



*Independent Statistics & Analysis*  
U.S. Energy Information  
Administration

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# Electric Power Annual 2015

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## Table of Contents

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### *Chapter 1. National Summary Data*

Table 1.1.	Total Electric Power Industry Summary Statistics
Table 1.2.	Summary Statistics for the United States
Table 1.3.	Supply and Disposition of Electricity

### *Chapter 2. Electricity Sales*

Table 2.1.	Number of Ultimate Customers Served by Sector, by Provider
Table 2.2.	Sales and Direct Use of Electricity to Ultimate Customers by Sector, by Provider
Table 2.3.	Revenue from Sales of Electricity to Ultimate Customers by Sector, by Provider
Table 2.4.	Average Price of Electricity to Ultimate Customers by End-Use Sector
Table 2.5.	Sales of Electricity to Ultimate Customers: Total by End-Use Sector
Table 2.6.	Revenue from Sales of Electricity to Ultimate Customers: Total by End-Use Sector
Table 2.7.	Average Price of Electricity to Ultimate Customers: Total by End-Use Sector
Table 2.8.	Sales of Electricity to Ultimate Customers by End-Use Sector, by State
Table 2.9.	Revenue from Sales of Electricity to Ultimate Customers by End-Use Sector, by State
Table 2.10.	Average Price of Electricity to Ultimate Customers by End-Use Sector, by State
Table 2.11.	Electric Power Industry - Electricity Purchases
Table 2.12.	Electric Power Industry - Electricity Sales for Resale
Table 2.13.	Electric Power Industry - U.S. Electricity Imports from and Electricity Exports to Canada and Mexico
Table 2.14.	Green Pricing Customers by End Use Sector

### *Chapter 3. Net Generation*

Table 3.1.A.	Net Generation by Energy Source: Total (All Sectors)
Table 3.1.B.	Net Generation from Renewable Sources: Total (All Sectors)
Table 3.2.A.	Net Generation by Energy Source: Electric Utilities
Table 3.2.B.	Net Generation from Renewable Sources: Electric Utilities
Table 3.3.A.	Net Generation by Energy Source: Independent Power Producers
Table 3.3.B.	Net Generation from Renewable Sources: Independent Power Producers
Table 3.4.A.	Net Generation by Energy Source: Commercial Sector
Table 3.4.B.	Net Generation from Renewable Sources: Commercial Sector
Table 3.5.A.	Net Generation by Energy Source: Industrial Sector
Table 3.5.B.	Net Generation from Renewable Sources: Industrial Sector
Table 3.6.	Net Generation by Energy Source: Residential Sector
Table 3.7.	Net Generation by State by Sector
Table 3.8.	Net Generation from Coal by State by Sector
Table 3.9.	Net Generation from Petroleum Liquids by State by Sector
Table 3.10.	Net Generation from Petroleum Coke by State by Sector
Table 3.11.	Net Generation from Natural Gas by State by Sector
Table 3.12.	Net Generation from Other Gases by State by Sector
Table 3.13.	Net Generation from Nuclear Energy by State by Sector
Table 3.14.	Net Generation from Hydroelectric (Conventional) Power by State by Sector
Table 3.15.	Net Generation from Renewable Sources Excluding Hydroelectric by State by Sector
Table 3.16.	Net Generation from Hydroelectric (Pumped Storage) Power by State by Sector
Table 3.17.	Net Generation from Other Energy Sources by State by Sector

---

Table 3.18.	Net Generation from Wind by State by Sector
Table 3.19.	Net Generation from Biomass by State by Sector
Table 3.20.	Net Generation from Geothermal by State by Sector
Table 3.21.	Net Generation from Solar Photovoltaic by State by Sector
Table 3.22.	Net Generation from Solar Thermal by State by Sector
Table 3.23.	Useful Thermal Output by Energy Source: Total Combined Heat and Power (All Sectors)
Table 3.24.	Useful Thermal Output by Energy Source: Electric Power Sector Combined Heat and Power
Table 3.25.	Useful Thermal Output by Energy Source: Commercial Sector Combined Heat and Power
Table 3.26.	Useful Thermal Output by Energy Source: Industrial Sector Combined Heat and Power

#### *Chapter 4. Generation Capacity*

Table 4.1.	Count of Electric Power Industry Power Plants, by Sector, by Predominant Energy Sources within Plant
Table 4.2.A.	Existing Net Summer Capacity by Energy Source and Producer Type
Table 4.2.B.	Existing Net Summer Capacity of Other Renewable Sources by Producer Type
Table 4.3.	Existing Capacity by Energy Source
Table 4.4.	Existing Capacity by Producer Type
Table 4.5.	Planned Generating Capacity Changes, by Energy Source
Table 4.6.	Capacity Additions, Retirements and Changes by Energy Source
Table 4.7.A.	Net Summer Capacity of Utility Scale Units by Technology and by State
Table 4.7.B.	Net Summer Capacity of Utility Scale Units Using Primarily Renewable Energy Sources and by State
Table 4.7.C.	Net Summer Capacity of Utility Scale Units Using Primarily Fossil Fuels and by State
Table 4.8.A.	Capacity Factors for Utility Scale Generators Primarily Using Fossil Fuels
Table 4.8.B.	Capacity Factors for Utility Scale Generators Not Primarily Using Fossil Fuel
Table 4.9.	Total Capacity of Distributed and Dispersed Generators by Technology Type
Table 4.10.	Net Metering Customers and Capacity by Technology Type, by End Use Sector
Table 4.11.	Fuel-Switching Capacity of Operable Generators Reporting Natural Gas as the Primary Fuel, by Producer Type
Table 4.12.	Fuel-Switching Capacity of Operable Generators Reporting Petroleum Liquids as the Primary Fuel, by Producer Type
Table 4.13.	Fuel-Switching Capacity of Operable Generators Reporting Natural Gas as the Primary Fuel, by Type of Prime Mover
Table 4.14.	Fuel-Switching Capacity of Operable Generators Reporting Natural Gas as the Primary Fuel, by Year of Initial Commercial Operation

#### *Chapter 5. Consumption of Fossil Fuels*

Table 5.1.A.	Coal: Consumption (Thousand Tons) for Electricity Generation by Sector
Table 5.1.B.	Coal: Consumption (Thousand Tons) for Useful Thermal Output by Sector
Table 5.1.C.	Coal: Consumption (Thousand Tons) for Electricity Generation and Useful Thermal Output by Sector
Table 5.1.D.	Coal: Consumption (Billion Btus) for Electricity Generation by Sector
Table 5.1.E.	Coal: Consumption (Billion Btus) for Useful Thermal Output by Sector
Table 5.1.F.	Coal: Consumption (Billion Btus) for Electricity Generation and Useful Thermal Output by Sector
Table 5.2.A.	Petroleum Liquids: Consumption (Thousand Barrels) for Electricity Generation by Sector

---

Table 5.2.B.	Petroleum Liquids: Consumption (Thousand Barrels) for Useful Thermal Output by Sector
Table 5.2.C.	Petroleum Liquids: Consumption (Thousand Barrels) for Electricity Generation and Useful Thermal Output by Sector
Table 5.2.D.	Petroleum Liquids: Consumption (Billion Btus) for Electricity Generation by Sector
Table 5.2.E.	Petroleum Liquids: Consumption (Billion Btus) for Useful Thermal Output by Sector
Table 5.2.F.	Petroleum Liquids: Consumption (Billion Btus) for Electricity Generation and Useful Thermal Output by Sector
Table 5.3.A.	Petroleum Coke: Consumption (Thousand Tons) for Electricity Generation by Sector
Table 5.3.B.	Petroleum Coke: Consumption (Thousand Tons) for Useful Thermal Output by Sector
Table 5.3.C.	Petroleum Coke: Consumption (Thousand Tons) for Electricity Generation and Useful Thermal Output by Sector
Table 5.3.D.	Petroleum Coke: Consumption (Billion Btus) for Electricity Generation by Sector
Table 5.3.E.	Petroleum Coke: Consumption (Billion Btus) for Useful Thermal Output by Sector
Table 5.3.F.	Petroleum Coke: Consumption (Billion Btus) for Electricity Generation and Useful Thermal Output by Sector
Table 5.4.A.	Natural Gas: Consumption (Million Cubic Feet) for Electricity Generation by Sector
Table 5.4.B.	Natural Gas: Consumption (Million Cubic Feet) for Useful Thermal Output by Sector
Table 5.4.C.	Natural Gas: Consumption (Million Cubic Feet) for Electricity Generation and Useful Thermal Output by Sector
Table 5.4.D.	Natural Gas: Consumption (Billion Btus) for Electricity Generation by Sector
Table 5.4.E.	Natural Gas: Consumption (Billion Btus) for Useful Thermal Output by Sector
Table 5.4.F.	Natural Gas: Consumption (Billion Btus) for Electricity Generation and Useful Thermal Output by Sector
Table 5.5.D.	Wood / Wood Waste Biomass: Consumption (Billion Btus) for Electricity Generation by Sector
Table 5.5.E.	Wood / Wood Waste Biomass: Consumption (Billion Btus) for Useful Thermal Output by Sector
Table 5.5.F.	Wood / Wood Waste Biomass: Consumption (Billion Btus) for Electricity Generation and Useful Thermal Output by Sector
Table 5.6.A.	Landfill Gas: Consumption (Million Cubic Feet) for Electricity Generation by Sector
Table 5.6.B.	Landfill Gas: Consumption (Million Cubic Feet) for Useful Thermal Output by Sector
Table 5.6.C.	Landfill Gas: Consumption (Million Cubic Feet) for Electricity Generation and Useful Thermal Output by Sector
Table 5.6.D.	Landfill Gas: Consumption (Billion Btus) for Electricity Generation by Sector
Table 5.6.E.	Landfill Gas: Consumption (Billion Btus) for Useful Thermal Output by Sector
Table 5.6.F.	Landfill Gas: Consumption (Billion Btus) for Electricity Generation and Useful Thermal Output by Sector
Table 5.7.A.	Biogenic Municipal Solid Waste: Consumption (Thousand Tons) for Electricity Generation by Sector
Table 5.7.B.	Biogenic Municipal Solid Waste: Consumption (Thousand Tons) for Useful Thermal Output by Sector
Table 5.7.C.	Biogenic Municipal Solid Waste: Consumption (Thousand Tons) for Electricity Generation and Useful Thermal Output by Sector
Table 5.7.D.	Biogenic Municipal Solid Waste: Consumption (Billion Btus) for Electricity Generation by Sector
Table 5.7.E.	Biogenic Municipal Solid Waste: Consumption (Billion Btus) for Useful Thermal Output by Sector

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Table 5.7.F.	Biogenic Municipal Solid Waste: Consumption (Billion Btus) for Electricity Generation and Useful Thermal Output by Sector
Table 5.8.D.	Other Waste Biomass: Consumption (Billion Btus) for Electricity Generation by Sector
Table 5.8.E.	Other Waste Biomass: Consumption (Billion Btus) for Useful Thermal Output by Sector
Table 5.8.F.	Other Waste Biomass: Consumption (Billion Btus) for Electricity Generation and Useful Thermal Output by Sector
Table 5.9.	Consumption of Coal for Electricity Generation by State by Sector
Table 5.10.	Consumption of Petroleum Liquids for Electricity Generation by State by Sector
Table 5.11.	Consumption of Petroleum Coke for Electricity Generation by State by Sector
Table 5.12.	Consumption of Natural Gas for Electricity Generation by State by Sector
Table 5.13.	Consumption of Landfill Gas for Electricity Generation by State by Sector
Table 5.14.	Consumption of Biogenic Municipal Solid Waste for Electricity Generation by State by Sector

### ***Chapter 6. Fossil Fuel Stocks for Electricity Generation***

Table 6.1.	Stocks of Coal, Petroleum Liquids, and Petroleum Coke: Electric Power Sector
Table 6.2.	Stocks of Coal, Petroleum Liquids, and Petroleum Coke: Electric Power Sector, by State
Table 6.3.	Stocks of Coal, Petroleum Liquids, and Petroleum Coke: Electric Power Sector, by Census Division
Table 6.4.	Stocks of Coal by Coal Rank: Electric Power Sector

### ***Chapter 7. Receipts, Cost, and Quality of Fossil Fuels***

Table 7.1.	Receipts, Average Cost, and Quality of Fossil Fuels for the Electric Power Industry
Table 7.2.	Receipts and Quality of Coal Delivered for the Electric Power Industry
Table 7.3.	Average Quality of Fossil Fuel Receipts for the Electric Power Industry
Table 7.4.	Weighted Average Cost of Fossil Fuels for the Electric Power Industry
Table 7.5.	Receipts, Average Cost, and Quality of Fossil Fuels: Electric Utilities
Table 7.6.	Receipts, Average Cost, and Quality of Fossil Fuels: Electric Utilities (continued)
Table 7.7.	Receipts, Average Cost, and Quality of Fossil Fuels: Independent Power Producers
Table 7.8.	Receipts, Average Cost, and Quality of Fossil Fuels: Independent Power Producers (continued)
Table 7.9.	Receipts, Average Cost, and Quality of Fossil Fuels: Commercial Sector
Table 7.10.	Receipts, Average Cost, and Quality of Fossil Fuels: Commercial Sector (continued)
Table 7.11.	Receipts, Average Cost, and Quality of Fossil Fuels: Industrial Sector
Table 7.12.	Receipts, Average Cost, and Quality of Fossil Fuels: Industrial Sector (continued)
Table 7.13.	Receipts of Coal Delivered for Electricity Generation by State
Table 7.14.	Receipts of Petroleum Liquids Delivered for Electricity Generation by State
Table 7.15.	Receipts of Petroleum Coke Delivered for Electricity Generation by State
Table 7.16.	Receipts of Natural Gas Delivered for Electricity Generation by State
Table 7.17.	Average Cost of Coal Delivered for Electricity Generation by State
Table 7.18.	Average Cost of Petroleum Liquids Delivered for Electricity Generation by State
Table 7.19.	Average Cost of Petroleum Coke Delivered for Electricity Generation by State
Table 7.20.	Average Cost of Natural Gas Delivered for Electricity Generation by State
Table 7.21.	Receipts and Quality of Coal by Rank Delivered for Electricity Generation: Total (All Sectors) by State
Table 7.22.	Receipts and Quality of Coal by Rank Delivered for Electricity Generation: Electric Utilities by State

- 
- Table 7.23. Receipts and Quality of Coal by Rank Delivered for Electricity Generation: Independent Power Producers by State
- Table 7.24. Receipts and Quality of Coal by Rank Delivered for Electricity Generation: Commercial Sector by State
- Table 7.25. Receipts and Quality of Coal by Rank Delivered for Electricity Generation: Industrial Sector by State

### *Chapter 8. Electric Power System Characteristics and Performance*

- Table 8.1. Average Operating Heat Rate for Selected Energy Sources
- Table 8.2. Average Tested Heat Rates by Prime Mover and Energy Source
- Table 8.3. Revenue and Expense Statistics for Major U.S. Investor-Owned Electric Utilities
- Table 8.4. Average Power Plant Operating Expenses for Major U.S. Investor-Owned Electric Utilities
- Table 8.5. Revenue and Expense Statistics for U.S. Cooperative Borrower-Owned Electric Utilities
- Table 8.6.A. Noncoincident Peak Load by North American Electric Reliability Corporation Assessment Area, Actual
- Table 8.6.B. Noncoincident Peak Load by North American Electric Reliability Corporation Assessment Area, Projected
- Table 8.7.A. Net Energy for Load by North American Electric Reliability Corporation Assessment Area, Actual
- Table 8.7.B. Net Energy for Load by North American Electric Reliability Corporation Assessment Area, Projected
- Table 8.8. Summer Net Internal Demand, Capacity Resources, and Capacity Margins by North American Electric Reliability Corporation Assessment Area, Projected
- Table 8.9. Winter Net Internal Demand, Capacity Resources, and Capacity Margins by North American Electric Reliability Corporation Assessment Area, Projected
- Table 8.10.A. Existing Transmission Capacity by High-Voltage Size
- Table 8.10.B. Proposed Transmission Capacity Additions by High-Voltage Size
- Table 8.11.A. U.S. Transmission Circuit Outages by Type and NERC region
- Table 8.11.B. U.S. Transformer Outages by Type and NERC region
- Table 8.12.A. U.S. Transmission Circuit Sustained Automatic Outage Counts and Hours, by High-Voltage Size and NERC Region
- Table 8.12.B. U.S. Transformer Sustained Automatic Outage Counts and Hours by High-Voltage Size and NERC Region
- Table 8.13.A. U.S. Transmission Circuit Sustained Automatic Outage Counts and Hours by Cause Code and by NERC Region
- Table 8.13.B. U.S. Transformer Sustained Automatic Outage Counts and Hours by Cause Code and by NERC Region

### *Chapter 9. Environmental Data*

- Table 9.1. Emissions from Energy Consumption at Conventional Power Plants and Combined-Heat-and-Power Plants
- Table 9.2. Quantity and Net Summer Capacity of Operable Environmental Equipment
- Table 9.3. Quantity and Net Summer Capacity of Operable Cooling Systems, by Energy Source and Cooling System Type
- Table 9.4. Average Cost of Existing Flue Gas Desulfurization Units
- Table 9.5. Emissions from Energy Consumption at Conventional Power Plants and Combined-Heat-and-Power Plants, by State

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## *Chapter 10. Demand-Side Management and Advanced Metering*

Table 10.1.	Demand-Side Management Program Annual Effects by Program Category
Table 10.2.	Demand-Side Management Program Annual Effects by Program Category, by Sector
Table 10.3.	Demand-Side Management Program Incremental Effects by Program Category
Table 10.4.	Demand-Side Management Program Incremental Effects by Program Category, by Sector
Table 10.5.	Demand-Side Management Program Direct and Indirect Costs
Table 10.6.	Energy Efficiency
Table 10.7.	Energy Efficiency – Life Cycle
Table 10.8.	Demand Response – Yearly Energy and Demand Savings
Table 10.9.	Demand Response – Program Costs
Table 10.10.	Advanced Metering Count by Technology Type

## *Appendix*

### Technical Notes

Table A.1.	Sulfur Dioxide Uncontrolled Emission Factors
Table A.2.	Nitrogen Oxides Uncontrolled Emission Factors
Table A.3.	Carbon Dioxide Uncontrolled Emission Factors
Table A.4.	Nitrogen Oxides Control Technology Emissions Reduction Factors
Table A.5.	Unit-of-Measure Equivalents

EIA Electric Industry Data Collection

# Chapter 1

## National Summary Data

Table 1.1. Total Electric Power Industry Summary Statistics, 2015 and 2014

Net Generation and Consumption of Fuels for January through December														
Total (All Sectors)					Electric Power Sector				Commercial		Industrial		Residential	
Fuel	Facility Type	Year 2015	Year 2014	Percentage Change	Electric Utilities		Independent Power Producers		Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014
					Year 2015	Year 2014	Year 2015	Year 2014						
Net Generation (Thousand Megawatthours)														
Coal	Utility Scale Facilities	1,352,398	1,581,710	-14.5%	998,385	1,173,073	342,608	395,701	509	595	10,896	12,341	0	0
Petroleum Liquids	Utility Scale Facilities	17,372	18,276	-5.0%	10,386	10,696	6,240	6,789	183	247	563	544	0	0
Petroleum Coke	Utility Scale Facilities	10,877	11,955	-9.0%	8,278	9,147	1,601	1,410	8	9	990	1,389	0	0
Natural Gas	Utility Scale Facilities	1,333,482	1,126,609	18.4%	617,817	501,414	619,839	531,758	7,471	7,227	88,355	86,209	0	0
Other Gas	Utility Scale Facilities	13,117	12,022	9.1%	199	112	3,517	3,246	0	0	9,401	8,664	0	0
Nuclear	Utility Scale Facilities	797,178	797,166	0.0%	416,680	419,871	380,498	377,295	0	0	0	0	0	0
Hydroelectric Conventional	Utility Scale Facilities	249,080	259,367	-4.0%	229,640	238,185	17,996	19,861	35	38	1,410	1,282	0	0
Renewable Sources Excluding Hydroelectric	Utility Scale Facilities	295,161	279,213	5.7%	37,485	34,496	225,820	212,809	3,220	3,232	28,635	28,675	0	0
... Wind	Utility Scale Facilities	190,719	181,655	5.0%	30,412	27,671	160,135	153,825	118	107	53	53	0	0
... Solar Thermal and Photovoltaic	Utility Scale Facilities	24,893	17,691	40.7%	1,494	1,218	22,962	16,086	416	371	21	16	0	0
... Wood and Wood-Derived Fuels	Utility Scale Facilities	41,929	42,340	-1.0%	3,018	3,050	11,545	11,977	48	74	27,318	27,239	0	0
... Other Biomass	Utility Scale Facilities	21,703	21,650	0.2%	1,473	1,441	16,350	16,161	2,637	2,681	1,243	1,367	0	0
... Geothermal	Utility Scale Facilities	15,918	15,877	0.3%	1,089	1,116	14,829	14,761	0	0	0	0	0	0
Hydroelectric Pumped Storage	Utility Scale Facilities	-5,091	-6,174	-17.5%	-4,105	-5,144	-987	-1,030	0	0	0	0	0	0
Other Energy Sources	Utility Scale Facilities	14,028	13,461	4.2%	558	622	6,838	6,690	1,170	1,171	5,462	4,978	0	0
All Energy Sources	Utility Scale Facilities	4,077,601	4,093,606	-0.4%	2,315,323	2,382,473	1,603,971	1,554,530	12,595	12,520	145,712	144,083	0	0
Estimated Distributed Solar Photovoltaic	Distributed Facilities	14,139	11,233	25.9%	0	0	0	0	5,689	5,146	1,451	1,139	6,999	4,947
Estimated Total Solar Photovoltaic	All Facilities	35,805	26,482	35.2%	1,388	1,094	19,841	13,769	6,106	5,516	1,472	1,156	6,999	4,947
Estimated Total Solar	All Facilities	39,032	28,924	34.9%	1,494	1,218	22,962	16,086	6,106	5,516	1,472	1,156	6,999	4,947
Consumption of Fossil Fuels for Electricity Generation														
Coal (1000 tons)	Utility Scale Facilities	739,594	853,634	-13.4%	539,506	624,235	195,927	224,568	163	202	3,999	4,629	0	0
Petroleum Liquids (1000 barrels)	Utility Scale Facilities	28,925	31,531	-8.3%	18,562	19,652	9,473	10,689	249	451	641	739	0	0
Petroleum Coke (1000 tons)	Utility Scale Facilities	4,044	4,412	-8.4%	3,120	3,440	669	599	2	2	253	371	0	0
Natural Gas (1000 Mcf)	Utility Scale Facilities	10,016,576	8,544,387	17.2%	4,745,255	3,895,008	4,576,683	3,954,032	70,092	71,957	624,545	623,390	0	0
Consumption of Fossil Fuels for Useful Thermal Output														
Coal (1000 tons)	Utility Scale Facilities	16,632	18,107	-8.1%	1,032	978	1,980	1,821	635	861	12,985	14,448	0	0
Petroleum Liquids (1000 barrels)	Utility Scale Facilities	3,142	3,099	1.4%	62	64	1,155	1,170	282	216	1,643	1,650	0	0
Petroleum Coke (1000 tons)	Utility Scale Facilities	1,144	1,283	-10.8%	9	3	109	90	16	16	1,010	1,174	0	0
Natural Gas (1000 Mcf)	Utility Scale Facilities	935,098	865,146	8.1%	8,060	4,926	283,372	292,016	46,287	46,635	597,379	521,569	0	0
Consumption of Fossil Fuels for Electricity Generation and Useful Thermal Output														
Coal (1000 tons)	Utility Scale Facilities	756,226	871,741	-13.3%	540,538	625,212	197,906	226,389	798	1,063	16,984	19,076	0	0
Petroleum Liquids (1000 barrels)	Utility Scale Facilities	32,067	34,630	-7.4%	18,624	19,716	10,629	11,859	531	667	2,283	2,389	0	0
Petroleum Coke (1000 tons)	Utility Scale Facilities	5,188	5,695	-8.9%	3,128	3,443	779	689	18	18	1,263	1,545	0	0
Natural Gas (1000 Mcf)	Utility Scale Facilities	10,951,674	9,409,532	16.4%	4,753,315	3,899,934	4,860,055	4,246,048	116,380	118,591	1,221,924	1,144,959	0	0

Sales, Revenue, and Average Price of Electricity to Ultimate Customers for January through December									
Sector	Total U.S. Electric Power Industry								
	Sales of Electricity to Ultimate Customers (million kWh)			Revenue from Sales of Electricity to Ultimate Customers (million dollars)			Average Price of Electricity to Ultimate Customers (cents/kWh)		
	Year 2015	Year 2014	Percentage Change	Year 2015	Year 2014	Percentage Change	Year 2015	Year 2014	Percentage Change
Residential	1,404,096	1,407,208	-0.2%	177,624	176,178	0.8%	12.65	12.52	1.0%
Commercial	1,360,752	1,352,158	0.6%	144,781	145,253	-0.3%	10.64	10.74	-0.9%
Industrial	986,508	997,576	-1.1%	68,166	70,855	-3.8%	6.91	7.10	-2.7%
Transportation	7,637	7,758	-1.6%	771	810	-4.9%	10.09	10.45	-3.4%
All Sectors	3,758,992	3,764,700	-0.2%	391,342	393,096	-0.4%	10.41	10.44	-0.3%

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 1.2. Summary Statistics for the United States, 2005 - 2015**

**(From Table 2.1.) Number of Ultimate Customers**

Year	Residential	Commer-cial	Industrial	Transpor-tation	Other	Total
2005	120,760,839	16,871,940	733,862	518	N/A	138,367,159
2006	122,471,071	17,172,499	759,604	791	N/A	140,403,965
2007	123,949,916	17,377,219	793,767	750	N/A	142,121,652
2008	125,037,837	17,582,382	774,808	726	N/A	143,395,753
2009	125,208,829	17,562,235	757,537	704	N/A	143,529,305
2010	125,717,935	17,674,338	747,747	239	N/A	144,140,259
2011	126,143,072	17,638,062	727,920	92	N/A	144,509,146
2012	126,832,343	17,729,029	732,385	83	N/A	145,293,840
2013	127,777,153	17,679,562	831,790	75	N/A	146,288,580
2014	128,680,416	17,853,995	839,212	79	N/A	147,373,702
2015	129,811,718	17,985,690	835,536	78	N/A	148,633,022

**(From Table 2.2.) Sales to Ultimate Customers**

**(Thousand Megawatthours)**

Year	Residential	Commer-cial	Industrial	Transpor-tation	Other	Total
2005	1,359,227	1,275,079	1,019,156	7,506	N/A	3,660,969
2006	1,351,520	1,299,744	1,011,298	7,358	N/A	3,669,919
2007	1,392,241	1,336,315	1,027,832	8,173	N/A	3,764,561
2008	1,380,662	1,336,133	1,009,516	7,653	N/A	3,733,965
2009	1,364,758	1,306,853	917,416	7,768	N/A	3,596,795
2010	1,445,708	1,330,199	971,221	7,712	N/A	3,754,841
2011	1,422,801	1,328,057	991,316	7,672	N/A	3,749,846
2012	1,374,515	1,327,101	985,714	7,320	N/A	3,694,650
2013	1,394,812	1,337,079	985,352	7,625	N/A	3,724,868
2014	1,407,208	1,352,158	997,576	7,758	N/A	3,764,700
2015	1,404,096	1,360,752	986,508	7,637	N/A	3,758,992

**(From Table 2.3.) Revenue From Ultimate Customers**

**(Million Dollars)**

Year	Residential	Commer-cial	Industrial	Transpor-tation	Other	Total
2005	128,393	110,522	58,445	643	N/A	298,003
2006	140,582	122,914	62,308	702	N/A	326,506
2007	148,295	128,903	65,712	792	N/A	343,703
2008	155,496	137,036	70,231	820	N/A	363,583
2009	157,044	132,747	62,670	828	N/A	353,289
2010	166,778	135,554	65,772	814	N/A	368,918
2011	166,714	135,927	67,606	803	N/A	371,049
2012	163,280	133,898	65,761	747	N/A	363,687
2013	169,131	137,188	67,934	805	N/A	375,058
2014	176,178	145,253	70,855	810	N/A	393,096
2015	177,624	144,781	68,166	771	N/A	391,342

**Table 1.2. Summary Statistics for the United States, 2005 - 2015**

**(From Table 2.4.) Average Price  
(Cents per Kilowatthour)**

Year	Residential	Commer-cial	Industrial	Transpor-tation	Other	Total
2005	9.45	8.67	5.73	8.57	N/A	8.14
2006	10.40	9.46	6.16	9.54	N/A	8.90
2007	10.65	9.65	6.39	9.70	N/A	9.13
2008	11.26	10.26	6.96	10.71	N/A	9.74
2009	11.51	10.16	6.83	10.66	N/A	9.82
2010	11.54	10.19	6.77	10.56	N/A	9.83
2011	11.72	10.24	6.82	10.46	N/A	9.90
2012	11.88	10.09	6.67	10.21	N/A	9.84
2013	12.13	10.26	6.89	10.55	N/A	10.07
2014	12.52	10.74	7.10	10.45	N/A	10.44
2015	12.65	10.64	6.91	10.09	N/A	10.41

**(From Tables 2.11. - 2.13.) Trade  
(Thousand Megawatthours)**

Year	Purchases	Sales for Resale	Imports	Exports
2005	6,092,285	6,071,659	43,929	19,151
2006	5,502,584	5,493,473	42,691	24,271
2007	5,411,422	5,479,394	51,396	20,144
2008	5,612,781	5,680,733	57,019	24,198
2009	5,028,647	5,065,031	52,191	18,138
2010	5,770,134	5,929,211	45,083	19,106
2011	5,024,621	5,143,121	52,300	15,049
2012	4,984,933	5,013,765	59,257	11,996
2013	4,684,977	4,842,508	68,947	11,373
2014	4,802,227	4,908,839	66,510	13,298
2015	4,761,523	4,797,395	75,770	9,100

**(From Tables 3.1.A. and 3.1.B.) Net Generation (Thousand Megawatthours)**

Utility Scale Capacity									
Year	Coal	Petroleum	Natural Gas	Other Gas	Nuclear	Hydro Conventional	Hydro Pumped Storage	Geothermal	Wind
2005	2,012,873	122,225	760,960	13,464	781,986	270,321	-6,558	14,692	17,811
2006	1,990,511	64,166	816,441	14,177	787,219	289,246	-6,558	14,568	26,589
2007	2,016,456	65,739	896,590	13,453	806,425	247,510	-6,896	14,637	34,450
2008	1,985,801	46,243	882,981	11,707	806,208	254,831	-6,288	14,840	55,363
2009	1,755,904	38,937	920,979	10,632	798,855	273,445	-4,627	15,009	73,886
2010	1,847,290	37,061	987,697	11,313	806,968	260,203	-5,501	15,219	94,652
2011	1,733,430	30,182	1,013,689	11,566	790,204	319,355	-6,421	15,316	120,177
2012	1,514,043	23,190	1,225,894	11,898	769,331	276,240	-4,950	15,562	140,822
2013	1,581,115	27,164	1,124,836	12,853	789,016	268,565	-4,681	15,775	167,840
2014	1,581,710	30,232	1,126,609	12,022	797,166	259,367	-6,174	15,877	181,655
2015	1,352,398	28,249	1,333,482	13,117	797,178	249,080	-5,091	15,918	190,719

<b>Utility Scale Capacity</b>	<b>Distributed Generation</b>	<b>Distributed and Utility Scale</b>
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**Table 1.2. Summary Statistics for the United States, 2005 - 2015**

Year	Solar Photo-voltaic	Solar Thermal	Wood and Wood-Derived Fuels	Other Biomass	Other Energy Sources	Total Utility Scale Generation	Estimated Photo-voltaic	Total Photo-voltaic	Total Solar
2005	16	535	38,856	15,420	12,821	4,055,423	--	16	550
2006	15	493	38,762	16,099	12,974	4,064,702	--	15	508
2007	16	596	39,014	16,525	12,231	4,156,745	--	16	612
2008	76	788	37,300	17,734	11,804	4,119,388	--	76	864
2009	157	735	36,050	18,443	11,928	3,950,331	--	157	891
2010	423	789	37,172	18,917	12,855	4,125,060	--	423	1,212
2011	1,012	806	37,449	19,222	14,154	4,100,141	--	1,012	1,818
2012	3,451	876	37,799	19,823	13,787	4,047,765	--	3,451	4,327
2013	8,121	915	40,028	20,830	13,588	4,065,964	--	8,121	9,036
2014	15,250	2,441	42,340	21,650	13,461	4,093,606	11,233	26,482	28,924
2015	21,666	3,227	41,929	21,703	14,028	4,077,601	14,139	35,805	39,032

**(From Tables 4.2.A. and 4.2.B.) Net Summer Generating Capacity (Megawatts)**

Utility Scale Capacity									
Year	Coal	Petroleum	Natural Gas	Other Gas	Nuclear	Hydro Conventional	Hydro Pumped Storage	Geothermal	Wind
2005	313,380.0	58,548.0	383,061.0	2,063.0	99,988.0	77,541.0	21,347.0	2,285.0	8,706.0
2006	312,956.0	58,097.0	388,294.0	2,256.0	100,334.0	77,821.0	21,461.0	2,274.0	11,329.0
2007	312,738.0	56,068.0	392,876.0	2,313.0	100,266.0	77,885.0	21,886.0	2,214.0	16,515.0
2008	313,322.0	57,445.0	397,460.0	1,995.0	100,755.0	77,930.0	21,858.0	2,229.0	24,651.0
2009	314,294.1	56,780.5	401,271.8	1,932.4	101,003.7	78,517.7	22,160.4	2,381.9	34,295.8
2010	316,800.1	55,646.9	407,028.4	2,700.3	101,167.4	78,824.7	22,198.9	2,404.6	39,134.5
2011	317,640.3	51,481.6	415,191.3	1,934.2	101,418.8	78,651.6	22,292.6	2,409.2	45,675.9
2012	309,680.4	47,167.2	422,364.4	1,945.6	101,885.0	78,738.0	22,368.3	2,592.1	59,074.8
2013	303,306.3	43,523.0	425,389.7	2,107.8	99,240.3	79,200.0	22,389.3	2,607.0	59,973.4
2014	299,094.2	41,135.4	432,150.3	1,914.3	98,569.3	79,677.3	22,485.1	2,514.3	64,231.5
2015	279,719.9	36,830.3	439,425.4	2,500.4	98,672.0	79,664.2	22,575.1	2,541.5	72,573.4

Utility Scale Capacity							Distributed Generation	Distributed and Utility Scale	
Year	Solar Photo-voltaic	Solar Thermal	Wood and Wood-Derived Fuels	Other Biomass	Other Energy Sources	Total Utility Scale Capacity	Estimated Photo-voltaic	Total Photo-voltaic	Total Solar
2005	--	--	6,193.0	3,609.0	887.0	978,020.0	--	--	--
2006	--	--	6,372.0	3,727.0	882.0	986,215.0	--	--	--
2007	36.7	464.8	6,704.0	4,134.0	788.0	994,888.0	--	36.7	501.5
2008	70.8	464.8	6,864.0	4,186.0	942.0	1,010,171.0	--	70.8	535.6
2009	145.5	473.0	6,939.3	4,316.5	887.8	1,025,400.4	--	145.5	618.5
2010	393.4	473.0	7,037.3	4,368.5	883.8	1,039,061.8	--	393.4	866.4
2011	1,052.0	471.5	7,076.5	4,535.9	1,419.6	1,051,251.0	--	1,052.0	1,523.5
2012	2,694.1	476.0	7,507.6	4,810.6	1,728.9	1,063,033.0	--	2,694.1	3,170.1
2013	5,336.1	1,286.4	8,354.2	5,043.0	2,307.0	1,060,063.5	--	5,336.1	6,622.5
2014	8,656.6	1,666.7	8,368.1	5,166.5	2,792.6	1,068,422.2	7,326.6	15,983.2	17,649.9
2015	11,905.4	1,757.9	8,968.9	5,124.5	1,795.6	1,064,054.5	9,778.5	21,683.9	23,441.8

**Table 1.2. Summary Statistics for the United States, 2005 - 2015**

**(From Chapter 5.) Consumption of Fossil Fuels**

Year	For Electricity Generation				For Useful Thermal Output			
	Coal (Thousand Tons)	Petroleum (Thousand Barrels)	Natural Gas (Millions of Cubic Feet)	Other Gas (Millions of BTU)	Coal (Thousand Tons)	Petroleum (Thousand Barrels)	Natural Gas (Millions of Cubic Feet)	Other Gas (Millions of BTU)
2005	1,041,448	206,785	6,036,370	109,916	23,833	24,408	984,340	238,396
2006	1,030,556	110,634	6,461,615	114,665	23,227	20,371	942,817	226,464
2007	1,046,795	112,615	7,089,342	114,904	22,810	19,775	872,579	214,321
2008	1,042,335	80,932	6,895,843	96,757	22,168	12,016	793,537	203,236
2009	934,683	67,668	7,121,069	83,593	20,507	13,161	816,787	175,671
2010	979,684	65,071	7,680,185	90,058	21,727	10,161	821,775	172,081
2011	934,938	52,387	7,883,865	91,290	21,532	9,223	839,681	191,138
2012	825,734	40,977	9,484,710	103,353	19,333	9,828	886,103	199,121
2013	860,729	47,492	8,596,299	115,303	18,350	10,886	882,385	189,902
2014	853,634	53,593	8,544,387	110,010	18,107	9,513	865,146	194,088
2015	739,594	49,145	10,016,576	105,997	16,632	8,864	935,098	183,596

Year	Total			
	Coal (Thousand Tons)	Petroleum (Thousand Barrels)	Natural Gas (Millions of Cubic Feet)	Other Gas (Millions of BTU)
2005	1,065,281	231,193	7,020,709	348,312
2006	1,053,783	131,005	7,404,432	341,129
2007	1,069,606	132,389	7,961,922	329,225
2008	1,064,503	92,948	7,689,380	299,993
2009	955,190	80,830	7,937,856	259,265
2010	1,001,411	75,231	8,501,960	262,138
2011	956,470	61,610	8,723,546	282,428
2012	845,066	50,805	10,370,812	302,475
2013	879,078	58,378	9,478,685	305,205
2014	871,741	63,106	9,409,532	304,098
2015	756,226	58,009	10,951,674	289,593

**(From Tables 6.1. and 7.1)**

**Year End Stocks, Annual Receipts and Average Costs**

Year	Electric Power Sector Year End Stocks		Annual Receipts at All Electricity Generators			Average Cost of Fuel at All Electricity Generators		
	Coal (Thousand Tons)	Petroleum (Thousand Barrels)	Coal (Thousand Tons)	Petroleum (Thousand Barrels)	Natural Gas (Millions of Cubic Feet)	Coal (Dollars per MMBtu)	Petroleum (Dollars per MMBtu)	Natural Gas (Dollars per MMBtu)
2005	101,137	50,062	1,021,437	194,733	6,181,717	1.54	6.44	8.21
2006	140,964	51,583	1,079,943	100,965	6,675,246	1.69	6.23	6.94
2007	151,221	47,203	1,054,664	88,347	7,200,316	1.77	7.17	7.11
2008	161,589	44,498	1,069,709	96,341	7,879,046	2.07	10.87	9.02
2009	189,467	46,181	981,477	88,951	8,118,550	2.21	7.02	4.74
2010	174,917	40,800	979,918	75,285	8,673,070	2.27	9.54	5.09
2011	172,387	37,387	956,538	66,058	9,056,164	2.39	12.48	4.72
2012	185,116	34,698	841,183	40,364	9,531,389	2.38	12.48	3.42

**Table 1.2. Summary Statistics for the United States, 2005 - 2015**

2013	147,884	33,622	823,222	43,714	8,503,424	2.34	11.57	4.33
2014	151,548	37,643	854,560	54,488	8,431,423	2.37	11.60	5.00
2015	195,548	39,586	782,929	48,804	9,842,581	2.22	6.74	3.23

**(From Table 9.1.) Emissions  
(Thousand Metric Tons)**

Year	Carbon Dioxide (CO <sub>2</sub> )	Sulfur Dioxide (SO <sub>2</sub> )	Nitrogen Oxides (NO <sub>x</sub> )
2005	2,543,838	10,340	3,961
2006	2,488,918	9,524	3,799
2007	2,547,032	9,042	3,650
2008	2,484,012	7,830	3,330
2009	2,269,508	5,970	2,395
2010	2,388,596	5,400	2,491
2011	2,287,071	4,845	2,406
2012	2,156,875	3,704	2,148
2013	2,173,806	3,609	2,163
2014	2,168,284	3,454	2,100
2015	2,031,452	2,548	1,824

**(From Tables 10.6. and 10.7.) Energy Efficiency**

Year	Savings		Incremental Costs		Life Cycle Savings		Life Cycle Costs	
	Energy (MWh)	Peak Demand (MW)	Incentives (thousand dollars)	Other (thousand dollars)	Energy (MWh)	Peak Demand (MW)	Incentives (thousand dollars)	Other (thousand dollars)
2013	24,681,523	19,599	2,872,171	1,945,877	251,464,746	134,861	6,029,552	3,996,230
2014	26,465,221	6,517	3,411,034	2,209,148	290,141,793	76,760	4,007,996	3,123,719
2015	26,189,500	6,055	3,449,385	2,281,188	307,084,004	32,991	4,256,873	3,708,393

**(From Tables 10.8. and 10.9.) Demand Response**

Year	Yearly Energy and Demand Savings				Program Costs	
	Customers	Energy (MWh)	Potential Peak Demand (MW)	Actual Peak Demand (MW)	Incentives (thousand dollars)	Other (thousand dollars)
2013	9,187,350	1,401,987	27,095	11,883	1,112,782	485,133
2014	9,265,629	1,436,449	31,191	12,683	1,217,796	447,659
2015	9,094,138	1,251,006	32,875	13,036	1,120,446	381,918

Coal includes anthracite, bituminous, subbituminous and lignite coal. Starting in 2002 waste coal is included in all coal metrics except for year-end stocks. Starting in 2002 Synthetic coal is included in all coal metrics. Starting in 2011 Coal-derived synthesis gas is included in all coal metrics. Prior to 2011 coal-derived synthesis gas was included in Other Gases.

Petroleum includes Distillate fuel oil (all diesel and No. 1, No. 2, and No. 4 fuel oils), residual fuel oil (No. 5 and No. 6 fuel oils and bunker C fuel oil), jet fuel, kerosene, petroleum coke (converted to liquid petroleum, see Technical Notes for conversion methodology) and waste oil. Prior to 2011 propane was in the Other Gas category. Beginning in 2004 small quantities of waste oil were excluded from petroleum stocks.

Natural gas includes a small number of generators for which waste heat is the primary energy source. Natural gas also includes a small amount of supplemental gaseous fuels that cannot be identified separately.

Prior to 2011, synthesis gas derived from petroleum coke was in the Other Gas category. Other Gas includes blast furnace gas, propane gas, and other manufactured and waste gases derived from fossil fuels.

Conventional hydroelectric power excludes pumped storage facilities.

## Table 1.2. Summary Statistics for the United States, 2005 - 2015

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 biomass includes biogenic municipal solid waste, landfill gas, sludge waste, agricultural byproducts, other biomass solids, other biomass liquids, and other biomass gases (including digester gases, methane, and other biomass gases). The reported summer capacity for other biomass also includes non-biogenic municipal solid waste.

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

Other energy sources include batteries, hydrogen, purchased steam, sulfur, tire-derived fuels and other miscellaneous energy sources, and for generation values, non-biogenic municipal solid waste.

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

N/A = Not available.

Notes: See Glossary reference for definitions. See Technical Notes Appendix for conversion to different units of measure. Capacity by energy source is based on the capacity associated with the energy source reported as the most predominant (primary) one, where more than one energy source is associated with a generator. Dual-fired capacity returned to respective fuel categories for current and all historical years. New fuel switchable capacity tables have replaced dual-fired breakouts. Totals may not equal sum of components because of independent rounding. In 2013, EIA revised its approach to estimating imports from Mexico.

Sources: U.S. Energy Information Administration Form EIA-411, 'Coordinated Bulk Power Supply Program Report;' Form EIA-412, 'Annual Electric Industry Financial Report'. The Form EIA-412 was terminated in 2003; Form EIA-767, 'Steam-Electric Plant Operation and Design Report' was suspended; Form EIA-860, 'Annual Electric Generator Report;' Form EIA-861, 'Annual Electric Power Industry Report;' Form EIA-923, 'Power Plant Operations Report' replaces several form(s) including: Form EIA-906, 'Power Plant Report;' Form EIA-920 'Combined Heat and Power Plant Report;' Form EIA-423, 'Monthly Cost and Quality of Fuels for Electric Plants Report;' and FERC Form 423, 'Monthly Report of Cost and Quality of Fuels for Electric Plants,' and their predecessor forms. Federal Energy Regulatory Commission, FERC Form 1, 'Annual Report of Major Utilities, Licensees and Others;' FERC Form 1-F, 'Annual Report for Nonmajor Public Utilities and Licensees;' Rural Utilities Service (RUS) Form 7, 'Operating Report;' RUS Form 12, 'Operating Report;'

Imports and Exports: National Energy Board of Canada; FERC 714, Annual Electric Balancing Authority Area and Planning Report; California Energy Commission; and EIA estimates

**Table 1.3. Supply and Disposition of Electricity, 2005 through 2015**

**(From Chapter 3.) Supply (Thousand Megawatthours)**

Year	Generation				Total Imports	Total Supply	
	Electric Utilities	IPP (Non-CHP)	IPP (CHP)	Commercial Sector			Industrial Sector
2005	2,474,846	1,246,971	180,375	8,492	144,739	43,929	4,099,352
2006	2,483,656	1,259,062	165,359	8,371	148,254	42,691	4,107,394
2007	2,504,131	1,323,856	177,356	8,273	143,128	51,396	4,208,140
2008	2,475,367	1,332,068	166,915	7,926	137,113	57,019	4,176,407
2009	2,372,776	1,277,916	159,146	8,165	132,329	52,191	4,002,522
2010	2,471,632	1,338,712	162,042	8,592	144,082	45,083	4,170,143
2011	2,460,851	1,331,303	156,032	10,080	141,875	52,300	4,152,441
2012	2,339,172	1,386,991	164,194	11,301	146,107	59,257	4,107,022
2013	2,388,058	1,368,038	147,619	12,234	150,015	68,947	4,134,911
2014	2,382,473	1,404,324	150,205	12,520	144,083	66,510	4,160,116
2015	2,315,323	1,448,799	155,173	12,595	145,712	75,770	4,153,371

**(From Chapter 2.) Disposition (Thousand Megawatthours)**

Year	Retail Sales			Direct Use	Total Exports	Losses and Unaccounted For	Total Disposition
	Full-Service Providers	Energy-Only Providers	Facility Direct				
2005	3,412,721	237,055	11,193	150,016	19,151	269,217	4,099,352
2006	3,438,337	219,185	12,397	146,927	24,271	266,277	4,107,394
2007	3,468,018	282,538	14,004	125,670	20,144	297,766	4,208,140
2008	3,436,011	284,386	13,567	132,197	24,198	286,048	4,176,407
2009	3,289,877	294,229	12,689	126,938	18,138	260,650	4,002,522
2010	3,365,338	379,277	10,226	131,910	19,106	264,285	4,170,143
2011	3,272,622	466,964	10,259	132,754	15,049	254,792	4,152,441
2012	3,172,096	514,290	8,263	137,657	11,996	262,720	4,107,022
2013	3,147,192	559,211	18,465	143,462	11,373	255,208	4,134,911
2014	3,184,841	563,441	16,418	138,574	13,298	243,544	4,160,116
2015	3,191,425	554,944	12,624	141,168	9,100	244,112	4,153,371

N/A = Not Available.

Facility Direct Retail Sales typically represent bilateral electric power sales between industrial and commercial generating facilities.

Direct Use represents commercial and industrial facility use of onsite net electricity generation; electricity sales or transfers to adjacent or co-located facilities; and barter transactions. Losses and Unaccounted For includes: (1) reporting by utilities and power marketers that represent losses incurred in transmission and distribution, as well as volumes unaccounted for in their own energy balance; and (2) discrepancies among the differing categories upon balancing the table.

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

Sources: U.S. Energy Information Administration, Form EIA-923, "Power Plant Operations Report" and predecessor form(s) including U.S. Energy Information Administration, Form EIA-906, "Power Plant Report;" and Form EIA-920, "Combined Heat and Power Plant Report;" Form EIA-861, "Annual Electric Power Industry Report;" and predecessor forms. Imports and Exports: Mexico data - DOE, Fossil Fuels, Office of Fuels Programs, Form OE-781R, "Annual Report of International Electrical Export/Import Data;" Canada data - National Energy Board of Canada (metered energy firm and interruptible).

## Chapter 2

# Electricity Sales

**Table 2.1. Number of Ultimate Customers Served by Sector, by Provider, 2005 through 2015**

Year	Residential	Commercial	Industrial	Transportation	Total
<b>Total Electric Industry</b>					
2005	120,760,839	16,871,940	733,862	518	138,367,159
2006	122,471,071	17,172,499	759,604	791	140,403,965
2007	123,949,916	17,377,219	793,767	750	142,121,652
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
<b>Full-Service Providers</b>					
2005	118,469,928	16,389,549	719,219	496	135,579,192
2006	120,677,627	16,673,766	745,645	764	138,097,802
2007	121,782,003	16,767,635	771,637	710	139,321,985
2008	122,706,203	16,932,969	756,094	696	140,395,962
2009	122,560,533	16,852,697	736,326	666	140,150,222
2010	121,555,089	16,675,341	718,652	198	138,949,280
2011	120,306,190	16,321,174	682,906	56	137,310,326
2012	118,650,233	16,111,883	681,074	48	135,443,238
2013	116,624,884	15,817,442	780,759	48	133,223,133
2014	117,230,661	15,942,158	789,803	50	133,962,672
2015	119,477,949	16,108,931	787,466	48	136,374,394
<b>Energy-Only Providers</b>					
2005	2,290,911	482,391	14,643	22	2,787,967
2006	1,793,444	498,733	13,959	27	2,306,163
2007	2,167,913	609,584	22,130	40	2,799,667
2008	2,331,634	649,413	18,714	30	2,999,791
2009	2,648,296	709,538	21,211	38	3,379,083
2010	4,162,846	998,997	29,095	41	5,190,979
2011	5,836,882	1,316,888	45,014	36	7,198,820
2012	8,182,110	1,617,146	51,311	35	9,850,602
2013	11,152,269	1,862,120	51,031	27	13,065,447
2014	11,449,755	1,911,837	49,409	29	13,411,030
2015	10,333,769	1,876,759	48,070	30	12,258,628

N/A = Not Available.

Pursuant to applicable Texas statutes establishing competitive electricity markets within the Electric Reliability Council of Texas (ERCOT), all customers served by Retail Energy Providers must be provided bundled energy and delivery services, so they are included under "Full-Service Providers".

Full-Service Providers sell bundled electricity services (e.g., both energy and delivery) to end users. Full-Service Providers may purchase electricity from others (such as Independent Power Producers or other Full-Service Providers) prior to delivery. Direct sales from independent facility generators to end use consumers are reported under Full-Service Providers. Energy-Only Providers sell energy to end use customers; incumbent utility distribution firms provide Delivery-Only Services for these customers.

Source: U.S. Energy Information Administration, Form EIA-861, "Annual Electric Power Industry Report." and Form EIA-861S, "Annual Electric Power Industry Report (Short Form)."

**Table 2.2. Sales and Direct Use of Electricity to Ultimate Customers by Sector, by Provider, 2005 through 2015 (Megawatthours)**

Year	Residential	Commercial	Industrial	Transportation	Total	Direct Use	Total End Use
<b>Total Electric Industry</b>							
2005	1,359,227,107	1,275,079,020	1,019,156,065	7,506,321	3,660,968,513	150,015,531	3,810,984,044
2006	1,351,520,036	1,299,743,695	1,011,297,566	7,357,543	3,669,918,840	146,926,612	3,816,845,452
2007	1,392,240,996	1,336,315,196	1,027,831,925	8,172,595	3,764,560,712	125,670,185	3,890,230,897
2008	1,380,661,745	1,336,133,485	1,009,516,178	7,653,211	3,733,964,619	132,196,685	3,866,161,304
2009	1,364,758,153	1,306,852,524	917,416,468	7,767,989	3,596,795,134	126,937,958	3,723,733,092
2010	1,445,708,403	1,330,199,364	971,221,189	7,712,412	3,754,841,368	131,910,249	3,886,751,617
2011	1,422,801,093	1,328,057,439	991,315,564	7,672,084	3,749,846,180	132,754,037	3,882,600,217
2012	1,374,514,708	1,327,101,196	985,713,854	7,320,028	3,694,649,786	137,656,510	3,832,306,296
2013	1,394,812,129	1,337,078,777	985,351,874	7,625,041	3,724,867,821	143,461,937	3,868,329,758
2014	1,407,208,311	1,352,158,263	997,576,138	7,757,555	3,764,700,267	138,573,884	3,903,274,151
2015	1,404,096,499	1,360,751,527	986,507,732	7,636,632	3,758,992,390	141,167,519	3,900,159,909
<b>Full-Service Providers</b>							
2005	1,339,568,275	1,151,327,861	929,675,932	3,341,814	3,423,913,882	N/A	3,423,913,882
2006	1,337,837,993	1,170,661,399	939,194,648	3,040,062	3,450,734,102	N/A	3,450,734,102
2007	1,375,450,126	1,180,789,042	923,148,031	2,635,498	3,482,022,697	N/A	3,482,022,697
2008	1,363,664,159	1,173,581,515	909,792,014	2,540,452	3,449,578,140	N/A	3,449,578,140
2009	1,345,314,362	1,143,473,246	811,314,045	2,464,259	3,302,565,912	N/A	3,302,565,912
2010	1,409,355,244	1,123,328,313	840,439,791	2,440,567	3,375,563,915	N/A	3,375,563,915
2011	1,368,453,770	1,090,292,969	822,404,124	1,730,820	3,282,881,683	N/A	3,282,881,683
2012	1,297,818,441	1,073,346,766	807,805,140	1,389,340	3,180,359,687	N/A	3,180,359,687
2013	1,291,368,071	1,074,915,884	797,769,849	1,603,318	3,165,657,122	N/A	3,165,657,122
2014	1,301,458,851	1,083,806,639	814,206,541	1,787,408	3,201,259,439	N/A	3,201,259,439
2015	1,307,918,081	1,089,268,864	805,111,979	1,749,450	3,204,048,374	N/A	3,204,048,374
<b>Energy-Only Providers</b>							
2005	19,658,832	123,751,159	89,480,133	4,164,507	237,054,631	N/A	237,054,631
2006	13,682,043	129,082,296	72,102,918	4,317,481	219,184,738	N/A	219,184,738
2007	16,790,870	155,526,154	104,683,894	5,537,097	282,538,015	N/A	282,538,015
2008	16,997,586	162,551,970	99,724,164	5,112,759	284,386,479	N/A	284,386,479
2009	19,443,791	163,379,278	106,102,423	5,303,730	294,229,222	N/A	294,229,222
2010	36,353,159	206,871,051	130,781,398	5,271,845	379,277,453	N/A	379,277,453
2011	54,347,323	237,764,470	168,911,440	5,941,264	466,964,497	N/A	466,964,497
2012	76,696,267	253,754,430	177,908,714	5,930,688	514,290,099	N/A	514,290,099
2013	103,444,058	262,162,893	187,582,025	6,021,723	559,210,699	N/A	559,210,699
2014	105,749,460	268,351,624	183,369,597	5,970,147	563,440,828	N/A	563,440,828
2015	96,178,418	271,482,663	181,395,753	5,887,182	554,944,016	N/A	554,944,016

N/A = Not Available.

Direct Use represents commercial and industrial facility use of onsite net electricity generation; and electricity sales or transfers to adjacent or co-located facilities for which revenue information is not available.

Pursuant to applicable Texas statutes establishing competitive electricity markets within the Electric Reliability Council of Texas (ERCOT), all customers served by Retail Energy Providers must be provided bundled energy and delivery services, so they are included under "Full-Service Providers".

Full-Service Providers sell bundled electricity services (e.g., both energy and delivery) to end users. Full-Service Providers may purchase electricity from others (such as Independent Power Producers or other Full-Service Providers) prior to delivery. Direct sales from independent facility generators to end use consumers are reported under Full-Service Providers. Energy-Only Providers sell energy to end use customers; incumbent utility distribution firms provide Delivery-Only Services for these customers.

Source: U.S. Energy Information Administration, Form EIA-861, "Annual Electric Power Industry Report.", Form EIA-861S, "Annual Electric Power Industry Report (Short Form)" and Form EIA-923, "Power Plant Operations Report"

**Table 2.3. Revenue from Sales of Electricity to Ultimate Customers by Sector, by Provider, 2005 through 2015 (Million Dollars)**

Year	Residential	Commercial	Industrial	Transportation	Total
<b>Total Electric Industry</b>					
2005	128,393	110,522	58,445	643	298,003
2006	140,582	122,914	62,308	702	326,506
2007	148,295	128,903	65,712	792	343,703
2008	155,496	137,036	70,231	820	363,583
2009	157,044	132,747	62,670	828	353,289
2010	166,778	135,554	65,772	814	368,918
2011	166,714	135,927	67,606	803	371,049
2012	163,280	133,898	65,761	747	363,687
2013	169,131	137,188	67,934	805	375,058
2014	176,178	145,253	70,855	810	393,096
2015	177,624	144,781	68,166	771	391,342
<b>Full-Service Providers</b>					
2005	125,983	97,405	52,113	249	275,749
2006	138,608	107,432	56,385	257	302,683
2007	145,642	109,703	56,950	232	312,527
2008	152,520	115,413	61,117	252	329,301
2009	153,741	112,254	53,284	226	319,506
2010	161,221	110,298	54,582	233	326,334
2011	158,788	108,318	54,285	162	321,552
2012	152,817	106,012	52,667	132	311,628
2013	155,203	108,460	54,309	167	318,138
2014	160,637	113,880	57,140	187	331,845
2015	162,857	113,225	54,787	170	331,038
<b>Competitive Service Providers</b>					
2005	2,410	13,117	6,333	394	22,254
2006	1,974	15,482	5,922	445	23,823
2007	2,653	19,200	8,762	560	31,176
2008	2,977	21,623	9,114	568	34,282
2009	3,302	20,493	9,386	602	33,783
2010	5,557	25,256	11,190	581	42,584
2011	7,926	27,609	13,321	641	49,497
2012	10,464	27,886	13,094	615	52,059
2013	13,928	28,729	13,625	638	56,919
2014	15,541	31,373	13,715	623	61,251
2015	14,767	31,557	13,379	601	60,303
<b>Energy-Only Providers</b>					
2005	1,285	8,844	4,749	308	15,186
2006	1,127	10,792	4,510	356	16,784
2007	1,646	13,553	7,197	458	22,854
2008	1,859	15,661	7,506	448	25,474
2009	1,889	14,045	7,369	460	23,763
2010	3,226	16,994	8,664	424	29,308
2011	4,578	18,086	10,392	463	33,519
2012	5,776	17,397	9,895	432	33,500
2013	7,755	17,876	10,330	451	36,412
2014	9,079	19,948	10,813	436	40,277
2015	8,428	19,657	10,298	407	38,791
<b>Delivery-Only Providers</b>					
2005	1,125	4,273	1,584	86	7,068
2006	847	4,690	1,412	90	7,040
2007	1,007	5,647	1,565	102	8,322
2008	1,118	5,962	1,608	120	8,808
2009	1,413	6,448	2,017	143	10,021
2010	2,330	8,262	2,526	157	13,276
2011	3,348	9,523	2,929	178	15,978
2012	4,687	10,489	3,199	183	18,559
2013	6,172	10,853	3,295	187	20,507
2014	6,462	11,425	2,901	187	20,975
2015	6,339	11,900	3,081	193	21,512

N/A = Not Available.

Pursuant to applicable Texas statutes establishing competitive electricity markets within the Electric Reliability Council of Texas (ERCOT), all customers served by Retail Energy Providers must be provided bundled energy and delivery services, so they are included under "Full-Service Providers".

Full-Service Providers sell bundled electricity services (e.g., both energy and delivery) to end users. Full-Service Providers may purchase electricity from others (such as Independent Power Producers or other Full-Service Providers) prior to delivery. Direct sales from independent facility generators to end use consumers are reported under Full-Service Providers. Energy-Only Providers sell energy to end use customers; incumbent utility distribution firms provide Delivery-Only Services for these customers. Data reported under Competitive Service Providers represent the sum of Energy-Only and Delivery-Only Services."

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

Source: U.S. Energy Information Administration, Form EIA-861, "Annual Electric Power Industry Report." Form EIA-861S, "Annual Electric Power Industry Report (Short Form)."

**Table 2.4. Average Price of Electricity to Ultimate Customers**

**by End-Use Sectors 2005 through 2015 (Cents per kilowatthour)**

Year	Residential	Commercial	Industrial	Transportation	Total
<b>Total Electric Industry</b>					
2005	9.45	8.67	5.73	8.57	8.14
2006	10.40	9.46	6.16	9.54	8.90
2007	10.65	9.65	6.39	9.70	9.13
2008	11.26	10.26	6.96	10.71	9.74
2009	11.51	10.16	6.83	10.66	9.82
2010	11.54	10.19	6.77	10.56	9.83
2011	11.72	10.24	6.82	10.46	9.90
2012	11.88	10.09	6.67	10.21	9.84
2013	12.13	10.26	6.89	10.55	10.07
2014	12.52	10.74	7.10	10.45	10.44
2015	12.65	10.64	6.91	10.09	10.41
<b>Full-Service Providers</b>					
2005	9.40	8.46	5.61	7.45	8.05
2006	10.36	9.18	6.0	8.44	8.77
2007	10.59	9.29	6.17	8.82	8.98
2008	11.18	9.83	6.72	9.91	9.55
2009	11.43	9.82	6.57	9.17	9.67
2010	11.44	9.82	6.49	9.55	9.67
2011	11.60	9.93	6.60	9.35	9.79
2012	11.77	9.88	6.52	9.50	9.80
2013	12.02	10.09	6.81	10.40	10.05
2014	12.34	10.51	7.02	10.49	10.37
2015	12.45	10.39	6.80	9.71	10.33
<b>Competitive Service Providers</b>					
2005	12.26	10.60	7.08	9.47	9.39
2006	14.43	11.99	8.21	10.32	10.87
2007	15.80	12.35	8.37	10.11	11.03
2008	17.51	13.30	9.14	11.11	12.05
2009	16.98	12.54	8.85	11.36	11.48
2010	15.29	12.21	8.56	11.03	11.23
2011	14.58	11.61	7.89	10.79	10.60
2012	13.64	10.99	7.36	10.38	10.12
2013	13.46	10.96	7.26	10.60	10.18
2014	14.70	11.69	7.48	10.44	10.87
2015	15.35	11.62	7.38	10.20	10.87
<b>Energy-Only Providers</b>					
2005	6.54	7.15	5.31	7.40	6.41
2006	8.23	8.36	6.25	8.24	7.66
2007	9.80	8.71	6.87	8.28	8.09
2008	10.94	9.63	7.53	8.77	8.96
2009	9.72	8.60	6.94	8.67	8.08
2010	8.88	8.21	6.62	8.05	7.73
2011	8.42	7.61	6.15	7.80	7.18
2012	7.53	6.86	5.56	7.29	6.51
2013	7.50	6.82	5.51	7.49	6.51
2014	8.59	7.43	5.90	7.31	7.15
2015	8.76	7.24	5.68	6.92	6.99
<b>Delivery-Only Providers</b>					
2005	5.72	3.45	1.77	2.07	2.98
2006	6.19	3.63	1.96	2.08	3.21
2007	6.0	3.63	1.50	1.84	2.95
2008	6.58	3.67	1.61	2.35	3.10
2009	7.27	3.95	1.90	2.69	3.41
2010	6.41	3.99	1.93	2.98	3.50
2011	6.16	4.01	1.73	2.99	3.42
2012	6.11	4.13	1.80	3.09	3.61
2013	5.97	4.14	1.76	3.11	3.67
2014	6.11	4.26	1.58	3.12	3.72
2015	6.59	4.38	1.70	3.28	3.88

N/A = Not Available.

Pursuant to applicable Texas statutes establishing competitive electricity markets within the Electric Reliability Council of Texas (ERCOT), all customers served by Retail Energy Providers must be provided bundled energy and delivery services, so they are included under "Full-Service Providers".

Full-Service Providers sell bundled electricity services (e.g., both energy and delivery) to end users. Full-Service Providers may purchase electricity from others (such as Independent Power Producers or other Full-Service Providers) prior to delivery. Direct sales from independent facility generators to end use consumers are reported under Full-Service Providers. Energy-Only Providers sell energy to end use customers; incumbent utility distribution firms provide Delivery-Only Services for these customers. Data reported under Competitive Service Providers represent the sum of Energy-Only and Delivery-Only Services."

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

Source: U.S. Energy Information Administration, Form EIA-861, "Annual Electric Power Industry Report." Form EIA-861S, "Annual Electric Power Industry Report (Short Form)."

**Table 2.5. Sales of Electricity to Ultimate Customers:  
Total by End-Use Sector, 2005 - December 2015 (Thousand Megawatthours)**

Period	Residential	Commercial	Industrial	Transportation	All Sectors
<b>Annual Totals</b>					
2005	1,359,227	1,275,079	1,019,156	7,506	3,660,969
2006	1,351,520	1,299,744	1,011,298	7,358	3,669,919
2007	1,392,241	1,336,315	1,027,832	8,173	3,764,561
2008	1,380,662	1,336,133	1,009,516	7,653	3,733,965
2009	1,364,758	1,306,853	917,416	7,768	3,596,795
2010	1,445,708	1,330,199	971,221	7,712	3,754,841
2011	1,422,801	1,328,057	991,316	7,672	3,749,846
2012	1,374,515	1,327,101	985,714	7,320	3,694,650
2013	1,394,812	1,337,079	985,352	7,625	3,724,868
2014	1,407,208	1,352,158	997,576	7,758	3,764,700
2015	1,404,096	1,360,752	986,508	7,637	3,758,992
<b>Year 2013</b>					
January	131,785	107,729	80,505	664	320,683
February	113,114	101,016	76,692	659	291,480
March	112,097	104,011	80,474	644	297,226
April	95,541	101,395	80,216	630	277,782
May	95,192	108,683	84,897	627	289,398
June	117,982	117,410	84,170	638	320,201
July	143,855	127,311	86,887	649	358,701
August	138,065	127,063	87,806	645	353,580
September	121,419	118,408	83,025	626	323,478
October	98,893	111,907	82,980	591	294,370
November	97,904	103,384	79,632	574	281,494
December	128,966	108,762	78,067	679	316,475
<b>Year 2014</b>					
January	146,511	113,866	80,149	712	341,238
February	128,475	104,353	75,413	700	308,941
March	114,233	106,968	80,539	648	302,388
April	92,290	102,459	80,505	640	275,894
May	95,727	109,666	85,383	646	291,421
June	118,049	118,423	85,711	609	322,792
July	137,028	125,434	88,417	645	351,524
August	135,830	125,603	89,808	642	351,883
September	120,741	120,049	85,489	628	326,907
October	98,038	113,023	84,994	625	296,680
November	99,486	104,245	81,044	637	285,413
December	120,801	108,070	80,123	626	309,620
<b>Year 2015</b>					
January	137,765	115,308	79,609	673	333,354
February	123,838	105,165	76,749	699	306,451
March	117,167	107,457	79,709	679	305,013
April	90,199	103,844	80,489	620	275,151
May	95,161	109,093	82,916	609	287,778
June	120,300	118,928	86,218	609	326,055
July	146,038	128,142	87,747	648	362,576
August	144,515	128,174	88,373	625	361,686
September	125,417	121,882	84,730	615	332,645
October	99,349	112,497	83,249	636	295,731
November	92,678	103,796	78,495	604	275,572
December	111,670	106,467	78,224	619	296,981

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

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

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

**Table 2.6. Revenue from Sales of Electricity to Ultimate Customers:  
Total by End-Use Sector, 2005 - December 2015 (Million Dollars)**

Period	Residential	Commercial	Industrial	Transportation	All Sectors
<b>Annual Totals</b>					
2005	128,393	110,522	58,445	643	298,003
2006	140,582	122,914	62,308	702	326,506
2007	148,295	128,903	65,712	792	343,703
2008	155,496	137,036	70,231	820	363,583
2009	157,044	132,747	62,670	828	353,289
2010	166,778	135,554	65,772	814	368,918
2011	166,714	135,927	67,606	803	371,049
2012	163,280	133,898	65,761	747	363,687
2013	169,131	137,188	67,934	805	375,058
2014	176,178	145,253	70,855	810	393,096
2015	177,624	144,781	68,166	771	391,342
<b>Year 2013</b>					
January	15,100	10,527	5,233	70	30,929
February	13,153	10,158	5,105	70	28,485
March	13,016	10,421	5,345	66	28,849
April	11,397	10,099	5,279	65	26,839
May	11,805	11,112	5,732	66	28,715
June	14,793	12,501	6,102	69	33,465
July	18,193	13,624	6,473	71	38,361
August	17,294	13,581	6,474	69	37,418
September	15,192	12,468	5,998	68	33,727
October	12,225	11,504	5,700	62	29,492
November	11,843	10,365	5,294	60	27,563
December	15,120	10,829	5,197	69	31,215
<b>Year 2014</b>					
January	17,075	11,790	5,596	78	34,539
February	15,338	11,142	5,370	73	31,922
March	13,996	11,390	5,632	68	31,087
April	11,365	10,715	5,451	65	27,596
May	12,300	11,555	5,833	65	29,753
June	15,337	12,974	6,335	65	34,710
July	17,943	14,014	6,742	69	38,767
August	17,708	13,876	6,748	64	38,396
September	15,639	13,399	6,299	69	35,406
October	12,352	12,239	6,007	64	30,663
November	12,417	10,967	5,470	65	28,920
December	14,707	11,192	5,372	66	31,336
<b>Year 2015</b>					
January	16,665	11,506	5,310	70	33,552
February	15,215	11,204	5,277	73	31,768
March	14,450	11,460	5,441	69	31,419
April	11,379	10,802	5,323	60	27,564
May	12,300	11,457	5,589	60	29,405
June	15,537	12,993	6,133	62	34,725
July	18,904	14,229	6,538	67	39,738
August	18,659	14,065	6,493	63	39,280
September	16,347	13,420	6,107	63	35,937
October	12,633	12,100	5,728	63	30,524
November	11,775	10,722	5,185	58	27,740
December	13,759	10,825	5,043	61	29,688

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

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

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

**Table 2.7. Average Price of Electricity to Ultimate Customers:  
Total by End-Use Sector, 2005 - December 2015 (Cents per Kilowatthour)**

Period	Residential	Commercial	Industrial	Transportation	All Sectors
<b>Annual Totals</b>					
2005	9.45	8.67	5.73	8.57	8.14
2006	10.40	9.46	6.16	9.54	8.90
2007	10.65	9.65	6.39	9.70	9.13
2008	11.26	10.26	6.96	10.71	9.74
2009	11.51	10.16	6.83	10.66	9.82
2010	11.54	10.19	6.77	10.56	9.83
2011	11.72	10.24	6.82	10.46	9.90
2012	11.88	10.09	6.67	10.21	9.84
2013	12.13	10.26	6.89	10.55	10.07
2014	12.52	10.74	7.10	10.45	10.44
2015	12.65	10.64	6.91	10.09	10.41
<b>Year 2013</b>					
January	11.46	9.77	6.50	10.53	9.64
February	11.63	10.06	6.66	10.56	9.77
March	11.61	10.02	6.64	10.25	9.71
April	11.93	9.96	6.58	10.28	9.66
May	12.40	10.22	6.75	10.50	9.92
June	12.54	10.65	7.25	10.76	10.45
July	12.65	10.70	7.45	10.97	10.69
August	12.53	10.69	7.37	10.77	10.58
September	12.51	10.53	7.22	10.88	10.43
October	12.36	10.28	6.87	10.46	10.02
November	12.10	10.03	6.65	10.49	9.79
December	11.72	9.96	6.66	10.20	9.86
<b>Year 2014</b>					
January	11.65	10.35	6.98	10.93	10.12
February	11.94	10.68	7.12	10.41	10.33
March	12.25	10.65	6.99	10.43	10.28
April	12.31	10.46	6.77	10.23	10.00
May	12.85	10.54	6.83	10.06	10.21
June	12.99	10.96	7.39	10.60	10.75
July	13.09	11.17	7.62	10.68	11.03
August	13.04	11.05	7.51	10.02	10.91
September	12.95	11.16	7.37	11.02	10.83
October	12.60	10.83	7.07	10.27	10.34
November	12.48	10.52	6.75	10.20	10.13
December	12.17	10.36	6.70	10.48	10.12
<b>Year 2015</b>					
January	12.10	9.98	6.67	10.45	10.06
February	12.29	10.65	6.88	10.49	10.37
March	12.33	10.66	6.83	10.12	10.30
April	12.62	10.40	6.61	9.76	10.02
May	12.93	10.50	6.74	9.87	10.22
June	12.92	10.92	7.11	10.15	10.65
July	12.94	11.10	7.45	10.34	10.96
August	12.91	10.97	7.35	10.14	10.86
September	13.03	11.01	7.21	10.29	10.80
October	12.72	10.76	6.88	9.91	10.32
November	12.71	10.33	6.61	9.63	10.07
December	12.32	10.17	6.45	9.81	10.00

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.

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

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

**Table 2.8. Sales of Electricity to Ultimate Customers by End-Use Sector, by State, 2015 and 2014 (Thousand Megawatthours)**

Census Division and State	Residential		Commercial		Industrial		Transportation		All Sectors	
	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014
New England	47,482	47,212	53,383	53,107	18,733	19,107	572	557	120,170	119,983
Connecticut	12,893	12,778	12,959	12,894	3,432	3,515	193	169	29,476	29,354
Maine	4,662	4,661	4,018	3,985	3,208	3,357	0	0	11,888	12,003
Massachusetts	20,175	20,071	26,200	26,076	7,892	7,961	353	361	54,621	54,469
New Hampshire	4,527	4,510	4,491	4,465	1,981	1,969	0	0	10,999	10,944
Rhode Island	3,136	3,070	3,705	3,658	799	887	26	28	7,665	7,643
Vermont	2,089	2,121	2,011	2,031	1,422	1,418	0	0	5,521	5,570
Middle Atlantic	134,574	132,063	159,474	158,043	72,804	73,837	3,896	3,983	370,747	367,926
New Jersey	29,142	27,893	38,723	38,154	7,320	7,517	304	303	75,490	73,866
New York	51,013	49,975	77,006	76,541	18,079	18,003	2,816	2,853	148,914	147,372
Pennsylvania	54,419	54,195	43,745	43,348	47,404	48,318	776	827	146,344	146,688
East North Central	183,153	187,958	183,420	182,860	196,364	200,505	589	648	563,527	571,971
Illinois	44,646	46,009	50,320	50,619	43,131	44,330	524	582	138,620	141,540
Indiana	32,442	33,704	24,022	24,130	48,030	49,088	21	21	104,515	106,943
Michigan	33,358	33,515	38,441	37,349	30,677	32,446	4	4	102,480	103,314
Ohio	51,493	52,804	47,124	47,005	50,557	50,829	40	42	149,213	150,680
Wisconsin	21,215	21,926	23,514	23,757	23,970	23,812	0	0	68,699	69,495
West North Central	101,620	106,909	101,711	100,716	91,430	93,507	45	45	294,806	301,178
Iowa	13,786	14,427	12,072	12,339	21,289	20,436	0	0	47,147	47,202
Kansas	13,242	13,685	15,380	15,383	11,227	11,494	0	0	39,849	40,562
Minnesota	21,714	22,791	23,388	22,828	21,453	23,076	24	24	66,579	68,719
Missouri	33,912	35,793	30,535	30,665	17,036	17,399	21	22	81,504	83,878
Nebraska	9,532	10,028	9,308	9,526	10,655	10,668	0	0	29,495	30,222
North Dakota	4,863	5,358	6,279	5,403	6,988	7,479	0	0	18,129	18,240
South Dakota	4,571	4,827	4,749	4,572	2,782	2,955	0	0	12,102	12,355
South Atlantic	359,258	355,708	311,709	306,877	143,229	141,701	1,341	1,346	815,537	805,631
Delaware	4,849	4,645	4,219	4,197	2,430	2,496	0	0	11,498	11,338
District of Columbia	2,498	2,072	8,222	8,548	238	242	334	331	11,291	11,194
Florida	122,759	116,535	95,847	92,926	16,897	16,522	95	95	235,599	226,078
Georgia	56,422	57,167	47,151	46,608	32,134	31,849	171	165	135,878	135,790
Maryland	27,403	27,488	29,959	29,804	3,883	3,848	536	544	61,782	61,684
North Carolina	57,902	58,650	48,236	47,510	27,701	26,965	9	9	133,848	133,133
South Carolina	30,059	30,716	21,927	21,656	29,342	29,248	0	0	81,328	81,620
Virginia	45,928	46,444	48,347	47,752	17,537	17,701	196	202	112,009	112,098
West Virginia	11,437	11,991	7,801	7,876	13,065	12,829	0	0	32,303	32,696
East South Central	118,305	121,790	92,400	89,758	102,502	107,412	0	1	313,208	318,961
Alabama	31,909	32,930	23,438	22,929	33,499	34,635	0	0	88,846	90,494
Kentucky	26,168	27,400	19,589	19,157	30,281	32,283	0	0	76,039	78,839
Mississippi	18,561	18,922	14,392	14,175	15,739	16,312	0	0	48,692	49,409
Tennessee	41,667	42,538	34,982	33,497	22,983	24,182	0	1	99,632	100,219
West South Central	218,086	214,093	194,164	196,362	179,373	178,313	192	184	591,815	588,952
Arkansas	18,273	18,441	12,153	11,988	16,038	16,651	0	0	46,465	47,080
Louisiana	31,545	31,401	24,996	24,493	35,123	34,723	12	12	91,676	90,628
Oklahoma	22,616	23,351	20,691	20,449	18,029	17,773	0	0	61,336	61,573
Texas	145,652	140,900	136,324	139,432	110,182	109,165	180	172	392,337	389,670
Mountain	95,206	93,788	94,880	93,898	84,740	84,579	134	133	274,962	272,398
Arizona	33,167	32,346	29,284	29,290	14,892	14,662	6	0	77,349	76,298
Colorado	18,385	18,093	20,408	20,129	15,259	15,110	64	64	54,116	53,397
Idaho	8,055	8,135	6,264	6,128	8,740	8,970	0	0	23,059	23,233
Montana	4,825	4,969	4,894	4,903	4,488	4,230	0	0	14,207	14,102
Nevada	12,339	11,917	9,614	9,418	14,059	13,733	8	8	36,020	35,076
New Mexico	6,642	6,612	8,877	8,976	7,575	7,527	0	0	23,094	23,115
Utah	9,117	8,964	11,615	11,053	9,405	9,965	56	61	30,192	30,043
Wyoming	2,677	2,752	3,925	4,000	10,323	10,381	0	0	16,925	17,134
Pacific Contiguous	141,727	143,061	163,672	164,574	92,284	93,566	867	860	398,550	402,061
California	89,386	89,361	118,384	119,494	52,562	52,898	838	832	261,170	262,585
Oregon	18,269	18,618	16,021	16,039	12,950	12,654	24	23	47,264	47,335
Washington	34,072	35,083	29,267	29,040	26,772	28,013	5	5	90,116	92,141
Pacific Noncontiguous	4,686	4,627	5,938	5,963	5,047	5,049	0	0	15,671	15,640
Alaska	2,044	2,044	2,763	2,762	1,352	1,360	0	0	6,159	6,165
Hawaii	2,641	2,584	3,174	3,202	3,696	3,690	0	0	9,511	9,475
U.S. Total	1,404,096	1,407,208	1,360,752	1,352,158	986,508	997,576	7,637	7,758	3,758,992	3,764,700

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 are final.

