61075	NPM2	47.5	Nuclear	NUC	ST	(P) Planned for installation, but regulatory approvals not initiated	50.0
2026	7	40575	Utah Associated Mun Power Sys	Electric Utility	UAMPS Carbon Free Power Plant	ID	61075	NPM3	47.5	Nuclear	NUC	ST	(P) Planned for installation, but regulatory approvals not initiated	50.0
2026	9	40575	Utah Associated Mun Power Sys	Electric Utility	UAMPS Carbon Free Power Plant	ID	61075	NPM4	47.5	Nuclear	NUC	ST	(P) Planned for installation, but regulatory approvals not initiated	50.0
2026	9	40575	Utah Associated Mun Power Sys	Electric Utility	UAMPS Carbon Free Power Plant	ID	61075	NPM5	47.5	Nuclear	NUC	ST	(P) Planned for installation, but regulatory approvals not initiated	50.0
2026	10	40575	Utah Associated Mun Power Sys	Electric Utility	UAMPS Carbon Free Power Plant	ID	61075	NPM6	47.5	Nuclear	NUC	ST	(P) Planned for installation, but regulatory approvals not initiated	50.0
2026	11	40575	Utah Associated Mun Power Sys	Electric Utility	UAMPS Carbon Free Power Plant	ID	61075	NPM7	47.5	Nuclear	NUC	ST	(P) Planned for installation, but regulatory approvals not initiated	50.0
2026	12	40575	Utah Associated Mun Power Sys	Electric Utility	UAMPS Carbon Free Power Plant	ID	61075	NPM8	47.5	Nuclear	NUC	ST	(P) Planned for installation, but regulatory approvals not initiated	50.0
2027	1	40575	Utah Associated Mun Power Sys	Electric Utility	UAMPS Carbon Free Power Plant	ID	61075	NPM9	47.5	Nuclear	NUC	ST	(P) Planned for installation, but regulatory approvals not initiated	50.0
2027	2	40575	Utah Associated Mun Power Sys	Electric Utility	UAMPS Carbon Free Power Plant	ID	61075	NPM10	47.5	Nuclear	NUC	ST	(P) Planned for installation, but regulatory approvals not initiated	50.0
2027	3	40575	Utah Associated Mun Power Sys	Electric Utility	UAMPS Carbon Free Power Plant	ID	61075	NPM11	47.5	Nuclear	NUC	ST	(P) Planned for installation, but regulatory approvals not initiated	50.0
2027	4	40575	Utah Associated Mun Power Sys	Electric Utility	UAMPS									

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
2019	1	19145	DTE Tuscola, LLC	Industrial	Tuscola Station	IL	55245	TG1	3.8	Natural Gas Steam Turbine	NG	ST
2019	1	58945	EthosEnergy Power Plant Services	Electric CHP	Quantum Pasco Power LP	FL	54424	EDG1	1.2	Petroleum Liquids	DFO	IC
2019	1	58945	EthosEnergy Power Plant Services	Electric CHP	Quantum Pasco Power LP	FL	54424	EDG2	1.2	Petroleum Liquids	DFO	IC
2019	1	58945	EthosEnergy Power Plant Services	Electric CHP	Quantum Pasco Power LP	FL	54424	GT1	48.5	Natural Gas Fired Combined Cycle	NG	CT
2019	1	58945	EthosEnergy Power Plant Services	Electric CHP	Quantum Pasco Power LP	FL	54424	GT2	48.5	Natural Gas Fired Combined Cycle	NG	CT
2019	1	58945	EthosEnergy Power Plant Services	Electric CHP	Quantum Pasco Power LP	FL	54424	ST1	24.0	Natural Gas Fired Combined Cycle	NG	CA
2019	2	1692	Big Rivers Electric Corp	Electric Utility	HMP&L Station Two Henderson	KY	1382	1	153.0	Conventional Steam Coal	BIT	ST
2019	2	1692	Big Rivers Electric Corp	Electric Utility	HMP&L Station Two Henderson	KY	1382	2	159.0	Conventional Steam Coal	BIT	ST
2019	2	11713	City of Marshall - (MI)	Electric Utility	Marshall (MI)	MI	1844	IC2	0.9	Natural Gas Internal Combustion Engine	NG	IC
2019	2	11713	City of Marshall - (MI)	Electric Utility	Marshall (MI)	MI	1844	IC4	0.7	Petroleum Liquids	DFO	IC
2019	2	10171	Kentucky Utilities Co	Electric Utility	E W Brown	KY	1355	1	106.0	Conventional Steam Coal	BIT	ST
2019	2	10171	Kentucky Utilities Co	Electric Utility	E W Brown	KY	1355	2	166.0	Conventional Steam Coal	BIT	ST
2019	3	11560	City of Manassas - (VA)	Electric Utility	Dean Drive Area Electric Generators	VA	56491	PG1	1.6	Petroleum Liquids	DFO	IC
2019	3	11560	City of Manassas - (VA)	Electric Utility	Dean Drive Area Electric Generators	VA	56491	PG2	1.6	Petroleum Liquids	DFO	IC
2019	3	59879	Greenleaf Energy LLC	Electric CHP	Greenleaf 1 Power Plant	CA	10350	GEN1	42.0	Natural Gas Fired Combined Cycle	NG	CT
2019	3	59879	Greenleaf Energy LLC	Electric CHP	Greenleaf 1 Power Plant	CA	10350	GEN2	8.0	Natural Gas Fired Combined Cycle	NG	CA
2019	3	25835	Portland City of	IPP	Ground Water Pumping Station	OR	50105	GPS1	0.9	Conventional Hydroelectric	WAT	HY
2019	3	25835	Portland City of	IPP	Ground Water Pumping Station	OR	50105	GPS2	0.9	Conventional Hydroelectric	WAT	HY
2019	3	25835	Portland City of	IPP	Ground Water Pumping Station	OR	50105	GPS3	0.9	Conventional Hydroelectric	WAT	HY
2019	3	25835	Portland City of	IPP	Ground Water Pumping Station	OR	50105	GPS4	0.9	Conventional Hydroelectric	WAT	HY
2019	3	25835	Portland City of	IPP	Ground Water Pumping Station	OR	50105	GPS5	0.9	Conventional Hydroelectric	WAT	HY
2019	3	25835	Portland City of	IPP	Ground Water Pumping Station	OR	50105	GPS6	0.9	Conventional Hydroelectric	WAT	HY
2019	3	56772	TX LFG Energy, LP	IPP	Coastal Plains	TX	55554	UNT1	1.7	Landfill Gas	LFG	IC
2019	3	56772	TX LFG Energy, LP	IPP	Coastal Plains	TX	55554	UNT3	1.7	Landfill Gas	LFG	IC
2019	3	56772	TX LFG Energy, LP	IPP	Coastal Plains	TX	55554	UNT4	1.7	Landfill Gas	LFG	IC
2019	4	7136	Georgia-Pacific Consr Prods LP-Naheola	Industrial	Georgia-Pacific Consr Prods LP-Naheola	AL	10699	GEN1	12.4	Wood/Wood Waste Biomass	BLQ	ST
2019	4	7136	Georgia-Pacific Consr Prods LP-Naheola	Industrial	Georgia-Pacific Consr Prods LP-Naheola	AL	10699	GEN2	12.4	Wood/Wood Waste Biomass	BLQ	ST
2019	4	56997	Marina Energy LLC	Commercial	Stockton Athletic Center	NJ	57864	LOT7	0.2	Solar Photovoltaic	SUN	PV
2019	4	56997	Marina Energy LLC	Commercial	Stockton Athletic Center	NJ	57864	LOT7B	0.2	Solar Photovoltaic	SUN	PV
2019	4	56997	Marina Energy LLC	Commercial	Stockton Athletic Center	NJ	57864	SAC	0.3	Solar Photovoltaic	SUN	PV
2019	5	8776	City of Holyoke Gas and Electric Dept.	Electric Utility	Harris Energy Realty	MA	54981	ALBA	0.3	Conventional Hydroelectric	WAT	HY
2019	5	8776	City of Holyoke Gas and Electric Dept.	Electric Utility	Harris Energy Realty	MA	54981	ALBD	0.4	Conventional Hydroelectric	WAT	HY
2019	5	29926	Entergy Nuclear Generation Co	IPP	Pilgrim Nuclear Power Station	MA	1590	1	679.0	Nuclear	NUC	ST
2019	5	60771	Marcus Hook 50 L.P	Electric CHP	Marcus Hook Refinery Cogen	PA	50074	GEN1	48.0	Natural Gas Fired Combustion Turbine	NG	GT
2019	5	12773	Monmouth Energy Inc	IPP	Monmouth Landfill Gas to Energy	NJ	55618	GEN1	3.3	Landfill Gas	LFG	GT
2019	5	12773	Monmouth Energy Inc	IPP	Monmouth Landfill Gas to Energy	NJ	55618	GEN2	3.3	Landfill Gas	LFG	GT
2019	5	13206	Nantucket Electric Co	Electric Utility	Nantucket	MA	1615	12	2.8	Petroleum Liquids	DFO	GT
2019	5	13206	Nantucket Electric Co	Electric Utility	Nantucket	MA	1615	13	2.9	Petroleum Liquids	DFO	GT
2019	5	19876	Virginia Electric & Power Co	Electric Utility	Yorktown	VA	3809	1	159.0	Conventional Steam Coal	BIT	ST
2019	5	19876	Virginia Electric & Power Co	Electric Utility	Yorktown	VA	3809	2	164.0	Conventional Steam Coal	BIT	ST
2019	5	20847	Wisconsin Electric Power Co	Electric Utility	Presque Isle	MI	1769	5	55.0	Conventional Steam Coal	SUB	ST
2019	5	20847	Wisconsin Electric Power Co	Electric Utility	Presque Isle	MI	1769	6	55.0	Conventional Steam Coal	SUB	ST
2019	5	20847	Wisconsin Electric Power Co	Electric Utility	Presque Isle	MI	1769	7	83.0	Conventional Steam Coal	SUB	ST
2019	5	20847	Wisconsin Electric Power Co	Electric Utility	Presque Isle	MI	1769	8	83.0	Conventional Steam Coal	SUB	ST
2019	5	20847	Wisconsin Electric Power Co	Electric Utility	Presque Isle	MI	1769	9	83.0	Conventional Steam Coal	SUB	ST
2019	7	61138	City Point Energy Center	Electric CHP	James River Genco LLC	VA	10377	GEN1	46.3	Conventional Steam Coal	BIT	ST
2019	7	61138	City Point Energy Center	Electric CHP	James River Genco LLC	VA	10377	GEN2	46.3	Conventional Steam Coal	BIT	ST
2019	8	14624	PUD No 2 of Grant County	Electric Utility	Wanapum	WA	3888	4	103.8	Conventional Hydroelectric	WAT	HY
2019	9	55951	Exelon Nuclear	IPP	Three Mile Island	PA	8011	1	802.8	Nuclear	NUC	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	10	1752	Biola University	Commercial	Biola University	CA	54296	EG1	0.6	Natural Gas Internal Combustion Engine	NG	IC
2019	10	1752	Biola University	Commercial	Biola University	CA	54296	EG2	0.6	Natural Gas Internal Combustion Engine	NG	IC
2019	10	56997	Marina Energy LLC	Commercial	Stockton Athletic Center	NJ	57864	2LOT7	0.5	Solar Photovoltaic	SUN	PV
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	22148	AES Alamos LLC	IPP	AES Alamos LLC	CA	315	1	175.0	Natural Gas Steam Turbine	NG	ST
2019	12	22148	AES Alamos LLC	IPP	AES Alamos LLC	CA	315	2	175.0	Natural Gas Steam Turbine	NG	ST
2019	12	22148	AES Alamos LLC	IPP	AES Alamos LLC	CA	315	6	495.0	Natural Gas Steam Turbine	NG	ST
2019	12	23693	AES Huntington Beach LLC	IPP	AES Huntington Beach LLC	CA	335	1	225.8	Natural Gas Steam Turbine	NG	ST
2019	12	228	City of Albany - (MO)	Electric Utility	Albany	MO	2113	1	2.1	Petroleum Liquids	DFO	IC
2019	12	59879	Greenleaf Energy LLC	Electric CHP	Greenleaf 2 Power Plant	CA	10349	GEN1	49.5	Natural Gas Fired Combustion Turbine	NG	GT
2019	12	8688	Hofstra University	Commercial	Hofstra University	NY	51035	GEN1	1.1	Natural Gas Internal Combustion Engine	NG	IC
2019	12	8688	Hofstra University	Commercial	Hofstra University	NY	51035	GEN2	1.1	Natural Gas Internal Combustion Engine	NG	IC
2019	12	56211	KCP&L Greater Missouri Operations Co	Electric Utility	Lake Road (MO)	MO	2098	4	97.1	Natural Gas Steam Turbine	NG	ST
2019	12	11479	Madison Gas & Electric Co	Electric Utility	Fitchburg	WI	3991	1	16.6	Natural Gas Fired Combustion Turbine	NG	GT
2019	12	11479	Madison Gas & Electric Co	Electric Utility	Fitchburg	WI	3991	2	15.8	Natural Gas Fired Combustion Turbine	NG	GT
2019	12	16572	Salt River Project	Electric Utility	Navajo	AZ	4941	NAV1	750.0	Conventional Steam Coal	BIT	ST

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
2019	12	16572	Salt River Project	Electric Utility	Navajo	AZ	4941	NAV2	750.0	Conventional Steam Coal	BIT	ST
2019	12	16572	Salt River Project	Electric Utility	Navajo	AZ	4941	NAV3	750.0	Conventional Steam Coal	BIT	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
2020	1	14328	Pacific Gas & Electric Co.	Electric Utility	Kilarc	CA	253	1	1.6	Conventional Hydroelectric	WAT	HY
2020	1	14328	Pacific Gas & Electric Co.	Electric Utility	Kilarc	CA	253	2	1.6	Conventional Hydroelectric	WAT	HY
2020	2	16657	San Jose/Santa Clara Water P C	Commercial	SJ/SC WPCP	CA	56080	EG1	2.8	Natural Gas Internal Combustion Engine	NG	IC
2020	2	16657	San Jose/Santa Clara Water P C	Commercial	SJ/SC WPCP	CA	56080	EG2	2.8	Natural Gas Internal Combustion Engine	NG	IC
2020	2	16657	San Jose/Santa Clara Water P C	Commercial	SJ/SC WPCP	CA	56080	EG3	2.8	Natural Gas Internal Combustion Engine	NG	IC
2020	4	6027	Entergy Nuclear Indian Point 2	IPP	Indian Point 2	NY	2497	2	1,018.5	Nuclear	NUC	ST
2020	4	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
2020	5	6455	Duke Energy Florida, LLC	Electric Utility	Avon Park	FL	624	P1	24.0	Natural Gas Fired Combustion Turbine	NG	GT
2020	5	6455	Duke Energy Florida, LLC	Electric Utility	Avon Park	FL	624	P2	24.0	Petroleum Liquids	DFO	GT
2020	5	6455	Duke Energy Florida, LLC	Electric Utility	Higgins	FL	630	P1	20.0	Natural Gas Fired Combustion Turbine	NG	GT
2020	5	6455	Duke Energy Florida, LLC	Electric Utility	Higgins	FL	630	P2	25.0	Natural Gas Fired Combustion Turbine	NG	GT
2020	5	6455	Duke Energy Florida, LLC	Electric Utility	Higgins	FL	630	P3	31.0	Natural Gas Fired Combustion Turbine	NG	GT
2020	5	6455	Duke Energy Florida, LLC	Electric Utility	Higgins	FL	630	P4	31.0	Natural Gas Fired Combustion Turbine	NG	GT
2020	5	6526	FirstEnergy Generation Corp	IPP	FirstEnergy W H Sammis	OH	2866	1	180.0	Conventional Steam Coal	BIT	ST
2020	5	6526	FirstEnergy Generation Corp	IPP	FirstEnergy W H Sammis	OH	2866	2	180.0	Conventional Steam Coal	BIT	ST
2020	5	6526	FirstEnergy Generation Corp	IPP	FirstEnergy W H Sammis	OH	2866	3	180.0	Conventional Steam Coal	BIT	ST
2020	5	6526	FirstEnergy Generation Corp	IPP	FirstEnergy W H Sammis	OH	2866	4	180.0	Conventional Steam Coal	BIT	ST
2020	5	50161	FirstEnergy Nuclear Operating Company	IPP	Davis Besse	OH	6149	1	894.0	Nuclear	NUC	ST
2020	5	16721	S D Warren Co.- Westbrook	Industrial	S D Warren Westbrook	ME	50447	GN18	0.4	Conventional Hydroelectric	WAT	HY
2020	5	16721	S D Warren Co.- Westbrook	Industrial	S D Warren Westbrook	ME	50447	GN19	0.4	Conventional Hydroelectric	WAT	HY
2020	5	16721	S D Warren Co.- Westbrook	Industrial	S D Warren Westbrook	ME	50447	GN20	0.4	Conventional Hydroelectric	WAT	HY
2020	6	7483	City of Grand Haven - (MI)	Electric Utility	Grand Haven Diesel Plant	MI	1826	1	8.4	Natural Gas Internal Combustion Engine	NG	IC
2020	6	60422	H.A. Wagner LLC	IPP	Herbert A Wagner	MD	1554	2	118.0	Conventional Steam Coal	RC	ST
2020	7	14328	Pacific Gas & Electric Co.	Electric Utility	Cow Creek	CA	229	1	0.9	Conventional Hydroelectric	WAT	HY
2020	7	14328	Pacific Gas & Electric Co.	Electric Utility	Cow Creek	CA	229	2	0.9	Conventional Hydroelectric	WAT	HY
2020	9	14173	Oroville Cogeneration LP	Industrial	Oroville Cogeneration LP	CA	54477	GEN1	1.1	Natural Gas Internal Combustion Engine	NG	IC
2020	9	14173	Oroville Cogeneration LP	Industrial	Oroville Cogeneration LP	CA	54477	GEN2	1.1	Natural Gas Internal Combustion Engine	NG	IC
2020	9	14173	Oroville Cogeneration LP	Industrial	Oroville Cogeneration LP	CA	54477	GEN3	1.1	Natural Gas Internal Combustion Engine	NG	IC
2020	9	14173	Oroville Cogeneration LP	Industrial	Oroville Cogeneration LP	CA	54477	GEN4	1.1	Natural Gas Internal Combustion Engine	NG	IC
2020	9	14173	Oroville Cogeneration LP	Industrial	Oroville Cogeneration LP	CA	54477	GEN5	1.1	Natural Gas Internal Combustion Engine	NG	IC
2020	9	14173	Oroville Cogeneration LP	Industrial	Oroville Cogeneration LP	CA	54477	GEN6	1.1	Natural Gas Internal Combustion Engine	NG	IC
2020	9	14173	Oroville Cogeneration LP	Industrial	Oroville Cogeneration LP	CA	54477	GEN7	1.1	Natural Gas Internal Combustion Engine	NG	IC
2020	11	56778	Bloom Energy 2009 PPA	IPP	Caltech Central	CA	57460	CL00	0.1	Other Waste Biomass	OBG	FC
2020	11	56778	Bloom Energy 2009 PPA	IPP	Caltech Central	CA	57460	CL01	0.1	Other Waste Biomass	OBG	FC
2020	11	56778	Bloom Energy 2009 PPA	IPP	Caltech Central	CA	57460	CL02	0.1	Other Waste Biomass	OBG	FC
2020	11	56778	Bloom Energy 2009 PPA	IPP	Caltech Central	CA	57460	CL03	0.1	Other Waste Biomass	OBG	FC
2020	11	56778	Bloom Energy 2009 PPA	IPP	Caltech Central	CA	57460	CL04	0.1	Other Waste Biomass	OBG	FC
2020	11	56778	Bloom Energy 2009 PPA	IPP	Caltech Central	CA	57460	CL05	0.1	Other Waste Biomass	OBG	FC
2020	11	56778	Bloom Energy 2009 PPA	IPP	Caltech Central	CA	57460	CL06	0.1	Other Waste Biomass	OBG	FC
2020	11	56778	Bloom Energy 2009 PPA	IPP	Caltech Central	CA	57460	CL07	0.1	Other Waste Biomass	OBG	FC
2020	11	56778	Bloom Energy 2009 PPA	IPP	Caltech Central	CA	57460	CL08	0.1	Other Waste Biomass	OBG	FC
2020	11	56778	Bloom Energy 2009 PPA	IPP	Caltech Central	CA	57460	CL09	0.1	Other Waste Biomass	OBG	FC
2020	11	56778	Bloom Energy 2009 PPA	IPP	Caltech Central	CA	57460	CL10	0.1	Other Waste Biomass	OBG	FC
2020	12	22148	AES Alamos LLC	IPP	AES Alamos LLC	CA	315	3	332.0	Natural Gas Steam Turbine	NG	ST
2020	12	22148	AES Alamos LLC	IPP	AES Alamos LLC	CA	315	4	335.0	Natural Gas Steam Turbine	NG	ST
2020	12	22148	AES Alamos LLC	IPP	AES Alamos LLC	CA	315	5	485.0	Natural Gas Steam Turbine	NG	ST
2020	12	23693	AES Huntington Beach LLC	IPP	AES Huntington Beach LLC	CA	335	2	225.8	Natural Gas Steam Turbine	NG	ST
2020	12	22484	AES Redondo Beach LLC	IPP	AES Redondo Beach LLC	CA	356	5	175.0	Natural Gas Steam Turbine	NG	ST
2020	12	22484	AES Redondo Beach LLC	IPP	AES Redondo Beach LLC	CA	356	6	175.0	Natural Gas Steam Turbine	NG	ST
2020	12	22484	AES Redondo Beach LLC	IPP	AES Redondo Beach LLC	CA	356	8	480.0	Natural Gas Steam Turbine	NG	ST
2020	12	17833	City Utilities of Springfield - (MO)	Electric Utility	James River Power Station	MO	2161	4	56.0	Natural Gas Steam Turbine	NG	ST
2020	12	17833	City Utilities of Springfield - (MO)	Electric Utility	James River Power Station	MO	2161	5	97.0	Natural Gas Steam Turbine	NG	ST
2020	12	50006	Invista	Industrial	Camden South Carolina	SC	10795	GEN1	5.5	Natural Gas Steam Turbine	NG	ST
2020	12	50006	Invista	Industrial	Camden South Carolina	SC	10795	GEN2	5.5	Natural Gas Steam Turbine	NG	ST
2020	12	56155	Lansing Board of Water and Light	Electric Utility	Eckert Station	MI	1831	4	64.0	Conventional Steam Coal	SUB	ST
2020	12	56155	Lansing Board of Water and Light	Electric Utility	Eckert Station	MI	1831	5	63.1	Conventional Steam Coal	SUB	ST
2020	12	56155	Lansing Board of Water and Light	Electric Utility	Eckert Station	MI	1831	6	62.8	Conventional Steam Coal	SUB	ST
2020	12	11479	Madison Gas & Electric Co	Electric Utility	Nine Springs	WI	9674	GT1	14.2	Natural Gas Fired Combustion Turbine	NG	GT
2020	12	11479	Madison Gas & Electric Co	Electric Utility	Sycamore (WI)	WI	3993	1	11.2	Natural Gas Fired Combustion Turbine	NG	GT
2020	12	11479	Madison Gas & Electric Co	Electric Utility	Sycamore (WI)	WI	3993	2	16.6	Natural Gas Fired Combustion Turbine	NG	GT
2020	12	15908	NRG California South LP	IPP	Ellwood	CA	8076	01	54.0	Natural Gas Fired Combustion Turbine	NG	GT
2020	12	55269	NextEra Energy Duane Arnold LLC	IPP	Duane Arnold Energy Center	IA	1060	1	601.4	Nuclear	NUC	ST
2020	12	61013	Northern Westchester Hospital	Commercial	Northern Westchester Hospital	NY	61378	4	0.8	Petroleum Liquids	DFO	IC



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	61013	Northern Westchester Hospital	Commercial	Northern Westchester Hospital	NY	61378	5	0.8	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	RC	ST
2020	12	20856	Wisconsin Power & Light Co	Electric Utility	Rock River	WI	4057	3	21.2	Natural Gas Fired Combustion Turbine	NG	GT
2020	12	20856	Wisconsin Power & Light Co	Electric Utility	Rock River	WI	4057	4	14.3	Natural Gas Fired Combustion Turbine	NG	GT
2020	12	20856	Wisconsin Power & Light Co	Electric Utility	Rock River	WI	4057	5	49.8	Natural Gas Fired Combustion Turbine	NG	GT
2020	12	20856	Wisconsin Power & Light Co	Electric Utility	Rock River	WI	4057	6	46.7	Natural Gas Fired Combustion Turbine	NG	GT
2020	12	20856	Wisconsin Power & Light Co	Electric Utility	Sheepskin	WI	4059	1	34.3	Natural Gas Fired Combustion Turbine	NG	GT
2021	1	15908	NRG California South LP	IPP	Ormond Beach	CA	350	1	741.0	Natural Gas Steam Turbine	NG	ST
2021	1	15908	NRG California South LP	IPP	Ormond Beach	CA	350	2	750.0	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	4	6028	Entergy Nuclear Indian Point 3	IPP	Indian Point 3	NY	8907	3	1,037.8	Nuclear	NUC	ST
2021	4	17633	Southern Indiana Gas & Elec Co	Electric Utility	Northeast (IN)	IN	1013	1	10.0	Natural Gas Fired Combustion Turbine	NG	GT
2021	4	17633	Southern Indiana Gas & Elec Co	Electric Utility	Northeast (IN)	IN	1013	2	10.0	Natural Gas Fired Combustion Turbine	NG	GT
2021	5	58435	Collinwood BioEnergy	Industrial	Collinwood BioEnergy Facility	OH	58439	CBE01	1.0	Other Waste Biomass	OBG	IC
2021	5	50161	FirstEnergy Nuclear Operating Company	IPP	Beaver Valley	PA	6040	1	907.0	Nuclear	NUC	ST
2021	5	50161	FirstEnergy Nuclear Operating Company	IPP	Perry	OH	6020	1	1,240.0	Nuclear	NUC	ST
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	6	14232	Otter Tail Power Co	Electric Utility	Hoot Lake	MN	1943	D1	0.2	Petroleum Liquids	DFO	IC
2021	6	14232	Otter Tail Power Co	Electric Utility	Hoot Lake	MN	1943	D2	0.1	Petroleum Liquids	DFO	IC
2021	6	15452	PSEG Power Connecticut LLC	IPP	Bridgeport Station	CT	568	3	383.4	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	50161	FirstEnergy Nuclear Operating Company	IPP	Beaver Valley	PA	6040	2	901.0	Nuclear	NUC	ST
2021	12	18301	City of Sumner - (IA)	Electric Utility	Sumner	IA	1191	1	2.6	Petroleum Liquids	DFO	IC
2021	12	18301	City of Sumner - (IA)	Electric Utility	Sumner	IA	1191	2	1.1	Petroleum Liquids	DFO	IC
2021	12	15466	Public Service Co of Colorado	Electric Utility	Salida	CO	474	1	0.8	Conventional Hydroelectric	WAT	HY
2022	1	59409	Eco Services Corp.	Industrial	Houston Plant	TX	52065	GEN2	1.5	All Other	WH	ST
2022	6	56192	Entergy Nuclear Palisades LLC	IPP	Palisades	MI	1715	1	804.2	Nuclear	NUC	ST
2022	7	15298	Talen Montana LLC	IPP	Colstrip	MT	6076	1	307.0	Conventional Steam Coal	SUB	ST
2022	7	15298	Talen Montana LLC	IPP	Colstrip	MT	6076	2	307.0	Conventional Steam Coal	SUB	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	SUB	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	15470	Duke Energy Indiana, LLC	Electric Utility	R Gallagher	IN	1008	2	140.0	Conventional Steam Coal	BIT	ST
2022	12	15470	Duke Energy Indiana, LLC	Electric Utility	R Gallagher	IN	1008	4	140.0	Conventional Steam Coal	BIT	ST
2022	12	54803	Dynegy Oakland, LLC	IPP	Dynegy Oakland Power Plant	CA	6211	GEN1	55.0	Petroleum Liquids	JF	GT
2022	12	54803	Dynegy Oakland, LLC	IPP	Dynegy Oakland Power Plant	CA	6211	GEN2	55.0	Petroleum Liquids	JF	GT
2022	12	54803	Dynegy Oakland, LLC	IPP	Dynegy Oakland Power Plant	CA	6211	GEN3	55.0	Petroleum Liquids	JF	GT
2022	12	5701	El Paso Electric Co	Electric Utility	Newman	TX	3456	1	74.0	Natural Gas Steam Turbine	NG	ST
2022	12	5701	El Paso Electric Co	Electric Utility	Newman	TX	3456	2	76.0	Natural Gas Steam Turbine	NG	ST
2022	12	5701	El Paso Electric Co	Electric Utility	Rio Grande	NM	2444	6	45.0	Natural Gas Steam Turbine	NG	ST
2022	12	5701	El Paso Electric Co	Electric Utility	Rio Grande	NM	2444	7	46.0	Natural Gas Steam Turbine	NG	ST
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	15466	Public Service Co of Colorado	Electric Utility	Comanche (CO)	CO	470	1	325.0	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
2022	12	30151	Tri-State G & T Assn, Inc	Electric Utility	Nucla	CO	527	1	12.0	Conventional Steam Coal	BIT	ST
2022	12	30151	Tri-State G & T Assn, Inc	Electric Utility	Nucla	CO	527	2	12.0	Conventional Steam Coal	BIT	ST
2022	12	30151	Tri-State G & T Assn, Inc	Electric Utility	Nucla	CO	527	3	12.0	Conventional Steam Coal	BIT	ST
2022	12	30151	Tri-State G & T Assn, Inc	Electric Utility	Nucla	CO	527	ST4	64.0	Conventional Steam Coal	BIT	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	20.5	Natural Gas Fired Combined Cycle	NG	CT
2023	3	13399	Nevada Cogeneration Assoc # 1	Electric CHP	Nevada Cogen Assoc#1 GarnetVly	NV	54350	GTB	20.5	Natural Gas Fired Combined Cycle	NG	CT
2023	3	13399	Nevada Cogeneration Assoc # 1	Electric CHP	Nevada Cogen Assoc#1 GarnetVly	NV	54350	GTC	20.5	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