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-861, Monthly Electric Sales and Revenue Report with State Distributions Report.

**Table 2.9. Revenue from Sales of Electricity to Ultimate Customers by End-Use Sector, by State, 2015 and 2014 (Million Dollars)**

Census Division and State	Residential		Commercial		Industrial		Transportation		All Sectors	
	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014
New England	9,227	8,414	8,255	7,806	2,312	2,263	58	58	19,852	18,541
Connecticut	2,699	2,523	2,070	2,005	445	454	25	22	5,239	5,004
Maine	728	712	501	506	290	300	0	0	1,519	1,518
Massachusetts	4,000	3,491	4,136	3,827	1,069	1,014	27	32	9,232	8,364
New Hampshire	838	791	672	640	252	235	0	0	1,762	1,666
Rhode Island	605	527	584	533	110	114	5	4	1,304	1,178
Vermont	357	371	292	296	146	145	0	0	795	811
Middle Atlantic	21,487	21,649	20,937	21,572	5,331	5,621	457	489	48,212	49,331
New Jersey	4,607	4,400	4,952	5,016	779	856	31	32	10,370	10,303
New York	9,456	10,031	11,786	12,341	1,141	1,184	365	394	22,747	23,951
Pennsylvania	7,423	7,218	4,199	4,216	3,412	3,581	61	63	15,095	15,078
East North Central	23,730	23,784	18,252	18,328	13,690	14,179	41	46	55,713	56,337
Illinois	5,581	5,481	4,540	4,688	2,875	3,037	36	40	13,033	13,246
Indiana	3,753	3,862	2,349	2,403	3,295	3,419	2	2	9,399	9,686
Michigan	4,811	4,846	4,057	4,060	2,155	2,491	0	0	11,023	11,398
Ohio	6,591	6,598	4,743	4,618	3,549	3,441	3	4	14,886	14,661
Wisconsin	2,994	2,996	2,562	2,558	1,816	1,791	0	0	7,372	7,345
West North Central	11,654	11,860	9,431	9,319	6,289	6,295	4	4	27,379	27,477
Iowa	1,604	1,610	1,077	1,070	1,255	1,167	0	0	3,936	3,847
Kansas	1,635	1,666	1,553	1,558	854	897	0	0	4,042	4,120
Minnesota	2,631	2,738	2,207	2,249	1,506	1,552	2	2	6,346	6,541
Missouri	3,800	3,808	2,798	2,729	1,096	1,106	2	2	7,696	7,644
Nebraska	1,011	1,043	807	831	809	797	0	0	2,627	2,671
North Dakota	468	490	555	475	564	570	0	0	1,586	1,535
South Dakota	507	505	435	406	205	206	0	0	1,146	1,118
South Atlantic	42,175	41,752	29,576	29,710	9,421	9,569	109	113	81,280	81,144
Delaware	651	617	433	441	201	214	0	0	1,285	1,272
District of Columbia	324	264	987	1,042	21	20	30	29	1,362	1,356
Florida	14,217	13,855	9,106	9,170	1,388	1,306	9	9	24,719	24,339
Georgia	6,511	6,659	4,663	4,827	1,887	2,116	9	12	13,070	13,614
Maryland	3,787	3,746	3,296	3,325	331	348	45	46	7,458	7,465
North Carolina	6,532	6,511	4,210	4,158	1,804	1,752	1	1	12,547	12,422
South Carolina	3,778	3,824	2,240	2,226	1,774	1,840	0	0	7,792	7,890
Virginia	5,221	5,155	3,970	3,893	1,219	1,220	16	17	10,425	10,284
West Virginia	1,153	1,120	672	629	796	753	0	0	2,621	2,502
East South Central	12,796	13,100	9,458	9,284	6,133	6,589	0	0	28,387	28,973
Alabama	3,732	3,782	2,539	2,474	2,021	2,131	0	0	8,292	8,386
Kentucky	2,680	2,785	1,848	1,808	1,661	1,833	0	0	6,189	6,425
Mississippi	2,092	2,141	1,518	1,525	1,033	1,077	0	0	4,643	4,744
Tennessee	4,292	4,392	3,553	3,477	1,418	1,549	0	0	9,263	9,418
West South Central	23,870	23,818	15,880	16,228	10,025	10,869	11	10	49,786	50,925
Arkansas	1,794	1,753	1,011	965	999	1,002	0	0	3,804	3,721
Louisiana	2,944	3,005	2,166	2,229	1,901	2,100	1	1	7,011	7,336
Oklahoma	2,294	2,343	1,588	1,654	964	1,039	0	0	4,846	5,036
Texas	16,838	16,716	11,115	11,380	6,161	6,727	10	9	34,124	34,832
Mountain	11,264	10,946	9,212	9,058	5,583	5,650	13	14	26,073	25,669
Arizona	4,023	3,849	3,043	2,968	933	948	1	0	7,999	7,764
Colorado	2,228	2,204	2,017	2,029	1,129	1,129	6	7	5,380	5,369
Idaho	800	791	489	476	576	574	0	0	1,865	1,841
Montana	525	506	501	473	239	232	0	0	1,264	1,211
Nevada	1,574	1,541	889	892	949	977	1	1	3,413	3,411
New Mexico	828	812	915	922	480	498	0	0	2,223	2,232
Utah	992	954	1,002	943	580	606	6	6	2,579	2,510
Wyoming	294	289	358	355	698	686	0	0	1,349	1,330
Pacific Contiguous	20,234	19,507	22,443	22,380	8,332	8,492	78	77	51,088	50,456
California	15,188	14,517	18,627	18,663	6,394	6,526	75	74	40,285	39,780
Oregon	1,948	1,949	1,410	1,404	773	755	2	2	4,134	4,110
Washington	3,098	3,041	2,406	2,314	1,165	1,211	0	0	6,669	6,566
Pacific Noncontiguous	1,187	1,348	1,337	1,568	1,048	1,328	0	0	3,572	4,244
Alaska	405	391	482	472	196	213	0	0	1,083	1,076
Hawaii	782	957	855	1,095	852	1,115	0	0	2,489	3,167
U.S. Total	177,624	176,178	144,781	145,253	68,166	70,855	771	810	391,342	393,096

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 are final.

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-861, Monthly Electric Sales and Revenue Report with State Distributions Report.

**Table 2.10. Average Price of Electricity to Ultimate Customers by End-Use Sector, by State, 2015 and 2014 (Cents per Kilowatthour)**

Census Division and State	Residential		Commercial		Industrial		Transportation		All Sectors	
	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014
New England	19.43	17.82	15.46	14.70	12.34	11.84	10.07	10.38	16.52	15.45
Connecticut	20.94	19.75	15.97	15.55	12.95	12.92	13.18	13.08	17.77	17.05
Maine	15.61	15.27	12.47	12.70	9.05	8.95	--	--	12.78	12.65
Massachusetts	19.83	17.39	15.79	14.68	13.54	12.74	7.76	8.76	16.90	15.35
New Hampshire	18.50	17.53	14.96	14.34	12.74	11.93	--	--	16.02	15.22
Rhode Island	19.29	17.17	15.78	14.56	13.76	12.86	18.54	14.89	17.01	15.41
Vermont	17.09	17.47	14.54	14.56	10.27	10.23	--	--	14.41	14.57
Middle Atlantic	15.97	16.39	13.13	13.65	7.32	7.61	11.72	12.28	13.00	13.41
New Jersey	15.81	15.78	12.79	13.15	10.64	11.38	10.25	10.43	13.74	13.95
New York	18.54	20.07	15.31	16.12	6.31	6.58	12.95	13.82	15.28	16.25
Pennsylvania	13.64	13.32	9.60	9.73	7.20	7.41	7.82	7.65	10.31	10.28
East North Central	12.96	12.65	9.95	10.02	6.97	7.07	7.01	7.10	9.89	9.85
Illinois	12.50	11.91	9.02	9.26	6.67	6.85	6.81	6.85	9.40	9.36
Indiana	11.57	11.46	9.78	9.96	6.86	6.97	9.92	10.20	8.99	9.06
Michigan	14.42	14.46	10.55	10.87	7.02	7.68	11.44	9.43	10.76	11.03
Ohio	12.80	12.50	10.07	9.83	7.02	6.77	7.69	8.78	9.98	9.73
Wisconsin	14.11	13.67	10.89	10.77	7.58	7.52	14.66	--	10.73	10.57
West North Central	11.47	11.09	9.27	9.25	6.88	6.73	8.98	8.84	9.29	9.12
Iowa	11.63	11.16	8.92	8.67	5.90	5.71	--	--	8.35	8.15
Kansas	12.34	12.17	10.10	10.13	7.61	7.80	--	--	10.14	10.16
Minnesota	12.12	12.01	9.44	9.85	7.02	6.72	9.50	9.79	9.53	9.52
Missouri	11.21	10.64	9.16	8.90	6.44	6.36	8.36	7.81	9.44	9.11
Nebraska	10.60	10.40	8.67	8.73	7.59	7.47	--	--	8.91	8.84
North Dakota	9.62	9.15	8.83	8.79	8.07	7.62	--	--	8.75	8.41
South Dakota	11.08	10.47	9.16	8.89	7.37	6.99	--	--	9.47	9.05
South Atlantic	11.74	11.74	9.49	9.68	6.58	6.75	8.12	8.40	9.97	10.07
Delaware	13.42	13.29	10.25	10.50	8.28	8.58	--	--	11.17	11.22
District of Columbia	12.99	12.74	12.01	12.19	8.78	8.41	9.00	8.80	12.07	12.11
Florida	11.58	11.89	9.50	9.87	8.22	7.90	8.92	9.25	10.49	10.77
Georgia	11.54	11.65	9.89	10.36	5.87	6.64	5.27	6.98	9.62	10.03
Maryland	13.82	13.63	11.00	11.15	8.53	9.04	8.34	8.50	12.07	12.10
North Carolina	11.28	11.10	8.73	8.75	6.51	6.50	7.90	7.84	9.37	9.33
South Carolina	12.57	12.45	10.21	10.28	6.05	6.29	--	--	9.58	9.67
Virginia	11.37	11.10	8.21	8.15	6.95	6.89	8.11	8.24	9.31	9.17
West Virginia	10.08	9.34	8.61	7.99	6.09	5.87	--	--	8.11	7.65
East South Central	10.82	10.76	10.24	10.34	5.98	6.13	--	8.57	9.06	9.08
Alabama	11.70	11.48	10.83	10.79	6.03	6.15	--	--	9.33	9.27
Kentucky	10.24	10.16	9.44	9.44	5.48	5.68	--	--	8.14	8.15
Mississippi	11.27	11.32	10.55	10.76	6.56	6.60	--	--	9.53	9.60
Tennessee	10.30	10.32	10.16	10.38	6.17	6.40	--	8.57	9.30	9.40
West South Central	10.95	11.12	8.18	8.26	5.59	6.10	5.53	5.44	8.41	8.65
Arkansas	9.82	9.51	8.32	8.05	6.23	6.02	11.21	11.35	8.19	7.90
Louisiana	9.33	9.57	8.66	9.10	5.41	6.05	8.28	9.27	7.65	8.09
Oklahoma	10.14	10.03	7.68	8.09	5.35	5.85	--	--	7.90	8.18
Texas	11.56	11.86	8.15	8.16	5.59	6.16	5.34	5.17	8.70	8.94
Mountain	11.83	11.67	9.71	9.65	6.59	6.68	9.97	10.49	9.48	9.42
Arizona	12.13	11.90	10.39	10.13	6.26	6.46	9.40	--	10.34	10.18
Colorado	12.12	12.18	9.88	10.08	7.40	7.47	10.08	10.79	9.94	10.06
Idaho	9.93	9.72	7.80	7.78	6.60	6.40	--	--	8.09	7.93
Montana	10.88	10.18	10.23	9.64	5.32	5.49	--	--	8.90	8.59
Nevada	12.76	12.93	9.25	9.47	6.75	7.12	9.11	9.25	9.48	9.73
New Mexico	12.47	12.28	10.30	10.27	6.33	6.61	--	--	9.62	9.65
Utah	10.88	10.65	8.62	8.53	6.17	6.08	10.05	10.34	8.54	8.35
Wyoming	10.97	10.50	9.12	8.88	6.76	6.61	--	--	7.97	7.76
Pacific Contiguous	14.28	13.64	13.71	13.60	9.03	9.08	8.99	8.91	12.82	12.55
California	16.99	16.25	15.73	15.62	12.17	12.34	8.99	8.90	15.42	15.15
Oregon	10.66	10.47	8.80	8.75	5.97	5.97	9.14	9.21	8.75	8.68
Washington	9.09	8.67	8.22	7.97	4.35	4.32	8.18	8.48	7.40	7.13
Pacific Noncontiguous	25.34	29.13	22.51	26.29	20.77	26.30	--	--	22.80	27.13
Alaska	19.83	19.14	17.44	17.09	14.53	15.66	--	--	17.59	17.46
Hawaii	29.60	37.04	26.93	34.21	23.06	30.22	--	--	26.17	33.43
U.S. Total	12.65	12.52	10.64	10.74	6.91	7.10	10.09	10.45	10.41	10.44

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

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

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

Source: U.S. Energy Information Administration, Form EIA-861, Monthly Electric Sales and Revenue Report with State Distributions Report.

**Table 2.11. Electric Power Industry - Electricity Purchases, 2005 through 2015 (Thousand Megawatthours)**

Year	Electric Utilities	Energy-Only Providers	Independent Power Producers	Combined Heat and Power	U.S. Total
2006	2,605,315	2,793,288	26,628	77,353	5,502,584
2007	2,504,002	2,805,833	24,942	76,646	5,411,422
2008	2,483,927	3,024,730	25,431	78,693	5,612,781
2009	2,364,648	2,564,407	27,922	71,669	5,028,647
2010	2,353,086	3,319,211	23,976	73,861	5,770,134
2011	2,245,381	2,679,803	21,844	77,593	5,024,621
2012	2,148,346	2,740,043	17,726	78,818	4,984,933
2013	2,099,528	2,482,928	16,101	86,420	4,684,977
2014	2,145,378	2,559,875	17,000	79,975	4,802,227
2015	2,101,788	2,506,185	54,046	99,505	4,761,523

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

Sources: U.S. Energy Information Administration, Form EIA-861, "Annual Electric Power Industry Report" and Form EIA-923, "Power Plant Operations Report"

**Table 2.12. Electric Power Industry - Electricity Sales for Resale, 2005 through 2015 (Thousand Megawatthours)**

Year	Electric Utilities	Energy-Only Providers	Independent Power Producers	Combined Heat and Power	U.S. Total
2005	1,925,710	2,867,048	1,252,796	26,105	6,071,659
2006	1,698,389	2,446,104	1,321,342	27,638	5,493,473
2007	1,603,179	2,476,740	1,368,310	31,165	5,479,394
2008	1,576,976	2,718,661	1,355,017	30,079	5,680,733
2009	1,495,636	2,240,399	1,295,857	33,139	5,065,031
2010	1,541,554	2,946,452	1,404,137	37,068	5,929,211
2011	1,529,434	2,206,981	1,372,306	34,400	5,143,121
2012	1,456,774	2,135,819	1,384,155	37,017	5,013,765
2013	1,472,124	2,036,460	1,298,528	35,396	4,842,508
2014	1,485,964	2,081,235	1,301,724	39,916	4,908,839
2015	1,393,396	2,033,705	1,331,181	39,113	4,797,395

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

Sources: U.S. Energy Information Administration, Form EIA-861, "Annual Electric Power Industry Report" and Form EIA-923, "Power Plant Operations Report"

**Table 2.13. Electric Power Industry - U.S. Electricity Imports from and Electricity Exports to Canada and Mexico, 2005-2015 (Megawatthours)**

Year	Canada		Mexico		U.S. Total	
	Imports from	Exports to	Imports from	Exports to	Imports	Exports
2005	42,332,039	18,680,237	1,597,275	470,731	43,929,314	19,150,968
2006	41,544,052	23,405,387	1,147,258	865,948	42,691,310	24,271,335
2007	50,118,056	19,559,417	1,277,646	584,175	51,395,702	20,143,592
2008	55,731,229	23,614,158	1,288,152	584,001	57,019,381	24,198,159
2009	50,870,451	17,517,112	1,320,144	620,872	52,190,595	18,137,984
2010	43,763,091	18,481,678	1,320,095	624,502	45,083,186	19,106,180
2011	51,075,952	14,398,470	1,223,758	650,082	52,299,710	15,048,552
2012	57,971,110	11,392,267	1,285,959	603,382	59,257,069	11,995,649
2013	62,739,038	10,694,907	6,207,597	678,300	68,946,635	11,373,207
2014	59,369,660	12,860,889	7,140,624	437,364	66,510,284	13,298,253
2015	68,462,277	8,707,873	7,308,192	392,016	75,770,469	9,099,889

Notes: In 2013, EIA revised its approach to estimating imports from Mexico.

Sources: National Energy Board of Canada; FERC 714, Annual Electric Balancing Authority Area and Planning Report; California Energy Commission; and EIA estimates.

**Table 2.14. Green Pricing Customers by End Use Sector, 2006 through 2012 (Table Discontinued)**

Year	Residential	Commercial	Industrial	Transportation	Total
2006	606,919	35,414	522	1	642,856
2007	773,391	61,608	553	99	835,651
2008	918,284	63,521	987	203	982,995
2009	1,058,185	64,139	1,454	--	1,123,778
2010	1,137,047	78,128	1,407	--	1,216,582
2011	1,187,867	89,677	1,440	--	1,278,984
2012	2,162,230	102,223	1,509	--	2,265,963

2012 was the last year this data was collected.

In 2006 the single largest provider of green pricing services in the country discontinued service in two States. More than 297,600 customers reverted to standard service tariffs, in Ohio and Pennsylvania.

Source: U.S. Energy Information Administration, Form EIA-861, "Annual Electric Power Industry Report."

# Chapter 3

## Net Generation

Table 3.1.A. Net Generation by Energy Source: Total (All Sectors), 2005 - 2015  
(Thousand Megawatthours)

Period	Generation at Utility Scale Facilities											Distributed Generation	Net Generation From Utility Scale Facilities and Distributed Generation		
	Coal	Petroleum Liquids	Petroleum Coke	Natural Gas	Other Gas	Nuclear	Hydroelectric Conventional	Solar	Renewable Sources Excluding Hydroelectric and Solar	Hydroelectric Pumped Storage	Other	Total Generation at Utility Scale Facilities	Estimated Distributed Solar Photovoltaic Generation	Estimated Total Solar Photovoltaic Generation	Estimated Total Solar Generation
Annual Totals															
2005	2,012,873	99,840	22,385	760,960	13,464	781,986	270,321	550	86,779	-6,558	12,821	4,055,423	N/A	N/A	N/A
2006	1,990,511	44,460	19,706	816,441	14,177	787,219	289,246	508	96,018	-6,558	12,974	4,064,702	N/A	N/A	N/A
2007	2,016,456	49,505	16,234	896,590	13,453	806,425	247,510	612	104,626	-6,896	12,231	4,156,745	N/A	N/A	N/A
2008	1,985,801	31,917	14,325	882,981	11,707	806,208	254,831	864	125,237	-6,288	11,804	4,119,388	N/A	N/A	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	1,126,609	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
Year 2013															
January	138,105	1,733	1,042	88,559	1,144	71,406	24,829	310	21,208	-465	1,098	348,967	N/A	N/A	N/A
February	123,547	1,130	867	80,283	968	61,483	20,418	433	19,898	-320	1,020	309,728	N/A	N/A	N/A
March	130,634	990	1,007	84,725	1,070	62,947	20,534	619	22,191	-462	1,143	325,399	N/A	N/A	N/A
April	111,835	995	891	78,036	1,020	56,767	25,097	667	23,294	-292	1,024	299,333	N/A	N/A	N/A
May	119,513	1,067	1,345	83,816	1,088	62,848	28,450	753	22,502	-334	1,110	322,156	N/A	N/A	N/A
June	138,283	1,035	1,307	99,615	1,048	66,430	27,384	871	20,084	-358	1,125	356,823	N/A	N/A	N/A
July	152,867	1,458	1,354	120,771	1,148	70,539	27,255	829	17,764	-340	1,201	394,846	N/A	N/A	N/A
August	149,426	1,076	1,372	121,156	1,143	71,344	21,633	944	16,438	-465	1,217	385,286	N/A	N/A	N/A
September	133,110	964	1,222	102,063	1,087	65,799	16,961	949	18,043	-439	1,182	340,941	N/A	N/A	N/A
October	120,996	945	1,074	88,587	1,072	63,184	17,199	988	20,070	-373	1,185	314,925	N/A	N/A	N/A
November	120,940	989	850	84,287	1,060	64,975	17,677	824	22,206	-413	1,143	314,540	N/A	N/A	N/A
December	141,860	1,438	1,013	92,936	1,006	71,294	21,128	850	20,776	-421	1,141	353,021	N/A	N/A	N/A
Year 2014															
January	157,097	5,913	1,158	91,061	933	73,163	21,634	751	24,742	-290	1,092	377,255	624	1,321	1,375
February	143,294	1,847	916	75,942	817	62,639	17,396	835	20,166	-445	941	324,348	664	1,416	1,499
March	136,443	2,002	1,186	78,151	866	62,397	24,257	1,317	24,534	-421	1,093	331,823	907	2,042	2,224
April	109,281	911	842	76,782	854	56,385	25,440	1,487	24,989	-378	1,039	297,631	988	2,249	2,476
May	118,786	960	1,084	89,120	944	62,947	26,544	1,750	22,073	-601	1,118	324,724	1,092	2,549	2,842
June	137,577	889	1,131	98,468	969	68,138	25,744	1,923	22,541	-653	1,117	357,844	1,101	2,678	3,024
July	149,627	992	1,050	115,081	1,069	71,940	24,357	1,788	19,256	-545	1,163	385,780	1,149	2,674	2,936
August	148,452	1,014	1,036	122,348	1,135	71,129	18,807	1,879	17,141	-840	1,239	384,341	1,139	2,757	3,019
September	126,110	929	1,019	106,582	1,126	67,535	16,074	1,832	18,061	-542	1,159	339,887	1,046	2,621	2,879
October	111,296	908	609	97,683	1,082	62,391	17,159	1,717	21,002	-448	1,122	314,522	965	2,448	2,682
November	119,127	963	775	84,354	1,073	65,140	18,625	1,380	25,428	-531	1,161	317,495	792	2,024	2,171
December	124,620	947	1,149	91,038	1,153	73,363	22,329	1,032	21,590	-480	1,218	337,957	766	1,703	1,798
Year 2015															
January	132,451	1,927	1,046	101,687	1,246	74,270	24,138	1,155	21,966	-551	1,120	360,455	746	1,838	1,902
February	126,977	5,221	1,100	91,315	1,025	63,461	22,286	1,484	21,078	-456	985	334,476	816	2,138	2,299
March	108,488	1,061	717	99,423	1,091	64,547	24,281	2,072	21,871	-409	1,051	324,192	1,134	2,920	3,206
April	88,989	919	809	92,806	979	59,784	22,471	2,379	24,115	-214	1,096	294,133	1,264	3,271	3,643
May	104,585	1,017	922	101,516	1,099	65,827	20,125	2,504	23,678	-370	1,185	322,087	1,394	3,553	3,898
June	125,673	1,040	821	121,478	1,118	68,516	20,414	2,558	20,003	-398	1,187	362,409	1,408	3,586	3,966
July	139,100	1,201	1,103	141,119	1,235	71,412	21,014	2,627	20,827	-513	1,293	400,419	1,487	3,734	4,114
August	134,670	1,093	1,040	139,084	1,196	72,415	19,122	2,688	20,134	-626	1,300	392,116	1,468	3,763	4,156
September	117,986	1,006	1,028	123,036	1,210	66,476	16,094	2,217	20,430	-544	1,182	350,122	1,330	3,238	3,547
October	96,759	945	827	110,005	906	60,571	16,630	1,910	22,798	-443	1,204	312,112	1,198	2,897	3,107
November	87,227	995	715	102,236	902	60,264	19,338	1,730	26,335	-285	1,197	300,653	982	2,507	2,712
December	89,495	948	749	109,777	1,110	69,634	23,166	1,570	27,032	-281	1,228	324,427	914	2,358	2,484

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 are final. 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.

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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.

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

**Table 3.1.B. Net Generation from Renewable Sources: Total (All Sectors), 2005 - 2015  
(Thousand Megawatthours)**

Period	Generation at Utility Scale Facilities										Total Renewable Generation at Utility Scale Facilities	Distributed Generation Estimated Distributed Solar Photovoltaic Generation	Net Generation From Utility Scale Facilities and Distributed Generation	
	Wind	Solar Photovoltaic	Solar Thermal	Wood and Wood-Derived Fuels	Landfill Gas	Biogenic Municipal Solid Waste	Other Waste Biomass	Geothermal	Conventional Hydroelectric	Estimated Total Solar Photovoltaic Generation			Estimated Total Solar Generation	
Annual Totals														
2005	17,811	16	535	38,856	5,142	8,330	1,948	14,692	270,321	357,651	N/A	N/A	N/A	
2006	26,589	15	493	38,762	5,677	8,478	1,944	14,568	289,246	385,772	N/A	N/A	N/A	
2007	34,450	16	596	39,014	6,158	8,304	2,063	14,637	247,510	352,747	N/A	N/A	N/A	
2008	55,363	76	788	37,300	7,156	8,097	2,481	14,840	254,831	380,932	N/A	N/A	N/A	
2009	73,886	157	735	36,050	7,924	8,058	2,461	15,009	273,445	417,724	N/A	N/A	N/A	
2010	94,652	423	789	37,172	8,377	7,927	2,613	15,219	260,203	427,376	N/A	N/A	N/A	
2011	120,177	1,012	806	37,449	9,044	7,354	2,824	15,316	319,355	513,336	N/A	N/A	N/A	
2012	140,822	3,451	876	37,799	9,803	7,320	2,700	15,562	276,240	494,573	N/A	N/A	N/A	
2013	167,840	8,121	915	40,028	10,658	7,186	2,986	15,775	268,565	522,073	N/A	N/A	N/A	
2014	181,655	15,250	2,441	42,340	11,220	7,228	3,202	15,877	259,367	538,579	11,233	26,482	28,924	
2015	190,719	21,666	3,227	41,929	11,291	7,211	3,201	15,918	249,080	544,241	14,139	35,805	39,032	
Year 2013														
January	14,739	299	11	3,400	870	579	239	1,382	24,829	46,347	N/A	N/A	N/A	
February	14,076	387	45	3,083	782	507	213	1,236	20,418	40,749	N/A	N/A	N/A	
March	15,756	547	72	3,300	917	601	240	1,378	20,534	43,345	N/A	N/A	N/A	
April	17,476	573	93	2,863	848	576	256	1,274	25,097	49,058	N/A	N/A	N/A	
May	16,239	649	104	3,174	923	620	238	1,308	28,450	51,704	N/A	N/A	N/A	
June	13,748	749	122	3,330	890	617	221	1,278	27,384	48,338	N/A	N/A	N/A	
July	11,094	743	85	3,536	911	640	246	1,337	27,255	45,847	N/A	N/A	N/A	
August	9,634	845	99	3,634	962	628	258	1,322	21,633	39,015	N/A	N/A	N/A	
September	11,674	874	75	3,353	884	597	235	1,299	16,961	35,952	N/A	N/A	N/A	
October	13,635	875	112	3,341	863	606	262	1,363	17,199	38,256	N/A	N/A	N/A	
November	15,803	775	49	3,407	888	594	283	1,230	17,677	40,707	N/A	N/A	N/A	
December	13,967	804	46	3,606	920	621	296	1,366	21,128	42,754	N/A	N/A	N/A	
Year 2014														
January	17,911	697	54	3,626	967	584	299	1,355	21,634	47,127	624	1,321	1,375	
February	14,009	752	83	3,265	930	490	267	1,206	17,396	38,397	664	1,416	1,499	
March	17,736	1,135	182	3,609	961	599	291	1,338	24,257	50,108	907	2,042	2,224	
April	18,636	1,261	226	3,230	957	586	267	1,314	25,440	51,916	988	2,249	2,476	
May	15,601	1,457	292	3,290	944	635	270	1,332	26,544	50,366	1,092	2,549	2,842	
June	15,799	1,578	345	3,622	943	613	271	1,293	25,744	50,208	1,101	2,678	3,024	
July	12,187	1,525	262	3,807	1,035	646	261	1,320	24,357	45,402	1,149	2,674	2,936	
August	10,171	1,618	261	3,761	988	647	245	1,329	19,807	38,828	1,139	2,757	3,019	
September	11,520	1,574	258	3,462	932	606	234	1,308	16,074	35,968	1,046	2,621	2,879	
October	14,508	1,484	233	3,422	854	603	269	1,345	17,159	39,878	965	2,448	2,682	
November	18,867	1,232	148	3,508	820	612	258	1,362	18,625	45,432	792	2,024	2,171	
December	14,711	936	95	3,737	890	609	268	1,375	22,329	44,950	766	1,703	1,798	
Year 2015														
January	15,162	1,092	63	3,717	885	582	258	1,362	24,138	47,259	746	1,838	1,902	
February	14,922	1,322	161	3,372	792	503	230	1,260	22,286	44,847	816	2,138	2,299	
March	15,308	1,786	286	3,457	914	543	255	1,394	24,281	48,224	1,134	2,920	3,206	
April	17,867	2,008	372	3,246	915	571	243	1,272	22,471	48,965	1,264	3,271	3,643	
May	17,151	2,160	345	3,338	951	609	238	1,390	20,125	46,308	1,394	3,553	3,898	
June	13,421	2,178	380	3,496	926	607	251	1,302	20,414	42,975	1,408	3,586	3,966	
July	13,675	2,247	380	3,806	1,035	661	293	1,357	21,014	44,469	1,487	3,734	4,114	
August	13,080	2,295	392	3,788	982	651	288	1,344	19,122	41,943	1,468	3,763	4,156	
September	13,972	1,908	309	3,450	931	607	268	1,203	16,094	38,742	1,330	3,238	3,547	
October	16,380	1,700	210	3,252	938	617	289	1,323	16,630	41,338	1,198	2,897	3,107	
November	19,682	1,525	204	3,418	993	620	290	1,334	19,338	47,403	982	2,507	2,712	
December	20,098	1,444	126	3,587	1,029	642	299	1,377	23,166	51,767	914	2,358	2,484	

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.

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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.

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

Table 3.2.A. Net Generation by Energy Source: Electric Utilities, 2005 - 2015  
(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	
Annual Totals												
2005	1,484,855	58,572	11,150	238,204	10	436,296	245,553	16	4,930	-5,383	643	2,474,846
2006	1,471,421	31,269	9,634	282,088	30	425,341	261,864	15	6,573	-5,281	700	2,483,656
2007	1,490,985	33,325	7,395	313,785	141	427,555	226,734	11	8,943	-5,328	586	2,504,131
2008	1,466,395	22,206	5,918	320,190	46	424,256	229,645	17	11,291	-5,143	545	2,475,367
2009	1,322,092	18,035	7,182	349,166	96	417,275	247,198	28	14,589	-3,369	483	2,372,776
2010	1,378,028	17,258	8,807	392,616	52	424,843	236,104	101	17,826	-4,466	462	2,471,632
2011	1,301,107	11,688	9,428	414,843	29	415,298	291,413	216	21,717	-5,492	604	2,460,851
2012	1,146,480	9,892	5,664	504,958	0	394,823	252,936	639	27,378	-4,202	603	2,339,172
2013	1,188,452	9,446	9,522	501,427	798	406,114	243,040	943	31,474	-3,773	615	2,388,058
2014	1,173,073	10,696	9,147	501,414	112	419,871	238,185	1,218	33,278	-5,144	622	2,382,473
2015	998,385	10,386	8,278	617,817	199	416,680	229,640	1,494	35,992	-4,105	558	2,315,323
Year 2013												
January	103,536	1,018	700	39,880	71	36,748	22,563	31	2,935	-404	45	207,123
February	91,384	723	616	36,248	63	31,144	18,316	43	2,661	-270	47	180,975
March	97,675	755	687	37,661	59	31,426	18,349	65	2,781	-382	54	189,129
April	84,352	744	574	33,545	38	28,991	22,654	67	2,986	-232	42	173,761
May	90,053	785	1,035	36,891	61	32,977	25,924	81	2,755	-260	52	190,354
June	104,679	751	966	45,152	68	34,504	24,686	94	2,352	-261	43	213,033
July	114,402	950	976	52,966	66	36,733	24,705	89	2,156	-238	62	232,867
August	113,917	794	952	55,077	76	37,177	19,864	101	1,956	-417	60	229,557
September	99,056	664	905	45,845	75	34,459	15,422	98	2,493	-347	49	198,719
October	91,694	699	759	39,850	61	31,605	15,619	105	2,577	-307	51	182,713
November	92,146	731	609	36,703	78	32,939	15,975	81	3,004	-331	56	181,991
December	105,558	832	743	41,610	81	37,412	18,964	88	2,819	-326	55	207,837
Year 2014												
January	115,862	2,445	949	41,208	13	38,847	19,673	53	3,286	-218	47	222,165
February	104,638	1,051	706	33,600	7	32,937	15,973	61	2,698	-361	34	191,345
March	97,957	1,037	953	35,116	9	32,612	22,423	91	3,296	-355	57	193,194
April	77,724	711	572	34,890	20	30,312	22,977	98	3,274	-301	52	170,329
May	89,103	709	833	41,226	12	33,760	23,933	114	2,632	-506	49	191,866
June	104,523	650	894	44,315	5	35,898	23,790	127	2,613	-557	53	212,311
July	112,875	711	792	50,296	7	38,031	22,624	131	2,261	-445	62	227,343
August	112,568	711	778	54,553	6	37,182	18,251	130	1,894	-740	60	225,392
September	94,482	711	750	46,260	5	35,296	14,895	126	2,277	-461	50	194,390
October	82,991	652	457	42,360	4	32,017	15,863	124	2,826	-351	48	176,990
November	87,064	643	577	37,477	9	34,552	17,369	91	3,473	-441	55	180,869
December	93,287	666	887	40,114	15	38,428	20,415	72	2,749	-409	56	196,279
Year 2015												
January	94,835	1,147	813	46,573	26	39,377	22,523	68	3,130	-460	41	208,073
February	90,828	2,014	879	43,951	24	33,478	21,075	87	2,877	-387	45	194,871
March	78,606	696	502	45,972	21	33,328	22,523	126	3,123	-319	31	184,609
April	66,628	695	565	43,065	20	31,053	20,156	145	3,157	-153	47	165,379
May	79,341	701	691	46,882	20	35,089	18,481	156	3,043	-292	54	184,165
June	93,799	765	604	57,292	17	35,150	18,429	153	2,311	-300	50	208,270
July	104,128	834	898	64,971	15	37,055	19,004	155	2,514	-413	49	229,212
August	100,129	794	827	63,376	21	38,482	17,813	159	2,554	-513	53	223,696
September	85,932	690	797	56,266	20	35,034	15,062	130	2,771	-477	49	196,273
October	71,408	682	610	49,533	12	31,886	15,378	114	3,261	-364	42	172,561
November	64,191	718	490	47,590	1	30,751	17,901	103	3,673	-218	48	165,247
December	68,558	650	604	52,345	1	35,997	21,296	98	3,577	-210	49	182,965

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.

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**Table 3.2.B. Net Generation from Renewable Sources: Electric Utilities, 2005 - 2015  
(Thousand Megawatthours)**

Period	Generation at Utility Scale Facilities										Total Renewable Generation at Utility Scale Facilities	Distributed Generation Estimated Distributed Solar Photovoltaic Generation	Net Generation From Utility Scale Facilities and Distributed Generation	
	Wind	Solar Photovoltaic	Solar Thermal	Wood and Wood-Derived Fuels	Landfill Gas	Biogenic Municipal Solid Waste	Other Waste Biomass	Geothermal	Conventional Hydroelectric	Estimated Total Solar Photovoltaic Generation			Estimated Total Solar Generation	
Annual Totals														
2005	1,046	16	0	1,829	503	250	175	1,126	245,553	250,499	N/A	N/A	N/A	
2006	2,351	15	0	1,937	705	228	190	1,162	261,864	268,452	N/A	N/A	N/A	
2007	4,361	10	1	2,226	751	240	226	1,139	226,734	235,687	N/A	N/A	N/A	
2008	6,899	16	1	1,888	844	211	252	1,197	229,645	240,953	N/A	N/A	N/A	
2009	10,348	28	1	1,748	866	184	261	1,182	247,198	261,815	N/A	N/A	N/A	
2010	13,089	101	0	2,328	879	154	259	1,118	236,104	254,031	N/A	N/A	N/A	
2011	17,140	187	29	2,023	957	165	295	1,137	291,413	313,346	N/A	N/A	N/A	
2012	22,926	551	89	1,836	1,022	184	265	1,143	252,936	280,953	N/A	N/A	N/A	
2013	26,436	841	102	2,534	1,114	197	188	1,005	243,040	275,457	N/A	N/A	N/A	
2014	27,671	1,094	124	3,050	1,068	191	182	1,116	238,185	272,681	0	1,094	1,218	
2015	30,412	1,388	106	3,018	1,061	195	218	1,089	229,640	267,125	0	1,388	1,494	
Year 2013														
January	2,532	26	4	185	87	14	18	99	22,563	25,529	N/A	N/A	N/A	
February	2,294	36	7	174	79	13	13	88	18,316	21,020	N/A	N/A	N/A	
March	2,374	56	9	190	96	14	13	94	18,349	21,196	N/A	N/A	N/A	
April	2,682	60	7	103	92	18	17	74	22,654	25,706	N/A	N/A	N/A	
May	2,382	68	13	175	95	18	19	67	25,924	28,760	N/A	N/A	N/A	
June	1,945	79	14	195	88	17	13	93	24,686	27,131	N/A	N/A	N/A	
July	1,703	76	13	234	88	18	17	96	24,705	26,950	N/A	N/A	N/A	
August	1,457	90	11	252	121	17	16	92	19,864	21,921	N/A	N/A	N/A	
September	2,032	90	8	244	93	16	15	92	15,422	18,013	N/A	N/A	N/A	
October	2,105	96	9	259	92	18	16	86	15,619	18,301	N/A	N/A	N/A	
November	2,607	78	3	251	90	18	14	24	15,975	19,060	N/A	N/A	N/A	
December	2,324	84	3	272	91	14	18	100	18,964	21,871	N/A	N/A	N/A	
Year 2014														
January	2,790	49	5	280	91	11	15	98	19,673	23,013	0	49	53	
February	2,252	53	8	252	83	10	16	84	15,973	18,732	0	53	61	
March	2,801	80	11	284	85	16	12	97	22,423	25,810	0	80	91	
April	2,892	86	12	175	87	19	13	89	22,977	26,350	0	86	98	
May	2,221	100	13	189	87	18	20	97	23,933	26,679	0	100	114	
June	2,146	118	10	255	89	17	14	92	23,790	26,530	0	118	127	
July	1,761	120	11	272	97	19	20	93	22,624	25,015	0	120	131	
August	1,380	117	12	296	97	16	12	93	18,251	20,274	0	117	130	
September	1,806	115	11	262	90	16	11	91	14,895	17,297	0	115	126	
October	2,338	107	17	265	90	18	19	97	15,863	18,813	0	107	124	
November	3,012	85	6	251	85	16	15	93	17,369	20,932	0	85	91	
December	2,272	63	9	270	86	15	15	91	20,415	23,235	0	63	72	
Year 2015														
January	2,627	64	5	285	90	12	22	95	22,523	25,721	0	64	68	
February	2,436	87	0	251	78	11	17	83	21,075	24,040	0	87	87	
March	2,678	118	9	235	92	12	17	91	22,523	25,772	0	118	126	
April	2,811	135	10	149	90	18	15	75	20,156	23,457	0	135	145	
May	2,595	141	15	227	89	21	17	94	18,481	21,679	0	141	156	
June	1,837	138	16	264	84	18	15	93	18,429	20,894	0	138	153	
July	1,966	138	17	321	94	19	20	93	19,004	21,673	0	138	155	
August	2,001	144	15	325	91	18	27	93	17,813	20,526	0	144	159	
September	2,319	123	7	240	87	17	22	85	15,062	17,963	0	123	130	
October	2,822	107	6	220	88	17	17	97	15,378	18,753	0	107	114	
November	3,216	99	4	243	90	15	16	93	17,901	21,677	0	99	103	
December	3,104	96	2	259	90	15	12	97	21,296	24,970	0	96	98	

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

Table 3.3.A. Net Generation by Energy Source: Independent Power Producers, 2005 - 2015  
(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	
Annual Totals												
2005	507,199	37,096	9,664	445,625	3,767	345,690	21,486	535	51,173	-1,174	6,285	1,427,346
2006	498,316	10,396	8,409	452,329	4,223	361,877	24,390	493	58,853	-1,277	6,412	1,424,421
2007	507,406	13,645	6,942	500,967	3,901	378,869	19,109	601	65,150	-1,569	6,191	1,501,212
2008	502,442	8,021	6,737	482,182	3,154	381,952	23,451	847	84,928	-1,145	6,414	1,498,982
2009	419,031	6,306	4,288	491,839	2,962	381,579	24,308	863	100,997	-1,259	6,146	1,437,061
2010	449,709	5,117	3,497	508,774	2,915	382,126	22,351	1,105	119,851	-1,035	6,345	1,500,754
2011	416,783	3,655	3,431	511,447	2,911	374,906	26,117	1,511	140,442	-928	7,059	1,487,335
2012	354,076	2,757	1,758	627,833	2,984	374,509	20,923	3,525	156,539	-748	7,030	1,551,186
2013	379,270	3,761	1,780	527,522	3,524	382,902	22,018	7,782	181,263	-908	6,742	1,515,657
2014	395,701	6,789	1,410	531,758	3,246	377,295	19,861	16,086	196,723	-1,030	6,690	1,554,530
2015	342,608	6,240	1,601	619,839	3,517	380,498	17,996	22,962	202,858	-987	6,838	1,603,971
Year 2013												
January	33,416	635	149	40,509	313	34,658	1,938	269	15,567	-61	545	127,938
February	31,100	346	132	36,722	261	30,340	1,736	374	14,766	-50	497	116,224
March	31,794	187	151	39,104	259	31,522	1,878	531	16,778	-80	574	122,699
April	26,434	206	144	37,081	284	27,776	2,189	573	17,890	-60	528	113,045
May	28,327	228	101	39,353	306	29,871	2,194	643	17,152	-74	574	118,674
June	32,481	241	141	46,520	280	31,926	2,365	745	15,065	-97	586	130,253
July	37,252	460	167	58,993	315	33,807	2,224	710	12,812	-103	605	147,241
August	34,371	239	211	57,526	300	34,167	1,525	813	11,692	-47	587	141,386
September	32,990	262	141	48,349	298	31,340	1,297	819	12,955	-92	561	128,919
October	28,248	202	149	41,022	343	31,578	1,339	849	14,846	-66	558	119,069
November	27,712	212	144	39,663	289	32,037	1,494	718	16,558	-82	554	119,297
December	35,144	544	151	42,679	274	33,881	1,839	738	15,181	-95	574	130,911
Year 2014												
January	40,054	3,281	109	41,761	253	34,316	1,837	681	18,727	-72	533	141,480
February	37,580	698	123	35,129	204	29,702	1,316	753	15,039	-84	472	120,930
March	37,333	880	129	35,402	206	29,785	1,715	1,196	18,569	-66	571	125,720
April	30,554	160	141	34,693	211	26,072	2,332	1,355	19,166	-77	516	115,124
May	28,635	203	125	40,419	271	29,187	2,477	1,596	16,817	-95	569	120,205
June	31,947	193	108	46,588	252	32,240	1,850	1,755	17,275	-96	565	132,678
July	35,597	236	128	56,400	276	33,909	1,641	1,618	14,183	-100	584	144,474
August	34,761	261	123	59,357	309	33,946	1,458	1,709	12,495	-101	594	144,913
September	30,580	171	145	52,430	293	32,238	1,091	1,670	13,267	-81	562	132,366
October	27,332	209	51	47,693	331	30,374	1,200	1,566	15,642	-97	566	124,857
November	31,053	268	88	39,234	292	30,589	1,155	1,260	19,441	-90	578	123,869
December	30,274	228	139	42,652	349	34,935	1,787	939	16,102	-71	580	127,913
Year 2015												
January	36,595	701	128	46,877	368	34,893	1,491	1,066	16,096	-92	560	138,685
February	35,196	3,049	132	40,256	305	29,984	1,104	1,372	15,785	-69	489	127,602
March	28,865	306	141	46,138	306	31,218	1,625	1,911	16,184	-90	527	127,131
April	21,519	170	140	42,762	269	28,732	2,175	2,193	18,393	-62	528	116,818
May	24,330	257	144	47,242	318	30,737	1,515	2,300	18,059	-78	561	125,387
June	30,878	215	138	56,098	282	33,366	1,867	2,359	15,117	-98	574	140,797
July	33,932	314	140	67,295	295	34,357	1,892	2,425	15,512	-101	617	156,677
August	33,522	250	142	66,938	311	33,933	1,216	2,481	14,856	-113	624	154,160
September	31,074	273	140	58,525	311	31,442	954	2,047	15,075	-67	571	140,345
October	24,463	216	149	52,489	216	28,685	1,135	1,762	16,981	-79	589	126,607
November	22,171	235	140	46,542	233	29,513	1,301	1,599	20,046	-67	591	122,304
December	20,063	254	67	48,676	302	33,637	1,721	1,448	20,754	-71	607	127,458

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 are final. 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.

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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 3.3.B. Net Generation from Renewable Sources: Independent Power Producers, 2005 - 2015  
(Thousand Megawatthours)**

Period	Generation at Utility Scale Facilities										Total Renewable Generation at Utility Scale Facilities	Distributed Generation Estimated Distributed Solar Photovoltaic Generation	Net Generation From Utility Scale Facilities and Distributed Generation	
	Wind	Solar Photovoltaic	Solar Thermal	Wood and Wood-Derived Fuels	Landfill Gas	Biogenic Municipal Solid Waste	Other Waste Biomass	Geothermal	Conventional Hydroelectric	Estimated Total Solar Photovoltaic Generation			Estimated Total Solar Generation	
Annual Totals														
2005	16,764	0	535	8,741	4,308	7,092	701	13,566	21,486	73,195	N/A	N/A	N/A	
2006	24,238	0	493	8,404	4,771	7,259	774	13,406	24,390	83,736	N/A	N/A	N/A	
2007	30,089	6	595	8,486	5,177	7,061	839	13,498	19,109	84,860	N/A	N/A	N/A	
2008	48,464	60	787	8,750	6,057	6,975	1,040	13,643	23,451	109,226	N/A	N/A	N/A	
2009	63,538	129	734	8,990	6,718	6,829	1,095	13,826	24,308	126,168	N/A	N/A	N/A	
2010	81,547	316	789	9,118	7,227	6,742	1,116	14,101	22,351	143,306	N/A	N/A	N/A	
2011	102,981	734	777	8,709	7,120	6,217	1,237	14,180	26,117	168,071	N/A	N/A	N/A	
2012	117,822	2,737	787	9,214	7,852	6,056	1,176	14,419	20,923	180,987	N/A	N/A	N/A	
2013	141,306	6,969	813	9,768	8,442	5,838	1,139	14,770	22,018	211,063	N/A	N/A	N/A	
2014	153,825	13,769	2,317	11,977	9,062	5,838	1,261	14,761	19,861	232,670	0	13,769	16,086	
2015	160,135	19,841	3,121	11,545	9,202	5,806	1,342	14,829	17,996	243,816	0	19,841	22,962	
Year 2013														
January	12,197	262	7	826	691	479	90	1,283	1,938	17,775	N/A	N/A	N/A	
February	11,774	336	38	717	622	419	86	1,148	1,736	16,875	N/A	N/A	N/A	
March	13,374	468	63	797	728	493	102	1,284	1,878	19,188	N/A	N/A	N/A	
April	14,786	487	86	673	676	460	95	1,201	2,189	20,652	N/A	N/A	N/A	
May	13,848	552	91	743	733	500	87	1,241	2,194	19,989	N/A	N/A	N/A	
June	11,796	638	108	799	705	502	77	1,185	2,365	18,176	N/A	N/A	N/A	
July	9,386	638	73	859	723	519	84	1,241	2,224	15,746	N/A	N/A	N/A	
August	8,173	725	88	949	741	507	92	1,231	1,525	14,030	N/A	N/A	N/A	
September	9,636	752	67	845	700	478	89	1,207	1,297	15,070	N/A	N/A	N/A	
October	11,521	746	103	781	678	489	78	1,278	1,339	17,035	N/A	N/A	N/A	
November	13,183	671	47	857	710	483	118	1,206	1,494	18,769	N/A	N/A	N/A	
December	11,631	696	42	921	734	509	120	1,266	1,839	17,758	N/A	N/A	N/A	
Year 2014														
January	15,104	631	50	993	775	466	132	1,257	1,837	21,244	0	631	681	
February	11,744	678	75	898	753	406	116	1,122	1,316	17,108	0	678	753	
March	14,921	1,024	171	1,007	780	498	123	1,240	1,715	21,480	0	1,024	1,196	
April	15,729	1,140	214	865	780	469	98	1,225	2,332	22,853	0	1,140	1,355	
May	13,369	1,317	279	818	770	512	113	1,235	2,477	20,891	0	1,317	1,596	
June	13,641	1,420	335	1,062	761	493	117	1,201	1,850	20,880	0	1,420	1,755	
July	10,416	1,366	251	1,103	835	515	88	1,227	1,641	17,442	0	1,366	1,618	
August	8,782	1,460	249	1,076	794	519	88	1,236	1,458	15,661	0	1,460	1,709	
September	9,704	1,423	247	1,025	750	483	89	1,217	1,091	16,028	0	1,423	1,670	
October	12,154	1,339	217	974	681	487	98	1,248	1,200	18,398	0	1,339	1,556	
November	15,835	1,118	142	1,080	664	495	97	1,269	1,155	21,856	0	1,118	1,260	
December	12,425	852	87	1,077	720	495	101	1,284	1,787	18,827	0	852	939	
Year 2015														
January	12,520	1,007	59	1,023	713	478	96	1,267	1,491	18,653	0	1,007	1,066	
February	12,471	1,211	161	983	641	412	101	1,177	1,104	18,261	0	1,211	1,372	
March	12,615	1,634	277	993	737	437	99	1,303	1,625	19,721	0	1,634	1,911	
April	15,040	1,831	362	876	742	452	84	1,198	2,175	22,760	0	1,831	2,193	
May	14,541	1,971	329	866	778	483	95	1,296	1,515	21,874	0	1,971	2,300	
June	11,572	1,995	364	980	758	483	114	1,209	1,867	19,343	0	1,995	2,359	
July	11,699	2,062	362	1,044	847	530	129	1,263	1,892	19,828	0	2,062	2,425	
August	11,069	2,103	377	1,085	801	525	124	1,252	1,216	18,553	0	2,103	2,481	
September	11,642	1,746	301	961	758	479	116	1,118	954	18,076	0	1,746	2,047	
October	13,541	1,558	204	826	764	501	123	1,226	1,135	19,878	0	1,558	1,762	
November	16,447	1,398	201	914	816	499	129	1,240	1,301	22,945	0	1,398	1,599	
December	16,976	1,324	124	995	847	525	131	1,280	1,721	23,922	0	1,324	1,448	

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.

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

Table 3.4.A. Net Generation by Energy Source: Commercial Sector, 2005 - 2015  
(Thousand Megawatthours)

Period	Generation at Utility Scale Facilities												Distributed Generation	Net Generation From Utility Scale Facilities and Distributed Generation	
	Coal	Petroleum Liquids	Petroleum Coke	Natural Gas	Other Gas	Nuclear	Hydroelectric Conventional	Solar	Renewable Sources Excluding Hydroelectric and Solar	Hydroelectric Pumped Storage	Other	Total Generation at Utility Scale Facilities	Estimated Distributed Solar Photovoltaic Generation	Estimated Total Solar Photovoltaic Generation	Estimated Total Solar Generation
Annual Totals															
2005	1,353	368	7	4,249	0	0	86	0	1,673	0	756	8,492	N/A	N/A	N/A
2006	1,310	228	7	4,355	0	0	93	0	1,619	0	758	8,371	N/A	N/A	N/A
2007	1,371	180	9	4,257	0	0	77	0	1,614	0	764	8,273	N/A	N/A	N/A
2008	1,261	136	6	4,188	0	0	60	0	1,555	0	720	7,926	N/A	N/A	N/A
2009	1,096	157	5	4,225	0	0	71	0	1,769	0	842	8,165	N/A	N/A	N/A
2010	1,111	117	7	4,725	3	0	80	5	1,709	0	834	8,592	N/A	N/A	N/A
2011	1,049	86	3	5,487	3	0	26	84	2,392	0	950	10,080	N/A	N/A	N/A
2012	883	191	6	6,603	0	0	28	148	2,397	0	1,046	11,301	N/A	N/A	N/A
2013	839	118	5	7,154	0	0	44	294	2,662	0	1,118	12,234	N/A	N/A	N/A
2014	595	247	9	7,227	0	0	38	371	2,862	0	1,171	12,520	5,146	5,516	5,516
2015	509	183	8	7,471	0	0	35	416	2,803	0	1,170	12,595	5,689	6,106	6,106
Year 2013															
January	89	19	1	562	0	0	4	9	212	0	85	981	N/A	N/A	N/A
February	81	14	1	512	0	0	4	15	187	0	74	888	N/A	N/A	N/A
March	78	7	1	574	0	0	4	22	220	0	90	995	N/A	N/A	N/A
April	63	7	0	541	0	0	4	25	210	0	95	946	N/A	N/A	N/A
May	69	8	0	546	0	0	5	27	229	0	97	981	N/A	N/A	N/A
June	75	7	0	593	0	0	5	30	223	0	93	1,026	N/A	N/A	N/A
July	76	13	0	779	0	0	5	28	235	0	100	1,236	N/A	N/A	N/A
August	71	7	1	697	0	0	4	29	238	0	101	1,147	N/A	N/A	N/A
September	60	6	1	652	0	0	3	30	222	0	99	1,073	N/A	N/A	N/A
October	49	7	1	550	0	0	2	32	226	0	96	961	N/A	N/A	N/A
November	60	8	0	525	0	0	2	24	223	0	92	936	N/A	N/A	N/A
December	68	16	1	623	0	0	3	23	236	0	95	1,064	N/A	N/A	N/A
Year 2014															
January	76	102	1	651	0	0	4	16	264	0	104	1,218	300	316	316
February	79	37	1	533	0	0	3	20	216	0	71	961	322	342	342
March	66	30	1	529	0	0	4	29	230	0	84	972	432	461	461
April	47	9	1	509	0	0	4	33	229	0	96	927	467	499	499
May	39	8	0	557	0	0	4	38	238	0	102	986	512	550	550
June	42	8	0	605	0	0	3	39	245	0	99	1,041	510	549	549
July	50	9	0	701	0	0	3	38	263	0	109	1,173	529	567	567
August	42	7	1	722	0	0	3	39	256	0	110	1,181	520	559	559
September	36	8	1	657	0	0	3	35	243	0	104	1,086	469	504	504
October	31	9	1	601	0	0	2	36	230	0	97	1,008	419	455	455
November	44	9	1	560	0	0	2	28	218	0	98	960	338	366	366
December	45	10	1	602	0	0	2	20	230	0	97	1,007	329	349	349
Year 2015															
January	56	22	1	564	0	0	3	20	225	0	88	981	327	347	347
February	59	72	1	499	0	0	3	23	198	0	77	932	356	379	379
March	52	11	1	560	0	0	3	33	227	0	91	977	479	512	512
April	38	8	1	513	0	0	3	39	231	0	98	931	525	564	564
May	32	10	0	583	0	0	3	46	237	0	101	1,013	574	619	619
June	45	10	0	662	0	0	4	43	232	0	102	1,098	571	614	614
July	44	12	0	769	0	0	3	45	256	0	108	1,238	596	641	641
August	39	12	1	760	0	0	2	46	243	0	104	1,206	575	621	621
September	33	7	1	716	0	0	2	37	242	0	106	1,145	515	553	553
October	34	6	1	643	0	0	3	32	234	0	95	1,049	455	488	488
November	35	6	1	583	0	0	3	27	236	0	102	992	367	394	394
December	41	7	1	617	0	0	4	24	242	0	98	1,033	349	373	373

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 are final. 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;

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

**Table 3.4.B. Net Generation from Renewable Sources: Commercial Sector, 2005 - 2015  
(Thousand Megawatthours)**

Period	Generation at Utility Scale Facilities										Total Renewable Generation at Utility Scale Facilities	Distributed Generation Estimated Distributed Solar Photovoltaic Generation	Net Generation From Utility Scale Facilities and Distributed Generation	
	Wind	Solar Photovoltaic	Solar Thermal	Wood and Wood-Derived Fuels	Landfill Gas	Biogenic Municipal Solid Waste	Other Waste Biomass	Geothermal	Conventional Hydroelectric	Estimated Total Solar Photovoltaic Generation			Estimated Total Solar Generation	
Annual Totals														
2005	0	0	0	16	218	953	486	0	86	1,759	N/A	N/A	N/A	
2006	0	0	0	21	173	956	470	0	93	1,713	N/A	N/A	N/A	
2007	0	0	0	15	203	962	434	0	77	1,691	N/A	N/A	N/A	
2008	0	0	0	21	234	911	389	0	60	1,615	N/A	N/A	N/A	
2009	0	0	0	20	318	1,045	386	0	71	1,839	N/A	N/A	N/A	
2010	16	5	0	21	256	1,031	386	0	80	1,794	N/A	N/A	N/A	
2011	51	84	0	26	952	971	393	0	26	2,502	N/A	N/A	N/A	
2012	54	148	0	24	848	1,070	402	0	28	2,573	N/A	N/A	N/A	
2013	61	294	0	34	925	1,149	493	0	44	3,000	N/A	N/A	N/A	
2014	107	371	0	74	905	1,202	575	0	38	3,271	5,146	5,516	5,516	
2015	118	416	0	48	847	1,199	592	0	35	3,255	5,689	6,106	6,106	
Year 2013														
January	6	9	0	2	77	87	40	0	4	225	N/A	N/A	N/A	
February	5	15	0	2	68	76	35	0	4	206	N/A	N/A	N/A	
March	5	22	0	3	79	93	40	0	4	246	N/A	N/A	N/A	
April	5	25	0	1	66	99	39	0	4	239	N/A	N/A	N/A	
May	5	27	0	2	80	101	41	0	5	261	N/A	N/A	N/A	
June	4	30	0	2	81	96	40	0	5	258	N/A	N/A	N/A	
July	3	28	0	3	84	102	43	0	5	268	N/A	N/A	N/A	
August	3	29	0	3	84	103	46	0	4	271	N/A	N/A	N/A	
September	4	30	0	2	77	102	38	0	3	255	N/A	N/A	N/A	
October	5	32	0	4	77	98	41	0	2	259	N/A	N/A	N/A	
November	8	24	0	5	72	94	44	0	2	250	N/A	N/A	N/A	
December	7	23	0	5	79	98	47	0	3	262	N/A	N/A	N/A	
Year 2014														
January	9	16	0	11	85	107	51	0	4	284	300	316	316	
February	8	20	0	10	79	74	46	0	3	240	322	342	342	
March	8	29	0	7	79	86	50	0	4	263	432	461	461	
April	8	33	0	2	74	98	47	0	4	266	467	499	499	
May	6	38	0	7	70	105	49	0	4	280	512	550	550	
June	9	39	0	10	77	102	46	0	3	287	510	549	549	
July	8	38	0	7	87	112	49	0	3	304	529	567	567	
August	6	39	0	6	81	113	50	0	3	298	520	559	559	
September	8	35	0	4	78	107	47	0	3	281	469	504	504	
October	11	36	0	4	69	99	47	0	2	268	419	455	455	
November	13	28	0	2	56	101	45	0	2	247	338	366	366	
December	10	20	0	4	68	99	48	0	2	252	329	349	349	
Year 2015														
January	11	20	0	6	68	91	50	0	3	249	327	347	347	
February	9	23	0	6	60	79	44	0	3	224	356	379	379	
March	10	33	0	3	71	93	49	0	3	263	479	512	512	
April	11	39	0	4	68	100	48	0	3	273	525	564	564	
May	10	46	0	6	70	103	48	0	3	286	574	619	619	
June	8	43	0	2	70	104	48	0	4	279	571	614	614	
July	7	45	0	7	78	111	53	0	3	304	596	641	641	
August	7	46	0	2	74	106	53	0	2	291	575	621	621	
September	8	37	0	4	70	109	51	0	2	282	515	553	553	
October	11	32	0	4	71	98	50	0	3	269	455	488	488	
November	13	27	0	1	71	104	47	0	3	266	367	394	394	
December	12	24	0	3	75	101	51	0	4	270	349	373	373	

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 are final. 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.

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

Table 3.5.A. Net Generation by Energy Source: Industrial Sector, 2005 - 2015  
(Thousand Megawatthours)

Period	Generation at Utility Scale Facilities											Total Generation at Utility Scale Facilities	Distributed Generation	Net Generation From Utility Scale Facilities and Distributed Generation		
	Coal	Petroleum Liquids	Petroleum Coke	Natural Gas	Other Gas	Nuclear	Hydroelectric Conventional	Solar	Renewable Sources Excluding Hydroelectric and Solar	Hydroelectric Pumped Storage	Other		Estimated Distributed Solar Photovoltaic Generation	Estimated Total Solar Photovoltaic Generation	Estimated Total Solar Generation	
Annual Totals																
2005	19,466	3,804	1,564	72,882	9,687	0	3,195	0	29,003	0	5,137	144,739	N/A	N/A	N/A	
2006	19,464	2,567	1,656	77,669	9,923	0	2,899	0	28,972	0	5,103	148,254	N/A	N/A	N/A	
2007	16,694	2,355	1,889	77,580	9,411	0	1,590	0	28,919	0	4,690	143,128	N/A	N/A	N/A	
2008	15,703	1,555	1,664	76,421	8,507	0	1,676	0	27,462	0	4,125	137,113	N/A	N/A	N/A	
2009	13,686	1,474	1,489	75,748	7,574	0	1,868	0	26,033	0	4,457	132,329	N/A	N/A	N/A	
2010	18,441	844	1,414	81,583	8,343	0	1,668	2	26,574	0	5,214	144,082	N/A	N/A	N/A	
2011	14,490	657	1,234	81,911	8,624	0	1,799	7	27,612	0	5,541	141,875	N/A	N/A	N/A	
2012	12,603	563	2,359	86,500	8,913	0	2,353	14	27,693	0	5,108	146,107	N/A	N/A	N/A	
2013	12,554	495	2,036	88,733	8,531	0	3,463	17	29,074	0	5,113	150,015	N/A	N/A	N/A	
2014	12,341	544	1,389	86,209	8,664	0	1,282	16	28,659	0	4,978	144,083	1,139	1,156	1,156	
2015	10,896	563	990	88,355	9,401	0	1,410	21	28,614	0	5,462	145,712	1,451	1,472	1,472	
Year 2013																
January	1,064	61	192	7,608	759	0	324	1	2,493	0	423	12,924	N/A	N/A	N/A	
February	983	47	118	6,801	644	0	363	1	2,284	0	402	11,642	N/A	N/A	N/A	
March	1,086	42	169	7,387	752	0	302	1	2,411	0	425	12,576	N/A	N/A	N/A	
April	986	37	173	6,869	698	0	250	2	2,208	0	358	11,580	N/A	N/A	N/A	
May	1,063	46	209	7,025	721	0	328	2	2,366	0	387	12,147	N/A	N/A	N/A	
June	1,048	36	201	7,351	699	0	328	2	2,444	0	402	12,511	N/A	N/A	N/A	
July	1,138	36	211	8,033	767	0	320	2	2,561	0	434	13,502	N/A	N/A	N/A	
August	1,066	36	208	7,856	767	0	240	2	2,551	0	468	13,195	N/A	N/A	N/A	
September	1,004	33	175	7,218	714	0	239	2	2,373	0	473	12,230	N/A	N/A	N/A	
October	1,005	37	166	7,165	667	0	239	2	2,421	0	481	12,182	N/A	N/A	N/A	
November	1,022	37	98	7,395	694	0	206	1	2,421	0	442	12,317	N/A	N/A	N/A	
December	1,089	47	118	8,025	650	0	322	1	2,540	0	417	13,210	N/A	N/A	N/A	
Year 2014																
January	1,105	85	100	7,441	667	0	120	1	2,466	0	408	12,391	62	62	62	
February	998	61	86	6,680	606	0	104	1	2,212	0	363	11,112	65	66	66	
March	1,087	56	103	7,105	651	0	114	1	2,439	0	382	11,937	93	94	94	
April	955	32	128	6,690	624	0	127	2	2,319	0	375	11,251	101	103	103	
May	1,009	40	126	6,918	662	0	130	2	2,385	0	397	11,667	111	113	113	
June	1,065	37	130	6,960	711	0	100	2	2,409	0	400	11,814	113	114	114	
July	1,105	37	129	7,685	786	0	89	2	2,549	0	408	12,790	117	119	119	
August	1,081	35	134	7,716	820	0	96	2	2,496	0	476	12,856	116	118	118	
September	1,013	39	123	7,234	828	0	86	2	2,275	0	444	12,044	106	107	107	
October	942	39	101	7,028	748	0	93	1	2,303	0	411	11,667	100	102	102	
November	966	42	108	7,083	772	0	99	1	2,297	0	429	11,797	81	82	82	
December	1,015	42	121	7,670	790	0	125	1	2,510	0	484	12,757	74	75	75	
Year 2015																
January	964	57	103	7,674	852	0	121	1	2,514	0	430	12,717	80	80	80	
February	894	86	88	6,609	696	0	105	1	2,217	0	374	11,071	85	86	86	
March	965	49	74	6,753	764	0	130	2	2,337	0	402	11,475	119	121	121	
April	804	45	104	6,465	690	0	138	2	2,335	0	423	11,005	129	132	132	
May	881	48	87	6,809	761	0	127	2	2,339	0	469	11,522	144	146	146	
June	951	49	78	7,426	819	0	114	2	2,343	0	462	12,244	144	146	146	
July	995	41	66	8,084	925	0	115	2	2,545	0	518	13,292	150	152	152	
August	980	37	70	8,010	864	0	90	2	2,480	0	519	13,054	147	149	149	
September	947	37	91	7,528	879	0	77	2	2,342	0	456	12,359	135	137	137	
October	853	40	67	7,340	678	0	114	2	2,322	0	478	11,894	125	126	126	
November	830	36	85	7,521	668	0	133	1	2,380	0	456	12,110	100	102	102	
December	832	38	77	8,137	806	0	145	1	2,459	0	475	12,970	93	94	94	

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.

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

**Table 3.5.B. Net Generation from Renewable Sources: Industrial Sector, 2005 - 2015  
(Thousand Megawatthours)**

Period	Generation at Utility Scale Facilities										Total Renewable Generation at Utility Scale Facilities	Distributed Generation Estimated Distributed Solar Photovoltaic Generation	Net Generation From Utility Scale Facilities and Distributed Generation	
	Wind	Solar Photovoltaic	Solar Thermal	Wood and Wood-Derived Fuels	Landfill Gas	Biogenic Municipal Solid Waste	Other Waste Biomass	Geothermal	Conventional Hydroelectric	Estimated Total Solar Photovoltaic Generation			Estimated Total Solar Generation	
Annual Totals														
2005	0	0	0	28,271	113	34	585	0	3,195	32,199	N/A	N/A	N/A	
2006	0	0	0	28,400	29	35	509	0	2,899	31,872	N/A	N/A	N/A	
2007	0	0	0	28,287	27	40	565	0	1,590	30,509	N/A	N/A	N/A	
2008	0	0	0	26,641	21	0	800	0	1,676	29,138	N/A	N/A	N/A	
2009	0	0	0	25,292	22	0	718	0	1,868	27,901	N/A	N/A	N/A	
2010	0	2	0	25,706	15	0	853	0	1,668	28,244	N/A	N/A	N/A	
2011	5	7	0	26,691	15	2	900	0	1,799	29,418	N/A	N/A	N/A	
2012	19	14	0	26,725	81	10	857	0	2,353	30,060	N/A	N/A	N/A	
2013	37	17	0	27,691	178	2	1,166	0	3,463	32,554	N/A	N/A	N/A	
2014	53	16	0	27,239	185	-2	1,185	0	1,282	29,957	1,139	1,156	1,156	
2015	53	21	0	27,318	182	12	1,049	0	1,410	30,045	1,451	1,472	1,472	
Year 2013														
January	3	1	0	2,386	14	0	91	0	324	2,818	N/A	N/A	N/A	
February	2	1	0	2,190	13	0	80	0	363	2,648	N/A	N/A	N/A	
March	3	1	0	2,310	14	0	85	0	302	2,715	N/A	N/A	N/A	
April	3	2	0	2,086	14	0	106	0	250	2,460	N/A	N/A	N/A	
May	4	2	0	2,254	15	0	92	0	328	2,695	N/A	N/A	N/A	
June	3	2	0	2,335	15	1	90	0	328	2,774	N/A	N/A	N/A	
July	2	2	0	2,441	15	0	102	0	320	2,883	N/A	N/A	N/A	
August	2	2	0	2,430	15	1	105	0	240	2,793	N/A	N/A	N/A	
September	2	2	0	2,263	15	0	93	0	239	2,614	N/A	N/A	N/A	
October	4	2	0	2,296	15	0	106	0	239	2,661	N/A	N/A	N/A	
November	5	1	0	2,294	16	0	106	0	206	2,629	N/A	N/A	N/A	
December	5	1	0	2,408	17	0	111	0	322	2,863	N/A	N/A	N/A	
Year 2014														
January	7	1	0	2,343	16	0	101	0	120	2,586	62	62	62	
February	4	1	0	2,105	14	0	89	0	104	2,317	65	66	66	
March	5	1	0	2,311	16	0	106	0	114	2,555	93	94	94	
April	6	2	0	2,188	17	-1	109	0	127	2,447	101	103	103	
May	4	2	0	2,276	16	0	89	0	130	2,517	111	113	113	
June	3	2	0	2,295	16	0	95	0	100	2,511	113	114	114	
July	3	2	0	2,426	16	0	104	0	89	2,640	117	119	119	
August	2	2	0	2,384	15	0	95	0	96	2,594	116	118	118	
September	2	2	0	2,171	14	0	88	0	86	2,362	106	107	107	
October	5	1	0	2,180	14	0	105	0	93	2,397	100	102	102	
November	6	1	0	2,175	15	0	101	0	99	2,397	81	82	82	
December	4	1	0	2,386	15	0	104	0	125	2,636	74	75	75	
Year 2015														
January	5	1	0	2,404	15	1	90	0	121	2,636	80	80	80	
February	5	1	0	2,132	12	1	67	0	105	2,323	85	86	86	
March	5	2	0	2,226	14	1	91	0	130	2,469	119	121	121	
April	5	2	0	2,218	15	1	96	0	138	2,475	129	132	132	
May	5	2	0	2,239	15	1	79	0	127	2,468	144	146	146	
June	4	2	0	2,251	15	1	73	0	114	2,459	144	146	146	
July	3	2	0	2,434	16	1	91	0	115	2,663	150	152	152	
August	3	2	0	2,377	16	1	84	0	90	2,573	147	149	149	
September	3	2	0	2,245	15	1	78	0	77	2,421	135	137	137	
October	5	2	0	2,201	16	1	99	0	114	2,438	125	126	126	
November	6	1	0	2,259	16	1	98	0	133	2,514	100	102	102	
December	6	1	0	2,331	17	1	104	0	145	2,605	93	94	94	

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

**Table 3.6. Net Generation by Energy Source: Residential Sector, 2014 - 2015  
(Thousand Megawatthours)**

Period	Distributed Generation
	Estimated Distributed Solar Photovoltaic Generation
Annual Totals	
2014	4,947
2015	6,999
Year 2014	
January	263
February	277
March	382
April	421
May	468
June	478
July	502
August	503
September	472
October	445
November	373
December	363
Year 2015	
January	340
February	375
March	536
April	609
May	676
June	693
July	741
August	746
September	679
October	618
November	515
December	471

See Glossary for definitions. Values are final.

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

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

Sources:

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

Table 3.7. Utility Scale Facility Net Generation by State, by Sector, 2015 and 2014 (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	
	Year 2015	Year 2014	Percentage Change	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014
New England	110,235	110,896	-0.6%	3,364	3,700	102,667	101,916	1,293	1,389	2,911	3,892
Connecticut	37,471	33,677	11.3%	45	55	36,538	32,709	402	440	466	473
Maine	11,741	13,249	-11.4%	0	1	9,323	9,804	206	208	2,212	3,236
Massachusetts	32,086	31,119	3.1%	715	680	30,654	29,687	535	600	181	152
New Hampshire	20,016	19,538	2.4%	1,695	2,086	18,217	17,353	73	69	32	31
Rhode Island	6,939	6,282	10.5%	12	11	6,854	6,203	73	68	0	0
Vermont	1,982	7,031	-71.8%	898	868	1,081	6,160	3	4	0	0
Middle Atlantic	427,809	426,232	0.4%	34,725	34,057	386,346	385,297	2,284	2,195	4,454	4,683
New Jersey	74,609	68,051	9.6%	-24	-117	73,272	66,874	656	603	706	691
New York	138,628	137,122	1.1%	34,682	34,083	101,778	100,914	1,236	1,174	932	951
Pennsylvania	214,572	221,058	-2.9%	67	91	211,296	217,509	392	417	2,817	3,041
East North Central	599,233	619,897	-3.3%	254,363	286,108	333,002	321,771	1,982	2,007	9,886	10,011
Illinois	193,952	202,144	-4.1%	4,429	10,457	186,373	188,360	489	538	2,662	2,789
Indiana	104,019	115,395	-9.9%	87,771	100,983	12,722	11,160	246	214	3,280	3,039
Michigan	113,008	106,817	5.8%	85,370	84,075	25,345	20,419	1,013	972	1,280	1,351
Ohio	121,893	134,476	-9.4%	24,404	43,291	96,499	90,205	128	107	862	874
Wisconsin	66,360	61,065	8.7%	52,389	47,302	12,064	11,628	106	176	1,801	1,959
West North Central	329,479	338,303	-2.6%	281,397	291,920	43,306	41,763	593	618	4,183	4,002
Iowa	56,659	56,853	-0.3%	41,813	43,022	12,522	11,546	221	220	2,103	2,064
Kansas	45,527	49,728	-8.4%	35,294	39,670	10,198	10,022	0	0	36	36
Minnesota	56,980	56,998	0.0%	45,817	45,963	9,519	9,437	191	215	1,453	1,384
Missouri	83,640	87,834	-4.8%	80,879	85,271	2,554	2,347	164	165	43	51
Nebraska	39,883	39,431	1.1%	36,522	36,561	2,963	2,511	17	17	381	342
North Dakota	37,157	36,463	1.9%	33,106	32,088	3,883	4,250	0	0	167	124
South Dakota	9,633	10,995	-12.4%	7,966	9,345	1,667	1,650	0	0	0	0
South Atlantic	792,087	784,957	0.9%	664,631	660,841	106,903	104,719	1,321	1,262	19,233	18,135
Delaware	7,810	7,704	1.4%	50	49	6,533	6,766	6	7	1,221	882
District of Columbia	54	68	-20.5%	0	0	31	0	23	68	0	0
Florida	237,413	230,016	3.2%	218,247	211,971	13,730	12,844	79	67	5,356	5,135
Georgia	128,818	125,837	2.4%	110,213	109,523	13,475	11,620	14	30	5,116	4,665
Maryland	36,366	37,834	-3.9%	19	20	35,567	37,049	504	414	276	350
North Carolina	128,388	128,144	0.2%	119,074	119,432	7,089	6,648	228	195	1,998	1,869
South Carolina	96,532	97,158	-0.6%	92,412	93,547	2,430	1,710	4	6	1,686	1,895
Virginia	84,412	77,137	9.4%	67,573	62,967	13,916	11,488	463	476	2,459	2,206
West Virginia	72,295	81,060	-10.8%	57,043	63,332	14,131	16,594	0	0	1,121	1,133
East South Central	375,994	374,871	0.3%	319,182	326,545	47,742	39,685	153	155	8,916	8,486
Alabama	152,477	149,340	2.1%	107,868	112,341	40,392	33,162	0	0	4,217	3,838
Kentucky	83,544	90,896	-8.1%	82,365	90,133	589	164	0	0	589	599
Mississippi	64,758	55,127	17.5%	56,273	47,084	6,565	6,191	7	21	1,913	1,831
Tennessee	75,215	79,507	-5.4%	72,676	76,987	195	146	146	134	2,197	2,219
West South Central	689,334	673,607	2.3%	242,258	250,342	370,773	348,669	895	932	75,408	73,664
Arkansas	55,559	61,592	-9.8%	39,538	48,753	14,265	11,051	6	8	1,750	1,780
Louisiana	107,812	104,229	3.4%	65,730	58,518	11,143	14,154	176	190	30,764	31,367
Oklahoma	76,136	70,156	8.5%	48,778	48,096	26,468	21,218	0	0	889	842
Texas	449,826	437,630	2.8%	88,212	94,975	318,898	302,245	712	734	42,004	39,675
Mountain	373,168	373,334	0.0%	298,033	300,036	71,151	69,519	534	478	3,450	3,301
Arizona	113,142	112,257	0.8%	94,379	94,847	18,611	17,254	151	156	0	0
Colorado	52,393	53,847	-2.7%	42,155	43,240	10,141	10,510	28	26	69	71
Idaho	15,667	15,184	3.2%	10,166	9,628	4,886	4,997	23	5	592	554
Montana	29,302	30,258	-3.2%	10,717	12,329	18,558	17,906	0	0	28	22
Nevada	39,047	36,001	8.5%	30,497	27,759	8,131	7,905	114	95	305	241
New Mexico	32,701	32,306	1.2%	25,951	26,423	6,626	5,741	124	112	1	30
Utah	41,949	43,785	-4.2%	39,381	40,741	1,505	1,937	93	83	970	1,023
Wyoming	48,967	49,696	-1.5%	44,788	45,069	2,693	3,266	0	0	1,486	1,361
Pacific Contiguous	363,858	375,262	-3.0%	206,132	217,897	138,002	137,095	3,001	2,929	16,723	17,341
California	196,704	198,808	-1.1%	71,150	71,037	108,154	109,784	2,889	2,802	14,511	15,184
Oregon	57,867	60,120	-3.7%	41,306	44,565	15,808	14,754	78	97	675	703
Washington	109,287	116,334	-6.1%	93,676	102,294	14,040	12,557	35	30	1,537	1,454
Pacific Noncontiguous	16,404	16,247	1.0%	11,239	11,027	4,079	4,097	539	555	548	568
Alaska	6,285	6,043	4.0%	5,746	5,510	253	243	165	172	121	118
Hawaii	10,120	10,204	-0.8%	5,492	5,517	3,826	3,854	375	383	427	451
U.S. Total	4,077,601	4,093,606	-0.4%	2,315,323	2,382,473	1,603,971	1,554,530	12,595	12,520	145,712	144,083

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 NM = Not meaningful due to large relative standard error or excessive percentage change.  
 Notes: See Glossary for definitions. Values 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 3.8. Utility Scale Facility Net Generation from Coal by State, by Sector, 2015 and 2014 (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	
	Year 2015	Year 2014	Percentage Change	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014
New England	3,882	5,010	-22.5%	937	1,311	2,901	3,646	0	0	44	53
Connecticut	600	825	-27.2%	0	0	600	825	0	0	0	0
Maine	92	79	16.2%	0	0	65	49	0	0	27	30
Massachusetts	2,253	2,795	-19.4%	0	0	2,236	2,772	0	0	17	23
New Hampshire	937	1,311	-28.6%	937	1,311	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	68,776	86,097	-20.1%	0	0	67,990	85,244	2	17	784	836
New Jersey	1,759	2,519	-30.2%	0	0	1,759	2,519	0	0	0	0
New York	2,380	4,592	-48.2%	0	0	2,075	4,283	0	0	305	310
Pennsylvania	64,637	78,986	-18.2%	0	0	64,156	78,442	2	17	479	527
East North Central	313,779	365,059	-14.0%	182,410	227,157	128,589	134,684	136	184	2,644	3,034
Illinois	73,774	87,282	-15.5%	3,715	9,986	68,404	75,505	37	40	1,618	1,751
Indiana	78,231	97,549	-19.8%	72,720	91,963	5,474	5,505	37	62	0	19
Michigan	52,884	52,900	0.0%	52,297	52,275	393	371	62	79	132	175
Ohio	71,710	89,879	-20.2%	17,180	36,335	54,318	53,304	0	NM	212	237
Wisconsin	37,181	37,449	-0.7%	36,499	36,597	0	0	0	1	682	851
West North Central	197,842	217,856	-9.2%	194,736	214,617	26	31	187	225	2,893	2,983
Iowa	29,811	33,733	-11.6%	27,880	31,756	0	0	128	140	1,803	1,836
Kansas	24,593	28,752	-14.5%	24,593	28,752	0	0	0	0	0	0
Minnesota	24,697	27,957	-11.7%	24,111	27,248	0	0	1	9	586	700
Missouri	65,326	72,409	-9.8%	65,221	72,257	26	31	58	76	21	45
Nebraska	24,185	24,922	-3.0%	23,804	24,580	0	0	0	0	381	342
North Dakota	27,734	27,394	1.2%	27,632	27,334	0	0	0	0	103	60
South Dakota	1,495	2,689	-44.4%	1,495	2,689	0	0	0	0	0	0
South Atlantic	242,400	292,303	-17.1%	212,673	253,587	27,959	36,297	74	48	1,694	2,372
Delaware	599	865	-30.8%	0	0	599	865	0	0	0	0
District of Columbia	0	0	--	0	0	0	0	0	0	0	0
Florida	42,904	52,054	-17.6%	41,588	50,276	1,129	1,516	0	0	187	262
Georgia	37,131	45,295	-18.0%	36,915	44,844	0	0	0	0	216	451
Maryland	13,926	17,603	-20.9%	0	0	13,810	17,444	2	115	157	157
North Carolina	39,922	49,238	-18.9%	39,349	48,057	337	852	56	23	181	305
South Carolina	22,631	28,914	-21.7%	22,488	28,748	0	0	0	0	143	167
Virginia	17,231	20,819	-17.2%	16,023	19,043	878	1,297	19	22	312	456
West Virginia	68,056	77,515	-12.2%	56,310	62,618	11,206	14,323	0	0	540	574
East South Central	151,017	177,521	-14.9%	146,886	173,827	3,029	2,464	0	11	1,101	1,219
Alabama	41,410	47,302	-12.5%	41,311	47,170	0	0	0	0	99	131
Kentucky	72,620	83,602	-13.1%	72,620	83,602	0	0	0	0	0	0
Mississippi	6,400	10,743	-40.4%	3,371	8,279	3,029	2,464	0	0	0	0
Tennessee	30,586	35,875	-14.7%	29,584	34,776	0	0	11	1,002	1,088	1,088
West South Central	183,326	230,521	-20.5%	95,150	123,496	87,746	106,583	0	0	430	443
Arkansas	21,740	33,221	-34.6%	17,634	29,544	4,049	3,619	0	0	57	57
Louisiana	15,165	19,221	-21.1%	9,125	8,538	6,040	10,683	0	0	0	0
Oklahoma	24,867	29,906	-16.8%	22,663	27,630	1,831	1,890	0	0	373	386
Texas	121,554	148,174	-18.0%	45,729	57,784	75,826	90,390	0	0	0	0
Mountain	181,645	194,556	-6.6%	162,855	175,630	17,852	17,921	0	0	937	1,005
Arizona	36,167	42,665	-15.2%	36,167	42,665	0	0	0	0	0	0
Colorado	31,541	32,545	-3.1%	31,471	32,443	62	94	0	0	8	8
Idaho	79	78	1.7%	0	0	0	0	0	0	79	78
Montana	16,013	15,579	2.8%	221	289	15,786	15,282	0	0	7	9
Nevada	2,657	6,548	-59.4%	1,804	5,126	853	1,422	0	0	0	0
New Mexico	20,440	20,356	0.4%	20,440	20,356	0	0	0	0	0	0
Utah	31,656	33,377	-5.2%	30,815	32,510	418	419	0	0	424	447
Wyoming	43,091	43,409	-0.7%	41,937	42,241	734	704	0	0	420	464
Pacific Contiguous	7,727	10,717	-27.9%	2,377	3,193	5,016	7,175	0	0	334	349
California	298	805	-63.0%	0	0	0	499	0	0	298	305
Oregon	2,377	3,193	-25.5%	2,377	3,193	0	0	0	0	0	0
Washington	5,052	6,720	-24.8%	0	0	5,016	6,676	0	0	36	44
Pacific Noncontiguous	2,005	2,069	-3.1%	360	257	1,501	1,657	109	111	35	45
Alaska	668	558	19.6%	360	257	198	191	109	111	0	0
Hawaii	1,337	1,511	-11.5%	0	0	1,303	1,466	0	0	35	45
U.S. Total	1,352,398	1,581,710	-14.5%	998,385	1,173,073	342,608	395,701	509	595	10,896	12,341

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 NM = Not meaningful due to large relative standard error or excessive percentage change.  
 Notes: See Glossary for definitions. Values 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 3.9. Utility Scale Facility Net Generation from Petroleum Liquids by State, by Sector, 2015 and 2014 (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	
	Year 2015	Year 2014	Percentage Change	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014
New England	2,055	2,205	-6.8%	188	264	1,740	1,769	84	124	42	47
Connecticut	437	513	-14.9%	8	9	411	492	10	7	9	5
Maine	548	305	79.7%	0	1	512	261	3	2	34	41
Massachusetts	777	1,005	-22.7%	61	131	677	793	39	80	0	1
New Hampshire	176	287	-38.9%	106	108	54	163	16	16	0	0
Rhode Island	114	88	29.2%	12	11	86	60	NM	NM	0	0
Vermont	3	5	-44.2%	2	4	0	0	1	1	0	0
Middle Atlantic	2,767	3,245	-14.7%	821	936	1,808	2,136	62	80	77	92
New Jersey	304	467	-34.9%	4	2	294	462	1	1	5	2
New York	1,892	2,136	-11.4%	817	933	959	1,045	59	76	58	83
Pennsylvania	571	641	-10.9%	0	1	554	630	2	2	14	8
East North Central	570	750	-23.9%	346	468	194	253	3	5	26	24
Illinois	56	87	-35.3%	8	29	48	58	0	0	0	0
Indiana	159	164	-2.9%	141	149	0	0	0	1	18	14
Michigan	109	140	-22.6%	104	136	NM	NM	2	2	2	3
Ohio	220	307	-28.5%	72	111	143	192	0	0	5	5
Wisconsin	27	52	-48.2%	22	44	3	3	0	2	1	3
West North Central	289	349	-17.0%	282	329	5	13	1	5	1	2
Iowa	64	59	8.5%	64	58	0	1	0	0	0	0
Kansas	49	45	8.1%	49	45	0	0	0	0	0	0
Minnesota	28	63	-55.3%	22	45	5	12	1	5	1	1
Missouri	99	107	-7.3%	99	107	0	0	0	0	0	0
Nebraska	6	43	-85.7%	6	43	0	0	0	0	0	0
North Dakota	26	26	1.3%	26	26	0	0	0	0	1	0
South Dakota	17	7	156.8%	17	7	0	0	0	0	0	0
South Atlantic	2,992	3,427	-12.7%	2,137	2,326	740	976	21	27	93	97
Delaware	154	183	-15.9%	5	9	149	175	0	0	0	0
District of Columbia	0	0	-	0	0	0	0	0	0	0	0
Florida	582	527	10.4%	560	500	7	5	0	0	14	22
Georgia	147	180	-17.9%	54	99	48	39	3	3	42	39
Maryland	232	463	-49.9%	11	12	204	428	16	23	NM	1
North Carolina	435	460	-5.5%	362	416	58	28	0	0	14	15
South Carolina	193	246	-21.3%	167	219	11	17	0	0	15	10
Virginia	1,108	1,205	-8.1%	851	935	249	258	1	1	7	10
West Virginia	140	163	-13.9%	127	136	14	27	0	0	0	0
East South Central	346	418	-17.1%	312	386	10	12	0	0	24	19
Alabama	84	98	-14.2%	53	71	10	11	0	0	21	16
Kentucky	113	120	-6.3%	113	120	0	0	0	0	0	0
Mississippi	14	14	0.2%	12	13	0	0	0	0	2	1
Tennessee	135	185	-27.0%	133	182	0	1	0	0	2	2
West South Central	257	192	34.1%	155	91	90	89	1	1	12	11
Arkansas	60	29	106.5%	39	19	13	7	0	0	8	3
Louisiana	78	48	63.2%	65	13	13	29	0	0	0	6
Oklahoma	11	12	-13.5%	9	12	0	0	0	0	2	0
Texas	108	102	5.6%	42	47	63	53	1	1	2	1
Mountain	213	240	-11.5%	194	213	17	20	NM	0	1	8
Arizona	48	57	-15.4%	48	57	0	0	0	0	0	0
Colorado	7	10	-26.9%	7	10	0	0	NM	0	0	0
Idaho	0	0	NM	0	0	0	0	0	0	0	0
Montana	14	26	-47.6%	0	9	13	17	0	0	0	0
Nevada	16	15	6.3%	13	13	3	2	0	0	0	0
New Mexico	63	63	-0.3%	63	63	0	0	0	0	0	0
Utah	20	24	-18.9%	19	23	1	1	0	0	0	1
Wyoming	45	45	-0.5%	45	38	0	0	0	0	0	7
Pacific Contiguous	112	81	38.8%	42	47	34	20	1	1	35	13
California	85	47	78.1%	35	33	25	10	0	1	25	4
Oregon	6	10	-38.6%	6	10	0	0	0	0	0	0
Washington	22	24	-7.9%	2	5	9	10	0	0	10	9
Pacific Noncontiguous	7,770	7,372	5.4%	5,908	5,635	1,602	1,500	9	5	250	231
Alaska	747	446	67.5%	695	398	0	0	6	3	46	44
Hawaii	7,023	6,926	1.4%	5,213	5,236	1,602	1,500	3	2	205	187
U.S. Total	17,372	18,276	-5.0%	10,386	10,696	6,240	6,789	183	247	563	544

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 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 3.10. Utility Scale Facility Net Generation from Petroleum Coke by State, by Sector, 2015 and 2014 (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	
	Year 2015	Year 2014	Percentage Change	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014
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	229	192	19.6%	0	0	0	0	0	0	229	192
New Jersey	71	NM	NM	0	0	0	0	0	0	71	NM
New York	0	0	--	0	0	0	0	0	0	0	0
Pennsylvania	158	162	-2.3%	0	0	0	0	0	0	158	162
East North Central	3,175	3,317	-4.3%	1,790	1,985	1,118	989	0	0	268	343
Illinois	0	0	--	0	0	0	0	0	0	0	0
Indiana	1,179	1,199	-1.7%	1,179	1,199	0	0	0	0	0	0
Michigan	718	911	-21.2%	542	698	29	50	0	0	147	163
Ohio	1,097	939	16.8%	0	0	1,088	939	0	0	9	0
Wisconsin	181	267	-32.3%	69	88	0	0	0	0	112	179
West North Central	46	85	-45.6%	0	0	0	0	8	9	38	76
Iowa	46	85	-45.6%	0	0	0	0	8	9	38	76
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	1,681	1,549	8.5%	1,568	1,351	0	0	0	0	113	198
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	1,568	1,351	16.1%	1,568	1,351	0	0	0	0	0	0
Georgia	113	198	-43.0%	0	0	0	0	0	0	113	198
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	964	1,033	-6.6%	964	1,033	0	0	0	0	0	0
Alabama	0	0	--	0	0	0	0	0	0	0	0
Kentucky	964	1,033	-6.6%	964	1,033	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	4,299	5,359	-19.8%	3,957	4,779	0	0	0	0	342	580
Arkansas	0	0	--	0	0	0	0	0	0	0	0
Louisiana	4,165	5,183	-19.6%	3,957	4,779	0	0	0	0	208	404
Oklahoma	0	0	--	0	0	0	0	0	0	0	0
Texas	134	176	-24.0%	0	0	0	0	0	0	134	176
Mountain	483	403	20.0%	0	0	483	403	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	483	403	20.0%	0	0	483	403	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	19	-100.0%	0	0	0	19	0	0	0	0
California	0	19	-100.0%	0	0	0	19	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	10,877	11,955	-9.0%	8,278	9,147	1,601	1,410	8	9	990	1,389

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 Negative generation denotes that electric power consumed for plant use exceeds gross generation.  
 Totals may not equal sum of components because of independent rounding. Percentage change is calculated before rounding.  
 Source: U.S. Energy Information Administration, Form EIA-923, Power Plant Operations Report.

Table 3.11. Utility Scale Facility Net Generation from Natural Gas by State, by Sector, 2015 and 2014 (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	
	Year 2015	Year 2014	Percentage Change	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014
New England	53,961	47,880	12.7%	414	343	51,527	44,990	946	962	1,073	1,584
Connecticut	17,362	14,684	18.2%	13	11	16,487	13,811	385	394	477	468
Maine	2,952	4,344	-32.1%	0	0	2,517	3,352	27	26	408	966
Massachusetts	21,007	18,498	13.6%	378	299	20,012	17,594	461	485	157	119
New Hampshire	6,052	4,388	37.9%	22	30	5,976	4,312	22	15	31	31
Rhode Island	6,586	5,963	10.4%	0	0	6,536	5,920	50	43	0	0
Vermont	1	2	-39.4%	1	2	0	0	0	0	0	0
Middle Atlantic	153,353	138,811	10.5%	12,145	11,998	138,287	123,946	1,090	1,010	1,831	1,857
New Jersey	36,974	31,410	17.7%	78	76	36,350	30,757	206	183	340	394
New York	56,923	54,380	4.7%	12,062	11,914	43,811	41,550	760	688	290	228
Pennsylvania	59,455	53,021	12.1%	4	9	58,127	51,639	123	139	1,201	1,235
East North Central	88,604	59,251	49.5%	39,198	24,274	46,414	32,392	1,355	1,346	1,637	1,238
Illinois	10,864	5,465	98.8%	629	383	9,276	4,167	446	490	513	425
Indiana	16,263	9,572	69.9%	13,021	6,951	2,532	2,055	167	111	543	455
Michigan	20,045	12,523	60.1%	6,320	3,325	12,896	8,500	555	518	273	180
Ohio	28,034	23,636	18.6%	6,884	6,590	20,948	16,901	117	95	84	51
Wisconsin	13,399	8,054	66.4%	12,342	7,025	762	769	70	132	224	127
West North Central	17,472	11,844	47.5%	14,663	9,753	2,194	1,697	227	206	388	189
Iowa	2,398	1,373	74.7%	2,164	1,277	0	0	45	38	190	58
Kansas	1,174	1,453	-19.2%	1,138	1,412	0	0	0	0	36	41
Minnesota	7,389	3,870	91.0%	6,392	3,140	771	554	105	110	122	65
Missouri	4,596	4,044	13.7%	3,077	2,842	1,424	1,143	76	57	20	3
Nebraska	431	406	6.2%	430	405	0	0	1	0	0	0
North Dakota	711	234	203.5%	690	213	0	0	0	0	21	22
South Dakota	773	465	66.2%	773	465	0	0	0	0	0	0
South Atlantic	305,242	251,545	21.3%	251,847	208,804	49,108	39,508	537	473	3,751	2,759
Delaware	6,689	6,297	6.2%	39	34	5,684	5,624	0	0	967	639
District of Columbia	23	68	-66.5%	0	0	0	0	23	68	0	0
Florida	155,824	140,034	11.3%	145,887	131,477	8,513	7,258	33	32	1,392	1,267
Georgia	50,469	40,961	23.2%	37,264	29,754	12,615	10,830	0	0	590	377
Maryland	4,555	2,506	81.8%	0	0	4,031	2,089	466	364	59	53
North Carolina	36,545	28,738	27.2%	32,567	25,224	3,794	3,419	8	0	176	94
South Carolina	16,549	11,407	45.1%	14,571	10,087	1,939	1,286	2	3	38	30
Virginia	33,284	20,882	59.4%	21,401	12,047	11,346	8,530	6	5	531	299
West Virginia	1,304	653	99.5%	119	181	1,185	472	0	0	0	0
East South Central	116,235	89,575	29.8%	69,949	50,980	44,223	36,779	151	141	1,913	1,674
Alabama	55,844	48,270	15.7%	14,691	14,388	40,126	32,907	0	0	1,027	975
Kentucky	5,950	2,500	138.0%	5,135	2,104	574	151	0	0	241	244
Mississippi	45,117	32,606	38.4%	41,175	28,539	3,523	3,714	7	21	411	331
Tennessee	9,324	6,200	50.4%	8,947	5,949	0	6	143	120	233	124
West South Central	353,095	297,097	18.8%	104,963	83,866	182,641	149,151	823	868	64,668	63,212
Arkansas	14,866	9,614	54.6%	4,476	2,025	10,068	7,307	2	3	320	279
Louisiana	66,211	56,121	18.0%	37,283	27,878	4,001	2,266	176	190	24,751	25,786
Oklahoma	34,286	26,641	28.7%	22,087	17,485	12,019	9,022	0	0	180	135
Texas	237,731	204,721	16.1%	41,117	36,478	156,552	130,556	645	675	39,417	37,013
Mountain	97,008	83,134	16.7%	69,836	57,626	25,359	23,856	418	396	1,394	1,256
Arizona	33,657	27,242	23.5%	18,497	13,251	15,030	13,859	130	132	0	0
Colorado	11,644	11,954	-2.6%	9,391	9,273	2,230	2,656	NM	7	19	18
Idaho	3,804	2,553	49.0%	2,128	1,246	1,606	1,276	15	0	55	30
Montana	599	515	16.2%	534	471	65	44	0	0	0	0
Nevada	29,000	22,961	26.3%	26,428	20,253	2,200	2,406	69	64	302	238
New Mexico	9,365	8,976	4.3%	5,190	5,802	4,052	3,035	121	109	1	30
Utah	8,218	8,376	-1.9%	7,527	7,307	176	526	78	83	436	460
Wyoming	722	557	29.6%	139	23	1	55	0	0	582	479
Pacific Contiguous	145,423	144,184	0.9%	51,784	50,551	80,085	79,438	1,924	1,822	11,630	12,372
California	116,140	120,426	-3.6%	37,076	36,002	65,695	70,438	1,853	1,733	11,516	12,253
Oregon	16,237	12,699	27.9%	6,599	4,917	9,532	7,636	52	77	55	70
Washington	13,046	11,059	18.0%	8,109	9,632	4,859	1,364	19	12	59	50
Pacific Noncontiguous	3,090	3,288	-6.0%	3,019	3,219	0	0	0	2	70	67
Alaska	3,090	3,288	-6.0%	3,019	3,219	0	0	0	2	70	67
Hawaii	0	0	--	0	0	0	0	0	0	0	0
U.S. Total	1,333,482	1,126,609	18.4%	617,817	501,414	619,839	531,758	7,471	7,227	88,355	86,209

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 Totals may not equal sum of components because of independent rounding. Percentage change is calculated before rounding.  
 Source: U.S. Energy Information Administration, Form EIA-923, Power Plant Operations Report.

Table 3.12. Utility Scale Facility Net Generation from Other Gases by State, by Sector, 2015 and 2014 (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	
	Year 2015	Year 2014	Percentage Change	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014
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	641	652	-1.7%	0	0	0	0	0	0	641	652
New Jersey	221	162	36.7%	0	0	0	0	0	0	221	162
New York	0	0	--	0	0	0	0	0	0	0	0
Pennsylvania	420	491	-14.4%	0	0	0	0	0	0	420	491
East North Central	4,706	4,549	3.5%	199	112	1,785	1,761	0	0	2,723	2,676
Illinois	280	338	-17.2%	0	0	2	8	0	0	278	330
Indiana	2,269	2,161	5.0%	20	20	0	0	0	0	2,248	2,142
Michigan	1,213	1,120	8.3%	178	92	1,034	1,028	0	0	0	0
Ohio	945	929	1.7%	0	0	748	725	0	0	197	204
Wisconsin	0	0	--	0	0	0	0	0	0	0	0
West North Central	39	40	-2.7%	0	0	0	0	0	0	39	40
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	39	40	-2.7%	0	0	0	0	0	0	39	40
South Dakota	0	0	--	0	0	0	0	0	0	0	0
South Atlantic	272	264	3.0%	0	0	0	0	0	0	272	264
Delaware	238	226	5.2%	0	0	0	0	0	0	238	226
District of Columbia	0	0	--	0	0	0	0	0	0	0	0
Florida	5	7	-28.4%	0	0	0	0	0	0	5	7
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	29	31	-5.8%	0	0	0	0	0	0	29	31
East South Central	48	193	-75.3%	0	0	0	0	0	0	48	193
Alabama	36	180	-80.1%	0	0	0	0	0	0	36	180
Kentucky	0	0	--	0	0	0	0	0	0	0	0
Mississippi	0	0	--	0	0	0	0	0	0	0	0
Tennessee	12	13	-8.3%	0	0	0	0	0	0	12	13
West South Central	4,980	4,249	17.2%	0	0	1,314	1,144	0	0	3,666	3,106
Arkansas	0	0	--	0	0	0	0	0	0	0	0
Louisiana	2,401	1,943	23.6%	0	0	0	0	0	0	2,401	1,943
Oklahoma	0	0	--	0	0	0	0	0	0	0	0
Texas	2,579	2,307	11.8%	0	0	1,314	1,144	0	0	1,265	1,163
Mountain	436	342	27.6%	0	0	23	5	0	0	414	337
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	17	0	NM	0	0	17	0	0	0	0	0
Nevada	6	5	7.2%	0	0	6	5	0	0	0	0
New Mexico	0	0	--	0	0	0	0	0	0	0	0
Utah	8	0	--	0	0	0	0	0	0	8	0
Wyoming	405	337	20.4%	0	0	0	0	0	0	405	337
Pacific Contiguous	1,944	1,670	16.4%	0	0	395	337	0	0	1,549	1,333
California	1,549	1,333	16.2%	0	0	0	0	0	0	1,549	1,333
Oregon	0	0	--	0	0	0	0	0	0	0	0
Washington	395	337	17.2%	0	0	395	337	0	0	0	0
Pacific Noncontiguous	50	62	-19.4%	0	0	0	0	0	0	50	62
Alaska	0	0	--	0	0	0	0	0	0	0	0
Hawaii	50	62	-19.4%	0	0	0	0	0	0	50	62
U.S. Total	13,117	12,022	9.1%	199	112	3,517	3,246	0	0	9,401	8,664

Displayed values of zero may represent small values that round to zero. The Excel version of this table provides additional precision which may be accessed by selecting individual cells.  
 NM = Not meaningful due to large relative standard error or excessive percentage change.  
 Notes: See Glossary for definitions. Values 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 3.13. Utility Scale Facility Net Generation from Nuclear Energy by State, by Sector, 2015 and 2014 (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	
	Year 2015	Year 2014	Percentage Change	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014
New England	31,890	36,839	-13.4%	0	0	31,890	36,839	0	0	0	0
Connecticut	17,411	15,841	9.9%	0	0	17,411	15,841	0	0	0	0
Maine	0	0	--	0	0	0	0	0	0	0	0
Massachusetts	4,995	5,769	-13.4%	0	0	4,995	5,769	0	0	0	0
New Hampshire	9,484	10,168	-6.7%	0	0	9,484	10,168	0	0	0	0
Rhode Island	0	0	--	0	0	0	0	0	0	0	0
Vermont	0	5,061	-100.0%	0	0	0	5,061	0	0	0	0
Middle Atlantic	158,381	153,260	3.3%	0	0	158,381	153,260	0	0	0	0
New Jersey	33,262	31,507	5.6%	0	0	33,262	31,507	0	0	0	0
New York	44,603	43,039	3.6%	0	0	44,603	43,039	0	0	0	0
Pennsylvania	80,517	78,715	2.3%	0	0	80,517	78,715	0	0	0	0
East North Central	154,001	154,835	-0.5%	23,015	25,423	130,986	129,412	0	0	0	0
Illinois	97,282	97,858	-0.6%	0	0	97,282	97,858	0	0	0	0
Indiana	0	0	--	0	0	0	0	0	0	0	0
Michigan	29,334	31,246	-6.1%	23,015	25,423	6,319	5,823	0	0	0	0
Ohio	17,377	16,284	6.7%	0	0	17,377	16,284	0	0	0	0
Wisconsin	10,008	9,447	5.9%	0	0	10,008	9,447	0	0	0	0
West North Central	46,677	44,796	4.2%	41,434	40,644	5,243	4,152	0	0	0	0
Iowa	5,243	4,152	26.3%	0	0	5,243	4,152	0	0	0	0
Kansas	8,630	8,558	0.8%	8,630	8,558	0	0	0	0	0	0
Minnesota	12,039	12,707	-5.3%	12,039	12,707	0	0	0	0	0	0
Missouri	10,440	9,276	12.5%	10,440	9,276	0	0	0	0	0	0
Nebraska	10,325	10,102	2.2%	10,325	10,102	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	199,917	198,388	0.8%	185,274	184,045	14,643	14,343	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	28,122	27,868	0.9%	28,122	27,868	0	0	0	0	0	0
Georgia	33,838	32,570	3.9%	33,838	32,570	0	0	0	0	0	0
Maryland	14,643	14,343	2.1%	0	0	14,643	14,343	0	0	0	0
North Carolina	42,097	40,967	2.8%	42,097	40,967	0	0	0	0	0	0
South Carolina	53,156	52,419	1.4%	53,156	52,419	0	0	0	0	0	0
Virginia	28,060	30,221	-7.1%	28,060	30,221	0	0	0	0	0	0
West Virginia	0	0	--	0	0	0	0	0	0	0	0
East South Central	78,626	79,166	-0.7%	78,626	79,166	0	0	0	0	0	0
Alabama	41,951	41,244	1.7%	41,951	41,244	0	0	0	0	0	0
Kentucky	0	0	--	0	0	0	0	0	0	0	0
Mississippi	11,715	10,252	14.3%	11,715	10,252	0	0	0	0	0	0
Tennessee	24,960	27,670	-9.8%	24,960	27,670	0	0	0	0	0	0
West South Central	68,493	71,077	-3.6%	29,139	31,790	39,355	39,287	0	0	0	0
Arkansas	13,838	14,478	-4.4%	13,838	14,478	0	0	0	0	0	0
Louisiana	15,301	17,311	-11.6%	15,301	17,311	0	0	0	0	0	0
Oklahoma	0	0	--	0	0	0	0	0	0	0	0
Texas	39,355	39,287	0.2%	0	0	39,355	39,287	0	0	0	0
Mountain	32,526	32,321	0.6%	32,526	32,321	0	0	0	0	0	0
Arizona	32,526	32,321	0.6%	32,526	32,321	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	26,666	26,483	0.7%	26,666	26,483	0	0	0	0	0	0
California	18,505	16,986	8.9%	18,505	16,986	0	0	0	0	0	0
Oregon	0	0	--	0	0	0	0	0	0	0	0
Washington	8,161	9,497	-14.1%	8,161	9,497	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	797,178	797,166	0.0%	416,680	419,871	380,498	377,295	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 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 3.14. Utility Scale Facility Net Generation from Hydroelectric (Conventional) Power by State, by Sector, 2015 and 2014 (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	
	Year 2015	Year 2014	Percentage Change	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014
New England	6,903	7,520	-8.2%	934	898	5,568	6,219	6	NM	394	398
Connecticut	302	434	-30.3%	24	34	278	400	0	0	0	0
Maine	3,361	3,623	-7.3%	0	0	2,971	3,231	0	0	390	392
Massachusetts	827	902	-8.3%	201	176	616	715	6	NM	5	6
New Hampshire	1,270	1,381	-8.0%	309	301	962	1,080	0	0	0	0
Rhode Island	3	4	-20.6%	0	0	3	4	0	0	0	0
Vermont	1,139	1,175	-3.0%	401	386	739	789	0	0	0	0
Middle Atlantic	28,628	28,745	-0.4%	22,288	21,509	6,273	7,165	5	3	62	69
New Jersey	10	17	-44.8%	0	0	10	17	0	0	0	0
New York	26,015	26,087	-0.3%	22,225	21,428	3,723	4,588	5	3	62	69
Pennsylvania	2,604	2,641	-1.4%	63	81	2,541	2,560	0	0	0	0
East North Central	4,802	5,053	-5.0%	4,129	4,326	478	538	2	3	193	187
Illinois	124	132	-5.9%	42	46	81	83	2	3	0	0
Indiana	381	371	2.7%	381	371	0	0	0	0	0	0
Michigan	1,499	1,600	-6.3%	1,387	1,468	83	103	0	0	30	29
Ohio	457	478	-4.5%	245	227	212	251	0	0	0	0
Wisconsin	2,341	2,472	-5.3%	2,074	2,214	103	100	0	0	163	158
West North Central	12,053	11,328	6.4%	11,729	11,105	209	203	0	0	115	19
Iowa	960	879	9.3%	954	872	6	6	0	0	0	0
Kansas	19	16	17.0%	0	0	19	16	0	0	0	0
Minnesota	849	548	54.8%	551	348	183	181	0	0	115	19
Missouri	1,595	697	128.7%	1,595	697	0	0	0	0	0	0
Nebraska	1,685	1,158	45.5%	1,685	1,158	0	0	0	0	0	0
North Dakota	2,094	2,531	-17.3%	2,094	2,531	0	0	0	0	0	0
South Dakota	4,850	5,498	-11.8%	4,850	5,498	0	0	0	0	0	0
South Atlantic	14,701	14,414	2.0%	11,940	11,700	2,161	2,138	13	17	586	557
Delaware	0	0	--	0	0	0	0	0	0	0	0
District of Columbia	0	0	--	0	0	0	0	0	0	0	0
Florida	244	211	15.6%	244	211	0	0	0	0	0	0
Georgia	2,984	3,064	-2.6%	2,952	3,036	10	10	0	0	21	18
Maryland	1,623	1,616	0.5%	0	0	1,623	1,616	0	0	0	0
North Carolina	4,742	4,756	-0.3%	4,688	4,684	44	58	11	14	0	0
South Carolina	2,564	2,569	-0.2%	2,497	2,492	65	75	2	3	0	0
Virginia	1,158	955	21.3%	1,072	882	74	63	0	0	12	10
West Virginia	1,385	1,242	11.5%	487	396	345	317	0	0	553	529
East South Central	22,847	21,511	6.2%	22,838	21,503	9	8	0	0	0	0
Alabama	9,862	9,467	4.2%	9,862	9,467	0	0	0	0	0	0
Kentucky	3,403	3,144	8.3%	3,395	3,136	9	8	0	0	0	0
Mississippi	0	0	--	0	0	0	0	0	0	0	0
Tennessee	9,581	8,901	7.6%	9,581	8,901	0	0	0	0	0	0
West South Central	8,189	5,544	47.7%	7,103	4,401	1,086	1,144	0	0	0	0
Arkansas	3,569	2,640	35.2%	3,521	2,620	49	20	0	0	0	0
Louisiana	999	1,090	-8.3%	0	0	999	1,090	0	0	0	0
Oklahoma	2,664	1,428	86.5%	2,664	1,428	0	0	0	0	0	0
Texas	956	386	147.8%	918	353	38	33	0	0	0	0
Mountain	30,801	32,362	-4.8%	29,701	31,158	1,093	1,198	6	6	0	0
Arizona	6,536	6,118	6.8%	6,536	6,118	0	0	0	0	0	0
Colorado	1,620	1,770	-8.5%	1,430	1,568	184	196	6	6	0	0
Idaho	8,757	9,002	-2.7%	8,025	8,209	732	794	0	0	0	0
Montana	9,888	11,483	-13.9%	9,745	11,328	143	155	0	0	0	0
Nevada	2,264	2,389	-5.2%	2,249	2,352	15	37	0	0	0	0
New Mexico	99	98	1.1%	99	98	0	0	0	0	0	0
Utah	769	633	21.5%	760	626	9	7	0	0	0	0
Wyoming	868	869	-0.1%	858	860	10	9	0	0	0	0
Pacific Contiguous	118,467	131,256	-9.7%	117,386	130,022	1,078	1,230	3	4	0	0
California	13,808	16,531	-16.5%	13,245	15,830	560	697	3	4	0	0
Oregon	31,254	35,262	-11.4%	31,016	35,018	238	244	0	0	0	0
Washington	73,405	79,463	-7.6%	73,125	79,175	280	289	0	0	0	0
Pacific Noncontiguous	1,690	1,633	3.5%	1,591	1,562	41	18	0	0	59	52
Alaska	1,569	1,539	2.0%	1,569	1,539	0	0	0	0	0	0
Hawaii	121	94	28.8%	22	24	41	18	0	0	59	52
U.S. Total	249,080	259,367	-4.0%	229,640	238,185	17,996	19,861	35	38	1,410	1,282

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 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 3.15. Utility Scale Facility Net Generation from Renewable Sources Excluding Hydroelectric by State, by Sector, 2015 and 2014 (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	
	Year 2015	Year 2014	Percentage Change	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014
New England	10,208	9,957	2.5%	890	883	7,900	7,203	168	193	1,249	1,678
Connecticut	805	769	4.7%	0	0	801	748	4	21	0	0
Maine	4,449	4,492	-1.0%	0	0	3,112	2,724	91	93	1,246	1,675
Massachusetts	1,833	1,730	6.0%	76	73	1,725	1,623	29	31	3	3
New Hampshire	2,048	1,952	4.9%	321	335	1,691	1,579	35	38	0	0
Rhode Island	236	226	4.1%	0	0	229	219	7	8	0	0
Vermont	838	788	6.4%	494	475	342	310	2	3	0	0
Middle Atlantic	13,734	14,063	-2.3%	63	310	12,227	12,222	681	648	764	882
New Jersey	1,595	1,536	3.9%	63	41	1,226	1,217	304	276	1	1
New York	6,319	6,447	-2.0%	0	269	5,886	5,704	215	212	218	262
Pennsylvania	5,821	6,080	-4.3%	0	0	5,114	5,301	162	160	544	619
East North Central	28,944	26,651	8.6%	3,700	2,977	23,292	21,602	274	270	1,677	1,801
Illinois	11,323	10,699	5.8%	34	13	11,284	10,682	5	4	0	0
Indiana	5,118	3,989	28.3%	308	302	4,716	3,599	22	21	71	67
Michigan	7,283	6,674	9.1%	1,976	1,327	4,431	4,393	201	195	675	760
Ohio	2,058	2,026	1.6%	27	28	1,673	1,619	11	10	347	369
Wisconsin	3,162	3,262	-3.1%	1,355	1,307	1,187	1,309	36	41	584	606
West North Central	54,218	51,532	5.2%	17,933	15,223	35,497	35,533	135	143	652	633
Iowa	18,131	16,573	9.4%	10,752	9,059	7,272	7,387	40	33	67	94
Kansas	11,062	10,904	1.5%	883	902	10,179	10,006	0	0	0	-4
Minnesota	11,588	11,457	1.1%	2,531	2,302	8,428	8,557	50	61	579	537
Missouri	1,179	1,255	-6.1%	42	47	1,105	1,173	30	32	3	3
Nebraska	3,251	2,801	16.1%	272	273	2,963	2,511	16	17	0	0
North Dakota	6,509	6,205	4.9%	2,622	1,953	3,883	4,250	0	0	4	3
South Dakota	2,498	2,336	6.9%	831	686	1,667	1,650	0	0	0	0
South Atlantic	23,017	21,502	7.0%	1,948	1,911	9,958	9,257	466	484	10,644	9,850
Delaware	130	131	-0.9%	7	6	101	101	6	7	16	17
District of Columbia	31	0	--	0	0	31	0	0	0	0	0
Florida	5,143	5,073	1.4%	278	288	2,709	2,784	46	34	2,110	1,967
Georgia	4,863	4,283	13.6%	4	1	802	740	11	27	4,047	3,515
Maryland	1,068	989	8.0%	8	9	938	817	21	25	100	138
North Carolina	3,963	3,276	21.0%	12	6	2,470	1,977	153	157	1,328	1,136
South Carolina	2,294	2,442	-6.1%	437	468	410	328	0	0	1,446	1,647
Virginia	4,144	3,852	7.6%	1,202	1,133	1,116	1,054	229	234	1,597	1,431
West Virginia	1,381	1,456	-5.1%	0	0	1,381	1,456	0	0	0	0
East South Central	6,363	5,876	8.3%	85	90	471	422	3	3	5,804	5,361
Alabama	3,289	2,779	18.4%	0	1	256	244	0	0	3,034	2,534
Kentucky	441	448	-1.5%	85	88	7	5	0	0	349	354
Mississippi	1,507	1,508	-0.1%	0	1	13	13	0	0	1,494	1,494
Tennessee	1,126	1,141	-1.3%	0	0	195	160	3	3	928	978
West South Central	65,190	58,681	11.1%	1,833	1,960	58,452	51,259	70	64	4,834	5,399
Arkansas	1,442	1,530	-5.8%	0	0	86	98	4	5	1,352	1,428
Louisiana	2,705	2,780	-2.7%	0	0	89	85	0	0	2,616	2,694
Oklahoma	14,369	12,275	17.1%	1,427	1,646	12,618	10,307	0	0	324	323
Texas	46,674	42,096	10.9%	406	314	45,659	40,770	66	59	543	953
Mountain	29,642	29,594	0.2%	3,124	3,284	26,005	25,844	110	75	404	390
Arizona	4,135	3,840	7.7%	532	421	3,581	3,396	22	24	0	0
Colorado	7,807	7,747	0.8%	135	171	7,653	7,560	17	13	3	3
Idaho	2,947	3,477	-15.2%	12	173	2,549	2,928	9	5	377	371
Montana	1,986	1,987	0.0%	217	233	1,748	1,741	0	0	21	13
Nevada	5,103	4,067	25.5%	2	0	5,054	4,033	45	31	3	3
New Mexico	2,734	2,813	-2.8%	158	103	2,573	2,707	3	3	0	0
Utah	1,172	1,256	-6.7%	260	275	898	981	15	0	0	0
Wyoming	3,757	4,406	-14.7%	1,808	1,908	1,949	2,498	0	0	0	0
Pacific Contiguous	62,413	59,938	4.1%	7,725	7,711	51,090	48,555	1,073	1,101	2,524	2,572
California	45,395	41,917	8.3%	2,178	2,292	41,668	37,907	1,032	1,064	517	653
Oregon	7,950	8,914	-10.8%	1,308	1,428	5,996	6,832	26	20	621	633
Washington	9,067	9,108	-0.4%	4,239	3,990	3,427	3,816	16	17	1,386	1,285
Pacific Noncontiguous	1,433	1,420	0.9%	182	147	927	914	240	250	84	110
Alaska	215	214	0.1%	105	100	55	52	50	56	5	6
Hawaii	1,218	1,206	1.1%	77	47	873	861	189	194	79	103
U.S. Total	295,161	279,213	5.7%	37,485	34,496	225,820	212,809	3,220	3,232	28,635	28,675

Displayed values of zero may represent small values that round to zero. The Excel version of this table provides additional precision which may be accessed by selecting individual cells.  
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 Notes: See Glossary for definitions. Values 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 3.16. Utility Scale Facility Net Generation from Hydroelectric (Pumped Storage) Power by State, by Sector, 2015 and 2014 (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	
	Year 2015	Year 2014	Percentage Change	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014
New England	-478	-451	5.8%	0	0	-478	-451	0	0	0	0
Connecticut	-4	7	-154.7%	0	0	-4	7	0	0	0	0
Maine	0	0	--	0	0	0	0	0	0	0	0
Massachusetts	-474	-458	3.4%	0	0	-474	-458	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	-1,101	-1,307	-15.7%	-592	-728	-509	-579	0	0	0	0
New Jersey	-170	-237	-28.4%	-170	-237	0	0	0	0	0	0
New York	-423	-491	-13.9%	-423	-491	0	0	0	0	0	0
Pennsylvania	-509	-579	-12.0%	0	0	-509	-579	0	0	0	0
East North Central	-481	-701	-31.4%	-481	-701	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	-481	-701	-31.4%	-481	-701	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	348	19	NM	348	19	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	348	19	NM	348	19	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	-2,755	-2,882	-4.4%	-2,755	-2,882	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	-815	-781	4.3%	-815	-781	0	0	0	0	0	0
Maryland	0	0	--	0	0	0	0	0	0	0	0
North Carolina	0	78	-99.9%	0	78	0	0	0	0	0	0
South Carolina	-904	-884	2.2%	-904	-884	0	0	0	0	0	0
Virginia	-1,036	-1,295	-20.0%	-1,036	-1,295	0	0	0	0	0	0
West Virginia	0	0	--	0	0	0	0	0	0	0	0
East South Central	-531	-491	8.0%	-531	-491	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	-531	-491	8.0%	-531	-491	0	0	0	0	0	0
West South Central	-41	-39	5.4%	-41	-39	0	0	0	0	0	0
Arkansas	32	67	-52.8%	32	67	0	0	0	0	0	0
Louisiana	0	0	--	0	0	0	0	0	0	0	0
Oklahoma	-72	-106	-31.5%	-72	-106	0	0	0	0	0	0
Texas	0	0	--	0	0	0	0	0	0	0	0
Mountain	-205	-211	-2.8%	-205	-211	0	0	0	0	0	0
Arizona	73	14	426.0%	73	14	0	0	0	0	0	0
Colorado	-279	-225	23.6%	-279	-225	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	153	-109	-239.4%	153	-109	0	0	0	0	0	0
California	113	-105	-207.6%	113	-105	0	0	0	0	0	0
Oregon	0	0	--	0	0	0	0	0	0	0	0
Washington	40	-5	-942.0%	40	-5	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	-5,091	-6,174	-17.5%	-4,105	-5,144	-987	-1,030	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 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 3.17. Utility Scale Facility Net Generation from Other Energy Sources by State, by Sector, 2015 and 2014 (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	
	Year 2015	Year 2014	Percentage Change	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014
New England	1,814	1,937	-6.4%	0	0	1,617	1,701	89	105	108	132
Connecticut	556	605	-7.9%	0	0	553	586	3	18	0	0
Maine	340	405	-16.1%	0	0	146	186	86	87	108	132
Massachusetts	868	878	-1.2%	0	0	868	878	0	0	0	0
New Hampshire	50	50	0.2%	0	0	50	50	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	2,400	2,473	-3.0%	0	31	1,888	1,902	445	438	67	103
New Jersey	582	640	-9.0%	0	0	371	395	145	143	67	103
New York	919	933	-1.5%	0	31	721	706	198	196	0	0
Pennsylvania	899	900	-0.2%	0	0	796	801	102	99	0	0
East North Central	1,132	1,134	-0.2%	56	88	147	141	212	198	717	708
Illinois	248	282	-11.9%	0	0	-5	0	0	0	253	282
Indiana	420	391	7.5%	0	29	0	0	20	19	400	342
Michigan	405	404	0.2%	32	32	160	152	192	179	21	41
Ohio	-3	-3	-7.6%	-3	0	-8	-11	0	0	8	7
Wisconsin	63	62	1.3%	27	27	0	0	0	0	35	35
West North Central	495	455	8.8%	273	230	132	134	34	30	56	60
Iowa	5	0	--	0	0	0	0	0	0	5	0
Kansas	0	0	-100.0%	0	0	0	0	0	0	0	0
Minnesota	390	397	-1.8%	173	173	132	134	34	30	51	60
Missouri	58	26	118.8%	58	26	0	0	0	0	0	0
Nebraska	0	0	--	0	0	0	0	0	0	0	0
North Dakota	42	31	34.1%	42	31	0	0	0	0	0	0
South Dakota	0	0	--	0	0	0	0	0	0	0	0
South Atlantic	4,621	4,448	3.9%	0	0	2,334	2,199	208	213	2,079	2,036
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	3,021	2,891	4.5%	0	0	1,372	1,281	0	0	1,649	1,610
Georgia	87	67	30.0%	0	0	0	0	0	0	87	67
Maryland	318	313	1.5%	0	0	318	313	0	0	0	0
North Carolina	685	631	8.6%	0	0	386	313	0	0	299	318
South Carolina	49	46	5.1%	0	0	4	5	0	0	44	41
Virginia	462	500	-7.6%	0	0	253	287	208	213	0	0
West Virginia	0	0	--	0	0	0	0	0	0	0	0
East South Central	78	69	13.7%	52	50	0	0	0	0	27	19
Alabama	0	NM	NM	0	0	0	0	0	0	0	NM
Kentucky	52	50	3.5%	52	50	0	0	0	0	0	0
Mississippi	6	4	39.7%	0	0	0	0	0	0	6	4
Tennessee	21	14	47.1%	0	0	0	0	0	0	21	14
West South Central	1,546	925	67.1%	0	0	91	12	0	0	1,455	913
Arkansas	12	13	-7.3%	0	0	0	0	0	0	12	13
Louisiana	788	533	47.8%	0	0	0	0	0	0	788	533
Oklahoma	11	-2	-600.2%	0	0	0	0	0	0	11	-2
Texas	734	381	92.7%	0	0	91	12	0	0	644	369
Mountain	621	594	4.5%	2	16	319	273	0	0	301	306
Arizona	0	0	--	0	0	0	0	0	0	0	0
Colorado	52	47	11.6%	0	0	12	4	0	0	40	42
Idaho	81	75	7.9%	0	0	0	0	0	0	81	75
Montana	303	265	14.3%	0	0	303	265	0	0	0	0
Nevada	1	15	-93.2%	1	15	0	0	0	0	0	0
New Mexico	1	1	0.0%	1	1	0	0	0	0	0	0
Utah	106	118	-10.4%	0	0	4	4	0	0	102	114
Wyoming	78	74	5.0%	0	0	0	0	0	0	78	74
Pacific Contiguous	953	1,022	-6.7%	-2	-1	303	321	0	0	652	702
California	812	848	-4.3%	-1	-1	207	213	0	0	606	636
Oregon	42	43	-2.7%	0	0	42	43	0	0	0	0
Washington	100	131	-24.0%	0	0	54	65	0	0	46	66
Pacific Noncontiguous	367	403	-8.9%	177	208	8	8	182	187	0	0
Alaska	-2	-2	4.1%	-2	-2	0	0	0	0	0	0
Hawaii	369	405	-8.9%	180	211	8	8	182	187	0	0
U.S. Total	14,028	13,461	4.2%	558	622	6,838	6,690	1,170	1,171	5,462	4,978

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 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 3.18. Utility Scale Facility Net Generation from Wind by State, by Sector, 2015 and 2014 (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	
	Year 2015	Year 2014	Percentage Change	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014
New England	2,269	2,055	10.4%	267	252	1,967	1,768	33	32	3	3
Connecticut	0	0	--	0	0	0	0	0	0	0	0
Maine	1,296	1,097	18.1%	0	0	1,296	1,097	0	0	0	0
Massachusetts	215	225	-4.6%	62	62	124	135	26	25	3	3
New Hampshire	423	412	2.9%	0	0	423	412	0	0	0	0
Rhode Island	10	10	1.5%	0	0	3	2	7	8	0	0
Vermont	325	311	4.5%	205	190	121	121	0	0	0	0
Middle Atlantic	7,351	7,556	-2.7%	0	0	7,349	7,554	0	0	2	2
New Jersey	22	23	-5.8%	0	0	22	23	0	0	0	0
New York	3,977	3,968	0.2%	0	0	3,974	3,966	0	0	2	2
Pennsylvania	3,353	3,565	-5.9%	0	0	3,353	3,565	0	0	0	0
East North Central	22,852	20,218	13.0%	3,053	2,381	19,751	17,790	6	5	41	42
Illinois	10,747	10,083	6.6%	14	13	10,728	10,066	5	4	0	0
Indiana	4,515	3,496	29.2%	0	0	4,514	3,495	1	1	0	0
Michigan	4,797	3,868	24.0%	1,975	1,327	2,822	2,541	0	0	0	0
Ohio	1,203	1,153	4.3%	13	14	1,156	1,104	0	0	34	35
Wisconsin	1,589	1,618	-1.8%	1,051	1,026	531	585	0	0	7	7
West North Central	51,867	49,249	5.3%	17,430	14,742	34,405	34,473	32	34	0	0
Iowa	17,873	16,307	9.6%	10,724	9,034	7,146	7,269	3	4	0	0
Kansas	10,999	10,845	1.4%	883	902	10,115	9,943	0	0	0	0
Minnesota	9,779	9,691	0.9%	2,152	1,941	7,598	7,720	29	30	0	0
Missouri	1,033	1,131	-8.7%	0	0	1,033	1,131	0	0	0	0
Nebraska	3,180	2,737	16.2%	218	226	2,963	2,511	0	0	0	0
North Dakota	6,506	6,202	4.9%	2,622	1,953	3,883	4,250	0	0	0	0
South Dakota	2,498	2,336	6.9%	831	686	1,667	1,650	0	0	0	0
South Atlantic	1,816	1,780	2.0%	0	0	1,811	1,775	5	5	0	0
Delaware	5	5	1.5%	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	435	324	34.3%	0	0	435	324	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	1,376	1,451	-5.2%	0	0	1,376	1,451	0	0	0	0
East South Central	46	51	-10.4%	0	0	46	51	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	46	51	-10.4%	0	0	46	51	0	0	0	0
West South Central	58,864	51,942	13.3%	1,707	1,941	57,126	49,977	31	24	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	14,031	11,937	17.5%	1,426	1,646	12,605	10,291	0	0	0	0
Texas	44,833	40,005	12.1%	281	295	44,521	39,686	31	24	0	0
Mountain	18,945	20,257	-6.5%	2,160	2,473	16,776	17,777	7	3	3	3
Arizona	452	468	-3.4%	0	0	452	468	0	0	0	0
Colorado	7,475	7,369	1.4%	135	169	7,334	7,196	4	0	3	3
Idaho	2,270	2,806	-19.1%	0	164	2,270	2,641	0	0	0	0
Montana	1,965	1,974	-0.5%	217	233	1,748	1,741	0	0	0	0
Nevada	310	300	3.2%	0	0	310	300	0	0	0	0
New Mexico	2,090	2,275	-8.1%	0	0	2,087	2,272	3	3	0	0
Utah	626	660	-5.2%	0	0	626	660	0	0	0	0
Wyoming	3,757	4,406	-14.7%	1,808	1,908	1,949	2,498	0	0	0	0
Pacific Contiguous	25,936	27,816	-6.8%	5,690	5,782	20,237	22,029	5	3	4	2
California	12,230	12,992	-5.9%	693	846	11,527	12,142	5	3	4	2
Oregon	6,632	7,555	-12.2%	1,234	1,358	5,398	6,198	0	0	0	0
Washington	7,075	7,268	-2.6%	3,763	3,579	3,312	3,689	0	0	0	0
Pacific Noncontiguous	772	731	5.7%	105	100	667	631	0	0	0	0
Alaska	160	152	5.1%	105	100	55	52	0	0	0	0
Hawaii	613	579	5.9%	0	0	613	579	0	0	0	0
U.S. Total	190,719	181,655	5.0%	30,412	27,671	160,135	153,825	118	107	53	53

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 Negative generation denotes that electric power consumed for plant use exceeds gross generation.  
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 Source: U.S. Energy Information Administration, Form EIA-923, Power Plant Operations Report.

Table 3.19. Utility Scale Facility Net Generation from Biomass by State, by Sector, 2015 and 2014 (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	
	Year 2015	Year 2014	Percentage Change	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014
New England	7,407	7,550	-1.9%	610	620	5,419	5,100	132	156	1,246	1,675
Connecticut	787	757	4.0%	0	0	784	736	4	21	0	0
Maine	3,153	3,394	-7.1%	0	0	1,816	1,627	91	93	1,246	1,675
Massachusetts	1,167	1,199	-2.7%	0	0	1,166	1,198	1	NM	0	0
New Hampshire	1,624	1,541	5.4%	321	335	1,268	1,168	35	38	0	0
Rhode Island	211	207	2.2%	0	0	211	207	0	0	0	0
Vermont	465	453	2.6%	289	285	174	165	2	3	0	0
Middle Atlantic	5,591	5,859	-4.6%	0	269	4,297	4,183	542	537	751	871
New Jersey	946	998	-5.3%	0	0	774	829	172	169	0	0
New York	2,241	2,408	-6.9%	0	269	1,814	1,668	212	212	215	260
Pennsylvania	2,404	2,453	-2.0%	0	0	1,709	1,686	159	156	536	611
East North Central	5,828	6,225	-6.4%	628	586	3,302	3,618	265	262	1,633	1,759
Illinois	527	566	-7.0%	19	0	507	566	0	0	0	0
Indiana	446	391	14.3%	300	300	55	4	21	20	71	67
Michigan	2,485	2,806	-11.5%	0	0	1,609	1,852	201	195	675	760
Ohio	799	818	-2.4%	5	5	475	473	8	7	311	334
Wisconsin	1,571	1,643	-4.4%	303	281	655	723	36	41	576	598
West North Central	2,330	2,271	2.6%	503	481	1,071	1,048	103	109	652	633
Iowa	258	266	-3.0%	27	25	126	118	37	30	67	94
Kansas	62	59	4.6%	0	0	62	64	0	0	0	-4
Minnesota	1,806	1,763	2.4%	379	362	828	834	21	30	579	537
Missouri	129	116	11.5%	42	47	55	33	29	32	3	3
Nebraska	71	64	10.5%	55	47	0	0	16	17	0	0
North Dakota	4	3	35.5%	0	0	0	0	0	0	4	3
South Dakota	0	0	--	0	0	0	0	0	0	0	0
South Atlantic	19,303	18,479	4.5%	1,744	1,700	6,544	6,537	371	392	10,644	9,850
Delaware	76	76	-0.3%	0	0	60	60	0	0	16	17
District of Columbia	31	0	--	0	0	31	0	0	0	0	0
Florida	4,919	4,831	1.8%	104	98	2,661	2,733	45	33	2,110	1,967
Georgia	4,734	4,163	13.7%	0	0	679	624	8	24	4,047	3,515
Maryland	514	567	-9.3%	0	0	400	408	15	21	100	138
North Carolina	2,589	2,547	1.7%	0	0	1,186	1,331	75	80	1,328	1,136
South Carolina	2,289	2,438	-6.1%	437	468	406	323	0	0	1,446	1,647
Virginia	4,144	3,852	7.6%	1,202	1,133	1,116	1,054	229	234	1,597	1,431
West Virginia	5	5	7.9%	0	0	5	5	0	0	0	0
East South Central	6,241	5,797	7.6%	85	90	352	346	0	0	5,804	5,361
Alabama	3,289	2,779	18.4%	0	1	256	244	0	0	3,034	2,534
Kentucky	441	448	-1.5%	85	88	7	5	0	0	349	354
Mississippi	1,507	1,508	-0.1%	0	1	13	13	0	0	1,494	1,494
Tennessee	1,004	1,062	-5.5%	0	0	76	84	0	0	928	978
West South Central	5,922	6,456	-8.3%	125	18	926	1,002	38	38	4,834	5,399
Arkansas	1,441	1,530	-5.8%	0	0	85	98	4	5	1,352	1,428
Louisiana	2,705	2,780	-2.7%	0	0	89	85	0	0	2,616	2,694
Oklahoma	336	338	-0.6%	0	0	13	16	0	0	324	323
Texas	1,440	1,808	-20.4%	125	18	739	803	33	33	543	953
Mountain	1,060	1,073	-1.2%	20	32	619	652	23	5	399	384
Arizona	227	231	-1.8%	7	21	219	210	0	0	0	0
Colorado	81	126	-35.9%	0	3	81	123	0	0	0	0
Idaho	601	593	1.5%	12	9	203	208	9	5	377	371
Montana	21	13	63.6%	0	0	0	0	0	0	21	13
Nevada	26	25	4.6%	0	0	26	25	0	0	0	0
New Mexico	20	14	38.0%	0	0	20	14	0	0	0	0
Utah	85	73	17.4%	0	0	71	73	15	0	0	0
Wyoming	0	0	--	0	0	0	0	0	0	0	0
Pacific Contiguous	9,575	9,881	-3.1%	725	658	5,365	5,652	971	1,005	2,514	2,565
California	6,468	6,891	-6.1%	184	183	4,847	5,092	929	968	507	647
Oregon	1,116	1,151	-3.0%	66	64	404	433	26	20	621	633
Washington	1,991	1,840	8.2%	475	411	114	127	16	17	1,386	1,285
Pacific Noncontiguous	376	397	-5.2%	52	37	0	0	240	250	84	110
Alaska	55	63	-12.2%	0	0	0	0	50	56	5	6
Hawaii	321	334	-3.9%	52	37	0	0	189	194	79	103
U.S. Total	63,632	63,989	-0.6%	4,491	4,491	27,894	28,137	2,685	2,755	28,561	28,606

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 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 3.20. Utility Scale Facility Net Generation from Geothermal by State, by Sector, 2015 and 2014 (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	
	Year 2015	Year 2014	Percentage Change	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014
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	3,625	3,338	8.6%	260	275	3,366	3,063	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	76	79	-4.1%	0	0	76	79	0	0	0	0
Montana	0	0	--	0	0	0	0	0	0	0	0
Nevada	3,111	2,729	14.0%	0	0	3,111	2,729	0	0	0	0
New Mexico	10	9	10.7%	0	0	10	9	0	0	0	0
Utah	430	522	-17.7%	260	275	170	247	0	0	0	0
Wyoming	0	0	--	0	0	0	0	0	0	0	0
Pacific Contiguous	12,062	12,285	-1.8%	829	841	11,233	11,445	0	0	0	0
California	11,883	12,102	-1.8%	827	841	11,056	11,261	0	0	0	0
Oregon	179	183	-2.5%	2	0	177	183	0	0	0	0
Washington	0	0	--	0	0	0	0	0	0	0	0
Pacific Noncontiguous	230	254	-9.3%	0	0	230	254	0	0	0	0
Alaska	0	0	--	0	0	0	0	0	0	0	0
Hawaii	230	254	-9.3%	0	0	230	254	0	0	0	0
U.S. Total	15,918	15,877	0.3%	1,089	1,116	14,829	14,761	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 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 3.21. Net Generation from Solar Photovoltaic by State, by Sector, 2015 and 2014 (Thousand Megawatthours)**

Census Division and State	All Sectors								Electric Power Sector				Commercial Sector				Industrial Sector				Residential Sector					
	Estimated Net Generation From Utility Scale Facilities and Distributed Solar Photovoltaic Generation			Generation at Utility Scale Facilities		Estimated Distributed Solar Photovoltaic Generation		Generation at Utility Scale Facilities		Generation at Utility Scale Facilities		Estimated Net Generation From Utility Scale Facilities and Distributed Solar		Generation at Utility Scale Facilities		Estimated Distributed Solar Photovoltaic Generation		Generation at Utility Scale Facilities		Estimated Distributed Solar Photovoltaic Generation						
	Year 2015	Year 2014	Percentage Change	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014					
New England	1,702	1,173	45.2%	531	350	1,171	823	14	11	515	334	1,746	823	3	5	743	559	52	40	0	0	52	40	376	224	
Connecticut	216	138	56.8%	17	12	199	126	0	0	17	12	90	68	0	0	90	68	10	7	0	0	10	7	98	52	
Maine	19	13	42.6%	0	0	19	13	0	0	0	0	6	4	0	0	6	4	0	0	0	0	0	0	13	9	
Massachusetts	1,314	930	41.3%	451	305	862	625	14	11	435	289	613	469	3	5	610	464	41	33	0	0	41	33	211	128	
New Hampshire	24	14	65.9%	0	0	24	14	0	0	0	0	7	5	0	0	7	5	1	1	0	0	1	1	16	9	
Rhode Island	28	21	31.1%	14	10	13	11	0	0	14	10	11	10	0	0	11	10	0	0	0	0	0	0	3	1	
Vermont	102	57	81.1%	48	24	54	33	0	0	48	24	18	8	0	0	18	8	0	0	0	0	0	0	36	25	
Middle Atlantic	3,077	2,622	17.3%	792	647	2,284	1,975	63	41	581	486	1,524	1,421	139	111	1,386	1,310	160	141	10	9	150	132	749	533	
New Jersey	2,062	1,888	9.3%	628	514	1,435	1,373	63	41	431	365	1,150	1,125	133	107	1,017	1,018	82	73	1	1	81	72	337	284	
New York	689	421	63.8%	101	71	589	350	0	0	98	71	282	183	3	0	259	183	10	5	0	0	10	5	319	162	
Pennsylvania	325	314	3.5%	64	62	261	252	0	0	52	50	113	113	3	4	109	109	68	63	8	8	59	55	93	88	
East North Central	463	378	22.4%	264	207	199	171	19	11	239	194	149	132	3	3	146	129	7	8	2	0	5	8	48	34	
Illinois	76	71	7.1%	49	50	27	21	1	0	48	50	19	16	0	0	19	16	0	0	0	0	0	0	8	5	
Indiana	168	111	50.9%	156	102	12	9	8	2	148	101	7	6	0	0	7	6	0	0	0	0	0	0	5	3	
Michigan	39	35	11.9%	1	0	38	35	1	0	0	0	27	26	0	0	27	26	1	1	0	0	1	1	10	8	
Ohio	151	137	10.6%	56	54	95	83	9	9	42	42	80	69	3	3	77	66	7	7	2	0	4	7	14	10	
Wisconsin	29	25	17.2%	1	1	27	23	0	0	1	1	17	16	0	0	17	16	0	0	0	0	0	0	10	7	
West North Central	240	172	39.2%	21	11	219	161	0	0	21	11	129	93	0	0	129	93	3	2	0	0	3	2	86	66	
Iowa	41	24	68.2%	0	0	41	24	0	0	0	0	27	16	0	0	27	16	1	1	0	0	1	1	13	8	
Kansas	6	3	112.4%	2	0	5	3	0	0	2	0	2	2	0	0	2	2	0	0	0	0	0	0	2	1	
Minnesota	28	21	32.1%	3	3	26	19	0	0	3	3	14	10	0	0	14	10	2	1	0	0	2	1	10	8	
Missouri	162	122	33.1%	17	9	145	113	0	0	16	9	86	64	0	0	86	64	1	1	0	0	1	1	59	48	
Nebraska	1	1	29.0%	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	
North Dakota	0	0	-15.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
South Dakota	1	0	27.8%	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
South Atlantic	2,627	1,794	46.4%	1,792	1,118	834	676	98	87	1,604	945	596	564	90	86	506	478	25	13	0	0	25	13	303	186	
Delaware	128	121	5.7%	49	50	79	71	7	6	41	42	55	54	1	2	54	52	4	4	0	0	4	4	22	16	
District of Columbia	32	31	6.3%	0	0	32	31	0	0	0	0	23	22	0	0	23	22	0	0	0	0	0	0	10	8	
Florida	274	236	16.0%	118	117	156	119	68	65	48	51	75	65	2	2	73	64	4	1	0	0	4	1	79	55	
Georgia	229	218	5.1%	129	119	100	99	4	1	123	116	95	96	3	3	92	93	2	1	0	0	2	1	6	4	
Maryland	457	351	30.4%	119	98	339	253	8	9	104	86	190	174	7	4	183	171	13	6	0	0	13	6	143	76	
North Carolina	1,460	803	81.8%	1,374	729	86	74	12	6	1,284	646	143	139	78	77	65	63	2	0	0	0	2	0	19	11	
South Carolina	11	9	30.1%	4	5	7	4	0	0	4	5	2	1	0	0	2	1	0	0	0	0	0	0	5	3	
Virginia	30	22	36.0%	0	0	30	22	0	0	0	0	13	11	0	0	13	11	0	0	0	0	0	0	16	11	
West Virginia	4	4	23.0%	0	0	4	4	0	0	0	0	1	1	0	0	1	1	0	0	0	0	0	0	3	3	
East South Central	155	105	47.1%	76	27	78	78	0	0	73	25	78	78	3	3	75	75	0	0	0	0	0	0	3	3	
Alabama	3	3	3.6%	0	0	3	3	0	0	0	0	3	3	0	0	3	3	0	0	0	0	0	0	0	0	0
Kentucky	14	13	9.7%	0	0	14	13	0	0	0	0	12	11	0	0	12	11	0	0	0	0	0	0	2	1	
Mississippi	2	2	-25.0%	0	0	2	2	0	0	0	0	1	1	0	0	1	1	0	0	0	0	0	0	0	0	1
Tennessee	136	87	55.9%	76	27	60	60	0	0	73	25	62	62	3	3	60	60	0	0	0	0	0	0	0	0	0
West South Central	789	557	41.7%	403	282	385	274	2	0	400	280	109	81	2	2	107	78	0	0	0	0	0	0	279	196	
Arkansas	6	5	30.6%	1	0	5	5	0	0	1	0	3	2	0	0	3	2	0	0	0	0	0	0	3	2	
Louisiana	153	104	48.1%	0	0	153	104	0	0	0	0	6	4	0	0	6	4	0	0	0	0	0	0	147	99	
Oklahoma	5	2	108.9%	2	0	3	2	2	0	0	0	1	1	0	0	1	1	0	0	0	0	0	0	2	2	
Texas	624	446	40.0%	401	282	223	164	0	0	399	280	100	73	2	2	98	71	0	0	0	0	0	0	126	93	
Mountain	7,358	5,939	23.9%	5,184	4,206	2,174	1,733	685	504	4,417	3,632	937	870	80	67	857	803	175	108	3	3	172	106	1,145	825	
Arizona	4,108	3,639	12.9%	2,738	2,538	1,370	1,101	525	401	2,191	2,114	524	506	22	24	503	482	147	83	0	0	147	83	721	536	
Colorado	643	606	6.0%	251	253	391	353	0	0	238	241	192	187	13	12	179	174	2	2	0	0	2	2	210	177	
Idaho	6	4	43.7%	0	0	6	4	0	0	0	0	3	2	0	0	3	2	0	0	0	0	0	0	4	2	
Montana	8	11	-28.0%	0	0	8	11	0	0	0	0	3	2	0	0	3	2	0	0	0	0	0	0	6	9	
Nevada	1,734	1,001	73.3%	1,548	897	186	104	2	0	1,499	864	115	87	45	31	70	56	20	18	3	3	17	15	99	32	
New Mexico	757	635	19.3%	615	515	142	120	158	103	457	412	73	67	0	0	73	67	1	1	0	0	1	1	69	52	
Utah	99	40	150.4%	32	2	67	37	0	0	32	2	26	18	0	0	26	18	5	3	0	0	5	3	36	16	
Wyoming	3	2	15.1%	0	0	3	2	0	0	0	0	1	1	0	0	1	1	0	0	0	0	0	0	2	1	
Pacific Contiguous	18,708	13,151	42.3%	12,547	8,361	6,161	4,790	481	430	11,962	7,834	1,594	1,486	97	93	1,497	1,393	1,050	844	7	5	1,043	839	3,621	2,557	
California	18,536	13,010	42.5%	12,522	8,336	6,014	4,674	474	423	11,944	7,816	1,543	1,436	97	93	1,446	1,344	1,046	841	7	5	1,040	837	3,528	2,494	
Oregon	116	104	11.7%	24	24	92	80	6	6	18	18	41	41	0	0	41	41	4	2	0	0	4	2	47	36	
Washington	56	37	54.0%	1	1	55	36	1	1	0	0	10	8	0	0	10	8	0	0	0	0	0	0	46	28	
Pacific Noncontiguous	687	590	16.3%	54	39	632	551	25	10	29	29	243	228	0	0	243	228	0	0	0	0	0	0	389	323	
Alaska	0	0	--	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hawaii	687	590	16.3%	54	39	632	551	25	10	29	29	243	228	0	0	243	228	0	0	0	0	0	0	389	323	
U.S. Total	35,805	26,482	35.2%	21,666	15,250	14,139	11,233	1,388	1,094	19,841	13,769	6,106	5,516	416	371	5,689	5,146	1,472	1,156	21	16	1,451	1,139	6,999	4,947	

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 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.

Table 3.22. Utility Scale Facility Net Generation from Solar Thermal by State, by Sector, 2015 and 2014 (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	
	Year 2015	Year 2014	Percentage Change	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014
New England	0	2	-100.0%	0	0	0	2	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	2	-100.0%	0	0	0	2	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	106	124	-14.8%	106	124	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	106	124	-14.8%	106	124	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	828	720	15.0%	0	0	828	720	0	0	0	0
Arizona	719	604	19.1%	0	0	719	604	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	109	116	-6.1%	0	0	109	116	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	2,293	1,595	43.7%	0	0	2,293	1,595	0	0	0	0
California	2,293	1,595	43.7%	0	0	2,293	1,595	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	3,227	2,441	32.2%	106	124	3,121	2,317	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 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 3.23. Useful Thermal Output by Energy Source: Total Combined Heat and Power (All Sectors), 2005 - 2015  
(Billion Btus)**

Period	Coal	Petroleum Liquids	Petroleum Coke	Natural Gas	Other Gas	Renewable Sources	Other	Total
<b>Annual Totals</b>								
2005	341,806	79,362	13,021	624,008	138,469	664,691	41,400	1,902,757
2006	332,548	54,224	24,009	603,288	126,049	689,549	49,308	1,878,973
2007	326,803	50,882	25,373	554,394	116,313	651,230	46,822	1,771,816
2008	315,244	29,554	18,263	509,330	110,680	610,131	23,729	1,616,931
2009	281,557	32,591	20,308	513,002	99,556	546,974	33,287	1,527,276
2010	300,303	19,914	21,448	524,494	91,439	581,310	28,755	1,567,662
2011	286,210	15,230	21,552	535,150	103,615	586,299	31,067	1,579,124
2012	252,605	12,452	24,419	556,945	113,147	580,513	24,571	1,564,653
2013	243,043	12,828	25,224	553,696	103,719	611,443	22,171	1,572,124
2014	232,509	11,990	23,457	545,624	104,868	624,086	21,390	1,563,923
2015	211,030	11,796	21,748	591,749	98,910	626,887	19,729	1,581,849
<b>Year 2013</b>								
January	22,527	1,347	2,290	46,795	9,100	53,279	1,887	137,225
February	20,302	1,158	1,850	42,052	8,059	47,778	1,774	122,972
March	21,781	913	2,166	46,138	8,872	51,075	1,972	132,917
April	18,929	975	1,789	44,169	8,493	49,214	1,833	125,403
May	19,531	984	2,151	44,384	8,700	49,408	1,551	126,709
June	19,011	924	2,215	44,436	8,337	49,882	1,824	126,628
July	20,221	887	2,370	49,098	8,886	53,519	1,953	136,934
August	19,643	819	2,691	48,839	8,644	52,218	2,074	134,927
September	18,556	808	2,017	45,755	8,338	48,342	1,898	125,715
October	19,549	888	2,071	45,314	8,378	50,312	1,823	128,335
November	21,524	914	1,615	46,565	8,160	52,107	1,767	132,650
December	21,471	2,213	1,999	50,152	9,751	54,309	1,814	141,708
<b>Year 2014</b>								
January	22,969	2,284	1,900	55,295	8,694	53,678	1,670	146,489
February	21,093	1,305	1,687	43,162	7,847	49,183	1,427	125,704
March	22,495	1,162	1,947	45,530	8,700	53,280	1,720	134,833
April	17,984	801	2,149	42,114	8,220	51,553	1,774	124,596
May	18,456	842	2,082	43,071	8,308	50,115	1,683	124,557
June	18,058	845	2,122	42,523	8,626	51,604	1,813	125,592
July	18,908	795	2,147	45,823	8,838	52,903	1,816	131,228
August	18,663	817	2,006	47,255	9,139	53,504	1,891	133,276
September	17,474	685	2,109	44,117	8,852	49,239	1,814	124,291
October	17,413	835	1,417	45,279	8,897	52,054	1,901	127,796
November	18,904	865	1,835	44,308	9,331	51,860	1,818	128,922
December	20,093	754	2,055	47,146	9,415	55,115	2,064	136,641
<b>Year 2015</b>								
January	21,115	1,155	1,981	50,138	9,327	56,281	1,661	141,657
February	19,499	2,090	1,905	46,106	7,897	49,871	1,437	128,806
March	19,098	985	2,012	50,343	8,470	52,087	1,631	134,626
April	16,589	873	2,003	46,088	8,189	51,783	1,590	127,116
May	16,985	883	1,878	46,159	7,800	52,304	1,586	127,594
June	16,620	831	1,758	47,704	8,224	51,115	1,683	127,936
July	17,999	873	1,524	52,248	8,551	53,097	1,703	135,996
August	16,970	789	1,626	52,797	8,512	53,028	1,740	135,462
September	16,437	790	1,869	49,599	8,819	50,168	1,681	129,363
October	15,628	905	1,640	50,020	7,731	50,638	1,578	128,140
November	16,832	799	2,015	49,204	7,207	52,039	1,699	129,794
December	17,259	822	1,538	51,343	8,183	54,475	1,739	135,359

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, and solar thermal.