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
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	9	17166	Sierra Pacific Power Co	Electric Utility	Brunswick	NV	6510	1	2.0	Petroleum Liquids	DFO	IC
2023	9	17166	Sierra Pacific Power Co	Electric Utility	Brunswick	NV	6510	2	2.0	Petroleum Liquids	DFO	IC
2023	9	17166	Sierra Pacific Power Co	Electric Utility	Brunswick	NV	6510	3	2.0	Petroleum Liquids	DFO	IC
2023	10	18715	Texas Municipal Power Agency	Electric Utility	Gibbons Creek	TX	6136	1	470.0	Conventional Steam Coal	SUB	ST
2023	12	5860	Empire District Electric Co	Electric Utility	Empire Energy Center	MO	6223	1	82.0	Natural Gas Fired Combustion Turbine	NG	GT
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	167.0	Natural Gas Steam Turbine	NG	ST
2023	12	14127	Omaha Public Power District	Electric Utility	North Omaha	NE	2291	1	64.8	Natural Gas Steam Turbine	NG	ST
2023	12	14127	Omaha Public Power District	Electric Utility	North Omaha	NE	2291	2	90.8	Natural Gas Steam Turbine	NG	ST
2023	12	14127	Omaha Public Power District	Electric Utility	North Omaha	NE	2291	3	86.0	Natural Gas Steam Turbine	NG	ST
2023	12	17633	Southern Indiana Gas & Elec Co	Electric Utility	A B Brown	IN	6137	1	245.0	Conventional Steam Coal	BIT	ST
2023	12	17633	Southern Indiana Gas & Elec Co	Electric Utility	A B Brown	IN	6137	2	245.0	Conventional Steam Coal	BIT	ST
2023	12	17718	Southwestern Public Service Co	Electric Utility	Nichols	TX	3484	2	106.0	Natural Gas Steam Turbine	NG	ST
2024	1	11843	Maui Electric Co Ltd	Electric Utility	Kahului	HI	6056	1	4.7	Petroleum Liquids	RFO	ST
2024	1	11843	Maui Electric Co Ltd	Electric Utility	Kahului	HI	6056	2	4.8	Petroleum Liquids	RFO	ST
2024	1	11843	Maui Electric Co Ltd	Electric Utility	Kahului	HI	6056	3	11.0	Petroleum Liquids	RFO	ST
2024	1	11843	Maui Electric Co Ltd	Electric Utility	Kahului	HI	6056	4	11.9	Petroleum Liquids	RFO	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	11	14328	Pacific Gas & Electric Co.	Electric Utility	Diablo Canyon	CA	6099	1	1,122.0	Nuclear	NUC	ST
2024	12	16604	City of San Antonio - (TX)	Electric Utility	J T Deely	TX	6181	1	420.0	Conventional Steam Coal	SUB	ST
2024	12	16604	City of San Antonio - (TX)	Electric Utility	J T Deely	TX	6181	2	420.0	Conventional Steam Coal	SUB	ST
2024	12	11208	Los Angeles Department of Water & Power	Electric Utility	Scattergood	CA	404	1	111.8	Natural Gas Steam Turbine	NG	ST
2024	12	11208	Los Angeles Department of Water & Power	Electric Utility	Scattergood	CA	404	2	156.3	Natural Gas Steam Turbine	NG	ST
2024	12	12384	Midwest Generations EME LLC	IPP	Will County	IL	884	4	510.0	Conventional Steam Coal	SUB	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	13781	Northern States Power Co - Minnesota	Electric Utility	Sherburne County	MN	6090	1	680.0	Conventional Steam Coal	SUB	ST
2024	12	17633	Southern Indiana Gas & Elec Co	Electric Utility	F B Culley	IN	1012	2	90.0	Conventional Steam Coal	BIT	ST
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	8	14328	Pacific Gas & Electric Co.	Electric Utility	Diablo Canyon	CA	6099	2	1,118.0	Nuclear	NUC	ST
2025	9	17166	Sierra Pacific Power Co	Electric Utility	Fort Churchill	NV	2330	1	113.0	Natural Gas Steam Turbine	NG	ST
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	56155	Lansing Board of Water and Light	Electric Utility	Erickson Station	MI	1832	1	154.5	Conventional Steam Coal	SUB	ST
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	13781	Northern States Power Co - Minnesota	Electric Utility	Saxon Falls	WI	1756	2	0.5	Conventional Hydroelectric	WAT	HY
2025	12	13781	Northern States Power Co - Minnesota	Electric Utility	Superior Falls	MI	1757	1	0.5	Conventional Hydroelectric	WAT	HY
2025	12	13781	Northern States Power Co - Minnesota	Electric Utility	Superior Falls	MI	1757	2	0.5	Conventional Hydroelectric	WAT	HY
2025	12	13781	Northern States Power Co - Minnesota	Electric Utility	Wheaton	WI	4014	1	44.0	Natural Gas Fired Combustion Turbine	NG	GT
2025	12	13781	Northern States Power Co - Minnesota	Electric Utility	Wheaton	WI	4014	2	55.0	Natural Gas Fired Combustion Turbine	NG	GT
2025	12	13781	Northern States Power Co - Minnesota	Electric Utility	Wheaton	WI	4014	3	44.0	Natural Gas Fired Combustion Turbine	NG	GT
2025	12	13781	Northern States Power Co - Minnesota	Electric Utility	Wheaton	WI	4014	4	47.0	Natural Gas Fired Combustion Turbine	NG	GT
2025	12	13781	Northern States Power Co - Minnesota	Electric Utility	Wheaton	WI	4014	5	52.0	Petroleum Liquids	DFO	GT
2025	12	13781	Northern States Power Co - Minnesota	Electric Utility	Wheaton	WI	4014	6	48.0	Petroleum Liquids	DFO	GT
2025	12	15466	Public Service Co of Colorado	Electric Utility	Comanche (CO)	CO	470	2	335.0	Conventional Steam Coal	SUB	ST
2025	12	17166	Sierra Pacific Power Co	Electric Utility	North Valmy	NV	8224	1	254.0	Conventional Steam Coal	SUB	ST
2025	12	17166	Sierra Pacific Power Co	Electric Utility	North Valmy	NV	8224	2	268.0	Conventional Steam Coal	SUB	ST
2025	12	17633	Southern Indiana Gas & Elec Co	Electric Utility	Broadway (IN)	IN	1011	2	65.0	Natural Gas Fired Combustion Turbine	NG	GT
2025	12	17718	Southwestern Public Service Co	Electric Utility	Cunningham	NM	2454	2	183.0	Natural Gas Steam Turbine	NG	ST
2025	12	17718	Southwestern Public Service Co	Electric Utility	Maddox	NM	2446	2	61.0	Natural Gas Fired Combustion Turbine	NG	GT
2025	12	17718	Southwestern Public Service Co	Electric Utility	Maddox	NM	2446	3	10.0	Natural Gas Fired Combustion Turbine	NG	GT

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
2025	12	19099	TransAlta Centralia Gen LLC	IPP	Transalta Centralia Generation	WA	3845	2	670.0	Conventional Steam Coal	RC	ST
2025	12	30151	Tri-State G & T Assn, Inc	Electric Utility	Craig (CO)	CO	6021	1	428.0	Conventional Steam Coal	SUB	ST
2026	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
2026	6	9417	Interstate Power and Light Co	Electric Utility	Burlington (IA)	IA	1104	GT1	15.2	Natural Gas Fired Combustion Turbine	NG	GT
2026	6	9417	Interstate Power and Light Co	Electric Utility	Burlington (IA)	IA	1104	GT2	13.4	Natural Gas Fired Combustion Turbine	NG	GT
2026	6	9417	Interstate Power and Light Co	Electric Utility	Burlington (IA)	IA	1104	GT3	14.2	Natural Gas Fired Combustion Turbine	NG	GT
2026	6	9417	Interstate Power and Light Co	Electric Utility	Burlington (IA)	IA	1104	GT4	16.1	Natural Gas Fired Combustion Turbine	NG	GT
2026	12	16604	City of San Antonio - (TX)	Electric Utility	O W Sommers	TX	3611	1	420.0	Natural Gas Steam Turbine	NG	ST
2026	12	5701	El Paso Electric Co	Electric Utility	Newman	TX	3456	3	102.0	Natural Gas Steam Turbine	NG	ST
2026	12	5701	El Paso Electric Co	Electric Utility	Newman	TX	3456	4	83.0	Natural Gas Fired Combined Cycle	NG	CA
2026	12	5701	El Paso Electric Co	Electric Utility	Newman	TX	3456	CT1	72.0	Natural Gas Fired Combined Cycle	NG	CT
2026	12	5701	El Paso Electric Co	Electric Utility	Newman	TX	3456	CT2	72.0	Natural Gas Fired Combined Cycle	NG	CT
2026	12	5860	Empire District Electric Co	Electric Utility	Empire Energy Center	MO	6223	2	82.0	Natural Gas Fired Combustion Turbine	NG	GT
2026	12	56997	Marina Energy LLC	Industrial	L'Oreal Piscataway	NJ	57868	UNIT1	1.1	Solar Photovoltaic	SUN	PV
2027	6	11208	Los Angeles Department of Water & Power	Electric Utility	Intermountain Power Project	UT	6481	1	900.0	Conventional Steam Coal	BIT	ST
2027	6	11208	Los Angeles Department of Water & Power	Electric Utility	Intermountain Power Project	UT	6481	2	900.0	Conventional Steam Coal	BIT	ST
2029	10	56667	Loraine Windpower Project	IPP	Loraine Windpark Project LLC	TX	57303	LWG1	75.0	Onshore Wind Turbine	WND	WT
2031	1	803	Arizona Public Service Co	Electric Utility	Four Corners	NM	2442	4	770.0	Conventional Steam Coal	SUB	ST
2031	1	803	Arizona Public Service Co	Electric Utility	Four Corners	NM	2442	5	770.0	Conventional Steam Coal	SUB	ST
2043	12	58840	Copenhagen Wind Farm, LLC	IPP	Copenhagen Wind Farm	NY	58979	CPHGN	79.9	Onshore Wind Turbine	WND	WT
2047	1	60304	Innovative Solar 31, LLC	IPP	Innovative Solar 31	NC	60540	IS031	35.0	Solar Photovoltaic	SUN	PV
2047	7	60455	PVN Milliken, LLC	IPP	PVN Milliken, LLC	CA	60790	PV	3.0	Solar Photovoltaic	SUN	PV
2047	9	60734	Elizabeth Mines Solar 1, LLC	IPP	Elizabeth Mines Solar 1	VT	61124	EMS1	5.0	Solar Photovoltaic	SUN	PV
2052	1	60471	Mt. Tom Solar, LLC	IPP	Mt. Tom Solar Project	MA	60906	BA1	3.1	Batteries	MWH	BA

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 6.7.A. Capacity Factors for Utility Scale Generators Primarily Using Fossil Fuels, January 2013-December 2018

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	59.8%	48.2%	4.9%	10.6%	6.1%	12.1%	0.8%	2.2%	
2014	61.1%	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%	
2016	53.3%	55.5%	8.3%	12.4%	9.6%	11.5%	1.1%	2.6%	
2017	53.7%	51.3%	6.7%	10.5%	9.9%	13.5%	0.9%	2.3%	
2018	54.0%	57.6%	11.8%	13.7%	NA	13.9%	2.5%	NA	
Year 2016									
January	56.4%	56.4%	5.0%	7.1%	9.5%	10.1%	0.6%	3.1%	
February	49.1%	53.6%	5.0%	7.4%	8.6%	10.6%	0.7%	2.8%	
March	36.0%	50.2%	7.1%	10.2%	8.9%	8.9%	1.1%	2.2%	
April	37.8%	47.6%	8.3%	11.7%	9.2%	9.7%	0.8%	2.1%	
May	41.6%	52.5%	7.6%	12.3%	9.3%	11.4%	1.1%	2.5%	
June	61.2%	63.9%	9.9%	17.5%	10.3%	13.3%	1.3%	2.1%	
July	69.8%	68.2%	13.7%	23.1%	11.7%	16.9%	2.1%	2.1%	
August	69.3%	70.8%	13.8%	21.1%	12.7%	15.1%	2.6%	2.3%	
Sept	60.4%	60.7%	9.5%	14.6%	10.3%	12.9%	1.2%	2.3%	
October	50.8%	47.8%	7.8%	11.4%	8.0%	8.8%	0.9%	2.4%	
November	46.2%	46.3%	6.8%	6.5%	7.9%	9.9%	0.7%	2.8%	
December	61.2%	47.5%	5.1%	5.4%	8.3%	10.1%	0.5%	4.0%	
Year 2017									
January	59.9%	46.7%	5.3%	4.3%	9.2%	11.6%	0.7%	3.0%	
February	49.7%	44.4%	5.4%	3.8%	7.9%	10.3%	0.8%	2.4%	
March	46.3%	44.8%	6.5%	7.2%	7.8%	13.0%	0.8%	2.7%	
April	43.6%	42.5%	5.6%	8.7%	8.0%	10.1%	0.6%	1.9%	
May	48.4%	45.8%	6.0%	9.1%	8.2%	15.9%	0.8%	2.0%	
June	58.5%	56.0%	7.3%	14.1%	10.3%	15.8%	0.8%	2.0%	
July	67.1%	67.0%	9.1%	20.8%	13.0%	18.5%	0.9%	2.1%	
August	62.9%	65.5%	8.0%	16.1%	12.3%	14.9%	0.9%	2.3%	
Sept	53.8%	55.7%	7.8%	13.3%	10.9%	14.2%	1.1%	2.3%	
October	47.5%	48.2%	6.6%	12.4%	10.2%	11.7%	0.9%	2.1%	
November	49.3%	45.6%	5.8%	7.0%	10.1%	12.3%	0.7%	2.1%	
December	56.2%	52.3%	6.4%	8.5%	10.3%	14.3%	1.4%	2.4%	
Year 2018									
January	64.3%	53.9%	11.9%	13.1%	NA	19.0%	5.0%	NA	
February	49.3%	55.0%	6.9%	6.7%	NA	11.8%	0.9%	NA	
March	43.9%	51.4%	9.3%	8.6%	NA	10.9%	1.4%	NA	
April	41.7%	47.9%	11.4%	8.7%	NA	12.7%	1.9%	NA	
May	47.0%	52.3%	11.8%	16.8%	NA	9.2%	2.3%	NA	
June	58.4%	61.8%	12.0%	17.9%	NA	15.2%	3.0%	NA	
July	64.3%	72.8%	18.9%	25.7%	NA	15.5%	3.6%	NA	
August	64.3%	72.1%	16.5%	22.5%	NA	15.8%	2.6%	NA	
Sept	56.0%	66.1%	14.6%	16.6%	NA	17.8%	3.1%	NA	
October	48.9%	55.3%	12.0%	14.0%	NA	13.9%	2.2%	NA	
November	54.0%	50.5%	9.7%	9.1%	NA	13.4%	1.8%	NA	
December	55.0%	50.7%	6.4%	3.4%	NA	11.6%	1.7%	NA	

Values for 2017 and prior years are final. Values for 2018 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-December 2018

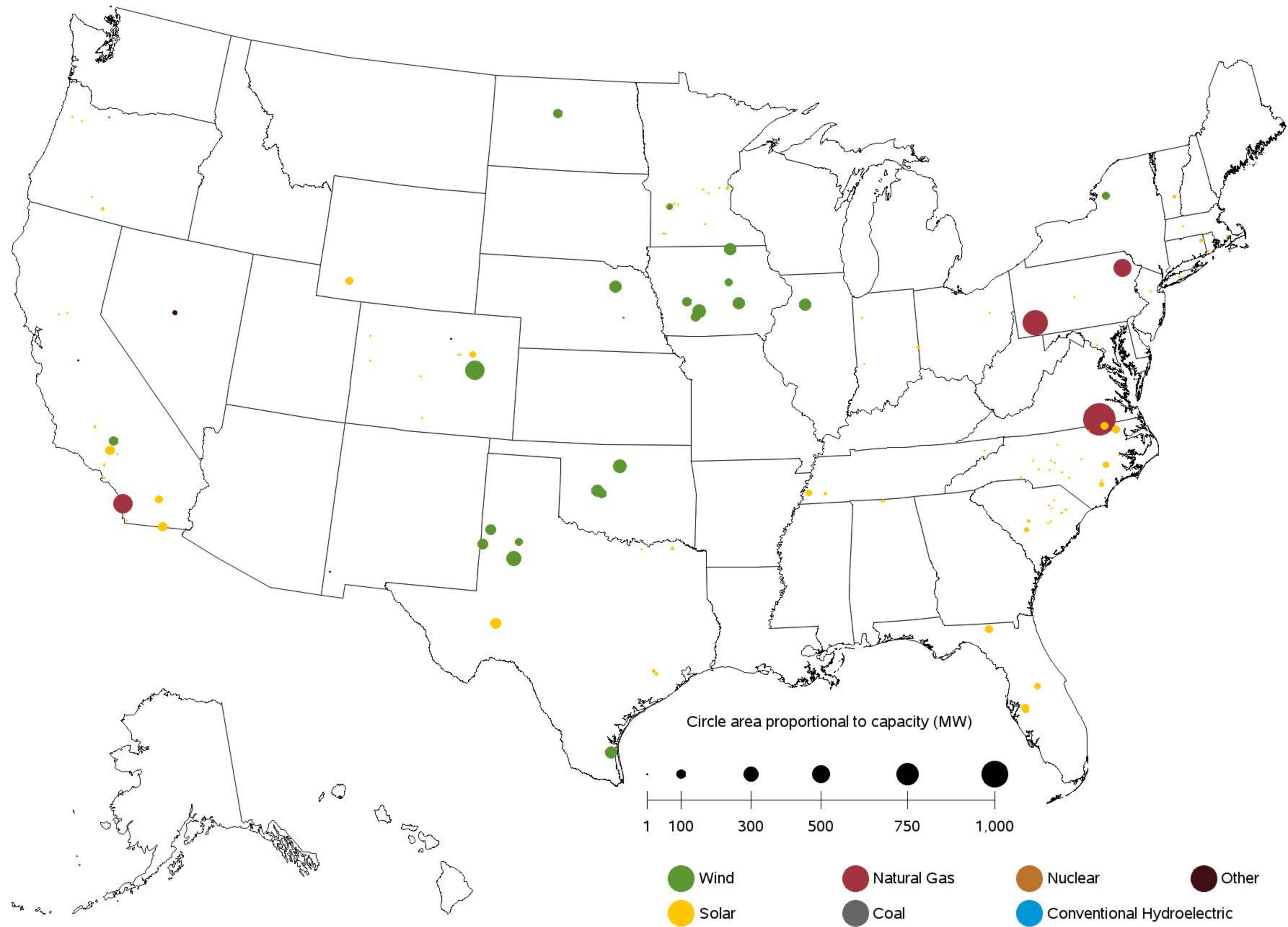
Period	Nuclear	Conventional Hydropower	Wind	Solar Photovoltaic	Solar Thermal	Landfill Gas and Municipal Solid Waste	Other Biomass Including Wood	Geothermal
Annual Factors								
2013	89.9%	38.9%	32.4%	NA	NA	68.9%	56.7%	73.6%
2014	91.7%	37.3%	34.0%	25.9%	19.8%	68.9%	58.9%	74.0%
2015	92.3%	35.8%	32.2%	25.8%	22.1%	68.7%	55.3%	74.3%
2016	92.3%	38.2%	34.5%	25.1%	22.2%	69.7%	55.6%	73.9%
2017	92.2%	43.1%	34.6%	25.7%	21.8%	68.0%	57.8%	74.0%
2018	92.6%	42.8%	37.4%	26.1%	23.6%	73.3%	49.3%	77.3%
Year 2016								
January	98.5%	43.6%	33.9%	15.2%	6.8%	68.3%	58.5%	73.4%
February	95.3%	43.8%	39.6%	22.9%	19.5%	67.6%	61.2%	73.2%
March	89.9%	45.9%	40.2%	24.9%	19.6%	67.2%	55.8%	72.5%
April	88.1%	44.6%	39.3%	27.2%	20.9%	69.3%	45.8%	68.8%
May	90.5%	42.8%	34.2%	30.2%	28.9%	72.9%	47.0%	73.9%
June	94.2%	40.6%	30.5%	30.3%	33.5%	72.0%	54.7%	71.2%
July	94.5%	36.1%	31.9%	31.7%	36.9%	70.9%	59.3%	72.2%
August	96.1%	33.0%	24.5%	31.7%	29.2%	70.3%	63.5%	73.0%
Sept	90.9%	28.6%	30.4%	28.5%	30.2%	67.9%	58.5%	75.5%
October	81.7%	29.3%	36.4%	24.0%	19.1%	63.8%	48.9%	74.6%
November	90.9%	32.8%	35.3%	20.4%	14.4%	72.6%	54.9%	77.7%
December	96.7%	37.9%	38.8%	16.2%	7.0%	73.4%	59.6%	80.1%
Year 2017								
January	98.7%	45.4%	32.6%	12.7%	7.3%	73.0%	59.7%	75.9%
February	95.0%	44.1%	38.6%	17.2%	11.7%	69.2%	59.9%	75.3%
March	87.8%	49.1%	40.6%	25.1%	22.9%	66.7%	60.7%	74.1%
April	79.1%	51.1%	41.1%	28.4%	24.9%	66.4%	52.3%	75.9%
May	82.7%	54.7%	36.2%	32.5%	31.0%	68.7%	49.9%	70.5%
June	93.4%	52.7%	32.9%	35.9%	37.9%	69.7%	56.7%	68.9%
July	96.2%	45.1%	25.6%	32.7%	25.4%	67.4%	60.4%	74.4%
August	97.7%	37.3%	21.8%	30.4%	27.6%	68.2%	60.8%	73.9%
Sept	94.9%	33.4%	29.5%	29.1%	29.2%	65.7%	55.2%	73.6%
October	89.0%	31.0%	40.2%	26.4%	24.1%	63.8%	54.1%	67.5%
November	92.9%	36.0%	39.1%	19.4%	10.3%	67.8%	59.9%	73.2%
December	99.4%	37.7%	38.0%	17.7%	9.0%	69.6%	63.3%	85.1%
Year 2018								
January	100.7%	45.1%	42.4%	18.7%	10.0%	72.1%	58.7%	76.6%
February	96.7%	49.2%	41.8%	22.9%	16.1%	76.7%	57.4%	80.5%
March	90.4%	45.1%	43.9%	26.3%	19.3%	73.2%	52.2%	78.2%
April	82.4%	49.9%	44.8%	31.2%	24.4%	71.6%	43.9%	70.3%
May	90.8%	54.2%	38.7%	31.9%	33.0%	68.9%	48.7%	78.9%
June	97.1%	51.7%	42.0%	34.5%	41.7%	76.5%	54.6%	76.2%
July	97.7%	43.4%	25.3%	31.6%	30.1%	75.6%	51.1%	78.0%
August	97.5%	37.7%	32.0%	31.0%	32.5%	75.3%	49.6%	78.0%
Sept	90.4%	32.8%	29.8%	27.7%	34.8%	70.2%	43.8%	78.4%
October	80.5%	31.1%	33.5%	23.1%	20.8%	71.9%	44.8%	72.6%
November	89.4%	37.1%	36.9%	18.8%	13.3%	73.7%	44.5%	78.8%
December	96.9%	37.3%	38.3%	15.1%	7.0%	74.3%	42.6%	80.8%

Values for 2017 and prior years are final. Values for 2018 are preliminary. NA = Not Available

Notes: Solar Thermal Capacity Factors include generation from plants using concentrated solar power energy storage.

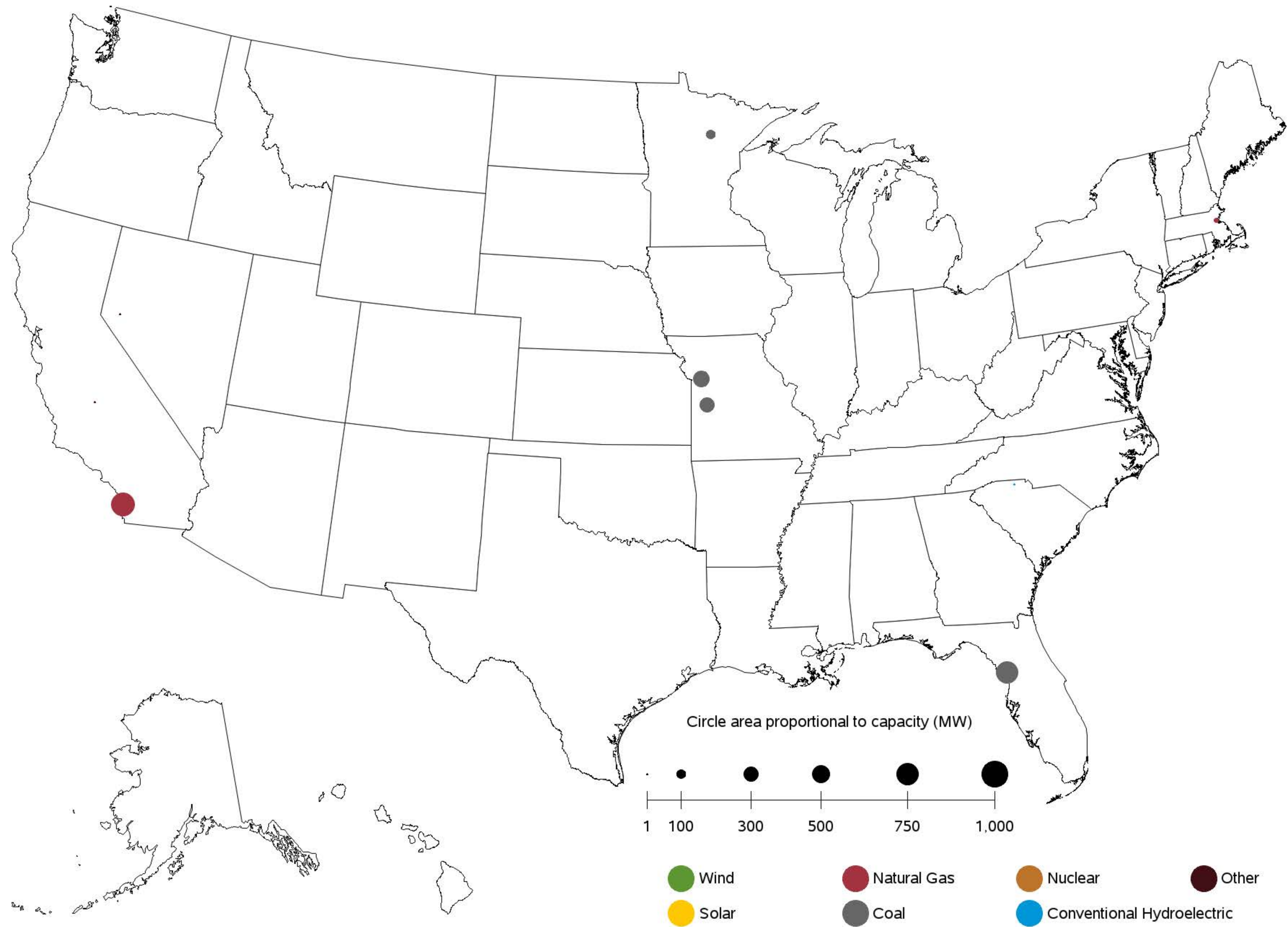
Sources: U.S. Energy Information Administration, Form EIA-923, Power Plant Operations Report; U.S. Energy Information Administration, Form EIA-860, 'Annual Electric Generator Report' and Form EIA-860M, 'Monthly Update to the Annual Electric Generator Report.'

Figure 6.1.A. Utility-Scale Generating Units Added in December 2018



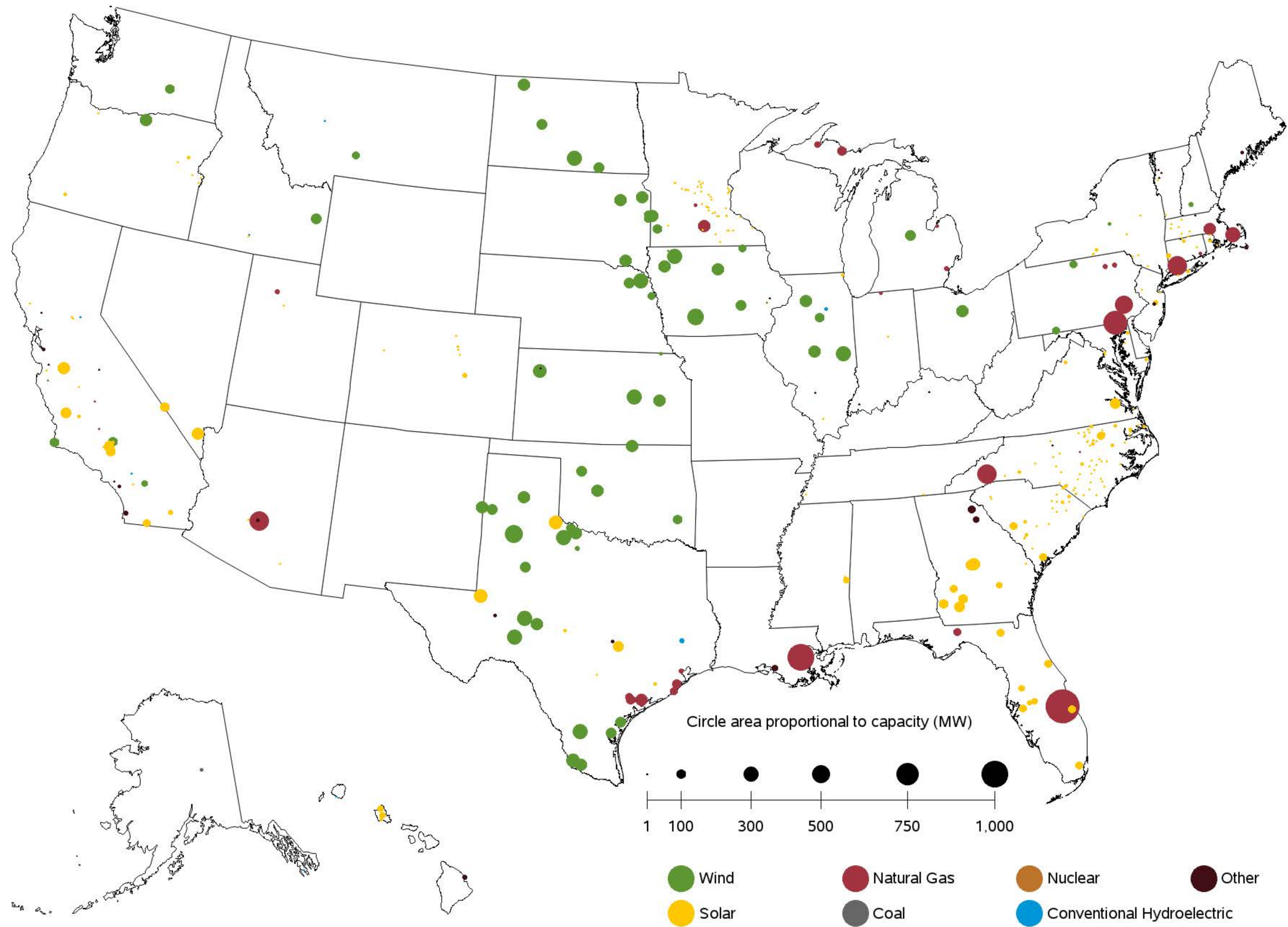
Sources: U.S. Energy Information Administration, Form EIA-860, 'Annual Electric Generator Report' and Form EIA-860M, 'Monthly Update to the Annual Electric Generator Report.'