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.

Beginning with the collection of Form EIA-923 in January 2008, the methodology for separating the fuel used for electricity generation and useful thermal output from combined heat and power plants changed. The new methodology was retroactively applied to 2004-2007. See the Technical Notes (Appendix C) for further information.

See Glossary for definitions. Values are final. 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.

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 3.24. Useful Thermal Output by Energy Source: Electric Power Sector Combined Heat and Power, 2005 - 2015  
(Billion Btus)**

Period	Coal	Petroleum Liquids	Petroleum Coke	Natural Gas	Other Gas	Renewable Sources	Other	Total
Annual Totals								
2005	39,652	5,571	2,238	239,324	36,694	18,240	3,884	345,605
2006	38,133	4,812	2,253	207,095	22,567	17,284	4,435	296,579
2007	38,260	5,294	1,862	212,705	20,473	19,166	4,459	302,219
2008	37,220	5,479	1,353	204,167	22,109	17,052	4,854	292,234
2009	38,015	5,341	1,445	190,875	19,830	17,625	5,055	278,187
2010	38,325	4,702	1,108	186,772	19,707	17,589	5,040	273,244
2011	35,209	4,484	1,231	190,712	20,435	16,029	6,044	274,143
2012	26,093	4,405	1,246	200,294	20,948	16,369	5,545	274,900
2013	21,306	4,614	993	188,094	10,303	16,225	4,966	246,501
2014	15,513	4,931	936	182,148	7,732	17,736	5,666	234,662
2015	16,036	4,894	1,143	178,167	7,161	16,999	5,180	229,580
Year 2013								
January	1,963	270	89	15,710	847	1,725	358	20,963
February	1,672	337	74	14,419	718	1,424	409	19,053
March	1,871	392	92	15,592	649	1,516	424	20,536
April	1,652	394	93	14,876	803	1,341	345	19,504
May	1,715	412	79	15,015	852	1,001	343	19,417
June	1,743	380	53	15,252	860	1,204	446	19,938
July	1,915	401	91	17,084	1,010	1,260	478	22,238
August	1,878	396	86	16,963	1,013	1,309	472	22,116
September	1,751	409	69	15,582	882	1,173	443	20,307
October	1,357	427	89	14,781	942	1,340	402	19,339
November	2,061	388	84	15,694	869	1,444	429	20,968
December	1,729	409	95	17,126	858	1,488	418	22,122
Year 2014								
January	1,494	649	89	17,244	725	1,595	453	22,249
February	1,501	379	69	14,726	518	1,586	425	19,203
March	1,896	429	85	15,719	407	1,702	488	20,726
April	1,378	372	93	13,949	602	1,411	384	18,189
May	1,287	391	83	14,379	613	1,095	381	18,229
June	1,264	402	1	14,490	503	1,390	537	18,587
July	1,261	414	48	15,510	580	1,444	508	19,764
August	1,233	483	92	15,970	635	1,408	478	20,299
September	1,045	274	92	14,627	736	1,273	509	18,555
October	945	414	93	14,607	805	1,550	504	18,918
November	1,133	399	93	14,885	736	1,594	463	19,303
December	1,077	327	97	16,042	872	1,689	537	20,640
Year 2015								
January	1,509	374	103	15,756	761	1,747	461	20,711
February	1,438	625	89	14,177	630	1,520	363	18,844
March	1,506	379	92	15,187	453	1,577	421	19,615
April	1,182	355	98	13,590	449	1,348	374	17,397
May	1,436	364	99	13,998	483	863	397	17,641
June	1,339	355	91	14,474	477	1,268	445	18,448
July	1,429	425	94	15,923	428	1,391	446	20,136
August	1,365	393	92	15,895	549	1,369	481	20,145
September	1,260	402	89	15,489	624	1,314	438	19,615
October	1,230	441	87	14,721	747	1,417	389	19,031
November	1,143	381	100	14,187	742	1,558	476	18,586
December	1,201	400	109	14,769	818	1,627	487	19,411

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, and solar thermal.

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.

Beginning with the collection of Form EIA-923 in January 2008, the methodology for separating the fuel used for electricity generation and useful thermal output from combined heat and power plants changed. The new methodology was retroactively applied to 2004-2007. See the Technical Notes (Appendix C) for further information.

See Glossary for definitions. Values are final. 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.

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 3.25. Useful Thermal Output by Energy Source: Commercial Sector Combined Heat and Power, 2005 - 2015  
(Billion Btus)**

Period	Coal	Petroleum Liquids	Petroleum Coke	Natural Gas	Other Gas	Renewable Sources	Other	Total
Annual Totals								
2005	22,601	3,518	166	20,227	0	8,647	5,921	61,081
2006	22,186	2,092	172	19,370	0	9,359	6,242	59,422
2007	22,595	1,640	221	20,040	0	6,651	3,983	55,131
2008	22,991	1,822	177	20,183	0	8,863	6,054	60,091
2009	20,057	1,095	155	25,902	0	8,450	5,761	61,420
2010	19,216	845	216	29,791	13	7,917	5,333	63,330
2011	17,234	687	111	24,848	14	7,433	5,988	56,314
2012	13,992	523	229	27,922	0	7,970	6,426	57,063
2013	10,942	1,017	222	27,562	0	7,054	5,693	52,489
2014	11,081	820	327	26,876	0	7,610	5,123	51,837
2015	7,966	823	325	26,498	0	8,228	5,641	49,482
Year 2013								
January	1,259	339	32	2,301	0	607	501	5,039
February	1,171	133	29	2,101	0	538	471	4,444
March	1,102	10	28	2,223	0	617	557	4,537
April	742	11	4	1,916	0	619	505	3,797
May	856	22	0	1,989	0	606	372	3,844
June	807	25	0	2,162	0	617	484	4,095
July	800	57	2	2,617	0	575	515	4,566
August	807	20	28	2,557	0	575	510	4,497
September	744	12	25	2,327	0	590	480	4,178
October	677	21	24	2,266	0	571	450	4,008
November	911	41	21	2,370	0	530	415	4,289
December	1,065	326	29	2,732	0	610	432	5,194
Year 2014								
January	1,344	446	32	4,690	0	711	440	7,663
February	1,353	174	28	2,043	0	553	311	4,461
March	1,265	99	33	1,834	0	621	438	4,290
April	850	13	31	1,732	0	543	424	3,593
May	772	15	16	1,833	0	659	425	3,720
June	831	10	0	1,876	0	686	402	3,805
July	930	13	5	2,052	0	677	415	4,090
August	722	9	41	2,264	0	671	450	4,155
September	637	6	38	2,118	0	630	464	3,893
October	571	7	29	2,162	0	618	455	3,841
November	862	14	36	2,095	0	590	441	4,038
December	945	14	39	2,177	0	652	459	4,286
Year 2015								
January	985	114	46	2,395	0	716	441	4,698
February	996	420	44	2,222	0	630	399	4,711
March	823	58	39	2,231	0	675	490	4,316
April	541	37	26	1,838	0	682	490	3,614
May	506	41	3	1,989	0	686	445	3,670
June	610	29	0	2,060	0	646	472	3,817
July	645	34	0	2,380	0	772	472	4,302
August	565	36	32	2,265	0	681	487	4,066
September	499	7	42	2,346	0	725	487	4,106
October	491	8	38	2,181	0	669	476	3,864
November	575	25	31	2,239	0	650	499	4,020
December	729	14	26	2,352	0	694	483	4,298

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, and solar thermal.

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.

Beginning with the collection of Form EIA-923 in January 2008, the methodology for separating the fuel used for electricity generation and useful thermal output from combined heat and power plants changed. The new methodology was retroactively applied to 2004-2007. See the Technical Notes (Appendix C) for further information.

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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 3.26. Useful Thermal Output by Energy Source: Industrial Sector Combined Heat and Power, 2005 - 2015 (Billion Btus)**

Period	Coal	Petroleum Liquids	Petroleum Coke	Natural Gas	Other Gas	Renewable Sources	Other	Total
<b>Annual Totals</b>								
2005	279,552	70,273	10,616	364,457	101,775	637,803	31,594	1,496,071
2006	272,229	47,320	21,584	376,822	103,481	662,906	38,630	1,522,971
2007	265,948	43,948	23,290	321,648	95,840	625,413	38,380	1,414,466
2008	255,032	22,253	16,733	284,980	88,571	584,216	12,821	1,264,606
2009	223,485	26,155	18,708	296,225	79,726	520,898	22,471	1,187,669
2010	242,762	14,366	20,124	307,931	71,719	555,804	18,382	1,231,088
2011	233,767	10,059	20,209	319,590	83,167	562,838	19,035	1,248,666
2012	212,520	7,524	22,944	328,729	92,199	556,174	12,599	1,232,689
2013	210,795	7,196	24,009	338,041	93,416	588,165	11,512	1,273,134
2014	199,512	6,120	22,167	334,901	97,137	596,087	10,600	1,266,524
2015	180,501	5,965	20,203	384,369	91,749	598,890	8,899	1,290,576
<b>Year 2013</b>								
January	19,306	737	2,168	28,784	8,253	50,947	1,028	111,223
February	17,459	687	1,746	25,532	7,341	45,816	894	99,475
March	18,808	511	2,046	28,323	8,223	48,942	991	107,844
April	16,535	569	1,692	27,378	7,690	47,255	983	102,102
May	16,960	550	2,072	27,380	7,848	47,801	836	103,448
June	16,461	519	2,162	27,022	7,476	48,061	894	102,595
July	17,506	429	2,278	29,397	7,876	51,684	960	110,130
August	16,958	403	2,577	29,318	7,632	50,334	1,092	108,314
September	16,061	388	1,923	27,846	7,457	46,579	975	101,230
October	17,514	440	1,958	28,267	7,435	48,401	972	104,988
November	18,551	485	1,510	28,500	7,291	50,133	923	107,393
December	18,676	1,478	1,875	30,294	8,893	52,211	964	114,392
<b>Year 2014</b>								
January	19,390	1,104	1,779	33,178	7,969	51,175	777	115,373
February	17,597	742	1,584	26,211	7,330	46,825	691	100,980
March	18,701	620	1,828	27,834	8,293	50,693	794	108,763
April	15,213	416	2,024	26,342	7,618	49,395	967	101,974
May	15,871	435	1,982	26,785	7,695	48,127	877	101,772
June	15,564	431	2,119	26,069	8,123	49,321	875	102,502
July	16,219	367	2,094	28,160	8,258	50,552	893	106,542
August	16,256	324	1,873	28,847	8,504	51,208	963	107,975
September	15,340	405	1,978	27,225	8,116	47,165	841	101,070
October	15,458	414	1,293	28,359	8,092	49,667	942	104,225
November	16,404	452	1,696	27,149	8,595	49,460	913	104,669
December	17,500	411	1,916	28,743	8,543	52,500	1,068	110,681
<b>Year 2015</b>								
January	17,972	653	1,828	31,802	8,566	53,548	758	115,127
February	16,437	959	1,768	29,513	7,267	47,456	673	104,072
March	16,153	545	1,875	32,754	8,017	49,592	719	109,654
April	14,389	481	1,875	30,456	7,740	49,593	726	105,260
May	14,575	478	1,768	29,966	7,317	50,534	743	105,380
June	14,150	446	1,652	30,980	7,747	48,965	765	104,706
July	15,399	413	1,426	33,688	8,122	50,706	784	110,539
August	14,589	358	1,502	34,315	7,963	50,745	770	110,242
September	14,206	380	1,738	31,512	8,196	47,924	756	104,711
October	13,390	455	1,511	32,884	6,985	48,333	713	104,270
November	14,508	392	1,858	32,532	6,465	49,611	723	106,089
December	14,733	406	1,403	33,967	7,365	51,883	769	110,525

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, and solar thermal.

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.

Beginning with the collection of Form EIA-923 in January 2008, the methodology for separating the fuel used for electricity generation and useful thermal output from combined heat and power plants changed. The new methodology was retroactively applied to 2004-2007. See the Technical Notes (Appendix C) for further information.

See Glossary for definitions. Values are final. 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.

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.

# Chapter 4

## Generation Capacity

**Table 4.1. Count of Electric Power Industry Power Plants, by Sector, by Predominant Energy Sources within Plant, 2005 through 2015**

Year	Coal	Petroleum	Natural Gas	Other Gases	Nuclear	Hydroelectric Conventional	Other Renewables	Hydroelectric Pumped Storage	Other Energy Sources
<b>Total (All Sectors)</b>									
2005	619	1,133	1,664	44	66	1,422	781	39	29
2006	616	1,148	1,659	46	66	1,421	843	39	29
2007	606	1,163	1,659	46	66	1,424	929	39	25
2008	598	1,170	1,655	43	66	1,423	1,076	39	29
2009	593	1,168	1,652	43	66	1,427	1,219	39	28
2010	580	1,169	1,657	48	66	1,432	1,355	39	32
2011	589	1,146	1,646	41	66	1,434	1,582	40	54
2012	557	1,129	1,714	44	66	1,426	1,956	41	64
2013	518	1,101	1,725	44	63	1,435	2,299	41	78
2014	491	1,082	1,749	43	62	1,441	2,674	41	94
2015	427	1,082	1,779	45	62	1,440	3,043	41	83
<b>Electric Utilities</b>									
2005	353	813	743	1	37	906	71	34	1
2006	353	832	758	1	37	905	84	34	1
2007	351	851	767	1	37	904	93	34	1
2008	348	866	774	--	37	902	107	34	1
2009	340	855	768	--	34	887	129	34	1
2010	333	855	775	3	34	888	155	34	--
2011	332	829	777	--	34	884	189	35	1
2012	315	815	797	--	34	875	238	36	5
2013	300	795	787	1	32	873	253	36	15
2014	286	780	803	1	32	889	272	35	20
2015	256	782	816	1	32	890	318	35	15
<b>Independent Power Producers, Non-Combined Heat and Power Plants</b>									
2005	101	170	357	2	29	456	502	5	2
2006	101	166	356	2	29	458	552	5	2
2007	101	166	364	1	29	462	625	5	1
2008	99	166	365	--	29	464	751	5	2
2009	100	173	377	1	32	485	868	5	2
2010	102	175	380	1	32	488	966	5	6
2011	98	166	373	--	32	490	1,106	5	12
2012	88	150	368	--	32	494	1,388	5	16
2013	86	147	384	1	31	505	1,670	5	15
2014	87	148	395	1	30	499	2,006	5	18
2015	80	143	397	--	30	497	2,309	5	21
<b>Independent Power Producers, Combined Heat and Power Plants</b>									
2005	48	14	177	3	--	--	33	--	--
2006	50	15	173	4	--	--	32	--	--
2007	48	12	170	4	--	--	32	--	--
2008	47	12	169	3	--	--	36	--	--
2009	51	10	166	3	--	--	41	--	--
2010	48	10	161	2	--	--	41	--	--
2011	45	11	156	1	--	--	38	--	1
2012	42	12	157	2	--	--	47	--	--
2013	35	11	152	2	--	1	51	--	5
2014	30	9	145	2	--	--	54	--	7
2015	27	8	143	3	--	--	58	--	3
<b>Commercial Sector</b>									
2005	20	64	113	1	--	9	48	--	--
2006	22	62	109	1	--	9	47	--	--
2007	20	64	106	1	--	9	47	--	1
2008	20	62	106	1	--	9	49	--	1
2009	18	68	107	1	--	9	47	--	1
2010	17	69	110	1	--	9	57	--	1
2011	22	80	118	--	--	10	105	--	2
2012	22	89	153	--	--	9	129	--	2
2013	19	92	164	--	--	9	160	--	3
2014	17	93	169	--	--	10	178	1	6
2015	12	94	176	--	--	10	186	1	3
<b>Industrial Sector</b>									
2005	97	72	274	37	--	51	127	--	26
2006	90	73	263	38	--	49	128	--	26
2007	86	70	252	39	--	49	132	--	22
2008	84	64	241	39	--	48	133	--	25
2009	84	62	234	38	--	46	134	--	24
2010	80	60	231	41	--	47	136	--	25
2011	92	60	222	40	--	50	144	--	38
2012	90	63	239	42	--	48	154	--	41
2013	78	56	238	40	--	47	165	--	40
2014	71	52	237	39	--	43	164	--	43
2015	52	55	247	41	--	43	172	--	41

Notes: The number of power plants for each energy source is the number of sites for which the respective energy source was reported as the most predominant energy source for at least one of its generators. If all generators for a site have the same energy source reported as the most predominant, that site will be counted once under that energy source. However, if the most predominant energy source is not the same for all generators within a site, the site is counted more than once, based on the number of most predominant energy sources for generators at a site. In general, this table translates the number of generators by energy source into the number of sites represented by the generators for an energy source. Therefore, the count for Total (All Sectors) above is the sum of the counts for each sector by energy source and does not necessarily represent unique sites. In addition, changes to predominant energy sources and status codes from year to year may result in changes to previously-posted data.

Capacity by energy source is based on the capacity associated with the energy source reported as the most predominant (primary) one, where more than one energy source is associated with a generator.

In 2011, EIA corrected the NAICS codes of several plants which resulted in a net capacity shift from the electric utility sector to the commercial sector.

Source: U.S. Energy Information Administration, Form EIA-860, 'Annual Electric Generator Report.'

Table 4.2.A. Existing Net Summer Capacity by Energy Source and Producer Type, 2005 through 2015 (Megawatts)

Year	Utility Scale Capacity										Distributed Capacity Estimated Photovoltaic
	Coal	Petroleum	Natural Gas	Other Gases	Nuclear	Hydroelectric Conventional	Other Renewable Sources	Hydroelectric Pumped Storage	Other Energy Sources	Utility Total	
Total (All Sectors)											
2005	313,380.0	58,548.0	383,061.0	2,063.0	99,988.0	77,541.0	21,205.0	21,347.0	887.0	978,020.0	--
2006	312,956.0	58,097.0	388,294.0	2,256.0	100,334.0	77,821.0	24,113.0	21,461.0	882.0	986,215.0	--
2007	312,738.0	56,068.0	392,876.0	2,313.0	100,266.0	77,885.0	30,069.0	21,886.0	788.0	994,888.0	--
2008	313,322.0	57,445.0	397,460.0	1,995.0	100,755.0	77,930.0	38,466.0	21,858.0	942.0	1,010,171.0	--
2009	314,294.1	56,780.5	401,271.8	1,932.4	101,003.7	78,517.7	48,552.0	22,160.4	887.8	1,025,400.4	--
2010	316,800.1	55,646.9	407,028.4	2,700.3	101,167.4	78,824.7	53,811.3	22,198.9	883.8	1,039,061.8	--
2011	317,640.3	51,481.6	415,191.3	1,934.2	101,418.8	78,651.6	61,221.0	22,292.6	1,419.6	1,051,251.0	--
2012	309,680.4	47,167.2	422,364.4	1,945.6	101,885.0	78,738.0	77,155.2	22,368.3	1,728.9	1,063,033.0	--
2013	303,306.3	43,523.0	425,389.7	2,107.8	99,240.3	79,200.0	82,600.1	22,389.3	2,307.0	1,060,063.5	--
2014	299,094.2	41,135.4	432,150.3	1,914.3	98,569.3	79,677.3	90,603.7	22,485.1	2,792.6	1,068,422.2	7,326.6
2015	279,719.9	36,830.3	439,425.4	2,500.4	98,672.0	79,664.2	102,871.6	22,575.1	1,795.6	1,064,054.5	9,778.5
Electric Utilities											
2005	229,705.0	30,867.0	147,752.0	--	56,564.0	71,568.0	1,545.0	18,195.0	39.0	556,235.0	--
2006	230,644.0	30,419.0	157,742.0	104.0	56,143.0	71,840.0	2,291.0	18,301.0	39.0	567,523.0	--
2007	231,289.0	29,115.0	162,756.0	104.0	54,211.0	72,186.0	2,806.0	18,693.0	39.0	571,200.0	--
2008	231,857.0	30,657.0	173,106.0	--	54,376.0	72,142.0	4,066.0	18,664.0	39.0	584,908.0	--
2009	234,396.6	30,174.1	180,570.7	--	54,355.2	72,689.7	5,613.9	18,930.0	39.0	596,769.2	--
2010	235,706.8	28,971.9	184,230.5	539.0	54,369.3	72,973.9	6,316.1	18,968.5	--	602,076.0	--
2011	236,391.7	27,669.9	193,630.5	--	54,351.6	72,182.4	7,811.1	19,062.2	5.3	611,104.7	--
2012	232,078.5	26,731.8	206,774.4	--	54,716.7	72,505.1	9,823.8	19,093.9	60.7	621,784.9	--
2013	228,478.0	24,648.8	208,485.7	12.0	52,399.1	72,755.2	10,118.4	19,114.9	787.3	616,799.4	--
2014	219,837.9	24,045.0	215,690.8	12.0	52,390.9	73,725.4	10,893.7	19,121.3	914.5	616,631.5	--
2015	202,922.4	22,269.7	223,215.6	12.0	52,457.2	73,713.0	12,654.3	19,211.3	87.5	606,543.0	--
Independent Power Producers, Non-Combined Heat and Power Plants											
2005	73,734.0	26,041.0	188,043.0	12.0	43,424.0	5,284.0	13,864.0	3,152.0	46.0	353,601.0	--
2006	72,730.0	25,384.0	184,196.0	20.0	44,190.0	5,263.0	15,865.0	3,160.0	46.0	350,854.0	--
2007	71,943.0	24,818.0	184,888.0	8.0	46,055.0	5,346.0	21,002.0	3,193.0	26.0	357,278.0	--
2008	71,864.0	24,823.0	179,169.0	--	46,379.0	5,433.0	28,139.0	3,193.0	46.0	359,044.0	--
2009	70,122.5	24,657.1	176,034.8	7.6	46,648.5	5,469.6	36,556.4	3,230.4	45.9	362,772.8	--
2010	71,214.4	24,866.8	178,190.4	7.6	46,798.1	5,488.6	41,013.7	3,230.4	76.9	370,886.9	--
2011	72,119.5	22,398.8	176,516.5	--	47,067.2	5,539.0	46,698.4	3,230.4	169.2	373,739.0	--
2012	69,068.4	18,643.9	170,653.8	--	47,168.3	5,568.6	60,116.8	3,274.4	470.2	374,964.4	--
2013	67,153.5	17,444.7	171,653.6	47.0	46,841.2	5,762.2	64,890.5	3,274.4	231.2	377,298.3	--
2014	71,994.6	15,724.4	172,224.5	47.0	46,178.4	5,651.2	72,144.4	3,358.4	238.7	387,561.6	--
2015	70,217.8	13,102.9	172,519.2	--	46,214.8	5,650.5	82,014.6	3,358.4	354.3	393,432.5	--
Independent Power Producers, Combined Heat and Power Plants											
2005	5,560.0	530.0	31,740.0	289.0	--	1.0	614.0	--	--	38,735.0	--
2006	5,837.0	970.0	30,031.0	325.0	--	1.0	628.0	--	--	37,793.0	--
2007	5,885.0	907.0	29,468.0	339.0	--	--	656.0	--	--	37,254.0	--
2008	5,927.0	900.0	29,575.0	206.0	--	--	701.0	--	--	37,309.0	--
2009	5,939.5	897.0	28,875.4	205.8	--	--	739.9	--	--	36,657.6	--
2010	5,450.6	766.0	29,005.6	182.3	--	--	845.5	--	--	36,250.0	--
2011	5,146.0	317.0	29,372.6	30.0	--	--	792.9	--	53.0	35,711.5	--
2012	4,755.9	317.2	29,128.6	83.0	--	--	981.2	--	--	35,265.9	--
2013	4,313.7	322.2	29,081.2	83.0	--	4.3	945.1	--	121.8	34,871.3	--
2014	4,073.0	308.2	27,676.7	83.0	--	--	885.9	--	335.8	33,362.6	--
2015	3,843.6	307.2	27,284.1	350.0	--	--	970.5	--	126.0	32,881.4	--
Commercial Sector											
2005	397.0	333.0	1,024.0	5.0	--	25.0	435.0	--	--	2,219.0	--
2006	428.0	341.0	1,040.0	5.0	--	25.0	433.0	--	--	2,272.0	--
2007	428.0	348.0	1,064.0	5.0	--	22.0	443.0	--	3.0	2,312.0	--
2008	428.0	352.0	1,059.0	5.0	--	22.0	444.0	--	3.0	2,312.0	--
2009	423.7	348.3	1,104.7	4.7	--	21.7	480.1	--	2.8	2,386.0	--
2010	418.2	368.2	1,154.5	4.7	--	21.7	519.7	--	2.8	2,489.8	--
2011	435.7	406.3	1,282.6	--	--	233.5	694.1	--	4.2	3,056.4	--
2012	435.6	442.7	1,544.9	--	--	18.4	776.8	--	4.2	3,222.6	--
2013	341.9	455.7	1,778.9	--	--	17.8	947.6	--	9.1	3,551.0	--
2014	290.1	463.5	1,832.6	--	--	21.4	1,066.8	5.4	15.6	3,695.4	3,279.7
2015	226.6	466.1	1,932.5	--	--	21.4	1,126.5	5.4	6.7	3,785.2	3,706.7
Industrial Sector											
2005	3,984.0	777.0	14,501.0	1,757.0	--	662.0	4,747.0	--	802.0	27,230.0	--
2006	3,317.0	983.0	15,285.0	1,802.0	--	693.0	4,896.0	--	797.0	27,773.0	--
2007	3,194.0	880.0	14,699.0	1,858.0	--	331.0	5,163.0	--	720.0	26,844.0	--
2008	3,246.0	713.0	14,551.0	1,784.0	--	334.0	5,116.0	--	854.0	26,599.0	--
2009	3,411.8	704.0	14,686.2	1,714.3	--	336.7	5,161.7	--	800.1	26,814.8	--
2010	4,010.1	674.0	14,447.4	1,966.7	--	340.5	5,116.3	--	804.1	27,359.1	--
2011	3,547.4	689.6	14,389.1	1,904.2	--	696.7	5,224.5	--	1,187.9	27,639.4	--
2012	3,342.0	1,031.6	14,262.7	1,862.6	--	645.9	5,456.6	--	1,193.8	27,795.2	--
2013	3,019.2	651.6	14,390.3	1,965.8	--	660.5	5,698.5	--	1,157.6	27,543.5	--
2014	2,898.6	594.3	14,725.7	1,772.3	--	279.3	5,612.9	--	1,288.0	27,171.1	700.6
2015	2,509.5	684.4	14,474.0	2,138.4	--	279.3	6,105.7	--	1,221.1	27,412.4	880.3
Residential Sector											
2014	--	--	--	--	--	--	--	--	--	--	3,346.3
2015	--	--	--	--	--	--	--	--	--	--	5,191.5

Notes: Coal includes anthracite, bituminous, subbituminous, lignite, and waste coal; coal syngas and refined coal; and beginning in 2011, coal-derived synthesis gas. Prior to 2011, coal-derived synthesis gas was included in Other Gases.  
 Petroleum includes distillate fuel oil (all diesel and No. 1, No. 2, and No. 4 fuel oils), residual fuel oil (No. 5 and No. 6 fuel oils and bunker C fuel oil), jet fuel, kerosene, petroleum coke (converted to liquid petroleum, see Technical Notes for conversion methodology), waste oil, and beginning in 2011, synthetic gas and propane. Prior to 2011, synthetic gas and propane were included in Other Gases.  
 Other Gases also includes blast furnace gas. Prior to 2011, waste heat was included in Natural Gas.  
 Hydroelectric Conventional capacity includes conventional hydroelectric power excluding pumped storage facilities.  
 Other Renewable Sources include wood, black liquor, other wood waste, municipal solid waste, landfill gas, sludge waste, agriculture byproducts, other biomass, geothermal, solar thermal, photovoltaic energy, and wind.  
 Other Energy Sources include batteries, hydrogen, purchased steam, sulfur, tire-derived fuels and other miscellaneous energy sources.  
 In 2011, EIA corrected the NAICS codes of several plants which resulted in a net capacity shift from the electric utility sector to the commercial sector.  
 Source: U.S. Energy Information Administration, Form EIA-860, 'Annual Electric Generator Report.'  
 Estimated distributed solar photovoltaic generation and distributed solar photovoltaic capacity are based on data from Form EIA-826, Form EIA-861 and from estimation methods described in the technical notes.

**Table 4.2.B. Existing Net Summer Capacity of Other Renewable Sources by Producer Type, 2005 through 2015 (Megawatts) (Page 1)**

Year	Utility Scale Capacity							Distributed and Utility Scale Capacity		
	Wind	Solar Photovoltaic	Solar Thermal	Wood and Wood-Derived Fuels	Geothermal	Other Biomass	Total Utility (Other Renewable Sources)	Estimated Distributed Photovoltaic	Total Solar Photovoltaic	Total Solar
Total (All Sectors)										
2005	8,706.0	--	--	6,193.0	2,285.0	3,609.0	21,205.0	--	--	--
2006	11,329.0	--	--	6,372.0	2,274.0	3,727.0	24,113.0	--	--	--
2007	16,515.0	36.7	464.8	6,704.0	2,214.0	4,134.0	30,069.0	--	36.7	501.5
2008	24,651.0	70.8	464.8	6,864.0	2,229.0	4,186.0	38,466.0	--	70.8	535.6
2009	34,295.8	145.5	473.0	6,939.3	2,381.9	4,316.5	48,552.0	--	145.5	618.5
2010	39,134.5	393.4	473.0	7,037.3	2,404.6	4,368.5	53,811.3	--	393.4	866.4
2011	45,675.9	1,052.0	471.5	7,076.5	2,409.2	4,535.9	61,221.0	--	1,052.0	1,523.5
2012	59,074.8	2,694.1	476.0	7,507.6	2,592.1	4,810.6	77,155.2	--	2,694.1	3,170.1
2013	59,973.4	5,336.1	1,286.4	8,354.2	2,607.0	5,043.0	82,600.1	--	5,336.1	6,622.5
2014	64,231.5	8,656.6	1,666.7	8,368.1	2,514.3	5,166.5	90,603.7	7,326.6	15,983.2	17,649.9
2015	72,573.4	11,905.4	1,757.9	8,968.9	2,541.5	5,124.5	102,871.6	9,778.5	21,683.9	23,441.8
Electric Utilities										
2005	765.0	--	--	391.0	242.0	136.0	1,545.0	--	--	--
2006	1,441.0	--	--	428.0	240.0	172.0	2,291.0	--	--	--
2007	1,928.0	10.5	1.0	418.0	158.0	290.0	2,806.0	--	10.5	11.5
2008	3,190.0	12.5	1.0	427.0	159.0	276.0	4,066.0	--	12.5	13.5
2009	4,654.8	41.0	1.0	431.3	158.9	326.9	5,613.9	--	41.0	42.0
2010	5,338.3	78.2	1.0	414.3	158.9	325.4	6,316.1	--	78.2	79.2
2011	6,735.2	201.4	1.0	359.1	158.9	355.5	7,811.1	--	201.4	202.4
2012	8,488.7	331.2	1.0	364.1	162.1	476.7	9,823.8	--	331.2	332.2
2013	8,424.7	487.9	--	564.3	164.1	477.4	10,118.4	--	487.9	487.9
2014	9,022.6	568.5	--	654.8	164.1	483.7	10,893.7	--	568.5	568.5
2015	10,580.9	842.9	--	623.8	165.9	440.8	12,654.3	--	842.9	842.9
Independent Power Producers, Non-Combined Heat and Power Plants										
2005	7,941.0	--	--	1,033.0	2,044.0	2,447.0	13,864.0	--	--	--
2006	9,888.0	--	--	1,037.0	2,034.0	2,505.0	15,865.0	--	--	--
2007	14,587.0	25.2	463.8	1,066.0	2,056.0	2,803.0	21,002.0	--	25.2	489.0
2008	21,461.0	57.2	463.8	1,196.0	2,070.0	2,891.0	28,139.0	--	57.2	521.0
2009	29,639.8	103.4	472.0	1,220.2	2,223.0	2,898.0	36,556.4	--	103.4	575.4
2010	33,783.9	307.9	472.0	1,274.5	2,245.7	2,929.7	41,013.7	--	307.9	779.9
2011	38,911.8	792.1	470.5	1,312.5	2,250.3	2,961.2	46,698.4	--	792.1	1,262.6
2012	50,547.6	2,255.7	475.0	1,398.8	2,384.2	3,055.5	60,116.8	--	2,255.7	2,730.7
2013	51,497.8	4,647.6	1,286.4	1,845.4	2,401.1	3,212.2	64,890.5	--	4,647.6	5,934.0
2014	55,133.0	7,857.0	1,666.7	1,816.6	2,308.8	3,362.3	72,144.4	--	7,857.0	9,523.7
2015	61,905.4	10,768.2	1,757.9	1,873.3	2,375.6	3,334.2	82,014.6	--	10,768.2	12,526.1

Notes: 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 Biomass includes municipal solid waste, landfill gas, sludge waste, agricultural byproducts, other biomass solids, other biomass liquids, and other biomass gases (including digester gases, methane, and other biomass gases).

\* = Value is less than half of the smallest unit of measure.

Capacity by energy source is based on the capacity associated with the energy source reported as the most predominant (primary) one, where more than one energy source is associated with a generator.

Source: U.S. Energy Information Administration, Form EIA-860, 'Annual Electric Generator Report.'

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

**Table 4.2.B. Existing Net Summer Capacity of Other Renewable Sources by Producer Type, 2005 through 2015 (Megawatts) (Page 2)**

Year	Utility Scale Capacity							Distributed and Utility Scale Capacity		
	Wind	Solar Photovoltaic	Solar Thermal	Wood and Wood-Derived Fuels	Geothermal	Other Biomass	Total Utility (Other Renewable Sources)	Estimated Distributed Photovoltaic	Total Solar Photovoltaic	Total Solar
Independent Power Producers, Combined Heat and Power Plants										
2005	--	--	--	218.0	--	395.0	614.0	--	--	--
2006	--	--	--	212.0	--	416.0	628.0	--	--	--
2007	--	--	--	210.0	--	446.0	656.0	--	--	--
2008	--	--	--	223.0	--	478.0	701.0	--	--	--
2009	--	--	--	237.2	--	502.7	739.9	--	--	--
2010	--	--	--	392.8	--	452.7	845.5	--	--	--
2011	--	--	--	356.3	--	436.6	792.9	--	--	--
2012	--	--	--	489.8	45.8	445.6	981.2	--	--	--
2013	--	--	--	469.2	41.8	434.1	945.1	--	--	--
2014	--	--	--	465.5	41.4	379.0	885.9	--	--	--
2015	--	--	--	568.2	--	402.3	970.5	--	--	--
Commercial Sector										
2005	--	--	--	7.0	--	428.0	435.0	--	--	--
2006	--	--	--	7.0	--	426.0	433.0	--	--	--
2007	--	--	--	8.0	--	435.0	443.0	--	--	--
2008	--	0.1	--	8.0	--	436.0	444.0	--	0.1	0.1
2009	1.2	0.1	--	7.6	--	471.2	480.1	--	0.1	0.1
2010	10.5	5.9	--	7.6	--	495.7	519.7	--	5.9	5.9
2011	24.6	54.1	--	7.6	--	607.8	694.1	--	54.1	54.1
2012	29.8	99.9	--	7.6	--	639.5	776.8	--	99.9	99.9
2013	33.2	192.9	--	8.4	--	713.1	947.6	--	192.9	192.9
2014	51.6	223.4	--	65.4	--	726.4	1,066.8	3,279.7	3,503.1	3,503.1
2015	55.3	282.1	--	65.3	--	723.8	1,126.5	3,706.7	3,988.8	3,988.8
Industrial Sector										
2005	--	--	--	4,545.0	--	202.0	4,747.0	--	--	--
2006	--	--	--	4,688.0	--	208.0	4,896.0	--	--	--
2007	--	1.0	--	5,002.0	--	160.0	5,163.0	--	1.0	1.0
2008	--	1.0	--	5,010.0	--	105.0	5,116.0	--	1.0	1.0
2009	--	1.0	--	5,043.0	--	117.7	5,161.7	--	1.0	1.0
2010	1.8	1.4	--	4,948.1	--	165.0	5,116.3	--	1.4	1.4
2011	4.3	4.4	--	5,041.0	--	174.8	5,224.5	--	4.4	4.4
2012	8.7	7.3	--	5,247.3	--	193.3	5,456.6	--	7.3	7.3
2013	17.7	7.7	--	5,466.9	--	206.2	5,698.5	--	7.7	7.7
2014	24.3	7.7	--	5,365.8	--	215.1	5,612.9	700.6	708.3	708.3
2015	31.8	12.2	--	5,838.3	--	223.4	6,105.7	880.3	892.5	892.5
Residential Sector										
2014	--	--	--	--	--	--	--	3,346.3	3,346.3	3,346.3
2015	--	--	--	--	--	--	--	5,191.5	5,191.5	5,191.5

Notes: 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 Biomass includes municipal solid waste, landfill gas, sludge waste, agricultural byproducts, other biomass solids, other biomass liquids, and other biomass gases (including digester gases, methane, and other biomass gases).

\* = Value is less than half of the smallest unit of measure.

Capacity by energy source is based on the capacity associated with the energy source reported as the most predominant (primary) one, where more than one energy source is associated with a generator.

Source: U.S. Energy Information Administration, Form EIA-860, 'Annual Electric Generator Report.'

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

**Table 4.3. Existing Capacity by Energy Source, 2015 (Megawatts)**

Energy Source	Facility Type	Number of Generators	Generator Nameplate Capacity	Net Summer Capacity	Net Winter Capacity
Coal	Utility Scale	968	304,789.8	279,719.9	281,105.8
Petroleum	Utility Scale	3,550	42,321.3	36,830.3	40,372.6
Natural Gas	Utility Scale	5,774	503,936.9	439,425.4	472,495.2
Other Gases	Utility Scale	100	2,824.0	2,500.4	2,490.7
Nuclear	Utility Scale	99	103,860.4	98,672.0	101,001.4
Hydroelectric Conventional	Utility Scale	4,020	78,956.9	79,664.2	79,071.9
Wind	Utility Scale	1,098	73,393.2	72,573.4	72,675.8
Solar Photovoltaic	Utility Scale	1,633	11,983.7	11,905.4	11,795.2
Solar Thermal	Utility Scale	19	1,774.6	1,757.9	1,631.8
Wood and Wood-Derived Fuels	Utility Scale	378	10,219.1	8,968.9	9,052.5
Geothermal	Utility Scale	197	3,811.8	2,541.5	2,799.3
Other Biomass	Utility Scale	1,959	5,880.6	5,124.5	5,197.1
Hydroelectric Pumped Storage	Utility Scale	156	21,572.7	22,575.1	22,463.3
Other Energy Sources	Utility Scale	117	2,040.2	1,795.6	1,800.9
Total	Utility Scale	20,068	1,167,365.2	1,064,054.5	1,103,953.5
Distributed Photovoltaic	Distributed	--	--	9,778.5	--
Estimated Total Photovoltaic	Utility and Distributed	--	--	21,683.9	--
Estimated Total Solar	Utility and Distributed	--	--	23,441.8	--

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

Petroleum includes distillate fuel oil (all diesel and No. 1, No. 2, and No. 4 fuel oils), residual fuel oil (No. 5 and No. 6 fuel oils and bunker C fuel oil), jet fuel, kerosene, petroleum coke (converted to liquid petroleum, see Technical Notes for conversion methodology), waste oil, and beginning in 2011, synthetic gas and propane. Prior to 2011, synthetic gas and propane were included in Other Gases.

Other Gases includes blast furnace gas. Prior to 2011, waste heat was included in Natural Gas.

Hydroelectric Conventional capacity includes conventional hydroelectric power excluding pumped storage facilities.

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 Biomass include municipal solid waste, landfill gas, sludge waste, agricultural byproducts, other biomass solids, other biomass liquids, and other biomass gases (including digester gases, methane, and other biomass gases).

Hydroelectric Conventional capacity includes conventional hydroelectric power excluding pumped storage facilities.

Other Energy Sources include batteries, hydrogen, purchased steam, sulfur, tire-derived fuels and other miscellaneous energy sources.

Capacity by energy source is based on the capacity associated with the energy source reported as the most predominant (primary) one, where more than one energy source is associated with a generator.

In 2011, EIA corrected the NAICS codes of several plants which resulted in a net capacity shift from the electric utility sector to the commercial sector.

Source: U.S. Energy Information Administration, Form EIA-860, 'Annual Electric Generator Report.'

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

**Table 4.4. Existing Capacity by Producer Type, 2015 (Megawatts)**

<b>Producer Type</b>	<b>Facility Type</b>	<b>Number of Generators</b>	<b>Generator Nameplate Capacity</b>	<b>Net Summer Capacity</b>	<b>Net Winter Capacity</b>
<b>Electric Power Sector</b>					
Electric Utilities	Utility Scale	9,562	665,200.5	606,543.0	627,718.0
Independent Power Producers, Non-Combined Heat and Power Plants	Utility Scale	7,235	429,212.6	393,432.5	407,864.5
Independent Power Producers, Combined Heat and Power Plants	Utility Scale	549	37,316.9	32,881.4	35,423.5
<b>Total</b>	Utility Scale	<b>17,346</b>	<b>1,131,730.0</b>	<b>1,032,856.9</b>	<b>1,071,006.0</b>
<b>Commercial and Industrial Sectors</b>					
Commercial Sector	Utility Scale	1,097	4,194.6	3,785.2	3,901.6
Industrial Sector	Utility Scale	1,625	31,440.6	27,412.4	29,045.9
<b>Total</b>	Utility Scale	<b>2,722</b>	<b>35,635.2</b>	<b>31,197.6</b>	<b>32,947.5</b>
<b>All Sectors</b>					
<b>Total</b>	<b>Utility Scale</b>	<b>20,068</b>	<b>1,167,365.2</b>	<b>1,064,054.5</b>	<b>1,103,953.5</b>
<b>Distributed</b>					
Estimated Solar Photovoltaic	Distributed	--	--	9,778.5	--

**Notes:**

See Glossary reference for definitions.

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

In the case of some wind, solar and wave energy sites, the capacity for multiple generators is reported in a single generator record and is presented as a single generator in the generator count. Capacity by energy source is based on the capacity associated with the energy source reported as the most predominant (primary) one, where more than one energy source is associated with a generator.

Source: U.S. Energy Information Administration, Form EIA-860, 'Annual Electric Generator Report.'

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

**Table 4.5. Planned Utility-Scale Generating Capacity Changes, by Energy Source, 2016-2020 (Page 1)**

Energy Source	Generator Additions		Generator Retirements		Net Capacity Additions	
	Number of Generators	Net Summer Capacity	Number of Generators	Net Summer Capacity	Number of Generators	Net Summer Capacity
Year 2016						
U.S. Total	812	30,272.4	136	8,755.4	676	21,517.0
Coal	1	50.0	51	6,944.5	-50	-6,894.5
Petroleum	18	42.3	23	332.9	-5	-290.6
Natural Gas	115	8,027.5	26	790.0	89	7,237.5
Other Gases	--	--	--	--	--	--
Nuclear	1	1,122.0	1	478.1	--	643.9
Hydroelectric Conventional	41	462.6	13	116.3	28	346.3
Wind	102	9,416.6	2	2.8	100	9,413.8
Solar Thermal and Photovoltaic	466	10,840.1	--	--	466	10,840.1
Wood and Wood-Derived Fuels	2	69.0	4	45.1	-2	23.9
Geothermal	--	--	2	30.0	-2	-30.0
Other Biomass	49	93.3	14	15.7	35	77.6
Hydroelectric Pumped Storage	--	--	--	--	--	--
Other Energy Sources	17	149.0	--	--	17	149.0
Year 2017						
U.S. Total	240	22,162.1	93	9,866.0	147	12,296.1
Coal	--	--	20	4,967.1	-20	-4,967.1
Petroleum	4	8.0	19	671.2	-15	-663.2
Natural Gas	85	12,688.8	32	2,009.3	53	10,679.5
Other Gases	--	--	--	--	--	--
Nuclear	--	--	2	1,901.8	-2	-1,901.8
Hydroelectric Conventional	14	159.9	10	215.0	4	-55.1
Wind	58	7,488.8	3	39.4	55	7,449.4
Solar Thermal and Photovoltaic	68	1,748.2	--	--	68	1,748.2
Wood and Wood-Derived Fuels	1	42.0	--	--	1	42.0
Geothermal	--	--	2	60.0	-2	-60.0
Other Biomass	6	10.4	5	2.2	1	8.2
Hydroelectric Pumped Storage	--	--	--	--	--	--
Other Energy Sources	4	16.0	--	--	4	16.0
Year 2018						
U.S. Total	168	29,277.2	26	5,290.1	142	23,987.1
Coal	2	77.0	6	2,521.4	-4	-2,444.4
Petroleum	--	--	4	65.8	-4	-65.8
Natural Gas	118	25,353.9	11	762.6	107	24,591.3
Other Gases	1	3.0	--	--	1	3.0
Nuclear	--	--	2	1,819.0	-2	-1,819.0
Hydroelectric Conventional	7	205.7	1	103.8	6	101.9
Wind	14	2,587.6	1	17.0	13	2,570.6
Solar Thermal and Photovoltaic	14	848.5	1	0.5	13	848.0
Wood and Wood-Derived Fuels	1	93.5	--	--	1	93.5
Geothermal	1	25.0	--	--	1	25.0
Other Biomass	10	83.0	--	--	10	83.0
Hydroelectric Pumped Storage	--	--	--	--	--	--
Other Energy Sources	--	--	--	--	--	--

Notes: These data reflect plans as of December 31, 2015

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

Petroleum includes distillate fuel oil (all diesel and No. 1, No. 2, and No. 4 fuel oils), residual fuel oil (No. 5 and No. 6 fuel oils and bunker C fuel oil), jet fuel, kerosene, petroleum coke (converted to liquid petroleum, see Technical Notes for conversion methodology), waste oil, synthetic gas, and propane.

Other Gases also includes blast furnace gas.

Hydroelectric Conventional capacity includes conventional hydroelectric power excluding pumped storage facilities.

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 Biomass include municipal solid waste, landfill gas, sludge waste, agricultural byproducts, other biomass solids, other biomass liquids, and other biomass gases (including digester gases, methane, and other biomass gases).

Hydroelectric Conventional capacity includes conventional hydroelectric power excluding pumped storage facilities.

Other Energy Sources include batteries, hydrogen, purchased steam, sulfur, tire-derived fuels and other miscellaneous energy sources.

Capacity by energy source is based on the capacity associated with the energy source reported as the most predominant (primary) one, where more than one energy source is associated with a generator.

In the case of wind, solar and wave energy sites, the capacity for multiple generators is reported in a single generator record and is presented as a single generator in the generator count.

Source: U.S. Energy Information Administration, Form EIA-860, 'Annual Electric Generator Report.'

**Table 4.5. Planned Generating Capacity Changes, by Energy Source, 2016-2020 (Page 2)**

Energy Source	Generator Additions		Generator Retirements		Net Capacity Additions	
	Number of Generators	Net Summer Capacity	Number of Generators	Net Summer Capacity	Number of Generators	Net Summer Capacity
Year 2019						
U.S. Total	78	18,197.2	32	5,629.0	46	12,568.2
Coal	1	350.0	4	474.9	-3	-124.9
Petroleum	--	--	3	6.0	-3	-6.0
Natural Gas	54	12,195.7	22	3,857.1	32	8,338.6
Other Gases	2	400.0	--	--	2	400.0
Nuclear	2	2,200.0	2	1,290.0	--	910.0
Hydroelectric Conventional	1	122.0	--	--	1	122.0
Wind	8	1,947.0	--	--	8	1,947.0
Solar Thermal and Photovoltaic	6	754.0	1	1.0	5	753.0
Wood and Wood-Derived Fuels	--	--	--	--	--	--
Geothermal	3	135.0	--	--	3	135.0
Other Biomass	--	--	--	--	--	--
Hydroelectric Pumped Storage	--	--	--	--	--	--
Other Energy Sources	1	93.5	--	--	1	93.5
Year 2020						
U.S. Total	43	10,923.9	49	4,866.4	-6	6,057.5
Coal	1	275.0	12	2,036.0	-11	-1,761.0
Petroleum	--	--	3	25.3	-3	-25.3
Natural Gas	23	6,829.5	23	2,804.0	--	4,025.5
Other Gases	--	--	--	--	--	--
Nuclear	2	2,200.0	--	--	2	2,200.0
Hydroelectric Conventional	--	--	--	--	--	--
Wind	2	1,163.0	--	--	2	1,163.0
Solar Thermal and Photovoltaic	11	303.7	--	--	11	303.7
Wood and Wood-Derived Fuels	--	--	--	--	--	--
Geothermal	3	151.9	--	--	3	151.9
Other Biomass	1	0.8	11	1.1	-10	-0.3
Hydroelectric Pumped Storage	--	--	--	--	--	--
Other Energy Sources	--	--	--	--	--	--
Years 2016-2020						
U.S. Total	1,341	110,832.8	336	34,406.9	1,005	76,425.9
Coal	5	752.0	93	16,943.9	-88	-16,191.9
Petroleum	22	50.3	52	1,101.2	-30	-1,050.9
Natural Gas	395	65,095.4	114	10,223.0	281	54,872.4
Other Gases	3	403.0	--	--	3	403.0
Nuclear	5	5,522.0	7	5,488.9	-2	33.1
Hydroelectric Conventional	63	950.2	24	435.1	39	515.1
Wind	184	22,603.0	6	59.2	178	22,543.8
Solar Thermal and Photovoltaic	565	14,494.5	2	1.5	563	14,493.0
Wood and Wood-Derived Fuels	4	204.5	4	45.1	--	159.4
Geothermal	7	311.9	4	90.0	3	221.9
Other Biomass	66	187.5	30	19.0	36	168.5
Hydroelectric Pumped Storage	--	--	--	--	--	--
Other Energy Sources	22	258.5	--	--	22	258.5

Notes: These data reflect plans as of December 31, 2015

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

Petroleum includes distillate fuel oil (all diesel and No. 1, No. 2, and No. 4 fuel oils), residual fuel oil (No. 5 and No. 6 fuel oils and bunker C fuel oil), jet fuel, kerosene, petroleum coke (converted to liquid petroleum, see Technical Notes for conversion methodology), waste oil, synthetic gas, and propane.

Other Gases also includes blast furnace gas.

Hydroelectric Conventional capacity includes conventional hydroelectric power excluding pumped storage facilities.

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 Biomass include municipal solid waste, landfill gas, sludge waste, agricultural byproducts, other biomass solids, other biomass liquids, and other biomass gases (including digester gases, methane, and other biomass gases).

Hydroelectric Conventional capacity includes conventional hydroelectric power excluding pumped storage facilities.

Other Energy Sources include batteries, hydrogen, purchased steam, sulfur, tire-derived fuels and other miscellaneous energy sources.

Capacity by energy source is based on the capacity associated with the energy source reported as the most predominant (primary) one, where more than one energy source is associated with a generator.

In the case of wind, solar and wave energy sites, the capacity for multiple generators is reported in a single generator record and is presented as a single generator in the generator count.

Source: U.S. Energy Information Administration, Form EIA-860, 'Annual Electric Generator Report.'

**Table 4.6. Utility-Scale Capacity Additions, Retirements and Changes by Energy Source, 2015 (Count, Megawatts)**

Energy Source	Generator Additions				Generator Retirements			
	Number of Generators	Generator Nameplate Capacity	Net Summer Capacity	Net Winter Capacity	Number of Generators	Generator Nameplate Capacity	Net Summer Capacity	Net Winter Capacity
Coal	2	5.5	4.7	4.7	111	16,581.4	14,802.2	15,032.5
Petroleum	27	44.9	42.9	43.1	65	1,364.6	1,260.8	1,405.7
Natural Gas	79	6,558.2	5,862.8	6,333.2	103	5,832.8	5,312.5	5,478.1
Other Gases	--	--	--	--	1	32.0	30.0	28.0
Nuclear	--	--	--	--	--	--	--	--
Hydroelectric Conventional	7	132.4	130.8	132.4	3	106.8	105.3	106.8
Wind	68	8,214.7	8,188.8	8,188.8	8	390.5	389.3	389.3
Solar Thermal and Photovoltaic	389	3,320.2	3,299.6	3,235.1	2	43.8	43.8	43.8
Wood and Wood-Derived Fuels	3	121.0	97.7	97.7	11	178.2	141.5	145.7
Geothermal	5	76.7	48.0	72.8	2	24.4	--	--
Other Biomass	35	137.9	123.9	129.1	27	108.4	90.1	90.2
Hydroelectric Pumped Storage	--	--	--	--	--	--	--	--
Other Energy Sources	11	142.5	141.1	141.3	3	3.0	3.0	3.0
Total	626	18,754.0	17,940.3	18,378.2	336	24,665.9	22,178.5	22,723.1

Energy Source	Other Changes to Existing Capacity		
	Generator Nameplate Capacity	Net Summer Capacity	Net Winter Capacity
Coal	-4,465.8	-4,576.8	-4,566.2
Petroleum	-3,256.8	-3,087.2	-3,004.5
Natural Gas	8,091.3	6,724.8	6,855.4
Other Gases	628.4	616.1	628.8
Nuclear	--	102.7	391.1
Hydroelectric Conventional	138.4	-38.6	-44.3
Wind	268.9	542.4	551.2
Solar Thermal and Photovoltaic	44.2	84.2	68.3
Wood and Wood-Derived Fuels	751.9	644.6	668.0
Geothermal	2.5	-20.8	-30.7
Other Biomass	-107.5	-75.8	-79.1
Hydroelectric Pumped Storage	-28.8	90.0	-5.0
Other Energy Sources	-1,367.0	-1,135.1	-1,163.1
Total	699.7	-129.5	269.9

Notes: Coal includes anthracite, bituminous, subbituminous, lignite, and waste coal, coal synfuel, refined coal, and coal-derived synthesis gas. Petroleum includes distillate fuel oil (all diesel and No. 1, No. 2, and No. 4 fuel oils), residual fuel oil (No. 5 and No. 6 fuel oils and bunker C fuel oil), jet fuel, kerosene, petroleum coke (converted to liquid petroleum, see Technical Notes for conversion methodology), waste oil, synthetic gas, and propane. Other Gases also includes blast furnace gas and other manufactured and waste gases derived from fossil fuels. Hydroelectric Conventional capacity includes conventional hydroelectric power excluding pumped storage facilities. 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 Biomass include municipal solid waste, landfill gas, sludge waste, agricultural byproducts, other biomass solids, other biomass liquids, and other biomass gases (including digester gases, methane, and other biomass gases). Other Energy Sources include batteries, hydrogen, purchased steam, sulfur, tire-derived fuels and other miscellaneous energy sources. Capacity by energy source is based on the capacity associated with the energy source reported as the most predominant (primary) one, where more than one energy source is associated with a generator. In the case of some wind, solar and wave energy sites, the capacity for multiple generators is reported in a single generator record and is presented as a single generator in the generator count. Other Changes to Existing Capacity reflect uprates, derates, repowerings, and changes to previously reported generator capacity. \* = Value is less than half of the smallest unit of measure.

Source: U.S. Energy Information Administration, Form EIA-860, 'Annual Electric Generator Report.'

Table 4.7.A. Net Summer Capacity of Utility Scale Units by Technology and by State, 2015 and 2014 (Megawatts)

Census Division and State	Renewable Sources		Fossil Fuels		Hydroelectric Pumped Storage		Other Energy Storage		Nuclear		All Other Sources		All Sources	
	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014
	New England	4,976.7	4,577.6	22,757.0	22,853.0	1,775.4	1,775.4	2.0	3.0	4,018.0	4,046.3	48.0	52.9	33,577.1
Connecticut	331.4	336.6	6,309.6	6,312.8	29.4	29.4	0.0	0.0	2,087.8	2,122.5	26.0	30.9	8,784.2	8,832.2
Maine	2,150.5	1,795.4	2,442.5	2,653.0	0.0	0.0	0.0	0.0	0.0	0.0	22.0	22.0	4,615.0	4,470.4
Massachusetts	963.0	909.9	9,843.0	9,791.2	1,746.0	1,746.0	2.0	3.0	682.3	677.6	0.0	0.0	13,236.3	13,127.7
New Hampshire	918.9	935.4	2,270.9	2,236.7	0.0	0.0	0.0	0.0	1,247.9	1,246.2	0.0	0.0	4,437.7	4,418.3
Rhode Island	57.3	50.3	1,791.3	1,759.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1,848.6	1,810.1
Vermont	555.6	550.0	99.7	99.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	655.3	649.5
Middle Atlantic	10,660.1	10,552.7	68,015.2	69,330.4	3,409.1	3,409.1	40.0	40.0	19,224.5	19,182.6	11.2	11.2	101,360.1	102,526.0
New Jersey	692.6	645.9	13,535.5	14,211.4	420.0	420.0	0.0	0.0	4,107.9	4,110.1	11.2	11.2	18,767.2	19,398.6
New York	7,114.9	7,047.2	26,310.1	26,499.3	1,406.1	1,406.1	20.0	20.0	5,397.6	5,431.5	0.0	0.0	40,248.7	40,404.1
Pennsylvania	2,852.6	2,859.6	28,169.6	28,619.7	1,583.0	1,583.0	20.0	20.0	9,719.0	9,641.0	0.0	0.0	42,344.2	42,723.3
East North Central	10,049.1	9,702.9	116,179.5	120,747.9	1,964.0	1,872.0	100.6	25.5	18,896.1	18,873.3	110.1	111.0	147,299.4	151,332.6
Illinois	3,977.0	3,717.9	29,893.2	29,442.1	0.0	0.0	72.6	1.5	11,589.6	11,564.1	0.0	1.0	45,532.4	44,726.6
Indiana	2,004.0	1,966.0	24,231.4	25,445.0	0.0	0.0	0.0	0.0	0.0	0.0	89.0	88.0	26,324.4	27,499.0
Michigan	2,253.5	2,146.7	21,868.5	22,433.3	1,964.0	1,872.0	0.0	0.0	3,976.5	3,982.0	0.0	0.9	30,062.5	30,434.9
Ohio	714.1	714.8	25,835.0	28,633.7	0.0	0.0	28.0	24.0	2,134.0	2,134.0	0.0	0.0	28,711.1	31,506.5
Wisconsin	1,100.5	1,157.5	14,351.4	14,793.8	0.0	0.0	0.0	0.0	1,196.0	1,193.2	21.1	21.1	16,669.0	17,165.6
West North Central	21,197.6	18,835.5	61,120.3	62,269.6	657.0	657.0	2.0	2.0	5,855.5	5,806.0	24.5	44.5	88,856.9	87,614.6
Iowa	6,302.3	5,727.5	9,950.1	10,157.7	0.0	0.0	0.0	0.0	601.4	601.4	0.0	20.0	16,853.8	16,506.6
Kansas	3,590.9	2,990.9	9,583.1	10,059.9	0.0	0.0	0.0	0.0	1,175.0	1,175.0	0.8	0.8	14,349.8	14,226.6
Minnesota	3,916.0	3,423.9	10,160.6	10,583.9	0.0	0.0	1.0	1.0	1,647.0	1,594.0	18.4	18.4	15,743.0	15,621.2
Missouri	1,032.2	1,050.8	18,883.6	18,887.8	657.0	657.0	1.0	1.0	1,190.0	1,193.0	0.0	0.0	21,763.8	21,789.6
Nebraska	1,178.9	1,105.4	6,237.1	6,384.4	0.0	0.0	0.0	0.0	1,242.1	1,242.6	0.0	0.0	8,658.1	8,732.4
North Dakota	2,741.5	2,279.0	4,615.5	4,505.6	0.0	0.0	0.0	0.0	0.0	0.0	5.3	5.3	7,362.3	6,789.9
South Dakota	2,435.8	2,258.0	1,690.3	1,690.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4,126.1	3,948.3
South Atlantic	14,039.5	12,847.4	157,964.9	162,622.3	7,905.2	7,905.2	76.5	34.0	24,578.6	24,559.1	509.7	970.7	205,074.4	208,938.7
Delaware	44.9	43.8	3,358.1	3,042.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3,403.0	3,086.2
District of Columbia	12.0	0.0	9.0	9.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21.0	9.0
Florida	1,425.5	1,310.5	53,289.6	53,780.8	0.0	0.0	0.0	0.0	3,572.0	3,572.0	348.7	776.7	58,635.8	59,440.0
Georgia	3,188.5	2,863.4	27,190.9	29,419.1	1,862.2	1,862.2	0.0	0.0	4,061.0	4,061.0	0.0	44.0	36,302.6	38,249.7
Maryland	1,007.0	955.5	9,681.7	9,600.2	0.0	0.0	11.0	0.0	1,707.8	1,707.8	0.0	0.0	12,407.5	12,263.5
North Carolina	3,928.4	3,258.5	22,021.3	22,005.4	86.0	86.0	0.0	0.0	5,113.6	5,094.1	161.0	54.0	31,310.3	30,498.0
South Carolina	1,790.4	1,779.5	11,635.2	11,772.3	2,716.0	2,716.0	0.0	0.0	6,556.2	6,556.2	0.0	0.0	22,697.8	22,824.0
Virginia	1,756.8	1,750.2	16,615.8	17,637.2	3,241.0	3,241.0	0.0	0.0	3,568.0	3,568.0	0.0	96.0	25,181.6	26,292.4
West Virginia	886.0	886.0	14,163.3	15,355.9	0.0	0.0	65.5	34.0	0.0	0.0	0.0	0.0	15,114.8	16,275.9
East South Central	8,012.4	7,953.8	67,273.3	70,314.0	1,616.3	1,616.3	0.0	0.0	9,868.1	9,875.6	1.4	159.7	86,771.5	89,919.4
Alabama	3,941.6	3,886.9	21,398.5	23,000.0	0.0	0.0	0.0	0.0	5,066.4	5,066.4	0.0	0.0	30,406.5	31,953.3
Kentucky	907.0	905.6	19,153.5	19,972.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20,060.5	20,877.8
Mississippi	274.7	274.7	14,407.4	14,247.4	0.0	0.0	0.0	0.0	1,401.0	1,408.5	1.4	159.7	16,084.5	16,090.3
Tennessee	2,889.1	2,886.6	12,313.9	13,094.4	1,616.3	1,616.3	0.0	0.0	3,400.7	3,400.7	0.0	0.0	20,220.0	20,998.0
West South Central	27,353.2	22,335.5	145,833.5	146,300.7	286.0	288.0	40.0	36.0	8,896.2	8,912.4	512.2	499.2	182,921.1	178,371.8
Arkansas	1,590.6	1,632.0	11,279.6	11,274.0	28.0	28.0	0.0	0.0	1,808.5	1,819.6	0.0	0.0	14,706.7	14,753.6
Louisiana	687.1	642.1	23,144.6	23,605.8	0.0	0.0	0.0	0.0	2,127.7	2,132.8	275.9	275.8	26,235.3	26,656.5
Oklahoma	5,941.7	4,718.9	18,635.4	19,069.3	258.0	260.0	0.0	0.0	0.0	0.0	0.0	0.0	24,835.1	24,048.2
Texas	19,133.8	15,342.5	92,773.9	92,351.6	0.0	0.0	40.0	36.0	4,960.0	4,960.0	236.3	223.4	117,144.0	112,913.5
Mountain	22,222.0	20,705.8	64,069.6	64,260.2	778.8	778.8	2.6	2.6	3,937.0	3,937.0	111.4	111.4	91,121.4	89,795.8
Arizona	4,541.4	4,401.2	19,382.4	19,694.4	216.3	216.3	0.0	0.0	3,937.0	3,937.0	0.0	0.0	28,077.1	28,248.9
Colorado	3,857.7	3,374.6	11,363.0	10,986.2	562.5	562.5	0.0	0.0	0.0	0.0	9.3	9.3	15,792.5	14,932.6
Idaho	3,776.1	3,776.1	1,157.5	1,152.9	0.0	0.0	0.0	0.0	0.0	0.0	14.8	14.8	4,948.4	4,943.8
Montana	3,414.1	3,397.3	2,722.2	2,888.7	0.0	0.0	0.0	0.0	0.0	0.0	44.0	44.0	6,180.3	6,330.0
Nevada	2,619.5	2,226.5	8,258.7	8,258.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10,878.2	10,485.2
New Mexico	1,464.4	1,148.6	6,936.9	6,920.8	0.0	0.0	2.6	2.6	0.0	0.0	0.0	0.0	8,403.9	8,072.0
Utah	834.4	667.1	7,462.4	7,626.4	0.0	0.0	0.0	0.0	0.0	0.0	31.8	31.8	8,328.6	8,325.3
Wyoming	1,714.4	1,714.4	6,786.5	6,732.1	0.0	0.0	0.0	0.0	0.0	0.0	11.5	11.5	8,512.4	8,458.0
Pacific Contiguous	62,953.6	61,714.2	51,152.1	51,630.6	4,183.3	4,183.3	16.5	8.0	3,398.0	3,377.0	106.3	566.3	121,809.8	121,479.4
California	26,181.1	25,022.8	42,484.6	43,052.5	3,869.3	3,869.3	10.5	8.0	2,240.0	2,240.0	106.3	453.6	74,891.8	74,646.2
Oregon	12,050.7	12,043.1	3,859.8	3,841.1	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	15,915.5	15,884.2
Washington	24,721.8	24,648.3	4,807.7	4,737.0	314.0	314.0	1.0	0.0	1,158.0	1,137.0	0.0	112.7	31,002.5	30,949.0
Pacific Noncontiguous	1,071.6	1,055.6	4,110.6	3,965.5	0.0	0.0	54.0	48.0	0.0	0.0	26.6	66.6	5,262.8	5,135.7
Alaska	508.7	502.7	2,053.4	1,894.5	0.0	0.0	27.0	27.0	0.0	0.0	0.0	40.0	2,589.1	2,464.2
Hawaii	562.9	552.9	2,057.2	2,071.0	0.0	0.0	27.0	21.0	0.0	0.0	26.6	26.6	2,673.7	2,671.5
U.S. Total	182,535.8	170,281.0	758,476.0	774,294.2	22,575.1	22,485.1	334.2	199.1	98,672.0	98,569.3	1,461.4	2,593.5	1,064,054.5	1,068,422.2

NM = Not meaningful due to large relative standard error.  
Values are final.

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 4.7.B. Net Summer Capacity Using Primarily Renewable Energy Sources and by State, 2015 and 2014 (Megawatts)

Census Division and State	Summer Capacity at Utility Scale Facilities														Distributed Capacity Estimated Distributed Solar Photovoltaic Capacity		Summer Capacity From Utility Scale Facilities and Distributed Capacity			
	Wind		Solar Photovoltaic		Solar Thermal		Conventional Hydroelectric		Biomass Sources		Geothermal		Total Renewable Sources		Year 2015	Year 2014	Estimated Total Solar Photovoltaic Capacity		Estimated Total Solar Capacity	
	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014			Year 2015	Year 2014	Year 2015	Year 2014
New England	994.1	808.2	386.6	328.1	0.0	0.0	1,948.8	1,965.8	1,647.2	1,475.5	0.0	0.0	4,976.7	4,577.6	1,034.0	701.4	1,420.6	1,029.5	1,420.6	1,029.5
Connecticut	0.0	0.0	10.0	10.0	0.0	0.0	122.2	122.2	199.2	204.4	0.0	0.0	331.4	336.6	180.8	105.7	190.8	115.7	190.8	115.7
Maine	612.8	430.6	0.0	0.0	0.0	0.0	728.9	733.0	808.8	631.8	0.0	0.0	2,150.5	1,795.4	16.6	10.8	16.6	10.8	16.6	10.8
Massachusetts	82.6	82.6	334.0	281.0	0.0	0.0	263.1	263.0	283.3	283.3	0.0	0.0	963.0	909.9	750.3	536.9	1,084.3	817.9	1,084.3	817.9
New Hampshire	171.0	171.0	0.0	0.0	0.0	0.0	504.8	521.3	243.1	243.1	0.0	0.0	918.9	935.4	25.5	12.2	25.5	12.2	25.5	12.2
Rhode Island	7.5	3.8	10.2	6.9	0.0	0.0	2.7	2.7	36.9	36.9	0.0	0.0	57.3	50.3	10.1	7.7	20.3	14.6	20.3	14.6
Vermont	120.2	120.2	32.4	30.2	0.0	0.0	327.1	323.6	75.9	76.0	0.0	0.0	555.6	550.0	50.7	28.2	83.1	58.4	83.1	58.4
Middle Atlantic	3,088.1	3,098.5	566.9	489.6	0.0	0.0	5,623.5	5,618.8	1,381.6	1,345.8	0.0	0.0	10,660.1	10,552.7	1,743.8	1,410.8	2,310.7	1,900.4	2,310.7	1,900.4
New Jersey	7.6	7.6	443.6	395.2	0.0	0.0	12.3	12.3	229.1	230.8	0.0	0.0	692.6	645.9	1,026.4	917.2	1,470.0	1,312.4	1,470.0	1,312.4
New York	1,747.0	1,747.0	81.1	52.3	0.0	0.0	4,711.6	4,713.1	575.2	534.8	0.0	0.0	7,114.9	7,047.2	536.7	321.6	617.8	373.9	617.8	373.9
Pennsylvania	1,333.5	1,343.9	42.2	42.1	0.0	0.0	899.6	893.4	577.3	580.2	0.0	0.0	2,852.6	2,859.6	180.6	172.1	222.8	214.2	222.8	214.2
East North Central	7,662.6	7,382.4	207.9	159.9	0.0	0.0	910.3	918.2	1,268.3	1,242.4	0.0	0.0	10,049.1	9,702.9	144.6	125.8	352.5	285.7	352.5	285.7
Illinois	3,799.8	3,526.8	32.8	31.9	0.0	0.0	34.1	34.1	110.3	125.1	0.0	0.0	3,977.0	3,717.9	19.0	15.8	51.8	47.7	51.8	47.7
Indiana	1,739.7	1,739.7	129.4	91.1	0.0	0.0	60.4	60.4	74.5	74.8	0.0	0.0	2,004.0	1,966.0	7.5	6.7	136.9	97.8	136.9	97.8
Michigan	1,360.1	1,360.1	2.0	0.0	0.0	0.0	330.9	333.1	560.5	453.5	0.0	0.0	2,253.5	2,146.7	27.7	25.8	29.7	25.8	29.7	25.8
Ohio	431.6	424.1	42.7	35.9	0.0	0.0	101.9	101.9	137.9	152.9	0.0	0.0	714.1	714.8	69.9	60.1	112.6	96.0	112.6	96.0
Wisconsin	331.4	331.7	1.0	1.0	0.0	0.0	383.0	388.7	385.1	436.1	0.0	0.0	1,100.5	1,157.5	20.6	17.4	21.6	18.4	21.6	18.4
West North Central	17,352.1	15,008.5	16.5	9.4	0.0	0.0	3,278.1	3,300.8	550.9	516.8	0.0	0.0	21,197.6	18,835.5	151.4	129.7	167.9	139.1	167.9	139.1
Iowa	6,134.2	5,562.2	0.0	0.0	0.0	0.0	144.9	144.9	23.2	20.4	0.0	0.0	6,302.3	5,727.5	31.4	23.7	31.4	23.7	31.4	23.7
Kansas	3,573.9	2,968.9	1.0	0.0	0.0	0.0	7.0	7.0	9.0	15.0	0.0	0.0	3,590.9	2,990.9	3.1	2.3	4.1	2.3	4.1	2.3
Minnesota	3,240.7	2,787.8	4.0	1.7	0.0	0.0	194.6	195.0	476.7	439.4	0.0	0.0	3,916.0	3,423.9	20.0	16.2	24.0	17.9	24.0	17.9
Missouri	458.5	458.5	11.5	7.7	0.0	0.0	545.7	568.1	16.5	16.5	0.0	0.0	1,032.2	1,050.8	95.4	86.1	106.9	93.8	106.9	93.8
Nebraska	885.3	811.9	0.0	0.0	0.0	0.0	277.9	277.8	15.7	15.7	0.0	0.0	1,178.9	1,105.4	0.9	0.8	0.9	0.8	0.9	0.8
North Dakota	2,221.7	1,759.2	0.0	0.0	0.0	0.0	510.0	510.0	9.8	9.8	0.0	0.0	2,741.5	2,279.0	0.2	0.2	0.2	0.2	0.2	0.2
South Dakota	837.8	660.0	0.0	0.0	0.0	0.0	1,598.0	1,598.0	0.0	0.0	0.0	0.0	2,435.8	2,258.0	0.3	0.3	0.3	0.3	0.3	0.3
South Atlantic	775.3	745.3	1,881.5	910.0	0.0	0.0	7,207.7	7,198.0	4,175.0	3,994.1	0.0	0.0	14,039.5	12,847.4	664.2	463.2	2,545.7	1,373.2	2,545.7	1,373.2
Delaware	2.0	2.0	30.7	29.6	0.0	0.0	0.0	0.0	12.2	12.2	0.0	0.0	44.9	43.8	55.2	46.9	85.9	76.5	85.9	76.5
District of Columbia	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.0	0.0	0.0	0.0	12.0	0.0	20.4	20.1	20.4	20.1	20.4	20.1
Florida	0.0	0.0	82.4	72.9	0.0	0.0	54.5	54.5	1,288.6	1,183.1	0.0	0.0	1,425.5	1,310.5	105.2	75.9	187.6	148.8	187.6	148.8
Georgia	0.0	0.0	245.2	68.6	0.0	0.0	2,047.5	2,047.6	895.8	747.2	0.0	0.0	3,188.5	2,863.4	NM	58.4	NM	127.0	NM	NM
Maryland	190.0	160.0	83.9	60.4	0.0	0.0	590.0	590.0	143.1	145.1	0.0	0.0	1,007.0	955.5	320.3	183.0	404.2	243.4	404.2	243.4
North Carolina	0.0	0.0	1,436.8	676.0	0.0	0.0	2,004.1	1,999.1	487.5	583.4	0.0	0.0	3,928.4	3,258.5	69.3	58.1	1,506.1	734.1	1,506.1	734.1
South Carolina	0.0	0.0	2.5	2.5	0.0	0.0	1,345.1	1,340.3	442.8	436.7	0.0	0.0	1,790.4	1,779.5	5.7	3.0	8.2	5.5	8.2	5.5
Virginia	0.0	0.0	866.0	866.0	0.0	0.0	866.0	866.0	890.8	884.2	0.0	0.0	1,756.8	1,750.2	22.5	15.2	22.5	15.2	22.5	15.2
West Virginia	583.3	583.3	0.0	0.0	0.0	0.0	300.5	300.5	2.2	2.2	0.0	0.0	886.0	886.0	3.2	2.6	3.2	2.6	3.2	2.6
East South Central	29.1	29.1	45.2	45.2	0.0	0.0	6,726.9	6,722.4	1,211.2	1,157.1	0.0	0.0	8,012.4	7,953.8	49.2	48.4	94.4	93.6	94.4	93.6
Alabama	0.0	0.0	0.0	0.0	0.0	0.0	3,271.0	3,271.0	670.6	615.9	0.0	0.0	3,941.6	3,886.9	2.0	1.9	2.0	1.9	2.0	1.9
Kentucky	0.0	0.0	0.0	0.0	0.0	0.0	837.3	835.3	69.7	70.3	0.0	0.0	907.0	905.6	9.2	8.3	9.2	8.3	9.2	8.3
Mississippi	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	274.7	274.7	0.0	0.0	274.7	274.7	1.1	1.3	1.1	1.3	1.1	1.3
Tennessee	29.1	29.1	45.2	45.2	0.0	0.0	2,618.6	2,616.1	196.2	196.2	0.0	0.0	2,889.1	2,886.6	36.9	36.9	82.1	82.1	82.1	82.1
West South Central	22,659.3	17,773.6	332.4	185.7	0.0	0.0	2,988.5	3,049.6	1,373.0	1,326.6	0.0	0.0	27,353.2	22,335.5	261.7	193.3	594.1	379.0	594.1	379.0
Arkansas	0.0	0.0	12.0	0.0	0.0	0.0	1,266.2	1,323.6	312.4	308.4	0.0	0.0	1,590.6	1,632.0	3.8	3.2	15.8	3.2	15.8	3.2
Louisiana	0.0	0.0	0.0	0.0	0.0	0.0	192.0	192.0	495.1	450.1	0.0	0.0	687.1	642.1	108.7	77.3	108.7	77.3	108.7	77.3
Oklahoma	5,001.4	3,779.5	2.5	0.0	0.0	0.0	861.6	863.2	76.2	76.2	0.0	0.0	5,941.7	4,718.9	2.0	1.6	4.5	1.6	4.5	1.6
Texas	17,657.9	13,994.1	317.9	185.7	0.0	0.0	668.7	670.8	489.3	491.9	0.0	0.0	19,133.8	15,342.5	147.2	111.1	465.1	296.8	465.1	296.8
Mountain	7,789.3	7,074.6	2,677.1	2,030.4	473.9	363.9	10,560.5	10,560.3	176.4	178.2	544.8	498.4	22,222.0	20,705.8	1,311.9	990.0	3,989.0	3,020.4	4,462.9	3,384.3
Arizona	267.3	237.3	1,227.1	1,112.9	295.4	295.4	2,720.9	2,720.9	30.7	34.7	0.0	0.0	4,541.4	4,401.2	769.0	615.3	1,996.1	1,728.2	2,291.5	2,023.6
Colorado	2,961.8	2,543.9	192.0	127.0	0.0	0.0	676.5	676.3	27.4	27.4	0.0	0.0	3,857.7	3,374.6	250.7	212.6	442.7	339.6	442.7	339.6
Idaho	962.7	962.7	0.0	0.0	0.0	0.0	2,707.7	2,707.7	95.7	95.7	10.0	10.0	3,776.1	3,776.1	4.6	3.0	4.6	3.0	4.6	3.0
Montana	653.5	636.7	0.0	0.0	0.0	0.0	2,757.6	2,757.6	3.0	3.0	0.0	0.0	3,414.1	3,397.3	6.2	8.3	6.2	8.3	6.2	8.3
Nevada	150.0	150.0	776.2	539.6	178.5	68.5	1,051.4	1,051.4	3.2	3.2	460.2	413.8	2,619.5	2,226.5	151.4	59.1	927.6	598.7	1,106.1	667.2
New Mexico	1,062.3	812.3	315.4	249.6	0.0	0.0	82.9	82.9	2.2	2.2	1.6	1.6	1,464.4	1,148.6	76.9	63.8	392.3	313.4	392.3	313.4
Utah	324.4	324.4	166.4	1.3	0.0	0.0	256.4	256.4	14.2	12.0	73.0	73.0	834.4	667.1	51.3	26.2	217.7	27.5	217.7	27.5
Wyoming	1,407.3	1,407.3	0.0	0.0	0.0	0.0	307.1	307.1	0.0	0.0	0.0	0.0	1,714.4	1,714.4	NM	1.6	NM	1.6	NM	NM
Pacific Contiguous	11,957.3	12,045.7	5,747.1	4,466.1	1,284.0	1,302.8	39,953.8	39,882.7	2,057.7	2,044.0	1,953.7	1,972.9	62,953.6	61,714.2	4,025.9	2,937.2	9,773.0	7,403.3	11,057.0	8,706.1
California	5,726.8	5,815.2	5,727.7	4,451.7	1,284.0	1,302.8	10,186.2	10,175.1	1,322.2	1,322.8	1,934.2	1,955.2	26,181.1	25,022.8	3,900.0	2,842.6	9,627.7	7,294.3	10,911.7	8,597.1
Oregon	3,157.4	3,157.4	18.9	13.9	0.0	0.0	8,525.4	8,522.9	329.5	331.2	19.5	17.7	12,050.7	12,043.1	71.3	61.1	90.2	75.0	90.2	75.0
Washington	3,073.1	3,073.1	0.5	0.5	0.0	0.0	21,242.2	21,184.7	406.0	390.0	0.0	0.0	24,721.8	24,648.3	54.6	33.5	55.1	34.0	55.1	34.0
Pacific Noncontiguous	266																			

Table 4.7.C. Net Summer Capacity of Utility Scale Units Using Primarily Fossil Fuels and by State, 2015 and 2014 (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	
	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014
New England	11,893.0	11,742.0	1,115.5	1,110.1	644.0	963.4	1,988.3	2,076.8	0.0	0.0	7,116.2	6,960.7	0.0	0.0	22,757.0	22,853.0
Connecticut	2,547.5	2,504.6	479.3	482.2	419.1	64.7	383.4	383.4	0.0	0.0	2,480.3	2,877.9	0.0	0.0	6,309.6	6,312.8
Maine	1,250.0	1,250.0	297.1	297.2	14.5	119.0	0.0	85.0	0.0	0.0	880.9	901.8	0.0	0.0	2,442.5	2,653.0
Massachusetts	5,098.6	5,054.2	335.3	326.9	198.0	769.3	1,071.0	1,074.5	0.0	0.0	3,140.1	2,566.3	0.0	0.0	9,843.0	9,791.2
New Hampshire	1,235.2	1,201.0	3.8	3.8	0.0	0.0	533.9	533.9	0.0	0.0	498.0	498.0	0.0	0.0	2,270.9	2,236.7
Rhode Island	1,761.7	1,732.2	0.0	0.0	12.4	10.4	0.0	0.0	0.0	0.0	17.2	17.2	0.0	0.0	1,791.3	1,759.8
Vermont	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	99.7	99.5	0.0	0.0	99.7	99.5
Middle Atlantic	24,621.1	23,322.4	7,599.7	8,808.6	13,207.8	11,069.0	16,993.0	18,582.4	78.6	11.6	5,391.2	7,436.0	123.8	100.4	68,015.2	69,330.4
New Jersey	8,047.5	6,620.9	2,817.1	4,081.5	1,109.2	514.6	1,245.0	1,870.0	11.6	11.6	281.7	1,112.8	23.4	0.0	13,535.5	14,211.4
New York	8,069.1	8,250.0	3,105.2	3,048.1	9,522.0	8,758.8	2,129.6	2,498.9	0.0	0.0	3,484.2	3,943.5	0.0	0.0	26,310.1	26,499.3
Pennsylvania	8,504.5	8,451.5	1,677.4	1,679.0	2,576.6	1,795.6	13,618.4	14,213.5	67.0	0.0	1,625.3	2,379.7	100.4	100.4	28,169.6	28,619.7
East North Central	17,001.6	16,384.0	25,525.3	25,665.9	3,283.4	3,656.7	65,964.6	70,837.2	521.6	521.6	2,739.9	2,747.8	1,143.1	934.7	116,179.5	120,747.9
Illinois	3,543.0	2,972.4	10,164.4	10,183.3	278.2	231.6	15,109.6	15,254.9	0.0	0.0	680.3	682.2	117.7	117.7	29,893.2	29,442.1
Indiana	2,480.2	2,480.2	3,142.6	3,142.6	88.1	76.0	17,384.9	18,599.0	274.0	274.0	273.3	273.3	588.3	599.9	24,231.4	25,445.0
Michigan	4,296.5	4,291.6	3,428.5	3,556.8	2,465.8	3,051.3	10,837.5	10,948.4	47.2	47.2	543.0	538.0	250.0	0.0	21,868.5	22,433.3
Ohio	4,041.0	3,974.6	5,427.7	5,427.7	131.4	131.4	15,259.9	18,084.0	142.0	142.0	645.9	656.9	187.1	217.1	25,835.0	28,633.7
Wisconsin	2,640.9	2,665.2	3,362.1	3,355.5	319.9	166.4	7,372.7	7,950.9	58.4	58.4	597.4	597.4	0.0	0.0	14,351.4	14,793.8
West North Central	5,917.9	5,731.8	11,393.8	11,494.8	3,617.1	3,315.9	36,055.1	37,602.3	32.0	32.0	4,096.0	4,084.4	8.4	8.4	61,120.3	62,269.6
Iowa	1,125.8	1,111.0	1,105.6	1,104.4	467.4	344.2	6,205.9	6,563.0	32.0	32.0	1,013.4	1,003.1	0.0	0.0	9,950.1	10,157.7
Kansas	149.0	0.0	2,184.8	2,363.8	2,024.0	2,061.0	4,687.2	5,097.1	0.0	0.0	538.1	538.0	0.0	0.0	9,583.1	10,059.9
Minnesota	2,173.2	2,158.2	2,534.1	2,575.7	353.8	263.9	4,300.1	4,788.1	0.0	0.0	799.4	798.0	0.0	0.0	10,160.6	10,583.9
Missouri	1,837.3	1,830.0	3,395.2	3,355.4	349.9	230.8	12,156.5	12,326.6	0.0	0.0	1,144.7	1,145.0	0.0	0.0	18,883.6	18,887.8
Nebraska	342.6	342.6	1,151.5	1,152.9	413.3	407.3	4,016.0	4,167.9	0.0	0.0	313.7	313.7	0.0	0.0	6,237.1	6,384.4
North Dakota	0.0	0.0	328.0	248.0	0.0	0.0	4,214.4	4,184.6	0.0	0.0	64.7	64.6	8.4	8.4	4,615.5	4,505.6
South Dakota	290.0	290.0	694.6	694.6	8.7	8.7	475.0	475.0	0.0	0.0	222.0	222.0	0.0	0.0	1,690.3	1,690.3
South Atlantic	48,550.2	47,131.3	31,110.1	31,856.0	7,072.8	4,937.4	59,031.6	63,864.2	83.8	669.8	11,981.4	14,028.6	135.0	135.0	157,964.9	162,622.3
Delaware	1,512.0	1,196.0	311.0	311.0	876.0	876.0	410.0	410.0	0.0	0.0	114.1	114.4	135.0	135.0	3,358.1	3,042.4
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	28,245.6	25,257.6	7,481.4	8,404.0	3,034.7	2,792.3	10,591.0	10,177.0	0.0	586.0	5,936.9	6,563.9	0.0	0.0	53,289.6	53,780.8
Georgia	7,953.2	7,961.8	7,857.0	7,823.4	789.4	115.0	9,508.5	12,314.4	83.8	83.8	999.0	1,120.7	0.0	0.0	27,190.9	29,419.1
Maryland	250.0	250.0	1,581.0	1,470.9	1,489.8	325.8	4,712.0	4,739.0	0.0	0.0	1,648.9	2,814.5	0.0	0.0	9,681.7	9,600.2
North Carolina	4,766.0	4,738.5	6,049.7	6,031.7	0.0	0.0	10,802.8	10,832.8	0.0	0.0	402.8	402.4	0.0	0.0	22,021.3	22,005.4
South Carolina	2,409.0	2,409.0	2,855.6	2,855.6	298.2	270.8	5,547.0	5,575.5	0.0	0.0	525.4	661.4	0.0	0.0	11,635.2	11,772.3
Virginia	5,414.4	5,318.4	3,894.1	3,879.1	584.7	557.5	4,379.3	5,541.9	0.0	0.0	2,343.3	2,340.3	0.0	0.0	16,615.8	17,637.2
West Virginia	0.0	0.0	1,071.3	1,071.3	0.0	0.0	13,081.0	14,273.6	0.0	0.0	11.0	11.0	0.0	0.0	14,163.3	15,355.9
East South Central	19,040.8	18,222.1	13,003.3	12,887.5	3,887.0	2,744.1	31,025.4	36,209.7	0.0	0.0	217.0	150.8	99.8	99.8	67,273.3	70,314.0
Alabama	9,397.8	9,391.3	2,530.6	2,530.6	636.3	189.3	8,691.4	10,746.4	0.0	0.0	42.6	42.6	99.8	99.8	21,398.5	23,000.0
Kentucky	663.3	0.0	4,976.6	4,870.6	0.0	0.0	13,436.7	15,089.7	0.0	0.0	76.9	11.9	0.0	0.0	19,153.5	19,972.2
Mississippi	7,576.7	7,427.8	1,718.9	1,716.9	3,247.5	2,533.6	1,820.0	2,526.0	0.0	0.0	44.3	43.1	0.0	0.0	14,407.4	14,247.4
Tennessee	1,403.0	1,403.0	3,777.2	3,769.4	3.2	21.2	7,077.3	7,847.6	0.0	0.0	53.2	53.2	0.0	0.0	12,313.9	13,094.4
West South Central	58,937.1	58,639.7	12,809.9	12,267.3	34,865.6	36,052.4	37,420.5	37,921.9	959.3	903.2	181.3	185.4	659.8	330.8	145,833.5	146,300.7
Arkansas	4,602.9	4,597.3	725.8	729.3	816.3	810.7	5,122.4	5,124.5	0.0	0.0	12.2	12.2	0.0	0.0	11,279.6	11,274.0
Louisiana	7,525.4	7,548.1	2,358.1	2,649.8	9,057.6	9,022.4	2,855.1	3,418.6	895.5	892.6	45.5	49.1	407.4	25.2	23,144.6	23,605.8
Oklahoma	6,720.2	7,161.8	1,292.2	1,194.7	5,222.1	5,381.1	5,326.5	5,257.3	0.0	0.0	74.4	74.4	0.0	0.0	18,635.4	19,069.3
Texas	40,088.6	39,332.5	8,433.8	7,693.5	19,769.6	20,838.2	24,116.5	24,121.5	63.8	10.6	49.2	49.7	252.4	305.6	92,773.9	92,351.6
Mountain	22,487.3	21,945.4	8,926.6	8,921.5	3,178.7	3,213.4	28,942.6	29,670.0	52.0	52.0	370.8	370.8	111.6	87.1	64,069.6	64,260.2
Arizona	9,866.7	9,888.7	2,367.6	2,367.6	1,147.6	1,177.6	5,910.0	6,170.0	0.0	0.0	90.5	90.5	0.0	0.0	19,382.4	19,694.4
Colorado	3,240.5	2,651.7	2,535.3	2,535.3	329.0	349.0	5,089.8	5,281.8	0.0	0.0	168.4	168.4	0.0	0.0	11,363.0	10,986.2
Idaho	568.5	568.5	562.1	567.5	4.3	4.3	17.2	17.2	0.0	0.0	5.4	5.4	0.0	0.0	1,157.5	1,152.9
Montana	0.0	0.0	321.6	362.1	54.0	54.0	2,293.1	2,419.1	52.0	52.0	0.0	0.0	1.5	1.5	2,722.2	2,888.7
Nevada	5,418.6	5,418.6	1,385.6	1,385.6	451.1	451.1	997.4	997.4	0.0	0.0	6.0	6.0	0.0	0.0	8,258.7	8,258.7
New Mexico	1,469.0	1,493.9	1,080.6	1,039.6	849.4	849.4	3,471.0	3,471.0	0.0	0.0	66.9	66.9	0.0	0.0	6,936.9	6,920.8
Utah	1,830.0	1,830.0	520.2	330.4	322.4	4,754.0	4,926.0	0.0	0.0	27.8	27.8	0.0	0.0	7,462.4	7,626.4	
Wyoming	94.0	94.0	153.6	153.6	12.9	5.6	6,410.1	6,387.5	0.0	0.0	5.8	5.8	110.1	85.6	6,786.5	6,732.1
Pacific Contiguous	25,151.4	24,981.9	11,447.0	11,371.4	11,890.1	12,611.3	2,015.0	2,043.6	17.0	0.0	422.3	410.7	209.3	211.7	51,152.1	51,630.6
California	19,571.3	19,352.3	10,551.8	10,596.4	11,638.1	12,378.0	90.0	118.6	17.0	0.0	407.1	395.5	209.3	211.7	42,484.6	43,052.5
Oregon	2,916.6	2,916.6	133.8	133.8	224.4	205.7	585.0	585.0	0.0	0.0	0.0	0.0	0.0	0.0	3,859.8	3,841.1
Washington	2,663.5	2,713.0	761.4	641.2	27.6	27.6	1,340.0	1,340.0	0.0	0.0	15.2	15.2	0.0	0.0	4,807.7	4,737.0
Pacific Noncontiguous	418.0	565.2	654.3	527.8	175.0	10.0	283.8	286.1	0.0	0.0	2,569.9	2,570.0	9.6	6.4	4,110.6	3,965.5
Alaska	418.0	565.2	654.3	527.8	175.0	10.0	103.8	106.1	0.0	0.0	702.3	685.4	0.0	0.0		

**Table 4.8.A. Capacity Factors for Utility Scale Generators Primarily Using Fossil Fuels, January 2013-December 2015**

Period	Coal	Natural Gas				Petroleum			
		Natural Gas Fired Combined Cycle	Natural Gas Fired Combustion Turbine	Steam Turbine	Internal Combustion Engine	Steam Turbine	Petroleum Liquids Fired Combustion Turbine	Internal Combustion Engine	
Annual Factors									
2013	59.7%	48.2%	4.9%	10.6%	6.1%	12.1%	0.8%	2.2%	
2014	61.0%	48.3%	5.2%	10.4%	8.5%	12.5%	1.1%	1.4%	
2015	54.7%	55.9%	6.9%	11.5%	8.9%	13.3%	1.1%	2.2%	
Year 2013									
January	61.2%	46.3%	3.6%	7.3%	4.6%	10.0%	0.7%	2.7%	
February	60.6%	46.7%	3.4%	6.7%	4.7%	9.7%	0.4%	2.0%	
March	57.7%	44.1%	4.0%	6.8%	5.7%	9.6%	0.3%	1.9%	
April	51.3%	40.4%	4.3%	7.3%	6.1%	11.6%	0.6%	2.4%	
May	52.9%	41.5%	4.5%	9.5%	5.2%	13.0%	0.7%	2.1%	
June	63.4%	50.9%	5.1%	14.7%	6.9%	15.4%	0.8%	1.7%	
July	67.9%	58.3%	8.5%	18.6%	8.4%	17.5%	2.1%	2.3%	
August	66.3%	60.2%	6.8%	17.6%	8.5%	14.4%	0.9%	2.2%	
September	61.2%	52.6%	5.6%	14.0%	6.7%	14.1%	1.3%	2.0%	
October	54.4%	45.4%	3.9%	8.5%	5.5%	12.7%	0.7%	2.0%	
November	56.2%	44.9%	3.9%	7.1%	4.5%	7.3%	0.6%	2.2%	
December	63.7%	47.1%	4.6%	8.5%	6.1%	10.2%	0.7%	2.7%	
Year 2014									
January	71.2%	47.2%	6.6%	10.0%	7.8%	19.5%	3.8%	2.3%	
February	71.9%	42.5%	4.7%	9.2%	8.7%	12.0%	0.9%	1.5%	
March	61.7%	39.7%	4.7%	7.2%	7.1%	13.7%	1.1%	1.4%	
April	51.1%	40.3%	3.8%	7.2%	7.9%	9.4%	0.5%	1.0%	
May	54.1%	45.0%	5.0%	9.8%	7.8%	10.2%	0.6%	1.6%	
June	64.8%	51.1%	5.4%	11.8%	7.6%	14.8%	0.9%	1.3%	
July	67.9%	57.7%	6.2%	15.2%	9.7%	15.0%	1.0%	1.5%	
August	67.5%	61.0%	6.6%	16.9%	11.0%	14.4%	1.3%	1.5%	
September	59.2%	55.4%	5.7%	12.7%	9.5%	13.5%	0.7%	1.4%	
October	50.7%	49.0%	5.2%	10.6%	8.8%	8.6%	0.7%	1.3%	
November	56.0%	43.7%	4.5%	7.6%	8.3%	7.7%	0.8%	1.2%	
December	56.6%	46.2%	4.1%	5.9%	7.2%	10.7%	0.6%	1.1%	
Year 2015									
January	61.3%	52.6%	4.4%	7.6%	5.2%	12.4%	0.6%	2.5%	
February	64.9%	52.2%	6.2%	9.9%	5.7%	22.8%	1.9%	3.1%	
March	50.3%	50.7%	5.2%	8.3%	8.5%	7.9%	0.6%	1.9%	
April	43.3%	47.9%	5.7%	9.4%	6.6%	12.0%	0.9%	2.2%	
May	49.8%	50.2%	6.7%	9.3%	8.7%	12.6%	1.1%	2.0%	
June	62.6%	61.5%	8.3%	13.7%	11.2%	12.0%	1.0%	2.0%	
July	66.8%	67.2%	10.7%	19.4%	12.3%	15.5%	1.3%	2.4%	
August	64.9%	66.9%	8.9%	19.0%	12.3%	14.8%	1.2%	2.4%	
September	58.7%	61.4%	8.2%	14.2%	9.8%	15.9%	1.2%	2.1%	
October	47.0%	53.6%	6.7%	10.5%	8.1%	14.5%	1.0%	2.1%	
November	43.9%	50.9%	7.0%	8.4%	8.6%	10.5%	1.9%	1.8%	
December	43.6%	54.6%	5.0%	8.5%	8.5%	9.7%	1.1%	2.0%	

Values are final.

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 4.8.B. Capacity Factors for Utility Scale Generators Not Primarily Using Fossil Fuels, January 2013-December 2015**

Period	Nuclear	Conventional Hydropower	Wind	Solar Photovoltaic	Solar Thermal	Landfill Gas and Municipal Solid Waste	Other Biomass Including Wood	Geothermal
Annual Factors								
2013	89.9%	38.9%	32.4%	NA	NA	68.9%	56.7%	73.6%
2014	91.7%	37.3%	34.0%	25.9%	19.8%	68.9%	58.9%	74.0%
2015	92.3%	35.8%	32.2%	25.8%	22.1%	68.7%	55.3%	74.3%
Year 2013								
January	93.9%	42.3%	33.5%	NA	NA	66.0%	56.5%	76.9%
February	90.3%	38.3%	35.4%	NA	NA	65.2%	56.0%	76.1%
March	83.4%	34.8%	35.9%	NA	NA	69.0%	55.4%	76.8%
April	77.6%	44.4%	41.1%	NA	NA	66.9%	44.8%	73.3%
May	83.3%	48.4%	37.0%	NA	NA	70.4%	50.5%	71.7%
June	93.1%	48.3%	32.4%	NA	NA	71.0%	54.8%	72.4%
July	95.6%	46.8%	25.3%	NA	NA	71.1%	58.2%	73.3%
August	96.7%	37.2%	22.0%	NA	NA	71.9%	64.8%	72.5%
September	92.2%	29.9%	27.4%	NA	NA	69.4%	61.1%	73.6%
October	85.7%	29.2%	31.0%	NA	NA	66.6%	57.9%	74.7%
November	91.0%	31.1%	37.0%	NA	NA	69.5%	61.0%	68.8%
December	96.6%	35.9%	31.3%	NA	NA	69.9%	59.0%	73.0%
Year 2014								
January	99.1%	36.7%	40.3%	NA	NA	68.1%	60.0%	74.0%
February	94.0%	32.6%	34.8%	NA	NA	68.3%	59.5%	73.3%
March	84.5%	40.7%	39.8%	NA	NA	69.6%	59.7%	73.5%
April	78.8%	44.5%	43.2%	NA	NA	69.9%	49.5%	74.6%
May	85.2%	44.6%	34.9%	NA	NA	70.6%	48.2%	73.2%
June	95.4%	44.8%	36.5%	NA	NA	70.8%	63.0%	73.4%
July	97.5%	41.3%	27.0%	NA	NA	73.1%	63.4%	72.5%
August	96.4%	33.7%	22.5%	30.9%	25.4%	71.1%	62.8%	73.0%
September	94.6%	28.2%	26.1%	30.7%	26.3%	68.9%	61.2%	74.2%
October	84.5%	29.2%	31.6%	26.5%	21.1%	64.4%	56.5%	73.9%
November	91.3%	32.6%	42.3%	22.3%	13.8%	66.1%	62.1%	77.3%
December	99.6%	37.8%	30.4%	15.1%	5.6%	65.4%	60.8%	75.5%
Year 2015								
January	101.3%	40.7%	31.2%	16.8%	5.0%	65.1%	57.2%	75.9%
February	95.8%	41.4%	34.1%	22.1%	14.5%	64.3%	60.0%	76.4%
March	88.0%	40.8%	31.4%	26.7%	22.6%	63.0%	53.4%	76.8%
April	84.3%	39.4%	37.5%	30.9%	30.5%	66.8%	47.3%	72.4%
May	89.8%	33.9%	34.8%	31.2%	27.0%	68.5%	48.4%	76.6%
June	96.4%	35.8%	27.9%	31.7%	32.2%	69.2%	56.7%	74.1%
July	97.3%	35.8%	27.4%	31.4%	31.1%	73.1%	59.9%	74.7%
August	98.6%	32.5%	25.8%	31.3%	32.3%	71.5%	61.6%	73.9%
September	93.6%	28.3%	28.1%	26.6%	27.1%	68.8%	56.1%	67.9%
October	82.5%	28.3%	31.6%	22.8%	16.5%	68.3%	48.8%	72.4%
November	84.8%	33.8%	39.0%	20.7%	16.9%	72.4%	55.8%	75.4%
December	94.9%	39.4%	37.4%	17.5%	9.5%	73.0%	58.3%	75.3%

Values are final. 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.'

**Table 4.9. Total Capacity of Distributed and Dispersed Generators by Technology Type, 2005 through 2015**

Year	Capacity (MW)										Number of Generators
	Internal Combustion	Combustion Turbine	Steam Turbine	Hydro	Wind	Photovoltaic	Storage	Other	Wind and Other	Total	
<b>Distributed Generators</b>											
2005	4,025.0	1,917.0	1,830.0	999.0	--	--	--	--	995.0	9,766.0	17,371
2006	3,646.0	1,298.0	2,582.0	806.0	--	--	--	--	1,081.0	9,411.0	5,044
2007	4,624.0	1,990.0	3,596.0	1,051.0	--	--	--	--	1,441.0	12,702.0	7,103
2008	5,112.0	1,949.0	3,060.0	1,154.0	--	--	--	--	1,588.0	12,863.0	9,591
2009	4,339.0	4,147.0	4,621.0	1,166.0	--	--	--	--	1,729.0	16,002.0	13,006
2010	886.8	186.0	109.9	97.4	98.9	236.3	--	372.7	--	1,988.0	15,630
2011	791.1	115.5	64.9	97.9	36.7	314.8	0.2	264.3	--	1,685.4	20,941
2012	756.1	105.8	60.2	119.9	252.9	543.7	15.2	324.4	--	1,990.6	28,252
2013	981.3	106.4	31.1	103.9	78.3	556.0	2.0	89.0	--	1,947.4	196,141
2014	813.8	81.3	12.9	108.2	33.7	692.0	7.2	101.0	--	1,855.5	203,099
2015	797.6	49.3	10.5	121.2	26.7	876.4	24.4	88.4	--	1,994.6	215,825
<b>Dispersed Generators</b>											
2005	4,290.0	335.0	126.0	2.0	--	--	--	--	13.0	4,766.0	11,373
2006	6,524.0	346.0	157.0	3.0	--	--	--	--	8.0	7,037.0	9,536
2007	7,866.0	268.0	102.0	31.0	--	--	--	--	30.0	8,297.0	11,057
2008	9,335.0	86.0	248.0	34.0	--	--	--	--	70.0	9,773.0	12,262
2009	9,751.0	329.0	204.0	81.0	--	--	--	--	108.0	10,475.0	13,928
2010	2,771.2	64.4	13.8	8.4	6.3	95.2	7.0	17.9	--	2,984.2	16,874
2011	2,916.9	40.3	14.6	6.0	3.2	2.7	8.0	7.9	--	2,999.6	14,123
2012	3,180.9	49.8	--	2.2	3.1	8.5	7.7	13.5	--	3,265.5	14,557
2013	3,249.7	159.8	17.0	1.9	4.5	21.6	8.7	25.8	--	3,489.0	17,929
2014	3,479.3	169.7	16.7	0.7	3.7	14.3	6.6	5.7	--	3,696.8	22,599
2015	3,160.9	199.1	16.7	0.7	4.7	17.6	7.2	5.7	--	3,412.6	23,665
<b>Distributed and Dispersed Generators</b>											
2005	8,315.0	2,252.0	1,956.0	1,001.0	--	--	--	--	1,008.0	14,532.0	28,744
2006	10,170.0	1,644.0	2,739.0	809.0	--	--	--	--	1,089.0	16,448.0	14,580
2007	12,490.0	2,258.0	3,698.0	1,082.0	--	--	--	--	1,471.0	20,999.0	18,160
2008	14,447.0	2,035.0	3,308.0	1,188.0	--	--	--	--	1,658.0	22,636.0	21,853
2009	14,090.0	4,476.0	4,825.0	1,247.0	--	--	--	--	1,837.0	26,477.0	26,934
2010	3,658.0	250.4	123.7	105.8	105.2	331.5	7.0	390.6	--	4,972.2	32,504
2011	3,708.0	155.8	79.5	103.9	39.9	317.5	8.2	272.2	--	4,685.0	35,064
2012	3,937.0	155.6	60.2	122.1	256.0	552.2	22.9	337.9	--	5,256.1	42,809
2013	4,231.0	266.2	48.1	105.8	82.8	577.6	10.7	114.8	--	5,436.4	214,070
2014	4,293.1	251.0	29.6	108.9	37.5	706.3	13.8	106.7	--	5,552.2	225,698
2015	3,958.5	248.5	27.2	121.9	31.4	893.9	31.6	94.1	--	5,407.1	239,490

Starting in 2013, the residential sector is now included and all net metering units are excluded.

Distributed and Dispersed generator data in 2005 include a significant number of generators reported by one respondent, which may be for residential applications.

Prior to 2010, data contains generators over and under 1 MW, from 2010 forward, data contains only generators under 1 MW.

Distributed generators are commercial and industrial generators which are connected to the grid. Dispersed generators are commercial and industrial generators which are not connected to the grid. Both types may be installed at or near a customer's site, or at other locations. They may be owned by either the customers of the distribution utility or by the utility. Other includes generators for which technology is not specified.

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

Source: U.S. Energy Information Administration, Form EIA-861, "Annual Electric Power Industry Report."

**Table 4.10. Net Metering Customers and Capacity by Technology Type, by End Use Sector, 2005 through 2015**

Year	Capacity (MW)					Customers				
	Residential	Commercial	Industrial	Transportation	Total	Residential	Commercial	Industrial	Transportation	Total
<b>Historical Data</b>										
2005	N/A	N/A	N/A	N/A	N/A	19,244	1,565	337	--	21,146
2006	N/A	N/A	N/A	N/A	N/A	30,689	2,553	376	--	33,618
2007	N/A	N/A	N/A	N/A	N/A	44,450	3,513	391	--	48,354
2008	N/A	N/A	N/A	N/A	N/A	64,400	5,305	304	--	70,009
2009	N/A	N/A	N/A	N/A	N/A	88,205	7,365	919	--	96,489
<b>Photovoltaic</b>										
2010	697.890	517.861	243.051	--	1,458.802	137,618	11,897	1,225	--	150,740
2011	1,024.139	1,089.275	381.670	--	2,495.410	198,255	18,345	2,418	--	219,018
2012	1,542.226	1,741.821	395.328	--	3,679.630	294,437	27,611	1,317	--	323,365
2013	2,286.567	2,294.831	565.982	--	5,147.380	442,195	35,379	2,480	--	480,054
2014	3,452.987	2,933.122	710.719	--	7,096.828	642,276	43,335	3,131	--	688,742
2015	5,357.358	3,455.124	884.664	--	9,697.146	958,850	51,501	3,624	--	1,013,975
<b>Wind</b>										
2010	83.797	26.106	6.392	--	116.295	3,467	583	37	--	4,087
2011	28.063	44.373	9.932	--	82.368	4,456	905	50	--	5,411
2012	33.484	74.620	17.495	--	125.599	4,796	1,143	48	--	5,987
2013	38.987	92.818	14.659	--	146.464	5,265	1,308	92	--	6,665
2014	37.918	101.622	25.426	--	164.966	5,379	1,351	94	--	6,824
2015	34.893	103.086	29.137	--	167.116	5,387	1,434	109	--	6,930
<b>Other</b>										
2010	11.455	34.752	24.835	--	71.042	767	271	56	--	1,094
2011	5.030	49.010	56.681	--	110.721	807	242	100	--	1,149
2012	7.539	65.821	83.170	--	156.530	862	314	122	--	1,298
2013	6.785	80.405	80.568	--	167.758	598	331	169	--	1,098
2014	7.633	102.797	98.277	--	208.707	857	397	201	--	1,455
2015	7.873	116.382	116.780	--	241.035	821	445	249	--	1,515
<b>All Technologies</b>										
2010	793.142	578.719	274.278	--	1,646.139	141,852	12,751	1,318	--	155,921
2011	1,057.232	1,182.658	448.283	--	2,688.173	203,518	19,492	2,568	--	225,578
2012	1,583.249	1,882.262	495.993	--	3,961.504	300,095	29,068	1,487	--	330,650
2013	2,332.339	2,468.054	661.209	--	5,461.602	448,058	37,018	2,741	--	487,817
2014	3,498.538	3,137.541	834.422	--	7,470.501	648,512	45,083	3,426	--	697,021
2015	5,400.124	3,674.592	1,030.581	--	10,105.297	965,058	53,380	3,982	--	1,022,420

Starting in 2013, there is no maximum capacity on installed units.

Capacity and customer count was not collected by technology type before 2010.

N/A = Not Available.

Total customer count for the years 2007, 2009, and 2010 were revised based on requests from respondents.

Source: U.S. Energy Information Administration, Form EIA-861, "Annual Electric Power Industry Report."

**Table 4.11. Fuel-Switching Capacity of Operable Generators Reporting Natural Gas as the Primary Fuel, by Producer Type, 2015  
(Megawatts, Percent)**

Producer Type	Total Net Summer Capacity of All Generators Reporting Natural Gas as the Primary Fuel	Fuel-Switchable Part of Total			
		Net Summer Capacity of Natural Gas-Fired Generators Reporting the Ability to Switch to Petroleum Liquids	Fuel Switchable Capacity as Percent of Total	Maximum Achievable Net Summer Capacity Using Petroleum Liquids	Fuel Switchable Net Summer Capacity Reported to Have No Factors that Limit the Ability to Switch to Petroleum Liquids
Electric Utilities	223,215.6	80,780.1	36.2%	80,075.4	17,654.9
Independent Power Producers, Non-Combined Heat and Power Plants	172,519.2	45,114.1	26.2%	40,976.9	8,061.8
Independent Power Producers, Combined Heat and Power Plants	27,284.1	5,067.7	18.6%	4,896.2	389.4
Electric Power Sector Subtotal	423,018.9	130,961.9	31.0%	125,948.5	26,106.1
Commercial Sector	1,932.5	866.1	44.8%	824.9	95.8
Industrial Sector	14,474.0	951.6	6.6%	929.4	142.3
All Sectors	439,425.4	132,779.6	30.2%	127,702.8	26,344.2

Notes: Petroleum liquids include distillate fuel oil (all diesel and No. 1, No. 2, and No. 4 fuel oils), residual fuel oil (No. 5 and No. 6 fuel oils and bunker C fuel oil), jet fuel, kerosene, waste oil, and propane.  
Source: U.S. Energy Information Administration, Form EIA-860, 'Annual Electric Generator Report.'

**Table 4.12. Fuel-Switching Capacity of Operable Generators Reporting Petroleum Liquids as the Primary Fuel, by Producer Type, 2015 (Megawatts, Percent)**

Producer Type	Total Net Summer Capacity of All Generators Reporting Petroleum Liquids as the Primary Fuel	Fuel-Switchable Part of Total		
		Net Summer Capacity of Petroleum Liquids-Fired Generators Reporting the Ability to Switch to Natural Gas	Fuel Switchable Capacity as Percent of Total	Maximum Achievable Net Summer Capacity Using Natural Gas
Electric Utilities	21,101.8	4,950.0	23.5%	5,785.1
Independent Power Producers, Non-Combined Heat and Power Plants	12,966.9	3,896.6	30.1%	2,877.7
Independent Power Producers, Combined Heat and Power Plants	255.2	--	0.0%	--
Electric Power Sector Subtotal	34,323.9	8,846.6	25.8%	8,662.8
Commercial Sector	466.1	21.2	4.5%	21.1
Industrial Sector	296.0	49.4	16.7%	43.4
All Sectors	35,086.0	8,917.2	25.4%	8,727.3

Notes: Petroleum liquids include distillate fuel oil (all diesel and No. 1, No. 2, and No. 4 fuel oils), residual fuel oil (No. 5 and No. 6 fuel oils and bunker C fuel oil), jet fuel, kerosene, waste oil, and propane.

Source: U.S. Energy Information Administration, Form EIA-860, 'Annual Electric Generator Report.'

**Table 4.13. Fuel-Switching Capacity of Operable Generators Reporting Natural Gas as the Primary Fuel, by Type of Prime Mover, 2015 (Megawatts, Percent)**

<b>Prime Mover Type</b>	<b>Number of Natural Gas-Fired Generators Reporting the Ability to Switch to Petroleum Liquids</b>	<b>Net Summer Capacity of Natural Gas-Fired Generators Reporting the Ability to Switch to Petroleum Liquids</b>	<b>Fuel Switchable Net Summer Capacity Reported to Have No Factors that Limit the Ability to Switch to Petroleum Liquids</b>
Steam Generator	200	29,440.7	8,418.4
Combined Cycle	404	46,078.4	6,233.3
Internal Combustion	325	1,164.9	281.0
Gas Turbine	902	56,095.6	11,411.5
All Fuel Switchable Prime Movers	1,831	132,779.6	26,344.2

Notes: Petroleum liquids include distillate fuel oil (all diesel and No. 1, No. 2, and No. 4 fuel oils), residual fuel oil (No. 5 and No. 6 fuel oils and bunker C fuel oil), jet fuel, kerosene, waste oil, and propane.

Source: U.S. Energy Information Administration, Form EIA-860, 'Annual Electric Generator Report.'

**Table 4.14. Fuel-Switching Capacity of Operable Generators Reporting Natural Gas as the Primary Fuel,**

**by Year of Initial Commercial Operation, 2015 (Megawatts, Percent)**

<b>Year of Initial Commercial Operation</b>	<b>Number of Natural Gas-Fired Generators Reporting the Ability to Switch to Petroleum Liquids</b>	<b>Net Summer Capacity of Natural Gas-Fired Generators Reporting the Ability to Switch to Petroleum Liquids</b>	<b>Fuel Switchable Net Summer Capacity Reported to Have No Factors that Limit the Ability to Switch to Petroleum Liquids</b>
Pre-1970	303	13,016.4	4,924.1
1970-1974	314	16,772.9	6,131.3
1975-1979	97	10,685.0	2,302.8
1980-1984	50	1,621.3	210.5
1985-1989	89	2,842.1	251.5
1990-1994	215	12,156.2	1,546.4
1995-1999	131	9,617.8	1,931.5
2000-2004	397	38,870.8	7,817.8
2005-2009	126	16,007.7	1,132.9
2010-2014	94	10,588.4	89.8
2015	15	601.0	5.6
<b>Total</b>	<b>1,831</b>	<b>132,779.6</b>	<b>26,344.2</b>

Notes: Petroleum liquids include distillate fuel oil (all diesel and No. 1, No. 2, and No. 4 fuel oils), residual fuel oil (No. 5 and No. 6 fuel oils and bunker C fuel oil), jet fuel, kerosene, waste oil, and propane.

Source: U.S. Energy Information Administration, Form EIA-860, "Annual Electric Generator Report."

## Chapter 5

# Consumption of Fossil Fuels

**Table 5.1.A. Coal: Consumption for Electricity Generation, by Sector, 2005 - 2015 (Thousand Tons)**

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
<b>Annual Totals</b>					
2005	1,041,448	761,349	272,218	377	7,504
2006	1,030,556	753,390	269,412	347	7,408
2007	1,046,795	764,765	276,581	361	5,089
2008	1,042,335	760,326	276,565	369	5,075
2009	934,683	695,615	234,077	317	4,674
2010	979,684	721,431	249,814	314	8,125
2011	934,938	689,316	239,541	347	5,735
2012	825,734	615,467	205,295	307	4,665
2013	860,729	638,327	217,219	513	4,670
2014	853,634	624,235	224,568	202	4,629
2015	739,594	539,506	195,927	163	3,999
<b>Year 2013</b>					
January	75,049	55,688	18,919	55	386
February	67,129	49,022	17,700	50	358
March	70,469	52,038	17,979	49	404
April	60,807	45,540	14,852	40	374
May	64,688	48,328	15,922	40	399
June	75,054	56,015	18,605	38	395
July	83,213	61,387	21,360	38	429
August	81,970	61,396	20,127	38	408
September	72,723	53,126	19,179	38	380
October	66,348	49,423	16,521	37	367
November	65,959	49,621	15,930	42	366
December	77,319	56,743	20,125	47	404
<b>Year 2014</b>					
January	83,647	61,084	22,129	27	407
February	76,160	55,073	20,699	27	362
March	72,124	51,559	20,147	22	396
April	58,065	41,151	16,541	16	357
May	64,033	47,114	16,521	12	385
June	74,328	55,542	18,365	15	406
July	81,495	60,238	20,821	16	420
August	81,074	60,222	20,422	14	417
September	69,127	50,728	17,998	12	389
October	61,129	44,987	15,772	11	359
November	64,651	46,561	17,720	14	356
December	67,799	49,976	17,434	16	373
<b>Year 2015</b>					
January	71,384	50,757	20,271	18	338
February	67,136	47,845	18,954	19	318
March	58,367	42,202	15,797	17	351
April	48,543	36,037	12,193	12	302
May	57,153	42,814	14,005	10	323
June	68,982	50,592	18,017	14	359
July	76,570	56,202	19,977	14	376
August	73,810	54,023	19,408	12	368
September	64,823	46,706	17,746	10	360
October	53,659	39,023	14,309	11	317
November	48,943	35,427	13,209	12	295
December	50,224	37,878	12,041	14	292

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 are final. 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 5.1.B. Coal: Consumption for Useful Thermal Output, by Sector, 2005 - 2015 (Thousand Tons)**

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
<b>Annual Totals</b>					
2005	23,833	0	3,918	1,544	18,371
2006	23,227	0	3,834	1,539	17,854
2007	22,810	0	3,795	1,566	17,449
2008	22,168	0	3,689	1,652	16,827
2009	20,507	0	3,935	1,481	15,091
2010	21,727	0	3,808	1,406	16,513
2011	21,532	0	3,628	1,321	16,584
2012	19,333	0	2,790	1,143	15,400
2013	18,350	0	2,416	843	15,090
2014	18,107	978	1,821	861	14,448
2015	16,632	1,032	1,980	635	12,985
<b>Year 2013</b>					
January	1,699	0	225	94	1,381
February	1,527	0	198	88	1,242
March	1,631	0	203	83	1,345
April	1,442	0	192	59	1,191
May	1,479	0	194	66	1,219
June	1,428	0	197	63	1,168
July	1,527	0	219	63	1,245
August	1,496	0	215	63	1,218
September	1,404	0	196	58	1,150
October	1,470	0	164	53	1,253
November	1,599	0	212	70	1,318
December	1,647	0	203	83	1,362
<b>Year 2014</b>					
January	1,773	114	171	105	1,384
February	1,641	97	167	105	1,271
March	1,722	95	199	96	1,332
April	1,425	81	162	66	1,115
May	1,450	81	146	59	1,164
June	1,413	63	153	63	1,134
July	1,466	78	150	70	1,169
August	1,451	70	149	58	1,175
September	1,355	70	121	52	1,113
October	1,359	66	122	47	1,123
November	1,480	76	138	68	1,198
December	1,573	86	142	74	1,271
<b>Year 2015</b>					
January	1,649	99	197	79	1,275
February	1,505	96	166	78	1,165
March	1,494	94	178	67	1,155
April	1,296	76	144	43	1,034
May	1,335	75	165	40	1,055
June	1,327	87	172	47	1,022
July	1,451	86	187	50	1,129
August	1,345	71	176	45	1,052
September	1,301	75	155	40	1,031
October	1,245	81	145	41	979
November	1,321	99	145	47	1,030
December	1,363	95	151	58	1,059

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 are final. 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 5.1.C. Coal: Consumption for Electricity Generation and Useful Thermal Output, by Sector, 2005 - 2015 (Thousand Tons)**

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
<b>Annual Totals</b>					
2005	1,065,281	761,349	276,135	1,922	25,875
2006	1,053,783	753,390	273,246	1,886	25,262
2007	1,069,606	764,765	280,377	1,927	22,537
2008	1,064,503	760,326	280,254	2,021	21,902
2009	955,190	695,615	238,012	1,798	19,766
2010	1,001,411	721,431	253,621	1,720	24,638
2011	956,470	689,316	243,168	1,668	22,319
2012	845,066	615,467	208,085	1,450	20,065
2013	879,078	638,327	219,635	1,356	19,761
2014	871,741	625,212	226,389	1,063	19,076
2015	756,226	540,538	197,906	798	16,984
<b>Year 2013</b>					
January	76,748	55,688	19,144	149	1,767
February	68,656	49,022	17,897	137	1,600
March	72,100	52,038	18,182	132	1,748
April	62,249	45,540	15,044	100	1,565
May	66,168	48,328	16,116	105	1,618
June	76,482	56,015	18,802	102	1,563
July	84,740	61,387	21,580	100	1,674
August	83,466	61,396	20,342	102	1,626
September	74,127	53,126	19,375	96	1,530
October	67,818	49,423	16,685	91	1,620
November	67,559	49,621	16,142	112	1,683
December	78,966	56,743	20,327	130	1,765
<b>Year 2014</b>					
January	85,420	61,198	22,300	132	1,791
February	77,801	55,170	20,866	131	1,633
March	73,846	51,654	20,346	118	1,729
April	59,489	41,232	16,703	82	1,472
May	65,483	47,195	16,667	72	1,549
June	75,741	55,606	18,518	78	1,540
July	82,961	60,316	20,970	85	1,589
August	82,526	60,292	20,571	72	1,591
September	70,482	50,798	18,118	64	1,502
October	62,488	45,053	15,895	58	1,482
November	66,131	46,637	17,858	82	1,554
December	69,372	50,062	17,576	90	1,644
<b>Year 2015</b>					
January	73,033	50,856	20,467	97	1,613
February	68,640	47,941	19,120	97	1,483
March	59,861	42,297	15,975	83	1,506
April	49,840	36,112	12,337	54	1,336
May	58,488	42,889	14,171	50	1,378
June	70,309	50,678	18,189	61	1,381
July	78,021	56,288	20,164	64	1,505
August	75,156	54,094	19,584	58	1,420
September	66,124	46,780	17,901	51	1,391
October	54,904	39,104	14,453	52	1,296
November	50,264	35,526	13,353	59	1,325
December	51,587	37,973	12,192	72	1,350

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

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Values are final. 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 5.1.D. Coal: Consumption for Electricity Generation, by Sector, 2005 - 2015 (Billion Btus)**

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
<b>Annual Totals</b>					
2005	20,801,716	15,397,688	5,250,824	8,314	144,889
2006	20,527,410	15,211,077	5,166,001	7,526	142,807
2007	20,841,871	15,436,110	5,287,202	7,833	110,727
2008	20,548,610	15,189,050	5,242,194	8,070	109,296
2009	18,240,611	13,744,178	4,390,596	7,007	98,829
2010	19,196,315	14,333,496	4,709,686	6,815	146,318
2011	18,074,298	13,551,416	4,399,144	7,263	116,475
2012	15,867,141	11,995,971	3,767,011	6,383	97,775
2013	16,509,468	12,421,537	3,981,216	9,444	97,270
2014	16,472,004	12,217,628	4,154,134	4,344	95,898
2015	14,167,878	10,456,910	3,624,869	3,443	82,656
<b>Year 2013</b>					
January	1,437,357	1,079,455	348,957	1,011	7,934
February	1,285,305	951,650	325,325	916	7,414
March	1,357,798	1,015,890	332,574	894	8,440
April	1,168,918	885,167	275,255	719	7,777
May	1,248,079	943,332	295,610	732	8,405
June	1,447,978	1,096,663	342,282	735	8,297
July	1,599,995	1,195,369	394,949	717	8,961
August	1,569,213	1,196,057	363,938	714	8,504
September	1,393,265	1,037,738	346,865	710	7,952
October	1,263,088	956,093	298,689	666	7,641
November	1,263,059	963,935	290,733	764	7,628
December	1,475,413	1,100,190	366,039	867	8,318
<b>Year 2014</b>					
January	1,629,049	1,202,969	417,069	589	8,423
February	1,484,641	1,085,437	391,078	585	7,541
March	1,413,884	1,017,112	387,962	493	8,318
April	1,127,192	807,693	311,840	338	7,320
May	1,239,709	927,469	304,012	273	7,956
June	1,439,870	1,091,640	339,459	326	8,446
July	1,566,788	1,177,989	379,727	339	8,733
August	1,552,663	1,174,260	369,470	295	8,637
September	1,318,826	987,034	323,487	249	8,055
October	1,161,615	867,552	286,399	221	7,443
November	1,241,104	908,616	324,843	300	7,344
December	1,296,664	969,857	318,789	335	7,684
<b>Year 2015</b>					
January	1,379,735	990,356	381,946	388	7,045
February	1,315,659	943,535	365,118	414	6,592
March	1,129,765	819,709	302,401	351	7,304
April	929,278	696,649	226,178	245	6,206
May	1,097,338	830,414	260,139	213	6,572
June	1,318,343	983,624	327,033	298	7,389
July	1,463,993	1,089,588	366,359	298	7,748
August	1,414,355	1,049,472	356,990	256	7,638
September	1,237,781	902,873	327,251	219	7,439
October	1,012,894	747,191	258,912	230	6,561
November	922,147	678,236	237,578	246	6,086
December	946,590	725,264	214,966	283	6,077

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

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Values are final. 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 5.1.E. Coal: Consumption for Useful Thermal Output, by Sector, 2005 - 2015 (Billion Btus)**

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
<b>Annual Totals</b>					
2005	548,666	0	88,364	34,616	425,685
2006	532,561	0	84,335	34,086	414,140
2007	521,717	0	83,838	34,690	403,189
2008	503,096	0	81,416	36,163	385,517
2009	462,674	0	90,867	32,651	339,156
2010	490,931	0	90,184	30,725	370,022
2011	479,822	0	84,855	28,056	366,911
2012	420,923	0	58,275	23,673	338,975
2013	401,108	0	47,677	18,535	334,897
2014	391,550	18,332	37,139	18,805	317,274
2015	356,895	18,640	37,815	13,483	286,956
<b>Year 2013</b>					
January	36,987	0	4,287	2,076	30,623
February	33,266	0	3,683	1,946	27,637
March	35,908	0	4,150	1,846	29,912
April	31,406	0	3,702	1,279	26,425
May	32,408	0	3,873	1,451	27,084
June	31,344	0	3,978	1,402	25,965
July	33,467	0	4,395	1,402	27,671
August	32,657	0	4,286	1,397	26,974
September	30,797	0	4,015	1,275	25,506
October	32,206	0	3,187	1,148	27,871
November	35,050	0	4,209	1,523	29,318
December	35,613	0	3,911	1,791	29,911
<b>Year 2014</b>					
January	38,562	2,143	3,420	2,286	30,713
February	35,455	1,819	3,386	2,301	27,949
March	37,670	1,807	4,257	2,115	29,492
April	30,526	1,528	3,245	1,435	24,318
May	31,345	1,548	3,073	1,299	25,425
June	30,577	1,185	3,131	1,411	24,850
July	31,888	1,483	3,128	1,556	25,722
August	31,443	1,328	3,069	1,257	25,789
September	29,329	1,280	2,590	1,103	24,356
October	29,267	1,233	2,414	990	24,630
November	31,820	1,387	2,769	1,472	26,193
December	33,667	1,591	2,658	1,582	27,836
<b>Year 2015</b>					
January	35,642	1,807	3,662	1,711	28,462
February	32,913	1,775	3,367	1,732	26,040
March	32,194	1,744	3,436	1,429	25,584
April	27,956	1,366	2,757	877	22,956
May	28,711	1,352	3,331	835	23,192
June	28,325	1,546	3,259	1,016	22,504
July	30,648	1,535	3,460	1,088	24,565
August	28,644	1,289	3,279	956	23,120
September	27,840	1,356	3,009	840	22,635
October	26,630	1,459	2,798	832	21,541
November	28,323	1,735	2,668	967	22,953
December	29,071	1,678	2,787	1,202	23,404

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 are final. 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 5.1.F. Coal: Consumption for Electricity Generation and Useful Thermal Output, by Sector, 2005 - 2015 (Billion Btus)**

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
<b>Annual Totals</b>					
2005	21,350,382	15,397,688	5,339,188	42,931	570,574
2006	21,059,972	15,211,077	5,250,336	41,612	556,948
2007	21,363,588	15,436,110	5,371,039	42,523	513,916
2008	21,051,706	15,189,050	5,323,610	44,233	494,813
2009	18,703,284	13,744,178	4,481,463	39,658	437,985
2010	19,687,246	14,333,496	4,799,870	37,540	516,341
2011	18,554,120	13,551,416	4,483,999	35,319	483,385
2012	16,288,063	11,995,971	3,825,286	30,056	436,750
2013	16,910,576	12,421,537	4,028,894	27,979	432,167
2014	16,863,554	12,235,960	4,191,273	23,149	413,173
2015	14,524,773	10,475,551	3,662,685	16,926	369,612
<b>Year 2013</b>					
January	1,474,344	1,079,455	353,245	3,088	38,556
February	1,318,570	951,650	329,008	2,862	35,051
March	1,393,706	1,015,890	336,724	2,740	38,353
April	1,200,325	885,167	278,957	1,998	34,202
May	1,280,487	943,332	299,483	2,183	35,489
June	1,479,322	1,096,663	346,260	2,137	34,262
July	1,633,462	1,195,369	399,343	2,118	36,631
August	1,601,870	1,196,057	368,224	2,110	35,478
September	1,424,061	1,037,738	350,880	1,985	33,458
October	1,295,294	956,093	301,876	1,813	35,512
November	1,298,109	963,935	294,943	2,287	36,945
December	1,511,026	1,100,190	369,950	2,657	38,229
<b>Year 2014</b>					
January	1,667,611	1,205,112	420,488	2,875	39,135
February	1,520,096	1,087,256	394,464	2,886	35,490
March	1,451,555	1,018,919	392,218	2,608	37,809
April	1,157,718	809,221	315,085	1,773	31,638
May	1,271,054	929,017	307,084	1,572	33,381
June	1,470,447	1,092,825	342,590	1,737	33,296
July	1,598,676	1,179,472	382,854	1,896	34,455
August	1,584,106	1,175,589	372,539	1,552	34,426
September	1,348,155	988,314	326,078	1,352	32,411
October	1,190,882	868,785	288,813	1,211	32,073
November	1,272,924	910,003	327,612	1,772	33,537
December	1,330,331	971,447	321,447	1,917	35,520
<b>Year 2015</b>					
January	1,415,376	992,163	385,608	2,098	35,507
February	1,348,573	945,310	368,485	2,146	32,632
March	1,161,958	821,453	305,837	1,780	32,888
April	957,233	698,015	228,935	1,122	29,162
May	1,126,049	831,767	263,470	1,049	29,764
June	1,346,669	985,169	330,292	1,314	29,894
July	1,494,640	1,091,122	369,819	1,386	32,312
August	1,443,000	1,050,760	360,269	1,213	30,758
September	1,265,621	904,228	330,260	1,059	30,074
October	1,039,523	748,650	261,710	1,062	28,102
November	950,469	679,971	240,247	1,213	29,039
December	975,661	726,941	217,753	1,485	29,481

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 are final. 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 5.2.A. Petroleum Liquids: Consumption for Electricity Generation, by Sector, 2005 - 2015 (Thousand Barrels)**

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
<b>Annual Totals</b>					
2005	165,137	98,223	62,154	580	4,180
2006	73,821	53,529	17,179	327	2,786
2007	82,433	56,910	22,793	250	2,480
2008	53,846	38,995	13,152	160	1,538
2009	43,562	31,847	9,880	184	1,652
2010	40,103	30,806	8,278	164	855
2011	27,326	20,844	5,633	133	716
2012	22,604	17,521	4,110	272	702
2013	23,231	16,827	5,494	328	582
2014	31,531	19,652	10,689	451	739
2015	28,925	18,562	9,473	249	641
<b>Year 2013</b>					
January	2,962	1,809	1,036	47	69
February	1,890	1,279	526	35	51
March	1,639	1,334	232	24	50
April	1,685	1,335	282	24	43
May	1,789	1,419	294	20	55
June	1,699	1,321	319	18	41
July	2,546	1,732	740	31	43
August	1,776	1,402	306	26	41
September	1,591	1,170	361	19	40
October	1,581	1,247	270	21	44
November	1,657	1,305	282	24	46
December	2,416	1,473	848	38	57
<b>Year 2014</b>					
January	10,190	4,468	5,487	112	122
February	3,117	1,879	1,099	58	81
March	3,476	1,917	1,443	43	72
April	1,556	1,283	200	31	42
May	1,647	1,296	274	22	56
June	1,502	1,179	246	27	50
July	1,696	1,308	311	24	53
August	1,751	1,310	372	23	45
September	1,645	1,296	274	24	50
October	1,550	1,218	251	28	53
November	1,681	1,230	362	28	60
December	1,721	1,268	368	30	54
<b>Year 2015</b>					
January	3,293	2,061	1,135	33	64
February	8,589	3,547	4,845	93	103
March	1,785	1,243	472	18	53
April	1,522	1,232	222	14	54
May	1,697	1,251	376	15	55
June	1,745	1,380	296	14	56
July	1,995	1,480	453	16	45
August	1,801	1,398	344	17	42
September	1,656	1,230	378	7	41
October	1,541	1,215	273	7	46
November	1,720	1,348	324	7	40
December	1,581	1,177	354	8	42

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 are final. 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 5.2.B. Petroleum Liquids: Consumption for Useful Thermal Output, by Sector, 2005 - 2015 (Thousand Barrels)**

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
Annual Totals					
2005	20,494	0	1,392	1,004	18,097
2006	14,077	0	1,153	559	12,365
2007	13,462	0	1,303	441	11,718
2008	7,533	0	1,311	461	5,762
2009	8,128	0	1,301	293	6,534
2010	4,866	0	1,086	212	3,567
2011	3,826	0	1,004	168	2,654
2012	3,097	0	992	122	1,984
2013	3,456	0	1,050	498	1,908
2014	3,099	64	1,170	216	1,650
2015	3,142	62	1,155	282	1,643
Year 2013					
January	473	0	63	214	196
February	311	0	79	55	178
March	235	0	89	3	143
April	245	0	89	3	153
May	248	0	92	7	149
June	230	0	86	6	139
July	220	0	90	13	117
August	209	0	90	5	114
September	203	0	94	3	106
October	229	0	99	10	120
November	234	0	88	12	134
December	619	0	92	167	360
Year 2014					
January	643	45	189	115	294
February	336	5	88	44	199
March	301	7	101	27	165
April	203	0	86	4	114
May	211	1	89	5	116
June	208	1	90	3	114
July	195	1	93	4	97
August	201	1	108	3	89
September	173	1	62	2	109
October	208	0	92	2	114
November	220	0	90	4	125
December	200	1	80	4	114
Year 2015					
January	324	7	99	43	175
February	595	46	175	116	259
March	261	1	89	25	146
April	239	0	80	17	142
May	232	0	82	18	132
June	218	1	79	14	123
July	231	1	102	15	113
August	203	1	88	16	98
September	199	1	90	2	106
October	225	1	98	3	124
November	203	1	85	7	110
December	210	1	90	5	114

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 are final. 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 5.2.C. Petroleum Liquids: Consumption for Electricity Generation and Useful Thermal Output, by Sector, 2005 - 2015 (Thousand Barrels)**

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
<b>Annual Totals</b>					
2005	185,631	98,223	63,546	1,584	22,278
2006	87,898	53,529	18,332	886	15,150
2007	95,895	56,910	24,097	691	14,198
2008	61,379	38,995	14,463	621	7,300
2009	51,690	31,847	11,181	477	8,185
2010	44,968	30,806	9,364	376	4,422
2011	31,152	20,844	6,637	301	3,370
2012	25,702	17,521	5,102	394	2,685
2013	26,687	16,827	6,544	826	2,490
2014	34,630	19,716	11,859	667	2,389
2015	32,067	18,624	10,629	531	2,283
<b>Year 2013</b>					
January	3,435	1,809	1,099	261	265
February	2,202	1,279	604	90	229
March	1,874	1,334	321	27	193
April	1,930	1,335	371	27	196
May	2,037	1,419	386	27	204
June	1,929	1,321	405	24	179
July	2,766	1,732	829	44	160
August	1,985	1,402	396	32	155
September	1,794	1,170	455	22	146
October	1,810	1,247	369	31	164
November	1,891	1,305	369	36	181
December	3,035	1,473	940	205	417
<b>Year 2014</b>					
January	10,833	4,513	5,677	227	416
February	3,453	1,885	1,187	101	280
March	3,776	1,924	1,545	70	237
April	1,760	1,283	286	35	156
May	1,858	1,296	363	27	172
June	1,711	1,180	336	30	164
July	1,890	1,309	404	28	150
August	1,952	1,311	481	26	134
September	1,818	1,297	336	26	159
October	1,758	1,219	343	30	166
November	1,900	1,230	453	32	186
December	1,921	1,269	449	34	169
<b>Year 2015</b>					
January	3,617	2,069	1,234	76	239
February	9,184	3,593	5,020	209	362
March	2,046	1,244	560	43	199
April	1,761	1,233	301	31	196
May	1,930	1,251	458	34	187
June	1,963	1,381	375	28	179
July	2,226	1,481	555	32	159
August	2,004	1,399	432	33	140
September	1,856	1,230	468	10	147
October	1,766	1,216	371	9	170
November	1,923	1,349	409	14	150
December	1,791	1,178	444	13	155

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 are final. 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 5.2.D. Petroleum Liquids: Consumption for Electricity Generation, by Sector, 2005 - 2015 (Billion Btus)**

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
<b>Annual Totals</b>					
2005	1,035,045	618,811	387,355	3,469	25,410
2006	459,392	335,130	105,312	1,963	16,987
2007	512,423	355,999	139,977	1,505	14,942
2008	332,367	242,379	79,816	957	9,215
2009	266,508	196,346	59,277	1,101	9,784
2010	244,114	188,987	49,042	970	5,115
2011	163,954	125,755	33,166	801	4,233
2012	134,956	105,179	24,081	1,618	4,078
2013	139,139	101,217	32,504	2,038	3,380
2014	188,814	118,226	63,488	2,765	4,335
2015	172,884	111,808	55,979	1,482	3,616
<b>Year 2013</b>					
January	17,827	10,919	6,205	295	408
February	11,312	7,630	3,161	219	302
March	9,826	8,042	1,344	148	292
April	10,063	8,024	1,639	149	252
May	10,659	8,502	1,716	125	317
June	10,195	7,967	1,880	112	236
July	15,284	10,417	4,430	190	247
August	10,630	8,488	1,739	164	238
September	9,514	7,058	2,105	118	233
October	9,466	7,532	1,550	130	255
November	9,876	7,826	1,630	151	270
December	14,487	8,812	5,107	236	332
<b>Year 2014</b>					
January	61,099	26,764	32,930	677	728
February	18,754	11,328	6,590	352	483
March	20,890	11,527	8,674	259	430
April	9,348	7,754	1,156	194	243
May	9,751	7,743	1,548	138	322
June	9,007	7,112	1,434	169	292
July	10,168	7,894	1,817	148	309
August	10,531	7,956	2,172	144	259
September	9,826	7,826	1,563	150	287
October	9,239	7,328	1,431	173	307
November	9,976	7,379	2,067	174	356
December	10,225	7,614	2,105	188	319
<b>Year 2015</b>					
January	19,762	12,461	6,733	196	373
February	51,647	21,467	29,024	555	601
March	10,639	7,442	2,781	106	309
April	9,079	7,414	1,273	82	310
May	10,048	7,502	2,165	90	291
June	10,375	8,309	1,683	82	301
July	11,925	8,942	2,634	98	252
August	10,782	8,447	2,001	102	233
September	9,816	7,329	2,217	44	228
October	9,151	7,287	1,568	39	257
November	10,254	8,123	1,865	41	226
December	9,403	7,085	2,037	46	236

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

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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.

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**Table 5.2.E. Petroleum Liquids: Consumption for Useful Thermal Output, by Sector, 2005 - 2015 (Billion Btus)**

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
<b>Annual Totals</b>					
2005	125,689	0	8,134	6,145	111,410
2006	87,137	0	6,740	3,481	76,916
2007	82,768	0	7,602	2,754	72,412
2008	45,481	0	7,644	2,786	35,051
2009	48,912	0	7,557	1,802	39,552
2010	29,243	0	6,402	1,297	21,545
2011	22,799	0	5,927	1,039	15,833
2012	18,233	0	5,871	746	11,616
2013	20,717	0	6,176	3,292	11,248
2014	18,181	395	6,802	1,311	9,672
2015	18,449	379	6,748	1,755	9,568
<b>Year 2013</b>					
January	2,962	0	373	1,437	1,151
February	1,884	0	464	356	1,064
March	1,379	0	524	19	835
April	1,448	0	528	18	902
May	1,464	0	548	38	878
June	1,359	0	506	36	818
July	1,294	0	530	82	682
August	1,221	0	524	34	663
September	1,179	0	542	19	618
October	1,350	0	581	64	705
November	1,379	0	515	75	789
December	3,798	0	541	1,114	2,143
<b>Year 2014</b>					
January	3,814	282	1,058	705	1,769
February	2,010	33	520	269	1,189
March	1,781	44	589	164	984
April	1,190	2	503	22	663
May	1,223	4	522	27	670
June	1,219	4	529	18	668
July	1,130	4	548	24	554
August	1,158	7	631	15	504
September	1,001	5	362	10	624
October	1,214	2	544	13	656
November	1,281	2	529	21	728
December	1,161	7	468	23	663
<b>Year 2015</b>					
January	1,906	46	554	264	1,042
February	3,556	285	997	721	1,552
March	1,545	8	518	157	862
April	1,408	2	471	109	826
May	1,352	3	482	115	752
June	1,268	5	469	92	703
July	1,350	3	599	96	651
August	1,189	7	518	99	565
September	1,151	3	528	15	604
October	1,319	4	580	16	718
November	1,184	5	503	41	634
December	1,222	7	529	28	658

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 are final. 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 5.2.F. Petroleum Liquids: Consumption for Electricity Generation and Useful Thermal Output, by Sector, 2005 - 2015 (Billion Btus)**

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
<b>Annual Totals</b>					
2005	1,160,733	618,811	395,489	9,614	136,820
2006	546,529	335,130	112,052	5,444	93,903
2007	595,191	355,999	147,579	4,259	87,354
2008	377,848	242,379	87,460	3,743	44,266
2009	315,420	196,346	66,834	2,903	49,336
2010	273,357	188,987	55,444	2,267	26,660
2011	186,753	125,755	39,093	1,840	20,066
2012	153,189	105,179	29,952	2,364	15,695
2013	159,855	101,217	38,681	5,330	14,628
2014	206,995	118,621	70,291	4,076	14,008
2015	191,333	112,186	62,727	3,236	13,184
<b>Year 2013</b>					
January	20,788	10,919	6,578	1,732	1,559
February	13,197	7,630	3,625	576	1,366
March	11,204	8,042	1,868	167	1,127
April	11,512	8,024	2,167	167	1,154
May	12,123	8,502	2,264	163	1,194
June	11,554	7,967	2,385	148	1,054
July	16,577	10,417	4,960	271	929
August	11,850	8,488	2,263	198	901
September	10,693	7,058	2,646	138	851
October	10,817	7,532	2,131	194	960
November	11,255	7,826	2,145	226	1,059
December	18,285	8,812	5,648	1,350	2,475
<b>Year 2014</b>					
January	64,913	27,046	33,988	1,382	2,498
February	20,764	11,361	7,110	621	1,672
March	22,671	11,571	9,262	424	1,414
April	10,537	7,756	1,659	216	906
May	10,974	7,747	2,070	164	992
June	10,226	7,116	1,963	186	960
July	11,298	7,898	2,365	173	863
August	11,689	7,963	2,803	159	764
September	10,827	7,831	1,925	161	910
October	10,453	7,330	1,975	185	963
November	11,257	7,381	2,596	195	1,085
December	11,386	7,621	2,573	211	982
<b>Year 2015</b>					
January	21,668	12,507	7,287	460	1,414
February	55,203	21,752	30,021	1,276	2,154
March	12,184	7,450	3,299	263	1,171
April	10,487	7,417	1,743	191	1,136
May	11,400	7,504	2,647	205	1,044
June	11,643	8,314	2,151	174	1,005
July	13,276	8,945	3,233	195	903
August	11,971	8,454	2,519	201	797
September	10,968	7,332	2,745	59	832
October	10,470	7,291	2,148	56	975
November	11,438	8,128	2,368	82	860
December	10,625	7,092	2,565	74	893

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

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

Values are final. 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 5.3.A. Petroleum Coke: Consumption for Electricity Generation, by Sector, 2005 - 2015 (Thousand Tons)**

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
Annual Totals					
2005	8,330	4,130	3,746	1	452
2006	7,363	3,619	3,286	1	456
2007	6,036	2,808	2,715	2	512
2008	5,417	2,296	2,704	1	416
2009	4,821	2,761	1,724	1	335
2010	4,994	3,325	1,354	2	313
2011	5,012	3,449	1,277	1	286
2012	3,675	2,105	756	1	812
2013	4,852	3,409	779	1	662
2014	4,412	3,440	599	2	371
2015	4,044	3,120	669	2	253
Year 2013					
January	385	253	67	0	65
February	314	220	62	0	32
March	364	236	67	0	60
April	342	217	62	0	63
May	469	361	41	0	68
June	476	348	63	0	66
July	474	337	72	0	65
August	491	332	93	0	66
September	442	326	60	0	57
October	404	289	64	0	51
November	308	217	60	0	30
December	381	272	69	0	39
Year 2014					
January	436	349	55	0	32
February	361	275	56	0	30
March	421	332	57	0	31
April	303	212	55	0	36
May	393	314	49	0	30
June	418	339	46	0	33
July	385	299	54	0	33
August	382	298	51	0	33
September	372	281	62	0	29
October	230	178	23	0	29
November	288	228	33	0	27
December	424	335	60	0	29
Year 2015					
January	402	312	56	0	33
February	413	332	56	0	25
March	275	195	60	0	20
April	300	213	59	0	28
May	339	260	59	0	20
June	306	233	55	0	18
July	409	333	59	0	17
August	388	311	58	0	18
September	376	294	61	0	21
October	300	227	57	0	16
November	260	178	62	0	20
December	276	232	26	0	18

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 are final. 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 5.3.B. Petroleum Coke: Consumption for Useful Thermal Output, by Sector, 2005 - 2015 (Thousand Tons)**

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
<b>Annual Totals</b>					
2005	783	0	206	8	568
2006	1,259	0	195	9	1,055
2007	1,262	0	162	11	1,090
2008	897	0	119	9	769
2009	1,007	0	126	8	873
2010	1,059	0	98	11	950
2011	1,080	0	112	6	962
2012	1,346	0	113	11	1,222
2013	1,486	0	96	11	1,379
2014	1,283	3	90	16	1,174
2015	1,144	9	109	16	1,010
<b>Year 2013</b>					
January	137	0	9	2	127
February	103	0	7	1	94
March	129	0	9	1	119
April	114	0	9	0	105
May	130	0	8	0	123
June	130	0	5	0	125
July	140	0	9	0	132
August	162	0	8	1	152
September	115	0	7	1	107
October	118	0	9	1	108
November	92	0	8	1	83
December	115	0	9	1	105
<b>Year 2014</b>					
January	105	0	9	2	95
February	93	1	7	1	84
March	106	0	8	2	96
April	116	0	9	2	105
May	110	0	8	1	102
June	109	0	0	0	109
July	114	0	5	0	109
August	112	0	9	2	101
September	113	0	9	2	102
October	86	0	9	1	75
November	104	1	9	2	92
December	114	0	9	2	103
<b>Year 2015</b>					
January	109	0	10	2	96
February	99	1	9	2	88
March	101	1	9	2	89
April	106	1	9	1	95
May	96	1	10	0	86
June	91	2	9	0	81
July	81	1	9	0	71
August	87	0	9	2	77
September	98	0	8	2	88
October	84	0	8	2	73
November	106	3	10	2	92
December	86	0	10	1	75

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 are final. 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 5.3.C. Petroleum Coke: Consumption for Electricity Generation and Useful Thermal Output, by Sector, 2005 - 2015 (Thousand Tons)**

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
Annual Totals					
2005	9,113	4,130	3,953	9	1,020
2006	8,622	3,619	3,482	10	1,511
2007	7,299	2,808	2,877	12	1,602
2008	6,314	2,296	2,823	10	1,184
2009	5,828	2,761	1,850	9	1,209
2010	6,053	3,325	1,452	12	1,264
2011	6,092	3,449	1,388	6	1,248
2012	5,021	2,105	869	13	2,034
2013	6,338	3,409	875	12	2,041
2014	5,695	3,443	689	18	1,545
2015	5,188	3,128	779	18	1,263
Year 2013					
January	522	253	76	2	191
February	416	220	69	2	126
March	493	236	76	2	180
April	456	217	71	0	168
May	600	361	48	0	191
June	606	348	68	0	191
July	614	337	80	0	197
August	653	332	101	2	218
September	558	326	67	1	164
October	522	289	73	1	158
November	400	217	68	1	114
December	496	272	78	2	144
Year 2014					
January	541	349	63	2	127
February	454	276	63	2	113
March	527	332	65	2	128
April	418	212	64	2	141
May	504	314	57	1	132
June	527	339	46	0	141
July	499	299	58	0	142
August	494	298	59	2	134
September	485	281	70	2	131
October	316	178	32	2	104
November	393	229	42	2	120
December	538	335	69	2	132
Year 2015					
January	510	313	66	3	129
February	513	332	65	2	113
March	376	196	69	2	109
April	406	213	68	2	123
May	435	261	69	0	105
June	398	235	63	0	99
July	490	334	68	0	88
August	475	311	67	2	95
September	475	294	69	2	109
October	384	227	65	2	89
November	365	181	72	2	111
December	362	232	36	2	93

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 are final. 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 5.3.D. Petroleum Coke: Consumption for Electricity Generation, by Sector, 2005 - 2015 (Billion Btus)**

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
<b>Annual Totals</b>					
2005	234,217	115,727	105,163	33	13,295
2006	208,518	102,117	92,643	33	13,726
2007	170,166	77,941	77,135	45	15,045
2008	152,933	64,843	76,416	37	11,638
2009	136,474	77,919	48,776	32	9,747
2010	141,774	94,331	38,235	44	9,165
2011	144,406	99,257	36,923	20	8,206
2012	105,488	60,862	21,643	39	22,944
2013	138,774	97,626	22,052	38	19,058
2014	123,736	95,642	17,032	59	11,003
2015	113,568	87,210	18,889	58	7,411
<b>Year 2013</b>					
January	11,015	7,296	1,909	5	1,806
February	9,000	6,373	1,737	5	885
March	10,473	6,823	1,887	5	1,758
April	9,805	6,228	1,738	1	1,837
May	13,517	10,387	1,165	0	1,965
June	13,631	9,956	1,774	0	1,901
July	13,647	9,726	2,052	0	1,868
August	14,164	9,616	2,654	5	1,888
September	12,723	9,379	1,709	4	1,631
October	11,347	8,075	1,813	4	1,455
November	8,860	6,258	1,684	3	915
December	10,593	7,508	1,931	5	1,149
<b>Year 2014</b>					
January	12,292	9,793	1,536	5	957
February	10,115	7,684	1,550	5	876
March	11,869	9,312	1,595	6	957
April	8,322	5,675	1,567	6	1,074
May	10,936	8,642	1,385	3	906
June	11,682	9,405	1,307	0	971
July	10,785	8,297	1,532	1	954
August	10,717	8,302	1,453	8	954
September	10,595	7,987	1,762	7	839
October	6,429	4,902	674	6	847
November	8,073	6,291	948	7	827
December	11,921	9,351	1,723	7	840
<b>Year 2015</b>					
January	11,284	8,736	1,580	8	960
February	11,577	9,221	1,607	8	742
March	7,683	5,359	1,708	7	609
April	8,244	5,748	1,657	5	833
May	9,413	7,150	1,681	1	582
June	8,550	6,461	1,558	0	531
July	11,441	9,307	1,663	0	472
August	10,833	8,658	1,655	6	514
September	10,649	8,320	1,718	7	605
October	8,493	6,419	1,596	7	471
November	7,463	5,145	1,739	6	573
December	7,938	6,687	727	5	519