Figure 6.1.B. Utility-Scale Generating Units Retired in December 2018



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.'

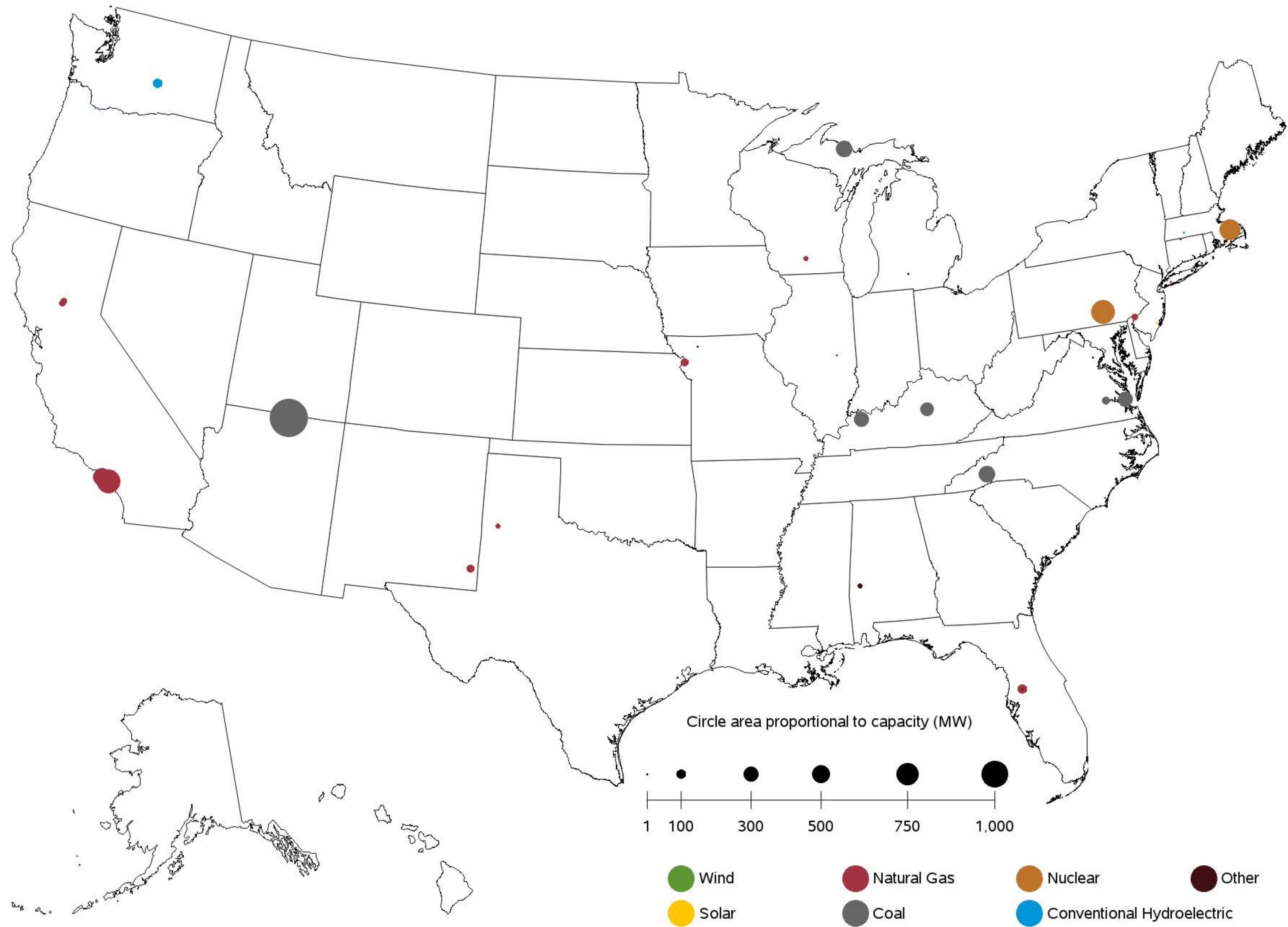
Figure 6.1.C. Utility-Scale Generating Units Planned to Come Online from January 2019 to December 2019



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 January 2019 to December 2019



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.'

# Chapter 7

## Imports and Exports

**Table 7.1. Electric Power Industry - U.S. Electricity Imports from and Electricity Exports to Canada and Mexico (Megawatthours)**

Period	Canada		Mexico		U.S. Total		
	Imports from	Exports to	Imports from	Exports to	Imports	Exports	Net Imports
<b>Annual Totals</b>							
2016	65,173,818	2,682,381	7,542,445	3,531,636	72,716,263	6,214,017	66,502,246
2017	59,909,320	3,312,798	5,775,597	6,058,005	65,684,917	9,370,803	56,314,114
<b>Year 2016</b>							
January	5,886,417	227,589	636,613	161,007	6,523,030	388,596	6,134,434
February	4,927,541	384,301	505,252	167,788	5,432,793	552,089	4,880,704
March	5,210,412	410,645	598,334	260,086	5,808,746	670,731	5,138,015
April	4,092,342	358,746	610,099	91,608	4,702,441	450,354	4,252,087
May	4,977,621	142,398	583,132	227,227	5,560,753	369,625	5,191,128
June	6,162,812	94,538	585,652	515,952	6,748,464	610,490	6,137,974
July	6,969,110	78,459	704,978	496,360	7,674,088	574,819	7,099,269
August	6,577,610	149,565	771,285	437,154	7,348,895	586,719	6,762,176
Sept	4,631,320	161,183	666,113	425,652	5,297,433	586,835	4,710,598
October	4,989,801	320,694	761,195	111,790	5,750,996	432,484	5,318,512
November	5,809,773	109,219	611,189	307,814	6,420,962	417,033	6,003,929
December	4,939,059	245,044	508,603	329,198	5,447,662	574,242	4,873,420
<b>Year 2017</b>							
January	6,345,401	172,909	673,166	310,843	7,018,567	483,752	6,534,815
February	5,120,144	359,401	552,254	330,610	5,672,398	690,011	4,982,387
March	5,612,473	663,648	410,568	334,509	6,023,041	998,157	5,024,884
April	5,262,194	619,414	299,908	486,903	5,562,102	1,106,317	4,455,785
May	4,912,110	341,657	171,906	489,911	5,084,016	831,568	4,252,448
June	5,637,814	242,997	355,162	568,400	5,992,976	811,397	5,181,579
July	5,328,084	65,828	585,167	642,440	5,913,251	708,268	5,204,983
August	5,874,172	63,435	634,751	709,103	6,508,923	772,538	5,736,385
Sept	4,715,752	139,000	512,536	553,042	5,228,288	692,042	4,536,246
October	3,504,501	165,550	447,906	544,420	3,952,407	709,970	3,242,437
November	3,379,626	263,999	550,385	558,909	3,930,011	822,908	3,107,103
December	4,217,049	214,960	581,888	528,915	4,798,937	743,875	4,055,062
<b>Year 2018</b>							
January	4,738,934	680,100	485,831	459,404	5,224,765	1,139,504	4,085,261
February	4,314,276	926,822	473,386	340,682	4,787,662	1,267,504	3,520,158
March	5,045,055	707,032	553,462	488,339	5,598,517	1,195,371	4,403,146
April	4,067,648	1,134,937	461,095	486,681	4,528,743	1,621,618	2,907,125
May	4,865,120	569,954	374,033	571,444	5,239,153	1,141,398	4,097,755
June	5,002,142	534,488	491,763	680,851	5,493,905	1,215,339	4,278,566
July	4,669,081	176,762	701,543	758,502	5,370,624	935,264	4,435,360
August	5,430,607	272,018	705,309	862,128	6,135,916	1,134,146	5,001,770
Sept	3,648,158	437,073	602,500	623,925	4,250,658	1,060,998	3,189,660

Source: U.S. Energy Information Administration, Form EIA-111, "Quarterly Electricity Imports and Exports Report."

# Chapter 8

## Puerto Rico

**Table 8.1 Puerto Rico- Sales of Electricity to Ultimate Customers:  
Total by End-Use Sector, 2008 - December 2018 (Thousand Megawatthours)**

Period	Residential	Commercial	Industrial	Transportation	All Sectors
<b>Annual Totals</b>					
2008	6,473	9,023	3,544	0	19,040
2009	6,673	8,937	3,094	0	18,704
2010	6,975	9,041	2,968	0	18,984
2011	6,587	8,832	2,832	0	18,251
2012	6,771	8,879	2,500	0	18,150
2013	6,320	8,969	2,504	0	17,793
2014	6,218	8,761	2,376	0	17,356
2015	6,314	8,586	2,355	0	17,255
2016	6,524	8,569	2,251	0	17,344
2017	5,045	6,820	1,747	0	13,611
<b>Year 2016</b>					
January	515	648	158	0	1,321
February	447	647	176	0	1,270
March	499	738	208	0	1,445
April	506	665	176	0	1,346
May	556	746	202	0	1,504
June	594	742	201	0	1,537
July	621	773	193	0	1,587
August	604	722	205	0	1,530
Sept	594	751	187	0	1,532
October	540	704	180	0	1,424
November	541	723	190	0	1,454
December	509	709	176	0	1,394
<b>Year 2017</b>					
January	508	650	159	0	1,317
February	395	575	154	0	1,125
March	490	698	191	0	1,380
April	494	628	184	0	1,306
May	525	675	182	0	1,382
June	595	692	184	0	1,472
July	590	710	200	0	1,501
August	632	719	187	0	1,537
Sept	520	372	127	0	1,020
October	16	224	11	0	252
November	42	569	28	0	639
December	237	306	138	0	682
<b>Year 2018</b>					
January	389	558	142	0	1,089
February	393	760	175	0	1,328
March	450	531	98	0	1,080
April	466	784	273	0	1,524
May	566	802	165	0	1,533
June	507	592	208	0	1,308
July	578	680	145	0	1,404
August	577	688	209	0	1,475
Sept	527	722	186	0	1,436
October	698	847	191	0	1,736
November	457	593	172	0	1,222
December	494	642	162	0	1,298
<b>Year to Date</b>					
2016	6,524	8,569	2,251	0	17,344
2017	5,045	6,820	1,747	0	13,611
2018	6,103	8,200	2,128	0	16,431

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

**Table 8.2 Puerto Rico- Revenue from Sales of Electricity to Ultimate Customers:  
Total by End-Use Sector, 2008 - December 2018 (Million Dollars)**

Period	Residential	Commercial	Industrial	Transportation	All Sectors
<b>Annual Totals</b>					
2008	1,574	2,285	734	0	4,593
2009	1,313	1,868	518	0	3,699
2010	1,521	2,103	564	0	4,188
2011	1,748	2,483	663	0	4,894
2012	1,690	2,605	647	0	4,942
2013	1,633	2,474	570	0	4,678
2014	1,636	2,394	551	0	4,581
2015	1,282	1,850	417	0	3,549
2016	1,170	1,677	356	0	3,203
2017	1,123	1,549	344	0	3,016
<b>Year 2016</b>					
January	86	120	23	0	229
February	75	118	25	0	218
March	79	131	29	0	239
April	86	124	26	0	235
May	91	139	29	0	259
June	103	141	30	0	274
July	110	150	30	0	291
August	118	154	36	0	308
Sept	111	146	31	0	288
October	108	155	33	0	296
November	102	147	32	0	282
December	101	152	31	0	284
<b>Year 2017</b>					
January	112	142	30	0	284
February	99	143	32	0	274
March	105	151	34	0	291
April	109	144	34	0	287
May	119	157	35	0	311
June	129	152	34	0	314
July	130	161	37	0	327
August	143	166	35	0	345
Sept	101	74	21	0	196
October	6	46	4	0	56
November	19	115	15	0	150
December	50	98	34	0	182
<b>Year 2018</b>					
January	86	159	32	0	277
February	76	171	32	0	279
March	110	149	22	0	280
April	84	161	54	0	300
May	104	165	23	0	292
June	108	133	40	0	281
July	122	166	29	0	317
August	114	149	39	0	302
Sept	109	162	34	0	306
October	137	181	36	0	353
November	102	142	34	0	278
December	112	154	31	0	298
<b>Year to Date</b>					
2016	1,170	1,677	356	0	3,203
2017	1,123	1,549	344	0	3,016
2018	1,265	1,893	405	0	3,563

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

**Table 8.3 Puerto Rico- Number of Ultimate Customers Served by Sector:  
Total by End-Use Sector, 2008 - December 2018**

Period	Residential	Commercial	Industrial	Transportation	All Sectors
<b>Annual Totals</b>					
2008	1,318,498	133,223	1,225	0	1,452,946
2009	1,330,507	132,620	828	0	1,463,955
2010	1,339,703	133,029	790	0	1,473,522
2011	1,341,708	132,738	750	0	1,475,196
2012	1,349,750	131,264	721	0	1,481,735
2013	1,340,989	131,034	694	0	1,472,717
2014	1,328,546	129,122	662	0	1,458,330
2015	1,326,631	127,365	647	0	1,454,643
2016	1,332,152	127,179	633	0	1,459,964
2017	1,337,756	127,065	618	0	1,465,439
<b>Year 2016</b>					
January	1,327,936	127,058	640	0	1,455,634
February	1,328,227	127,040	637	0	1,455,904
March	1,329,387	127,155	636	0	1,457,178
April	1,331,140	127,236	635	0	1,459,011
May	1,332,103	127,264	636	0	1,460,003
June	1,332,712	127,158	635	0	1,460,505
July	1,333,672	127,327	633	0	1,461,632
August	1,333,858	127,218	631	0	1,461,707
Sept	1,331,317	126,967	627	0	1,458,911
October	1,334,555	127,221	626	0	1,462,402
November	1,335,163	127,237	629	0	1,463,029
December	1,335,753	127,265	627	0	1,463,645
<b>Year 2017</b>					
January	1,336,481	127,251	627	0	1,464,359
February	1,337,101	127,229	626	0	1,464,956
March	1,335,413	127,147	620	0	1,463,180
April	1,337,164	127,086	620	0	1,464,870
May	1,337,956	127,048	618	0	1,465,622
June	1,339,373	127,119	616	0	1,467,108
July	1,338,891	127,049	614	0	1,466,554
August	1,337,758	127,026	615	0	1,465,399
Sept	1,338,973	127,056	615	0	1,466,644
October	1,337,261	126,948	615	0	1,464,824
November	1,338,117	126,941	613	0	1,465,671
December	1,338,583	126,877	612	0	1,466,072
<b>Year 2018</b>					
January	1,338,417	126,681	611	0	1,465,709
February	1,337,561	126,422	612	0	1,464,595
March	1,338,960	126,367	613	0	1,465,940
April	1,339,727	126,216	612	0	1,466,555
May	1,340,002	126,123	610	0	1,466,735
June	1,339,841	126,006	610	0	1,466,457
July	1,340,490	125,949	607	0	1,467,046
August	1,341,417	126,011	604	0	1,468,032
Sept	1,342,332	126,102	605	0	1,469,039
October	1,343,883	126,219	603	0	1,470,705
November	1,344,948	126,429	601	0	1,471,978
December	1,346,102	126,526	602	0	1,473,230

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

**Table 8.4 Puerto Rico- Average Price of Electricity to Ultimate Customers:  
Total by End-Use Sector, 2008 - December 2018 (Cents per Kilowatthour)**

Period	Residential	Commercial	Industrial	Transportation	All Sectors
<b>Annual Totals</b>					
2008	24.32	25.32	20.72	--	24.12
2009	19.68	20.91	16.73	--	19.78
2010	21.80	23.26	19.01	--	22.06
2011	26.54	28.11	23.39	--	26.82
2012	24.96	29.34	25.89	--	27.23
2013	25.84	27.59	22.77	--	26.29
2014	26.31	27.33	23.18	--	26.39
2015	20.31	21.55	17.71	--	20.57
2016	17.93	19.57	15.83	--	18.47
2017	22.26	22.72	19.70	--	22.16
<b>Year 2016</b>					
January	16.78	18.54	14.39	--	17.36
February	16.74	18.31	14.23	--	17.19
March	15.90	17.70	14.02	--	16.55
April	16.91	18.58	14.52	--	17.42
May	16.33	18.63	14.61	--	17.24
June	17.32	19.01	15.12	--	17.85
July	17.78	19.39	15.74	--	18.31
August	19.50	21.38	17.42	--	20.11
Sept	18.66	19.42	16.61	--	18.78
October	20.07	22.02	18.35	--	20.82
November	18.88	20.34	17.04	--	19.37
December	19.79	21.45	17.90	--	20.40
<b>Year 2017</b>					
January	22.10	21.89	18.77	--	21.60
February	25.09	24.84	20.48	--	24.33
March	21.46	21.69	17.76	--	21.06
April	22.16	22.89	18.43	--	21.99
May	22.66	23.27	19.03	--	22.48
June	21.69	21.91	18.18	--	21.35
July	22.01	22.62	18.43	--	21.82
August	22.62	23.17	18.91	--	22.42
Sept	19.36	19.90	16.35	--	19.18
October	37.23	20.39	40.29	--	22.36
November	45.99	20.27	53.04	--	23.39
December	21.07	31.94	24.72	--	26.70
<b>Year 2018</b>					
January	22.11	28.53	22.32	--	25.43
February	19.32	22.48	18.45	--	21.02
March	24.40	27.97	22.42	--	25.97
April	18.09	20.56	19.86	--	19.68
May	18.38	20.61	13.77	--	19.05
June	21.24	22.46	19.23	--	21.47
July	21.17	24.32	19.78	--	22.56
August	19.81	21.63	18.51	--	20.48
Sept	20.75	22.50	18.18	--	21.30
October	19.58	21.36	18.69	--	20.35
November	22.31	24.00	19.55	--	22.74
December	22.77	24.05	19.33	--	22.97
<b>Year to Date</b>					
2016	17.93	19.57	15.83	--	18.47
2017	22.26	22.72	19.70	--	22.16
2018	20.73	23.08	19.04	--	21.68

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



**Table 8.5. Net Summer Capacity (MW) of Existing Utility Scale Units by Technology for Puerto Rico, 2007-December 2018**

Period	Coal	Hydroelectric Conventional	Natural Gas	Other	Petroleum	Solar	Wind	Total
Annual Totals								
2007	454	98	1,335	0	2,976	0	0	4,863
2008	454	98	1,335	0	3,406	0	0	5,293
2009	454	98	1,335	0	3,470	0	0	5,358
2010	454	98	1,335	0	3,470	0	0	5,358
2011	454	98	1,335	0	3,470	5	0	5,363
2012	454	98	1,335	0	3,470	23	98	5,479
2013	454	98	1,335	0	3,470	26	98	5,482
2014	454	98	1,335	0	3,470	38	99	5,494
2015	454	98	1,335	9	3,474	70	99	5,539
2016	454	98	1,335	33	3,474	145	99	5,638
2017	454	98	1,335	33	3,474	145	99	5,638
Year 2018								
January	454	98	1,324	33	3,474	145	99	5,627
February	454	98	1,324	33	3,474	145	99	5,627
March	454	98	1,324	33	3,474	145	99	5,627
April	454	98	1,324	33	3,474	145	99	5,627
May	454	98	1,324	33	3,474	145	99	5,627
June	454	98	1,324	33	3,474	145	99	5,627
July	454	98	1,324	33	3,474	145	99	5,627
August	454	98	1,335	33	3,474	145	99	5,638
Sept	454	98	1,335	33	3,474	145	99	5,638
October	454	98	1,335	33	3,474	145	99	5,638
November	454	98	1,335	33	3,474	145	99	5,638
December	454	98	1,335	33	3,474	145	99	5,638

Capacity from facilities with a total generator nameplate capacity less than 1 MW are excluded from this report.

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.'

# Appendices

Table A.1.A. Relative Standard Error (Percent) for Net Generation by Fuel Type:

## Total (All Sectors) by Census Division and State, December 2018

Census Region and State	Coal	Petroleum Liquids	Petroleum Coke	Natural Gas	Other Gases	Nuclear	Hydroelectric Conventional
<b>New England</b>	<b>2</b>	<b>49</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>10</b>
Connecticut	0	83	0	1	0	0	32
Maine	22	70	0	16	0	0	12
Massachusetts	0	100	0	4	0	0	21
New Hampshire	0	50	0	0	0	0	20
Rhode Island	0	105	0	10	0	0	0
Vermont	0	760	0	0	0	0	19
<b>Middle Atlantic</b>	<b>3</b>	<b>27</b>	<b>41</b>	<b>1</b>	<b>16</b>	<b>0</b>	<b>3</b>
New Jersey	0	25	0	2	0	0	0
New York	0	56	0	2	0	0	2
Pennsylvania	3	28	61	1	25	0	13
<b>East North Central</b>	<b>0</b>	<b>15</b>	<b>11</b>	<b>1</b>	<b>5</b>	<b>0</b>	<b>11</b>
Illinois	0	40	0	10	0	0	43
Indiana	0	9	0	2	9	0	37
Michigan	3	7	0	2	0	0	20
Ohio	1	31	23	0	16	0	35
Wisconsin	0	48	0	3	0	0	15
<b>West North Central</b>	<b>1</b>	<b>14</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>7</b>
Iowa	0	37	0	5	0	0	24
Kansas	0	22	0	9	0	0	0
Minnesota	2	69	0	11	0	0	21
Missouri	0	23	0	8	0	0	18
Nebraska	4	199	0	66	0	0	21
North Dakota	0	5	0	60	0	0	16
South Dakota	0	319	0	71	0	0	11
<b>South Atlantic</b>	<b>1</b>	<b>6</b>	<b>7</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>8</b>
Delaware	0	57	0	0	0	0	0
District of Columbia	0	0	0	0	0	0	0
Florida	0	6	0	1	0	0	45
Georgia	0	18	46	1	0	0	13
Maryland	0	43	0	2	0	0	2
North Carolina	0	9	0	1	0	0	11
South Carolina	0	22	0	1	0	0	16
Virginia	19	13	0	2	0	0	19
West Virginia	2	0	0	19	0	0	17
<b>East South Central</b>	<b>0</b>	<b>9</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>5</b>
Alabama	0	10	0	2	0	0	6
Kentucky	0	0	0	3	0	0	10
Mississippi	0	18	0	1	0	0	0
Tennessee	0	24	0	2	0	0	8
<b>West South Central</b>	<b>0</b>	<b>21</b>	<b>0</b>	<b>1</b>	<b>4</b>	<b>0</b>	<b>9</b>
Arkansas	0	29	0	4	0	0	12
Louisiana	0	97	0	2	9	0	22
Oklahoma	0	1	0	2	0	0	14
Texas	0	10	12	1	2	0	18
<b>Mountain</b>	<b>1</b>	<b>9</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>4</b>
Arizona	0	14	0	2	0	0	4
Colorado	0	84	0	3	0	0	18
Idaho	138	0	0	12	0	0	8
Montana	4	31	0	10	0	0	8
Nevada	0	0	0	1	0	0	5
New Mexico	0	45	0	5	0	0	61
Utah	0	0	0	5	0	0	23
Wyoming	3	1	0	7	0	0	24
<b>Pacific Contiguous</b>	<b>0</b>	<b>22</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>2</b>
California	0	21	0	2	2	0	8
Oregon	0	40	0	3	0	0	3
Washington	0	56	0	8	0	0	1
<b>Pacific Noncontiguous</b>	<b>14</b>	<b>1</b>	<b>0</b>	<b>24</b>	<b>0</b>	<b>0</b>	<b>19</b>
Alaska	39	4	0	24	0	0	20
Hawaii	0	1	0	0	0	0	49
<b>U.S. Total</b>	<b>0</b>	<b>3</b>	<b>4</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>3</b>

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, December 2018 (Continued)

Census Region and State	Wind	Geothermal	Biomass	Solar Thermal and Photovoltaic	Other Renewables	Hydroelectric Pumped Storage	Other Energy Sources	All Energy Sources
<b>New England</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>4</b>	<b>0</b>	<b>1</b>	<b>1</b>
Connecticut	0	0	0	37	10	0	0	1
Maine	0	0	0	143	5	0	0	5
Massachusetts	0	0	0	13	6	0	2	3
New Hampshire	0	0	0	0	10	0	0	3
Rhode Island	0	0	0	69	7	0	0	9
Vermont	0	0	0	34	10	0	0	13
<b>Middle Atlantic</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>11</b>	<b>3</b>	<b>0</b>	<b>1</b>	<b>1</b>
New Jersey	0	0	0	13	7	0	0	1
New York	0	0	0	20	4	0	2	1
Pennsylvania	0	0	0	47	4	0	0	1
<b>East North Central</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>16</b>	<b>2</b>	<b>0</b>	<b>3</b>	<b>0</b>
Illinois	0	0	0	38	3	0	0	0
Indiana	0	0	0	23	4	0	0	0
Michigan	0	0	0	35	4	0	10	1
Ohio	0	0	0	38	4	0	0	0
Wisconsin	0	0	0	72	6	0	45	1
<b>West North Central</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>2</b>	<b>0</b>	<b>5</b>	<b>1</b>
Iowa	0	0	0	111	3	0	0	1
Kansas	0	0	0	169	2	0	0	1
Minnesota	0	0	0	13	4	0	3	2
Missouri	0	0	0	40	4	0	0	1
Nebraska	0	0	0	79	4	0	0	2
North Dakota	0	0	0	0	3	0	42	1
South Dakota	0	0	0	277	7	0	0	5
<b>South Atlantic</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>2</b>	<b>0</b>	<b>1</b>	<b>0</b>
Delaware	0	0	0	56	44	0	0	2
District of Columbia	0	0	0	0	0	0	0	0
Florida	0	0	0	2	2	0	1	0
Georgia	0	0	0	8	3	0	0	1
Maryland	0	0	0	15	8	0	0	1
North Carolina	0	0	0	5	3	0	0	1
South Carolina	0	0	0	15	4	0	0	1
Virginia	0	0	0	14	5	0	0	2
West Virginia	0	0	0	0	7	0	0	2
<b>East South Central</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>2</b>	<b>0</b>	<b>7</b>	<b>1</b>
Alabama	0	0	0	17	3	0	0	1
Kentucky	0	0	0	59	15	0	0	1
Mississippi	0	0	0	5	3	0	0	1
Tennessee	0	0	0	34	7	0	69	1
<b>West South Central</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>0</b>
Arkansas	0	0	0	8	4	0	0	1
Louisiana	0	0	0	254	4	0	2	1
Oklahoma	0	0	0	60	2	0	0	1
Texas	0	0	0	4	1	0	4	0
<b>Mountain</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>3</b>	<b>2</b>	<b>0</b>	<b>3</b>	<b>1</b>
Arizona	0	0	0	4	5	0	0	1
Colorado	0	0	0	11	2	0	0	1
Idaho	0	14	0	19	6	0	0	6
Montana	0	0	0	82	7	0	0	3
Nevada	0	3	0	4	3	0	0	1
New Mexico	0	0	0	11	3	0	0	2
Utah	0	6	0	8	6	0	10	1
Wyoming	0	0	0	0	6	0	0	3
<b>Pacific Contiguous</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>3</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>1</b>
California	0	1	0	3	2	0	2	1
Oregon	0	9	0	18	5	0	0	2
Washington	0	0	0	77	4	0	0	1
<b>Pacific Noncontiguous</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>16</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>5</b>
Alaska	0	0	0	0	24	0	0	13
Hawaii	0	8	0	16	9	0	0	1
<b>U.S. Total</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>

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 December 2018

Census Region and State	Coal	Petroleum Liquids	Petroleum Coke	Natural Gas	Other Gases	Nuclear	Hydroelectric Conventional
<b>New England</b>	<b>2</b>	<b>49</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>10</b>
Connecticut	0	83	0	1	0	0	32
Maine	22	70	0	16	0	0	12
Massachusetts	0	100	0	4	0	0	21
New Hampshire	0	50	0	0	0	0	20
Rhode Island	0	105	0	10	0	0	0
Vermont	0	760	0	0	0	0	19
<b>Middle Atlantic</b>	<b>3</b>	<b>27</b>	<b>41</b>	<b>1</b>	<b>16</b>	<b>0</b>	<b>3</b>
New Jersey	0	25	0	2	0	0	0
New York	0	56	0	2	0	0	2
Pennsylvania	3	28	61	1	25	0	13
<b>East North Central</b>	<b>0</b>	<b>15</b>	<b>11</b>	<b>1</b>	<b>5</b>	<b>0</b>	<b>11</b>
Illinois	0	40	0	10	0	0	43
Indiana	0	9	0	2	9	0	37
Michigan	3	7	0	2	0	0	20
Ohio	1	31	23	0	16	0	35
Wisconsin	0	48	0	3	0	0	15
<b>West North Central</b>	<b>1</b>	<b>14</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>7</b>
Iowa	0	37	0	5	0	0	24
Kansas	0	22	0	9	0	0	0
Minnesota	2	69	0	11	0	0	21
Missouri	0	23	0	8	0	0	18
Nebraska	4	199	0	66	0	0	21
North Dakota	0	5	0	60	0	0	16
South Dakota	0	319	0	71	0	0	11
<b>South Atlantic</b>	<b>1</b>	<b>6</b>	<b>7</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>8</b>
Delaware	0	57	0	0	0	0	0
District of Columbia	0	0	0	0	0	0	0
Florida	0	6	0	1	0	0	45
Georgia	0	18	46	1	0	0	13
Maryland	0	43	0	2	0	0	2
North Carolina	0	9	0	1	0	0	11
South Carolina	0	22	0	1	0	0	16
Virginia	19	13	0	2	0	0	19
West Virginia	2	0	0	19	0	0	17
<b>East South Central</b>	<b>0</b>	<b>9</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>5</b>
Alabama	0	10	0	2	0	0	6
Kentucky	0	0	0	3	0	0	10
Mississippi	0	18	0	1	0	0	0
Tennessee	0	24	0	2	0	0	8
<b>West South Central</b>	<b>0</b>	<b>21</b>	<b>0</b>	<b>1</b>	<b>4</b>	<b>0</b>	<b>9</b>
Arkansas	0	29	0	4	0	0	12
Louisiana	0	97	0	2	9	0	22
Oklahoma	0	1	0	2	0	0	14
Texas	0	10	12	1	2	0	18
<b>Mountain</b>	<b>1</b>	<b>9</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>4</b>
Arizona	0	14	0	2	0	0	4
Colorado	0	84	0	3	0	0	18
Idaho	138	0	0	12	0	0	8
Montana	4	31	0	10	0	0	8
Nevada	0	0	0	1	0	0	5
New Mexico	0	45	0	5	0	0	61
Utah	0	0	0	5	0	0	23
Wyoming	3	1	0	7	0	0	24
<b>Pacific Contiguous</b>	<b>0</b>	<b>22</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>2</b>
California	0	21	0	2	2	0	8
Oregon	0	40	0	3	0	0	3
Washington	0	56	0	8	0	0	1
<b>Pacific Noncontiguous</b>	<b>14</b>	<b>1</b>	<b>0</b>	<b>24</b>	<b>0</b>	<b>0</b>	<b>19</b>
Alaska	39	4	0	24	0	0	20
Hawaii	0	1	0	0	0	0	49
<b>U.S. Total</b>	<b>0</b>	<b>3</b>	<b>4</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>3</b>