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

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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 5.3.E. Petroleum Coke: Consumption for Useful Thermal Output, by Sector, 2005 - 2015 (Billion Btus)**

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
Annual Totals					
2005	22,224	0	5,935	228	16,061
2006	38,169	0	5,672	236	32,262
2007	38,033	0	4,710	303	33,019
2008	27,100	0	3,441	243	23,416
2009	29,974	0	3,652	213	26,109
2010	31,303	0	2,855	296	28,152
2011	31,943	0	3,244	153	28,546
2012	38,777	0	3,281	315	35,181
2013	40,846	0	2,769	305	37,772
2014	36,602	90	2,597	449	33,467
2015	33,138	255	3,167	446	29,269
Year 2013					
January	3,724	0	249	45	3,430
February	2,852	0	208	40	2,604
March	3,543	0	257	38	3,248
April	3,059	0	259	5	2,795
May	3,572	0	220	0	3,352
June	3,570	0	148	0	3,422
July	3,869	0	253	2	3,615
August	4,398	0	238	38	4,121
September	3,184	0	191	35	2,958
October	3,280	0	248	33	2,999
November	2,584	0	234	28	2,321
December	3,211	0	264	39	2,908
Year 2014					
January	2,965	0	249	44	2,672
February	2,639	18	193	38	2,390
March	3,032	6	235	45	2,745
April	3,348	4	258	42	3,044
May	3,181	4	229	22	2,926
June	3,154	6	4	0	3,145
July	3,232	0	133	6	3,092
August	3,144	1	255	56	2,832
September	3,305	3	256	52	2,995
October	2,374	6	259	39	2,069
November	2,951	34	258	50	2,609
December	3,277	8	268	54	2,947
Year 2015					
January	3,119	13	285	63	2,758
February	2,865	15	248	60	2,542
March	2,952	21	255	53	2,623
April	3,063	15	272	35	2,740
May	2,811	28	275	4	2,504
June	2,637	51	251	0	2,335
July	2,301	16	260	0	2,025
August	2,500	0	256	43	2,201
September	2,877	1	246	57	2,573
October	2,456	12	240	52	2,152
November	3,097	84	277	43	2,693
December	2,459	0	302	35	2,122

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

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Values are final. 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 5.3.F. Petroleum Coke: Consumption for Electricity Generation and Useful Thermal Output, by Sector, 2005 - 2015 (Billion Btus)**

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
Annual Totals					
2005	256,441	115,727	111,098	260	29,356
2006	246,687	102,117	98,314	269	45,987
2007	208,198	77,941	81,845	348	48,064
2008	180,034	64,843	79,856	280	35,055
2009	166,449	77,919	52,428	245	35,856
2010	173,078	94,331	41,090	340	37,317
2011	176,349	99,257	40,167	173	36,752
2012	144,266	60,862	24,925	353	58,126
2013	179,621	97,626	24,821	343	56,831
2014	160,338	95,731	19,629	508	44,470
2015	146,706	87,465	22,056	505	36,680
Year 2013					
January	14,739	7,296	2,158	50	5,236
February	11,852	6,373	1,945	45	3,489
March	14,016	6,823	2,144	43	5,006
April	12,864	6,228	1,998	6	4,632
May	17,089	10,387	1,385	0	5,317
June	17,201	9,956	1,922	0	5,323
July	17,517	9,726	2,305	3	5,483
August	18,561	9,616	2,892	44	6,010
September	15,907	9,379	1,899	39	4,589
October	14,628	8,075	2,061	38	4,454
November	11,444	6,258	1,918	32	3,236
December	13,804	7,508	2,195	44	4,057
Year 2014					
January	15,257	9,793	1,785	49	3,629
February	12,754	7,702	1,743	43	3,265
March	14,901	9,318	1,830	51	3,703
April	11,670	5,679	1,825	48	4,118
May	14,117	8,646	1,614	24	3,832
June	14,837	9,411	1,311	0	4,115
July	14,017	8,297	1,666	7	4,047
August	13,861	8,303	1,708	64	3,787
September	13,900	7,990	2,018	58	3,834
October	8,803	4,908	933	45	2,917
November	11,024	6,325	1,206	57	3,437
December	15,198	9,359	1,991	61	3,787
Year 2015					
January	14,403	8,748	1,865	71	3,718
February	14,442	9,236	1,855	68	3,284
March	10,635	5,380	1,963	60	3,232
April	11,307	5,763	1,930	41	3,574
May	12,224	7,177	1,956	4	3,086
June	11,186	6,512	1,809	0	2,866
July	13,742	9,322	1,923	0	2,497
August	13,332	8,658	1,911	49	2,714
September	13,527	8,321	1,964	64	3,178
October	10,949	6,430	1,836	59	2,624
November	10,560	5,229	2,016	48	3,267
December	10,397	6,687	1,029	40	2,640

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 are final. 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 5.4.A. Natural Gas: Consumption for Electricity Generation, by Sector, 2005 - 2015 (Million Cubic Feet)**

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
<b>Annual Totals</b>					
2005	6,036,370	2,134,859	3,349,921	33,785	517,805
2006	6,461,615	2,478,396	3,412,826	34,623	535,770
2007	7,089,342	2,736,418	3,765,194	34,087	553,643
2008	6,895,843	2,730,134	3,612,197	33,403	520,109
2009	7,121,069	2,911,279	3,655,712	34,279	519,799
2010	7,680,185	3,290,993	3,794,423	39,462	555,307
2011	7,883,865	3,446,087	3,819,107	47,170	571,501
2012	9,484,710	4,101,927	4,686,260	63,116	633,407
2013	8,596,299	3,970,447	3,917,131	66,570	642,152
2014	8,544,387	3,895,008	3,954,032	71,957	623,390
2015	10,016,576	4,745,255	4,576,683	70,092	624,545
<b>Year 2013</b>					
January	666,650	310,174	296,071	5,247	55,159
February	599,100	278,139	266,731	4,807	49,424
March	637,349	293,545	285,259	5,365	53,180
April	595,667	268,467	272,544	5,095	49,562
May	646,296	295,973	294,795	5,160	50,369
June	771,868	363,204	349,597	5,582	53,485
July	949,141	432,493	451,078	7,169	58,401
August	937,197	442,939	430,139	6,449	57,671
September	784,619	365,005	361,481	6,005	52,128
October	669,764	312,216	300,858	4,993	51,697
November	633,885	284,526	291,241	4,881	53,237
December	704,762	323,768	317,338	5,817	57,840
<b>Year 2014</b>					
January	694,661	324,657	309,522	6,411	54,071
February	579,819	265,645	261,103	5,180	47,892
March	591,101	271,638	263,442	5,292	50,729
April	579,336	270,132	256,256	4,967	47,981
May	680,193	323,448	300,470	5,761	50,513
June	754,126	348,327	349,049	6,119	50,630
July	880,805	393,011	425,395	6,966	55,433
August	935,170	426,346	445,556	7,430	55,839
September	805,960	355,962	391,332	6,396	52,270
October	736,039	323,456	356,020	5,939	50,625
November	633,279	288,760	287,096	5,496	51,927
December	673,898	303,627	308,792	5,999	55,480
<b>Year 2015</b>					
January	745,235	347,151	338,575	5,254	54,254
February	676,139	331,550	293,466	4,643	46,480
March	736,500	348,019	335,606	5,168	47,707
April	692,199	329,693	312,160	4,864	45,483
May	765,715	361,501	350,073	5,514	48,627
June	922,461	447,079	416,030	6,221	53,131
July	1,084,120	510,084	509,399	7,336	57,301
August	1,064,683	496,826	503,679	7,235	56,943
September	930,090	432,653	437,222	6,696	53,518
October	824,878	380,830	386,725	5,943	51,380
November	767,336	366,510	342,625	5,470	52,732
December	807,219	393,358	351,123	5,748	56,990

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 are final. 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 5.4.B. Natural Gas: Consumption for Useful Thermal Output, by Sector, 2005 - 2015 (Million Cubic Feet)**

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
<b>Annual Totals</b>					
2005	984,340	0	384,365	34,172	565,803
2006	942,817	0	330,878	33,112	578,828
2007	872,579	0	339,796	35,987	496,796
2008	793,537	0	326,048	32,813	434,676
2009	816,787	0	305,542	41,275	469,970
2010	821,775	0	301,769	46,324	473,683
2011	839,681	0	308,669	39,856	491,155
2012	886,103	0	322,607	47,883	515,613
2013	882,385	0	303,177	51,057	528,151
2014	865,146	4,926	292,016	46,635	521,569
2015	935,098	8,060	283,372	46,287	597,379
<b>Year 2013</b>					
January	74,638	0	25,440	4,277	44,920
February	67,391	0	23,519	3,883	39,989
March	73,151	0	25,107	4,051	43,993
April	70,245	0	23,817	3,571	42,857
May	70,784	0	24,040	3,703	43,041
June	70,610	0	24,349	4,045	42,216
July	78,649	0	27,553	4,968	46,128
August	78,207	0	27,452	4,811	45,943
September	72,884	0	24,996	4,358	43,529
October	72,095	0	23,964	4,137	43,993
November	73,889	0	25,253	4,336	44,300
December	79,843	0	27,687	4,915	47,241
<b>Year 2014</b>					
January	87,362	527	28,175	7,205	51,455
February	68,875	539	23,822	3,527	40,988
March	72,690	476	25,252	3,245	43,717
April	67,023	286	22,224	3,085	41,428
May	67,861	224	22,787	3,272	41,578
June	67,490	274	23,101	3,460	40,656
July	72,370	267	24,630	3,749	43,724
August	74,882	441	25,464	4,031	44,946
September	69,772	367	23,285	3,731	42,390
October	71,722	431	23,484	3,776	44,032
November	70,483	534	24,002	3,672	42,274
December	74,615	561	25,790	3,883	44,381
<b>Year 2015</b>					
January	79,075	582	25,015	4,250	49,227
February	73,005	615	22,712	3,906	45,772
March	80,319	512	24,594	4,013	51,201
April	73,041	598	21,826	3,220	47,398
May	72,919	629	22,283	3,475	46,532
June	74,850	589	22,777	3,582	47,901
July	82,339	727	25,332	4,138	52,143
August	83,543	935	25,150	3,973	53,485
September	78,210	731	24,437	4,076	48,965
October	78,745	688	23,297	3,788	50,972
November	77,684	713	22,566	3,845	50,561
December	81,369	743	23,382	4,021	53,223

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 are final. 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 5.4.C. Natural Gas: Consumption for Electricity Generation and Useful Thermal Output, by Sector, 2005 - 2015 (Million Cubic Feet)**

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
<b>Annual Totals</b>					
2005	7,020,709	2,134,859	3,734,286	67,957	1,083,607
2006	7,404,432	2,478,396	3,743,704	67,735	1,114,597
2007	7,961,922	2,736,418	4,104,991	70,074	1,050,439
2008	7,689,380	2,730,134	3,938,245	66,216	954,785
2009	7,937,856	2,911,279	3,961,254	75,555	989,769
2010	8,501,960	3,290,993	4,096,192	85,786	1,028,990
2011	8,723,546	3,446,087	4,127,777	87,026	1,062,657
2012	10,370,812	4,101,927	5,008,867	110,999	1,149,020
2013	9,478,685	3,970,447	4,220,309	117,626	1,170,303
2014	9,409,532	3,899,934	4,246,048	118,591	1,144,959
2015	10,951,674	4,753,315	4,860,055	116,380	1,221,924
<b>Year 2013</b>					
January	741,288	310,174	321,512	9,524	100,079
February	666,492	278,139	290,249	8,690	89,413
March	710,500	293,545	310,365	9,417	97,174
April	665,912	268,467	296,361	8,666	92,419
May	717,080	295,973	318,835	8,863	93,410
June	842,478	363,204	373,946	9,627	95,701
July	1,027,790	432,493	478,631	12,137	104,529
August	1,015,404	442,939	457,592	11,260	103,614
September	857,503	365,005	386,477	10,363	95,657
October	741,859	312,216	324,822	9,130	95,691
November	707,774	284,526	316,494	9,218	97,537
December	784,605	323,768	345,024	10,732	105,081
<b>Year 2014</b>					
January	782,023	325,184	337,697	13,616	105,526
February	648,695	266,184	284,925	8,706	88,880
March	663,791	272,114	288,694	8,537	94,446
April	646,360	270,418	278,481	8,052	89,409
May	748,053	323,672	323,257	9,033	92,091
June	821,616	348,601	372,150	9,580	91,286
July	953,174	393,278	450,025	10,715	99,157
August	1,010,052	426,786	471,019	11,461	100,785
September	875,732	356,329	414,618	10,126	94,659
October	807,761	323,887	379,503	9,715	94,657
November	703,762	289,294	311,098	9,169	94,202
December	748,513	304,188	334,581	9,883	99,861
<b>Year 2015</b>					
January	824,310	347,733	363,591	9,504	103,482
February	749,144	332,165	316,178	8,549	92,252
March	816,819	348,531	360,200	9,180	98,908
April	765,240	330,291	333,985	8,084	92,881
May	838,634	362,129	372,356	8,989	95,159
June	997,311	447,668	438,807	9,804	101,032
July	1,166,459	510,811	534,731	11,474	109,444
August	1,148,226	497,761	528,829	11,208	110,428
September	1,008,300	433,385	461,659	10,772	102,484
October	903,623	381,518	410,022	9,731	102,351
November	845,020	367,223	365,190	9,315	103,292
December	888,588	394,101	374,505	9,769	110,212

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 are final. 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 5.4.D. Natural Gas: Consumption for Electricity Generation, by Sector, 2005 - 2015 (Billion Btus)**

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
<b>Annual Totals</b>					
2005	6,212,116	2,198,098	3,444,875	34,645	534,498
2006	6,643,926	2,546,169	3,508,597	35,473	553,687
2007	7,287,714	2,808,500	3,872,646	34,872	571,697
2008	7,087,191	2,803,283	3,712,872	34,138	536,899
2009	7,301,522	2,981,285	3,750,080	35,046	535,111
2010	7,852,665	3,359,035	3,882,995	40,356	570,279
2011	8,052,309	3,511,732	3,906,484	48,509	585,584
2012	9,696,575	4,179,725	4,802,741	64,987	649,122
2013	8,813,288	4,059,838	4,026,793	67,918	658,740
2014	8,795,303	4,001,826	4,076,787	74,194	642,495
2015	10,360,990	4,905,009	4,739,438	71,929	644,615
<b>Year 2013</b>					
January	682,789	316,593	304,155	5,369	56,671
February	612,994	283,589	273,760	4,918	50,727
March	652,614	299,857	292,673	5,473	54,610
April	610,112	274,005	280,148	5,191	50,768
May	662,458	302,275	303,396	5,254	51,533
June	791,607	371,403	359,645	5,694	54,865
July	974,371	442,779	464,389	7,319	59,884
August	961,152	453,529	441,994	6,577	59,051
September	805,110	373,801	371,746	6,124	53,439
October	686,941	319,387	309,370	5,088	53,096
November	649,915	291,076	299,155	4,978	54,707
December	723,226	331,545	326,361	5,932	59,389
<b>Year 2014</b>					
January	712,739	332,236	318,202	6,617	55,685
February	595,093	272,135	268,359	5,324	49,275
March	606,450	277,717	271,095	5,444	52,194
April	594,458	276,418	263,616	5,108	49,315
May	699,321	331,772	309,525	5,951	52,074
June	775,917	357,324	360,122	6,313	52,157
July	907,414	404,309	438,809	7,174	57,122
August	964,381	438,925	460,152	7,674	57,630
September	831,074	366,740	403,853	6,591	53,890
October	758,982	333,256	367,397	6,129	52,199
November	653,369	297,748	296,324	5,676	53,621
December	696,105	313,245	319,334	6,193	57,333
<b>Year 2015</b>					
January	769,742	358,190	350,122	5,392	56,037
February	698,432	342,020	303,698	4,773	47,941
March	760,323	358,769	347,035	5,302	49,217
April	716,099	340,500	323,696	4,994	46,909
May	792,174	373,581	362,718	5,657	50,218
June	955,116	462,643	431,141	6,378	54,954
July	1,122,760	528,459	527,544	7,524	59,233
August	1,101,434	513,804	521,449	7,411	58,770
September	962,814	447,835	452,875	6,867	55,237
October	853,062	393,697	400,278	6,092	52,995
November	793,593	378,610	355,000	5,629	54,355
December	835,443	406,902	363,882	5,911	58,749

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 are final. 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 5.4.E. Natural Gas: Consumption for Useful Thermal Output, by Sector, 2005 - 2015 (Billion Btus)**

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
<b>Annual Totals</b>					
2005	1,008,404	0	392,842	35,037	580,525
2006	968,574	0	339,047	33,928	595,599
2007	894,272	0	347,181	36,689	510,402
2008	813,794	0	333,197	33,434	447,163
2009	836,863	0	312,553	42,032	482,279
2010	841,521	0	308,246	47,001	486,274
2011	861,006	0	315,411	40,976	504,619
2012	909,087	0	330,354	48,944	529,788
2013	905,583	0	311,058	51,939	542,587
2014	891,994	5,033	300,870	47,579	538,514
2015	965,573	8,254	292,629	47,573	617,118
<b>Year 2013</b>					
January	76,717	0	26,089	4,346	46,281
February	69,168	0	24,128	3,948	41,091
March	75,220	0	25,767	4,123	45,330
April	72,174	0	24,507	3,631	44,036
May	72,623	0	24,741	3,765	44,118
June	72,557	0	25,054	4,118	43,386
July	80,666	0	28,262	5,057	47,347
August	80,163	0	28,121	4,898	47,145
September	74,769	0	25,637	4,436	44,696
October	73,891	0	24,514	4,207	45,171
November	75,752	0	25,861	4,411	45,480
December	81,882	0	28,379	4,998	48,505
<b>Year 2014</b>					
January	89,681	541	28,928	7,283	52,929
February	70,790	552	24,446	3,600	42,192
March	74,801	467	25,959	3,309	45,066
April	68,948	292	22,805	3,150	42,701
May	70,016	228	23,476	3,344	42,968
June	69,612	280	23,804	3,531	41,997
July	74,748	276	25,408	3,830	45,233
August	77,399	455	26,291	4,125	46,528
September	72,014	379	24,029	3,815	43,791
October	74,034	441	24,258	3,863	45,472
November	72,787	548	24,809	3,756	43,674
December	77,162	572	26,657	3,971	45,961
<b>Year 2015</b>					
January	81,639	593	25,823	4,355	50,868
February	75,313	628	23,427	4,001	47,257
March	82,901	524	25,415	4,119	52,843
April	75,388	613	22,542	3,304	48,928
May	75,351	641	23,007	3,563	48,139
June	77,455	600	23,573	3,690	49,592
July	85,250	750	26,202	4,262	54,036
August	86,315	953	26,022	4,091	55,249
September	80,778	749	25,235	4,196	50,598
October	81,246	703	24,051	3,891	52,600
November	80,037	734	23,223	3,959	52,120
December	83,900	766	24,107	4,139	54,887

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

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Values are final. 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 5.4.F. Natural Gas: Consumption for Electricity Generation and Useful Thermal Output, by Sector, 2005 - 2015 (Billion Btus)**

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
<b>Annual Totals</b>					
2005	7,220,520	2,198,098	3,837,717	69,682	1,115,023
2006	7,612,500	2,546,169	3,847,644	69,401	1,149,286
2007	8,181,986	2,808,500	4,219,827	71,560	1,082,099
2008	7,900,986	2,803,283	4,046,069	67,571	984,062
2009	8,138,385	2,981,285	4,062,633	77,077	1,017,390
2010	8,694,186	3,359,035	4,191,241	87,357	1,056,553
2011	8,913,315	3,511,732	4,221,895	89,485	1,090,203
2012	10,605,661	4,179,725	5,133,095	113,932	1,178,910
2013	9,718,871	4,059,838	4,337,851	119,857	1,201,326
2014	9,687,297	4,006,859	4,377,657	121,773	1,181,009
2015	11,326,564	4,913,263	5,032,066	119,502	1,261,732
<b>Year 2013</b>					
January	759,506	316,593	330,244	9,716	102,952
February	682,162	283,589	297,888	8,866	91,818
March	727,834	299,857	318,440	9,596	99,941
April	682,286	274,005	304,655	8,822	94,804
May	735,081	302,275	328,137	9,019	95,651
June	864,164	371,403	384,699	9,812	98,250
July	1,055,037	442,779	492,650	12,376	107,231
August	1,041,315	453,529	470,115	11,475	106,196
September	879,879	373,801	397,383	10,561	98,135
October	760,832	319,387	333,884	9,295	98,267
November	725,667	291,076	325,016	9,389	100,187
December	805,108	331,545	354,739	10,931	107,893
<b>Year 2014</b>					
January	802,421	332,777	347,130	13,900	108,614
February	665,884	272,687	292,806	8,924	91,468
March	681,251	278,184	297,053	8,753	97,260
April	663,406	276,710	286,421	8,258	92,017
May	769,337	332,000	333,000	9,294	95,042
June	845,529	357,604	383,926	9,845	94,154
July	982,162	404,585	464,217	11,004	102,356
August	1,041,780	439,380	486,443	11,799	104,158
September	903,089	367,120	427,881	10,407	97,681
October	833,016	333,697	391,655	9,992	97,671
November	726,156	298,296	321,133	9,432	97,295
December	773,267	313,817	345,991	10,165	103,294
<b>Year 2015</b>					
January	851,381	358,783	375,946	9,747	106,905
February	773,745	342,649	327,125	8,773	95,198
March	843,224	359,293	372,449	9,422	102,060
April	791,486	341,113	346,238	8,298	95,838
May	867,525	374,222	385,725	9,221	98,357
June	1,032,571	463,242	454,714	10,068	104,546
July	1,208,010	529,209	553,746	11,786	113,269
August	1,187,749	514,757	547,471	11,501	114,019
September	1,043,593	448,583	478,110	11,064	105,835
October	934,308	394,400	424,329	9,984	105,595
November	873,630	379,344	378,223	9,588	106,474
December	919,343	407,668	387,990	10,050	113,636

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 are final. 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 5.5.D. Wood / Wood Waste Biomass: Consumption for Electricity Generation, by Sector, 2005 - 2015 (Billion Btus)**

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
<b>Annual Totals</b>					
2005	355,250	27,373	138,407	207	189,263
2006	350,074	27,455	135,546	269	186,803
2007	353,025	31,568	132,953	284	188,220
2008	338,786	29,150	130,122	287	179,227
2009	320,444	29,565	130,894	274	159,712
2010	349,530	40,167	137,072	274	172,016
2011	347,623	35,474	130,108	482	181,559
2012	390,342	32,723	138,217	478	218,924
2013	397,929	43,363	143,721	536	210,308
2014	431,285	45,643	174,513	961	210,167
2015	406,650	43,919	171,387	504	190,840
<b>Year 2013</b>					
January	33,353	3,294	12,101	46	17,912
February	29,984	3,036	10,623	43	16,282
March	32,674	3,280	11,999	51	17,344
April	27,741	1,964	9,730	21	16,027
May	31,241	3,025	10,837	35	17,344
June	33,044	3,409	11,757	44	17,833
July	35,341	4,027	12,669	43	18,601
August	36,477	4,116	13,924	47	18,389
September	33,383	4,025	12,350	33	16,974
October	33,694	4,329	11,681	52	17,632
November	34,163	4,364	12,503	58	17,238
December	36,834	4,493	13,547	64	18,730
<b>Year 2014</b>					
January	37,135	4,268	14,488	150	18,228
February	33,670	3,805	13,442	125	16,298
March	36,751	4,396	14,837	87	17,430
April	31,558	2,624	12,884	43	16,007
May	32,416	2,959	12,100	67	17,290
June	37,105	3,977	15,346	124	17,658
July	39,028	4,052	16,069	81	18,827
August	38,477	4,275	15,672	69	18,461
September	35,553	3,720	14,839	54	16,940
October	35,086	3,777	13,871	64	17,375
November	36,209	3,715	15,424	46	17,025
December	38,296	4,075	15,542	51	18,628
<b>Year 2015</b>					
January	36,170	4,203	15,139	53	16,775
February	33,328	3,574	14,696	51	15,007
March	33,569	3,459	14,639	41	15,430
April	31,142	2,361	13,300	48	15,433
May	32,373	3,394	13,359	54	15,567
June	33,871	3,817	14,521	25	15,508
July	36,954	4,615	15,335	62	16,942
August	37,027	4,529	15,927	30	16,541
September	33,522	3,464	14,011	42	16,005
October	30,952	3,269	12,065	42	15,577
November	32,840	3,484	13,457	20	15,880
December	34,900	3,750	14,939	35	16,176

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 are final. 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 5.5.E. Wood / Wood Waste Biomass: Consumption for Useful Thermal Output, by Sector, 2005 - 2015 (Billion Btus)**

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
<b>Annual Totals</b>					
2005	997,331	0	19,193	1,028	977,111
2006	1,049,161	0	18,814	1,045	1,029,303
2007	982,486	0	21,435	1,756	959,296
2008	923,889	0	18,075	1,123	904,690
2009	816,285	0	19,587	1,135	795,563
2010	876,041	0	18,357	1,064	856,620
2011	893,314	0	16,577	1,022	875,716
2012	883,158	0	19,251	949	862,958
2013	919,631	0	20,342	950	898,339
2014	946,344	8,835	22,262	3,766	911,481
2015	943,962	9,351	19,200	3,714	911,697
<b>Year 2013</b>					
January	79,616	0	1,730	77	77,810
February	71,246	0	1,642	74	69,530
March	76,554	0	1,698	81	74,775
April	73,726	0	1,956	21	71,749
May	75,190	0	1,475	48	73,667
June	76,058	0	1,618	75	74,365
July	82,751	0	1,751	82	80,918
August	79,205	0	1,868	84	77,253
September	73,225	0	1,660	45	71,520
October	74,777	0	1,512	106	73,159
November	77,020	0	1,662	114	75,244
December	80,263	0	1,771	143	78,350
<b>Year 2014</b>					
January	80,405	649	1,975	311	77,469
February	73,581	733	1,988	271	70,589
March	80,081	875	2,027	342	76,837
April	77,233	678	1,914	246	74,395
May	76,839	773	1,454	338	74,274
June	79,101	683	1,848	400	76,170
July	80,733	767	1,876	351	77,739
August	82,539	722	1,908	346	79,564
September	76,170	573	1,706	296	73,596
October	78,477	737	1,894	285	75,561
November	78,316	728	1,738	271	75,578
December	82,869	916	1,935	309	79,709
<b>Year 2015</b>					
January	84,431	912	1,877	388	81,254
February	75,501	897	1,754	371	72,478
March	77,437	822	1,688	320	74,607
April	77,369	538	1,622	300	74,909
May	79,154	742	936	146	77,329
June	77,486	796	1,477	273	74,940
July	80,499	768	1,635	384	77,711
August	81,262	782	1,727	295	78,459
September	77,136	694	1,765	327	74,350
October	75,247	739	1,386	273	72,849
November	77,481	741	1,513	295	74,932
December	80,959	919	1,819	342	77,880

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 are final. 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 5.5.F. Wood / Wood Waste Biomass: Consumption for Electricity Generation and Useful Thermal Output, by Sector, 2005 - 2015 (Billion Btus)**

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
<b>Annual Totals</b>					
2005	1,352,582	27,373	157,600	1,235	1,166,373
2006	1,399,235	27,455	154,360	1,314	1,216,106
2007	1,335,511	31,568	154,388	2,040	1,147,516
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
<b>Year 2013</b>					
January	112,969	3,294	13,831	123	95,721
February	101,230	3,036	12,265	117	85,813
March	109,229	3,280	13,697	132	92,120
April	101,468	1,964	11,685	42	87,776
May	106,431	3,025	12,312	83	91,011
June	109,102	3,409	13,375	119	92,198
July	118,092	4,027	14,421	125	99,519
August	115,682	4,116	15,792	131	95,642
September	106,608	4,025	14,011	78	88,494
October	108,471	4,329	13,193	158	90,791
November	111,183	4,364	14,165	172	92,482
December	117,097	4,493	15,317	207	97,080
<b>Year 2014</b>					
January	117,540	4,918	16,463	461	95,698
February	107,251	4,538	15,430	395	86,888
March	116,832	5,272	16,864	430	94,267
April	108,791	3,302	14,798	290	90,402
May	109,255	3,732	13,554	405	91,564
June	116,206	4,661	17,194	524	93,828
July	119,761	4,818	17,945	432	96,566
August	121,016	4,997	17,579	415	98,025
September	111,723	4,292	16,545	350	90,537
October	113,563	4,514	15,765	348	92,936
November	114,524	4,443	17,162	317	92,603
December	121,165	4,991	17,477	360	98,337
<b>Year 2015</b>					
January	120,602	5,115	17,017	441	98,029
February	108,829	4,471	16,450	422	87,485
March	111,006	4,281	16,327	361	90,036
April	108,511	2,899	14,922	348	90,342
May	111,527	4,136	14,295	200	92,896
June	111,358	4,613	15,998	299	90,448
July	117,453	5,384	16,970	446	94,653
August	118,289	5,311	17,653	325	95,000
September	110,658	4,158	15,776	369	90,355
October	106,199	4,007	13,451	315	88,426
November	110,321	4,225	14,970	315	90,811
December	115,859	4,669	16,757	377	94,056

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 are final. 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 5.6.A. Landfill Gas: Consumption for Electricity Generation, by Sector, 2005 - 2015 (Million Cubic Feet)**

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
<b>Annual Totals</b>					
2005	141,899	11,490	123,064	4,797	2,548
2006	160,033	16,617	136,108	6,644	664
2007	166,774	17,442	144,104	4,598	630
2008	195,777	20,465	169,547	5,235	530
2009	206,792	19,583	180,689	5,931	589
2010	218,331	19,975	192,428	5,535	393
2011	232,795	22,086	180,856	29,469	384
2012	256,376	25,193	201,965	26,672	2,545
2013	271,967	27,259	211,942	28,143	4,623
2014	285,982	25,819	228,447	27,038	4,678
2015	282,530	25,257	227,381	25,250	4,642
<b>Year 2013</b>					
January	22,446	2,169	17,413	2,494	371
February	20,061	1,962	15,670	2,098	331
March	23,296	2,302	18,243	2,384	366
April	21,467	2,261	16,911	1,942	353
May	23,275	2,317	18,229	2,343	387
June	22,614	2,168	17,652	2,407	387
July	23,199	2,109	18,232	2,469	389
August	24,445	2,964	18,590	2,515	377
September	22,680	2,272	17,654	2,366	388
October	22,199	2,286	17,082	2,432	400
November	22,709	2,210	17,825	2,252	422
December	23,576	2,241	18,441	2,441	453
<b>Year 2014</b>					
January	24,810	2,187	19,717	2,506	401
February	23,764	1,997	19,121	2,289	357
March	24,623	2,107	19,714	2,388	414
April	24,489	2,133	19,679	2,260	416
May	24,111	2,136	19,380	2,190	404
June	24,096	2,173	19,233	2,294	396
July	26,390	2,372	21,117	2,498	404
August	25,163	2,332	20,037	2,403	391
September	23,690	2,143	18,898	2,290	359
October	21,697	2,148	17,099	2,092	358
November	20,698	2,030	16,561	1,723	385
December	22,451	2,062	17,892	2,105	393
<b>Year 2015</b>					
January	22,341	2,166	17,669	2,131	375
February	19,907	1,894	15,857	1,843	313
March	22,993	2,187	18,282	2,152	372
April	23,039	2,153	18,422	2,078	386
May	23,827	2,070	19,235	2,148	374
June	23,305	2,066	18,720	2,146	372
July	25,727	2,228	20,794	2,293	413
August	24,507	2,120	19,753	2,227	407
September	23,326	2,004	18,828	2,108	387
October	23,435	2,081	18,967	1,989	398
November	24,602	2,123	20,052	2,020	408
December	25,520	2,165	20,803	2,115	438

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

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Values are final. 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 5.6.B. Landfill Gas: Consumption for Useful Thermal Output, by Sector, 2005 - 2015 (Million Cubic Feet)**

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
<b>Annual Totals</b>					
2005	1,923	0	965	435	522
2006	2,051	0	525	1,094	433
2007	1,988	0	386	1,102	501
2008	1,025	0	454	433	138
2009	793	0	545	176	72
2010	1,623	0	1,195	370	58
2011	3,195	0	2,753	351	91
2012	3,189	0	2,788	340	61
2013	831	0	261	423	147
2014	1,710	176	525	674	335
2015	1,522	2	644	515	362
<b>Year 2013</b>					
January	64	0	18	33	12
February	64	0	22	30	11
March	60	0	23	24	13
April	76	0	28	37	11
May	86	0	35	40	11
June	79	0	30	37	12
July	87	0	35	39	13
August	77	0	27	37	13
September	65	0	17	35	12
October	62	0	15	35	12
November	54	0	4	38	12
December	59	0	8	38	13
<b>Year 2014</b>					
January	169	20	62	61	25
February	148	18	64	44	23
March	132	19	41	44	27
April	137	19	28	60	30
May	144	19	33	64	29
June	154	17	54	54	29
July	179	14	70	64	30
August	161	15	62	55	30
September	140	14	47	51	28
October	101	2	21	53	25
November	112	3	17	64	29
December	132	15	26	61	30
<b>Year 2015</b>					
January	105	0	34	42	29
February	102	0	40	37	24
March	131	0	54	47	30
April	128	0	50	47	31
May	125	0	49	45	31
June	119	0	42	46	30
July	151	0	72	47	32
August	123	0	60	31	32
September	132	0	54	47	31
October	111	0	45	36	30
November	143	0	68	45	30
December	152	0	76	45	31

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

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Values are final. 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 5.6.C. Landfill Gas: Consumption for Electricity Generation and Useful Thermal Output, by Sector, 2005 - 2015 (Million Cubic Feet)**

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
<b>Annual Totals</b>					
2005	143,822	11,490	124,030	5,232	3,070
2006	162,084	16,617	136,632	7,738	1,096
2007	168,762	17,442	144,490	5,699	1,131
2008	196,802	20,465	170,001	5,668	668
2009	207,585	19,583	181,234	6,106	661
2010	219,954	19,975	193,623	5,905	451
2011	235,990	22,086	183,609	29,820	474
2012	259,564	25,193	204,753	27,012	2,606
2013	272,798	27,259	212,203	28,566	4,770
2014	287,692	25,995	228,971	27,713	5,013
2015	284,052	25,259	228,024	25,765	5,004
<b>Year 2013</b>					
January	22,510	2,169	17,431	2,527	383
February	20,125	1,962	15,692	2,128	342
March	23,355	2,302	18,267	2,408	378
April	21,542	2,261	16,939	1,979	364
May	23,361	2,317	18,263	2,383	398
June	22,693	2,168	17,682	2,443	400
July	23,286	2,109	18,267	2,508	402
August	24,522	2,964	18,617	2,552	390
September	22,744	2,272	17,671	2,402	400
October	22,261	2,286	17,096	2,467	413
November	22,764	2,210	17,829	2,290	434
December	23,635	2,241	18,448	2,479	466
<b>Year 2014</b>					
January	24,980	2,207	19,779	2,567	426
February	23,912	2,014	19,185	2,334	379
March	24,755	2,126	19,755	2,432	442
April	24,625	2,152	19,708	2,320	446
May	24,255	2,155	19,413	2,254	433
June	24,250	2,190	19,287	2,348	425
July	26,569	2,386	21,187	2,561	434
August	25,324	2,347	20,099	2,458	421
September	23,830	2,158	18,944	2,341	387
October	21,798	2,150	17,119	2,145	383
November	20,811	2,033	16,578	1,786	414
December	22,584	2,077	17,918	2,166	423
<b>Year 2015</b>					
January	22,445	2,166	17,702	2,173	404
February	20,009	1,894	15,897	1,881	337
March	23,125	2,187	18,336	2,199	401
April	23,167	2,153	18,473	2,125	417
May	23,952	2,070	19,283	2,193	405
June	23,424	2,066	18,763	2,192	403
July	25,877	2,228	20,865	2,340	445
August	24,630	2,120	19,813	2,258	439
September	23,458	2,004	18,881	2,155	418
October	23,546	2,081	19,012	2,025	428
November	24,746	2,124	20,120	2,064	438
December	25,672	2,165	20,878	2,160	469

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 are final. 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 5.6.D. Landfill Gas: Consumption for Electricity Generation, by Sector, 2005 - 2015 (Billion Btus)**

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
<b>Annual Totals</b>					
2005	67,902	5,650	58,624	2,360	1,269
2006	75,970	8,287	63,950	3,388	345
2007	79,712	8,620	68,432	2,344	316
2008	94,215	10,242	81,029	2,668	276
2009	99,821	9,748	86,773	2,999	301
2010	105,835	10,029	92,763	2,837	205
2011	112,538	11,146	89,857	11,332	203
2012	124,297	12,721	99,938	10,356	1,282
2013	132,766	13,819	105,330	11,290	2,327
2014	140,779	13,132	114,333	10,937	2,377
2015	138,085	12,846	112,911	10,023	2,304
<b>Year 2013</b>					
January	10,911	1,101	8,635	987	189
February	9,771	991	7,773	839	168
March	11,389	1,173	9,073	957	186
April	10,561	1,150	8,427	804	180
May	11,438	1,174	9,113	954	197
June	11,049	1,090	8,787	975	197
July	11,374	1,079	9,094	1,003	198
August	11,941	1,502	9,234	1,013	192
September	11,072	1,154	8,785	941	192
October	10,767	1,159	8,448	963	198
November	11,036	1,116	8,818	894	208
December	11,457	1,131	9,143	961	223
<b>Year 2014</b>					
January	12,152	1,109	9,831	1,008	204
February	11,686	1,014	9,561	930	181
March	12,101	1,072	9,862	956	211
April	12,040	1,085	9,843	902	211
May	11,900	1,097	9,725	872	206
June	11,873	1,101	9,633	937	201
July	13,072	1,217	10,609	1,041	206
August	12,414	1,186	10,047	982	199
September	11,663	1,091	9,452	936	183
October	10,659	1,091	8,549	837	182
November	10,192	1,028	8,267	703	194
December	11,028	1,042	8,954	832	200
<b>Year 2015</b>					
January	10,849	1,090	8,760	813	186
February	9,679	941	7,865	718	155
March	11,199	1,102	9,083	830	184
April	11,239	1,102	9,140	806	191
May	11,627	1,075	9,524	842	186
June	11,382	1,033	9,308	856	185
July	12,622	1,139	10,345	932	205
August	11,994	1,091	9,809	892	202
September	11,418	1,034	9,345	846	192
October	11,451	1,060	9,394	799	197
November	12,101	1,086	9,985	827	203
December	12,525	1,094	10,353	861	218

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 are final. 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 5.6.E. Landfill Gas: Consumption for Useful Thermal Output, by Sector, 2005 - 2015 (Billion Btus)**

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
<b>Annual Totals</b>					
2005	994	0	519	212	263
2006	1,034	0	267	549	218
2007	985	0	226	532	228
2008	552	0	271	211	70
2009	440	0	313	91	37
2010	847	0	643	174	30
2011	1,635	0	1,422	165	48
2012	1,630	0	1,441	156	32
2013	414	0	132	206	76
2014	852	88	266	326	173
2015	756	1	326	250	179
<b>Year 2013</b>					
January	32	0	9	17	6
February	32	0	11	15	6
March	30	0	12	12	7
April	38	0	14	18	6
May	43	0	17	19	6
June	39	0	15	18	7
July	43	0	17	19	7
August	38	0	13	18	7
September	32	0	9	17	6
October	31	0	8	17	6
November	27	0	2	18	6
December	29	0	4	18	7
<b>Year 2014</b>					
January	85	10	32	30	13
February	75	9	32	23	12
March	67	10	21	23	14
April	68	9	14	29	15
May	72	10	17	30	15
June	77	9	28	26	15
July	88	7	36	30	16
August	80	8	31	26	15
September	69	7	24	24	15
October	50	1	11	25	13
November	56	1	9	31	15
December	66	8	13	29	16
<b>Year 2015</b>					
January	52	0	17	21	14
February	51	0	21	19	12
March	65	0	28	22	15
April	64	0	26	23	15
May	62	0	25	22	15
June	58	0	21	22	15
July	75	0	36	22	16
August	62	0	31	16	16
September	65	0	27	23	15
October	56	0	23	18	15
November	70	0	34	21	15
December	75	0	38	21	16

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

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Values are final. 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 5.6.F. Landfill Gas: Consumption for Electricity Generation and Useful Thermal Output, by Sector, 2005 - 2015 (Billion Btus)**

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
<b>Annual Totals</b>					
2005	68,897	5,650	59,144	2,571	1,532
2006	77,004	8,287	64,217	3,937	563
2007	80,697	8,620	68,657	2,875	544
2008	94,768	10,242	81,300	2,879	346
2009	100,261	9,748	87,086	3,089	337
2010	106,681	10,029	93,405	3,011	236
2011	114,173	11,146	91,279	11,497	251
2012	125,927	12,721	101,379	10,512	1,315
2013	133,180	13,819	105,462	11,497	2,403
2014	141,632	13,220	114,599	11,263	2,550
2015	138,841	12,847	113,238	10,273	2,483
<b>Year 2013</b>					
January	10,943	1,101	8,644	1,004	195
February	9,803	991	7,784	853	174
March	11,420	1,173	9,084	969	193
April	10,598	1,150	8,441	822	185
May	11,480	1,174	9,130	974	202
June	11,088	1,090	8,802	992	204
July	11,418	1,079	9,112	1,022	205
August	11,979	1,502	9,247	1,031	199
September	11,104	1,154	8,794	958	199
October	10,798	1,159	8,455	980	204
November	11,063	1,116	8,821	913	214
December	11,486	1,131	9,147	979	230
<b>Year 2014</b>					
January	12,237	1,119	9,863	1,038	217
February	11,761	1,023	9,593	953	192
March	12,168	1,082	9,883	979	225
April	12,109	1,094	9,857	931	227
May	11,972	1,107	9,742	902	221
June	11,950	1,110	9,661	962	216
July	13,160	1,224	10,644	1,071	221
August	12,495	1,193	10,078	1,008	215
September	11,732	1,098	9,476	960	198
October	10,709	1,092	8,560	863	195
November	10,247	1,029	8,275	734	209
December	11,093	1,050	8,967	861	215
<b>Year 2015</b>					
January	10,901	1,090	8,777	834	200
February	9,730	941	7,885	737	167
March	11,264	1,102	9,111	852	199
April	11,302	1,102	9,165	829	206
May	11,689	1,075	9,549	865	201
June	11,440	1,033	9,329	878	200
July	12,696	1,139	10,382	955	221
August	12,056	1,091	9,840	908	218
September	11,483	1,034	9,373	869	207
October	11,507	1,060	9,417	817	212
November	12,171	1,086	10,019	848	218
December	12,601	1,094	10,391	882	233

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

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Values are final. 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 5.7.A. Biogenic Municipal Solid Waste: Consumption for Electricity Generation, by Sector, 2005 - 2015 (Thousand Tons)**

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
<b>Annual Totals</b>					
2005	19,370	560	17,033	1,753	25
2006	19,629	500	17,343	1,761	25
2007	19,576	553	17,116	1,785	122
2008	19,805	509	17,487	1,809	0
2009	19,669	465	17,048	2,155	0
2010	19,437	402	16,802	2,233	0
2011	16,972	388	14,625	1,955	4
2012	16,968	418	14,235	2,304	12
2013	17,007	456	14,057	2,485	8
2014	16,706	444	13,809	2,447	6
2015	16,631	452	13,797	2,375	8
<b>Year 2013</b>					
January	1,328	32	1,115	181	0
February	1,199	30	1,000	169	0
March	1,411	31	1,175	205	1
April	1,371	43	1,121	206	1
May	1,480	43	1,218	218	1
June	1,503	40	1,242	220	1
July	1,549	44	1,278	226	1
August	1,478	40	1,213	224	1
September	1,408	38	1,154	216	1
October	1,403	41	1,155	206	0
November	1,350	40	1,107	203	0
December	1,528	35	1,280	213	1
<b>Year 2014</b>					
January	1,381	28	1,131	221	0
February	1,205	24	1,014	166	0
March	1,390	38	1,165	187	0
April	1,371	44	1,127	200	0
May	1,455	42	1,200	214	1
June	1,418	40	1,170	207	1
July	1,489	44	1,224	220	1
August	1,469	38	1,210	220	1
September	1,384	38	1,141	205	1
October	1,374	40	1,133	200	0
November	1,373	32	1,139	201	0
December	1,397	36	1,155	205	1
<b>Year 2015</b>					
January	1,335	31	1,114	190	0
February	1,212	24	1,020	168	0
March	1,310	28	1,088	194	0
April	1,315	41	1,077	196	1
May	1,380	45	1,136	199	1
June	1,417	44	1,168	205	1
July	1,540	46	1,274	219	1
August	1,491	43	1,239	208	1
September	1,388	43	1,139	206	1
October	1,383	38	1,157	187	1
November	1,389	34	1,153	202	1
December	1,471	36	1,232	202	1

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

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Values are final. 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 5.7.B. Biogenic Municipal Solid Waste: Consumption for Useful Thermal Output, by Sector, 2005 - 2015 (Thousand Tons)**

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
<b>Annual Totals</b>					
2005	2,719	0	623	1,536	560
2006	2,840	0	725	1,595	520
2007	2,219	0	768	1,136	315
2008	2,328	0	806	1,514	8
2009	2,426	0	823	1,466	137
2010	2,287	0	819	1,316	152
2011	2,044	0	742	1,148	154
2012	1,986	0	522	1,273	190
2013	1,865	0	517	1,160	187
2014	1,955	0	650	1,104	200
2015	1,986	0	655	1,127	203
<b>Year 2013</b>					
January	156	0	42	98	17
February	143	0	40	91	12
March	167	0	47	104	16
April	164	0	40	109	15
May	153	0	32	105	16
June	167	0	47	103	17
July	158	0	45	95	18
August	155	0	44	93	17
September	152	0	39	97	16
October	150	0	46	91	13
November	141	0	46	82	14
December	159	0	48	94	16
<b>Year 2014</b>					
January	203	0	59	126	17
February	140	0	49	76	15
March	154	0	52	86	15
April	155	0	58	82	15
May	166	0	57	92	18
June	163	0	57	90	16
July	164	0	54	93	17
August	161	0	47	92	22
September	157	0	48	92	18
October	165	0	56	93	17
November	158	0	55	88	15
December	169	0	59	93	17
<b>Year 2015</b>					
January	180	0	67	95	19
February	147	0	48	83	16
March	172	0	59	96	17
April	162	0	53	92	17
May	164	0	49	99	16
June	154	0	47	90	17
July	170	0	55	99	17
August	164	0	55	91	18
September	162	0	49	95	18
October	169	0	57	94	17
November	166	0	56	96	14
December	174	0	61	96	17

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

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Values are final. 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 5.7.C. Biogenic Municipal Solid Waste: Consumption for Electricity Generation and Useful Thermal Output, by Sector, 2005 - 2015 (Thousand Tons)**

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
<b>Annual Totals</b>					
2005	22,089	560	17,655	3,289	584
2006	22,469	500	18,068	3,356	545
2007	21,796	553	17,885	2,921	437
2008	22,134	509	18,294	3,323	8
2009	22,095	465	17,872	3,622	137
2010	21,725	402	17,621	3,549	152
2011	19,016	388	15,367	3,103	158
2012	18,954	418	14,757	3,577	203
2013	18,871	456	14,574	3,646	195
2014	18,661	444	14,459	3,551	206
2015	18,617	452	14,452	3,502	211
<b>Year 2013</b>					
January	1,484	32	1,157	278	17
February	1,342	30	1,040	259	13
March	1,579	31	1,222	309	17
April	1,535	43	1,161	315	16
May	1,633	43	1,250	323	17
June	1,669	40	1,289	322	18
July	1,707	44	1,323	322	18
August	1,633	40	1,257	317	18
September	1,559	38	1,193	312	17
October	1,552	41	1,201	297	13
November	1,491	40	1,152	284	14
December	1,687	35	1,328	307	17
<b>Year 2014</b>					
January	1,584	28	1,190	347	18
February	1,345	24	1,063	242	15
March	1,544	38	1,217	273	16
April	1,526	44	1,184	283	15
May	1,622	42	1,256	306	18
June	1,581	40	1,227	297	17
July	1,653	44	1,279	313	18
August	1,629	38	1,257	312	22
September	1,541	38	1,188	297	18
October	1,540	40	1,189	293	17
November	1,531	32	1,194	289	15
December	1,566	36	1,214	299	17
<b>Year 2015</b>					
January	1,515	31	1,181	284	19
February	1,359	24	1,068	250	16
March	1,482	28	1,147	290	18
April	1,477	41	1,130	289	17
May	1,544	45	1,185	298	17
June	1,571	44	1,214	296	18
July	1,710	46	1,329	318	18
August	1,655	43	1,294	299	19
September	1,551	43	1,188	301	19
October	1,551	38	1,215	281	18
November	1,555	34	1,209	297	15
December	1,645	36	1,293	298	18

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

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Values are final. 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 5.7.D. Biogenic Municipal Solid Waste: Consumption for Electricity Generation, by Sector, 2005 - 2015 (Billion Btus)**

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
<b>Annual Totals</b>					
2005	144,339	4,724	126,529	12,923	164
2006	146,987	4,078	129,779	12,964	165
2007	146,308	4,557	127,826	13,043	881
2008	148,452	4,476	130,041	13,934	0
2009	146,971	3,989	126,649	16,333	0
2010	144,934	3,322	124,437	17,176	0
2011	135,241	3,433	115,841	15,933	34
2012	135,735	3,910	113,418	18,307	100
2013	135,764	4,459	111,430	19,811	64
2014	134,408	4,429	110,569	19,366	45
2015	133,117	4,295	109,691	19,068	63
<b>Year 2013</b>					
January	10,655	297	8,917	1,437	4
February	9,619	307	7,962	1,347	3
March	11,276	313	9,313	1,643	7
April	10,910	433	8,814	1,658	5
May	11,803	452	9,593	1,752	6
June	11,852	360	9,756	1,730	7
July	12,190	435	9,962	1,786	7
August	11,705	405	9,521	1,771	8
September	11,270	377	9,174	1,712	7
October	11,292	367	9,256	1,665	4
November	10,950	381	8,930	1,637	3
December	12,242	334	10,229	1,674	5
<b>Year 2014</b>					
January	11,151	274	9,110	1,764	3
February	9,655	237	8,128	1,287	3
March	11,231	457	9,297	1,474	3
April	11,034	448	9,007	1,578	1
May	11,678	397	9,596	1,680	5
June	11,426	411	9,379	1,632	5
July	11,996	428	9,825	1,737	6
August	11,822	357	9,715	1,745	5
September	11,120	379	9,098	1,638	4
October	11,026	361	9,056	1,605	3
November	11,072	302	9,151	1,616	3
December	11,198	377	9,206	1,609	5
<b>Year 2015</b>					
January	10,811	282	8,993	1,531	5
February	9,765	232	8,180	1,350	3
March	10,467	263	8,659	1,542	3
April	10,583	400	8,612	1,567	4
May	11,137	434	9,081	1,615	6
June	11,297	422	9,257	1,613	5
July	12,220	443	10,031	1,741	6
August	11,820	415	9,735	1,664	6
September	11,034	405	8,961	1,664	5
October	11,118	363	9,238	1,512	5
November	11,112	301	9,166	1,638	7
December	11,751	334	9,778	1,632	7

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

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Values are final. 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 5.7.E. Biogenic Municipal Solid Waste: Consumption for Useful Thermal Output, by Sector, 2005 - 2015 (Billion Btus)**

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
<b>Annual Totals</b>					
2005	20,296	0	4,551	11,991	3,754
2006	21,729	0	5,347	12,654	3,728
2007	16,174	0	5,683	8,350	2,141
2008	18,272	0	6,039	12,174	59
2009	18,785	0	6,229	11,535	1,021
2010	17,502	0	6,031	10,333	1,138
2011	16,766	0	5,807	9,731	1,227
2012	16,310	0	4,180	10,615	1,515
2013	15,168	0	4,145	9,530	1,493
2014	15,783	0	5,140	9,046	1,597
2015	16,623	0	5,195	9,752	1,676
<b>Year 2013</b>					
January	1,291	0	337	821	132
February	1,178	0	320	760	99
March	1,365	0	379	860	126
April	1,340	0	323	898	119
May	1,242	0	259	854	129
June	1,353	0	376	839	138
July	1,285	0	361	784	140
August	1,248	0	354	755	139
September	1,230	0	314	789	127
October	1,207	0	368	736	103
November	1,139	0	365	663	111
December	1,290	0	389	770	130
<b>Year 2014</b>					
January	1,632	0	474	1,019	139
February	1,128	0	387	624	117
March	1,247	0	409	716	122
April	1,250	0	461	670	119
May	1,339	0	445	754	140
June	1,315	0	450	738	127
July	1,320	0	430	754	136
August	1,299	0	371	756	172
September	1,264	0	372	752	140
October	1,332	0	440	759	133
November	1,280	0	432	729	120
December	1,376	0	469	773	134
<b>Year 2015</b>					
January	1,533	0	530	822	181
February	1,227	0	377	714	136
March	1,438	0	465	832	141
April	1,350	0	421	795	135
May	1,368	0	383	859	126
June	1,281	0	366	778	136
July	1,419	0	432	854	133
August	1,382	0	433	787	162
September	1,352	0	384	825	143
October	1,409	0	447	820	142
November	1,401	0	461	831	109
December	1,463	0	495	836	132

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

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Values are final. 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 5.7.F. Biogenic Municipal Solid Waste: Consumption for Electricity Generation and Useful Thermal Output, by Sector, 2005 - 2015 (Billion Btus)**

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
<b>Annual Totals</b>					
2005	164,635	4,724	131,080	24,914	3,918
2006	168,716	4,078	135,127	25,618	3,893
2007	162,482	4,557	133,509	21,393	3,022
2008	166,723	4,476	136,080	26,108	59
2009	165,755	3,989	132,877	27,868	1,021
2010	162,436	3,322	130,467	27,509	1,138
2011	152,007	3,433	121,648	25,664	1,262
2012	152,045	3,910	117,598	28,923	1,614
2013	150,932	4,459	115,574	29,342	1,557
2014	150,191	4,429	115,709	28,411	1,643
2015	149,740	4,295	114,886	28,821	1,739
<b>Year 2013</b>					
January	11,945	297	9,254	2,258	136
February	10,797	307	8,282	2,106	102
March	12,641	313	9,693	2,503	132
April	12,250	433	9,137	2,556	124
May	13,046	452	9,852	2,606	134
June	13,206	360	10,132	2,569	146
July	13,475	435	10,323	2,570	147
August	12,953	405	9,875	2,526	147
September	12,500	377	9,488	2,502	134
October	12,500	367	9,625	2,402	106
November	12,089	381	9,295	2,300	114
December	13,531	334	10,618	2,444	135
<b>Year 2014</b>					
January	12,783	274	9,584	2,783	142
February	10,783	237	8,514	1,911	120
March	12,478	457	9,706	2,190	125
April	12,284	448	9,468	2,248	119
May	13,017	397	10,041	2,434	145
June	12,741	411	9,829	2,370	132
July	13,316	428	10,255	2,492	141
August	13,121	357	10,086	2,501	176
September	12,384	379	9,470	2,390	144
October	12,359	361	9,497	2,364	136
November	12,352	302	9,583	2,345	123
December	12,574	377	9,676	2,382	139
<b>Year 2015</b>					
January	12,344	282	9,523	2,353	186
February	10,992	232	8,557	2,064	139
March	11,905	263	9,125	2,373	144
April	11,934	400	9,032	2,362	139
May	12,505	434	9,464	2,474	132
June	12,578	422	9,624	2,391	141
July	13,640	443	10,463	2,595	139
August	13,202	415	10,167	2,450	169
September	12,386	405	9,345	2,489	148
October	12,528	363	9,685	2,332	147
November	12,512	301	9,627	2,469	116
December	13,215	334	10,274	2,468	139

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

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Values are final. 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 5.8.D. Other Waste Biomass: Consumption for Electricity Generation, by Sector, 2005 - 2015 (Billion Btus)**

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
<b>Annual Totals</b>					
2005	17,852	2,485	7,365	4,677	3,325
2006	17,727	2,611	7,788	4,436	2,893
2007	19,083	2,992	8,861	4,049	3,181
2008	24,288	3,409	12,745	3,684	4,450
2009	24,847	3,679	13,231	3,760	4,177
2010	29,996	3,668	14,449	3,790	8,090
2011	30,771	4,488	16,115	3,816	6,352
2012	30,342	4,191	15,740	4,016	6,395
2013	29,385	2,432	13,671	4,979	8,303
2014	38,361	2,360	21,628	5,745	8,627
2015	41,785	2,853	25,058	5,935	7,939
<b>Year 2013</b>					
January	2,362	233	1,103	405	621
February	2,082	151	1,021	357	553
March	2,415	162	1,225	412	617
April	2,485	205	1,148	394	738
May	2,367	231	1,059	414	663
June	2,174	173	945	401	655
July	2,423	211	1,062	428	722
August	2,462	203	1,063	456	740
September	2,320	209	1,044	373	694
October	2,491	212	1,130	410	739
November	2,851	197	1,435	452	767
December	2,953	246	1,436	477	795
<b>Year 2014</b>					
January	3,630	212	2,208	509	701
February	3,175	199	1,875	459	641
March	3,420	142	2,015	509	754
April	3,157	170	1,713	473	800
May	3,380	241	1,957	491	691
June	3,350	182	1,995	461	713
July	3,143	261	1,631	491	760
August	2,962	148	1,596	495	723
September	2,776	136	1,525	464	652
October	3,137	257	1,666	472	742
November	3,045	202	1,671	455	716
December	3,188	209	1,777	466	735
<b>Year 2015</b>					
January	3,094	259	1,688	510	638
February	2,946	220	1,776	454	497
March	3,146	215	1,758	505	667
April	2,971	188	1,574	485	724
May	3,130	229	1,797	481	623
June	3,326	190	2,057	492	586
July	3,941	275	2,428	520	719
August	4,054	370	2,501	517	666
September	3,738	299	2,314	501	623
October	3,717	223	2,301	476	717
November	3,927	215	2,507	477	727
December	3,797	171	2,357	516	753

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

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Values are final. 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 5.8.E. Other Waste Biomass: Consumption for Useful Thermal Output, by Sector, 2005 - 2015 (Billion Btus)**

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
<b>Annual Totals</b>					
2005	38,010	0	10,275	2,086	25,649
2006	36,966	0	8,561	2,318	26,087
2007	41,757	0	10,294	2,643	28,820
2008	41,851	0	9,674	1,542	30,635
2009	41,810	0	10,355	1,638	29,817
2010	47,153	0	8,436	1,648	37,070
2011	43,483	0	6,460	1,566	35,458
2012	46,863	0	6,914	1,796	38,153
2013	62,445	0	6,768	1,259	54,418
2014	65,201	15	6,930	1,543	56,712
2015	67,512	1	7,845	2,000	57,666
<b>Year 2013</b>					
January	5,947	0	1,327	145	4,476
February	5,066	0	874	90	4,102
March	5,451	0	870	107	4,474
April	5,533	0	395	81	5,058
May	4,344	0	212	86	4,046
June	4,065	0	270	100	3,696
July	4,414	0	216	106	4,093
August	4,570	0	215	118	4,238
September	4,086	0	184	114	3,789
October	5,954	0	649	98	5,206
November	6,362	0	787	99	5,475
December	6,653	0	770	116	5,767
<b>Year 2014</b>					
January	6,040	2	701	138	5,199
February	5,865	2	723	134	5,006
March	6,232	2	797	123	5,311
April	6,446	2	388	104	5,952
May	4,525	2	305	138	4,081
June	4,469	2	323	142	4,002
July	5,141	1	380	149	4,611
August	4,143	1	403	151	3,588
September	3,841	1	304	122	3,413
October	6,029	0	692	101	5,235
November	6,000	0	960	113	4,927
December	6,469	1	955	130	5,383
<b>Year 2015</b>					
January	6,572	0	1,031	161	5,379
February	5,524	0	875	137	4,512
March	6,283	0	829	151	5,302
April	5,542	0	361	183	4,997
May	4,782	0	421	187	4,174
June	4,738	0	470	169	4,098
July	5,097	0	478	198	4,421
August	4,526	0	390	208	3,928
September	4,356	0	351	186	3,819
October	6,558	0	832	151	5,575
November	6,636	0	982	118	5,535
December	6,899	0	825	149	5,925

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

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**Table 5.8.F. Other Waste Biomass: Consumption for Electricity Generation and Useful Thermal Output, by Sector, 2005 - 2015 (Billion Btus)**

Period	Total (all sectors)	Electric Power Sector		Commercial Sector	Industrial Sector
		Electric Utilities	Independent Power Producers		
<b>Annual Totals</b>					
2005	55,862	2,485	17,640	6,763	28,974
2006	54,693	2,611	16,348	6,755	28,980
2007	60,840	2,992	19,155	6,692	32,001
2008	66,139	3,409	22,419	5,227	35,085
2009	66,658	3,679	23,586	5,398	33,994
2010	77,150	3,668	22,884	5,438	45,159
2011	74,255	4,488	22,574	5,382	41,810
2012	77,205	4,191	22,654	5,812	44,548
2013	91,830	2,432	20,439	6,238	62,721
2014	103,561	2,375	28,558	7,289	65,339
2015	109,297	2,854	32,903	7,935	65,605
<b>Year 2013</b>					
January	8,309	233	2,430	550	5,096
February	7,149	151	1,895	447	4,655
March	7,866	162	2,095	519	5,091
April	8,018	205	1,543	475	5,795
May	6,711	231	1,271	500	4,709
June	6,239	173	1,215	501	4,350
July	6,837	211	1,278	534	4,814
August	7,032	203	1,277	574	4,977
September	6,406	209	1,227	487	4,483
October	8,445	212	1,780	508	5,945
November	9,212	197	2,222	550	6,243
December	9,606	246	2,205	593	6,562
<b>Year 2014</b>					
January	9,669	214	2,909	647	5,900
February	9,039	201	2,598	593	5,648
March	9,652	144	2,812	632	6,065
April	9,603	172	2,101	577	6,752
May	7,905	243	2,262	628	4,772
June	7,819	183	2,317	603	4,715
July	8,285	262	2,010	640	5,371
August	7,105	150	1,998	645	4,312
September	6,616	137	1,829	586	4,065
October	9,166	257	2,358	573	5,977
November	9,045	203	2,631	568	5,643
December	9,657	210	2,732	596	6,119
<b>Year 2015</b>					
January	9,666	259	2,719	671	6,017
February	8,470	220	2,651	591	5,008
March	9,428	215	2,587	656	5,969
April	8,513	188	1,935	668	5,722
May	7,912	229	2,218	668	4,797
June	8,063	190	2,527	662	4,684
July	9,039	275	2,906	718	5,140
August	8,579	370	2,891	724	4,594
September	8,094	299	2,665	687	4,442
October	10,275	223	3,133	627	6,292
November	10,562	216	3,489	596	6,262
December	10,696	171	3,182	666	6,678

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

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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 5.9. Consumption of Coal for Electricity Generation by State by Sector, 2015 and 2014 (Thousand Tons)**

Census Division and State	Electric Power Sector										
	All Sectors			Electric Utilities		Independent Power Producers		Commercial Sector		Industrial Sector	
	Year 2015	Year 2014	Percentage Change	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014
New England	1,795	2,310	-22.0%	406	544	1,377	1,753	0	0	12	13
Connecticut	359	499	-28.0%	0	0	359	499	0	0	0	0
Maine	22	19	15.0%	0	0	13	10	0	0	8	9
Massachusetts	1,009	1,248	-19.0%	0	0	1,005	1,244	0	0	3	5
New Hampshire	406	544	-25.0%	406	544	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	32,755	41,408	-21.0%	0	0	32,513	41,140	1	5	241	263
New Jersey	753	1,061	-29.0%	0	0	753	1,061	0	0	0	0
New York	1,104	2,221	-50.0%	0	0	1,038	2,154	0	0	66	67
Pennsylvania	30,898	38,127	-19.0%	0	0	30,722	37,925	1	5	175	196
East North Central	164,983	190,107	-13.0%	96,932	117,719	67,141	71,320	38	55	873	1,013
Illinois	44,030	52,198	-16.0%	2,033	5,765	41,413	45,798	13	18	572	617
Indiana	39,116	48,560	-19.0%	36,320	45,734	2,786	2,804	10	17	0	5
Michigan	29,568	29,530	0.1%	29,253	29,180	228	214	15	19	72	117
Ohio	30,576	38,486	-21.0%	7,804	15,913	22,714	22,504	0	1	58	67
Wisconsin	21,692	21,334	1.7%	21,522	21,126	0	0	0	0	171	207
West North Central	125,028	138,064	-9.4%	123,424	136,287	13	19	58	71	1,533	1,687
Iowa	17,659	20,549	-14.0%	16,840	19,703	0	0	34	36	786	810
Kansas	15,851	18,199	-13.0%	15,851	18,199	0	0	0	0	0	0
Minnesota	14,649	16,800	-13.0%	14,338	16,397	0	0	5	10	306	393
Missouri	38,277	42,967	-11.0%	38,234	42,899	13	19	19	24	12	25
Nebraska	14,862	15,427	-3.7%	14,508	15,036	0	0	0	0	354	391
North Dakota	22,739	22,342	1.8%	22,663	22,273	0	0	0	0	76	69
South Dakota	990	1,780	-44.0%	990	1,780	0	0	0	0	0	0
South Atlantic	105,370	125,890	-16.0%	92,673	109,643	12,283	15,617	23	23	391	607
Delaware	276	397	-30.0%	0	0	276	397	0	0	0	0
District of Columbia	0	0	--	0	0	0	0	0	0	0	0
Florida	19,053	22,835	-17.0%	18,581	22,191	437	594	0	0	35	50
Georgia	19,354	22,760	-15.0%	19,307	22,660	0	0	0	0	47	100
Maryland	6,046	7,451	-19.0%	0	0	6,015	7,402	0	7	31	41
North Carolina	15,634	19,496	-20.0%	15,436	19,086	151	345	14	6	33	59
South Carolina	9,238	11,752	-21.0%	9,183	11,695	0	0	0	0	55	57
Virginia	7,587	9,281	-18.0%	7,121	8,606	396	576	8	10	62	89
West Virginia	28,181	31,918	-12.0%	23,045	25,405	5,008	6,303	0	0	128	211
East South Central	75,121	87,424	-14.0%	71,763	84,538	3,133	2,625	0	3	226	258
Alabama	21,049	23,913	-12.0%	21,025	23,880	0	0	0	0	24	33
Kentucky	34,381	39,214	-12.0%	34,381	39,214	0	0	0	0	0	0
Mississippi	4,830	6,550	-26.0%	1,697	3,925	3,133	2,625	0	0	0	0
Tennessee	14,862	17,747	-16.0%	14,660	17,519	0	0	0	3	202	225
West South Central	126,189	152,519	-17.0%	62,331	77,531	63,662	74,781	0	0	196	208
Arkansas	12,830	19,295	-34.0%	10,557	17,226	2,259	2,055	0	0	14	14
Louisiana	10,755	12,632	-15.0%	6,671	5,845	4,084	6,787	0	0	0	0
Oklahoma	15,825	18,934	-16.0%	14,453	17,517	1,191	1,224	0	0	182	193
Texas	86,779	101,658	-15.0%	30,651	36,942	56,129	64,715	0	0	0	0
Mountain	102,261	108,050	-5.4%	90,285	95,891	11,542	11,675	0	0	435	484
Arizona	19,812	22,911	-14.0%	19,812	22,911	0	0	0	0	0	0
Colorado	17,461	17,769	-1.7%	17,440	17,740	16	24	0	0	5	5
Idaho	16	18	-11.0%	0	0	0	0	0	0	16	18
Montana	10,283	10,187	0.9%	221	285	10,057	9,895	0	0	5	7
Nevada	1,507	3,446	-56.0%	1,010	2,667	497	779	0	0	0	0
New Mexico	11,882	11,913	-0.3%	11,882	11,913	0	0	0	0	0	0
Utah	14,814	15,312	-3.3%	14,140	14,611	440	452	0	0	234	250
Wyoming	26,486	26,493	0.0%	25,781	25,764	532	524	0	0	173	204
Pacific Contiguous	4,882	6,630	-26.0%	1,401	1,853	3,405	4,702	0	0	76	75
California	67	290	-77.0%	0	0	0	227	0	0	67	63
Oregon	1,401	1,853	-24.0%	1,401	1,853	0	0	0	0	0	0
Washington	3,414	4,486	-24.0%	0	0	3,405	4,475	0	0	9	12
Pacific Noncontiguous	1,209	1,231	-1.8%	292	230	858	936	44	44	15	20
Alaska	556	487	14.0%	292	230	220	213	44	44	0	0
Hawaii	653	744	-12.0%	0	0	638	724	0	0	15	20
U.S. Total	739,594	853,634	-13.0%	539,506	624,235	195,927	224,568	163	202	3,999	4,629

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 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 5.10. Consumption of Petroleum Liquids for Electricity Generation by State, by Sector, 2015 and 2014 (Thousand Barrels)**

Census Division and State	Electric Power Sector										
	All Sectors			Electric Utilities		Independent Power Producers		Commercial Sector		Industrial Sector	
	Year 2015	Year 2014	Percentage Change	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014
New England	3,440	3,673	-6.3%	350	509	2,940	2,976	102	138	49	51
Connecticut	737	908	-19.0%	12	17	691	871	20	15	14	6
Maine	927	526	76.0%	0	1	884	476	8	6	35	43
Massachusetts	1,325	1,646	-20.0%	100	240	1,175	1,324	50	80	0	1
New Hampshire	291	454	-36.0%	208	216	70	222	14	16	0	0
Rhode Island	151	113	35.0%	23	21	120	83	9	NM	0	0
Vermont	8	26	-67.0%	7	13	0	0	2	13	0	0
Middle Atlantic	4,680	5,484	-15.0%	1,419	1,585	3,100	3,724	72	65	90	110
New Jersey	496	786	-37.0%	7	7	481	777	1	1	7	1
New York	3,101	3,423	-9.4%	1,410	1,576	1,571	1,712	65	58	54	77
Pennsylvania	1,083	1,275	-15.0%	1	2	1,048	1,234	6	7	29	32
East North Central	1,106	1,478	-25.0%	699	944	369	498	4	5	34	32
Illinois	107	168	-36.0%	17	58	90	110	0	0	0	0
Indiana	287	298	-3.7%	264	279	0	0	1	1	23	18
Michigan	222	285	-22.0%	216	277	0	0	2	2	4	6
Ohio	422	598	-29.0%	142	210	274	382	1	0	6	5
Wisconsin	67	129	-48.0%	61	120	5	5	0	2	1	2
West North Central	590	787	-25.0%	569	737	15	31	4	17	2	2
Iowa	95	128	-26.0%	92	126	2	2	0	0	0	0
Kansas	110	116	-5.3%	110	116	0	0	0	0	0	0
Minnesota	69	143	-52.0%	51	96	13	29	4	16	1	1
Missouri	209	224	-6.8%	209	224	0	0	0	0	0	0
Nebraska	16	99	-84.0%	16	99	0	0	0	0	0	0
North Dakota	53	54	-1.8%	52	53	0	0	0	0	1	0
South Dakota	38	23	66.0%	38	23	0	0	0	0	0	0
South Atlantic	5,463	6,627	-18.0%	4,014	4,345	1,300	1,862	48	213	101	207
Delaware	255	300	-15.0%	8	15	246	285	0	0	0	0
District of Columbia	0	0	--	0	0	0	0	0	0	0	0
Florida	1,100	938	17.0%	1,062	908	26	11	0	0	12	19
Georgia	284	497	-43.0%	156	240	86	112	5	3	37	141
Maryland	484	1,105	-56.0%	23	25	419	872	40	206	2	1
North Carolina	801	895	-10.0%	723	825	62	52	1	0	15	18
South Carolina	385	500	-23.0%	342	446	14	33	0	0	29	21
Virginia	1,907	2,109	-9.6%	1,475	1,651	424	447	2	3	6	8
West Virginia	247	284	-13.0%	224	234	23	50	0	0	0	0
East South Central	691	832	-17.0%	639	775	22	26	0	0	30	31
Alabama	153	206	-26.0%	104	153	22	24	0	0	27	29
Kentucky	244	246	-0.8%	244	246	0	0	0	0	0	0
Mississippi	31	31	-1.2%	29	30	0	0	0	0	1	1
Tennessee	264	349	-25.0%	262	345	1	2	0	0	1	2
West South Central	463	366	27.0%	272	180	174	170	1	1	15	14
Arkansas	108	49	121.0%	75	33	23	12	0	0	9	4
Louisiana	125	91	37.0%	99	29	25	54	0	0	1	8
Oklahoma	20	22	-12.0%	17	22	0	0	0	0	3	1
Texas	211	203	3.5%	81	95	126	104	1	1	2	2
Mountain	424	474	-10.0%	384	426	39	41	0	NM	1	7
Arizona	92	108	-15.0%	92	108	0	0	0	0	0	0
Colorado	24	38	-39.0%	23	38	0	0	0	NM	0	0
Idaho	0	0	-69.0%	0	0	0	0	0	0	0	0
Montana	32	55	-42.0%	1	20	31	35	0	0	0	0
Nevada	31	29	7.2%	25	25	NM	4	0	0	0	0
New Mexico	126	124	2.1%	126	123	0	0	0	0	0	0
Utah	34	43	-19.0%	32	40	1	1	0	0	1	1
Wyoming	85	77	11.0%	85	71	0	0	0	0	0	6
Pacific Contiguous	213	161	32.0%	81	92	83	47	1	2	48	20
California	164	100	65.0%	67	63	65	30	1	1	32	5
Oregon	11	18	-40.0%	11	18	0	0	0	0	0	0
Washington	38	44	-14.0%	4	11	17	17	1	0	16	14
Pacific Noncontiguous	11,856	11,650	1.8%	10,137	10,061	1,431	1,314	17	9	272	265
Alaska	1,346	1,261	6.7%	1,260	1,168	0	0	7	4	79	89
Hawaii	10,510	10,388	1.2%	8,877	8,893	1,431	1,314	9	6	193	176
U.S. Total	28,925	31,531	-8.3%	18,562	19,652	9,473	10,689	249	451	641	739

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

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

**Table 5.11. Consumption of Petroleum Coke for Electricity Generation by State, by Sector, 2015 and 2014 (Thousand Tons)**

Census Division and State	Electric Power Sector										
	All Sectors			Electric Utilities		Independent Power Producers		Commercial Sector		Industrial Sector	
	Year 2015	Year 2014	Percentage Change	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014
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	55	55	0.6%	0	0	0	0	0	0	55	55
New Jersey	7	NM	NM	0	0	0	0	0	0	7	NM
New York	0	0	--	0	0	0	0	0	0	0	0
Pennsylvania	48	50	-3.9%	0	0	0	0	0	0	48	50
East North Central	1,238	1,269	-2.4%	700	763	487	438	0	0	52	67
Illinois	0	0	--	0	0	0	0	0	0	0	0
Indiana	387	370	4.4%	387	370	0	0	0	0	0	0
Michigan	321	402	-20.0%	280	350	15	22	0	0	27	31
Ohio	473	416	14.0%	0	0	472	416	0	0	1	0
Wisconsin	57	80	-28.0%	34	43	0	0	0	0	23	37
West North Central	18	34	-48.0%	0	0	0	0	2	2	16	32
Iowa	18	34	-48.0%	0	0	0	0	2	2	16	32
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	597	528	13.0%	566	494	0	0	0	0	30	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	566	494	15.0%	566	494	0	0	0	0	0	0
Georgia	30	34	-10.0%	0	0	0	0	0	0	30	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	369	401	-8.1%	369	401	0	0	0	0	0	0
Alabama	0	0	--	0	0	0	0	0	0	0	0
Kentucky	369	401	-8.1%	369	401	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	1,585	1,964	-19.0%	1,485	1,781	0	0	0	0	100	183
Arkansas	0	0	--	0	0	0	0	0	0	0	0
Louisiana	1,518	1,842	-18.0%	1,485	1,781	0	0	0	0	33	60
Oklahoma	0	0	--	0	0	0	0	0	0	0	0
Texas	68	123	-45.0%	0	0	0	0	0	0	68	123
Mountain	182	153	19.0%	0	0	182	153	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	182	153	19.0%	0	0	182	153	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	8	-100.0%	0	0	0	8	0	0	0	0
California	0	8	-100.0%	0	0	0	8	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	4,044	4,412	-8.4%	3,120	3,440	669	599	2	2	253	371