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 December 2018 (Continued)

Census Region and State	Wind	Geothermal	Biomass	Solar Thermal and Photovoltaic	Other Renewables	Hydroelectric Pumped Storage	Other Energy Sources	All Energy Sources
<b>New England</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>4</b>	<b>0</b>	<b>1</b>	<b>1</b>
Connecticut	0	0	0	37	10	0	0	1
Maine	0	0	0	143	5	0	0	5
Massachusetts	0	0	0	13	6	0	2	3
New Hampshire	0	0	0	0	10	0	0	3
Rhode Island	0	0	0	69	7	0	0	9
Vermont	0	0	0	34	10	0	0	13
<b>Middle Atlantic</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>11</b>	<b>3</b>	<b>0</b>	<b>1</b>	<b>1</b>
New Jersey	0	0	0	13	7	0	0	1
New York	0	0	0	20	4	0	2	1
Pennsylvania	0	0	0	47	4	0	0	1
<b>East North Central</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>16</b>	<b>2</b>	<b>0</b>	<b>3</b>	<b>0</b>
Illinois	0	0	0	38	3	0	0	0
Indiana	0	0	0	23	4	0	0	0
Michigan	0	0	0	35	4	0	10	1
Ohio	0	0	0	38	4	0	0	0
Wisconsin	0	0	0	72	6	0	45	1
<b>West North Central</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>2</b>	<b>0</b>	<b>5</b>	<b>1</b>
Iowa	0	0	0	111	3	0	0	1
Kansas	0	0	0	169	2	0	0	1
Minnesota	0	0	0	13	4	0	3	2
Missouri	0	0	0	40	4	0	0	1
Nebraska	0	0	0	79	4	0	0	2
North Dakota	0	0	0	0	3	0	42	1
South Dakota	0	0	0	277	7	0	0	5
<b>South Atlantic</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>2</b>	<b>0</b>	<b>1</b>	<b>0</b>
Delaware	0	0	0	56	44	0	0	2
District of Columbia	0	0	0	0	0	0	0	0
Florida	0	0	0	2	2	0	1	0
Georgia	0	0	0	8	3	0	0	1
Maryland	0	0	0	15	8	0	0	1
North Carolina	0	0	0	5	3	0	0	1
South Carolina	0	0	0	15	4	0	0	1
Virginia	0	0	0	14	5	0	0	2
West Virginia	0	0	0	0	7	0	0	2
<b>East South Central</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>2</b>	<b>0</b>	<b>7</b>	<b>1</b>
Alabama	0	0	0	17	3	0	0	1
Kentucky	0	0	0	59	15	0	0	1
Mississippi	0	0	0	5	3	0	0	1
Tennessee	0	0	0	34	7	0	69	1
<b>West South Central</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>0</b>
Arkansas	0	0	0	8	4	0	0	1
Louisiana	0	0	0	254	4	0	2	1
Oklahoma	0	0	0	60	2	0	0	1
Texas	0	0	0	4	1	0	4	0
<b>Mountain</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>3</b>	<b>2</b>	<b>0</b>	<b>3</b>	<b>1</b>
Arizona	0	0	0	4	5	0	0	1
Colorado	0	0	0	11	2	0	0	1
Idaho	0	14	0	19	6	0	0	6
Montana	0	0	0	82	7	0	0	3
Nevada	0	3	0	4	3	0	0	1
New Mexico	0	0	0	11	3	0	0	2
Utah	0	6	0	8	6	0	10	1
Wyoming	0	0	0	0	6	0	0	3
<b>Pacific Contiguous</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>3</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>1</b>
California	0	1	0	3	2	0	2	1
Oregon	0	9	0	18	5	0	0	2
Washington	0	0	0	77	4	0	0	1
<b>Pacific Noncontiguous</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>16</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>5</b>
Alaska	0	0	0	0	24	0	0	13
Hawaii	0	8	0	16	9	0	0	1
<b>U.S. Total</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>

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.C. Relative Standard Error (Percent) for Small Scale Solar Generation and Capacity  
by Sector, Census Division and State, December 2018**

Census Region and State	Residential	Commercial	Industrial	Transportation	Total
<b>New England</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>.</b>	<b>0</b>
Connecticut	0	1	0	.	0
Maine	1	2	0	.	1
Massachusetts	0	0	1	.	0
New Hampshire	0	0	0	.	0
Rhode Island	0	0	0	.	0
Vermont	2	7	61	.	3
<b>Middle Atlantic</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>.</b>	<b>0</b>
New Jersey	0	0	2	.	0
New York	0	0	1	.	0
Pennsylvania	0	2	0	.	1
<b>East North Central</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>.</b>	<b>1</b>
Illinois	4	8	0	.	4
Indiana	4	1	0	.	2
Michigan	2	13	16	.	5
Ohio	3	3	3	.	2
Wisconsin	5	8	2	.	4
<b>West North Central</b>	<b>2</b>	<b>1</b>	<b>5</b>	<b>.</b>	<b>1</b>
Iowa	6	3	36	.	3
Kansas	11	5	0	.	7
Minnesota	5	5	4	.	3
Missouri	2	1	0	.	1
Nebraska	14	24	34	.	12
North Dakota	0	0	0	.	0
South Dakota	0	0	0	.	0
<b>South Atlantic</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>.</b>	<b>1</b>
Delaware	3	2	10	.	2
District of Columbia	0	0	0	.	0
Florida	3	4	2	.	2
Georgia	82	49	0	.	47
Maryland	1	1	1	.	1
North Carolina	6	1	0	.	4
South Carolina	2	3	0	.	2
Virginia	7	5	4	.	5
West Virginia	0	0	0	.	0
<b>East South Central</b>	<b>3</b>	<b>4</b>	<b>0</b>	<b>.</b>	<b>3</b>
Alabama	0	0	0	.	0
Kentucky	4	4	0	.	3
Mississippi	5	9	0	.	5
Tennessee	0	0	0	.	0
<b>West South Central</b>	<b>2</b>	<b>3</b>	<b>0</b>	<b>.</b>	<b>2</b>
Arkansas	11	12	0	.	8
Louisiana	2	5	0	.	2
Oklahoma	10	9	0	.	7
Texas	3	4	0	.	3
<b>Mountain</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>.</b>	<b>0</b>
Arizona	0	1	8	.	0
Colorado	2	2	31	.	1
Idaho	2	9	0	.	2
Montana	8	13	0	.	7
Nevada	0	0	0	.	0
New Mexico	2	5	0	.	2
Utah	1	4	0	.	1
Wyoming	16	45	0	.	15
<b>Pacific Contiguous</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>.</b>	<b>0</b>
California	0	1	0	.	0
Oregon	1	6	6	.	2
Washington	2	21	31	.	3
<b>Pacific Noncontiguous</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>.</b>	<b>0</b>
Alaska	7	7	0	.	5
Hawaii	0	0	0	.	0
<b>U.S. Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>.</b>	<b>0</b>

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, December 2018**

Census Region and State	Coal	Petroleum Liquids	Petroleum Coke	Natural Gas	Other Gases	Nuclear	Hydroelectric Conventional
<b>New England</b>	<b>0</b>	<b>130</b>	<b>0</b>	<b>41</b>	<b>0</b>	<b>0</b>	<b>20</b>
Connecticut	0	123	0	0	0	0	28
Maine	0	0	0	0	0	0	0
Massachusetts	0	193	0	102	0	0	40
New Hampshire	0	168	0	0	0	0	37
Rhode Island	0	0	0	0	0	0	0
Vermont	0	794	0	0	0	0	30
<b>Middle Atlantic</b>	<b>0</b>	<b>96</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>1</b>
New Jersey	0	0	0	128	0	0	0
New York	0	113	0	5	0	0	1
Pennsylvania	0	0	0	0	0	0	0
<b>East North Central</b>	<b>1</b>	<b>13</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>11</b>
Illinois	0	212	0	0	0	0	63
Indiana	0	10	0	4	0	0	37
Michigan	3	7	0	8	0	0	21
Ohio	7	149	0	1	0	0	39
Wisconsin	0	52	0	3	0	0	16
<b>West North Central</b>	<b>1</b>	<b>14</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>7</b>
Iowa	0	37	0	5	0	0	25
Kansas	0	22	0	10	0	0	0
Minnesota	2	101	0	12	0	0	26
Missouri	0	23	0	11	0	0	18
Nebraska	4	199	0	67	0	0	21
North Dakota	0	5	0	62	0	0	16
South Dakota	0	337	0	71	0	0	11
<b>South Atlantic</b>	<b>1</b>	<b>7</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>9</b>
Delaware	0	0	0	0	0	0	0
Florida	0	6	0	1	0	0	45
Georgia	0	19	0	1	0	0	13
Maryland	0	18	0	0	0	0	0
North Carolina	0	8	0	1	0	0	10
South Carolina	0	25	0	0	0	0	16
Virginia	21	38	0	3	0	0	18
West Virginia	0	0	0	0	0	0	25
<b>East South Central</b>	<b>0</b>	<b>10</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>5</b>
Alabama	0	12	0	5	0	0	6
Kentucky	0	0	0	3	0	0	10
Mississippi	0	18	0	1	0	0	0
Tennessee	0	27	0	2	0	0	8
<b>West South Central</b>	<b>0</b>	<b>27</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>9</b>
Arkansas	0	41	0	5	0	0	12
Louisiana	0	97	0	4	0	0	0
Oklahoma	0	1	0	3	0	0	14
Texas	0	12	0	3	0	0	18
<b>Mountain</b>	<b>1</b>	<b>10</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>4</b>
Arizona	0	14	0	3	0	0	4
Colorado	0	110	0	3	0	0	19
Idaho	0	0	0	5	0	0	8
Montana	0	828	0	18	0	0	8
Nevada	0	0	0	1	0	0	0
New Mexico	0	45	0	7	0	0	61
Utah	0	0	0	5	0	0	23
Wyoming	3	1	0	9	0	0	24
<b>Pacific Contiguous</b>	<b>0</b>	<b>30</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>1</b>
California	0	29	0	4	0	0	7
Oregon	0	0	0	8	0	0	3
Washington	0	488	0	11	0	0	1
<b>Pacific Noncontiguous</b>	<b>62</b>	<b>1</b>	<b>0</b>	<b>24</b>	<b>0</b>	<b>0</b>	<b>21</b>
Alaska	62	4	0	24	0	0	22
Hawaii	0	1	0	0	0	0	0
<b>U.S. Total</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>2</b>

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, December 2018 (Continued)

Census Region and State	Wind	Geothermal	Biomass	Solar Thermal and Photovoltaic	Other Renewables	Hydroelectric Pumped Storage	Other Energy Sources	All Energy Sources
<b>New England</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>43</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>9</b>
Connecticut	0	0	0	0	0	0	0	18
Maine	0	0	0	0	0	0	0	0
Massachusetts	0	0	0	60	37	0	0	32
New Hampshire	0	0	0	0	0	0	0	8
Rhode Island	0	0	0	0	0	0	0	0
Vermont	0	0	0	64	11	0	0	18
<b>Middle Atlantic</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>46</b>	<b>46</b>	<b>0</b>	<b>0</b>	<b>1</b>
New Jersey	0	0	0	46	46	0	0	81
New York	0	0	0	0	0	0	0	1
Pennsylvania	0	0	0	0	0	0	0	0
<b>East North Central</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>27</b>	<b>7</b>	<b>0</b>	<b>5</b>	<b>1</b>
Illinois	0	0	0	93	39	0	0	1
Indiana	0	0	0	36	26	0	0	1
Michigan	0	0	0	42	9	0	0	2
Ohio	0	0	0	143	74	0	0	3
Wisconsin	0	0	0	0	11	0	49	1
<b>West North Central</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>90</b>	<b>2</b>	<b>0</b>	<b>8</b>	<b>1</b>
Iowa	0	0	0	132	3	0	0	1
Kansas	0	0	0	338	7	0	0	0
Minnesota	0	0	0	261	6	0	0	2
Missouri	0	0	0	0	70	0	0	1
Nebraska	0	0	0	0	25	0	0	3
North Dakota	0	0	0	0	5	0	42	1
South Dakota	0	0	0	0	12	0	0	6
<b>South Atlantic</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>
Delaware	0	0	0	161	161	0	0	25
Florida	0	0	0	1	2	0	0	0
Georgia	0	0	0	15	15	0	0	1
Maryland	0	0	0	139	139	0	0	0
North Carolina	0	0	0	18	18	0	0	1
South Carolina	0	0	0	267	18	0	0	1
Virginia	0	0	0	31	15	0	0	2
West Virginia	0	0	0	0	0	0	0	0
<b>East South Central</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>49</b>	<b>42</b>	<b>0</b>	<b>0</b>	<b>1</b>
Alabama	0	0	0	80	80	0	0	1
Kentucky	0	0	0	59	46	0	0	1
Mississippi	0	0	0	0	0	0	0	1
Tennessee	0	0	0	0	0	0	0	1
<b>West South Central</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>55</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>1</b>
Arkansas	0	0	0	309	309	0	0	1
Louisiana	0	0	0	254	254	0	0	1
Oklahoma	0	0	0	60	8	0	0	2
Texas	0	0	0	195	33	0	0	1
<b>Mountain</b>	<b>0</b>	<b>9</b>	<b>0</b>	<b>12</b>	<b>4</b>	<b>0</b>	<b>30</b>	<b>1</b>
Arizona	0	0	0	14	14	0	0	1
Colorado	0	0	0	202	3	0	0	1
Idaho	0	0	0	0	28	0	0	6
Montana	0	0	0	0	24	0	0	7
Nevada	0	0	0	0	0	0	0	1
New Mexico	0	0	0	25	25	0	0	2
Utah	0	9	0	0	9	0	43	1
Wyoming	0	0	0	0	9	0	0	3
<b>Pacific Contiguous</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>19</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>1</b>
California	0	0	0	19	5	0	0	2
Oregon	0	0	0	167	8	0	0	3
Washington	0	0	0	0	5	0	0	1
<b>Pacific Noncontiguous</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>21</b>	<b>0</b>	<b>0</b>	<b>8</b>
Alaska	0	0	0	0	39	0	0	15
Hawaii	0	0	0	0	0	0	0	1
<b>U.S. Total</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>4</b>	<b>2</b>	<b>0</b>	<b>4</b>	<b>0</b>

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 December 2018

Census Region and State	Coal	Petroleum Liquids	Petroleum Coke	Natural Gas	Other Gases	Nuclear	Hydroelectric Conventional
<b>New England</b>	<b>0</b>	<b>130</b>	<b>0</b>	<b>41</b>	<b>0</b>	<b>0</b>	<b>20</b>
Connecticut	0	123	0	0	0	0	28
Maine	0	0	0	0	0	0	0
Massachusetts	0	193	0	102	0	0	40
New Hampshire	0	168	0	0	0	0	37
Rhode Island	0	0	0	0	0	0	0
Vermont	0	794	0	0	0	0	30
<b>Middle Atlantic</b>	<b>0</b>	<b>96</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>1</b>
New Jersey	0	0	0	128	0	0	0
New York	0	113	0	5	0	0	1
Pennsylvania	0	0	0	0	0	0	0
<b>East North Central</b>	<b>1</b>	<b>13</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>11</b>
Illinois	0	212	0	0	0	0	63
Indiana	0	10	0	4	0	0	37
Michigan	3	7	0	8	0	0	21
Ohio	7	149	0	1	0	0	39
Wisconsin	0	52	0	3	0	0	16
<b>West North Central</b>	<b>1</b>	<b>14</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>7</b>
Iowa	0	37	0	5	0	0	25
Kansas	0	22	0	10	0	0	0
Minnesota	2	101	0	12	0	0	26
Missouri	0	23	0	11	0	0	18
Nebraska	4	199	0	67	0	0	21
North Dakota	0	5	0	62	0	0	16
South Dakota	0	337	0	71	0	0	11
<b>South Atlantic</b>	<b>1</b>	<b>7</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>9</b>
Delaware	0	0	0	0	0	0	0
Florida	0	6	0	1	0	0	45
Georgia	0	19	0	1	0	0	13
Maryland	0	18	0	0	0	0	0
North Carolina	0	8	0	1	0	0	10
South Carolina	0	25	0	0	0	0	16
Virginia	21	38	0	3	0	0	18
West Virginia	0	0	0	0	0	0	25
<b>East South Central</b>	<b>0</b>	<b>10</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>5</b>
Alabama	0	12	0	5	0	0	6
Kentucky	0	0	0	3	0	0	10
Mississippi	0	18	0	1	0	0	0
Tennessee	0	27	0	2	0	0	8
<b>West South Central</b>	<b>0</b>	<b>27</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>9</b>
Arkansas	0	41	0	5	0	0	12
Louisiana	0	97	0	4	0	0	0
Oklahoma	0	1	0	3	0	0	14
Texas	0	12	0	3	0	0	18
<b>Mountain</b>	<b>1</b>	<b>10</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>4</b>
Arizona	0	14	0	3	0	0	4
Colorado	0	110	0	3	0	0	19
Idaho	0	0	0	5	0	0	8
Montana	0	828	0	18	0	0	8
Nevada	0	0	0	1	0	0	0
New Mexico	0	45	0	7	0	0	61
Utah	0	0	0	5	0	0	23
Wyoming	3	1	0	9	0	0	24
<b>Pacific Contiguous</b>	<b>0</b>	<b>30</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>1</b>
California	0	29	0	4	0	0	7
Oregon	0	0	0	8	0	0	3
Washington	0	488	0	11	0	0	1
<b>Pacific Noncontiguous</b>	<b>62</b>	<b>1</b>	<b>0</b>	<b>24</b>	<b>0</b>	<b>0</b>	<b>21</b>
Alaska	62	4	0	24	0	0	22
Hawaii	0	1	0	0	0	0	0
<b>U.S. Total</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>2</b>

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 December 2018 (Continued)

Census Region and State	Wind	Geothermal	Biomass	Solar Thermal and Photovoltaic	Other Renewables	Hydroelectric Pumped Storage	Other Energy Sources	All Energy Sources
<b>New England</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>43</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>9</b>
Connecticut	0	0	0	0	0	0	0	18
Maine	0	0	0	0	0	0	0	0
Massachusetts	0	0	0	60	37	0	0	32
New Hampshire	0	0	0	0	0	0	0	8
Rhode Island	0	0	0	0	0	0	0	0
Vermont	0	0	0	64	11	0	0	18
<b>Middle Atlantic</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>46</b>	<b>46</b>	<b>0</b>	<b>0</b>	<b>1</b>
New Jersey	0	0	0	46	46	0	0	81
New York	0	0	0	0	0	0	0	1
Pennsylvania	0	0	0	0	0	0	0	0
<b>East North Central</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>27</b>	<b>7</b>	<b>0</b>	<b>5</b>	<b>1</b>
Illinois	0	0	0	93	39	0	0	1
Indiana	0	0	0	36	26	0	0	1
Michigan	0	0	0	42	9	0	0	2
Ohio	0	0	0	143	74	0	0	3
Wisconsin	0	0	0	0	11	0	49	1
<b>West North Central</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>90</b>	<b>2</b>	<b>0</b>	<b>8</b>	<b>1</b>
Iowa	0	0	0	132	3	0	0	1
Kansas	0	0	0	338	7	0	0	0
Minnesota	0	0	0	261	6	0	0	2
Missouri	0	0	0	0	70	0	0	1
Nebraska	0	0	0	0	25	0	0	3
North Dakota	0	0	0	0	5	0	42	1
South Dakota	0	0	0	0	12	0	0	6
<b>South Atlantic</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>
Delaware	0	0	0	161	161	0	0	25
Florida	0	0	0	1	2	0	0	0
Georgia	0	0	0	15	15	0	0	1
Maryland	0	0	0	139	139	0	0	0
North Carolina	0	0	0	18	18	0	0	1
South Carolina	0	0	0	267	18	0	0	1
Virginia	0	0	0	31	15	0	0	2
West Virginia	0	0	0	0	0	0	0	0
<b>East South Central</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>49</b>	<b>42</b>	<b>0</b>	<b>0</b>	<b>1</b>
Alabama	0	0	0	80	80	0	0	1
Kentucky	0	0	0	59	46	0	0	1
Mississippi	0	0	0	0	0	0	0	1
Tennessee	0	0	0	0	0	0	0	1
<b>West South Central</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>55</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>1</b>
Arkansas	0	0	0	309	309	0	0	1
Louisiana	0	0	0	254	254	0	0	1
Oklahoma	0	0	0	60	8	0	0	2
Texas	0	0	0	195	33	0	0	1
<b>Mountain</b>	<b>0</b>	<b>9</b>	<b>0</b>	<b>12</b>	<b>4</b>	<b>0</b>	<b>30</b>	<b>1</b>
Arizona	0	0	0	14	14	0	0	1
Colorado	0	0	0	202	3	0	0	1
Idaho	0	0	0	0	28	0	0	6
Montana	0	0	0	0	24	0	0	7
Nevada	0	0	0	0	0	0	0	1
New Mexico	0	0	0	25	25	0	0	2
Utah	0	9	0	0	9	0	43	1
Wyoming	0	0	0	0	9	0	0	3
<b>Pacific Contiguous</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>19</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>1</b>
California	0	0	0	19	5	0	0	2
Oregon	0	0	0	167	8	0	0	3
Washington	0	0	0	0	5	0	0	1
<b>Pacific Noncontiguous</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>21</b>	<b>0</b>	<b>0</b>	<b>8</b>
Alaska	0	0	0	0	39	0	0	15
Hawaii	0	0	0	0	0	0	0	1
<b>U.S. Total</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>4</b>	<b>2</b>	<b>0</b>	<b>4</b>	<b>0</b>

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, December 2018

Census Region and State	Coal	Petroleum Liquids	Petroleum Coke	Natural Gas	Other Gases	Nuclear	Hydroelectric Conventional
<b>New England</b>	<b>0</b>	<b>66</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>11</b>
Connecticut	0	87	0	0	0	0	36
Maine	0	59	0	20	0	0	13
Massachusetts	0	205	0	4	0	0	24
New Hampshire	0	763	0	0	0	0	22
Rhode Island	0	125	0	10	0	0	0
Vermont	0	0	0	0	0	0	23
<b>Middle Atlantic</b>	<b>3</b>	<b>26</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>10</b>
New Jersey	0	28	0	2	0	0	0
New York	0	96	0	2	0	0	10
Pennsylvania	3	29	0	1	0	0	13
<b>East North Central</b>	<b>0</b>	<b>25</b>	<b>23</b>	<b>1</b>	<b>6</b>	<b>0</b>	<b>38</b>
Illinois	0	38	0	12	0	0	61
Indiana	0	0	0	1	0	0	0
Michigan	0	0	0	1	0	0	77
Ohio	0	29	23	0	20	0	63
Wisconsin	0	0	0	0	0	0	70
<b>West North Central</b>	<b>0</b>	<b>76</b>	<b>0</b>	<b>18</b>	<b>0</b>	<b>0</b>	<b>46</b>
Iowa	0	112	0	0	0	0	0
Kansas	0	0	0	0	0	0	0
Minnesota	0	80	0	40	0	0	56
Missouri	0	0	0	0	0	0	0
South Dakota	0	0	0	0	0	0	0
<b>South Atlantic</b>	<b>5</b>	<b>10</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>5</b>
Delaware	0	59	0	0	0	0	0
Florida	0	188	0	9	0	0	0
Georgia	0	298	0	1	0	0	135
Maryland	0	43	0	2	0	0	2
North Carolina	0	77	0	6	0	0	77
South Carolina	0	0	0	5	0	0	85
Virginia	0	2	0	2	0	0	74
West Virginia	8	0	0	87	0	0	33
<b>East South Central</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>208</b>
Alabama	0	1	0	0	0	0	0
Kentucky	0	0	0	0	0	0	208
Mississippi	0	0	0	0	0	0	0
Tennessee	0	0	0	0	0	0	0
<b>West South Central</b>	<b>0</b>	<b>16</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>21</b>
Arkansas	0	0	0	0	0	0	45
Louisiana	0	0	0	0	0	0	22
Oklahoma	0	0	0	0	0	0	0
Texas	0	21	0	1	0	0	0
<b>Mountain</b>	<b>3</b>	<b>15</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>22</b>
Arizona	0	0	0	1	0	0	0
Colorado	0	0	0	19	0	0	56
Idaho	0	0	0	34	0	0	27
Montana	4	21	0	4	0	0	65
Nevada	0	0	0	0	0	0	89
New Mexico	0	0	0	7	0	0	0
Utah	0	0	0	0	0	0	0
Wyoming	0	0	0	0	0	0	0
<b>Pacific Contiguous</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>32</b>
California	0	0	0	2	0	0	48
Oregon	0	0	0	1	0	0	46
Washington	0	6	0	12	0	0	40
<b>Pacific Noncontiguous</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Alaska	47	0	0	0	0	0	0
Hawaii	0	0	0	0	0	0	0
<b>U.S. Total</b>	<b>1</b>	<b>6</b>	<b>15</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>7</b>

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, December 2018 (Continued)

Census Region and State	Wind	Geothermal	Biomass	Solar Thermal and Photovoltaic	Other Renewables	Hydroelectric Pumped Storage	Other Energy Sources	All Energy Sources
<b>New England</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>4</b>	<b>0</b>	<b>1</b>	<b>1</b>
Connecticut	0	0	0	38	10	0	0	1
Maine	0	0	0	143	6	0	0	6
Massachusetts	0	0	0	14	6	0	2	3
New Hampshire	0	0	0	0	13	0	0	3
Rhode Island	0	0	0	69	7	0	0	9
Vermont	0	0	0	40	17	0	0	17
<b>Middle Atlantic</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>1</b>
New Jersey	0	0	0	15	8	0	0	1
New York	0	0	0	20	4	0	0	1
Pennsylvania	0	0	0	52	5	0	0	1
<b>East North Central</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>19</b>	<b>2</b>	<b>0</b>	<b>19</b>	<b>0</b>
Illinois	0	0	0	37	2	0	0	0
Indiana	0	0	0	29	3	0	0	1
Michigan	0	0	0	57	5	0	26	2
Ohio	0	0	0	40	4	0	0	0
Wisconsin	0	0	0	74	10	0	0	1
<b>West North Central</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>2</b>
Iowa	0	0	0	202	4	0	0	3
Kansas	0	0	0	193	2	0	0	2
Minnesota	0	0	0	13	4	0	0	4
Missouri	0	0	0	42	4	0	0	3
Nebraska	0	0	0	79	4	0	0	4
North Dakota	0	0	0	0	3	0	0	3
South Dakota	0	0	0	277	8	0	0	8
<b>South Atlantic</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>3</b>	<b>0</b>	<b>1</b>	<b>1</b>
Delaware	0	0	0	60	55	0	0	2
Florida	0	0	0	15	5	0	2	4
Georgia	0	0	0	9	8	0	0	2
Maryland	0	0	0	15	9	0	0	1
North Carolina	0	0	0	5	4	0	0	4
South Carolina	0	0	0	15	13	0	0	5
Virginia	0	0	0	15	10	0	0	2
West Virginia	0	0	0	0	7	0	0	7
<b>East South Central</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>11</b>	<b>0</b>	<b>0</b>	<b>0</b>
Alabama	0	0	0	17	14	0	0	0
Kentucky	0	0	0	322	158	0	0	21
Mississippi	0	0	0	5	11	0	0	0
Tennessee	0	0	0	35	31	0	0	28
<b>West South Central</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>
Arkansas	0	0	0	8	22	0	0	1
Louisiana	0	0	0	0	61	0	0	3
Oklahoma	0	0	0	0	2	0	0	1
Texas	0	0	0	4	1	0	0	1
<b>Mountain</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>3</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>1</b>
Arizona	0	0	0	4	5	0	0	1
Colorado	0	0	0	12	3	0	0	4
Idaho	0	14	0	19	7	0	0	11
Montana	0	0	0	82	7	0	0	3
Nevada	0	3	0	4	3	0	0	2
New Mexico	0	0	0	12	3	0	0	3
Utah	0	9	0	8	6	0	0	5
Wyoming	0	0	0	0	8	0	0	6
<b>Pacific Contiguous</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>3</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>1</b>
California	0	1	0	3	2	0	0	2
Oregon	0	9	0	18	5	0	0	2
Washington	0	0	0	77	7	0	0	3
<b>Pacific Noncontiguous</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>21</b>	<b>11</b>	<b>0</b>	<b>0</b>	<b>3</b>
Alaska	0	0	0	0	52	0	0	40
Hawaii	0	8	0	21	11	0	0	3
<b>U.S. Total</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>

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 December 2018

Census Region and State	Coal	Petroleum Liquids	Petroleum Coke	Natural Gas	Other Gases	Nuclear	Hydroelectric Conventional
<b>New England</b>	<b>0</b>	<b>66</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>11</b>
Connecticut	0	87	0	0	0	0	36
Maine	0	59	0	20	0	0	13
Massachusetts	0	205	0	4	0	0	24
New Hampshire	0	763	0	0	0	0	22
Rhode Island	0	125	0	10	0	0	0
Vermont	0	0	0	0	0	0	23
<b>Middle Atlantic</b>	<b>3</b>	<b>26</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>10</b>
New Jersey	0	28	0	2	0	0	0
New York	0	96	0	2	0	0	10
Pennsylvania	3	29	0	1	0	0	13
<b>East North Central</b>	<b>0</b>	<b>25</b>	<b>23</b>	<b>1</b>	<b>6</b>	<b>0</b>	<b>38</b>
Illinois	0	38	0	12	0	0	61
Indiana	0	0	0	1	0	0	0
Michigan	0	0	0	1	0	0	77
Ohio	0	29	23	0	20	0	63
Wisconsin	0	0	0	0	0	0	70
<b>West North Central</b>	<b>0</b>	<b>76</b>	<b>0</b>	<b>18</b>	<b>0</b>	<b>0</b>	<b>46</b>
Iowa	0	112	0	0	0	0	0
Kansas	0	0	0	0	0	0	0
Minnesota	0	80	0	40	0	0	56
Missouri	0	0	0	0	0	0	0
South Dakota	0	0	0	0	0	0	0
<b>South Atlantic</b>	<b>5</b>	<b>10</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>5</b>
Delaware	0	59	0	0	0	0	0
Florida	0	188	0	9	0	0	0
Georgia	0	298	0	1	0	0	135
Maryland	0	43	0	2	0	0	2
North Carolina	0	77	0	6	0	0	77
South Carolina	0	0	0	5	0	0	85
Virginia	0	2	0	2	0	0	74
West Virginia	8	0	0	87	0	0	33
<b>East South Central</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>208</b>
Alabama	0	1	0	0	0	0	0
Kentucky	0	0	0	0	0	0	208
Mississippi	0	0	0	0	0	0	0
Tennessee	0	0	0	0	0	0	0
<b>West South Central</b>	<b>0</b>	<b>16</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>21</b>
Arkansas	0	0	0	0	0	0	45
Louisiana	0	0	0	0	0	0	22
Oklahoma	0	0	0	0	0	0	0
Texas	0	21	0	1	0	0	0
<b>Mountain</b>	<b>3</b>	<b>15</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>22</b>
Arizona	0	0	0	1	0	0	0
Colorado	0	0	0	19	0	0	56
Idaho	0	0	0	34	0	0	27
Montana	4	21	0	4	0	0	65
Nevada	0	0	0	0	0	0	89
New Mexico	0	0	0	7	0	0	0
Utah	0	0	0	0	0	0	0
Wyoming	0	0	0	0	0	0	0
<b>Pacific Contiguous</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>32</b>
California	0	0	0	2	0	0	48
Oregon	0	0	0	1	0	0	46
Washington	0	6	0	12	0	0	40
<b>Pacific Noncontiguous</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Alaska	47	0	0	0	0	0	0
Hawaii	0	0	0	0	0	0	0
<b>U.S. Total</b>	<b>1</b>	<b>6</b>	<b>15</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>7</b>