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

**Table 5.12. Consumption of Natural Gas for Electricity Generation by State, by Sector, 2015 and 2014 (Million Cubic Feet)**

Census Division and State	Electric Power Sector										
	All Sectors			Electric Utilities		Independent Power Producers		Commercial Sector		Industrial Sector	
	Year 2015	Year 2014	Percentage Change	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014
New England	404,268	356,658	13.0%	4,386	3,585	382,202	330,872	9,325	9,416	8,355	12,786
Connecticut	128,326	108,833	18.0%	267	121	119,063	99,682	3,913	3,993	5,082	5,038
Maine	20,260	30,772	-34.0%	0	0	17,888	23,848	356	302	2,017	6,622
Massachusetts	162,051	140,167	16.0%	3,792	3,005	152,881	131,658	4,262	4,518	1,116	987
New Hampshire	43,066	31,557	36.0%	307	423	42,366	30,816	253	178	140	139
Rhode Island	50,545	45,293	12.0%	0	0	50,005	44,867	539	425	0	0
Vermont	21	36	-42.0%	19	36	0	0	2	0	0	0
Middle Atlantic	1,180,966	1,075,743	9.8%	116,143	113,124	1,042,537	940,884	10,628	9,824	11,658	11,911
New Jersey	275,564	241,591	14.0%	737	715	269,860	235,561	1,816	1,599	3,150	3,717
New York	467,122	445,419	4.9%	115,373	112,335	342,188	324,672	7,515	6,767	2,046	1,644
Pennsylvania	438,280	388,733	13.0%	33	73	430,488	380,651	1,297	1,458	6,461	6,550
East North Central	684,073	470,661	45.0%	305,678	188,722	350,516	253,049	10,439	14,611	17,441	14,279
Illinois	87,371	49,883	75.0%	5,464	3,458	74,372	34,713	4,080	8,839	3,455	2,872
Indiana	125,064	75,966	65.0%	96,816	52,646	23,024	19,089	994	651	4,230	3,579
Michigan	164,114	110,299	49.0%	54,569	32,038	98,273	68,268	3,511	3,348	7,762	6,646
Ohio	208,398	174,659	19.0%	57,059	47,497	149,307	125,684	1,306	1,079	726	398
Wisconsin	99,125	59,855	66.0%	91,769	53,083	5,540	5,294	548	695	1,268	783
West North Central	143,077	106,861	34.0%	120,123	89,544	16,237	12,777	3,042	2,802	3,674	1,738
Iowa	18,776	11,523	63.0%	16,198	10,496	0	0	542	468	2,036	558
Kansas	15,182	19,120	-21.0%	14,624	18,443	0	0	0	0	558	677
Minnesota	54,364	31,236	74.0%	45,920	24,806	6,055	4,431	1,646	1,637	743	362
Missouri	37,925	34,937	8.6%	26,653	25,859	10,183	8,347	850	696	239	36
Nebraska	4,266	4,197	1.6%	4,255	4,189	0	0	4	2	7	6
North Dakota	6,437	1,984	224.0%	6,346	1,885	0	0	0	0	91	99
South Dakota	6,128	3,865	59.0%	6,128	3,865	0	0	0	0	0	0
South Atlantic	2,288,760	1,874,308	22.0%	1,864,143	1,533,740	388,423	311,826	7,551	6,613	28,643	22,129
Delaware	57,235	53,793	6.4%	367	336	45,067	45,800	0	0	11,801	7,657
District of Columbia	648	769	-16.0%	0	0	0	0	648	769	0	0
Florida	1,163,471	1,043,127	12.0%	1,086,206	976,434	68,114	57,944	208	237	8,944	8,512
Georgia	358,959	293,080	22.0%	262,095	207,817	93,261	81,832	0	0	3,603	3,431
Maryland	44,642	24,338	83.0%	0	0	37,782	18,569	6,551	5,492	310	277
North Carolina	270,320	206,348	31.0%	239,576	179,505	29,779	26,235	54	3	912	605
South Carolina	135,505	86,333	57.0%	119,264	75,616	15,980	10,440	21	53	240	225
Virginia	244,760	159,810	53.0%	155,303	91,990	86,553	66,340	70	59	2,833	1,421
West Virginia	13,219	6,709	97.0%	1,332	2,043	11,887	4,666	0	0	0	1
East South Central	862,559	666,562	29.0%	533,813	389,409	313,289	262,810	1,255	1,229	14,202	13,114
Alabama	404,213	352,980	15.0%	111,635	108,395	283,612	235,776	0	0	8,967	8,809
Kentucky	53,503	28,612	87.0%	45,788	25,190	5,935	1,602	0	0	1,780	1,819
Mississippi	332,923	238,193	40.0%	306,850	210,866	23,742	25,368	34	100	2,296	1,859
Tennessee	71,920	46,777	54.0%	69,540	44,957	0	64	1,221	1,128	1,159	627
West South Central	2,636,288	2,277,553	16.0%	862,132	723,156	1,307,140	1,083,179	7,298	7,661	459,718	463,558
Arkansas	105,102	68,129	54.0%	34,791	16,411	68,332	49,907	24	24	1,954	1,787
Louisiana	531,883	465,683	14.0%	305,826	243,957	29,480	14,409	1,679	1,830	194,898	205,488
Oklahoma	255,418	208,331	23.0%	169,886	142,665	84,483	64,869	0	0	1,048	797
Texas	1,743,885	1,535,410	14.0%	351,629	320,124	1,124,844	953,993	5,595	5,807	261,818	255,486
Mountain	727,043	637,181	14.0%	525,578	443,786	185,807	178,747	4,578	4,277	11,081	10,370
Arizona	249,798	207,007	21.0%	139,541	104,505	108,784	101,104	1,472	1,398	0	0
Colorado	89,735	94,739	-5.3%	70,440	71,161	19,043	23,287	3	52	249	239
Idaho	28,013	18,267	53.0%	16,437	9,263	10,882	8,704	163	0	531	301
Montana	6,558	5,936	10.0%	5,956	5,243	602	419	0	0	0	274
Nevada	209,654	167,794	25.0%	190,075	146,908	16,286	18,132	699	646	2,594	2,108
New Mexico	77,051	75,836	1.6%	47,060	52,074	28,614	22,123	1,364	1,246	13	392
Utah	61,376	63,889	-3.9%	54,843	54,313	1,587	4,466	877	935	4,069	4,175
Wyoming	4,859	3,712	31.0%	1,226	319	8	512	0	0	3,626	2,881
Pacific Contiguous	1,058,400	1,046,008	1.2%	383,053	377,997	590,531	579,888	15,976	15,510	68,840	72,613
California	850,427	876,779	-3.0%	278,479	273,216	488,483	516,997	15,325	14,608	68,140	71,958
Oregon	112,912	89,959	26.0%	46,156	34,542	65,790	54,174	571	848	395	396
Washington	95,061	79,270	20.0%	58,419	70,240	36,257	8,717	80	55	305	259
Pacific Noncontiguous	31,139	32,851	-5.2%	30,207	31,944	0	0	0	15	933	892
Alaska	31,139	32,851	-5.2%	30,207	31,944	0	0	0	15	933	892
Hawaii	0	0	--	0	0	0	0	0	0	0	0
U.S. Total	10,016,576	8,544,387	17.0%	4,745,255	3,895,008	4,576,683	3,954,032	70,092	71,957	624,545	623,390

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 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 5.13. Consumption of Landfill Gas for Electricity Generation by State, by Sector, 2015 and 2014 (Million Cubic Feet)**

Census Division and State	Electric Power Sector										
	All Sectors			Electric Utilities		Independent Power Producers		Commercial Sector		Industrial Sector	
	Year 2015	Year 2014	Percentage Change	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014
New England	11,497	12,064	-4.7%	0	0	10,952	11,388	546	676	0	0
Connecticut	490	531	-7.8%	0	0	490	531	0	0	0	0
Maine	849	860	-1.2%	0	0	849	860	0	0	0	0
Massachusetts	3,801	4,233	-10.0%	0	0	3,801	4,233	0	0	0	0
New Hampshire	1,625	1,871	-13.0%	0	0	1,079	1,195	546	676	0	0
Rhode Island	4,191	3,980	5.3%	0	0	4,191	3,980	0	0	0	0
Vermont	541	589	-8.1%	0	0	541	589	0	0	0	0
Middle Atlantic	55,414	55,925	-0.9%	0	0	52,918	53,883	826	591	1,670	1,451
New Jersey	9,051	9,877	-8.4%	0	0	8,748	9,496	303	381	0	0
New York	16,083	17,295	-7.0%	0	0	16,083	17,295	0	0	0	0
Pennsylvania	30,281	28,753	5.3%	0	0	28,088	27,091	523	210	1,670	1,451
East North Central	64,333	66,101	-2.7%	7,114	6,946	56,208	58,114	227	323	784	718
Illinois	13,620	15,612	-13.0%	371	0	13,249	15,612	0	0	0	0
Indiana	7,889	7,065	12.0%	6,539	6,646	1,071	231	0	0	279	189
Michigan	19,708	20,560	-4.1%	0	0	19,708	20,560	0	0	0	0
Ohio	11,248	10,666	5.5%	0	139	11,248	10,527	0	0	0	0
Wisconsin	11,868	12,197	-2.7%	204	161	10,932	11,184	227	323	505	529
West North Central	10,779	10,407	3.6%	2,977	2,931	7,802	7,475	0	0	0	0
Iowa	2,604	2,421	7.5%	0	0	2,604	2,421	0	0	0	0
Kansas	1,380	1,451	-4.9%	0	0	1,380	1,451	0	0	0	0
Minnesota	3,502	3,643	-3.9%	736	748	2,767	2,895	0	0	0	0
Missouri	1,937	1,683	15.0%	885	975	1,052	708	0	0	0	0
Nebraska	1,356	1,209	12.0%	1,356	1,209	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	48,003	48,852	-1.7%	5,538	5,263	38,084	38,002	2,193	3,077	2,188	2,509
Delaware	1,592	1,722	-7.6%	0	0	1,432	1,381	0	0	160	341
District of Columbia	0	0	--	0	0	0	0	0	0	0	0
Florida	8,797	8,523	3.2%	2,075	1,964	6,684	6,557	7	1	31	0
Georgia	4,423	4,276	3.5%	0	0	3,892	3,228	77	507	454	540
Maryland	2,411	3,004	-20.0%	0	0	1,651	1,885	760	1,119	0	0
North Carolina	10,907	12,005	-9.1%	0	0	9,822	10,827	1,085	1,177	0	0
South Carolina	5,281	5,196	1.6%	3,391	3,218	347	350	0	0	1,544	1,628
Virginia	14,441	14,004	3.1%	72	81	14,105	13,650	264	272	0	0
West Virginia	151	NM	NM	0	0	151	NM	0	0	0	0
East South Central	5,061	5,247	-3.5%	2,044	2,171	3,017	3,076	0	0	0	0
Alabama	1,028	1,017	1.1%	0	0	1,028	1,017	0	0	0	0
Kentucky	2,197	2,293	-4.2%	2,044	2,171	153	122	0	0	0	0
Mississippi	227	226	0.4%	0	0	227	226	0	0	0	0
Tennessee	1,609	1,710	-5.9%	0	0	1,609	1,710	0	0	0	0
West South Central	17,375	16,925	2.7%	0	0	16,725	16,424	649	502	0	0
Arkansas	1,572	1,552	1.2%	0	0	1,572	1,552	0	0	0	0
Louisiana	0	0	--	0	0	0	0	0	0	0	0
Oklahoma	297	372	-20.0%	0	0	297	372	0	0	0	0
Texas	15,507	15,000	3.4%	0	0	14,857	14,499	649	502	0	0
Mountain	5,785	5,601	3.3%	561	844	4,705	4,650	519	107	0	0
Arizona	1,280	1,574	-19.0%	281	643	999	931	0	0	0	0
Colorado	1,274	1,296	-1.7%	0	0	1,274	1,296	0	0	0	0
Idaho	994	786	27.0%	279	201	549	478	166	107	0	0
Montana	0	0	--	0	0	0	0	0	0	0	0
Nevada	544	523	4.1%	0	0	544	523	0	0	0	0
New Mexico	0	0	--	0	0	0	0	0	0	0	0
Utah	1,692	1,423	19.0%	0	0	1,339	1,423	353	0	0	0
Wyoming	0	0	--	0	0	0	0	0	0	0	0
Pacific Contiguous	63,191	63,839	-1.0%	7,024	7,664	36,969	35,434	19,198	20,742	0	0
California	53,431	53,545	-0.2%	2,647	3,232	32,043	30,089	18,741	20,224	0	0
Oregon	5,632	5,956	-5.4%	1,511	1,306	3,664	4,132	457	518	0	0
Washington	4,128	4,338	-4.8%	2,866	3,126	1,262	1,213	0	0	0	0
Pacific Noncontiguous	1,091	1,021	6.8%	0	0	0	0	1,091	1,021	0	0
Alaska	1,091	1,021	6.8%	0	0	0	0	1,091	1,021	0	0
Hawaii	0	0	--	0	0	0	0	0	0	0	0
U.S. Total	282,530	285,982	-1.2%	25,257	25,819	227,381	228,447	25,250	27,038	4,642	4,678

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 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 5.14. Consumption of Biogenic Municipal Solid Waste for Electricity Generation by State, by Sector, 2015 and 2014 (Thousand Tons)**

Census Division and State	Electric Power Sector										
	All Sectors			Electric Utilities		Independent Power Producers		Commercial Sector		Industrial Sector	
	Year 2015	Year 2014	Percentage Change	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014
New England	3,763,218	3,947,012	-4.7%	0	0	3,552,611	3,670,491	210,607	276,521	0	0
Connecticut	1,295,253	1,439,039	-10.0%	0	0	1,280,442	1,362,408	14,811	76,631	0	0
Maine	297,513	312,200	-4.7%	0	0	101,717	112,310	195,796	199,890	0	0
Massachusetts	2,048,139	2,071,104	-1.1%	0	0	2,048,139	2,071,104	0	0	0	0
New Hampshire	122,313	124,669	-1.9%	0	0	122,313	124,669	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	5,335,761	5,319,020	0.3%	0	0	4,212,340	4,193,779	1,123,421	1,125,241	0	0
New Jersey	1,380,234	1,407,197	-1.9%	0	0	1,034,424	1,064,677	345,810	342,520	0	0
New York	2,014,840	2,006,020	0.4%	0	0	1,503,504	1,492,447	511,336	513,573	0	0
Pennsylvania	1,940,687	1,905,803	1.8%	0	0	1,674,412	1,636,655	266,275	269,148	0	0
East North Central	259,287	250,926	3.3%	39,561	33,125	0	0	219,726	217,801	0	0
Illinois	0	0	--	0	0	0	0	0	0	0	0
Indiana	10,346	12,055	-14.0%	0	0	0	0	10,346	12,055	0	0
Michigan	209,380	205,746	1.8%	0	0	0	0	209,380	205,746	0	0
Ohio	0	0	--	0	0	0	0	0	0	0	0
Wisconsin	39,561	33,125	19.0%	39,561	33,125	0	0	0	0	0	0
West North Central	649,182	657,293	-1.2%	412,369	410,961	212,117	224,466	24,696	21,866	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	649,182	657,293	-1.2%	412,369	410,961	212,117	224,466	24,696	21,866	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	5,442,950	5,311,564	2.5%	0	0	5,027,176	4,893,678	415,774	417,886	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	3,633,452	3,437,826	5.7%	0	0	3,633,452	3,437,826	0	0	0	0
Georgia	0	0	--	0	0	0	0	0	0	0	0
Maryland	808,747	803,242	0.7%	0	0	808,531	803,037	216	205	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	1,000,751	1,070,496	-6.5%	0	0	585,193	652,815	415,558	417,681	0	0
West Virginia	0	0	--	0	0	0	0	0	0	0	0
East South Central	0	0	--	0	0	0	0	0	0	0	0
Alabama	0	0	--	0	0	0	0	0	0	0	0
Kentucky	0	0	--	0	0	0	0	0	0	0	0
Mississippi	0	0	--	0	0	0	0	0	0	0	0
Tennessee	0	0	--	0	0	0	0	0	0	0	0
West South Central	7,727	5,694	36.0%	0	0	0	0	0	0	7,727	5,694
Arkansas	0	0	--	0	0	0	0	0	0	0	0
Louisiana	0	0	--	0	0	0	0	0	0	0	0
Oklahoma	7,727	5,694	36.0%	0	0	0	0	0	0	7,727	5,694
Texas	0	0	--	0	0	0	0	0	0	0	0
Mountain	2,042	2,031	0.5%	0	0	2,042	2,031	0	0	0	0
Arizona	0	0	--	0	0	0	0	0	0	0	0
Colorado	0	0	--	0	0	0	0	0	0	0	0
Idaho	0	0	--	0	0	0	0	0	0	0	0
Montana	0	0	--	0	0	0	0	0	0	0	0
Nevada	0	0	--	0	0	0	0	0	0	0	0
New Mexico	0	0	--	0	0	0	0	0	0	0	0
Utah	2,042	2,031	0.5%	0	0	2,042	2,031	0	0	0	0
Wyoming	0	0	--	0	0	0	0	0	0	0	0
Pacific Contiguous	790,261	824,353	-4.1%	0	0	790,261	824,353	0	0	0	0
California	520,946	538,836	-3.3%	0	0	520,946	538,836	0	0	0	0
Oregon	117,293	119,273	-1.7%	0	0	117,293	119,273	0	0	0	0
Washington	152,022	166,244	-8.6%	0	0	152,022	166,244	0	0	0	0
Pacific Noncontiguous	380,467	387,986	-1.9%	0	0	0	0	380,467	387,986	0	0
Alaska	0	0	--	0	0	0	0	0	0	0	0
Hawaii	380,467	387,986	-1.9%	0	0	0	0	380,467	387,986	0	0
U.S. Total	16,630,895	16,705,879	-0.4%	451,930	444,086	13,796,547	13,808,798	2,374,691	2,447,301	7,727	5,694

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 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 6

# Fossil Fuel Stocks for Electricity Generation

**Table 6.1. Stocks of Coal, Petroleum Liquids, and Petroleum Coke: Electric Power Sector, 2005 - 2015**

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									
2005	101,137	47,414	530	77,457	29,532	374	23,680	17,882	156
2006	140,964	48,216	674	110,277	29,799	456	30,688	18,416	217
2007	151,221	44,433	554	120,504	28,032	253	30,717	16,401	301
2008	161,589	40,804	739	127,463	26,108	468	34,126	14,696	270
2009	189,467	39,210	1,394	154,815	25,811	1,194	34,652	13,399	201
2010	174,917	35,706	1,019	143,744	24,798	850	31,173	10,908	168
2011	172,387	34,847	508	142,103	25,648	404	30,284	9,198	104
2012	185,116	32,224	495	150,942	23,875	414	34,174	8,349	81
2013	147,884	31,673	390	120,792	22,494	303	27,092	9,179	86
2014	151,548	33,505	827	116,684	22,487	686	34,864	11,018	142
2015	195,548	32,884	1,340	153,226	21,443	1,163	42,322	11,441	177
Year 2013, End of Month Stocks									
January	178,859	31,314	442	145,550	23,442	358	33,309	7,872	84
February	175,565	31,205	442	144,081	23,182	362	31,484	8,023	81
March	171,736	32,199	407	141,891	23,917	323	29,845	8,281	84
April	173,014	31,569	456	143,082	23,399	387	29,933	8,169	69
May	177,174	31,494	443	144,824	23,305	348	32,350	8,189	96
June	171,124	31,313	408	139,705	23,148	303	31,418	8,165	105
July	160,019	30,804	394	131,967	22,770	279	28,053	8,034	115
August	154,567	31,436	260	127,153	23,070	183	27,414	8,366	77
September	152,694	31,428	309	125,579	22,618	191	27,115	8,811	118
October	154,194	31,771	291	125,616	22,696	214	28,578	9,075	77
November	156,249	32,620	338	126,611	22,827	250	29,638	9,793	88
December	147,884	31,673	390	120,792	22,494	303	27,092	9,179	86
Year 2014, End of Month Stocks									
January	133,705	27,553	298	108,249	20,649	216	25,456	6,904	83
February	119,904	29,158	277	97,363	20,964	202	22,541	8,195	74
March	118,260	29,197	350	96,029	21,341	282	22,231	7,855	67
April	128,925	29,568	515	103,431	21,583	451	25,494	7,985	64
May	136,921	29,376	458	108,064	21,446	374	28,856	7,930	84
June	133,479	29,738	397	103,948	21,568	343	29,531	8,170	54
July	125,870	29,120	381	97,829	20,967	300	28,041	8,152	81
August	121,369	29,346	388	93,552	21,205	289	27,817	8,141	99
September	124,546	29,789	389	96,266	21,338	297	28,280	8,451	92
October	136,964	30,883	510	105,094	21,741	394	31,870	9,142	117
November	142,595	32,829	633	110,221	22,103	502	32,374	10,726	131
December	151,548	33,505	827	116,684	22,487	686	34,864	11,018	142
Year 2015, End of Month Stocks									
January	154,390	32,896	892	118,239	22,177	742	36,151	10,718	150
February	149,071	28,446	850	115,271	20,328	723	33,800	8,118	127
March	154,347	29,536	818	120,635	21,165	698	33,712	8,371	120
April	167,063	29,614	912	130,078	21,218	776	36,985	8,396	136
May	172,809	30,184	999	134,499	21,504	856	38,310	8,680	143
June	166,437	30,441	1,031	130,716	21,634	883	35,720	8,807	149
July	157,938	30,119	1,064	124,301	21,365	909	33,638	8,754	156
August	155,952	30,143	1,029	123,296	21,138	891	32,656	9,005	138
September	162,109	31,390	1,102	128,351	21,450	973	33,757	9,941	129
October	175,588	32,462	1,151	138,712	21,540	1,026	36,876	10,922	125
November	188,595	33,487	1,290	149,168	21,946	1,159	39,427	11,542	131
December	195,548	32,884	1,340	153,226	21,443	1,163	42,322	11,441	177

Notes: See Glossary for definitions. Values are final.

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 6.2 Stocks of Coal, Petroleum Liquids, and Petroleum Coke:  
Electric Power Sector, by State, 2015 and 2014**

Census Division and State	Coal (Thousand Tons)			Petroleum Liquids (Thousand Barrels)			Petroleum Coke (Thousand Tons)		
	December 2015	December 2014	Percentage Change	December 2015	December 2014	Percentage Change	December 2015	December 2014	Percentage Change
New England	1,758	1,611	9.1%	4,918	4,989	-1.4%	0	0	--
Connecticut	W	W	W	1,669	1,498	11.4%	0	0	--
Maine	0	0	--	W	W	W	0	0	--
Massachusetts	W	W	W	1,957	1,965	-0.4%	0	0	--
New Hampshire	W	W	W	W	W	W	0	0	--
Rhode Island	0	W	W	W	W	W	0	0	--
Vermont	0	0	--	NM	57	NM	0	0	--
Middle Atlantic	7,914	8,079	-2.0%	6,054	5,724	5.8%	0	W	W
New Jersey	932	893	4.3%	761	771	-1.3%	0	0	--
New York	513	894	-42.6%	3,861	3,562	8.4%	0	0	--
Pennsylvania	6,469	6,292	2.8%	1,432	1,390	3.0%	0	W	W
East North Central	43,926	33,839	29.8%	1,158	1,162	-0.3%	192	216	-11.1%
Illinois	11,111	7,461	48.9%	87	96	-9.4%	0	0	--
Indiana	11,491	8,985	27.9%	114	138	-17.5%	0	W	W
Michigan	7,743	6,982	10.9%	339	344	-1.6%	W	W	W
Ohio	8,582	6,566	30.7%	361	332	9.0%	W	W	W
Wisconsin	4,999	3,846	30.0%	257	252	2.0%	W	W	W
West North Central	31,675	20,648	53.4%	1,069	1,791	-40.3%	0	0	--
Iowa	6,892	3,856	78.7%	148	179	-17.4%	0	0	--
Kansas	4,985	2,990	66.7%	143	662	-78.4%	0	0	--
Minnesota	4,933	2,337	111.1%	149	156	-4.4%	0	0	--
Missouri	9,764	6,497	50.3%	415	435	-4.6%	0	0	--
Nebraska	3,068	2,970	3.3%	118	244	-51.4%	0	0	--
North Dakota	W	W	W	37	43	-13.3%	0	0	--
South Dakota	W	W	W	58	72	-19.4%	0	0	--
South Atlantic	35,260	29,371	20.0%	12,323	12,542	-1.7%	W	W	W
Delaware	W	W	W	486	304	59.7%	0	0	--
District of Columbia	0	0	--	0	0	--	0	0	--
Florida	6,344	5,245	21.0%	5,476	5,985	-8.5%	148	W	W
Georgia	6,683	5,605	19.2%	841	934	-10.0%	0	0	--
Maryland	2,051	1,856	10.5%	983	857	14.7%	0	0	--
North Carolina	7,621	6,125	24.4%	1,264	1,254	0.8%	0	0	--
South Carolina	5,891	4,102	43.6%	721	698	3.4%	0	0	--
Virginia	1,401	1,603	-12.6%	2,422	2,335	3.7%	0	0	--
West Virginia	W	W	W	130	175	-25.6%	W	W	W
East South Central	18,959	17,780	6.6%	1,835	1,953	-6.0%	W	W	W
Alabama	4,324	4,131	4.7%	259	257	0.8%	0	0	--
Kentucky	8,934	8,396	6.4%	251	259	-3.1%	W	W	W
Mississippi	1,706	1,818	-6.2%	577	586	-1.6%	0	0	--
Tennessee	3,995	3,436	16.3%	748	851	-12.1%	0	0	--
West South Central	34,018	22,419	51.7%	1,911	2,033	-6.0%	W	W	W
Arkansas	5,056	3,023	67.2%	W	W	W	0	0	--
Louisiana	3,831	3,361	14.0%	412	498	-17.3%	W	W	W
Oklahoma	5,923	2,940	101.5%	W	W	W	0	0	--
Texas	19,208	13,095	46.7%	1,198	1,241	-3.5%	0	0	--
Mountain	20,737	16,387	26.5%	411	440	-6.6%	W	W	W
Arizona	4,728	2,688	75.9%	138	143	-3.7%	0	0	--
Colorado	5,605	4,595	22.0%	125	131	-4.5%	0	0	--
Idaho	0	0	--	W	W	W	0	0	--
Montana	W	W	W	19	20	-3.0%	W	W	W
Nevada	1,114	1,141	-2.4%	W	W	W	0	0	--
New Mexico	W	W	W	43	54	-20.2%	0	0	--
Utah	3,941	3,082	27.9%	40	43	-6.9%	0	0	--
Wyoming	3,329	2,999	11.0%	31	34	-9.5%	0	0	--
Pacific Contiguous	W	W	W	517	342	51.4%	0	0	--
California	0	0	--	W	155	W	0	0	--
Oregon	W	W	W	W	W	W	0	0	--
Washington	W	W	W	267	W	W	0	0	--
Pacific Noncontiguous	W	W	W	2,689	2,530	6.3%	0	0	--
Alaska	W	W	W	362	283	28.0%	0	0	--
Hawaii	W	W	W	2,327	2,248	3.5%	0	0	--
U.S. Total	195,548	151,548	29.0%	32,884	33,505	-1.9%	1,340	827	62.0%

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 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 6.3 Stocks of Coal, Petroleum Liquids, and Petroleum Coke:  
Electric Power Sector, by Census Division, 2015 and 2014**

Census Division	Electric Power Sector			Electric Utilities		Independent Power Producers	
	December 2015	December 2014	Percentage Change	December 2015	December 2014	December 2015	December 2014
<b>Coal (Thousand Tons)</b>							
New England	1,758	1,611	9.1%	W	W	W	W
Middle Atlantic	7,914	8,079	-2.0%	0	W	7,914	W
East North Central	43,926	33,839	29.8%	27,729	23,394	16,198	10,446
West North Central	31,675	20,648	53.4%	W	W	W	W
South Atlantic	35,260	29,371	20.0%	32,248	26,326	3,012	3,045
East South Central	18,959	17,780	6.6%	18,959	W	0	W
West South Central	34,018	22,419	51.7%	21,483	12,257	12,535	10,162
Mountain	20,737	16,387	26.5%	W	W	W	W
Pacific Contiguous	W	W	W	W	W	W	W
Pacific Noncontiguous	W	W	W	W	W	W	W
<b>U.S. Total</b>	<b>195,548</b>	<b>151,548</b>	<b>29.0%</b>	<b>153,226</b>	<b>116,684</b>	<b>42,322</b>	<b>34,864</b>
<b>Petroleum Liquids (Thousand Barrels)</b>							
New England	4,918	4,989	-1.4%	689	899	4,229	4,090
Middle Atlantic	6,054	5,724	5.8%	2,381	2,069	3,673	3,654
East North Central	1,158	1,162	-0.3%	862	852	296	310
West North Central	1,069	1,791	-40.3%	1,042	1,763	27	28
South Atlantic	12,323	12,542	-1.7%	9,839	10,339	2,484	2,203
East South Central	1,835	1,953	-6.0%	W	W	W	W
West South Central	1,911	2,033	-6.0%	1,411	1,479	500	554
Mountain	411	440	-6.6%	W	W	W	W
Pacific Contiguous	517	342	51.4%	414	250	103	91
Pacific Noncontiguous	2,689	2,530	6.3%	W	W	W	W
<b>U.S. Total</b>	<b>32,884</b>	<b>33,505</b>	<b>-1.9%</b>	<b>21,443</b>	<b>22,487</b>	<b>11,441</b>	<b>11,018</b>
<b>Petroleum Coke (Thousand Tons)</b>							
New England	0	0	--	0	0	0	0
Middle Atlantic	0	W	W	0	0	0	W
East North Central	192	216	-11.1%	W	W	W	W
West North Central	0	0	--	0	0	0	0
South Atlantic	W	W	W	148	W	W	W
East South Central	W	W	W	W	W	0	0
West South Central	W	W	W	W	W	0	0
Mountain	W	W	W	0	0	W	W
Pacific Contiguous	0	0	--	0	0	0	0
Pacific Noncontiguous	0	0	--	0	0	0	0
<b>U.S. Total</b>	<b>1,340</b>	<b>827</b>	<b>62.0%</b>	<b>W</b>	<b>W</b>	<b>W</b>	<b>W</b>

W = Withheld to avoid disclosure of individual company data.

Notes: See Glossary for definitions. Values 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 6.4. Stocks of Coal by Coal Rank: Electric Power Sector, 2005 - 2015**

Period	Electric Power Sector			
	Bituminous Coal	Subbituminous Coal	Lignite Coal	Total
<b>End of Year Stocks</b>				
2005	52,923	44,377	3,836	101,137
2006	67,760	68,408	4,797	140,964
2007	63,964	82,692	4,565	151,221
2008	65,818	91,214	4,556	161,589
2009	91,922	92,448	5,097	189,467
2010	81,108	86,915	6,894	174,917
2011	82,056	85,151	5,179	172,387
2012	86,437	93,833	4,846	185,116
2013	73,113	69,720	5,051	147,884
2014	72,771	72,552	6,225	151,548
2015	82,004	108,614	4,931	195,548
<b>Year 2013, End of Month Stocks</b>				
January	83,501	90,693	4,664	178,859
February	81,835	89,227	4,504	175,565
March	80,528	86,416	4,792	171,736
April	82,756	85,182	5,076	173,014
May	84,487	86,439	6,248	177,174
June	82,016	82,922	6,186	171,124
July	75,887	78,372	5,760	160,019
August	73,002	75,970	5,595	154,567
September	72,121	75,001	5,571	152,694
October	74,079	74,620	5,496	154,194
November	75,232	75,683	5,334	156,249
December	73,113	69,720	5,051	147,884
<b>Year 2014, End of Month Stocks</b>				
January	63,618	64,709	5,378	133,705
February	56,041	58,418	5,445	119,904
March	55,150	57,657	5,453	118,260
April	60,602	62,266	6,056	128,925
May	63,782	66,827	6,311	136,921
June	62,679	64,378	6,423	133,479
July	60,134	59,514	6,222	125,870
August	60,128	54,787	6,453	121,369
September	63,031	55,432	6,082	124,546
October	69,246	61,368	6,350	136,964
November	70,666	66,105	5,824	142,595
December	72,771	72,552	6,225	151,548
<b>Year 2015, End of Month Stocks</b>				
January	70,423	78,424	5,542	154,390
February	64,396	79,411	5,264	149,071
March	65,421	84,013	4,912	154,347
April	70,985	90,919	5,159	167,063
May	74,195	93,538	5,077	172,809
June	72,921	88,835	4,681	166,437
July	68,197	84,988	4,753	157,938
August	67,777	83,691	4,484	155,952
September	70,365	87,185	4,559	162,109
October	76,243	94,720	4,626	175,588
November	80,254	103,602	4,738	188,595
December	82,004	108,614	4,931	195,548

Notes: See Glossary for definitions.

Values are final. 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 7

# Receipts, Cost, and Quality of Fossil Fuels

**Table 7.1. Receipts, Average Cost, and Quality of Fossil Fuels for the Electric Power Industry, 2005 through 2015**

Period	Coal				Petroleum				Natural Gas		All Fossil Fuels
	Receipts (Thousand Tons)	Average Sulfur Percent by Weight	Average Cost		Receipts (Thousand Barrels)	Average Sulfur Percent by Weight	Average Cost		Receipts (Thousand Mcf)	Average Cost (Dollars per MMBtu)	Average Cost (Dollars per MMBtu)
			(Dollars per MMBtu)	(Dollars per Ton)			(Dollars per MMBtu)	(Dollars per Barrel)			
2005	1,021,437	0.98	1.54	31.20	194,733	1.61	6.44	39.65	6,181,717	8.21	3.25
2006	1,079,943	0.97	1.69	34.09	100,965	2.31	6.23	37.66	6,675,246	6.94	3.02
2007	1,054,664	0.96	1.77	35.48	88,347	2.10	7.17	43.50	7,200,316	7.11	3.23
2008	1,069,709	0.97	2.07	41.14	96,341	2.21	10.87	64.89	7,879,046	9.02	4.11
2009	981,477	1.01	2.21	43.74	88,951	2.14	7.02	41.64	8,118,550	4.74	3.04
2010	979,918	1.16	2.27	44.64	75,285	2.14	9.54	56.35	8,673,070	5.09	3.26
2011	956,538	1.19	2.39	46.65	66,058	2.49	12.48	73.29	9,056,164	4.72	3.29
2012	841,183	1.25	2.38	46.09	40,364	3.61	12.48	73.30	9,531,389	3.42	2.83
2013	823,222	1.29	2.34	45.33	43,714	3.54	11.57	68.09	8,503,424	4.33	3.09
2014	854,560	1.32	2.37	45.96	54,488	3.56	11.60	68.12	8,431,423	5.00	3.31
2015	782,929	1.29	2.22	42.86	48,804	3.38	6.74	39.51	9,842,581	3.23	2.65

\* = value is less than half of the smallest unit of measure. (e.g., for values with no decimals, the smallest unit is 1 then values under 0.5 are shown as ".")

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 - includes petroleum liquids (distillate fuel oil and residual fuel oil) and petroleum coke which includes petroleum coke-derived synthesis gas. Prior to 2011, petroleum coke-derived synthesis gas was included in Other Gases. 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.

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

- All values are final.

- See Glossary for definitions.

- Starting in January 2013, there may have been a shift in the continuity of Chapter 7 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 7.2. Receipts and Quality of Coal Delivered for the Electric Power Industry, 2005 through 2015**

Period	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
2005	480,179	1.56	10.5	456,856	0.36	6.2	77,677	1.02	14.0
2006	489,550	1.59	10.5	504,947	0.35	6.1	75,742	0.95	14.4
2007	467,817	1.62	10.3	505,155	0.34	6.0	71,930	0.90	14.0
2008	464,362	1.68	10.6	522,228	0.34	5.8	68,945	0.86	13.8
2009	418,688	1.77	10.5	484,007	0.34	5.8	64,966	0.95	14.0
2010	403,619	1.90	10.4	491,425	0.33	5.8	71,416	0.90	14.1
2011	380,184	2.01	10.5	488,366	0.33	5.8	75,675	0.90	14.4
2012	317,398	2.23	10.6	442,674	0.32	5.8	71,848	0.93	14.6
2013	312,821	2.33	10.5	429,283	0.32	5.8	71,191	0.92	14.3
2014	334,082	2.34	10.3	440,013	0.31	5.8	71,534	0.90	14.1
2015	289,093	2.40	10.4	421,127	0.32	5.8	65,826	0.89	14.1

\* = Value is less than half of the smallest unit of measure. (e.g., for values with no decimals, the smallest unit is 1 then values under 0.5 are shown as \*.)

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 and beginning in 2011, coal-derived synthesis gas. Prior to 2011 coal-derived synthesis gas was included in Other Gases.

- All values are final.
- See Glossary for definitions.
- Starting in January 2013, there may have been a shift in the continuity of Chapter 7 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 7.3. Average Quality of Fossil Fuel Receipts for the Electric Power Industry, 2005 through 2015**

Period	Coal			Petroleum			Natural Gas
	Average Btu per Pound	Average Sulfur Percent by Weight	Average Ash Percent by Weight	Average Btu per Gallon	Average Sulfur Percent by Weight	Average Ash Percent by Weight	Average Btu per Cubic Foot
2005	10,107	0.98	9.0	146,481	1.61	0.2	1,028
2006	10,063	0.97	9.0	143,883	2.31	0.2	1,027
2007	10,028	0.96	8.8	144,546	2.10	0.1	1,027
2008	9,947	0.97	9.0	142,205	2.21	0.3	1,027
2009	9,902	1.01	8.9	141,321	2.14	0.2	1,025
2010	9,842	1.16	8.8	140,598	2.14	0.2	1,022
2011	9,762	1.19	8.8	139,795	2.49	0.4	1,021
2012	9,668	1.25	8.8	139,567	3.61	0.5	1,023
2013	9,661	1.29	8.7	139,671	3.54	0.5	1,026
2014	9,710	1.32	8.6	139,713	3.56	0.5	1,029
2015	9,634	1.29	8.6	139,681	3.38	0.5	1,034

\* = Value is less than half of the smallest unit of measure. (e.g., for values with no decimals, the smallest unit is 1 then values under 0.5 are shown as \*.)

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 - includes petroleum liquids (distillate fuel oil and residual fuel oil) and petroleum coke which includes petroleum coke-derived synthesis gas. Prior to 2011, petroleum coke-derived synthesis gas was included in Other Gases. 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.

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

- All values are final.
- See Glossary for definitions.
- Starting in January 2013, there may have been a shift in the continuity of Chapter 7 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 7.4. Weighted Average Cost of Fossil Fuels for the Electric Power Industry, 2005 through 2015**

Period	Coal								Petroleum		Natural Gas		Total Fossil	
	Bituminous		Subbituminous		Lignite		All Coal Ranks		Receipts (Trillion Btu)	Average Cost (Dollars per MMBtu)	Receipts (Trillion Btu)	Average Cost (Dollars per MMBtu)	Receipts (Trillion Btu)	Average Cost (Dollars per MMBtu)
	Receipts (Trillion Btu)	Average Cost (Dollars per MMBtu)	Receipts (Trillion Btu)	Average Cost (Dollars per MMBtu)	Receipts (Trillion Btu)	Average Cost (Dollars per MMBtu)	Receipts (Trillion Btu)	Average Cost (Dollars per MMBtu)						
2005	11,546	1.83	8,004	1.19	1,008	1.07	20,647	1.54	1,198	6.44	6,357	8.21	28,202	3.25
2006	11,789	2.03	8,842	1.31	982	1.15	21,735	1.69	610	6.23	6,856	6.94	29,201	3.02
2007	11,279	2.07	8,826	1.45	925	1.28	21,152	1.77	536	7.17	7,396	7.11	29,085	3.23
2008	11,119	2.50	9,087	1.62	896	1.41	21,280	2.07	575	10.87	8,089	9.02	29,945	4.11
2009	10,010	2.75	8,421	1.64	835	1.58	19,438	2.21	528	7.02	8,319	4.74	28,285	3.04
2010	9,652	2.81	8,545	1.73	925	1.62	19,290	2.27	445	9.54	8,867	5.09	28,602	3.26
2011	9,040	2.94	8,498	1.91	986	1.62	18,676	2.39	388	12.48	9,251	4.72	28,314	3.29
2012	7,502	2.89	7,722	1.97	931	1.80	16,266	2.38	237	12.48	9,747	3.42	26,249	2.83
2013	7,351	2.77	7,511	2.00	927	1.78	15,907	2.34	256	11.57	8,721	4.33	24,884	3.09
2014	7,883	2.74	7,681	2.06	934	1.77	16,595	2.37	320	11.60	8,679	5.00	25,594	3.31
2015	6,797	2.58	7,353	1.94	855	1.92	15,086	2.22	286	6.74	10,174	3.23	25,546	2.65

\* = Value is less than half of the smallest unit of measure. (e.g., for values with no decimals, the smallest unit is 1 then values under 0.5 are shown as \*.)

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 - All coal ranks subtotal 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.

Bituminous coal includes anthracite coal and beginning in 2011, coal-derived synthesis gas.

PETROLEUM - includes petroleum liquids (distillate fuel oil and residual fuel oil) and petroleum coke which includes petroleum coke-derived synthesis gas. Prior to 2011, petroleum coke-derived synthesis gas was included in Other Gases. 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.

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

- All values are final.
- See Glossary for definitions.
- Starting in January 2013, there may have been a shift in the continuity of Chapter 7 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 7.5. Receipts, Average Cost, and Quality of Fossil Fuels: Electric Utilities, 2005 - 2015

Period	Coal						Petroleum Liquids					
	Receipts		Average Cost		Average Sulfur Percent by Weight	Percentage of Consumption	Receipts		Average Cost		Average Sulfur Percent by Weight	Percentage of Consumption
	(Billion Btu)	(Thousand Tons)	(Dollars per MMBtu)	(Dollars per Ton)			(Billion Btu)	(Thousand Barrels)	(Dollars per MMBtu)	(Dollars per Barrel)		
Annual Totals												
2005	15,836,924	775,890	1.53	31.22	0.94	101.9	566,320	89,303	7.17	45.46	0.89	90.9
2006	16,197,852	797,361	1.69	34.26	0.92	105.8	269,033	42,415	8.33	52.80	0.82	79.2
2007	15,561,395	767,377	1.78	36.06	0.92	100.3	216,349	34,026	9.24	58.73	0.77	59.8
2008	15,347,396	764,399	2.06	41.32	0.93	100.5	240,937	38,891	15.83	98.09	0.60	99.7
2009	14,402,019	719,253	2.22	44.47	0.99	103.4	202,598	32,959	10.44	64.18	0.51	103.5
2010	14,226,995	713,094	2.27	45.33	1.14	98.8	189,790	31,099	13.94	85.07	0.48	101.0
2011	13,871,559	699,353	2.40	47.67	1.16	101.5	144,255	23,859	20.30	122.72	0.53	114.5
2012	11,939,543	609,445	2.43	47.51	1.18	99.0	86,030	14,252	22.11	133.44	0.41	81.3
2013	11,595,328	592,772	2.38	46.51	1.23	92.9	78,101	12,814	21.09	128.57	0.43	76.2
2014	12,064,810	614,728	2.39	46.95	1.21	98.3	98,357	16,161	19.90	121.14	0.44	82.0
2015	11,088,631	571,707	2.25	43.71	1.17	105.8	90,041	14,747	11.32	69.13	0.46	79.2
Year 2013												
January	966,431	49,719	2.37	46.15	1.18	89.3	7,473	1,239	21.08	127.15	0.41	68.5
February	899,054	45,989	2.38	46.62	1.26	93.8	6,220	1,009	21.34	131.57	0.40	78.9
March	948,352	48,339	2.37	46.58	1.27	92.9	9,929	1,608	20.43	126.13	0.45	120.6
April	904,409	45,784	2.41	47.65	1.28	100.5	3,831	638	21.99	131.94	0.45	47.8
May	958,782	48,775	2.40	47.27	1.23	100.9	6,010	987	20.90	127.33	0.47	69.5
June	965,951	49,292	2.39	46.90	1.21	88.0	4,713	786	21.31	127.71	0.43	59.5
July	1,031,429	53,206	2.34	45.37	1.16	86.7	7,153	1,184	20.82	125.77	0.44	68.4
August	1,071,201	54,959	2.37	46.16	1.21	89.5	8,382	1,353	19.78	122.55	0.45	96.5
September	974,613	49,808	2.38	46.62	1.22	93.8	4,882	795	21.67	132.98	0.34	68.0
October	956,973	48,754	2.37	46.45	1.27	98.7	6,139	1,011	21.98	133.43	0.40	81.1
November	958,575	49,043	2.36	46.21	1.22	98.8	6,313	1,037	21.61	131.57	0.41	79.5
December	959,557	49,103	2.37	46.32	1.23	86.5	7,055	1,166	21.58	130.56	0.43	79.2
Year 2014												
January	939,850	48,843	2.30	44.18	1.13	79.8	12,001	2,011	21.72	129.64	0.32	44.6
February	870,977	44,490	2.31	45.27	1.23	80.6	12,180	2,005	21.72	131.94	0.49	106.4
March	991,708	50,353	2.37	46.61	1.23	97.5	8,992	1,474	21.53	131.41	0.39	76.6
April	948,645	47,838	2.41	47.72	1.23	116.0	6,691	1,099	21.74	132.35	0.36	85.6
May	1,003,354	50,694	2.42	47.83	1.27	107.4	5,313	885	21.88	131.42	0.34	68.2
June	998,236	50,508	2.40	47.48	1.25	90.8	6,271	1,037	21.65	130.91	0.34	87.9
July	1,059,989	53,961	2.41	47.22	1.19	89.5	5,979	985	21.28	129.22	0.47	75.2
August	1,096,270	55,759	2.40	47.18	1.22	92.5	6,800	1,108	20.61	126.44	0.50	84.5
September	1,037,230	52,716	2.41	47.40	1.21	103.8	6,921	1,137	19.90	121.13	0.48	87.7
October	1,047,018	53,419	2.34	45.74	1.20	118.6	6,939	1,148	19.33	117.03	0.48	94.2
November	1,010,559	51,705	2.33	45.51	1.20	110.9	7,512	1,237	17.71	107.56	0.50	100.6
December	1,060,973	54,441	2.60	50.75	1.20	108.8	12,760	2,035	13.22	82.91	0.46	160.4
Year 2015												
January	1,022,724	52,840	2.31	44.72	1.17	103.9	8,679	1,427	11.79	71.76	0.57	69.0
February	853,788	44,181	2.26	43.70	1.17	92.2	8,590	1,404	11.71	71.63	0.47	39.1
March	915,194	47,024	2.26	44.08	1.17	111.2	10,166	1,669	12.11	73.85	0.52	134.1
April	872,141	44,828	2.26	43.98	1.20	124.1	6,581	1,083	13.26	80.57	0.39	87.9
May	918,188	46,827	2.29	44.97	1.21	109.2	7,705	1,259	12.50	76.54	0.46	100.6
June	897,838	45,934	2.28	44.49	1.23	90.6	7,498	1,234	13.66	82.97	0.46	89.4
July	959,033	49,930	2.24	42.94	1.11	88.7	6,138	1,004	12.47	76.21	0.40	67.8
August	1,026,500	52,727	2.26	44.04	1.17	97.5	5,716	944	11.75	71.16	0.42	67.5
September	993,558	51,091	2.26	44.03	1.16	109.2	7,097	1,157	9.75	59.76	0.38	94.1
October	941,342	48,715	2.19	42.30	1.13	124.6	5,909	970	9.43	57.50	0.44	79.8
November	862,786	44,830	2.20	42.41	1.14	126.2	8,558	1,386	8.80	54.38	0.57	102.8
December	825,539	42,781	2.21	42.64	1.16	112.7	7,402	1,209	8.52	52.14	0.37	102.7

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 are final.

- See Glossary for definitions.

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- 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 7.6. Receipts, Average Cost, and Quality of Fossil Fuels: Electric Utilities, 2005 - 2015 (continued)

Period	Petroleum Coke							Natural Gas					All Fossil Fuels
	Receipts		Average Cost			Average Sulfur Percent by Weight	Percentage of Consumption	Receipts		Average Cost			Average Cost
	(Billion Btu)	(Thousand Tons)	(Dollars per MMBtu)	(Dollars per Ton)	(Billion Btu)			(Thousand Mcf)	(Dollars per MMBtu)	(Dollars per Mcf)	Percentage of Consumption	(Dollars per MMBtu)	
<b>Annual Totals</b>													
2005	102,450	3,632	1.29	36.31	5.16	87.9	1,835,221	1,780,721	8.32	8.57	83.4	2.38	
2006	99,471	3,516	1.49	42.21	5.11	97.2	2,222,289	2,163,113	7.36	7.56	87.3	2.45	
2007	84,812	2,964	1.73	49.57	5.09	105.6	2,378,104	2,315,637	7.47	7.67	84.6	2.61	
2008	80,987	2,843	2.13	60.51	5.36	123.8	2,856,354	2,784,642	9.15	9.39	102.0	3.33	
2009	109,126	3,833	1.68	47.84	5.02	138.8	3,033,133	2,962,640	5.50	5.63	101.8	2.87	
2010	103,152	3,628	2.38	67.65	5.03	109.1	3,395,962	3,327,919	5.43	5.54	101.1	2.99	
2011	99,208	3,445	3.08	88.73	5.17	99.9	3,571,348	3,507,613	5.00	5.09	101.8	3.08	
2012	72,782	2,521	2.30	66.40	5.46	119.8	4,083,579	4,003,457	3.74	3.81	97.6	2.86	
2013	99,088	3,463	2.11	60.30	5.34	101.6	3,939,408	3,851,241	4.49	4.59	97.0	2.99	
2014	123,793	4,349	1.89	53.77	5.56	126.3	3,876,549	3,772,596	5.17	5.31	96.7	3.16	
2015	115,929	4,069	1.77	50.44	5.23	130.1	4,717,748	4,565,040	3.52	3.64	96.0	2.67	
<b>Year 2013</b>													
January	6,816	237	1.97	56.67	5.52	93.7	308,726	302,282	4.35	4.44	97.5	2.95	
February	7,272	254	2.05	58.54	5.32	115.4	276,355	270,729	4.29	4.38	97.3	2.92	
March	5,449	190	2.00	57.27	5.37	80.5	292,291	285,901	4.44	4.54	97.4	2.99	
April	8,309	291	2.23	63.79	5.23	133.8	267,830	262,122	4.88	4.99	97.6	3.03	
May	8,610	301	2.28	65.22	5.28	83.5	298,278	291,130	4.84	4.96	98.4	3.06	
June	8,302	291	2.36	67.19	4.88	83.7	360,943	352,719	4.65	4.75	97.1	3.06	
July	9,006	314	2.25	64.47	5.35	93.2	427,831	417,585	4.38	4.48	96.6	3.01	
August	7,910	274	2.15	62.01	5.24	82.6	436,060	426,576	4.15	4.24	96.3	2.97	
September	10,687	373	2.09	59.92	5.32	114.6	360,603	352,812	4.35	4.44	96.7	2.97	
October	9,457	333	2.06	58.58	5.37	114.9	309,544	302,556	4.40	4.50	96.9	2.95	
November	7,486	262	1.87	53.23	5.41	120.6	281,343	274,910	4.44	4.55	96.6	2.92	
December	9,784	343	1.93	54.95	5.75	125.9	319,604	311,919	4.93	5.05	96.3	3.10	
<b>Year 2014</b>													
January	8,753	309	1.79	50.66	5.22	88.7	322,118	314,783	6.23	6.37	96.8	3.45	
February	8,883	312	2.01	57.15	5.47	113.1	261,721	255,665	7.00	7.16	96.1	3.56	
March	11,235	396	1.94	54.97	5.85	119.1	269,374	263,288	5.93	6.06	96.8	3.24	
April	11,184	394	2.07	58.69	5.98	186.0	270,455	264,009	5.34	5.47	97.6	3.14	
May	10,813	383	2.13	60.11	5.57	121.8	324,319	316,054	5.26	5.40	97.7	3.18	
June	9,321	325	1.97	56.35	5.85	95.9	346,749	337,837	5.17	5.31	96.9	3.19	
July	9,697	339	1.79	51.25	5.70	113.6	390,076	379,146	4.84	4.98	96.4	3.12	
August	10,451	365	1.85	52.89	5.51	122.5	424,307	412,297	4.47	4.60	96.6	3.05	
September	9,844	345	1.81	51.54	5.40	122.6	353,112	342,647	4.63	4.77	96.2	3.05	
October	9,240	326	1.65	46.75	5.25	182.8	323,101	313,490	4.55	4.69	96.8	2.93	
November	10,079	354	1.70	48.51	5.43	154.6	288,185	279,556	4.75	4.90	96.6	2.94	
December	14,294	499	1.90	54.38	5.40	149.0	303,034	293,825	4.61	4.76	96.6	3.13	
<b>Year 2015</b>													
January	11,509	404	1.94	55.36	5.21	129.1	345,262	334,921	4.24	4.37	96.3	2.84	
February	8,617	301	1.72	49.17	5.31	90.5	325,811	315,866	4.57	4.72	95.1	2.95	
March	7,949	283	1.95	54.67	5.16	144.7	343,696	333,075	3.78	3.90	95.6	2.74	
April	8,845	313	1.95	55.11	4.92	146.8	331,639	321,268	3.48	3.60	97.3	2.65	
May	10,125	357	1.98	56.26	5.21	136.5	364,935	353,283	3.50	3.61	97.6	2.69	
June	7,485	262	1.73	49.60	5.62	111.4	444,769	429,988	3.47	3.59	96.1	2.72	
July	11,256	395	1.86	52.91	5.04	118.3	509,115	491,495	3.46	3.59	96.2	2.69	
August	9,787	342	1.76	50.54	4.92	109.8	492,323	476,327	3.46	3.57	95.7	2.67	
September	12,216	429	1.72	49.08	5.09	145.7	428,044	413,887	3.40	3.52	95.5	2.63	
October	9,567	334	1.77	50.64	5.05	147.2	380,675	367,001	3.25	3.37	96.2	2.52	
November	10,082	354	1.46	41.65	5.64	196.4	365,361	354,358	2.97	3.07	96.5	2.47	
December	8,492	297	1.35	38.62	5.76	128.1	386,119	373,572	2.93	3.03	94.8	2.47	

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 are final.

- See Glossary for definitions.

- Starting in January 2013, there may have been a shift in the continuity of Chapter 7 tables due to changes in the sample design of Form EIA-923 and the imputation process.

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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 7.7 Receipts, Average Cost, and Quality of Fossil Fuels: Independent Power Producers, 2005 - 2015**

Period	Coal						Petroleum Liquids					
	Receipts		Average Cost		Average Sulfur Percent by Weight	Percentage of Consumption	Receipts		Average Cost		Average Sulfur Percent by Weight	Percentage of Consumption
	(Billion Btu)	(Thousand Tons)	(Dollars per MMBtu)	(Dollars per Ton)			(Billion Btu)	(Thousand Barrels)	(Dollars per MMBtu)	(Dollars per Barrel)		
Annual Totals												
2005	4,459,333	229,071	1.56	30.39	1.10	83.0	381,871	61,753	8.30	51.34	0.54	97.2
2006	5,204,402	266,856	1.69	33.04	1.09	97.7	117,524	19,236	9.65	58.98	0.45	104.9
2007	5,275,454	273,216	1.71	33.11	1.06	97.5	125,025	20,486	10.49	64.01	0.45	85.0
2008	5,395,142	281,258	2.03	38.98	1.04	100.4	82,124	13,657	16.30	98.03	0.41	94.4
2009	4,563,080	240,687	2.11	39.94	1.06	101.1	68,030	11,408	10.02	59.76	0.37	102.0
2010	4,555,898	243,585	2.20	41.15	1.21	96.0	49,598	8,420	14.80	87.19	0.35	89.9
2011	4,292,284	233,295	2.28	41.95	1.25	95.9	41,599	7,096	20.30	119.01	0.50	106.9
2012	4,036,436	218,341	2.21	40.92	1.42	104.9	23,922	4,073	22.34	131.28	0.44	79.8
2013	4,032,431	217,572	2.20	40.95	1.48	99.1	43,432	7,205	19.71	118.88	0.45	110.1
2014	4,243,949	226,600	2.25	42.20	1.61	100.1	71,774	11,980	19.90	119.36	0.45	101.0
2015	3,731,508	198,982	2.10	39.39	1.66	100.5	55,248	9,189	11.69	70.36	0.46	86.5
Year 2013												
January	352,557	18,976	2.21	41.20	1.51	99.1	2,963	495	21.11	126.80	0.54	45.0
February	308,971	16,694	2.18	40.44	1.56	93.3	4,345	712	20.68	126.61	0.51	117.8
March	319,485	17,108	2.24	41.93	1.57	94.1	4,016	661	19.63	119.32	0.41	206.0
April	303,157	16,041	2.21	41.98	1.60	106.6	2,074	350	W	W	0.44	94.2
May	345,413	18,316	2.23	42.25	1.53	113.7	2,404	402	20.48	122.55	0.43	104.1
June	331,183	17,955	2.22	40.98	1.41	95.5	2,048	344	20.51	122.17	0.43	84.9
July	336,772	18,662	2.18	39.50	1.28	86.5	3,386	564	20.03	120.23	0.46	68.0
August	369,852	20,185	2.16	39.71	1.41	99.2	3,449	582	19.54	115.78	0.39	147.1
September	361,593	19,609	2.20	40.72	1.48	101.2	4,942	821	18.64	112.29	0.40	180.6
October	338,484	18,086	2.22	41.67	1.47	108.4	3,904	647	19.14	115.55	0.47	175.5
November	328,769	17,596	2.18	40.82	1.50	109.0	6,401	1,051	18.52	113.07	0.49	284.8
December	336,195	18,343	2.20	40.48	1.44	90.2	3,498	576	19.73	119.40	0.43	61.3
Year 2014												
January	356,260	19,360	2.25	41.46	1.56	86.8	14,823	2,481	22.05	132.09	0.46	43.7
February	324,520	17,309	2.31	43.39	1.62	83.0	13,652	2,247	21.53	131.09	0.39	189.3
March	383,238	19,906	2.32	44.67	1.66	97.8	6,096	1,023	22.59	134.69	0.52	66.2
April	368,214	19,193	2.29	44.00	1.60	114.9	2,150	365	21.88	129.00	0.48	127.7
May	358,005	18,880	2.30	43.62	1.65	113.3	3,198	529	20.19	121.99	0.52	145.8
June	346,608	18,528	2.29	42.89	1.64	100.1	2,867	477	21.11	126.96	0.51	141.6
July	346,695	18,879	2.24	41.19	1.53	90.0	2,327	391	21.59	128.64	0.50	96.7
August	366,331	19,740	2.22	41.23	1.63	96.0	2,265	382	W	W	0.49	79.5
September	342,392	18,355	2.21	41.35	1.70	101.3	3,161	526	19.20	115.97	0.50	156.6
October	345,463	18,416	2.18	40.98	1.57	115.9	5,762	961	17.58	105.43	0.44	279.8
November	338,083	18,186	2.19	40.72	1.58	101.8	10,107	1,695	15.62	93.26	0.38	374.5
December	368,141	19,847	2.20	40.90	1.54	112.9	5,366	904	15.41	91.46	0.53	201.5
Year 2015												
January	370,545	19,679	2.19	41.18	1.57	96.2	4,385	732	15.01	89.69	0.49	59.4
February	302,474	16,111	2.22	41.77	1.63	84.3	11,250	1,857	13.25	80.43	0.51	37.0
March	298,086	15,549	2.21	42.43	1.63	97.3	3,976	670	13.58	80.81	0.49	119.6
April	290,324	15,310	2.11	40.15	1.67	124.1	2,315	394	12.90	76.13	0.46	130.6
May	289,053	15,209	2.13	40.54	1.77	107.3	3,836	648	13.09	77.69	0.41	141.4
June	282,635	15,143	2.14	40.04	1.77	83.3	2,120	356	13.32	79.32	0.48	95.0
July	319,704	17,307	2.09	38.62	1.66	85.8	2,277	386	12.82	75.72	0.47	69.7
August	345,979	18,463	2.11	39.54	1.69	94.3	3,485	581	12.58	75.51	0.48	134.5
September	345,305	18,605	2.05	38.03	1.69	103.9	6,857	1,134	9.47	57.12	0.47	242.0
October	323,263	17,340	1.99	37.04	1.62	120.0	6,936	1,131	8.70	53.42	0.41	304.8
November	286,023	15,432	1.97	36.47	1.57	115.6	5,410	891	9.13	55.56	0.45	217.6
December	278,119	14,836	1.96	36.85	1.64	121.7	2,401	409	9.61	56.22	0.45	92.1

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**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.

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- See Glossary for definitions.

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- 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 7.8. Receipts, Average Cost, and Quality of Fossil Fuels: Independent Power Producers, 2005 - 2015 (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												
2005	92,706	3,277	0.90	25.42	5.09	82.9	3,675,165	3,578,722	8.20	8.42	95.8	4.69
2006	85,924	3,031	1.07	30.34	5.13	87.1	3,742,865	3,647,102	6.66	6.84	97.4	3.82
2007	56,580	1,994	1.02	28.95	4.88	69.3	4,097,825	3,990,546	6.92	7.11	97.2	4.06
2008	79,122	2,788	1.47	41.85	4.63	98.8	4,061,830	3,956,155	8.93	9.17	100.5	5.07
2009	49,619	1,732	1.31	37.63	3.87	93.6	4,087,573	3,987,721	4.30	4.41	100.7	3.18
2010	30,079	1,050	1.74	49.80	3.84	72.3	4,212,611	4,119,103	4.94	5.05	100.6	3.57
2011	33,643	1,175	2.54	72.85	4.55	84.6	4,252,040	4,158,617	4.62	4.72	100.8	3.52
2012	23,024	801	0.82	23.98	5.49	92.1	4,810,553	4,696,637	3.17	3.25	93.8	2.74
2013	16,150	575	W	W	5.39	65.6	4,025,263	3,917,898	4.25	4.36	92.8	W
2014	13,781	488	2.48	70.31	5.33	70.9	4,054,540	3,934,672	4.90	5.05	92.7	W
2015	14,550	524	2.45	68.22	5.26	67.3	4,683,291	4,530,195	2.94	3.04	93.2	W
Year 2013												
January	1,444	52	0.00	0.00	5.37	67.8	305,859	297,827	4.59	4.72	92.6	3.29
February	1,424	51	0.00	0.00	5.39	74.3	271,071	264,155	4.73	4.85	91.0	3.39
March	1,474	53	0.00	0.00	5.36	69.9	293,315	285,996	4.36	4.47	92.2	3.27
April	1,507	54	W	W	5.44	76.0	282,900	275,394	4.56	4.68	92.9	W
May	1,628	57	W	W	5.43	118.1	304,542	296,100	4.45	4.58	92.9	W
June	1,541	54	W	W	5.43	80.3	357,118	347,375	4.20	4.32	92.9	W
July	1,543	54	W	W	5.37	67.4	457,359	444,633	4.06	4.17	92.9	W
August	951	34	W	W	5.36	33.2	439,538	428,028	3.67	3.77	93.5	W
September	118	4	W	W	5.22	6.1	372,893	362,795	3.83	3.94	93.9	W
October	1,492	53	W	W	5.33	73.4	311,285	302,936	3.86	3.96	93.3	W
November	1,490	52	0.00	0.00	5.43	77.3	301,695	293,861	4.03	4.14	92.9	3.11
December	1,538	55	W	W	5.42	70.9	327,686	318,797	5.05	5.19	92.4	W
Year 2014												
January	922	33	W	W	5.35	52.4	320,157	311,751	8.58	8.81	92.3	W
February	1,039	38	0.00	0.00	5.27	60.8	267,558	260,190	8.33	8.57	91.3	5.10
March	1,127	41	W	W	5.47	62.5	271,937	264,409	6.38	6.56	91.6	W
April	1,047	37	W	W	5.53	57.9	264,781	257,569	4.83	4.96	92.5	W
May	1,419	50	W	W	5.35	88.8	305,484	296,701	4.51	4.65	91.8	W
June	1,349	47	W	W	5.24	102.9	352,539	342,158	4.45	4.58	91.9	W
July	1,124	39	W	W	5.55	67.8	432,673	419,753	3.98	4.10	93.3	W
August	1,401	49	W	W	5.39	83.2	455,652	441,523	3.71	3.83	93.7	W
September	946	33	W	W	5.29	47.3	400,187	387,887	3.72	3.84	93.6	W
October	821	29	W	W	5.26	91.2	363,367	352,206	3.58	3.69	92.8	W
November	1,066	36	W	W	5.29	87.9	298,147	289,008	4.27	4.41	92.9	W
December	1,520	53	W	W	5.10	76.9	322,057	311,517	4.04	4.18	93.1	W
Year 2015												
January	1,427	52	W	W	5.10	77.7	341,822	330,761	4.08	4.22	91.0	W
February	562	20	W	W	4.53	30.3	301,145	291,394	5.27	5.45	92.2	W
March	956	34	W	W	4.81	48.8	347,024	336,090	3.37	3.49	93.3	W
April	1,501	54	W	W	4.95	79.8	324,962	313,969	2.65	2.75	94.0	W
May	1,348	48	W	W	5.17	69.5	359,864	347,963	2.75	2.85	93.5	W
June	1,237	44	W	W	5.22	69.1	425,118	410,985	2.68	2.78	93.7	W
July	1,119	40	W	W	5.30	58.9	516,995	500,696	2.71	2.79	93.6	W
August	1,289	45	W	W	5.62	67.7	511,789	495,450	2.71	2.80	93.7	W
September	432	16	W	W	5.44	22.4	445,913	431,110	2.69	2.79	93.4	W
October	1,295	47	W	W	5.38	71.8	394,437	381,566	2.55	2.64	93.1	W
November	1,643	59	W	W	5.35	82.8	351,912	340,122	2.31	2.40	93.1	W
December	1,742	65	W	W	5.70	179.6	362,309	350,090	2.21	2.29	93.5	W

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#### 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.

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- See the Technical Notes for fuel conversion factors.

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Table 7.9. Receipts, Average Cost, and Quality of Fossil Fuels: Commercial Sector, 2005 - 2015

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												
2005	11,081	464	2.57	61.21	2.43	24.2	1,684	289	8.28	48.22	0.17	18.3
2006	12,207	518	2.63	61.95	2.51	27.5	798	137	13.50	78.70	0.17	15.5
2007	12,419	531	2.67	62.46	2.58	27.6	249	43	14.04	81.93	0.17	6.2
2008	43,997	2,009	2.65	58.12	1.73	99.4	3,800	633	17.84	107.10	0.37	102.0
2009	41,182	1,876	2.90	63.68	1.67	104.3	3,517	583	10.82	65.26	0.45	122.1
2010	37,778	1,747	2.82	61.06	1.77	101.6	2,395	400	15.24	91.25	0.38	106.3
2011	35,892	1,686	2.92	62.24	1.78	101.1	1,959	325	19.67	118.66	0.55	108.0
2012	4,427	192	3.41	78.71	2.75	13.2	247	43	W	W	0.00	11.0
2013	3,507	151	W	W	3.05	11.2	0	0	--	--	--	0.0
2014	4,096	182	W	W	2.50	17.1	0	0	--	--	--	0.0
2015	2,439	109	W	W	2.55	13.6	0	0	--	--	--	0.0
Year 2013												
January	390	17	W	W	2.99	11.2	0	0	--	--	--	0.0
February	394	17	W	W	3.07	12.2	0	0	--	--	--	0.0
March	489	21	W	W	2.74	16.0	0	0	--	--	--	0.0
April	241	10	W	W	3.04	10.4	0	0	--	--	--	0.0
May	383	17	W	W	2.96	15.8	0	0	--	--	--	0.0
June	355	16	W	W	2.91	15.2	0	0	--	--	--	0.0
July	209	9	W	W	3.41	8.9	0	0	--	--	--	0.0
August	386	17	W	W	2.82	16.3	0	0	--	--	--	0.0
September	143	6	W	W	3.37	6.4	0	0	--	--	--	0.0
October	61	3	W	W	3.34	2.9	0	0	--	--	--	0.0
November	202	9	W	W	3.52	7.9	0	0	--	--	--	0.0
December	254	11	W	W	3.45	8.6	0	0	--	--	--	0.0
Year 2014												
January	400	18	W	W	3.06	13.3	0	0	--	--	--	0.0
February	407	18	W	W	2.91	13.7	0	0	--	--	--	0.0
March	526	24	2.98	66.22	2.39	20.1	0	0	--	--	--	0.0
April	640	30	2.70	58.40	1.24	36.2	0	0	--	--	--	0.0
May	475	21	W	W	2.54	29.1	0	0	--	--	--	0.0
June	116	5	W	W	2.88	6.3	0	0	--	--	--	0.0
July	261	11	W	W	2.52	13.2	0	0	--	--	--	0.0
August	159	7	W	W	2.96	9.4	0	0	--	--	--	0.0
September	306	13	W	W	2.56	21.1	0	0	--	--	--	0.0
October	313	14	W	W	2.72	23.9	0	0	--	--	--	0.0
November	229	10	W	W	3.00	12.3	0	0	--	--	--	0.0
December	264	12	W	W	2.96	13.0	0	0	--	--	--	0.0
Year 2015												
January	309	14	W	W	2.65	14.4	0	0	--	--	--	0.0
February	479	23	2.14	44.32	1.71	23.9	0	0	--	--	--	0.0
March	177	8	W	W	2.93	9.3	0	0	--	--	--	0.0
April	298	13	W	W	2.72	23.8	0	0	--	--	--	0.0
May	102	5	W	W	2.90	9.0	0	0	--	--	--	0.0
June	213	9	W	W	2.30	15.1	0	0	--	--	--	0.0
July	124	5	W	W	2.93	8.3	0	0	--	--	--	0.0
August	187	8	W	W	2.46	13.3	0	0	--	--	--	0.0
September	49	2	W	W	3.01	4.3	0	0	--	--	--	0.0
October	130	6	W	W	3.08	11.1	0	0	--	--	--	0.0
November	182	8	W	W	3.00	13.6	0	0	--	--	--	0.0
December	188	8	W	W	2.86	11.5	0	0	--	--	--	0.0

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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.

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Table 7.10. Receipts, Average Cost, and Quality of Fossil Fuels: Commercial Sector, 2005 - 2015 (continued)

Period	Petroleum Coke							Natural Gas					All Fossil Fuels
	Receipts		Average Cost			Average Sulfur Percent by Weight	Percentage of Consumption	Receipts		Average Cost		Percentage of Consumption	Average Cost
	(Billion Btu)	(Thousand Tons)	(Dollars per MMBtu)	(Dollars per Ton)	(Billion Btu)			(Thousand Mcf)	(Dollars per MMBtu)	(Dollars per Mcf)	(Dollars per MMBtu)		
<b>Annual Totals</b>													
2005	0	0	--	--	--	0.0	17,600	17,142	8.38	8.60	25.2	6.25	
2006	0	0	--	--	--	0.0	21,369	20,819	8.33	8.55	30.7	6.42	
2007	0	0	--	--	--	0.0	23,502	22,955	7.99	8.18	32.8	6.20	
2008	370	14	2.14	58.36	5.53	135.3	71,670	69,877	9.01	9.24	105.5	6.94	
2009	252	9	1.65	46.54	5.11	102.8	81,134	79,308	5.18	5.30	105.0	4.58	
2010	410	15	2.19	60.59	5.67	122.5	92,055	90,130	5.39	5.51	105.1	4.83	
2011	268	9	W	W	5.46	147.4	95,287	93,306	5.20	5.31	107.2	W	
2012	0	0	--	--	--	0.0	18,315	18,008	5.88	5.98	16.2	W	
2013	0	0	--	--	--	0.0	5,497	5,450	W	W	4.6	W	
2014	0	0	--	--	--	0.0	5,849	5,795	W	W	4.9	W	
2015	0	0	--	--	--	0.0	6,499	6,371	W	W	5.5	W	
<b>Year 2013</b>													
January	0	0	--	--	--	0.0	330	327	W	W	3.4	W	
February	0	0	--	--	--	0.0	361	357	W	W	4.1	W	
March	0	0	--	--	--	0.0	382	378	W	W	4.0	W	
April	0	0	--	--	--	0.0	375	371	W	W	4.3	W	
May	0	0	--	--	--	0.0	467	464	W	W	5.2	W	
June	0	0	--	--	--	0.0	404	401	W	W	4.2	W	
July	0	0	--	--	--	0.0	445	440	W	W	3.6	W	
August	0	0	--	--	--	0.0	414	411	W	W	3.7	W	
September	0	0	--	--	--	0.0	560	554	W	W	5.4	W	
October	0	0	--	--	--	0.0	633	629	W	W	6.9	W	
November	0	0	--	--	--	0.0	529	524	W	W	5.7	W	
December	0	0	--	--	--	0.0	599	592	W	W	5.5	W	
<b>Year 2014</b>													
January	0	0	--	--	--	0.0	423	418	W	W	3.1	W	
February	0	0	--	--	--	0.0	314	310	W	W	3.6	W	
March	0	0	--	--	--	0.0	359	355	W	W	4.2	W	
April	0	0	--	--	--	0.0	439	435	W	W	5.4	W	
May	0	0	--	--	--	0.0	491	486	W	W	5.4	W	
June	0	0	--	--	--	0.0	440	437	W	W	4.6	W	
July	0	0	--	--	--	0.0	476	472	W	W	4.4	W	
August	0	0	--	--	--	0.0	625	619	W	W	5.4	W	
September	0	0	--	--	--	0.0	555	551	W	W	5.4	W	
October	0	0	--	--	--	0.0	580	575	W	W	5.9	W	
November	0	0	--	--	--	0.0	476	472	W	W	5.1	W	
December	0	0	--	--	--	0.0	672	666	W	W	6.7	W	
<b>Year 2015</b>													
January	0	0	--	--	--	0.0	552	545	W	W	5.7	W	
February	0	0	--	--	--	0.0	378	372	W	W	4.4	W	
March	0	0	--	--	--	0.0	438	432	W	W	4.7	W	
April	0	0	--	--	--	0.0	420	413	W	W	5.1	W	
May	0	0	--	--	--	0.0	494	488	W	W	5.4	W	
June	0	0	--	--	--	0.0	522	513	W	W	5.2	W	
July	0	0	--	--	--	0.0	540	528	W	W	4.6	W	
August	0	0	--	--	--	0.0	694	680	W	W	6.1	W	
September	0	0	--	--	--	0.0	632	620	W	W	5.8	W	
October	0	0	--	--	--	0.0	530	523	W	W	5.4	W	
November	0	0	--	--	--	0.0	775	749	W	W	8.0	W	
December	0	0	--	--	--	0.0	524	507	W	W	5.2	W	

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

W = Withheld to avoid disclosure of individual company data.