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 December 2018 (Continued)

Census Region and State	Wind	Geothermal	Biomass	Solar Thermal and Photovoltaic	Other Renewables	Hydroelectric Pumped Storage	Other Energy Sources	All Energy Sources
<b>New England</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>4</b>	<b>0</b>	<b>1</b>	<b>1</b>
Connecticut	0	0	0	38	10	0	0	1
Maine	0	0	0	143	6	0	0	6
Massachusetts	0	0	0	14	6	0	2	3
New Hampshire	0	0	0	0	13	0	0	3
Rhode Island	0	0	0	69	7	0	0	9
Vermont	0	0	0	40	17	0	0	17
<b>Middle Atlantic</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>1</b>
New Jersey	0	0	0	15	8	0	0	1
New York	0	0	0	20	4	0	0	1
Pennsylvania	0	0	0	52	5	0	0	1
<b>East North Central</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>19</b>	<b>2</b>	<b>0</b>	<b>19</b>	<b>0</b>
Illinois	0	0	0	37	2	0	0	0
Indiana	0	0	0	29	3	0	0	1
Michigan	0	0	0	57	5	0	26	2
Ohio	0	0	0	40	4	0	0	0
Wisconsin	0	0	0	74	10	0	0	1
<b>West North Central</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>2</b>
Iowa	0	0	0	202	4	0	0	3
Kansas	0	0	0	193	2	0	0	2
Minnesota	0	0	0	13	4	0	0	4
Missouri	0	0	0	42	4	0	0	3
Nebraska	0	0	0	79	4	0	0	4
North Dakota	0	0	0	0	3	0	0	3
South Dakota	0	0	0	277	8	0	0	8
<b>South Atlantic</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>3</b>	<b>0</b>	<b>1</b>	<b>1</b>
Delaware	0	0	0	60	55	0	0	2
Florida	0	0	0	15	5	0	2	4
Georgia	0	0	0	9	8	0	0	2
Maryland	0	0	0	15	9	0	0	1
North Carolina	0	0	0	5	4	0	0	4
South Carolina	0	0	0	15	13	0	0	5
Virginia	0	0	0	15	10	0	0	2
West Virginia	0	0	0	0	7	0	0	7
<b>East South Central</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>11</b>	<b>0</b>	<b>0</b>	<b>0</b>
Alabama	0	0	0	17	14	0	0	0
Kentucky	0	0	0	322	158	0	0	21
Mississippi	0	0	0	5	11	0	0	0
Tennessee	0	0	0	35	31	0	0	28
<b>West South Central</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>
Arkansas	0	0	0	8	22	0	0	1
Louisiana	0	0	0	0	61	0	0	3
Oklahoma	0	0	0	0	2	0	0	1
Texas	0	0	0	4	1	0	0	1
<b>Mountain</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>3</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>1</b>
Arizona	0	0	0	4	5	0	0	1
Colorado	0	0	0	12	3	0	0	4
Idaho	0	14	0	19	7	0	0	11
Montana	0	0	0	82	7	0	0	3
Nevada	0	3	0	4	3	0	0	2
New Mexico	0	0	0	12	3	0	0	3
Utah	0	9	0	8	6	0	0	5
Wyoming	0	0	0	0	8	0	0	6
<b>Pacific Contiguous</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>3</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>1</b>
California	0	1	0	3	2	0	0	2
Oregon	0	9	0	18	5	0	0	2
Washington	0	0	0	77	7	0	0	3
<b>Pacific Noncontiguous</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>21</b>	<b>11</b>	<b>0</b>	<b>0</b>	<b>3</b>
Alaska	0	0	0	0	52	0	0	40
Hawaii	0	8	0	21	11	0	0	3
<b>U.S. Total</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>

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, December 2018**

Census Region and State	Coal	Petroleum Liquids	Petroleum Coke	Natural Gas	Other Gases	Nuclear	Hydroelectric Conventional
<b>New England</b>	<b>0</b>	<b>67</b>	<b>0</b>	<b>16</b>	<b>0</b>	<b>0</b>	<b>0</b>
Connecticut	0	2,620	0	22	0	0	0
Maine	0	0	0	0	0	0	0
Massachusetts	0	269	0	25	0	0	0
New Hampshire	0	1	0	0	0	0	0
Rhode Island	0	109	0	70	0	0	0
Vermont	0	0	0	0	0	0	0
<b>Middle Atlantic</b>	<b>0</b>	<b>154</b>	<b>0</b>	<b>15</b>	<b>0</b>	<b>0</b>	<b>0</b>
New Jersey	0	0	0	26	0	0	0
New York	0	208	0	19	0	0	0
Pennsylvania	0	0	0	0	0	0	0
<b>East North Central</b>	<b>110</b>	<b>1</b>	<b>0</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>0</b>
Illinois	110	0	0	21	0	0	0
Indiana	0	0	0	0	0	0	0
Michigan	0	2	0	9	0	0	0
Ohio	0	0	0	0	0	0	0
Wisconsin	0	0	0	12	0	0	0
<b>West North Central</b>	<b>0</b>	<b>15</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>
Iowa	0	0	0	0	0	0	0
Minnesota	0	17	0	1	0	0	0
Missouri	0	0	0	0	0	0	0
Nebraska	0	0	0	0	0	0	0
North Dakota	0	0	0	0	0	0	0
South Dakota	0	4,251	0	0	0	0	0
<b>South Atlantic</b>	<b>0</b>	<b>16</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>0</b>
District of Columbia	0	0	0	0	0	0	0
Florida	0	0	0	0	0	0	0
Georgia	0	16	0	0	0	0	0
Maryland	0	995	0	4	0	0	0
North Carolina	0	415	0	60	0	0	0
South Carolina	0	531	0	0	0	0	0
Virginia	0	0	0	0	0	0	0
<b>East South Central</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>32</b>	<b>0</b>	<b>0</b>	<b>0</b>
Mississippi	0	0	0	0	0	0	0
Tennessee	0	0	0	32	0	0	0
<b>West South Central</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>17</b>	<b>0</b>	<b>0</b>	<b>413</b>
Arkansas	0	0	0	110	0	0	0
Louisiana	0	0	0	38	0	0	0
Oklahoma	0	0	0	0	0	0	0
Texas	0	0	0	19	0	0	413
<b>Mountain</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>0</b>
Arizona	0	0	0	0	0	0	0
Colorado	0	0	0	0	0	0	0
Idaho	0	0	0	0	0	0	0
Nevada	0	0	0	0	0	0	0
New Mexico	0	0	0	35	0	0	0
Utah	0	0	0	0	0	0	0
<b>Pacific Contiguous</b>	<b>0</b>	<b>104</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>687</b>
California	0	21	0	3	0	0	687
Oregon	0	427	0	21	0	0	0
Washington	0	0	0	0	0	0	0
<b>Pacific Noncontiguous</b>	<b>60</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>58</b>
Alaska	60	1	0	0	0	0	58
Hawaii	0	0	0	0	0	0	0
<b>U.S. Total</b>	<b>25</b>	<b>22</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>47</b>

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, December 2018 (Continued)

Census Region and State	Wind	Geothermal	Biomass	Solar Thermal and Photovoltaic	Other Renewables	Hydroelectric Pumped Storage	Other Energy Sources	All Energy Sources
<b>New England</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>102</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>12</b>
Connecticut	0	0	0	483	483	0	0	22
Maine	0	0	0	0	0	0	0	0
Massachusetts	0	0	0	95	31	0	0	22
New Hampshire	0	0	0	0	0	0	0	0
Rhode Island	0	0	0	0	0	0	0	56
Vermont	0	0	0	0	0	0	0	0
<b>Middle Atlantic</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>34</b>	<b>5</b>	<b>0</b>	<b>3</b>	<b>7</b>
New Jersey	0	0	0	35	11	0	0	8
New York	0	0	0	198	7	0	7	12
Pennsylvania	0	0	0	169	6	0	0	2
<b>East North Central</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>149</b>	<b>14</b>	<b>0</b>	<b>0</b>	<b>6</b>
Illinois	0	0	0	239	134	0	0	22
Indiana	0	0	0	0	0	0	0	0
Michigan	0	0	0	0	0	0	0	6
Ohio	0	0	0	235	29	0	0	2
Wisconsin	0	0	0	309	68	0	0	20
<b>West North Central</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>0</b>	<b>80</b>	<b>5</b>
Iowa	0	0	0	0	14	0	0	3
Kansas	0	0	0	0	113	0	0	113
Minnesota	0	0	0	0	44	0	80	13
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	4,251
<b>South Atlantic</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>34</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>4</b>
Delaware	0	0	0	341	50	0	0	50
District of Columbia	0	0	0	0	0	0	0	0
Florida	0	0	0	146	20	0	0	13
Georgia	0	0	0	251	251	0	0	132
Maryland	0	0	0	119	31	0	0	4
North Carolina	0	0	0	37	32	0	0	23
South Carolina	0	0	0	0	0	0	0	2
Virginia	0	0	0	0	3	0	0	1
<b>East South Central</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>194</b>	<b>194</b>	<b>0</b>	<b>0</b>	<b>32</b>
Mississippi	0	0	0	0	0	0	0	0
Tennessee	0	0	0	194	194	0	0	32
<b>West South Central</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>23</b>	<b>0</b>	<b>0</b>	<b>16</b>
Arkansas	0	0	0	0	0	0	0	95
Louisiana	0	0	0	0	0	0	0	38
Oklahoma	0	0	0	0	0	0	0	0
Texas	0	0	0	0	24	0	0	17
<b>Mountain</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>43</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>4</b>
Arizona	0	0	0	131	131	0	0	4
Colorado	0	0	0	110	110	0	0	44
Idaho	0	0	0	0	0	0	0	0
Nevada	0	0	0	49	4	0	0	3
New Mexico	0	0	0	0	325	0	0	34
Utah	0	0	0	0	0	0	0	0
<b>Pacific Contiguous</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>33</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>3</b>
California	0	0	0	33	5	0	0	3
Oregon	0	0	0	0	22	0	0	15
Washington	0	0	0	0	51	0	0	17
<b>Pacific Noncontiguous</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>14</b>
Alaska	0	0	0	0	0	0	0	34
Hawaii	0	0	0	0	0	0	0	0
<b>U.S. Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>17</b>	<b>3</b>	<b>0</b>	<b>2</b>	<b>3</b>

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 December 2018

Census Region and State	Coal	Petroleum Liquids	Petroleum Coke	Natural Gas	Other Gases	Nuclear	Hydroelectric Conventional
<b>New England</b>	<b>0</b>	<b>67</b>	<b>0</b>	<b>16</b>	<b>0</b>	<b>0</b>	<b>0</b>
Connecticut	0	2,620	0	22	0	0	0
Maine	0	0	0	0	0	0	0
Massachusetts	0	269	0	25	0	0	0
New Hampshire	0	1	0	0	0	0	0
Rhode Island	0	109	0	70	0	0	0
Vermont	0	0	0	0	0	0	0
<b>Middle Atlantic</b>	<b>0</b>	<b>154</b>	<b>0</b>	<b>15</b>	<b>0</b>	<b>0</b>	<b>0</b>
New Jersey	0	0	0	26	0	0	0
New York	0	208	0	19	0	0	0
Pennsylvania	0	0	0	0	0	0	0
<b>East North Central</b>	<b>110</b>	<b>1</b>	<b>0</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>0</b>
Illinois	110	0	0	21	0	0	0
Indiana	0	0	0	0	0	0	0
Michigan	0	2	0	9	0	0	0
Ohio	0	0	0	0	0	0	0
Wisconsin	0	0	0	12	0	0	0
<b>West North Central</b>	<b>0</b>	<b>15</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>
Iowa	0	0	0	0	0	0	0
Minnesota	0	17	0	1	0	0	0
Missouri	0	0	0	0	0	0	0
Nebraska	0	0	0	0	0	0	0
North Dakota	0	0	0	0	0	0	0
South Dakota	0	4,251	0	0	0	0	0
<b>South Atlantic</b>	<b>0</b>	<b>16</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>0</b>
District of Columbia	0	0	0	0	0	0	0
Florida	0	0	0	0	0	0	0
Georgia	0	16	0	0	0	0	0
Maryland	0	995	0	4	0	0	0
North Carolina	0	415	0	60	0	0	0
South Carolina	0	531	0	0	0	0	0
Virginia	0	0	0	0	0	0	0
<b>East South Central</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>32</b>	<b>0</b>	<b>0</b>	<b>0</b>
Mississippi	0	0	0	0	0	0	0
Tennessee	0	0	0	32	0	0	0
<b>West South Central</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>17</b>	<b>0</b>	<b>0</b>	<b>413</b>
Arkansas	0	0	0	110	0	0	0
Louisiana	0	0	0	38	0	0	0
Oklahoma	0	0	0	0	0	0	0
Texas	0	0	0	19	0	0	413
<b>Mountain</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>0</b>
Arizona	0	0	0	0	0	0	0
Colorado	0	0	0	0	0	0	0
Idaho	0	0	0	0	0	0	0
Nevada	0	0	0	0	0	0	0
New Mexico	0	0	0	35	0	0	0
Utah	0	0	0	0	0	0	0
<b>Pacific Contiguous</b>	<b>0</b>	<b>104</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>687</b>
California	0	21	0	3	0	0	687
Oregon	0	427	0	21	0	0	0
Washington	0	0	0	0	0	0	0
<b>Pacific Noncontiguous</b>	<b>60</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>58</b>
Alaska	60	1	0	0	0	0	58
Hawaii	0	0	0	0	0	0	0
<b>U.S. Total</b>	<b>25</b>	<b>22</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>47</b>

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 December 2018 (Continued)

Census Region and State	Wind	Geothermal	Biomass	Solar Thermal and Photovoltaic	Other Renewables	Hydroelectric Pumped Storage	Other Energy Sources	All Energy Sources
<b>New England</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>102</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>12</b>
Connecticut	0	0	0	483	483	0	0	22
Maine	0	0	0	0	0	0	0	0
Massachusetts	0	0	0	95	31	0	0	22
New Hampshire	0	0	0	0	0	0	0	0
Rhode Island	0	0	0	0	0	0	0	56
Vermont	0	0	0	0	0	0	0	0
<b>Middle Atlantic</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>34</b>	<b>5</b>	<b>0</b>	<b>3</b>	<b>7</b>
New Jersey	0	0	0	35	11	0	0	8
New York	0	0	0	198	7	0	7	12
Pennsylvania	0	0	0	169	6	0	0	2
<b>East North Central</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>149</b>	<b>14</b>	<b>0</b>	<b>0</b>	<b>6</b>
Illinois	0	0	0	239	134	0	0	22
Indiana	0	0	0	0	0	0	0	0
Michigan	0	0	0	0	0	0	0	6
Ohio	0	0	0	235	29	0	0	2
Wisconsin	0	0	0	309	68	0	0	20
<b>West North Central</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>0</b>	<b>80</b>	<b>5</b>
Iowa	0	0	0	0	14	0	0	3
Kansas	0	0	0	0	113	0	0	113
Minnesota	0	0	0	0	44	0	80	13
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	4,251
<b>South Atlantic</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>34</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>4</b>
Delaware	0	0	0	341	50	0	0	50
District of Columbia	0	0	0	0	0	0	0	0
Florida	0	0	0	146	20	0	0	13
Georgia	0	0	0	251	251	0	0	132
Maryland	0	0	0	119	31	0	0	4
North Carolina	0	0	0	37	32	0	0	23
South Carolina	0	0	0	0	0	0	0	2
Virginia	0	0	0	0	3	0	0	1
<b>East South Central</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>194</b>	<b>194</b>	<b>0</b>	<b>0</b>	<b>32</b>
Mississippi	0	0	0	0	0	0	0	0
Tennessee	0	0	0	194	194	0	0	32
<b>West South Central</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>23</b>	<b>0</b>	<b>0</b>	<b>16</b>
Arkansas	0	0	0	0	0	0	0	95
Louisiana	0	0	0	0	0	0	0	38
Oklahoma	0	0	0	0	0	0	0	0
Texas	0	0	0	0	24	0	0	17
<b>Mountain</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>43</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>4</b>
Arizona	0	0	0	131	131	0	0	4
Colorado	0	0	0	110	110	0	0	44
Idaho	0	0	0	0	0	0	0	0
Nevada	0	0	0	49	4	0	0	3
New Mexico	0	0	0	0	325	0	0	34
Utah	0	0	0	0	0	0	0	0
<b>Pacific Contiguous</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>33</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>3</b>
California	0	0	0	33	5	0	0	3
Oregon	0	0	0	0	22	0	0	15
Washington	0	0	0	0	51	0	0	17
<b>Pacific Noncontiguous</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>14</b>
Alaska	0	0	0	0	0	0	0	34
Hawaii	0	0	0	0	0	0	0	0
<b>U.S. Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>17</b>	<b>3</b>	<b>0</b>	<b>2</b>	<b>3</b>

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, December 2018**

Census Region and State	Coal	Petroleum Liquids	Petroleum Coke	Natural Gas	Other Gases	Nuclear	Hydroelectric Conventional
<b>New England</b>	<b>191</b>	<b>78</b>	<b>0</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>33</b>
Connecticut	0	0	0	14	0	0	0
Maine	191	145	0	27	0	0	34
Massachusetts	0	0	0	9	0	0	0
New Hampshire	0	0	0	0	0	0	0
Rhode Island	0	0	0	46	0	0	0
<b>Middle Atlantic</b>	<b>41</b>	<b>10</b>	<b>41</b>	<b>9</b>	<b>16</b>	<b>0</b>	<b>38</b>
New Jersey	0	0	0	10	0	0	0
New York	0	0	0	7	0	0	38
Pennsylvania	41	89	61	14	25	0	0
<b>East North Central</b>	<b>8</b>	<b>19</b>	<b>0</b>	<b>6</b>	<b>7</b>	<b>0</b>	<b>30</b>
Illinois	7	0	0	20	0	0	0
Indiana	0	1	0	7	9	0	0
Michigan	52	1,856	0	17	0	0	61
Ohio	0	0	0	11	0	0	0
Wisconsin	25	269	0	19	0	0	34
<b>West North Central</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>30</b>
Iowa	3	0	0	13	0	0	0
Kansas	0	0	0	20	0	0	0
Minnesota	19	0	0	0	0	0	30
Missouri	0	0	0	0	0	0	0
Nebraska	9	0	0	0	0	0	0
North Dakota	64	0	0	0	0	0	0
<b>South Atlantic</b>	<b>8</b>	<b>20</b>	<b>46</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>29</b>
Delaware	0	0	0	0	0	0	0
Florida	21	29	0	12	0	0	0
Georgia	28	36	46	21	0	0	0
Maryland	0	0	0	0	0	0	0
North Carolina	2	50	0	22	0	0	344
South Carolina	0	0	0	10	0	0	0
Virginia	8	49	0	6	0	0	0
West Virginia	0	0	0	0	0	0	29
<b>East South Central</b>	<b>0</b>	<b>44</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>0</b>
Alabama	0	105	0	14	0	0	0
Kentucky	0	0	0	11	0	0	0
Mississippi	0	0	0	22	0	0	0
Tennessee	0	0	0	5	0	0	0
<b>West South Central</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>1</b>	<b>6</b>	<b>0</b>	<b>0</b>
Arkansas	0	0	0	18	0	0	0
Louisiana	0	0	0	2	9	0	0
Oklahoma	0	0	0	0	0	0	0
Texas	0	0	12	2	6	0	0
<b>Mountain</b>	<b>24</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>0</b>
Colorado	0	0	0	0	0	0	0
Idaho	138	0	0	40	0	0	0
Montana	0	0	0	0	0	0	0
Nevada	0	0	0	0	0	0	0
New Mexico	0	0	0	0	0	0	0
Utah	0	0	0	0	0	0	0
Wyoming	26	0	0	9	0	0	0
<b>Pacific Contiguous</b>	<b>0</b>	<b>56</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>0</b>
California	0	0	0	1	2	0	0
Oregon	0	0	0	49	0	0	0
Washington	0	126	0	38	0	0	0
<b>Pacific Noncontiguous</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>106</b>
Alaska	0	10	0	0	0	0	0
Hawaii	0	0	0	0	0	0	106
<b>U.S. Total</b>	<b>4</b>	<b>7</b>	<b>17</b>	<b>1</b>	<b>4</b>	<b>0</b>	<b>17</b>

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, December 2018 (Continued)

Census Region and State	Wind	Geothermal	Biomass	Solar Thermal and Photovoltaic	Other Renewables	Hydroelectric Pumped Storage	Other Energy Sources	All Energy Sources
<b>New England</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>70</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>7</b>
Connecticut	0	0	0	1,245	1,245	0	0	14
Maine	0	0	0	0	5	0	0	9
Massachusetts	0	0	0	0	0	0	0	8
New Hampshire	0	0	0	0	0	0	0	0
Rhode Island	0	0	0	0	0	0	0	46
<b>Middle Atlantic</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>102</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>6</b>
New Jersey	0	0	0	140	140	0	0	5
New York	0	0	0	0	11	0	0	6
Pennsylvania	0	0	0	147	6	0	0	9
<b>East North Central</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>1</b>	<b>3</b>
Illinois	0	0	0	0	0	0	0	6
Indiana	0	0	0	0	18	0	0	5
Michigan	0	0	0	0	6	0	0	8
Ohio	0	0	0	0	16	0	0	7
Wisconsin	0	0	0	0	6	0	94	9
<b>West North Central</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>3</b>
Iowa	0	0	0	0	0	0	0	3
Kansas	0	0	0	0	0	0	0	19
Minnesota	0	0	0	0	0	0	0	7
Missouri	0	0	0	0	0	0	0	0
Nebraska	0	0	0	0	0	0	0	9
North Dakota	0	0	0	0	92	0	0	39
<b>South Atlantic</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>245</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>2</b>
Delaware	0	0	0	0	46	0	0	1
Florida	0	0	0	245	4	0	0	4
Georgia	0	0	0	0	3	0	0	4
Maryland	0	0	0	0	0	0	0	0
North Carolina	0	0	0	0	4	0	0	4
South Carolina	0	0	0	0	2	0	0	2
Virginia	0	0	0	0	0	0	0	2
West Virginia	0	0	0	0	0	0	0	18
<b>East South Central</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>195</b>	<b>2</b>	<b>0</b>	<b>69</b>	<b>3</b>
Alabama	0	0	0	0	3	0	0	5
Kentucky	0	0	0	0	12	0	0	8
Mississippi	0	0	0	0	3	0	0	6
Tennessee	0	0	0	195	5	0	69	2
<b>West South Central</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>1</b>
Arkansas	0	0	0	0	4	0	0	4
Louisiana	0	0	0	0	3	0	2	2
Oklahoma	0	0	0	0	0	0	0	0
Texas	0	0	0	0	7	0	4	2
<b>Mountain</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>5</b>
Colorado	0	0	0	0	0	0	0	0
Idaho	0	0	0	0	1	0	0	11
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	8
<b>Pacific Contiguous</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>58</b>	<b>4</b>	<b>0</b>	<b>2</b>	<b>1</b>
California	0	0	0	58	8	0	2	1
Oregon	0	0	0	0	8	0	0	10
Washington	0	0	0	0	6	0	0	6
<b>Pacific Noncontiguous</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>143</b>	<b>0</b>	<b>0</b>	<b>10</b>
Alaska	0	0	0	0	143	0	0	3
Hawaii	0	0	0	0	0	0	0	14
<b>U.S. Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>45</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>1</b>

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 December 2018

Census Region and State	Coal	Petroleum Liquids	Petroleum Coke	Natural Gas	Other Gases	Nuclear	Hydroelectric Conventional
<b>New England</b>	<b>191</b>	<b>78</b>	<b>0</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>33</b>
Connecticut	0	0	0	14	0	0	0
Maine	191	145	0	27	0	0	34
Massachusetts	0	0	0	9	0	0	0
New Hampshire	0	0	0	0	0	0	0
Rhode Island	0	0	0	46	0	0	0
<b>Middle Atlantic</b>	<b>41</b>	<b>10</b>	<b>41</b>	<b>9</b>	<b>16</b>	<b>0</b>	<b>38</b>
New Jersey	0	0	0	10	0	0	0
New York	0	0	0	7	0	0	38
Pennsylvania	41	89	61	14	25	0	0
<b>East North Central</b>	<b>8</b>	<b>19</b>	<b>0</b>	<b>6</b>	<b>7</b>	<b>0</b>	<b>30</b>
Illinois	7	0	0	20	0	0	0
Indiana	0	1	0	7	9	0	0
Michigan	52	1,856	0	17	0	0	61
Ohio	0	0	0	11	0	0	0
Wisconsin	25	269	0	19	0	0	34
<b>West North Central</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>30</b>
Iowa	3	0	0	13	0	0	0
Kansas	0	0	0	20	0	0	0
Minnesota	19	0	0	0	0	0	30
Missouri	0	0	0	0	0	0	0
Nebraska	9	0	0	0	0	0	0
North Dakota	64	0	0	0	0	0	0
<b>South Atlantic</b>	<b>8</b>	<b>20</b>	<b>46</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>29</b>
Delaware	0	0	0	0	0	0	0
Florida	21	29	0	12	0	0	0
Georgia	28	36	46	21	0	0	0
Maryland	0	0	0	0	0	0	0
North Carolina	2	50	0	22	0	0	344
South Carolina	0	0	0	10	0	0	0
Virginia	8	49	0	6	0	0	0
West Virginia	0	0	0	0	0	0	29
<b>East South Central</b>	<b>0</b>	<b>44</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>0</b>
Alabama	0	105	0	14	0	0	0
Kentucky	0	0	0	11	0	0	0
Mississippi	0	0	0	22	0	0	0
Tennessee	0	0	0	5	0	0	0
<b>West South Central</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>1</b>	<b>6</b>	<b>0</b>	<b>0</b>
Arkansas	0	0	0	18	0	0	0
Louisiana	0	0	0	2	9	0	0
Oklahoma	0	0	0	0	0	0	0
Texas	0	0	12	2	6	0	0
<b>Mountain</b>	<b>24</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>0</b>
Colorado	0	0	0	0	0	0	0
Idaho	138	0	0	40	0	0	0
Montana	0	0	0	0	0	0	0
Nevada	0	0	0	0	0	0	0
New Mexico	0	0	0	0	0	0	0
Utah	0	0	0	0	0	0	0
Wyoming	26	0	0	9	0	0	0
<b>Pacific Contiguous</b>	<b>0</b>	<b>56</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>0</b>
California	0	0	0	1	2	0	0
Oregon	0	0	0	49	0	0	0
Washington	0	126	0	38	0	0	0
<b>Pacific Noncontiguous</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>106</b>
Alaska	0	10	0	0	0	0	0
Hawaii	0	0	0	0	0	0	106
<b>U.S. Total</b>	<b>4</b>	<b>7</b>	<b>17</b>	<b>1</b>	<b>4</b>	<b>0</b>	<b>17</b>

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 December 2018 (Continued)

Census Region and State	Wind	Geothermal	Biomass	Solar Thermal and Photovoltaic	Other Renewables	Hydroelectric Pumped Storage	Other Energy Sources	All Energy Sources
<b>New England</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>70</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>7</b>
Connecticut	0	0	0	1,245	1,245	0	0	14
Maine	0	0	0	0	5	0	0	9
Massachusetts	0	0	0	0	0	0	0	8
New Hampshire	0	0	0	0	0	0	0	0
Rhode Island	0	0	0	0	0	0	0	46
<b>Middle Atlantic</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>102</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>6</b>
New Jersey	0	0	0	140	140	0	0	5
New York	0	0	0	0	11	0	0	6
Pennsylvania	0	0	0	147	6	0	0	9
<b>East North Central</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>1</b>	<b>3</b>
Illinois	0	0	0	0	0	0	0	6
Indiana	0	0	0	0	18	0	0	5
Michigan	0	0	0	0	6	0	0	8
Ohio	0	0	0	0	16	0	0	7
Wisconsin	0	0	0	0	6	0	94	9
<b>West North Central</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>3</b>
Iowa	0	0	0	0	0	0	0	3
Kansas	0	0	0	0	0	0	0	19
Minnesota	0	0	0	0	0	0	0	7
Missouri	0	0	0	0	0	0	0	0
Nebraska	0	0	0	0	0	0	0	9
North Dakota	0	0	0	0	92	0	0	39
<b>South Atlantic</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>245</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>2</b>
Delaware	0	0	0	0	46	0	0	1
Florida	0	0	0	245	4	0	0	4
Georgia	0	0	0	0	3	0	0	4
Maryland	0	0	0	0	0	0	0	0
North Carolina	0	0	0	0	4	0	0	4
South Carolina	0	0	0	0	2	0	0	2
Virginia	0	0	0	0	0	0	0	2
West Virginia	0	0	0	0	0	0	0	18
<b>East South Central</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>195</b>	<b>2</b>	<b>0</b>	<b>69</b>	<b>3</b>
Alabama	0	0	0	0	3	0	0	5
Kentucky	0	0	0	0	12	0	0	8
Mississippi	0	0	0	0	3	0	0	6
Tennessee	0	0	0	195	5	0	69	2
<b>West South Central</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>1</b>
Arkansas	0	0	0	0	4	0	0	4
Louisiana	0	0	0	0	3	0	2	2
Oklahoma	0	0	0	0	0	0	0	0
Texas	0	0	0	0	7	0	4	2
<b>Mountain</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>5</b>
Colorado	0	0	0	0	0	0	0	0
Idaho	0	0	0	0	1	0	0	11
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	8
<b>Pacific Contiguous</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>58</b>	<b>4</b>	<b>0</b>	<b>2</b>	<b>1</b>
California	0	0	0	58	8	0	2	1
Oregon	0	0	0	0	8	0	0	10
Washington	0	0	0	0	6	0	0	6
<b>Pacific Noncontiguous</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>143</b>	<b>0</b>	<b>0</b>	<b>10</b>
Alaska	0	0	0	0	143	0	0	3
Hawaii	0	0	0	0	0	0	0	14
<b>U.S. Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>45</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>1</b>

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, December 2018**

Census Region and State	Residential	Commercial	Industrial	Transportation	Total
<b>New England</b>	<b>4</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>2</b>
Connecticut	0	1	3	0	1
Maine	1	1	2	0	1
Massachusetts	9	1	7	0	3
New Hampshire	1	1	3	0	1
Rhode Island	0	0	0	0	0
Vermont	3	7	7	0	3
<b>Middle Atlantic</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
New Jersey	0	0	1	0	0
New York	0	0	1	0	0
Pennsylvania	0	1	0	0	0
<b>East North Central</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>
Illinois	1	1	1	0	0
Indiana	1	4	2	0	1
Michigan	1	2	3	0	1
Ohio	1	1	1	0	1
Wisconsin	1	4	6	0	2
<b>West North Central</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>0</b>	<b>1</b>
Iowa	2	8	6	0	3
Kansas	3	1	8	0	2
Minnesota	1	5	7	0	3
Missouri	1	3	7	0	2
Nebraska	2	8	10	0	4
North Dakota	1	4	9	0	4
South Dakota	2	10	14	0	5
<b>South Atlantic</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>
Delaware	1	3	5	0	2
District of Columbia	0	0	0	0	0
Florida	1	1	6	0	1
Georgia	2	1	4	0	1
Maryland	0	1	2	0	0
North Carolina	1	1	4	0	1
South Carolina	2	1	4	0	1
Virginia	1	0	5	0	1
West Virginia	0	1	0	0	0
<b>East South Central</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>1</b>
Alabama	2	1	3	0	1
Kentucky	2	4	3	0	2
Mississippi	3	2	5	0	2
Tennessee	1	4	5	0	2
<b>West South Central</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>1</b>
Arkansas	2	2	5	0	2
Louisiana	2	1	2	0	1
Oklahoma	2	1	5	0	2
Texas	2	2	2	0	1
<b>Mountain</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>1</b>
Arizona	1	3	4	0	1
Colorado	2	5	6	0	2
Idaho	1	5	6	0	2
Montana	2	8	5	0	3
Nevada	1	2	1	0	1
New Mexico	2	8	8	0	4
Utah	2	5	3	0	2
Wyoming	2	8	4	0	3
<b>Pacific Contiguous</b>	<b>0</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>1</b>
California	0	1	2	0	1
Oregon	1	4	10	0	3
Washington	1	4	7	0	2
<b>Pacific Noncontiguous</b>	<b>1</b>	<b>5</b>	<b>5</b>	<b>0</b>	<b>2</b>
Alaska	2	11	17	0	6
Hawaii	0	0	0	0	0
<b>U.S. Total</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>

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 December 2018

Census Region and State	Residential	Commercial	Industrial	Transportation	Total
<b>New England</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>0</b>
Connecticut	0	1	2	0	1
Maine	0	1	1	0	1
Massachusetts	1	1	4	0	1
New Hampshire	0	1	2	0	1
Rhode Island	0	0	0	0	0
Vermont	1	6	6	0	3
<b>Middle Atlantic</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
New Jersey	0	0	1	0	0
New York	0	0	1	0	0
Pennsylvania	0	0	0	0	0
<b>East North Central</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>
Illinois	0	1	1	0	0
Indiana	1	3	2	0	1
Michigan	0	1	2	0	1
Ohio	0	1	1	0	0
Wisconsin	0	3	4	0	2
<b>West North Central</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>1</b>
Iowa	1	6	4	0	2
Kansas	1	1	5	0	1
Minnesota	1	3	5	0	2
Missouri	1	2	5	0	1
Nebraska	1	6	6	0	3
North Dakota	1	3	6	0	3
South Dakota	1	7	9	0	3
<b>South Atlantic</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>
Delaware	1	2	4	0	1
District of Columbia	0	0	0	0	0
Florida	0	0	4	0	0
Georgia	1	1	3	0	1
Maryland	0	0	2	0	0
North Carolina	0	0	2	0	1
South Carolina	1	1	2	0	1
Virginia	0	0	3	0	0
West Virginia	0	1	0	0	0
<b>East South Central</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>1</b>
Alabama	1	1	2	0	1
Kentucky	1	3	3	0	1
Mississippi	1	1	4	0	1
Tennessee	0	3	4	0	1
<b>West South Central</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>
Arkansas	1	1	3	0	1
Louisiana	1	1	1	0	0
Oklahoma	1	1	3	0	1
Texas	1	1	1	0	1
<b>Mountain</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>1</b>
Arizona	0	2	3	0	1
Colorado	1	4	5	0	2
Idaho	1	4	3	0	1
Montana	1	6	4	0	2
Nevada	0	1	1	0	1
New Mexico	1	6	6	0	3
Utah	1	4	2	0	2
Wyoming	1	6	3	0	2
<b>Pacific Contiguous</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>1</b>
California	0	1	1	0	0
Oregon	1	3	6	0	2
Washington	0	3	5	0	2
<b>Pacific Noncontiguous</b>	<b>0</b>	<b>4</b>	<b>3</b>	<b>0</b>	<b>2</b>
Alaska	1	8	11	0	4
Hawaii	0	0	0	0	0
<b>U.S. Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

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, December 2018**

Census Region and State	Residential	Commercial	Industrial	Transportation	Total
<b>New England</b>	<b>2</b>	<b>1</b>	<b>11</b>	<b>0</b>	<b>2</b>
Connecticut	5	1	2	0	2
Maine	1	1	2	0	1
Massachusetts	4	1	24	0	3
New Hampshire	1	1	2	0	1
Rhode Island	0	0	0	0	0
Vermont	3	7	6	0	3
<b>Middle Atlantic</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
New Jersey	0	0	2	0	0
New York	0	0	1	0	0
Pennsylvania	0	1	0	0	0
<b>East North Central</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>
Illinois	1	1	1	0	1
Indiana	2	4	2	0	1
Michigan	1	1	4	0	1
Ohio	1	1	1	0	1
Wisconsin	1	3	8	0	2
<b>West North Central</b>	<b>1</b>	<b>2</b>	<b>4</b>	<b>0</b>	<b>1</b>
Iowa	2	6	9	0	3
Kansas	3	2	7	0	2
Minnesota	1	3	9	0	2
Missouri	2	4	7	0	2
Nebraska	2	6	14	0	4
North Dakota	2	3	9	0	3
South Dakota	2	7	16	0	4
<b>South Atlantic</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>
Delaware	2	3	4	0	2
District of Columbia	0	0	0	0	0
Florida	1	1	6	0	1
Georgia	2	2	5	0	2
Maryland	1	1	0	0	0
North Carolina	2	1	4	0	1
South Carolina	2	2	4	0	1
Virginia	1	1	5	0	1
West Virginia	1	2	0	0	0
<b>East South Central</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>1</b>
Alabama	2	2	3	0	1
Kentucky	2	5	4	0	2
Mississippi	3	3	6	0	2
Tennessee	2	4	6	0	2
<b>West South Central</b>	<b>2</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>1</b>
Arkansas	3	3	5	0	2
Louisiana	2	2	2	0	1
Oklahoma	3	2	6	0	2
Texas	2	2	3	0	1
<b>Mountain</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>0</b>	<b>1</b>
Arizona	1	3	5	0	1
Colorado	3	5	8	0	3
Idaho	1	4	7	0	2
Montana	2	5	8	0	3
Nevada	1	3	2	0	1
New Mexico	4	8	12	0	4
Utah	3	6	4	0	3
Wyoming	2	6	5	0	3
<b>Pacific Contiguous</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>0</b>
California	0	1	2	0	0
Oregon	1	3	11	0	2
Washington	1	3	9	0	2
<b>Pacific Noncontiguous</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>0</b>	<b>1</b>
Alaska	2	6	16	0	4
Hawaii	0	0	0	0	0
<b>U.S. Total</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>

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.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 December 2018**

Census Region and State	Residential	Commercial	Industrial	Transportation	Total
<b>New England</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>
Connecticut	4	1	1	0	2
Maine	0	1	2	0	0
Massachusetts	0	1	3	0	0
New Hampshire	1	1	2	0	0
Rhode Island	0	0	0	0	0
Vermont	2	6	5	0	2
<b>Middle Atlantic</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
New Jersey	0	0	1	0	0
New York	0	0	1	0	0
Pennsylvania	1	0	0	0	0
<b>East North Central</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>
Illinois	0	1	1	0	0
Indiana	1	3	1	0	1
Michigan	0	1	3	0	1
Ohio	0	1	1	0	0
Wisconsin	1	2	5	0	1
<b>West North Central</b>	<b>0</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>1</b>
Iowa	1	4	5	0	2
Kansas	1	1	5	0	1
Minnesota	1	3	6	0	2
Missouri	1	3	4	0	1
Nebraska	1	5	8	0	3
North Dakota	1	3	6	0	3
South Dakota	1	5	10	0	3
<b>South Atlantic</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>
Delaware	1	3	5	0	1
District of Columbia	0	0	0	0	0
Florida	0	1	4	0	0
Georgia	1	1	3	0	1
Maryland	0	0	0	0	0
North Carolina	1	1	3	0	1
South Carolina	1	1	2	0	1
Virginia	1	1	3	0	0
West Virginia	0	1	0	0	0
<b>East South Central</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>1</b>
Alabama	1	1	2	0	1
Kentucky	1	4	3	0	1
Mississippi	1	2	4	0	1
Tennessee	1	3	4	0	1
<b>West South Central</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>1</b>
Arkansas	1	2	3	0	1
Louisiana	1	1	1	0	1
Oklahoma	1	1	4	0	1
Texas	1	1	2	0	1
<b>Mountain</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>1</b>
Arizona	0	2	3	0	1
Colorado	1	4	6	0	2
Idaho	1	3	3	0	1
Montana	1	4	6	0	2
Nevada	0	2	1	0	1
New Mexico	2	6	9	0	3
Utah	1	4	3	0	2
Wyoming	1	5	4	0	2
<b>Pacific Contiguous</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>
California	0	1	1	0	0
Oregon	1	2	7	0	2
Washington	1	2	6	0	1
<b>Pacific Noncontiguous</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>1</b>
Alaska	1	5	10	0	3
Hawaii	0	0	0	0	0
<b>U.S. Total</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>

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, December 2018**

Census Region and State	Residential	Commercial	Industrial	Transportation	Total
<b>New England</b>	<b>3</b>	<b>0</b>	<b>11</b>	<b>0</b>	<b>2</b>
Connecticut	5	0	2	0	2
Maine	0	0	1	0	0
Massachusetts	5	1	24	0	3
New Hampshire	0	0	1	0	0
Rhode Island	0	0	0	0	0
Vermont	2	2	2	0	1
<b>Middle Atlantic</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
New Jersey	0	0	1	0	0
New York	0	0	0	0	0
Pennsylvania	0	0	0	0	0
<b>East North Central</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Illinois	0	0	0	0	0
Indiana	1	1	1	0	1
Michigan	1	1	1	0	1
Ohio	0	0	0	0	0
Wisconsin	1	2	2	0	1
<b>West North Central</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>1</b>
Iowa	2	3	4	0	1
Kansas	2	2	4	0	2
Minnesota	1	2	3	0	1
Missouri	1	1	2	0	1
Nebraska	2	3	5	0	2
North Dakota	1	2	3	0	1
South Dakota	2	4	5	0	2
<b>South Atlantic</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>
Delaware	1	1	2	0	1
District of Columbia	0	0	0	0	0
Florida	1	1	3	0	1
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	1
West Virginia	0	1	0	0	0
<b>East South Central</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>
Alabama	1	2	1	0	1
Kentucky	1	1	1	0	1
Mississippi	2	2	3	0	1
Tennessee	1	1	2	0	1
<b>West South Central</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>1</b>
Arkansas	2	3	2	0	1
Louisiana	1	1	1	0	1
Oklahoma	2	2	3	0	1
Texas	1	1	1	0	1
<b>Mountain</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>
Arizona	1	1	2	0	1
Colorado	2	2	3	0	1
Idaho	1	2	2	0	1
Montana	2	4	4	0	1
Nevada	1	1	1	0	1
New Mexico	3	3	6	0	2
Utah	2	2	2	0	1
Wyoming	2	3	2	0	1
<b>Pacific Contiguous</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>
California	0	0	1	0	0
Oregon	1	2	3	0	1
Washington	1	2	2	0	1
<b>Pacific Noncontiguous</b>	<b>1</b>	<b>3</b>	<b>2</b>	<b>0</b>	<b>2</b>
Alaska	2	6	8	0	3
Hawaii	0	0	0	0	0
<b>U.S. Total</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>

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.B. Relative Standard Error for Average Price of Electricity to Ultimate Customers**

**by End-Use Sector, Census Division, and State, Year-to-Date through December 2018**

Census Region and State	Residential	Commercial	Industrial	Transportation	Total
<b>New England</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>1</b>
Connecticut	4	1	2	0	2
Maine	0	1	2	0	1
Massachusetts	1	1	5	0	1
New Hampshire	1	1	2	0	1
Rhode Island	0	0	0	0	0
Vermont	2	7	7	0	3
<b>Middle Atlantic</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
New Jersey	0	0	2	0	0
New York	0	0	1	0	0
Pennsylvania	1	1	0	0	0
<b>East North Central</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>
Illinois	0	1	1	0	0
Indiana	1	4	2	0	1
Michigan	0	2	3	0	1
Ohio	0	1	1	0	0
Wisconsin	1	3	6	0	2
<b>West North Central</b>	<b>0</b>	<b>2</b>	<b>3</b>	<b>0</b>	<b>1</b>
Iowa	1	6	6	0	3
Kansas	1	2	6	0	2
Minnesota	1	4	7	0	2
Missouri	1	3	6	0	1
Nebraska	1	7	9	0	4
North Dakota	1	4	8	0	4
South Dakota	1	8	12	0	4
<b>South Atlantic</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>
Delaware	1	3	5	0	2
District of Columbia	0	0	0	0	0
Florida	0	1	5	0	0
Georgia	1	1	4	0	1
Maryland	0	1	2	0	0
North Carolina	1	1	3	0	1
South Carolina	1	1	3	0	1
Virginia	0	1	4	0	1
West Virginia	0	1	0	0	0
<b>East South Central</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>1</b>
Alabama	1	1	3	0	1
Kentucky	1	5	3	0	2
Mississippi	1	2	5	0	2
Tennessee	1	4	5	0	2
<b>West South Central</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>1</b>
Arkansas	1	2	4	0	2
Louisiana	1	1	2	0	1
Oklahoma	1	2	5	0	1
Texas	1	1	2	0	1
<b>Mountain</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>1</b>
Arizona	0	2	4	0	1
Colorado	1	5	7	0	2
Idaho	1	4	4	0	2
Montana	1	7	6	0	3
Nevada	0	2	1	0	1
New Mexico	2	8	10	0	4
Utah	1	5	3	0	2
Wyoming	1	7	4	0	3
<b>Pacific Contiguous</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>1</b>
California	0	1	2	0	1
Oregon	1	4	9	0	2
Washington	1	4	7	0	2
<b>Pacific Noncontiguous</b>	<b>1</b>	<b>4</b>	<b>3</b>	<b>0</b>	<b>2</b>
Alaska	1	9	14	0	5
Hawaii	0	0	0	0	0
<b>U.S. Total</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>

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 2018

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
2018	1	01/01/2018 5:43 PM		. Hours, . Minutes	American Electric Power - Texas	TRE	Texas:	Public appeal to reduce the use of electricity for purposes of maintaining the continuity of the electric power system-Severe Weather	Unknown	Unknown
2018	1	01/01/2018 6:21 PM	01/02/2018 6:11 PM	23 Hours, 50 Minutes	Tennessee Valley Authority	SERC	Tennessee:	Public appeal to reduce the use of electricity for purposes of maintaining the continuity of the electric power system-Severe Weather	Unknown	Unknown
2018	1	01/01/2018 9:37 PM	01/02/2018 10:30 AM	12 Hours, 53 Minutes	Memphis Light Gas and Water Division	SERC	Tennessee:	Public appeal to reduce the use of electricity for purposes of maintaining the continuity of the electric power system-System Operations	Unknown	Unknown
2018	1	01/02/2018 6:45 AM	01/02/2018 9:00 AM	2 Hours, 15 Minutes	Duke Energy Progress	SERC	North Carolina: South Carolina:	System-wide voltage reductions of 3 percent or more-Severe Weather	14998	Unknown
2018	1	01/02/2018 7:30 AM		. Hours, . Minutes	South Carolina Electric and Gas	SERC	South Carolina:	Public appeal to reduce the use of electricity for purposes of maintaining the continuity of the electric power system-Severe Weather	0	717000
2018	1	01/02/2018 10:00 AM	02/12/2018 8:00 AM	982 Hours, 0 Minutes	Somerset Operating Company, LLC	NPCC	New York: Niagara County:	Fuel supply emergencies that could impact electric power system adequacy or reliability-Fuel Supply Deficiency	675	Unknown
2018	1	01/15/2018 4:20 AM	01/18/2018 5:48 AM	73 Hours, 28 Minutes	American Electric Power - Texas	TRE	Texas:	Public appeal to reduce the use of electricity for purposes of maintaining the continuity of the electric power system-Severe Weather	Unknown	Unknown
2018	1	01/16/2018 1:57 PM	01/16/2018 2:32 PM	0 Hours, 35 Minutes	ERCOT	TRE	Texas:	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-Severe Weather	Unknown	Unknown
2018	1	01/16/2018 3:00 PM	01/18/2018 1:00 PM	46 Hours, 0 Minutes	Memphis Light Gas and Water Division	SERC	Tennessee: Shelby County:	Public appeal to reduce the use of electricity for purposes of maintaining the continuity of the electric power system-System Operations	Unknown	Unknown
2018	1	01/16/2018 3:00 PM	01/18/2018 1:00 PM	46 Hours, 0 Minutes	Tennessee Valley Authority	SERC	Tennessee:	Public appeal to reduce the use of electricity for purposes of maintaining the continuity of the electric power system-Severe Weather	Unknown	Unknown
2018	1	01/17/2018 5:10 AM	01/17/2018 1:00 PM	7 Hours, 50 Minutes	Cooperative Energy	SERC	Mississippi:	Public appeal to reduce the use of electricity for purposes of maintaining the continuity of the electric power system-System Operations	1788	420000
2018	1	01/17/2018 6:10 AM	01/17/2018 2:00 PM	7 Hours, 50 Minutes	Louisiana Generating LLC	SERC	Louisiana:	Public appeal to reduce the use of electricity for purposes of maintaining the continuity of the electric power system-System Operations	Unknown	Unknown
2018	1	01/18/2018 5:00 AM	01/18/2018 9:45 AM	4 Hours, 45 Minutes	Cooperative Energy	SERC	Mississippi:	Public appeal to reduce the use of electricity for purposes of maintaining the continuity of the electric power system-System Operations	1760	420000
2018	1	01/18/2018 5:00 AM	01/18/2018 11:00 AM	6 Hours, 0 Minutes	Entergy Services, Inc.	SERC	Arkansas: Mississippi: Louisiana: Texas:	Public appeal to reduce the use of electricity for purposes of maintaining the continuity of the electric power system-Severe Weather	31500	Unknown
2018	1	01/18/2018 6:00 AM		. Hours, . Minutes	Louisiana Generating LLC	SERC	Louisiana:	Public appeal to reduce the use of electricity for purposes of maintaining the continuity of the electric power system-System Operations	Unknown	Unknown
2018	2	02/08/2018 1:25 PM	02/08/2018 1:31 PM	0 Hours, 6 Minutes	Pacific Gas & Electric Co	WECC	California:	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-System Operations	30	10900
2018	3	03/01/2018 11:43 AM	03/01/2018 11:56 AM	0 Hours, 13 Minutes	Pacific Gas & Electric Co	WECC	California:	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-Severe Weather	38	10898
2018	3	03/01/2018 9:57 PM	03/02/2018 10:14 AM	12 Hours, 17 Minutes	The Illuminating Company	RF	Ohio:	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	86501
2018	3	03/01/2018 10:20 PM	03/04/2018 8:00 PM	69 Hours, 40 Minutes	Detroit Edison Co	RF	Michigan: Wayne County, Washtenaw County, Oakland County, Macomb County, Monroe County:	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	95000
2018	3	03/02/2018 7:00 AM		. Hours, . Minutes	Central Hudson Gas & Elec Corp	NPCC	New York: Dutchess County, Orange County, Greene County, Ulster County, Putnam County, Sullivan County, Albany County, Columbia County:	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	90000
2018	3	03/02/2018 8:00 AM	03/03/2018 11:00 PM	39 Hours, 0 Minutes	American Electric Power - (RFC Reliability Region) (8400 Smiths Mill Road, New Albany Ohio 43054)	RF	Virginia: West Virginia:	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	65198
2018	3	03/02/2018 8:42 AM		. Hours, . Minutes	Niagara Mohawk Power Corporation (dba National Grid)	NPCC	New York:	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	63331

Table B.1 Major Disturbances and Unusual Occurrences, Year-to-Date 2018

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
2018	3	03/02/2018 11:34 AM		. Hours, . Minutes	New York State Electric & Gas	NPCC	New York	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	50000
2018	3	03/02/2018 11:58 AM		. Hours, . Minutes	PPL Electric Utilities Corp	RF	Pennsylvania: Berks County, Bucks County, Carbon County, Chester County, Clinton County, Columbia County, Cumberland County, Dauphin County, Juniata County, Lackawanna County, Lancaster County, Lebanon County, Lehigh County, Luzerne County, Lycoming County, Monroe County, Montgomery County, Montour County, Northampton County, Northumberland County, Pike County, Schuylkill County, Snyder 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-Severe Weather	Unknown	126000
2018	3	03/02/2018 12:00 PM		. Hours, . Minutes	Baltimore Gas and Electric	RF	Maryland	Public appeal to reduce the use of electricity for purposes of maintaining the continuity of the electric power system-Severe Weather	670	474019
2018	3	03/02/2018 12:00 PM	03/05/2018 12:00 AM	60 Hours, 0 Minutes	Exelon Corporation/PECO	RF	Pennsylvania	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	630000
2018	3	03/02/2018 1:51 PM	03/04/2018 12:11 PM	46 Hours, 20 Minutes	Metropolitan Edison Co	RF	Pennsylvania	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	233136
2018	3	03/02/2018 1:51 PM	03/05/2018 1:18 PM	71 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-Severe Weather	Unknown	325000
2018	3	03/02/2018 3:10 PM	03/06/2018 4:57 AM	85 Hours, 47 Minutes	Jersey Central Power & Lt Co	RF	Ohio	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	249322
2018	3	03/02/2018 3:46 PM	03/04/2018 7:46 PM	52 Hours, 0 Minutes	Consolidated Edison Co-NY Inc	NPCC	New York: New York County, Westchester County;	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	72353
2018	3	03/02/2018 5:00 PM	03/06/2018 11:00 AM	90 Hours, 0 Minutes	Delmarva Power & Light Company	RF	Delaware: Maryland:	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	60000
2018	3	03/07/2018 12:00 PM	03/07/2018 5:00 PM	5 Hours, 0 Minutes	Exelon Corporation/PECO	RF	Pennsylvania	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	120000
2018	3	03/07/2018 4:10 PM	03/10/2018 11:32 AM	67 Hours, 22 Minutes	Jersey Central Power & Lt Co	RF	New Jersey	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	216800
2018	3	03/07/2018 5:15 PM		. Hours, . Minutes	Public Service Electric & Gas	RF	New Jersey	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	50	58000
2018	3	03/07/2018 7:37 PM	03/10/2018 4:35 PM	68 Hours, 58 Minutes	ISO New England	NPCC	Connecticut: Massachusetts: Maine: New Hampshire: Rhode Island: Vermont:	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	102000
2018	3	03/13/2018 8:50 AM	03/14/2018 11:22 PM	38 Hours, 32 Minutes	ISO New England	NPCC	Massachusetts: Rhode Island:	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	123629
2018	3	03/19/2018 11:29 PM	03/20/2018 3:37 AM	4 Hours, 8 Minutes	Southern Company	SERC	Alabama: Georgia:	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	261	78220
2018	3	03/20/2018 7:00 PM	03/25/2018 6:30 AM	107 Hours, 30 Minutes	Atlantic City Electric Co	RF	New Jersey: Atlantic County, Camden County, Cape May County, Gloucester County, Salem County, Cumberland County, Burlington County;	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	80	124000
2018	3	03/24/2018 10:30 PM	03/26/2018 8:00 PM	45 Hours, 30 Minutes	American Electric Power - (RFC Reliability Region) (8400 Smiths Mill Road, New Albany Ohio 43054)	RF	Virginia: West Virginia:	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	81227
2018	4	04/04/2018 4:42 PM	04/07/2018 6:22 AM	61 Hours, 40 Minutes	Niagara Mohawk Power Corporation (dba National Grid)	NPCC	New York:	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	72896
2018	4	04/05/2018 12:50 AM	04/05/2018 4:00 PM	15 Hours, 10 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	65932
2018	4	04/09/2018 11:16 AM		. Hours, . Minutes	Peak Reliability	WECC	Utah:	Uncontrolled loss of 300 Megawatts or more of firm system loads for more than 15 minutes from a single incident-Transmission Interruption	300	250000
2018	4	04/09/2018 12:16 PM	04/09/2018 1:52 PM	1 Hours, 36 Minutes	Pacificorp	WECC	Utah: Salt Lake County;	Uncontrolled loss of 300 Megawatts or more of firm system loads for more than 15 minutes from a single incident-Transmission Interruption	806	57000
2018	4	04/14/2018 9:30 AM	04/14/2018 10:00 AM	0 Hours, 30 Minutes	Entergy Corp	SERC	Louisiana: Arkansas: Mississippi: Texas:	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	56350
2018	4	04/15/2018 7:30 AM	04/18/2018 7:30 AM	72 Hours, 0 Minutes	DTE Energy	RF	Michigan:	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	389591
2018	4	04/15/2018 5:14 PM	04/15/2018 11:25 PM	6 Hours, 11 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	Unknown	78100
2018	5	05/04/2018 12:00 PM	05/06/2018 1:00 PM	49 Hours, 0 Minutes	DTE Energy	RF	Michigan:	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	300000
2018	5	05/04/2018 2:00 PM	05/05/2018 9:30 AM	19 Hours, 30 Minutes	Consumers Energy Co	RF	Michigan: Calhoun County, Genesee County, Ingham County, Kent County, Macomb County, Midland County, Saginaw County, Gratiot County;	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	90000

Table B.1 Major Disturbances and Unusual Occurrences, Year-to-Date 2018

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
2018	5	05/04/2018 8:10 PM		. Hours, . Minutes	Niagara Mohawk Power Corporation (dba National Grid)	NPCC	New York	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	106150
2018	5	05/04/2018 11:10 PM	05/05/2018 12:40 AM	1 Hours, 30 Minutes	ISO New England	NPCC	New Hampshire: Vermont	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	56000
2018	5	05/05/2018 4:30 AM	05/05/2018 3:30 PM	11 Hours, 0 Minutes	ISO New England	NPCC	Vermont: New Hampshire: Maine	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	31900
2018	5	05/14/2018 7:08 PM		. Hours, . Minutes	Dominion Energy VA	SERC	Virginia	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	112000
2018	5	05/15/2018 2:50 PM		. Hours, . Minutes	PPL Electric Utilities Corp	RF	Pennsylvania: Lehigh County, Schuylkill County, Cumberland County, Lancaster County, Northampton County, Berks County, Clinton County, Susquehanna County, Bucks County, Carbon County, Chester County, Columbia County, Juniata County	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	114000
2018	5	05/15/2018 4:00 PM		. Hours, . Minutes	Central Hudson Gas & Electric	NPCC	New York: Dutchess County, Ulster County, Orange County	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	72000
2018	5	05/15/2018 5:15 PM		. Hours, . Minutes	New York State Electric & Gas	NPCC	New York	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	49999
2018	5	05/15/2018 5:25 PM		. Hours, . Minutes	Jersey Central Power & Lt Co	RF	New Jersey	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	82372
2018	5	05/15/2018 6:14 PM	05/15/2018 7:00 PM	0 Hours, 46 Minutes	Metropolitan Edison Co	RF	Pennsylvania	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	52872
2018	5	05/15/2018 6:35 PM	05/18/2018 3:57 PM	69 Hours, 22 Minutes	ISO New England	NPCC	Connecticut: Massachusetts: Rhode Island	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	120000
2018	5	05/17/2018 1:11 AM		. Hours, . Minutes	Peak Reliability	WECC	California: Contra Costa County	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	70	70000
2018	5	05/17/2018 1:11 AM	05/18/2018 12:38 AM	23 Hours, 27 Minutes	Pacific Gas & Electric Co	WECC	California	Loss of electric service to more than 50,000 customers for 1 hour or more-Transmission Disruption	124	70000
2018	5	05/26/2018 6:40 PM	05/27/2018 11:50 PM	29 Hours, 10 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	163932
2018	6	06/02/2018 5:00 AM	06/02/2018 11:00 AM	6 Hours, 0 Minutes	Kansas City Power & Light Co.	SPP RE	Missouri: Jackson County, Clay County, Platte County, Andrew County; Kansas: Johnson County	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	103535
2018	6	06/18/2018 6:20 PM	06/19/2018 12:15 AM	5 Hours, 55 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	112927
2018	6	06/20/2018 10:58 PM	06/21/2018 6:05 AM	7 Hours, 7 Minutes	Lake Worth Utilities	FRCC	Florida: Palm Beach County	Complete operational failure or shut-down of the transmission and/or distribution of electrical system-Transmission Interruption	73	27000
2018	6	06/22/2018 2:38 PM		. Hours, . Minutes	Peak Reliability	WECC	Washington	Electrical system separation (Islanding) where part or parts of power grid remain(s) operational in an otherwise blocked out area or within the partial failure of an integrated electrical system-Severe Weather	10000	4200000
2018	6	06/28/2018 2:50 PM	06/29/2018 9:00 AM	18 Hours, 10 Minutes	Southern Company	SERC	Alabama: Georgia	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	160	48109
2018	6	06/28/2018 6:36 PM	07/01/2018 7:00 AM	60 Hours, 24 Minutes	Ameren Missouri	SERC	Missouri: Illinois	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	112000
2018	6	06/29/2018 7:35 AM	06/29/2018 9:30 AM	1 Hours, 55 Minutes	Minnesota Power	MRO	Minnesota: St. Louis County	Uncontrolled loss of 300 Megawatts or more of firm system loads for 15 minutes or more from a single incident-Severe Weather	350	Unknown
2018	7	07/11/2018 12:58 AM		. Hours, . Minutes	California Department of Water Resources	WECC	California	Fuel supply emergencies that could impact electric power system adequacy or reliability-Fuel Supply Deficiency	0	0
2018	7	07/11/2018 3:40 PM	07/11/2018 4:00 PM	0 Hours, 20 Minutes	Tennessee Valley Authority	SERC	Tennessee	Uncontrolled loss of 300 Megawatts or more of firm system loads for 15 minutes or more from a single incident-Transmission Interruption	425	26195
2018	7	07/16/2018 5:15 AM		. Hours, . Minutes	California Department of Water Resources	WECC	California: Merced County	Fuel supply emergencies that could impact electric power system adequacy or reliability-Fuel Supply Deficiency	0	0
2018	7	07/18/2018 4:00 AM		. Hours, . Minutes	California Department of Water Resources	WECC	California: Fresno County	Fuel supply emergencies that could impact electric power system adequacy or reliability-Fuel Supply Deficiency	0	0
2018	7	07/18/2018 5:28 PM	07/18/2018 5:31 PM	0 Hours, 3 Minutes	Bonneville Power Administration	WECC	Oregon	Total generation loss, within one minute of: greater than or equal to 2,000 Megawatts in the Eastern or Western Interconnection or greater than or equal to 1,400 Megawatts in the ERCOT Interconnection.-Severe Weather/Transmission Interruption	Unknown	Unknown
2018	7	07/20/2018 4:19 PM	07/20/2018 4:48 PM	0 Hours, 29 Minutes	Tennessee Valley Authority	SERC	Kentucky	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	87833



Table B.1 Major Disturbances and Unusual Occurrences, Year-to-Date 2018

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
2018	7	07/21/2018 4:45 AM	07/21/2018 11:15 AM	6 Hours, 30 Minutes	Entergy Corp	SERC	Arkansas	Loss of electric service to more than 50,000 customers for 1 hour or more.-Severe Weather	Unknown	64930
2018	7	07/21/2018 7:20 AM	07/21/2018 11:30 AM	4 Hours, 10 Minutes	Southern Company	SERC	Georgia	Loss of electric service to more than 50,000 customers for 1 hour or more.-Severe Weather	143	42901
2018	7	07/23/2018 4:16 AM	07/23/2018 4:29 AM	0 Hours, 13 Minutes	Duke Energy Florida	FRCC	Florida: Pinellas County	within its area, contrary to design, of three or more Bulk Electric System Facilities caused by a common disturbance (excluding successful automatic reclosing).-Severe Weather/Transmission Interruption	40	Unknown
2018	7	07/26/2018 8:24 PM		. Hours, . Minutes	Redding Electric Utility	WECC	California: Shasta County	Public appeal to reduce the use of electricity for purposes of maintaining the continuity of the Bulk Electric System.-Natural Disaster	Unknown	Unknown
2018	7	07/27/2018 9:34 AM	07/27/2018 9:51 AM	0 Hours, 17 Minutes	Peak Reliability	WECC	Washington: Clark County	Electrical System Separation (Islanding) where part or parts of power grid remain(s) operational in an otherwise blocked out area or within the partial failure of an integrated electrical system.-System Operations	Unknown	Unknown
2018	7	07/27/2018 4:28 PM	07/27/2018 4:33 PM	0 Hours, 5 Minutes	Consolidated Edison Co-NY Inc	NPCC	New York: New York County	within its area, contrary to design, of three or more Bulk Electric System Facilities caused by a common disturbance (excluding successful automatic reclosing).-Severe Weather/Transmission Interruption	0	0
2018	7	07/29/2018 2:33 PM	07/29/2018 6:23 PM	3 Hours, 50 Minutes	Pacific Gas & Electric Co	WECC	California	Loss of electric service to more than 50,000 customers for 1 hour or more.-Natural Disaster	83	57670
2018	7	07/30/2018 6:30 AM	07/30/2018 11:00 PM	16 Hours, 30 Minutes	Arizona Public Service Co	WECC	Arizona: Maricopa County	Loss of electric service to more than 50,000 customers for 1 hour or more.-Severe Weather	Unknown	82000
2018	8	08/07/2018 1:22 AM	08/07/2018 1:59 AM	0 Hours, 37 Minutes	Pacific Gas & Electric Co	WECC	California: Butte County	Electrical System Separation (Islanding) where part or parts of power grid remain(s) operational in an otherwise blocked out area or within the partial failure of an integrated electrical system.-Natural Disaster	5	485
2018	8	08/07/2018 1:22 AM	08/07/2018 7:04 PM	17 Hours, 42 Minutes	Pacific Gas & Electric Co	WECC	California: Butte County	Electrical System Separation (Islanding) where part or parts of power grid remain(s) operational in an otherwise blocked out area or within the partial failure of an integrated electrical system.-Natural Disaster	27	11383
2018	8	08/26/2018 10:00 PM	08/27/2018 4:56 AM	6 Hours, 56 Minutes	Consumers Energy Co	RF	Michigan: Muskegon County, Newaygo County, Oceana County, Mason County, Kent County, Mecosta County, Montcalm County, Isabella County, Midland County, Saginaw County	Loss of electric service to more than 50,000 customers for 1 hour or more.-Severe Weather	Unknown	67000
2018	8	08/28/2018 8:00 PM	08/30/2018 2:59 PM	42 Hours, 59 Minutes	Consumers Energy Co	RF	Michigan: Benzie County, Barry County, Grand Traverse County, Kalkaska County, Mason County, Oceana County, Muskegon County, Kent County, Newaygo County, Montcalm County, Mecosta County, Antrim County, Eaton County, Ionia County, Isabella County, Clare County, Saginaw County	Loss of electric service to more than 50,000 customers for 1 hour or more.-Severe Weather	Unknown	110000
2018	8	08/29/2018 12:00 AM	08/30/2018 12:00 AM	24 Hours, 0 Minutes	ComEd	SERC	Illinois	Loss of electric service to more than 50,000 customers for 1 hour or more.-Severe Weather	Unknown	100000
2018	8	08/31/2018 3:07 PM	08/31/2018 3:31 PM	0 Hours, 24 Minutes	Pacificorp	WECC	Oregon	within its area, contrary to design, of three or more Bulk Electric System Facilities caused by a common disturbance (excluding successful automatic reclosing).-Natural Disaster/Transmission Interruption	96	50000
2018	9	09/06/2018 2:26 AM	09/06/2018 2:27 AM	0 Hours, 1 Minutes	Tampa Electric Co	FRCC	Florida: Hillsborough County	Unexpected Transmission Loss within its area, contrary to design, of three or more Bulk Electric System Facilities caused by a common disturbance (excluding successful automatic reclosing).-Transmission Interruption	0	0
2018	9	09/13/2018 8:30 PM	09/19/2018 5:00 PM	140 Hours, 30 Minutes	North Carolina EI Member Corp	SERC	North Carolina	Loss of electric service to more than 50,000 customers for 1 hour or more.-Severe Weather	300	325000
2018	9	09/13/2018 8:56 PM	09/20/2018 7:00 PM	166 Hours, 4 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	1457583
2018	9	09/15/2018 1:05 AM	09/17/2018 4:00 PM	62 Hours, 55 Minutes	South Carolina Pub Serv Auth	SERC	South Carolina: Horry County, Chesterfield County, Dillon County, Georgetown County, Marlboro County, Darlington County	Loss of electric service to more than 50,000 customers for 1 hour or more.-Severe Weather	Unknown	50100
2018	9	09/15/2018 3:00 PM	09/15/2018 6:00 PM	3 Hours, 0 Minutes	Louisiana Generating LLC	SERC	Louisiana	Public appeal to reduce the use of electricity for purposes of maintaining the continuity of the Bulk Electric System.-System Operations	Unknown	Unknown

Table B.1 Major Disturbances and Unusual Occurrences, Year-to-Date 2018

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
2018	9	09/15/2018 3:00 PM	09/15/2018 6:00 PM	3 Hours, 0 Minutes	Cooperative Energy	SERC	Mississippi: Forrest County;	Public appeal to reduce the use of electricity for purposes of maintaining the continuity of the Bulk Electric System.-System Operations	1322	420000
2018	9	09/16/2018 8:00 AM	09/18/2018 7:40 PM	59 Hours, 40 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	Unknown	50000
2018	9	09/22/2018 3:23 PM	09/22/2018 11:00 PM	7 Hours, 37 Minutes	Los Angeles Department of Water & Power	WECC	California: Los Angeles County;	Unexpected Transmission loss within its area, contrary to design, of three or more Bulk Electric System Facilities caused by a common disturbance (excluding successful automatic reclosing).-Natural Disaster	3507	2500
2018	9	09/26/2018 1:54 PM	09/26/2018 5:58 PM	4 Hours, 4 Minutes	CenterPoint Energy	TRE	Texas: Harris County;	Unexpected Transmission loss within its area, contrary to design, of three or more Bulk Electric System Facilities caused by a common disturbance (excluding successful automatic reclosing).-Transmission Interruption	0	0
2018	10	10/10/2018 11:59 AM	.	. Hours, . Minutes	Southern Company	FRCC	Florida: Alabama: Georgia;	Loss of electric service to more than 50,000 customers for 1 hour or more.-Severe Weather	152	45604
2018	10	10/10/2018 2:00 PM	10/11/2018 6:00 AM	16 Hours, 0 Minutes	Seminole Electric Cooperative Inc.	FRCC	Florida;	Loss of electric service to more than 50,000 customers for 1 hour or more.-Severe Weather	135	60717
2018	10	10/10/2018 4:00 PM	10/19/2018 6:00 AM	206 Hours, 0 Minutes	City of Tallahassee	FRCC	Florida;	Loss of electric service to more than 50,000 customers for 1 hour or more.-Severe Weather	330	55000
2018	10	10/11/2018 7:21 AM	10/11/2018 3:00 PM	7 Hours, 39 Minutes	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	Unknown	71654
2018	10	10/11/2018 1:15 PM	.	. Hours, . 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	Unknown	240807
2018	10	10/11/2018 4:42 PM	10/12/2018 9:00 PM	28 Hours, 18 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	170222
2018	10	10/11/2018 6:55 PM	10/12/2018 12:00 PM	17 Hours, 5 Minutes	North Carolina EI Member Corp	SERC	North Carolina;	Loss of electric service to more than 50,000 customers for 1 hour or more.-Severe Weather	Unknown	117000
2018	10	10/12/2018 3:36 AM	10/12/2018 1:56 PM	10 Hours, 20 Minutes	PJM Interconnection	RF	Maryland: Garrett County;	Unexpected Transmission loss within its area, contrary to design, of three or more Bulk Electric System Facilities caused by a common disturbance (excluding successful automatic reclosing).-Transmission Interruption	0	0
2018	10	10/14/2018 10:11 PM	.	. Hours, . Minutes	Pacific Gas & Electric Co	WECC	California;	Loss of electric service to more than 50,000 customers for 1 hour or more.-Natural Disaster	Unknown	60000
2018	10	10/16/2018 4:15 AM	10/16/2018 5:11 PM	12 Hours, 56 Minutes	ISO New England	NPCC	Connecticut: Rhode Island: Massachusetts: Vermont: New Hampshire: Maine;	Loss of electric service to more than 50,000 customers for 1 hour or more.-Severe Weather	Unknown	18000
2018	10	10/21/2018 12:16 AM	10/21/2018 4:14 PM	15 Hours, 58 Minutes	American Electric Power	RF	West Virginia;	Loss of electric service to more than 50,000 customers for 1 hour or more.-Severe Weather	Unknown	63408
2018	10	10/31/2018 7:30 PM	11/01/2018 6:55 PM	23 Hours, 25 Minutes	CenterPoint Energy	TRE	Texas: Harris County;	Loss of electric service to more than 50,000 customers for 1 hour or more.-Severe Weather	402	140932
2018	11	11/03/2018 5:20 PM	11/04/2018 2:30 PM	21 Hours, 10 Minutes	ISO New England	NPCC	Connecticut: Massachusetts: New Hampshire: Vermont: Maine: Rhode Island;	Loss of electric service to more than 50,000 customers for 1 hour or more.-Severe Weather	Unknown	62000
2018	11	11/06/2018 9:49 AM	11/09/2018 2:05 PM	76 Hours, 16 Minutes	Tennessee Valley Authority	SERC	Tennessee;	Loss of electric service to more than 50,000 customers for 1 hour or more.-Severe Weather	Unknown	61000
2018	11	11/08/2018 7:16 AM	11/28/2018 4:32 PM	489 Hours, 16 Minutes	Pacific Gas & Electric Co	WECC	California: Butte County;	Electrical System Separation (Islanding) where part or parts of power grid remain(s) operational in an otherwise blocked out area or within the partial failure of an integrated electrical system.-Natural Disaster/Transmission Interruption	32	11844
2018	11	11/10/2018 5:02 PM	11/14/2018 3:00 PM	93 Hours, 58 Minutes	WSPC	MRO	Wisconsin;	Fuel supply emergencies that could impact electric power system adequacy or reliability.-Fuel Supply Deficiency	0	0
2018	11	11/15/2018 3:23 AM	11/15/2018 5:35 PM	14 Hours, 12 Minutes	LG&E KU	SERC	Kentucky;	Loss of electric service to more than 50,000 customers for 1 hour or more.-Severe Weather	Unknown	150000
2018	11	11/15/2018 5:28 AM	11/15/2018 8:35 AM	3 Hours, 7 Minutes	Duke Energy Midwest	RF	Indiana;	Loss of electric service to more than 50,000 customers for 1 hour or more.-Severe Weather	Unknown	55000
2018	11	11/15/2018 5:38 AM	11/16/2018 6:00 AM	24 Hours, 22 Minutes	Duke Energy Midwest	SERC	Kentucky: Ohio;	Loss of electric service to more than 50,000 customers for 1 hour or more.-Severe Weather	Unknown	104000
2018	11	11/15/2018 10:50 AM	11/17/2018 1:12 PM	50 Hours, 22 Minutes	American Electric Power - (RFC Reliability Region)	RF	Virginia: West Virginia;	Loss of electric service to more than 50,000 customers for 1 hour or more.-Severe Weather	Unknown	50600

Table B.1 Major Disturbances and Unusual Occurrences, Year-to-Date 2018

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
2018	11	11/25/2018 10:30 PM	11/28/2018 8:17 PM	69 Hours, 47 Minutes	ComEd	SERC	Illinois: Will County, DuPage County, Kane County, McHenry County, Winnebago County, Ogle County, DeKalb County, Lee County, Grundy County, Lake County, Cook County, Livingston County, Stephenson County, LaSalle County, Kankakee County, Kendall County, Boone County;	Loss of electric service to more than 50,000 customers for 1 hour or more.-Severe Weather	Unknown	313448
2018	11	11/27/2018 8:00 AM	11/28/2018 4:50 PM	32 Hours, 50 Minutes	ISO New England	NPCC	Maine: New Hampshire; Vermont;	Loss of electric service to more than 50,000 customers for 1 hour or more.-Severe Weather	Unknown	32000
2018	12	12/03/2018 3:15 AM	12/03/2018 3:44 AM	0 Hours, 29 Minutes	ERCOT	TRE	Texas:	Unexpected transmission loss within its area, contrary to design, of three or more Bulk Electric System Facilities caused by a common disturbance (excluding successful automatic reclosing).-Transmission Interruption	16	Unknown
2018	12	12/09/2018 12:23 AM	12/09/2018 11:54 AM	11 Hours, 31 Minutes	Southern Company	SERC	Alabama; Georgia;	Loss of electric service to more than 50,000 customers for 1 hour or more.-Severe Weather	137	41126
2018	12	12/09/2018 3:35 AM	12/10/2018 11:45 PM	44 Hours, 10 Minutes	Duke Energy Carolinas	SERC	North Carolina;	Loss of electric service to more than 50,000 customers for 1 hour or more.-Severe Weather/Transmission Interruption	Unknown	50000
2018	12	12/09/2018 8:41 AM	12/09/2018 6:00 PM	9 Hours, 19 Minutes	Duke Energy Progress	SERC	North Carolina;	Loss of electric service to more than 50,000 customers for 1 hour or more.-Severe Weather	Unknown	70000
2018	12	12/14/2018 4:00 PM	12/17/2018 2:00 AM	58 Hours, 0 Minutes	Puget Sound Energy	WECC	Washington: King County, Kitsap County, Island County, Pierce County, Thurston County, Whatcom County, Skagit County, Kittitas County;	Loss of electric service to more than 50,000 customers for 1 hour or more.-Severe Weather	Unknown	150000
2018	12	12/14/2018 6:00 PM	.	. Hours, . Minutes	Snohomish County PUD No. 1	WECC	Washington: Snohomish County;	Loss of electric service to more than 50,000 customers for 1 hour or more.-Severe Weather	200	60000
2018	12	12/20/2018 9:30 AM	12/20/2018 5:00 PM	7 Hours, 30 Minutes	Puget Sound Energy	WECC	Washington: Skagit County, Snohomish County, King County, Kitsap County, Island County;	Loss of electric service to more than 50,000 customers for 1 hour or more.-Severe Weather	Unknown	165000
2018	12	12/27/2018 9:12 PM	12/27/2018 9:16 PM	0 Hours, 4 Minutes	Consolidated Edison Co-NY Inc.	NPCC	New York: New York County;	Unexpected transmission loss within its area, contrary to design, of three or more Bulk Electric System Facilities caused by a common disturbance (excluding successful automatic reclosing).-Transmission Interruption	Unknown	Unknown

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, 2017

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
2017	1	01/08/2017 9:07 AM	01/13/2017 2:30 PM	125 Hours, 23 Minutes	Pacific Gas & Electric Co	WECC	California	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	106000
2017	1	01/08/2017 11:59 PM		. Hours, . Minutes	California Department of Water Resources	WECC	California	Fuel supply emergencies that could impact electric power system adequacy or reliability-Fuel Supply Deficiency	0	0
2017	1	01/10/2017 7:30 PM	01/13/2017 2:30 PM	67 Hours, 0 Minutes	Pacific Gas & Electric Co	WECC	California	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	87000
2017	1	01/15/2017 6:35 AM	01/15/2017 7:44 AM	1 Hours, 9 Minutes	Los Angeles Department of Water & Power	WECC	California: Los Angeles County	Loss of electric service to more than 50,000 customers for 1 hour or more-Transmission Disruption	176	126000
2017	1	01/15/2017 9:27 AM	01/17/2017 1:58 AM	40 Hours, 31 Minutes	Oklahoma Municipal Power Authority	SPP	Oklahoma: Harper 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-Severe Weather	1	788
2017	1	01/18/2017 6:05 PM	01/19/2017 12:05 AM	6 Hours, 0 Minutes	Pacific Gas & Electric Co	WECC	California	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	75000
2017	1	01/22/2017 4:15 AM	01/24/2017 2:00 PM	57 Hours, 45 Minutes	Pacific Gas & Electric Co	WECC	California	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	97	64000
2017	1	01/22/2017 6:00 AM		. Hours, . Minutes	California Department of Water Resources	WECC	California	Fuel supply emergencies that could impact electric power system adequacy or reliability-Fuel Supply Deficiency	0	0
2017	1	01/22/2017 4:00 PM	01/23/2017 3:26 AM	11 Hours, 26 Minutes	Southern Company	SERC	Alabama: Georgia: Mississippi: Florida	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	100	29965
2017	2	02/02/2017 1:04 AM	02/02/2017 5:00 AM	3 Hours, 56 Minutes	Public Service Company of New Mexico	WECC	New Mexico: Bernalillo County, Santa Fe County	Uncontrolled loss of 300 Megawatts or more of firm system loads for more than 15 minutes from a single incident-Transmission Interruption	396	149223
2017	2	02/02/2017 1:11 AM		. Hours, . 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-Transmission Interruption	400	Unknown
2017	2	02/13/2017 1:00 PM	02/15/2017 1:35 PM	48 Hours, 35 Minutes	North Carolina Mun Power Agny #1	SERC	North Carolina: Union County	Physical attack that could potentially impact electric power system adequacy or reliability; or vandalism which targets components of any security systems-Vandalism	0	0
2017	2	02/17/2017 8:09 AM	02/22/2017 7:30 PM	131 Hours, 21 Minutes	Pacific Gas & Electric Co	WECC	California	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	254	169250
2017	2	02/17/2017 1:00 PM	02/17/2017 1:15 PM	0 Hours, 15 Minutes	Nevada Power Company d/b/a NV Energy	WECC	Nevada: Clark County	Physical attack that could potentially impact electric power system adequacy or reliability; or vandalism which targets components of any security systems-Vandalism	0	0
2017	2	02/17/2017 3:00 PM	02/20/2017 11:00 AM	68 Hours, 0 Minutes	LADWP	WECC	California: Los Angeles County	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	111591
2017	3	03/01/2017 8:30 AM	03/01/2017 2:00 PM	5 Hours, 30 Minutes	Tennessee Valley Authority	SERC	Tennessee: Kentucky	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	58000
2017	3	03/01/2017 11:49 AM	03/02/2017 9:30 PM	33 Hours, 41 Minutes	American Electric Power	RFC	Kentucky: West Virginia	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	98575
2017	3	03/02/2017 12:20 PM	03/02/2017 11:45 PM	11 Hours, 25 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	54316
2017	3	03/06/2017 8:00 PM	03/07/2017 1:00 AM	5 Hours, 0 Minutes	Kansas City Power & Light Co	SERC	Missouri: Jackson County, Platte County, Cass County, Lafayette County, Chariton County, Carroll County, Clay County, Johnson County	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	97734
2017	3	03/08/2017 9:30 AM	03/11/2017 5:00 AM	67 Hours, 30 Minutes	Consumers Energy Co	RFC	Michigan: Jackson County, Calhoun County, Ingham County, Hillsdale County, Washtenaw County, Kent County, Ottawa County, Midland County, Saginaw County	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	343000
2017	3	03/08/2017 11:30 AM	03/08/2017 7:52 PM	8 Hours, 22 Minutes	Cleveland Electric Illum Co	RFC	Ohio	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	71012
2017	3	03/08/2017 12:00 PM	03/11/2017 11:31 AM	71 Hours, 31 Minutes	Detroit Edison Co	RFC	Michigan	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	800000
2017	3	03/08/2017 1:30 PM	03/08/2017 4:30 PM	3 Hours, 0 Minutes	Niagara Mohawk Power Corporation (dba National Grid)	NPCC	New York	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather/Transmission Interruption	Unknown	106869
2017	3	03/08/2017 3:33 PM		. Hours, . Minutes	Rochester Gas & Electric Corp	NPCC	New York	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	50000
2017	3	03/14/2017 12:32 PM		. Hours, . Minutes	ISO New England	NPCC	Connecticut: Massachusetts: Rhode Island: New Hampshire: Maine: Vermont	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	69647
2017	3	03/21/2017 8:00 PM	03/22/2017 9:15 AM	13 Hours, 15 Minutes	Southern Company	SERC	Georgia	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	857	257000
2017	3	03/29/2017 3:30 AM	03/31/2017 6:00 AM	50 Hours, 30 Minutes	Oncor Electric Delivery Company LLC	TRE	Texas	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	175000

Table B.2 Major Disturbances and Unusual Occurrences, 2017

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
2017	4	04/03/2017 11:00 AM	04/03/2017 8:00 PM	9 Hours, 0 Minutes	Southern Company	SERC	Alabama, Georgia	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	290	86330
2017	4	04/06/2017 7:00 PM		. Hours, . Minutes	Pacific Gas & Electric Co	WECC	California	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	100000
2017	4	04/07/2017 4:33 AM	04/07/2017 8:20 AM	3 Hours, 47 Minutes	Pacificorp	WECC	Oregon	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	100	64852
2017	4	04/07/2017 8:15 AM	04/08/2017 12:14 AM	15 Hours, 59 Minutes	Portland General Electric Co	WECC	Oregon: Multnomah County, Washington County, Marion County, Clackamas County	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	153867
2017	4	04/24/2017 5:32 AM	04/24/2017 6:33 AM	1 Hours, 1 Minutes	Duke Energy Carolinas	SERC	North Carolina: Mecklenburg County	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	240	74698
2017	4	04/30/2017 1:00 AM	04/30/2017 5:45 PM	16 Hours, 45 Minutes	Entergy Corp	SERC	Arkansas, Louisiana, Mississippi	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	145174
2017	5	05/01/2017 11:14 PM	05/01/2017 11:34 PM	0 Hours, 20 Minutes	Pennsylvania Electric Co	RFC	Ohio	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	92390
2017	5	05/03/2017 6:58 PM	05/03/2017 9:15 PM	2 Hours, 17 Minutes	Southern California Edison Co	WECC	California	Load shedding of 100 Megawatts or more implemented under emergency operational policy-Generation Inadequacy	572	0
2017	5	05/03/2017 7:05 PM	05/03/2017 9:00 PM	1 Hours, 55 Minutes	California ISO	WECC	California	Load shedding of 100 Megawatts or more implemented under emergency operational policy-Generation Inadequacy	878	Unknown
2017	5	05/04/2017 5:00 AM	05/04/2017 10:00 PM	17 Hours, 0 Minutes	Southern Company	SERC	Alabama: Georgia	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	200	60377
2017	5	05/07/2017 5:15 AM		. Hours, . Minutes	California Department of Water Resources	WECC	California: Fresno County	Fuel supply emergencies that could impact electric power system adequacy or reliability-Fuel Supply Deficiency	0	0
2017	5	05/07/2017 11:30 PM	05/08/2017 5:00 AM	5 Hours, 30 Minutes	Owensboro Municipal Utilities	SERC	Kentucky: Daviess County	Public appeal to reduce the use of electricity for purposes of maintaining the continuity of the electric power system-Generation Inadequacy	80	0
2017	5	05/19/2017 5:30 AM		. Hours, . Minutes	Ameren Missouri	SERC	Missouri: St. Louis County	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	70696
2017	5	05/27/2017 11:00 PM		. Hours, . Minutes	Tennessee Valley Authority	SERC	Tennessee: Shelby County, Putnam County, Knox County, Davidson County, Hamilton County; Alabama: Madison County	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	116000
2017	5	05/27/2017 11:10 PM		. Hours, . Minutes	Memphis Light Gas and Water Division	SERC	Tennessee: Shelby County	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	391	188000
2017	5	05/28/2017 7:30 PM	05/29/2017 10:00 PM	26 Hours, 30 Minutes	American Electric Power - (SPP Reliability Region)	TRE	Texas: Louisiana	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	103000
2017	5	05/28/2017 7:30 PM	05/29/2017 10:00 PM	26 Hours, 30 Minutes	Southwest Power Pool, Inc.	SERC	Louisiana: Texas	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	103000
2017	6	06/11/2017 2:39 PM	06/11/2017 5:55 PM	3 Hours, 16 Minutes	MISO	RFC	Michigan	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	63	Unknown
2017	7	07/07/2017 3:30 AM	07/08/2017 7:30 PM	40 Hours, 0 Minutes	Consumers Energy Co	RFC	Michigan: Kent County, Ottawa County, Muskegon County, Barry County, Oceana County, Eaton County	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	160000
2017	7	07/08/2017 6:52 PM	07/09/2017 8:00 AM	13 Hours, 8 Minutes	Los Angeles Department of Water & Power	WECC	California: Los Angeles County	Uncontrolled loss of 300 Megawatts or more of firm system loads for more than 15 minutes from a single incident-Transmission Interruption	645	176867
2017	7	07/18/2017 4:23 PM	07/18/2017 6:39 PM	2 Hours, 16 Minutes	Western Area Power Administration - Western Area Lower Colorado	WECC	Nevada	Uncontrolled loss of 300 Megawatts or more of firm system loads for more than 15 minutes from a single incident-Severe Weather	0	0
2017	7	07/22/2017 10:00 PM		. Hours, . Minutes	Southwest Power Pool, Inc.	SERC	Missouri	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	131000
2017	7	07/22/2017 10:00 PM		. Hours, . Minutes	KCP&L Greater Missouri Operations Company	SERC	Missouri	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	115000
2017	7	07/22/2017 10:00 PM	07/23/2017 12:00 PM	14 Hours, 0 Minutes	Kansas City Power & Light Co	SERC	Missouri: Clay County, Jackson County, Lafayette County, Platte County; Kansas: Johnson County, Miami County, Wyandotte County	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	112540
2017	7	07/23/2017 4:00 AM		. Hours, . Minutes	Ameren Missouri	SERC	Missouri: Illinois	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	82000
2017	7	07/27/2017 6:00 AM	07/27/2017 11:29 AM	5 Hours, 29 Minutes	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

Table B.2 Major Disturbances and Unusual Occurrences, 2017

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
2017	8	08/21/2017 11:41 PM	08/22/2017 12:21 AM	0 Hours, 40 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-System Operations	1	2
2017	8	08/25/2017 6:17 PM	09/02/2017 5:00 PM	190 Hours, 43 Minutes	American Electric Power - Texas	TRE	Texas: Wagonwheel County, Nueces County, Aransas County, Refugio County, San Patricio County, Calhoun County, Victoria County, Jackson County, Live Oak County, Jim Wells County, Bee County, Lavaca County	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	220400
2017	8	08/25/2017 6:30 PM	09/05/2017 5:00 PM	262 Hours, 30 Minutes	ERCOT	TRE	Texas	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	330000
2017	8	08/26/2017 12:39 AM	08/26/2017 12:52 AM	0 Hours, 13 Minutes	ERCOT	TRE	Texas	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-Severe Weather	Unknown	Unknown
2017	8	08/26/2017 6:26 AM	09/08/2017 12:00 AM	305 Hours, 34 Minutes	CenterPoint Energy	TRE	Texas	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	1076868
2017	8	08/27/2017 5:10 AM	09/08/2017 12:00 AM	282 Hours, 50 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	1076868
2017	8	08/30/2017 2:15 AM	.	. Hours, . Minutes	Entergy Corp	TRE	Texas	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	78500
2017	8	08/31/2017 2:49 PM	08/31/2017 5:14 PM	2 Hours, 25 Minutes	Southern California Edison Co	WECC	California: Los Angeles County	Loss shedding or 100 Megawatts or more implemented under emergency operational policy-Severe Weather	100	0
2017	9	09/01/2017 3:41 PM	09/01/2017 8:30 PM	4 Hours, 49 Minutes	Southern California Edison Co	WECC	California:	Loss shedding or 100 Megawatts or more implemented under emergency operational policy-Severe Weather	337	0
2017	9	09/09/2017 12:00 AM	.	. Hours, . Minutes	Tampa Electric Company	FRCC	Florida: Hillsborough County, Pasco County, Polk County;	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	1275	425000
2017	9	09/09/2017 12:30 PM	.	. Hours, . Minutes	Florida Power & Light	FRCC	Florida:	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	3500000
2017	9	09/10/2017 6:35 PM	09/13/2017 5:00 PM	70 Hours, 25 Minutes	Duke Energy Florida	FRCC	Florida: Alachua County, Bay County, Brevard County, Citrus County, Columbia County, Dixie County, Flagler County, Franklin County, Gilchrist County, Gulf County, Hamilton County, Hardee County, Hernando County, Highlands County, Jefferson County, Lafayette County, Lake County, Leon County, Levy County, Madison County, Marion County, Orange County, Osceola County, Pasco County, Pinellas County, Po	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	4500	1000000
2017	9	09/10/2017 8:37 PM	.	. Hours, . Minutes	Seminole Electric Cooperative Inc	FRCC	Florida:	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	452555
2017	9	09/11/2017 12:30 AM	.	. Hours, . Minutes	Lakeland Electric	FRCC	Florida:	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	200	20000
2017	9	09/11/2017 2:27 AM	09/15/2017 8:44 PM	114 Hours, 17 Minutes	Southern Company	SERC	Georgia:	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	132	39659
2017	9	09/11/2017 12:55 PM	09/12/2017 8:00 AM	19 Hours, 5 Minutes	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	687	154832
2017	9	09/11/2017 5:30 PM	09/13/2017 9:30 AM	40 Hours, 0 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	365	265729
2017	10	10/08/2017 3:00 AM	.	. Hours, . Minutes	Southern Company	SERC	Alabama: Florida: Mississippi:	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	306	91945
2017	10	10/09/2017 2:03 AM	10/17/2017 1:30 PM	203 Hours, 27 Minutes	Pacific Gas & Electric Co	WECC	California:	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather/Transmission Interruption	177	117900
2017	10	10/09/2017 6:44 AM	.	. Hours, . Minutes	Pacific Gas & Electric Co	WECC	California:	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-Severe Weather	100	Unknown
2017	10	10/12/2017 9:09 AM	.	. Hours, . Minutes	Clarksdale Public Utilities	SERC	Mississippi: Coahoma County;	Public appeal to reduce the use of electricity for purposes of maintaining the continuity of the electric power system-System Operations	Unknown	Unknown
2017	10	10/16/2017 3:45 PM	10/16/2017 4:09 PM	0 Hours, 24 Minutes	Bonneville Power Administration	WECC	Washington: Montana:	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

Table B.2 Major Disturbances and Unusual Occurrences, 2017

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
2017	10	10/16/2017 3:55 PM	10/16/2017 4:10 PM	0 Hours, 15 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-Transmission Interruption	0	0
2017	10	10/20/2017 3:44 AM	10/20/2017 3:45 AM	0 Hours, 1 Minutes	Peak Reliability	WECC	Washington:	Uncontrolled loss of 300 Megawatts or more of firm system loads for more than 15 minutes from a single incident-Severe Weather	900	Unknown
2017	10	10/22/2017 8:45 AM	10/22/2017 2:00 PM	5 Hours, 15 Minutes	Entergy Corp	SERC	Louisiana: Mississippi: Arkansas: Texas:	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	Unknown
2017	10	10/23/2017 5:50 PM	10/24/2017 6:17 PM	24 Hours, 27 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	440	115144
2017	10	10/26/2017 8:17 AM	10/26/2017 8:41 AM	0 Hours, 24 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-Transmission Interruption	0	0
2017	10	10/26/2017 8:17 AM	10/26/2017 8:41 AM	0 Hours, 24 Minutes	Bonneville Power Administration	WECC	Washington: Whatcom County: Montana:	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
2017	10	10/29/2017 11:40 PM	11/01/2017 6:08 PM	66 Hours, 28 Minutes	ISO New England	NPCC	Connecticut: Massachusetts: New Hampshire: Maine: Rhode Island: Vermont:	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	310453
2017	11	11/01/2017 3:40 PM	11/01/2017 10:00 PM	6 Hours, 20 Minutes	Owensboro Municipal Utilities	SERC	Kentucky: Daviess County:	Public appeal to reduce the use of electricity for purposes of maintaining the continuity of the electric power system-Generation Inadequacy	0	0
2017	11	11/05/2017 7:35 PM	11/05/2017 11:09 PM	3 Hours, 34 Minutes	Ohio Edison Co	RF	Ohio:	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	89216
2017	11	11/13/2017 2:00 AM	11/15/2017 8:17 AM	54 Hours, 17 Minutes	Puget Sound Energy	WECC	Washington: Island County, King County, Kitsap County, Thurston County, Skagit County, Whatcom County:	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	236100
2017	11	11/13/2017 4:33 PM	11/16/2017 6:00 AM	61 Hours, 27 Minutes	Seattle City Light, System Control Center	WECC	Washington: King County:	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	85	68430
2017	12	12/04/2017 9:53 PM	.	. Hours, . Minutes	Southern California Edison Co	WECC	California:	Uncontrolled loss of 300 Megawatts or more of firm system loads for more than 15 minutes from a single incident-Severe Weather/Transmission Interruption	540	263000
2017	12	12/05/2017 6:30 AM	12/06/2017 10:00 AM	27 Hours, 30 Minutes	Consumers Energy Co	RF	Michigan: Oscoda County, Isabella County, Roscommon County, Ogemaw County:	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	117500
2017	12	12/07/2017 8:00 PM	12/08/2017 5:00 PM	21 Hours, 0 Minutes	CPS Energy	TRE	Texas: Bexar County:	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	88000
2017	12	12/08/2017 9:30 AM	12/08/2017 10:30 PM	13 Hours, 0 Minutes	Entergy Corp	SERC	Louisiana: Mississippi:	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	Unknown	79000
2017	12	12/08/2017 10:00 AM	12/10/2017 8:50 PM	58 Hours, 50 Minutes	Southern Company	SERC	Alabama: Georgia: Mississippi:	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather	865	301872
2017	12	12/10/2017 1:25 AM	12/10/2017 2:30 AM	1 Hours, 5 Minutes	Southern California Edison Co	WECC	California: Ventura County, Santa Barbara County:	Loss of electric service to more than 50,000 customers for 1 hour or more-Severe Weather/Transmission Interruption	110	51323
2017	12	12/13/2017 9:55 AM	12/13/2017 2:45 PM	4 Hours, 50 Minutes	Long Island Power Authority	NPCC	New York: Suffolk County:	Fuel supply emergencies that could impact electric power system adequacy or reliability-Fuel Supply Deficiency	0	0
2017	12	12/29/2017 7:00 AM	.	. Hours, . 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

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<sup>21,24</sup>. 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 data<sup>22</sup>. 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 Inference<sup>16</sup>," 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  $n$ th digit if the  $(n+1)$  digit is 5 or larger and keep the  $n$ th 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 estimates<sup>1</sup>.

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)
	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)
Natural Gas and Other Gases	BFG	Blast Furnace Gas
	NG	Natural Gas
	OG	Other Gas
Nuclear	NUC	Nuclear (including Uranium, Plutonium, and Thorium)
Hydroelectric Conventional	WAT (Prime Mover = HY)	Water at a Conventional Hydroelectric Turbine, and water used in Wave Buoy Hydrokinetic Technology, Current Hydrokinetic Technology, and Tidal Hydrokinetic Technology
	WAT (Prime Mover = PS)	Pumping Energy for Reversible (Pumped Storage) Hydroelectric 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
Other Biomass	AB	Agricultural By-Products
	MSW	Municipal Solid Waste
	OBG	Other Biomass Gas (including digester gas, methane, and other biomass gases)
	OBL	Other Biomass Liquids
	OBS	Other Biomass Solids
	LFG	Landfill Gas
	SLW	Sludge Waste
Other Renewable Energy Sources	SUN	Solar (including solar thermal)
	WND	Wind
	GEO	Geothermal
Other Energy Sources	PUR	Purchased Steam
	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 entities<sup>14</sup>. 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<sup>15</sup>. 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 waste<sup>2</sup>:** 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).<sup>3</sup>

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 kilowatt-hour.

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:

$$CapacityFactor = \left( \frac{\sum_{x,m} Generation_{x,m}}{\sum_{x,m} Capacity_{x,m} * AvailableTime_{x,m}} \right)$$

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**

23

**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

92

### 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.<sup>1</sup> 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  $i^{\text{th}}$  utility’s 2013 (or the last published year) solar PV capacity

$y_{i_{2015,m}}$  is the  $i^{\text{th}}$  utility’s month  $m$ , 2015 (or the current year) reported solar PV capacity

$w_i$  is the weight factor, which is the inverse of  $x_{i_{2013}}$

$\beta_1$  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

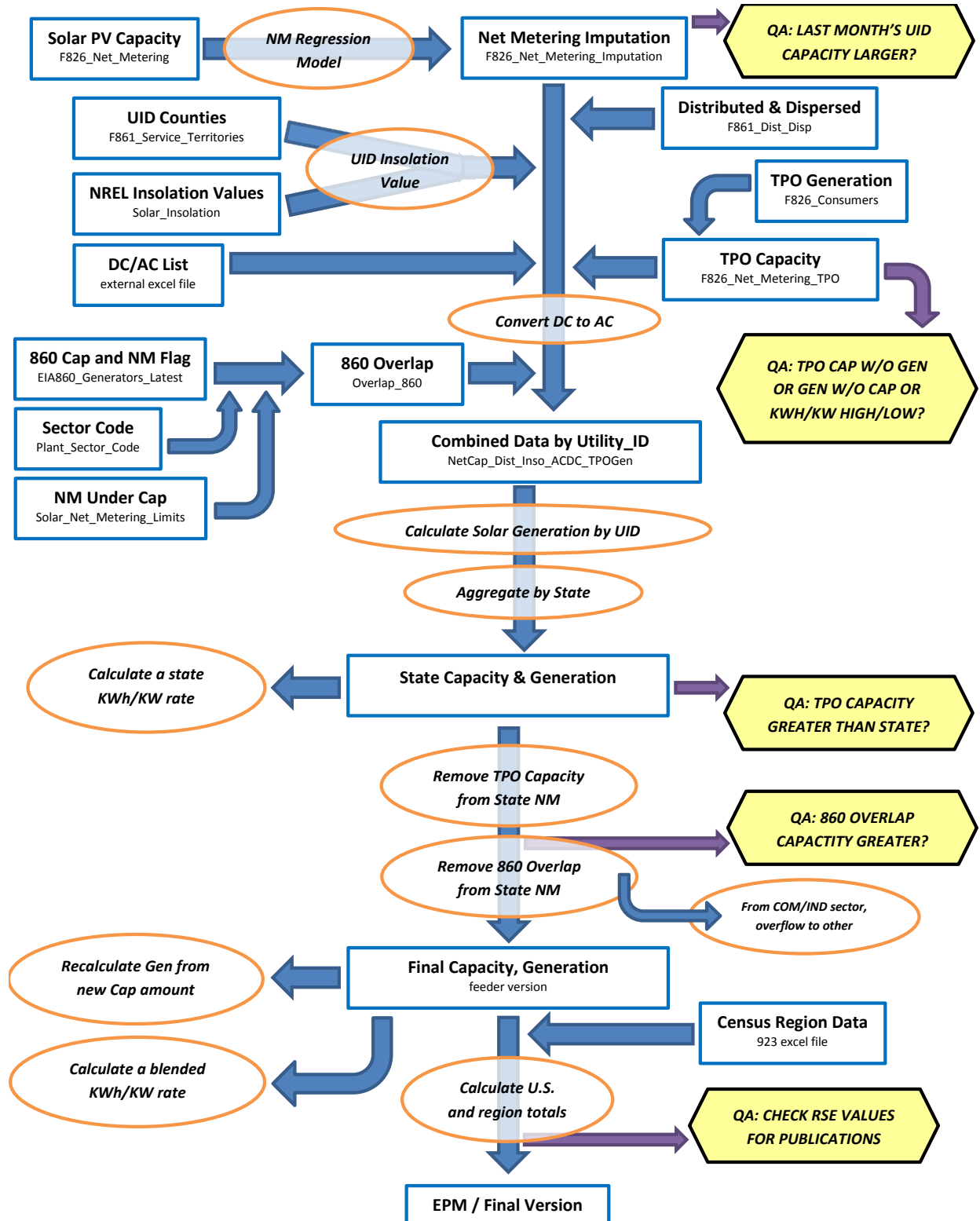


37	USA VA Norfolk Int'l Airport	Virginia Beach-Norfolk-Newport News, VA-NC MSA
38	USA RI Providence T F Green State	Providence-Warwick, RI-MA MSA
39	USA WI Milwaukee Mitchell Intl Airport	Milwaukee-Waukesha-West Allis, WI MSA
40	USA FL Jacksonville Craig	Jacksonville, FL MSA
41	USA TN Memphis Int'l Airport	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 McCallen 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



---

<sup>1</sup> 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/>.

<sup>2</sup> See the following sources: Bahillo, A. et al. Journal of Energy Resources Technology, “NOx 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.

<sup>3</sup> 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, December 2018

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	22.49	6.11	--	1.03
Connecticut	--	5.80	--	1.03
Maine	24.60	5.88	--	1.06
Massachusetts	--	--	--	1.03
New Hampshire	22.10	6.29	--	1.03
Rhode Island	--	--	--	1.03
Vermont	--	--	--	--
Middle Atlantic	22.56	6.03	--	1.04
New Jersey	26.05	5.81	--	1.04
New York	26.07	6.04	--	1.03
Pennsylvania	22.28	6.02	--	1.04
East North Central	19.94	5.78	27.24	1.05
Illinois	17.71	5.80	--	1.00
Indiana	21.90	5.76	--	1.06
Michigan	18.55	5.80	27.20	1.05
Ohio	24.43	5.77	--	1.06
Wisconsin	17.59	5.80	27.76	1.04
West North Central	16.65	5.81	27.60	1.06
Iowa	17.73	5.80	27.60	1.08
Kansas	17.07	5.77	--	1.04
Minnesota	17.70	5.71	--	1.07
Missouri	17.70	5.78	--	1.03
Nebraska	16.97	--	--	1.06
North Dakota	13.03	5.91	--	1.00
South Dakota	16.44	--	--	--
South Atlantic	23.34	5.95	28.04	1.03
Delaware	--	5.67	--	1.04
District of Columbia	--	--	--	--
Florida	23.52	5.90	28.04	1.02
Georgia	19.37	5.89	--	1.02
Maryland	25.24	6.13	--	1.01
North Carolina	25.12	5.98	--	1.03
South Carolina	24.34	5.78	--	1.02
Virginia	20.54	5.80	--	1.05
West Virginia	25.07	5.77	--	1.08
East South Central	21.04	5.79	--	1.03
Alabama	19.18	5.75	--	1.03
Kentucky	22.48	5.84	--	1.04
Mississippi	13.35	5.80	--	1.03
Tennessee	22.75	5.76	--	1.00
West South Central	16.16	5.84	28.80	1.03
Arkansas	17.46	5.80	--	1.02
Louisiana	16.90	5.90	28.80	1.03
Oklahoma	17.01	--	--	1.03
Texas	15.60	5.82	--	1.03
Mountain	18.75	5.74	--	1.05
Arizona	19.72	5.67	--	1.04
Colorado	18.32	5.72	--	1.13
Idaho	--	--	--	1.00
Montana	17.04	5.92	--	1.04
Nevada	18.78	5.80	--	1.03
New Mexico	18.70	5.66	--	1.03
Utah	21.53	5.88	--	1.04
Wyoming	17.72	5.87	--	1.05
Pacific Contiguous	17.21	6.00	--	1.04
California	22.97	--	--	1.03
Oregon	17.12	--	--	1.05
Washington	16.81	6.00	--	1.08
Pacific Noncontiguous	17.91	6.11	--	1.00
Alaska	14.29	5.60	--	1.00
Hawaii	19.62	6.11	--	--
U.S. Total	19.10	6.03	28.17	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, 2015 through 2017

Item	Mean Absolute Value of Percent Change Total (All Sectors)		
	2015	2016	2017
<b>Net Generation</b>			
Coal	0.33%	0.09%	0.17%
Petroleum Liquids	1.00%	3.08%	3.76%
Petroleum Coke	1.60%	1.46%	5.79%
Natural Gas	0.18%	0.30%	1.93%
Other Gases	3.90%	3.76%	11.64%
Hydroelectric	1.08%	0.76%	2.47%
Nuclear	0.01%	0.05%	0.00%
Other	0.80%	0.76%	2.50%
<b>Total</b>	<b>0.23%</b>	<b>0.08%</b>	<b>0.63%</b>
<b>Consumption of Fossil Fuels for Electricity Generation</b>			
Coal	0.24%	0.11%	0.13%
Petroleum Liquids	2.28%	5.81%	4.01%
Petroleum Coke	1.50%	0.87%	4.95%
Natural Gas	0.32%	2.26%	1.08%
<b>Fuel Stocks for Electric Power Sector</b>			
Coal	0.40%	0.72%	0.18%
Petroleum Liquids	2.92%	3.19%	1.97%
Petroleum Coke	0.04%	0.27%	14.42%
<b>Retail Sales</b>			
Residential	0.30%	0.26%	0.31%
Commercial	0.18%	0.55%	0.28%
Industrial	2.92%	4.31%	4.00%
Transportation	0.37%	0.06%	0.12%
<b>Total</b>	<b>0.93%</b>	<b>1.40%</b>	<b>1.12%</b>
<b>Revenue</b>			
Residential	0.15%	0.28%	0.26%
Commercial	0.62%	1.21%	0.28%
Industrial	3.15%	4.54%	3.52%
Transportation	1.09%	1.53%	0.21%
<b>Total</b>	<b>0.83%</b>	<b>1.34%</b>	<b>0.57%</b>
<b>Average Retail Price</b>			
Residential	0.15%	0.05%	0.21%
Commercial	0.44%	0.65%	0.20%
Industrial	0.31%	0.24%	0.51%
Transportation	0.83%	1.57%	0.20%
<b>Total</b>	<b>0.11%</b>	<b>0.10%</b>	<b>0.53%</b>
<b>Receipt of Fossil Fuels</b>			
Coal	1.70%	1.92%	1.30%
Petroleum Liquids	1.86%	1.16%	3.18%
Petroleum Coke	2.47%	0.01%	0.00%
Natural Gas	0.25%	0.21%	19.49%
<b>Cost of Fossil Fuels</b>			
Coal	0.04%	0.12%	0.83%
Petroleum Liquids	0.25%	0.26%	0.34%
Petroleum Coke	1.42%	0.12%	0.00%
Natural Gas	0.14%	0.12%	0.47%

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, 2015 through 2017

Item	2015			2016			2017		
	Preliminary Annual Data	Final Annual Data	Percent Change	Preliminary Annual Data	Final Annual Data	Percent Change	Preliminary Annual Data	Final Annual Data	Percent Change
<b>Net Generation (Thousand MWh)</b>									
Coal	1,356,057	1,352,398	-0.27%	1,240,108	1,239,149	-0.08%	1,207,901	1,205,835	-0.17%
Petroleum Liquids	17,456	17,372	-0.48%	12,675	13,008	2.63%	12,583	12,414	-1.34%
Petroleum Coke	10,987	10,877	-1.00%	11,232	11,197	-0.31%	8,508	8,976	5.50%
Natural Gas	1,335,068	1,333,482	-0.12%	1,380,295	1,378,307	-0.14%	1,272,864	1,296,415	1.85%
Other Gases	12,963	13,117	1.18%	13,000	12,807	-1.48%	14,159	12,469	-11.94%
Hydroelectric	246,075	243,989	-0.85%	259,143	261,126	0.77%	293,550	293,839	0.10%
Nuclear	797,178	797,178	0.00%	805,327	805,694	0.05%	804,950	804,950	0.00%
Other	311,597	309,189	-0.77%	357,299	355,387	-0.54%	400,289	399,371	-0.23%
<b>Total</b>	<b>4,087,381</b>	<b>4,077,601</b>	<b>-0.24%</b>	<b>4,079,079</b>	<b>4,076,675</b>	<b>-0.06%</b>	<b>4,014,804</b>	<b>4,034,268</b>	<b>0.48%</b>
<b>Consumption of Fossil Fuels for Electricity Generation</b>									
Coal (1,000 tons)	740,855	739,594	-0.17%	678,005	677,371	-0.09%	663,479	663,911	0.07%
Petroleum Liquids (1,000 barrels)	29,545	28,925	-2.10%	21,225	22,405	5.56%	21,935	21,696	-1.09%
Petroleum Coke (1,000 tons)	4,088	4,044	-1.07%	4,275	4,253	-0.52%	3,349	3,490	4.21%
Natural Gas (1,000 Mcf)	10,048,346	10,016,576	-0.32%	10,400,189	10,170,110	-2.21%	9,440,777	9,507,760	0.71%
<b>Fuel Stocks for Electric Power Sector</b>									
Coal (1,000 tons)	197,128	195,548	-0.80%	163,946	162,009	-1.18%	137,155	137,687	0.39%
Petroleum Liquids (1,000 barrels)	32,223	32,884	2.05%	30,880	31,839	3.11%	28,723	29,294	1.99%
Petroleum Coke (1,000 tons)	1,342	1,340	-0.15%	872	845	-3.10%	1,113	864	-22.42%
<b>Retail Sales (Million kWh)</b>									
Residential	1,399,884	1,404,096	0.30%	1,407,394	1,411,058	0.26%	1,378,819	1,378,648	-0.01%
Commercial	1,358,419	1,360,752	0.17%	1,359,617	1,367,191	0.56%	1,349,208	1,352,888	0.27%
Industrial	958,563	986,508	2.92%	936,269	976,715	4.32%	946,443	984,298	4.00%
Transportation	7,659	7,637	-0.29%	7,499	7,497	-0.03%	7,524	7,523	-0.02%
<b>Total</b>	<b>3,724,525</b>	<b>3,758,992</b>	<b>0.93%</b>	<b>3,710,779</b>	<b>3,762,462</b>	<b>1.39%</b>	<b>3,681,995</b>	<b>3,723,356</b>	<b>1.12%</b>
<b>Revenue (Million Dollars)</b>									
Residential	177,367	177,624	0.14%	176,585	177,077	0.28%	177,860	177,661	-0.11%
Commercial	143,893	144,781	0.62%	140,937	142,643	1.21%	144,108	144,242	0.09%
Industrial	66,088	68,166	3.14%	63,201	66,068	4.54%	65,394	67,691	3.51%
Transportation	779	771	-1.12%	711	722	1.53%	727	728	0.15%
<b>Total</b>	<b>388,127</b>	<b>391,341</b>	<b>0.83%</b>	<b>381,435</b>	<b>386,509</b>	<b>1.33%</b>	<b>388,089</b>	<b>390,322</b>	<b>0.58%</b>
<b>Average Retail Price (Cents/kWh)</b>									
Residential	12.67	12.65	-0.16%	12.55	12.55	0.02%	12.90	12.89	-0.10%
Commercial	10.59	10.64	0.44%	10.37	10.43	0.65%	10.68	10.66	-0.18%
Industrial	6.89	6.91	0.22%	6.75	6.76	0.21%	6.91	6.88	-0.47%
Transportation	10.17	10.09	-0.83%	9.48	9.63	1.55%	9.67	9.68	0.17%
<b>Total</b>	<b>10.42</b>	<b>10.41</b>	<b>-0.10%</b>	<b>10.28</b>	<b>10.27</b>	<b>-0.06%</b>	<b>10.54</b>	<b>10.48</b>	<b>-0.54%</b>
<b>Receipt of Fossil Fuels</b>									
Coal (1,000 tons)	769,866	782,929	1.70%	638,564	650,770	1.91%	634,118	642,364	1.30%
Petroleum Liquids (1,000 barrels)	24,512	24,320	-0.78%	16,610	16,807	1.18%	15,619	16,127	3.25%
Petroleum Coke (1,000 tons)	4,779	4,897	2.46%	4,166	4,166	0.01%	3,309	3,309	0.00%
Natural Gas (1,000 Mcf)	9,843,170	9,842,581	-0.01%	10,258,688	10,271,180	0.12%	8,050,520	9,628,733	19.60%
<b>Cost of Fossil Fuels (Dollars per Million Btu)</b>									
Coal (1,000 tons)	2.22	2.22	-0.03%	2.12	2.11	-0.15%	2.08	2.06	-0.87%
Petroleum Liquids (1,000 barrels)	11.48	11.49	0.10%	9.36	9.39	0.28%	11.82	11.86	0.36%
Petroleum Coke (1,000 tons)	1.87	1.84	-1.37%	1.65	1.65	0.15%	2.13	2.13	0.00%
Natural Gas (1,000 Mcf)	3.22	3.23	0.18%	2.88	2.87	-0.06%	3.39	3.37	-0.55%

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 kilowatt-hour 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 2017 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**

<b>Unit</b>	<b>Equivalent</b>
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



---

## 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<sup>21,24</sup>. 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 data<sup>22</sup>. 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 Inference<sup>16</sup>," 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  $n$ th digit if the  $(n+1)$  digit is 5 or larger and keep the  $n$ th 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 estimates<sup>1</sup>.

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)
	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)
Natural Gas and Other Gases	BFG	Blast Furnace Gas
	NG	Natural Gas
	OG	Other Gas
Nuclear	NUC	Nuclear (including Uranium, Plutonium, and Thorium)
	WAT	Water at a Conventional
Hydroelectric 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 (Prime Mover = PS)	Pumping Energy for Reversible (Pumped Storage) Hydroelectric 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
Other Biomass	AB	Agricultural By-Products
	MSW	Municipal Solid Waste
	OBG	Other Biomass Gas (including digester gas, methane, and other biomass gases)
	OBL	Other Biomass Liquids
	OBS	Other Biomass Solids
	LFG	Landfill Gas
	SLW	Sludge Waste
Other Renewable Energy Sources	SUN	Solar (including solar thermal)
	WND	Wind
	GEO	Geothermal
Other Energy Sources	PUR	Purchased Steam
	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 entities<sup>14</sup>. 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<sup>15</sup>. 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 waste<sup>2</sup>:** 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).<sup>3</sup>

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 kilowatt-hour.

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:

$$CapacityFactor = \left( \frac{\sum_{x,m} Generation_{x,m}}{\sum_{x,m} Capacity_{x,m} * AvailableTime_{x,m}} \right)$$

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**

23

**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

92

### 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.<sup>1</sup> 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  $i^{\text{th}}$  utility’s 2013 (or the last published year) solar PV capacity

$y_{i_{2015,m}}$  is the  $i^{\text{th}}$  utility’s month  $m$ , 2015 (or the current year) reported solar PV capacity

$w_i$  is the weight factor, which is the inverse of  $x_{i_{2013}}$

$\beta_1$  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

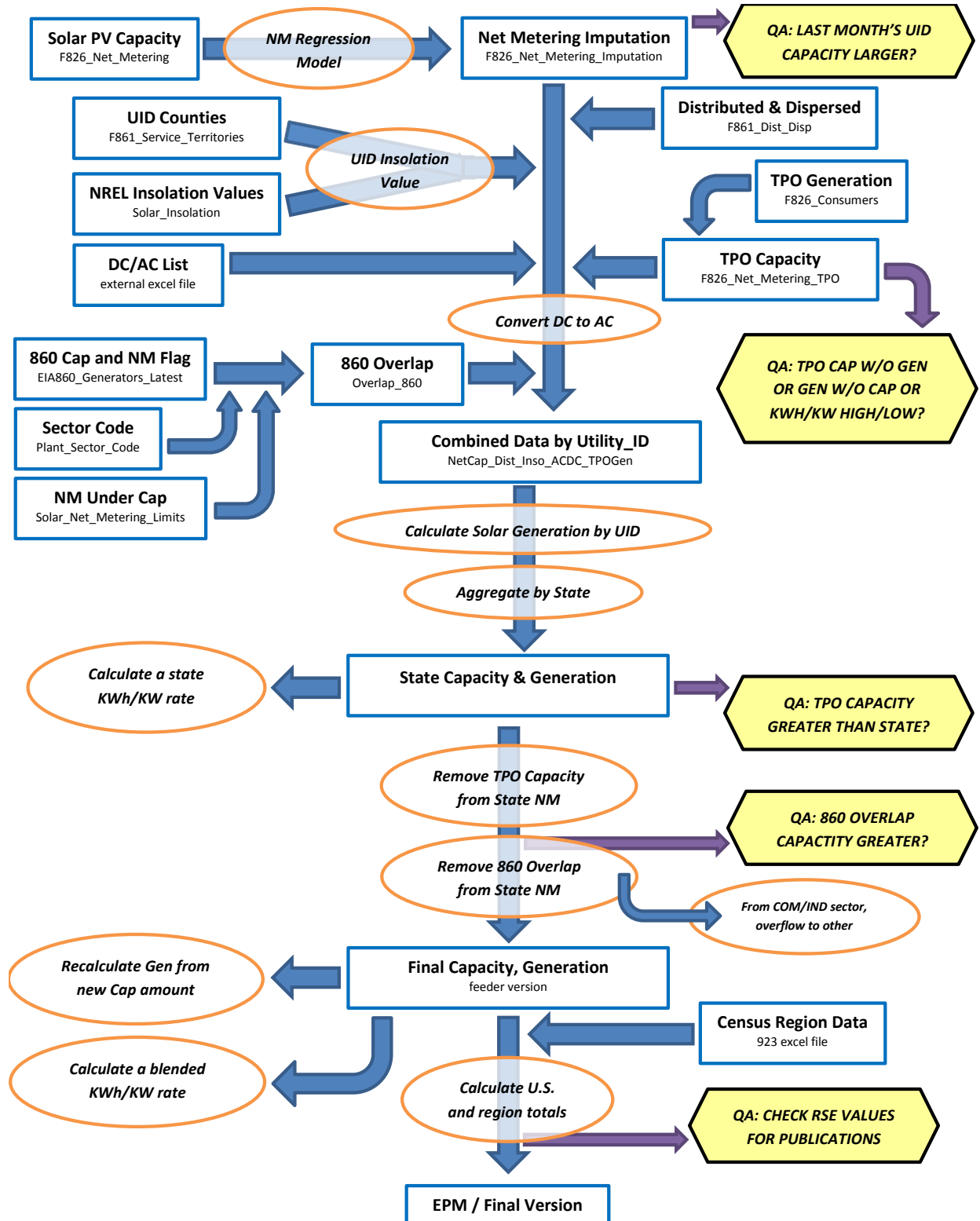
Site	Weather Location	MSA
1	USA NY New York Central Park Obs.	New York-Newark-Jersey City, NY-NJ-PA MSA
2	USA CA Los Angeles Intl Airport	Los Angeles-Long Beach-Anaheim, CA MSA
3	USA IL Chicago Midway Airport	Chicago-Naperville-Elgin, IL-IN-WI MSA
4	USA TX Dallas-fort Worth Intl Airport	Dallas-Fort Worth-Arlington, 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 McCallen 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



---

<sup>1</sup> 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/>.

<sup>2</sup> See the following sources: Bahillo, A. et al. Journal of Energy Resources Technology, “NOx 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.

<sup>3</sup> 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.

## 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 through 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, (C<sub>3</sub>H<sub>8</sub>). 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.

**Watt-hour (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.