Notes:

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

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**Table 7.11. Receipts, Average Cost, and Quality of Fossil Fuels: Industrial Sector, 2005 - 2015**

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												
2005	339,968	16,011	1.94	41.17	1.42	61.9	36,383	5,876	6.64	41.13	1.36	26.4
2006	320,640	15,208	2.03	42.76	1.47	60.2	19,514	3,214	7.57	45.95	1.30	21.2
2007	303,091	13,540	2.20	49.16	1.36	60.1	33,637	5,514	8.53	52.06	1.33	38.8
2008	493,724	22,044	2.72	60.96	1.28	100.7	48,822	7,958	12.50	76.69	1.01	109.0
2009	431,686	19,661	2.81	61.68	1.22	99.5	55,899	9,232	9.83	59.52	0.83	112.8
2010	468,991	21,492	2.75	60.08	1.26	87.2	33,276	5,554	13.21	79.15	0.93	125.6
2011	476,108	22,204	2.93	62.86	1.33	99.5	28,939	4,878	17.67	104.83	1.08	144.8
2012	285,172	13,206	3.02	65.24	1.33	65.8	6,739	1,095	W	W	1.52	40.8
2013	275,543	12,727	W	W	1.32	64.4	2,431	394	18.20	112.29	1.43	15.8
2014	281,867	13,050	W	W	1.33	68.4	2,290	373	17.91	109.99	1.43	15.6
2015	263,630	12,132	W	W	1.35	71.4	2,359	385	13.45	82.47	1.42	16.9
Year 2013												
January	22,923	1,071	W	W	1.23	60.6	330	53	18.32	113.35	1.58	20.1
February	20,789	962	W	W	1.31	60.2	214	35	18.09	110.29	1.33	15.3
March	23,120	1,078	W	W	1.24	61.7	318	52	18.11	111.18	1.25	26.9
April	21,566	986	W	W	1.35	63.0	226	36	W	W	1.63	18.6
May	23,533	1,082	W	W	1.31	66.8	244	39	17.85	110.67	1.41	19.2
June	22,312	1,032	W	W	1.18	66.0	246	40	18.19	112.54	1.69	22.2
July	24,077	1,120	W	W	1.29	67.0	208	33	17.37	108.22	1.66	20.8
August	24,220	1,116	W	W	1.30	68.6	161	26	18.55	113.24	1.38	17.0
September	23,042	1,066	W	W	1.37	69.7	80	13	18.61	114.88	1.32	8.8
October	22,581	1,031	W	W	1.38	63.7	102	17	19.09	118.20	0.80	10.1
November	23,845	1,092	W	W	1.42	64.9	104	17	19.02	115.77	1.00	9.5
December	23,534	1,091	W	W	1.40	61.8	198	32	18.35	113.33	1.25	7.7
Year 2014												
January	23,384	1,093	W	W	1.29	61.0	385	62	18.67	115.30	1.30	15.0
February	21,991	1,020	W	W	1.33	62.5	332	53	20.18	125.46	1.04	19.1
March	25,143	1,161	2.92	63.25	1.41	67.2	135	22	20.74	127.74	1.16	9.3
April	22,469	1,042	3.09	66.66	1.31	70.8	142	23	17.86	110.18	1.60	14.8
May	22,090	1,028	W	W	1.27	66.3	144	23	17.67	109.00	1.70	13.6
June	21,987	1,014	W	W	1.40	65.9	197	32	18.15	111.64	1.79	19.5
July	24,237	1,122	W	W	1.29	70.6	149	24	16.89	103.81	1.54	16.2
August	25,258	1,165	W	W	1.35	73.2	117	19	W	W	1.59	14.2
September	23,305	1,073	W	W	1.28	71.5	140	23	17.75	108.43	1.86	14.5
October	23,967	1,110	W	W	1.35	74.9	150	25	16.21	98.83	1.56	14.8
November	23,701	1,098	W	W	1.37	70.7	169	28	17.46	105.26	1.42	15.1
December	24,334	1,125	W	W	1.30	68.4	230	38	14.15	85.81	1.33	22.4
Year 2015												
January	24,148	1,100	W	W	1.36	68.2	210	34	13.50	83.50	1.82	14.2
February	19,118	882	2.77	60.15	1.42	59.5	275	44	15.47	96.51	1.58	12.2
March	24,240	1,110	W	W	1.30	73.7	212	34	14.93	93.02	1.65	17.1
April	21,069	969	W	W	1.42	72.5	257	43	13.30	79.04	0.98	22.1
May	21,441	991	W	W	1.28	71.9	95	16	15.20	90.88	1.05	8.5
June	21,188	975	W	W	1.36	70.6	240	39	13.12	79.91	1.30	22.0
July	23,947	1,110	W	W	1.34	73.7	122	20	13.55	83.51	1.58	12.5
August	22,948	1,059	W	W	1.28	74.6	161	26	13.21	81.06	1.52	18.7
September	22,556	1,038	W	W	1.22	74.6	151	25	13.56	82.72	1.38	16.9
October	20,964	967	W	W	1.40	74.6	221	36	12.74	77.23	1.26	21.5
November	21,602	987	W	W	1.51	74.5	180	29	11.49	71.78	1.40	19.1
December	20,408	944	W	W	1.36	69.9	234	38	11.75	72.24	1.52	24.5

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**Notes:**

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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.

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**Table 7.12. Receipts, Average Cost, and Quality of Fossil Fuels: Industrial Sector, 2005 - 2015 (continued)**

Period	Petroleum Coke						Natural Gas					All Fossil Fuels
	Receipts		Average Cost			Percentage of Consumption	Receipts		Average Cost			Average Cost
	(Billion Btu)	(Thousand Tons)	(Dollars per MMBtu)	(Dollars per Ton)	Average Sulfur Percent by Weight		(Billion Btu)	(Thousand Mcf)	(Dollars per MMBtu)	(Dollars per Mcf)	Percentage of Consumption	
Annual Totals												
2005	16,620	594	1.21	33.75	5.44	58.2	828,882	805,132	8.00	8.24	74.3	6.18
2006	17,875	646	1.63	45.05	5.43	42.7	869,157	844,211	7.02	7.22	75.7	5.64
2007	19,700	698	1.96	55.42	5.52	43.6	896,803	871,178	6.97	7.18	82.9	5.78
2008	39,246	1,396	3.34	93.84	4.92	117.9	1,099,613	1,068,372	8.95	9.22	111.9	7.10
2009	38,924	1,381	1.80	50.82	4.51	114.2	1,117,489	1,088,880	4.27	4.38	110.0	4.02
2010	35,866	1,269	2.46	69.38	4.90	100.5	1,166,768	1,135,917	4.64	4.77	110.4	4.24
2011	37,981	1,351	W	W	5.03	108.3	1,331,977	1,296,628	4.28	4.40	122.0	W
2012	23,861	858	2.62	72.96	5.86	42.2	834,245	813,288	2.97	3.05	70.8	W
2013	17,236	623	W	W	5.82	30.5	750,946	728,835	W	W	62.3	W
2014	9,736	358	W	W	5.83	23.2	742,347	718,360	W	W	62.7	W
2015	8,189	304	W	W	5.50	24.1	765,964	740,975	W	W	60.6	W
Year 2013												
January	1,844	67	2.30	63.72	6.13	34.8	61,781	60,209	W	W	60.2	W
February	1,058	38	2.38	65.94	6.03	30.4	59,307	57,544	W	W	64.4	W
March	1,317	47	2.40	67.24	6.03	26.2	63,464	61,243	W	W	63.0	W
April	1,424	51	W	W	5.96	30.6	58,374	56,733	W	W	61.4	W
May	1,520	54	W	W	5.82	28.5	62,146	60,458	W	W	64.7	W
June	1,686	61	W	W	5.70	32.1	64,256	62,350	W	W	65.2	W
July	1,666	59	W	W	5.99	30.2	63,859	61,986	W	W	59.3	W
August	2,041	72	W	W	5.94	33.2	64,617	62,815	W	W	60.6	W
September	1,565	56	W	W	5.68	34.3	60,028	58,253	W	W	60.9	W
October	1,252	46	W	W	5.36	29.1	62,118	60,239	W	W	63.0	W
November	677	25	2.36	65.25	5.58	21.5	64,376	62,456	W	W	64.0	W
December	1,189	45	W	W	5.28	31.4	66,621	64,548	W	W	61.4	W
Year 2014												
January	398	15	W	W	5.87	11.7	66,078	64,072	W	W	60.7	W
February	339	13	W	W	5.95	11.2	59,291	57,453	W	W	64.6	W
March	834	31	W	W	5.76	24.3	65,433	63,434	W	W	67.2	W
April	755	28	W	W	5.88	19.7	58,439	56,714	W	W	63.4	W
May	408	15	W	W	5.78	11.7	60,012	58,094	W	W	63.1	W
June	990	36	W	W	5.66	25.6	60,327	58,411	W	W	64.0	W
July	794	29	W	W	5.79	20.2	64,393	62,325	W	W	62.9	W
August	912	34	W	W	5.80	25.1	64,667	62,493	W	W	62.0	W
September	997	36	W	W	5.92	27.6	59,277	57,273	W	W	60.5	W
October	950	34	W	W	5.92	33.0	58,228	56,273	W	W	59.5	W
November	1,071	40	W	W	5.83	33.3	61,753	59,657	W	W	63.3	W
December	1,286	47	W	W	5.86	36.1	64,449	62,162	W	W	62.3	W
Year 2015												
January	1,065	39	W	W	5.45	30.6	63,737	61,619	W	W	59.6	W
February	675	25	W	W	5.72	22.1	60,233	58,313	W	W	63.2	W
March	794	29	W	W	5.66	26.6	63,904	61,821	W	W	62.5	W
April	937	34	W	W	5.81	27.3	59,995	58,072	W	W	62.5	W
May	650	24	W	W	5.58	22.7	62,594	60,498	W	W	63.6	W
June	847	32	W	W	5.41	31.7	63,763	61,470	W	W	60.8	W
July	680	26	W	W	5.28	29.4	67,248	64,911	W	W	59.3	W
August	478	18	W	W	5.34	18.9	68,195	66,008	W	W	59.8	W
September	648	24	W	W	5.57	22.0	63,672	61,594	W	W	60.1	W
October	218	9	W	W	4.62	9.6	57,688	55,868	W	W	54.6	W
November	393	15	W	W	5.27	13.3	65,289	63,274	W	W	61.3	W
December	804	30	W	W	5.46	32.7	69,647	67,528	W	W	61.3	W

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**Table 7.13. Receipts of Coal Delivered for Electricity Generation by State, 2015 and 2014  
(Thousand Tons)**

Census Division and State	Electric Power Sector										
	All Sectors			Electric Utilities		Independent Power Producers		Commercial Sector		Industrial Sector	
	Year 2015	Year 2014	Percentage Change	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014
New England	2,081	2,577	-19.0%	657	526	1,395	2,019	0	0	30	32
Connecticut	251	487	-49.0%	0	0	251	487	0	0	0	0
Maine	104	85	22.0%	0	0	74	53	0	0	30	32
Massachusetts	1,070	1,225	-13.0%	0	0	1,070	1,225	0	0	0	0
New Hampshire	657	526	25.0%	657	526	0	0	0	0	0	0
Rhode Island	0	254	-100.0%	0	0	0	254	0	0	0	0
Vermont	0	0	--	0	0	0	0	0	0	0	0
Middle Atlantic	31,548	42,038	-25.0%	0	166	30,693	40,974	0	0	856	898
New Jersey	854	1,091	-22.0%	0	0	854	1,091	0	0	0	0
New York	1,006	2,903	-65.0%	0	0	698	2,588	0	0	309	315
Pennsylvania	29,689	38,044	-22.0%	0	166	29,142	37,295	0	0	547	583
East North Central	174,849	196,078	-11.0%	100,647	120,272	71,207	72,437	27	70	2,968	3,300
Illinois	55,587	62,810	-12.0%	8,656	14,063	44,727	46,437	0	0	2,204	2,310
Indiana	34,888	40,628	-14.0%	32,030	37,770	2,858	2,858	0	0	0	0
Michigan	29,684	30,834	-3.7%	29,367	30,412	260	249	27	70	30	104
Ohio	31,671	39,646	-20.0%	8,063	16,476	23,362	22,893	0	0	246	278
Wisconsin	23,020	22,159	3.9%	22,531	21,551	0	0	0	0	488	608
West North Central	139,057	137,428	1.2%	135,625	133,816	0	0	81	112	3,350	3,500
Iowa	22,411	19,375	16.0%	20,212	17,086	0	0	0	0	2,199	2,288
Kansas	17,888	18,068	-1.0%	17,888	18,068	0	0	0	0	0	0
Minnesota	17,220	16,913	1.8%	16,848	16,484	0	0	14	19	358	410
Missouri	41,233	41,473	-0.6%	41,166	41,380	0	0	67	93	0	0
Nebraska	15,326	16,153	-5.1%	14,532	15,351	0	0	0	0	794	801
North Dakota	23,877	23,671	0.9%	23,877	23,671	0	0	0	0	0	0
South Dakota	1,101	1,776	-38.0%	1,101	1,776	0	0	0	0	0	0
South Atlantic	111,710	123,112	-9.3%	96,660	103,554	13,080	17,158	0	0	1,969	2,400
Delaware	152	534	-72.0%	0	0	152	534	0	0	0	0
District of Columbia	0	0	--	0	0	0	0	0	0	0	0
Florida	19,159	22,159	-14.0%	18,339	21,090	589	817	0	0	230	251
Georgia	20,219	20,524	-1.5%	20,005	20,097	0	0	0	0	214	427
Maryland	6,438	8,262	-22.0%	0	0	6,163	7,901	0	0	276	361
North Carolina	16,129	17,580	-8.3%	15,519	16,658	237	545	0	0	373	377
South Carolina	11,163	10,947	2.0%	11,009	10,752	0	0	0	0	155	195
Virginia	7,791	10,260	-24.0%	6,594	8,847	855	1,051	0	0	343	362
West Virginia	30,657	32,845	-6.7%	25,194	26,109	5,084	6,308	0	0	379	428
East South Central	76,694	87,900	-13.0%	72,115	83,767	3,133	2,625	0	0	1,447	1,507
Alabama	20,259	23,312	-13.0%	20,259	23,312	0	0	0	0	0	0
Kentucky	40,770	38,741	5.2%	40,770	38,741	0	0	0	0	0	0
Mississippi	5,125	6,195	-17.0%	1,993	3,570	3,133	2,625	0	0	0	0
Tennessee	10,541	19,652	-46.0%	9,094	18,145	0	0	0	0	1,447	1,507
West South Central	135,422	150,653	-10.0%	70,465	75,723	64,344	74,380	0	0	613	550
Arkansas	14,779	18,630	-21.0%	12,220	16,594	2,475	1,980	0	0	84	56
Louisiana	10,896	12,017	-9.3%	6,480	5,574	4,416	6,443	0	0	0	0
Oklahoma	18,725	19,018	-1.5%	16,884	17,324	1,312	1,200	0	0	529	494
Texas	91,021	100,988	-9.9%	34,881	36,230	56,140	64,757	0	0	0	0
Mountain	105,381	106,386	-0.9%	93,895	94,745	11,259	11,367	0	0	227	273
Arizona	21,535	22,591	-4.7%	21,535	22,591	0	0	0	0	0	0
Colorado	18,272	17,184	6.3%	18,272	17,184	0	0	0	0	0	0
Idaho	0	0	--	0	0	0	0	0	0	0	0
Montana	9,997	9,905	0.9%	221	285	9,777	9,621	0	0	0	0
Nevada	1,367	3,924	-65.0%	856	3,154	510	770	0	0	0	0
New Mexico	12,403	11,867	4.5%	12,403	11,867	0	0	0	0	0	0
Utah	15,203	14,458	5.2%	14,536	13,732	440	452	0	0	227	273
Wyoming	26,604	26,457	0.6%	26,072	25,933	532	524	0	0	0	0
Pacific Contiguous	5,421	7,602	-29.0%	1,476	2,159	3,273	4,854	0	0	671	588
California	671	771	-13.0%	0	0	0	183	0	0	671	588
Oregon	1,476	2,159	-32.0%	1,476	2,159	0	0	0	0	0	0
Washington	3,273	4,671	-30.0%	0	0	3,273	4,671	0	0	0	0
Pacific Noncontiguous	765	786	-2.6%	166	0	599	786	0	0	0	0
Alaska	166	0	--	166	0	0	0	0	0	0	0
Hawaii	599	786	-24.0%	0	0	599	786	0	0	0	0
U.S. Total	782,929	854,560	-8.4%	571,707	614,728	198,982	226,600	109	182	12,132	13,050

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 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 7.14. Receipts of Petroleum Liquids Delivered for Electricity Generation by State, 2015 and 2014  
(Thousand Barrels)**

Census Division and State	Electric Power Sector										
	All Sectors			Electric Utilities		Independent Power Producers		Commercial Sector		Industrial Sector	
	Year 2015	Year 2014	Percentage Change	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014
New England	2,937	4,554	-35.0%	63	755	2,868	3,748	0	0	6	50
Connecticut	761	1,092	-30.0%	0	0	761	1,092	0	0	0	0
Maine	873	637	37.0%	0	0	867	587	0	0	6	50
Massachusetts	1,107	1,867	-41.0%	6	301	1,101	1,566	0	0	0	0
New Hampshire	81	741	-89.0%	58	455	23	287	0	0	0	0
Rhode Island	115	217	-47.0%	0	0	115	217	0	0	0	0
Vermont	0	0	--	0	0	0	0	0	0	0	0
Middle Atlantic	4,179	5,410	-23.0%	1,544	1,421	2,616	3,963	0	0	19	26
New Jersey	119	283	-58.0%	0	0	119	283	0	0	0	0
New York	3,054	3,545	-14.0%	1,544	1,421	1,494	2,109	0	0	16	15
Pennsylvania	1,006	1,583	-36.0%	0	0	1,003	1,571	0	0	3	12
East North Central	1,081	1,524	-29.0%	690	914	349	570	0	0	42	41
Illinois	101	179	-43.0%	12	45	89	133	0	0	0	0
Indiana	268	359	-25.0%	268	359	0	0	0	0	0	0
Michigan	177	227	-22.0%	167	215	0	0	0	0	11	12
Ohio	458	644	-29.0%	172	186	256	432	0	0	30	25
Wisconsin	77	115	-33.0%	71	108	4	4	0	0	2	3
West North Central	437	612	-29.0%	437	609	0	3	0	0	0	0
Iowa	78	99	-21.0%	78	99	0	0	0	0	0	0
Kansas	89	89	0.0%	89	89	0	0	0	0	0	0
Minnesota	46	93	-50.0%	46	89	0	3	0	0	0	0
Missouri	145	232	-38.0%	145	232	0	0	0	0	0	0
Nebraska	3	36	-92.0%	3	36	0	0	0	0	0	0
North Dakota	46	58	-20.0%	46	58	0	0	0	0	0	0
South Dakota	30	6	412.0%	30	6	0	0	0	0	0	0
South Atlantic	5,045	5,656	-11.0%	3,535	3,893	1,197	1,511	0	0	313	252
Delaware	199	26	660.0%	0	0	199	26	0	0	0	0
District of Columbia	0	0	--	0	0	0	0	0	0	0	0
Florida	652	567	15.0%	631	531	4	11	0	0	17	25
Georgia	275	399	-31.0%	142	262	76	60	0	0	57	76
Maryland	457	919	-50.0%	0	0	457	919	0	0	0	0
North Carolina	628	775	-19.0%	547	732	41	21	0	0	40	22
South Carolina	458	574	-20.0%	302	483	7	0	0	0	149	91
Virginia	2,159	2,107	2.5%	1,715	1,650	396	419	0	0	49	38
West Virginia	215	290	-26.0%	199	235	16	55	0	0	0	0
East South Central	493	658	-25.0%	482	631	7	23	0	0	4	4
Alabama	86	133	-35.0%	79	110	7	23	0	0	0	0
Kentucky	196	225	-13.0%	196	225	0	0	0	0	0	0
Mississippi	47	24	94.0%	47	24	0	0	0	0	0	0
Tennessee	165	276	-40.0%	161	272	0	0	0	0	4	4
West South Central	342	471	-27.0%	237	274	106	198	0	0	0	0
Arkansas	98	33	198.0%	71	15	27	18	0	0	0	0
Louisiana	94	211	-55.0%	70	157	25	54	0	0	0	0
Oklahoma	4	27	-86.0%	4	27	0	0	0	0	0	0
Texas	146	200	-27.0%	92	75	54	126	0	0	0	0
Mountain	360	354	1.7%	337	323	23	31	0	0	0	0
Arizona	104	84	24.0%	104	84	0	0	0	0	0	0
Colorado	6	9	-33.0%	6	9	0	0	0	0	0	0
Idaho	0	0	--	0	0	0	0	0	0	0	0
Montana	15	26	-43.0%	0	0	15	26	0	0	0	0
Nevada	30	27	10.0%	24	23	6	4	0	0	0	0
New Mexico	103	104	-0.6%	103	104	0	0	0	0	0	0
Utah	30	34	-10.0%	28	32	2	1	0	0	0	0
Wyoming	71	70	1.3%	71	70	0	0	0	0	0	0
Pacific Contiguous	23	35	-35.0%	9	21	14	14	0	0	0	0
California	0	0	--	0	0	0	0	0	0	0	0
Oregon	8	15	-47.0%	8	15	0	0	0	0	0	0
Washington	15	20	-26.0%	1	6	14	14	0	0	0	0
Pacific Noncontiguous	9,423	9,238	2.0%	7,413	7,320	2,010	1,918	0	0	0	0
Alaska	17	0	--	17	0	0	0	0	0	0	0
Hawaii	9,406	9,238	1.8%	7,396	7,320	2,010	1,918	0	0	0	0
U.S. Total	24,320	28,514	-15.0%	14,747	16,161	9,189	11,980	0	0	385	373

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 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 7.15. Receipts of Petroleum Coke Delivered for Electricity Generation by State, 2015 and 2014  
(Thousand Tons)**

Census Division and State	Electric Power Sector										
	All Sectors			Electric Utilities		Independent Power Producers		Commercial Sector		Industrial Sector	
	Year 2015	Year 2014	Percentage Change	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014
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	107	111	-3.1%	0	0	0	0	0	0	107	111
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	107	111	-3.1%	0	0	0	0	0	0	107	111
East North Central	1,309	1,489	-12.0%	711	886	524	488	0	0	75	115
Illinois	0	0	--	0	0	0	0	0	0	0	0
Indiana	393	424	-7.3%	393	424	0	0	0	0	0	0
Michigan	295	427	-31.0%	282	406	13	21	0	0	0	0
Ohio	511	467	9.3%	0	0	511	467	0	0	0	0
Wisconsin	111	171	-35.0%	36	56	0	0	0	0	75	115
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	1,125	1,076	4.6%	1,003	944	0	0	0	0	122	132
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	1,003	944	6.3%	1,003	944	0	0	0	0	0	0
Georgia	122	132	-7.9%	0	0	0	0	0	0	122	132
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	623	571	9.2%	623	571	0	0	0	0	0	0
Alabama	0	0	--	0	0	0	0	0	0	0	0
Kentucky	623	571	9.2%	623	571	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	1,732	1,949	-11.0%	1,732	1,949	0	0	0	0	0	0
Arkansas	0	0	--	0	0	0	0	0	0	0	0
Louisiana	1,732	1,949	-11.0%	1,732	1,949	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	4,897	5,195	-5.7%	4,069	4,349	524	488	0	0	304	358

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 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 7.16. Receipts of Natural Gas Delivered for Electricity Generation by State, 2015 and 2014  
(Million Cubic Feet)

Census Division and State	Electric Power Sector										
	All Sectors			Electric Utilities		Independent Power Producers		Commercial Sector		Industrial Sector	
	Year 2015	Year 2014	Percentage Change	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014
New England	370,575	329,008	13.0%	2,208	1,968	368,367	321,630	0	0	0	5,409
Connecticut	116,115	96,817	20.0%	0	0	116,115	96,817	0	0	0	0
Maine	18,262	29,233	-38.0%	0	0	18,262	23,824	0	0	0	5,409
Massachusetts	145,641	126,810	15.0%	1,900	1,544	143,741	125,265	0	0	0	0
New Hampshire	42,713	31,309	36.0%	308	424	42,405	30,885	0	0	0	0
Rhode Island	47,843	44,839	6.7%	0	0	47,843	44,839	0	0	0	0
Vermont	0	0	--	0	0	0	0	0	0	0	0
Middle Atlantic	1,103,350	987,872	12.0%	100,143	96,010	1,001,191	889,655	0	0	2,016	2,207
New Jersey	266,209	220,363	21.0%	0	0	266,209	220,363	0	0	0	0
New York	421,822	400,776	5.3%	100,143	96,010	320,884	303,819	0	0	794	947
Pennsylvania	415,319	366,733	13.0%	0	0	414,097	365,473	0	0	1,222	1,260
East North Central	650,392	440,348	48.0%	289,805	179,794	348,022	252,118	5,235	4,996	7,331	3,441
Illinois	72,846	33,334	119.0%	4,906	3,176	67,883	30,108	0	0	57	49
Indiana	113,996	75,417	51.0%	90,386	53,125	23,610	22,291	0	0	0	0
Michigan	160,213	99,894	60.0%	49,690	25,188	101,036	68,361	5,235	4,996	4,252	1,349
Ohio	204,922	173,203	18.0%	55,607	47,857	148,304	124,547	0	0	1,012	798
Wisconsin	98,416	58,501	68.0%	89,216	50,447	7,189	6,810	0	0	2,010	1,244
West North Central	133,003	96,722	38.0%	113,623	81,414	17,690	14,296	1,136	800	555	212
Iowa	24,510	16,383	50.0%	24,490	16,341	0	0	0	0	19	42
Kansas	11,865	13,175	-9.9%	11,865	13,175	0	0	0	0	0	0
Minnesota	51,801	29,157	78.0%	43,836	23,023	7,372	5,894	74	84	519	156
Missouri	35,353	31,555	12.0%	23,974	22,437	10,318	8,402	1,062	716	0	0
Nebraska	3,510	3,383	3.7%	3,493	3,370	0	0	0	0	16	14
North Dakota	520	48	976.0%	520	48	0	0	0	0	0	0
South Dakota	5,444	3,020	80.0%	5,444	3,020	0	0	0	0	0	0
South Atlantic	2,253,356	1,848,980	22.0%	1,847,641	1,533,263	363,728	290,636	0	0	41,987	25,080
Delaware	54,963	53,844	2.1%	0	0	41,150	43,273	0	0	13,812	10,571
District of Columbia	0	0	--	0	0	0	0	0	0	0	0
Florida	1,124,717	1,015,834	11.0%	1,072,494	973,100	51,313	42,314	0	0	910	420
Georgia	363,615	297,620	22.0%	258,451	208,634	92,429	81,063	0	0	12,736	7,924
Maryland	37,007	17,912	107.0%	0	0	36,516	17,675	0	0	492	237
North Carolina	273,890	205,537	33.0%	238,411	179,177	29,779	26,235	0	0	5,700	125
South Carolina	131,628	85,032	55.0%	118,356	75,763	12,522	8,903	0	0	750	366
Virginia	254,277	166,359	53.0%	158,515	94,502	88,175	66,418	0	0	7,587	5,438
West Virginia	13,259	6,841	94.0%	1,414	2,087	11,845	4,754	0	0	0	0
East South Central	843,264	650,914	30.0%	520,943	387,877	312,000	258,926	0	0	10,321	4,110
Alabama	376,645	327,708	15.0%	94,387	95,991	282,258	231,717	0	0	0	0
Kentucky	54,355	27,678	96.0%	48,420	26,076	5,935	1,602	0	0	0	0
Mississippi	332,183	245,694	35.0%	308,376	220,087	23,806	25,607	0	0	0	0
Tennessee	80,081	49,834	61.0%	69,760	45,724	0	0	0	0	10,321	4,110
West South Central	2,915,238	2,569,357	13.0%	836,372	708,715	1,439,913	1,227,392	0	0	638,953	633,251
Arkansas	109,604	72,786	51.0%	31,168	14,652	74,489	55,711	0	0	3,948	2,423
Louisiana	540,484	480,607	12.0%	299,974	241,778	36,611	20,660	0	0	203,898	218,169
Oklahoma	254,326	207,476	23.0%	168,137	142,416	85,496	64,801	0	0	693	259
Texas	2,010,824	1,808,489	11.0%	337,093	309,868	1,243,317	1,086,221	0	0	430,414	412,400
Mountain	670,939	582,191	15.0%	507,474	429,597	162,953	152,074	0	0	512	520
Arizona	247,291	204,092	21.0%	138,854	103,879	108,437	100,213	0	0	0	0
Colorado	87,626	91,190	-3.9%	70,667	70,783	16,960	20,407	0	0	0	0
Idaho	24,559	16,111	52.0%	14,164	7,888	10,395	8,223	0	0	0	0
Montana	4,978	51	NM	4,957	17	21	34	0	0	0	0
Nevada	188,354	149,459	26.0%	188,354	147,804	0	1,655	0	0	0	0
New Mexico	65,736	66,088	-0.5%	39,673	46,131	26,063	19,957	0	0	0	0
Utah	51,263	54,460	-5.9%	49,682	52,797	1,070	1,143	0	0	512	520
Wyoming	1,131	738	53.0%	1,124	298	8	441	0	0	0	0
Pacific Contiguous	886,660	904,961	-2.0%	331,027	332,887	516,331	527,944	0	0	39,302	44,129
California	720,997	746,402	-3.4%	234,515	233,296	447,181	468,976	0	0	39,302	44,129
Oregon	85,639	89,256	-4.1%	46,071	35,055	39,567	54,201	0	0	0	0
Washington	80,024	69,303	15.0%	50,441	64,537	29,583	4,766	0	0	0	0
Pacific Noncontiguous	15,803	21,071	-25.0%	15,803	21,071	0	0	0	0	0	0
Alaska	15,803	21,071	-25.0%	15,803	21,071	0	0	0	0	0	0
Hawaii	0	0	--	0	0	0	0	0	0	0	0
U.S. Total	9,842,581	8,431,423	17.0%	4,565,040	3,772,596	4,530,195	3,934,672	6,371	5,795	740,975	718,360

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

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

**Table 7.17. Average Cost of Coal Delivered for Electricity Generation by State, 2015 and 2014**  
(Dollars per MMBtu)

Census Division and State	Electric Power Sector			Electric Utilities		Independent Power Producers	
	Year 2015	Year 2014	Percentage Change	Year 2015	Year 2014	Year 2015	Year 2014
New England	3.47	W	W	3.87	4.27	3.25	W
Connecticut	W	W	W	--	--	W	W
Maine	W	W	W	--	--	W	W
Massachusetts	W	W	W	--	--	W	W
New Hampshire	3.87	4.27	-9.4%	3.87	4.27	--	--
Rhode Island	--	W	W	--	--	--	W
Vermont	--	--	--	--	--	--	--
Middle Atlantic	2.34	2.58	-9.3%	--	3.50	2.34	2.58
New Jersey	3.82	3.95	-3.3%	--	--	3.82	3.95
New York	2.83	3.03	-6.6%	--	--	2.83	3.03
Pennsylvania	2.28	2.51	-9.2%	--	3.50	2.28	2.50
East North Central	2.18	2.32	-6.0%	2.29	2.41	2.04	2.16
Illinois	1.92	1.99	-3.5%	2.06	2.04	1.89	1.97
Indiana	W	W	W	2.32	2.56	W	W
Michigan	W	W	W	2.39	2.60	W	W
Ohio	W	W	W	2.12	2.16	W	W
Wisconsin	2.27	2.31	-1.7%	2.27	2.31	--	--
West North Central	1.72	1.78	-3.4%	1.72	1.78	--	--
Iowa	1.62	1.67	-3.0%	1.62	1.67	--	--
Kansas	1.70	1.79	-5.0%	1.70	1.79	--	--
Minnesota	1.90	1.95	-2.6%	1.90	1.95	--	--
Missouri	1.90	2.00	-5.0%	1.90	2.00	--	--
Nebraska	1.34	1.40	-4.3%	1.34	1.40	--	--
North Dakota	1.56	1.53	2.0%	1.56	1.53	--	--
South Dakota	2.23	2.09	6.7%	2.23	2.09	--	--
South Atlantic	2.93	3.08	-4.9%	2.97	3.12	2.64	2.80
Delaware	W	W	W	--	--	W	W
District of Columbia	--	--	--	--	--	--	--
Florida	W	W	W	3.08	3.30	W	W
Georgia	2.93	3.10	-5.5%	2.93	3.10	--	--
Maryland	2.87	2.97	-3.4%	--	--	2.87	2.97
North Carolina	3.47	3.58	-3.1%	3.47	3.60	3.55	3.02
South Carolina	3.55	3.63	-2.2%	3.55	3.63	--	--
Virginia	2.95	3.28	-10.0%	2.87	3.20	3.49	3.87
West Virginia	2.31	2.40	-3.7%	2.37	2.46	1.96	2.09
East South Central	W	W	W	2.32	2.50	W	W
Alabama	2.44	2.69	-9.3%	2.44	2.69	--	--
Kentucky	2.22	2.34	-5.1%	2.22	2.34	--	--
Mississippi	W	W	W	3.06	3.27	W	W
Tennessee	2.39	2.45	-2.4%	2.39	2.45	--	--
West South Central	2.07	2.08	-0.5%	2.20	2.19	1.90	1.96
Arkansas	W	W	W	2.26	2.40	W	W
Louisiana	W	W	W	3.18	2.95	W	W
Oklahoma	W	W	W	1.97	1.96	W	W
Texas	1.97	1.99	-1.0%	2.13	2.08	1.87	1.95
Mountain	W	2.09	W	1.92	2.15	W	1.47
Arizona	2.07	2.10	-1.4%	2.07	2.10	--	--
Colorado	1.83	1.93	-5.2%	1.83	1.93	--	--
Idaho	--	--	--	--	--	--	--
Montana	W	W	W	1.72	1.82	W	W
Nevada	W	W	W	2.47	2.48	W	W
New Mexico	2.34	3.78	-38.0%	2.34	3.78	--	--
Utah	1.94	2.10	-7.6%	1.94	2.10	--	--
Wyoming	W	W	W	1.63	1.58	W	W
Pacific Contiguous	W	W	W	2.38	2.49	W	W
California	--	W	W	--	--	--	W
Oregon	2.38	2.49	-4.4%	2.38	2.49	--	--
Washington	W	W	W	--	--	W	W
Pacific Noncontiguous	W	W	W	3.27	--	W	W
Alaska	3.27	--	--	3.27	--	--	--
Hawaii	W	W	W	--	--	W	W
U.S. Total	2.21	2.36	-6.4%	2.25	2.39	2.10	2.25

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 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 7.18. Average Cost of Petroleum Liquids Delivered for Electricity Generation by State, 2015 and 2014**  
(Dollars per MMBtu)

Census Division and State	Electric Power Sector			Electric Utilities		Independent Power Producers	
	Year 2015	Year 2014	Percentage Change	Year 2015	Year 2014	Year 2015	Year 2014
New England	W	17.53	W	11.50	16.96	W	17.64
Connecticut	W	W	W	--	--	W	W
Maine	W	W	W	--	--	W	W
Massachusetts	11.84	18.09	-35.0%	22.00	19.94	11.79	17.75
New Hampshire	W	W	W	10.54	15.16	W	W
Rhode Island	W	W	W	--	--	W	W
Vermont	--	--	--	--	--	--	--
Middle Atlantic	11.27	19.30	-42.0%	8.78	16.10	13.04	20.63
New Jersey	13.93	22.94	-39.0%	--	--	13.93	22.94
New York	10.77	18.33	-41.0%	8.78	16.10	12.94	20.02
Pennsylvania	13.13	21.10	-38.0%	--	--	13.13	21.10
East North Central	13.52	W	W	13.57	22.02	13.41	W
Illinois	W	22.47	W	14.05	22.36	W	22.51
Indiana	13.78	21.78	-37.0%	13.78	21.78	--	--
Michigan	12.86	21.30	-40.0%	12.86	21.30	--	--
Ohio	13.44	W	W	13.54	23.55	13.37	W
Wisconsin	W	W	W	14.44	21.47	W	W
West North Central	12.40	W	W	12.40	21.13	--	W
Iowa	12.24	21.66	-43.0%	12.24	21.66	--	--
Kansas	12.07	20.71	-42.0%	12.07	20.71	--	--
Minnesota	13.13	W	W	13.13	22.14	--	W
Missouri	12.88	20.51	-37.0%	12.88	20.51	--	--
Nebraska	18.25	21.92	-17.0%	18.25	21.92	--	--
North Dakota	12.65	21.20	-40.0%	12.65	21.20	--	--
South Dakota	9.48	22.70	-58.0%	9.48	22.70	--	--
South Atlantic	12.45	21.31	-42.0%	12.16	21.27	13.49	21.40
Delaware	W	W	W	--	--	W	W
District of Columbia	--	--	--	--	--	--	--
Florida	W	W	W	14.24	18.81	W	W
Georgia	15.88	21.64	-27.0%	16.66	21.98	14.11	19.97
Maryland	10.79	21.17	-49.0%	--	--	10.79	21.17
North Carolina	W	22.02	W	13.22	22.10	W	19.61
South Carolina	14.83	22.60	-34.0%	14.83	22.60	--	--
Virginia	11.30	21.27	-47.0%	10.19	21.15	16.49	21.76
West Virginia	W	W	W	13.89	22.02	W	W
East South Central	W	W	W	12.57	19.78	W	W
Alabama	W	W	W	12.66	20.94	W	W
Kentucky	13.21	21.42	-38.0%	13.21	21.42	--	--
Mississippi	10.43	20.43	-49.0%	10.43	20.43	--	--
Tennessee	12.40	17.89	-31.0%	12.40	17.89	--	--
West South Central	13.12	20.18	-35.0%	13.00	19.97	13.39	20.48
Arkansas	W	W	W	13.26	21.41	W	W
Louisiana	W	W	W	12.53	19.94	W	W
Oklahoma	13.81	21.15	-35.0%	13.81	21.15	--	--
Texas	W	W	W	13.12	19.31	W	W
Mountain	14.68	W	W	14.70	22.73	14.33	W
Arizona	13.67	22.60	-40.0%	13.67	22.60	--	--
Colorado	14.74	19.70	-25.0%	14.74	19.70	--	--
Idaho	--	--	--	--	--	--	--
Montana	W	W	W	--	--	W	W
Nevada	W	W	W	16.50	23.43	W	W
New Mexico	15.53	23.84	-35.0%	15.53	23.84	--	--
Utah	W	W	W	14.72	20.61	W	W
Wyoming	14.38	22.43	-36.0%	14.38	22.43	--	--
Pacific Contiguous	W	W	W	11.19	19.63	W	W
California	--	--	--	--	--	--	--
Oregon	11.19	20.84	-46.0%	11.19	20.84	--	--
Washington	W	W	W	11.29	16.63	W	W
Pacific Noncontiguous	W	W	W	10.94	19.84	W	W
Alaska	17.12	--	--	17.12	--	--	--
Hawaii	W	W	W	10.93	19.84	W	W
U.S. Total	11.45	19.90	-42.0%	11.32	19.90	11.69	19.90

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 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 7.19. Average Cost of Petroleum Coke Delivered for Electricity Generation by State, 2015 and 2014**  
(Dollars per MMBtu)

Census Division and State	Electric Power Sector			Electric Utilities		Independent Power Producers	
	Year 2015	Year 2014	Percentage Change	Year 2015	Year 2014	Year 2015	Year 2014
New England	--	--	--	--	--	--	--
Connecticut	--	--	--	--	--	--	--
Maine	--	--	--	--	--	--	--
Massachusetts	--	--	--	--	--	--	--
New Hampshire	--	--	--	--	--	--	--
Rhode Island	--	--	--	--	--	--	--
Vermont	--	--	--	--	--	--	--
Middle Atlantic	--	--	--	--	--	--	--
New Jersey	--	--	--	--	--	--	--
New York	--	--	--	--	--	--	--
Pennsylvania	--	--	--	--	--	--	--
East North Central	W	W	W	1.29	1.22	W	W
Illinois	--	--	--	--	--	--	--
Indiana	0.95	0.94	1.1%	0.95	0.94	--	--
Michigan	W	W	W	1.76	1.45	W	W
Ohio	W	W	W	--	--	W	W
Wisconsin	1.68	1.84	-8.7%	1.68	1.84	--	--
West North Central	--	--	--	--	--	--	--
Iowa	--	--	--	--	--	--	--
Kansas	--	--	--	--	--	--	--
Minnesota	--	--	--	--	--	--	--
Missouri	--	--	--	--	--	--	--
Nebraska	--	--	--	--	--	--	--
North Dakota	--	--	--	--	--	--	--
South Dakota	--	--	--	--	--	--	--
South Atlantic	2.12	2.42	-12.0%	2.12	2.42	--	--
Delaware	--	--	--	--	--	--	--
District of Columbia	--	--	--	--	--	--	--
Florida	2.12	2.42	-12.0%	2.12	2.42	--	--
Georgia	--	--	--	--	--	--	--
Maryland	--	--	--	--	--	--	--
North Carolina	--	--	--	--	--	--	--
South Carolina	--	--	--	--	--	--	--
Virginia	--	--	--	--	--	--	--
West Virginia	--	--	--	--	--	--	--
East South Central	1.68	1.77	-5.1%	1.68	1.77	--	--
Alabama	--	--	--	--	--	--	--
Kentucky	1.68	1.77	-5.1%	1.68	1.77	--	--
Mississippi	--	--	--	--	--	--	--
Tennessee	--	--	--	--	--	--	--
West South Central	1.80	1.96	-8.2%	1.80	1.96	--	--
Arkansas	--	--	--	--	--	--	--
Louisiana	1.80	1.96	-8.2%	1.80	1.96	--	--
Oklahoma	--	--	--	--	--	--	--
Texas	--	--	--	--	--	--	--
Mountain	--	--	--	--	--	--	--
Arizona	--	--	--	--	--	--	--
Colorado	--	--	--	--	--	--	--
Idaho	--	--	--	--	--	--	--
Montana	--	--	--	--	--	--	--
Nevada	--	--	--	--	--	--	--
New Mexico	--	--	--	--	--	--	--
Utah	--	--	--	--	--	--	--
Wyoming	--	--	--	--	--	--	--
Pacific Contiguous	--	--	--	--	--	--	--
California	--	--	--	--	--	--	--
Oregon	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--
Pacific Noncontiguous	--	--	--	--	--	--	--
Alaska	--	--	--	--	--	--	--
Hawaii	--	--	--	--	--	--	--
U.S. Total	1.85	1.94	-4.6%	1.77	1.89	2.45	2.48

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 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 7.20. Average Cost of Natural Gas Delivered for Electricity Generation by State, 2015 and 2014**  
(Dollars per MMBtu)

Census Division and State	Electric Power Sector			Electric Utilities		Independent Power Producers	
	Year 2015	Year 2014	Percentage Change	Year 2015	Year 2014	Year 2015	Year 2014
New England	4.29	6.49	-34.0%	3.92	5.65	4.30	6.50
Connecticut	4.60	6.65	-31.0%	--	--	4.60	6.65
Maine	W	W	W	--	--	W	W
Massachusetts	4.21	6.46	-35.0%	3.76	5.54	4.22	6.47
New Hampshire	W	W	W	4.92	6.05	W	W
Rhode Island	3.62	W	W	--	--	3.62	W
Vermont	--	--	--	--	--	--	--
Middle Atlantic	2.92	5.00	-42.0%	3.70	5.48	2.82	4.94
New Jersey	2.87	4.69	-39.0%	--	--	2.87	4.69
New York	3.41	5.28	-35.0%	3.70	5.48	3.31	5.20
Pennsylvania	2.42	4.86	-50.0%	--	--	2.42	4.86
East North Central	2.82	5.13	-45.0%	2.94	5.19	2.72	5.10
Illinois	W	W	W	3.71	6.02	W	W
Indiana	W	W	W	2.93	5.11	W	W
Michigan	3.12	6.56	-52.0%	3.10	6.74	3.13	6.49
Ohio	2.28	4.14	-45.0%	2.38	4.33	2.25	4.07
Wisconsin	W	W	W	3.17	5.26	W	W
West North Central	W	5.54	W	3.44	5.58	W	5.26
Iowa	3.06	5.87	-48.0%	3.06	5.87	--	--
Kansas	3.78	5.51	-31.0%	3.78	5.51	--	--
Minnesota	W	W	W	3.62	5.82	W	W
Missouri	W	W	W	3.27	5.27	W	W
Nebraska	3.71	5.60	-34.0%	3.71	5.60	--	--
North Dakota	8.40	4.12	104.0%	8.40	4.12	--	--
South Dakota	3.13	4.79	-35.0%	3.13	4.79	--	--
South Atlantic	3.98	5.42	-27.0%	4.11	5.48	2.86	4.89
Delaware	--	--	--	--	--	--	--
District of Columbia	--	--	--	--	--	--	--
Florida	4.31	5.46	-21.0%	4.34	5.48	2.82	4.38
Georgia	3.17	4.86	-35.0%	3.21	4.87	3.03	4.81
Maryland	3.88	5.10	-24.0%	--	--	3.88	5.10
North Carolina	W	W	W	4.64	6.06	W	W
South Carolina	W	W	W	3.37	4.91	W	W
Virginia	3.36	5.88	-43.0%	3.80	6.26	2.14	5.20
West Virginia	W	W	W	2.78	5.93	W	W
East South Central	2.92	4.67	-37.0%	2.92	4.68	2.94	4.64
Alabama	W	W	W	3.01	4.57	W	W
Kentucky	W	W	W	3.52	6.02	W	W
Mississippi	W	W	W	2.85	4.58	W	W
Tennessee	2.72	4.62	-41.0%	2.72	4.62	--	--
West South Central	2.82	4.59	-39.0%	2.93	4.74	2.74	4.48
Arkansas	W	W	W	3.28	6.46	W	W
Louisiana	W	W	W	2.91	4.62	W	W
Oklahoma	W	W	W	2.97	4.99	W	W
Texas	2.79	4.50	-38.0%	2.91	4.63	2.75	4.46
Mountain	W	5.05	W	3.23	5.10	W	4.76
Arizona	3.30	5.15	-36.0%	3.41	5.39	2.96	4.59
Colorado	3.52	5.21	-32.0%	3.39	5.22	4.32	5.18
Idaho	2.89	W	W	2.89	5.29	--	W
Montana	W	W	W	2.26	6.25	W	W
Nevada	3.20	W	W	3.20	5.10	--	W
New Mexico	3.07	4.74	-35.0%	3.07	4.74	--	--
Utah	W	W	W	2.92	4.62	W	W
Wyoming	W	W	W	4.72	6.96	W	W
Pacific Contiguous	3.20	4.96	-35.0%	3.47	5.09	2.96	4.84
California	3.29	5.07	-35.0%	3.64	5.30	3.03	4.90
Oregon	W	W	W	2.75	4.27	W	W
Washington	W	W	W	3.48	4.92	W	W
Pacific Noncontiguous	5.37	5.04	6.5%	5.37	5.04	--	--
Alaska	5.37	5.04	6.5%	5.37	5.04	--	--
Hawaii	--	--	--	--	--	--	--
U.S. Total	3.27	5.05	-35.0%	3.52	5.17	2.94	4.90

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

**Table 7.21. Receipts and Quality of Coal by Rank Delivered for Electricity Generation:  
Total (All Sectors) by State, 2015**

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	1,831	1.23	8.8	251	0.09	2.0	0	--	--
Connecticut	0	--	--	251	0.09	2.0	0	--	--
Maine	104	0.72	8.2	0	--	--	0	--	--
Massachusetts	1,070	0.64	9.7	0	--	--	0	--	--
New Hampshire	657	2.16	7.4	0	--	--	0	--	--
Rhode Island	0	--	--	0	--	--	0	--	--
Vermont	0	--	--	0	--	--	0	--	--
Middle Atlantic	25,758	3.02	11.0	420	0.23	5.1	0	--	--
New Jersey	854	1.43	7.8	0	--	--	0	--	--
New York	586	1.96	8.8	420	0.23	5.1	0	--	--
Pennsylvania	24,318	3.11	11.1	0	--	--	0	--	--
East North Central	78,115	3.08	10.0	96,734	0.25	4.9	0	--	--
Illinois	10,032	3.53	18.9	45,555	0.21	4.7	0	--	--
Indiana	32,490	2.89	8.8	2,398	0.28	5.0	0	--	--
Michigan	2,944	1.83	7.8	26,740	0.29	5.0	0	--	--
Ohio	31,580	3.28	9.2	91	0.24	5.4	0	--	--
Wisconsin	1,069	2.47	7.9	21,951	0.26	5.2	0	--	--
West North Central	1,572	3.43	8.9	114,458	0.28	5.2	23,027	0.85	10.1
Iowa	476	3.44	8.1	21,935	0.26	5.0	0	--	--
Kansas	269	3.63	14.0	17,620	0.33	5.1	0	--	--
Minnesota	0	--	--	17,220	0.37	6.3	0	--	--
Missouri	827	3.37	7.7	40,407	0.23	4.8	0	--	--
Nebraska	0	--	--	15,326	0.29	5.3	0	--	--
North Dakota	0	--	--	850	0.36	4.5	23,027	0.85	10.1
South Dakota	0	--	--	1,101	0.36	5.5	0	--	--
South Atlantic	99,249	2.16	10.3	11,577	0.32	5.0	0	--	--
Delaware	152	2.43	7.6	0	--	--	0	--	--
District of Columbia	0	--	--	0	--	--	0	--	--
Florida	19,159	2.21	8.4	0	--	--	0	--	--
Georgia	8,909	2.13	9.3	11,310	0.32	5.0	0	--	--
Maryland	6,146	2.25	9.7	267	0.20	4.8	0	--	--
North Carolina	16,129	1.70	9.9	0	--	--	0	--	--
South Carolina	11,163	1.63	9.3	0	--	--	0	--	--
Virginia	7,791	1.16	14.3	0	--	--	0	--	--
West Virginia	29,799	2.81	11.4	0	--	--	0	--	--
East South Central	50,041	2.54	9.2	23,521	0.27	5.1	3,133	0.47	13.6
Alabama	9,503	1.69	9.9	10,756	0.25	5.3	0	--	--
Kentucky	31,944	2.95	9.3	8,826	0.30	5.0	0	--	--
Mississippi	1,281	1.22	7.1	712	0.27	5.3	3,133	0.47	13.6
Tennessee	7,314	2.11	8.5	3,227	0.23	4.7	0	--	--
West South Central	988	2.01	18.7	95,093	0.28	5.1	39,340	0.95	16.5
Arkansas	84	0.69	9.1	14,695	0.26	5.2	0	--	--
Louisiana	305	3.00	9.3	7,139	0.29	5.2	3,452	0.61	15.2
Oklahoma	599	1.67	25.6	18,126	0.25	4.9	0	--	--
Texas	0	--	--	55,133	0.29	5.2	35,888	0.98	16.6
Mountain	30,270	0.61	13.8	74,450	0.52	9.2	221	0.56	9.4
Arizona	6,779	0.58	10.5	14,756	0.66	10.4	0	--	--
Colorado	3,056	0.51	10.5	15,216	0.31	5.5	0	--	--
Idaho	0	--	--	0	--	--	0	--	--
Montana	0	--	--	9,777	0.70	10.1	221	0.56	9.4
Nevada	217	0.52	9.5	1,149	0.34	7.2	0	--	--
New Mexico	5,780	0.79	25.3	6,623	0.74	21.7	0	--	--
Utah	14,438	0.59	12.1	325	0.89	8.8	0	--	--
Wyoming	0	--	--	26,604	0.46	7.3	0	--	--
Pacific Contiguous	671	0.52	10.0	4,623	0.33	7.5	0	--	--
California	671	0.52	10.0	0	--	--	0	--	--
Oregon	0	--	--	1,476	0.23	4.4	0	--	--
Washington	0	--	--	3,146	0.38	9.0	0	--	--
Pacific Noncontiguous	599	1.07	5.8	0	--	--	106	0.16	9.8
Alaska	0	--	--	0	--	--	106	0.16	9.8
Hawaii	599	1.07	5.8	0	--	--	0	--	--
U.S. Total	289,093	2.40	10.4	421,127	0.32	5.8	65,826	0.89	14.1

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:  
 Bituminous coal includes anthracite coal and coal-derived synthesis gas.  
 See Glossary for definitions. Values 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 7.22. Receipts and Quality of Coal by Rank Delivered for Electricity Generation: Electric Utilities by State, 2015**

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	657	2.16	7.4	0	--	--	0	--	--
Connecticut	0	--	--	0	--	--	0	--	--
Maine	0	--	--	0	--	--	0	--	--
Massachusetts	0	--	--	0	--	--	0	--	--
New Hampshire	657	2.16	7.4	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	43,378	2.88	8.7	57,269	0.27	5.0	0	--	--
Illinois	2,219	3.27	10.7	6,437	0.22	4.7	0	--	--
Indiana	29,633	2.86	8.7	2,398	0.28	5.0	0	--	--
Michigan	2,629	1.91	7.9	26,737	0.29	5.0	0	--	--
Ohio	8,063	3.26	8.7	0	--	--	0	--	--
Wisconsin	834	2.57	7.8	21,698	0.26	5.2	0	--	--
West North Central	1,029	3.46	9.3	111,570	0.28	5.2	23,027	0.85	10.1
Iowa	0	--	--	20,212	0.26	5.0	0	--	--
Kansas	269	3.63	14.0	17,620	0.33	5.1	0	--	--
Minnesota	0	--	--	16,848	0.38	6.3	0	--	--
Missouri	760	3.40	7.6	40,407	0.23	4.8	0	--	--
Nebraska	0	--	--	14,532	0.29	5.4	0	--	--
North Dakota	0	--	--	850	0.36	4.5	23,027	0.85	10.1
South Dakota	0	--	--	1,101	0.36	5.5	0	--	--
South Atlantic	85,350	2.12	10.3	11,310	0.32	5.0	0	--	--
Delaware	0	--	--	0	--	--	0	--	--
District of Columbia	0	--	--	0	--	--	0	--	--
Florida	18,339	2.27	8.4	0	--	--	0	--	--
Georgia	8,695	2.15	9.3	11,310	0.32	5.0	0	--	--
Maryland	0	--	--	0	--	--	0	--	--
North Carolina	15,519	1.74	10.0	0	--	--	0	--	--
South Carolina	11,009	1.64	9.3	0	--	--	0	--	--
Virginia	6,594	1.16	15.4	0	--	--	0	--	--
West Virginia	25,194	2.68	11.3	0	--	--	0	--	--
East South Central	48,594	2.60	9.3	23,521	0.27	5.1	0	--	--
Alabama	9,503	1.69	9.9	10,756	0.25	5.3	0	--	--
Kentucky	31,944	2.95	9.3	8,826	0.30	5.0	0	--	--
Mississippi	1,281	1.22	7.1	712	0.27	5.3	0	--	--
Tennessee	5,867	2.45	8.7	3,227	0.23	4.7	0	--	--
West South Central	305	3.00	9.3	60,439	0.26	5.1	9,721	0.98	17.9
Arkansas	0	--	--	12,220	0.26	5.1	0	--	--
Louisiana	305	3.00	9.3	2,723	0.27	5.1	3,452	0.61	15.2
Oklahoma	0	--	--	16,884	0.25	4.9	0	--	--
Texas	0	--	--	28,612	0.26	5.2	6,269	1.22	19.6
Mountain	30,043	0.61	13.8	63,631	0.50	9.1	221	0.56	9.4
Arizona	6,779	0.58	10.5	14,756	0.66	10.4	0	--	--
Colorado	3,056	0.51	10.5	15,216	0.31	5.5	0	--	--
Idaho	0	--	--	0	--	--	0	--	--
Montana	0	--	--	0	--	--	221	0.56	9.4
Nevada	217	0.52	9.5	639	0.40	8.7	0	--	--
New Mexico	5,780	0.79	25.3	6,623	0.74	21.7	0	--	--
Utah	14,211	0.59	12.2	325	0.89	8.8	0	--	--
Wyoming	0	--	--	26,072	0.46	7.3	0	--	--
Pacific Contiguous	0	--	--	1,476	0.23	4.4	0	--	--
California	0	--	--	0	--	--	0	--	--
Oregon	0	--	--	1,476	0.23	4.4	0	--	--
Washington	0	--	--	0	--	--	0	--	--
Pacific Noncontiguous	0	--	--	0	--	--	106	0.16	9.8
Alaska	0	--	--	0	--	--	106	0.16	9.8
Hawaii	0	--	--	0	--	--	0	--	--
U.S. Total	209,355	2.20	10.2	329,217	0.32	5.9	33,074	0.89	12.3

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 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 7.23. Receipts and Quality of Coal by Rank Delivered for Electricity Generation: Independent Power Producers by State, 2015**

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	1,144	0.65	9.6	251	0.09	2.0	0	--	--
Connecticut	0	--	--	251	0.09	2.0	0	--	--
Maine	74	0.72	8.3	0	--	--	0	--	--
Massachusetts	1,070	0.64	9.7	0	--	--	0	--	--
New Hampshire	0	--	--	0	--	--	0	--	--
Rhode Island	0	--	--	0	--	--	0	--	--
Vermont	0	--	--	0	--	--	0	--	--
Middle Atlantic	25,073	3.05	11.0	420	0.23	5.1	0	--	--
New Jersey	854	1.43	7.8	0	--	--	0	--	--
New York	278	2.29	9.3	420	0.23	5.1	0	--	--
Pennsylvania	23,942	3.12	11.1	0	--	--	0	--	--
East North Central	32,476	3.33	11.8	38,731	0.21	4.7	0	--	--
Illinois	6,090	3.68	26.4	38,637	0.21	4.7	0	--	--
Indiana	2,858	3.28	10.3	0	--	--	0	--	--
Michigan	258	1.02	6.6	3	0.22	5.0	0	--	--
Ohio	23,270	3.30	9.4	91	0.24	5.4	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	11,929	2.59	10.3	267	0.20	4.8	0	--	--
Delaware	152	2.43	7.6	0	--	--	0	--	--
District of Columbia	0	--	--	0	--	--	0	--	--
Florida	589	1.00	10.9	0	--	--	0	--	--
Georgia	0	--	--	0	--	--	0	--	--
Maryland	5,871	2.26	9.2	267	0.20	4.8	0	--	--
North Carolina	237	0.79	9.7	0	--	--	0	--	--
South Carolina	0	--	--	0	--	--	0	--	--
Virginia	855	0.87	8.8	0	--	--	0	--	--
West Virginia	4,225	3.77	12.3	0	--	--	0	--	--
East South Central	0	--	--	0	--	--	3,133	0.47	13.6
Alabama	0	--	--	0	--	--	0	--	--
Kentucky	0	--	--	0	--	--	0	--	--
Mississippi	0	--	--	0	--	--	3,133	0.47	13.6
Tennessee	0	--	--	0	--	--	0	--	--
West South Central	599	1.67	25.6	34,125	0.32	5.2	29,619	0.94	16.0
Arkansas	0	--	--	2,475	0.28	5.5	0	--	--
Louisiana	0	--	--	4,416	0.31	5.2	0	--	--
Oklahoma	599	1.67	25.6	713	0.24	4.7	0	--	--
Texas	0	--	--	26,521	0.32	5.2	29,619	0.94	16.0
Mountain	0	--	--	10,819	0.67	9.6	0	--	--
Arizona	0	--	--	0	--	--	0	--	--
Colorado	0	--	--	0	--	--	0	--	--
Idaho	0	--	--	0	--	--	0	--	--
Montana	0	--	--	9,777	0.70	10.1	0	--	--
Nevada	0	--	--	510	0.27	5.2	0	--	--
New Mexico	0	--	--	0	--	--	0	--	--
Utah	0	--	--	0	--	--	0	--	--
Wyoming	0	--	--	532	0.46	6.1	0	--	--
Pacific Contiguous	0	--	--	3,146	0.38	9.0	0	--	--
California	0	--	--	0	--	--	0	--	--
Oregon	0	--	--	0	--	--	0	--	--
Washington	0	--	--	3,146	0.38	9.0	0	--	--
Pacific Noncontiguous	599	1.07	5.8	0	--	--	0	--	--
Alaska	0	--	--	0	--	--	0	--	--
Hawaii	599	1.07	5.8	0	--	--	0	--	--
U.S. Total	71,820	3.03	11.3	87,759	0.31	5.7	32,752	0.90	15.8

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 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 7.24. Receipts and Quality of Coal by Rank Delivered for Electricity Generation: Commercial Sector by State, 2015**

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	27	2.37	8.9	0	--	--	0	--	--
Illinois	0	--	--	0	--	--	0	--	--
Indiana	0	--	--	0	--	--	0	--	--
Michigan	27	2.37	8.9	0	--	--	0	--	--
Ohio	0	--	--	0	--	--	0	--	--
Wisconsin	0	--	--	0	--	--	0	--	--
West North Central	67	3.02	8.6	14	0.33	3.9	0	--	--
Iowa	0	--	--	0	--	--	0	--	--
Kansas	0	--	--	0	--	--	0	--	--
Minnesota	0	--	--	14	0.33	3.9	0	--	--
Missouri	67	3.02	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	94	2.82	8.7	14	0.33	3.9	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 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 7.25. Receipts and Quality of Coal by Rank Delivered for Electricity Generation: Industrial Sector by State, 2015**

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	30	0.72	8.2	0	--	--	0	--	--
Connecticut	0	--	--	0	--	--	0	--	--
Maine	30	0.72	8.2	0	--	--	0	--	--
Massachusetts	0	--	--	0	--	--	0	--	--
New Hampshire	0	--	--	0	--	--	0	--	--
Rhode Island	0	--	--	0	--	--	0	--	--
Vermont	0	--	--	0	--	--	0	--	--
Middle Atlantic	684	1.96	9.1	0	--	--	0	--	--
New Jersey	0	--	--	0	--	--	0	--	--
New York	309	1.66	8.4	0	--	--	0	--	--
Pennsylvania	376	2.21	9.7	0	--	--	0	--	--
East North Central	2,235	3.22	8.5	734	0.36	5.5	0	--	--
Illinois	1,723	3.46	8.2	481	0.41	5.5	0	--	--
Indiana	0	--	--	0	--	--	0	--	--
Michigan	30	0.89	9.7	0	--	--	0	--	--
Ohio	246	3.04	10.0	0	--	--	0	--	--
Wisconsin	235	2.04	8.6	253	0.27	5.6	0	--	--
West North Central	476	3.44	8.1	2,874	0.22	4.8	0	--	--
Iowa	476	3.44	8.1	1,723	0.22	4.8	0	--	--
Kansas	0	--	--	0	--	--	0	--	--
Minnesota	0	--	--	358	0.23	5.8	0	--	--
Missouri	0	--	--	0	--	--	0	--	--
Nebraska	0	--	--	794	0.21	4.4	0	--	--
North Dakota	0	--	--	0	--	--	0	--	--
South Dakota	0	--	--	0	--	--	0	--	--
South Atlantic	1,969	1.25	10.1	0	--	--	0	--	--
Delaware	0	--	--	0	--	--	0	--	--
District of Columbia	0	--	--	0	--	--	0	--	--
Florida	230	0.72	5.7	0	--	--	0	--	--
Georgia	214	1.39	10.6	0	--	--	0	--	--
Maryland	276	2.00	21.6	0	--	--	0	--	--
North Carolina	373	0.93	6.9	0	--	--	0	--	--
South Carolina	155	0.74	7.3	0	--	--	0	--	--
Virginia	343	1.89	7.8	0	--	--	0	--	--
West Virginia	379	0.98	12.2	0	--	--	0	--	--
East South Central	1,447	0.87	7.7	0	--	--	0	--	--
Alabama	0	--	--	0	--	--	0	--	--
Kentucky	0	--	--	0	--	--	0	--	--
Mississippi	0	--	--	0	--	--	0	--	--
Tennessee	1,447	0.87	7.7	0	--	--	0	--	--
West South Central	84	0.69	9.1	529	0.24	4.9	0	--	--
Arkansas	84	0.69	9.1	0	--	--	0	--	--
Louisiana	0	--	--	0	--	--	0	--	--
Oklahoma	0	--	--	529	0.24	4.9	0	--	--
Texas	0	--	--	0	--	--	0	--	--
Mountain	227	0.40	9.6	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	227	0.40	9.6	0	--	--	0	--	--
Wyoming	0	--	--	0	--	--	0	--	--
Pacific Contiguous	671	0.52	10.0	0	--	--	0	--	--
California	671	0.52	10.0	0	--	--	0	--	--
Oregon	0	--	--	0	--	--	0	--	--
Washington	0	--	--	0	--	--	0	--	--
Pacific Noncontiguous	0	--	--	0	--	--	0	--	--
Alaska	0	--	--	0	--	--	0	--	--
Hawaii	0	--	--	0	--	--	0	--	--
U.S. Total	7,824	1.78	8.9	4,137	0.25	4.9	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 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 8

# Electric Power System Characteristics and Performance

**Table 8.1. Average Operating Heat Rate for Selected Energy Sources,  
2005 through 2015 (Btu per Kilowatthour)**

Year	Coal	Petroleum	Natural Gas	Nuclear
2005	10,373	10,631	8,551	10,436
2006	10,351	10,809	8,471	10,435
2007	10,375	10,794	8,403	10,489
2008	10,378	11,015	8,305	10,452
2009	10,414	10,923	8,160	10,459
2010	10,415	10,984	8,185	10,452
2011	10,444	10,829	8,152	10,464
2012	10,498	10,991	8,039	10,479
2013	10,459	10,713	7,948	10,449
2014	10,428	10,814	7,907	10,459
2015	10,495	10,687	7,878	10,458

Coal includes anthracite, bituminous, subbituminous and lignite coal. Waste coal and synthetic coal are included starting in 2002.

Petroleum includes distillate fuel oil (all diesel and No. 1 and No. 2 fuel oils), residual fuel oil (No. 5 and No. 6 fuel oils and bunker C fuel oil, jet fuel, kerosene, petroleum coke, and waste oil.

Notes:

Included in the calculation for coal, petroleum, and natural gas average operating heat rate are electric power plants in the utility and independent power producer sectors.

Combined heat and power plants, and all plants in the commercial and industrial sectors are excluded from the calculations.

The nuclear average heat rate is the weighted average tested heat rate for nuclear units as reported on the Form EIA-860.

Sources: U.S. Energy Information Administration, Form EIA-923, "Power Plant Operations Report," and predecessor form(s) including U.S. Energy Information Administration, Form EIA-906, "Power Plant Report;" and Form EIA-920, "Combined Heat and Power Plant Report;" Form EIA-860, "Annual Electric Generator Report."

**Table 8.2. Average Tested Heat Rates by Prime Mover and Energy Source, 2007 - 2015  
(Btu per Kilowatthour)**

Prime Mover	Coal	Petroleum	Natural Gas	Nuclear
2007				
Steam Generator	10,158	10,398	10,440	10,489
Gas Turbine	--	13,217	11,632	--
Internal Combustion	--	10,447	10,175	--
Combined Cycle	W	10,970	7,577	--
2008				
Steam Generator	10,138	10,356	10,377	10,452
Gas Turbine	--	13,311	11,576	--
Internal Combustion	--	10,427	9,975	--
Combined Cycle	W	10,985	7,642	--
2009				
Steam Generator	10,150	10,349	10,427	10,459
Gas Turbine	--	13,326	11,560	--
Internal Combustion	--	10,428	9,958	--
Combined Cycle	W	10,715	7,605	--
2010				
Steam Generator	10,142	10,249	10,416	10,452
Gas Turbine	--	13,386	11,590	--
Internal Combustion	--	10,429	9,917	--
Combined Cycle	W	10,474	7,619	--
2011				
Steam Generator	10,128	10,414	10,414	10,464
Gas Turbine	--	13,637	11,569	--
Internal Combustion	--	10,428	9,923	--
Combined Cycle	W	10,650	7,603	--
2012				
Steam Generator	10,107	10,359	10,385	10,479
Gas Turbine	--	13,622	11,499	--
Internal Combustion	--	10,416	9,991	--
Combined Cycle	W	10,195	7,615	--
2013				
Steam Generator	10,089	10,334	10,354	10,449
Gas Turbine	--	13,555	11,371	--
Internal Combustion	--	10,401	9,573	--
Combined Cycle	W	9,937	7,667	--
2014				
Steam Generator	10,080	10,156	10,408	10,459
Gas Turbine	--	13,457	11,378	--
Internal Combustion	--	10,403	9,375	--
Combined Cycle	W	9,924	7,658	--
2015				
Steam Generator	10,059	10,197	10,372	10,458
Gas Turbine	--	13,550	11,302	--
Internal Combustion	--	10,379	9,322	--
Combined Cycle	W	9,676	7,655	--

Notes: W = Withheld to avoid disclosure of individual company data.

Heat rate is reported at full load conditions for electric utilities and independent power producers.  
The average heat rates above are weighted by Net Summer Capacity.  
Coal Combined Cycle represents integrated gasification units.

Source: U.S. Energy Information Administration, Form EIA-860, 'Annual Electric Generator Report.'

**Table 8.3. Revenue and Expense Statistics for Major U.S. Investor-Owned Electric Utilities, 2005 through 2015 (Million Dollars)**

Description	2005	2006	2007	2008	2009	2010
<b>Utility Operating Revenues</b>	<b>265,652</b>	<b>275,501</b>	<b>270,964</b>	<b>298,962</b>	<b>276,124</b>	<b>285,512</b>
.....Electric Utility	234,909	246,736	240,864	266,124	249,303	260,119
.....Other Utility	30,743	28,765	30,100	32,838	26,822	25,393
<b>Utility Operating Expenses</b>	<b>236,786</b>	<b>245,589</b>	<b>241,198</b>	<b>267,263</b>	<b>244,243</b>	<b>253,022</b>
.....Electric Utility	207,830	218,445	213,076	236,572	219,544	234,173
.....Operation	150,645	158,893	153,885	175,887	154,925	166,922
.....Production	120,586	127,494	121,700	140,974	118,816	128,831
.....Cost of Fuel	36,106	37,945	39,548	47,337	40,242	44,138
.....Purchased Power	77,902	79,205	74,112	84,724	67,630	67,284
.....Other	6,599	10,371	8,058	8,937	10,970	17,409
.....Transmission	5,664	6,179	6,051	6,950	6,742	6,948
.....Distribution	3,502	3,640	3,765	3,997	3,947	4,007
.....Customer Accounts	4,229	4,409	4,652	5,286	5,203	5,091
.....Customer Service	2,291	2,536	2,939	3,567	3,857	4,741
.....Sales	219	240	239	225	178	185
.....Administrative and General	14,130	14,580	14,346	14,718	15,991	17,120
.....Maintenance	12,033	12,838	13,181	14,192	14,092	14,957
.....Depreciation	17,123	17,373	17,936	19,049	20,095	20,951
.....Taxes and Other	26,805	28,149	27,000	26,202	29,081	31,343
.....Other Utility	28,956	27,143	28,122	30,692	24,698	18,849
<b>Net Utility Operating Income</b>	<b>28,866</b>	<b>29,912</b>	<b>29,766</b>	<b>31,699</b>	<b>31,881</b>	<b>32,490</b>

Description	2011	2012	2013	2014	2015
<b>Utility Operating Revenues</b>	<b>280,520</b>	<b>270,912</b>	<b>281,901</b>	<b>298,430</b>	<b>282,695</b>
.....Electric Utility	255,573	249,166	257,718	271,832	260,121
.....Other Utility	24,946	21,745	24,183	26,598	22,574
<b>Utility Operating Expenses</b>	<b>247,118</b>	<b>235,694</b>	<b>244,316</b>	<b>258,936</b>	<b>242,728</b>
.....Electric Utility	228,873	220,722	227,483	240,643	228,366
.....Operation	161,460	152,379	156,077	165,989	149,939
.....Production	122,520	111,714	115,046	123,366	107,201
.....Cost of Fuel	42,779	38,998	41,127	42,545	34,711
.....Purchased Power	61,447	54,570	55,529	62,066	52,970
.....Other	18,294	18,146	18,390	18,755	19,521
.....Transmission	6,876	7,183	7,881	8,902	9,624
.....Distribution	4,044	4,181	4,197	4,331	4,406
.....Customer Accounts	5,180	5,086	5,107	5,255	5,184
.....Customer Service	5,311	5,640	5,906	6,396	6,445
.....Sales	185	221	203	208	201
.....Administrative and General	17,343	18,353	17,738	17,532	16,878
.....Maintenance	15,772	15,489	15,505	16,801	16,392
.....Depreciation	22,555	23,677	24,723	25,919	26,847
.....Taxes and Other	29,086	29,177	31,179	31,934	35,188
.....Other Utility	18,245	14,972	16,833	18,293	14,362
<b>Net Utility Operating Income</b>	<b>33,402</b>	<b>35,218</b>	<b>37,585</b>	<b>39,494</b>	<b>39,968</b>

Notes: 2007 financial data does not include information on Entergy Gulf State Louisiana LLC and Entergy Texas Inc. as both were not reported on the FERC Form for that year.

Missing or erroneous respondent data may result in slight imbalances in some of the expense account subtotals.

Total may not equal sum of components due to independent rounding.

Sources: Federal Energy Regulatory Commission, FERC Form 1, "Annual Report of Major Electric Utilities, Licensees and Others via Ventyx Global Energy Velocity Suite.

**Table 8.4. Average Power Plant Operating Expenses for Major U.S. Investor-Owned**

**Electric Utilities, 2005 through 2015 (Mills per Kilowatthour)**

Year	Operation				Maintenance			
	Nuclear	Fossil Steam	Hydro-electric	Gas Turbine and Small Scale	Nuclear	Fossil Steam	Hydro-electric	Gas Turbine and Small Scale
2005	8.26	3.21	3.95	3.69	5.27	2.98	2.73	1.89
2006	9.03	3.57	3.76	3.51	5.69	3.19	2.70	2.16
2007	9.54	3.63	5.44	3.26	5.79	3.37	3.87	2.42
2008	9.89	3.72	5.78	3.77	6.20	3.59	3.89	2.72
2009	10.00	4.23	4.88	3.05	6.34	3.96	3.50	2.58
2010	10.50	4.04	5.33	2.79	6.80	3.99	3.81	2.73
2011	10.89	4.02	5.13	2.81	6.80	3.99	3.74	2.93
2012	12.49	4.38	6.71	2.46	7.32	4.48	4.63	2.76
2013	12.51	4.57	6.56	2.56	6.64	4.41	4.32	2.80
2014	12.41	4.55	7.30	2.63	6.67	5.11	4.59	2.90
2015	11.17	5.16	8.37	2.34	7.06	5.41	5.06	2.68

Year	Fuel				Total			
	Nuclear	Fossil Steam	Hydro-electric	Gas Turbine and Small Scale	Nuclear	Fossil Steam	Hydro-electric	Gas Turbine and Small Scale
2005	4.63	21.69	--	55.52	18.15	27.88	6.68	61.10
2006	4.85	23.09	--	53.89	19.57	29.85	6.46	59.56
2007	4.99	23.88	--	58.75	20.32	30.88	9.32	64.43
2008	5.29	28.43	--	64.23	21.37	35.75	9.67	70.72
2009	5.35	32.30	--	51.93	21.69	40.48	8.38	57.55
2010	6.68	27.73	--	43.21	23.98	35.76	9.15	48.74
2011	7.01	27.08	--	38.80	24.70	35.09	8.88	44.54
2012	7.61	28.34	--	30.45	27.42	37.20	11.34	35.67
2013	8.14	28.94	--	32.56	27.29	37.92	10.88	37.92
2014	7.71	29.39	--	37.06	26.79	39.04	11.90	42.60
2015	7.48	26.70	--	28.22	25.71	37.26	13.42	33.24

Hydroelectric category consists of both conventional hydroelectric and pumped storage.

Gas Turbine and Small Scale category consists of gas turbine, internal combustion, photovoltaic, and wind plants.

Notes: Expenses are average expenses weighted by net generation. A mill is a monetary cost and billing unit equal to 1/1000 of the U.S. dollar (equivalent to 1/10 of one cent).

Total may not equal sum of components due to independent rounding.

Sources: Federal Energy Regulatory Commission, FERC Form 1, "Annual Report of Major Electric Utilities, Licensees and Others via Ventyx Global Energy Velocity Suite.

# Chapter 9

## Environmental Data

**Table 9.1. Emissions from Energy Consumption at Conventional Power Plants and Combined-Heat-and-Power Plants 2005 through 2015 (Thousand Metric Tons)**

Year	Carbon Dioxide (CO2)	Sulfur Dioxide (SO2)	Nitrogen Oxides (NOx)
2005	2,543,838	10,340	3,961
2006	2,488,918	9,524	3,799
2007	2,547,032	9,042	3,650
2008	2,484,012	7,830	3,330
2009	2,269,508	5,970	2,395
2010	2,388,596	5,400	2,491
2011	2,287,071	4,845	2,406
2012	2,156,875	3,704	2,148
2013	2,173,806	3,609	2,163
2014	2,168,284	3,454	2,100
2015	2,031,452	2,548	1,824

Notes:

The emissions data presented include total emissions from both electricity generation and the production of useful thermal output.

See Appendix A, Technical Notes, for a description of the sources and methodology used to develop the emissions estimates.

Source: Calculations made by the Office of Electricity, Renewables, and Uranium Statistics, U.S. Energy Information Administration.

**Table 9.2. Quantity and Net Summer Capacity of Operable Environmental Equipment, 2005 - 2015**

Year	Flue Gas Desulfurization Systems		Electrostatic Precipitators		Baghouses		Select Catalytic and Non-Catalytic Reduction Systems		Activated Carbon Injection Systems		Direct Sorbent Injection Systems	
	Quantity	Associated Net Summer Capacity (MW)	Quantity	Associated Net Summer Capacity (MW)	Quantity	Associated Net Summer Capacity (MW)	Quantity	Associated Net Summer Capacity (MW)	Quantity	Associated Net Summer Capacity (MW)	Quantity	Associated Net Summer Capacity (MW)
2005	555	113,573	1,542	324,511	528	58,033	1,068	236,689	128	4,693	47	6,765
2006	554	116,899	1,494	317,408	539	60,641	1,151	255,923	139	6,859	55	7,333
2007	582	130,815	1,494	317,296	556	65,672	1,186	264,851	141	7,735	56	7,407
2008	629	150,835	1,469	316,356	576	68,442	1,238	276,010	169	17,391	59	7,506
2009	669	174,090	1,454	313,902	597	73,863	1,311	298,441	227	39,546	62	8,047
2010	708	200,368	1,408	310,031	610	83,407	1,348	313,656	262	54,183	63	8,527
2011	721	210,878	1,364	306,511	633	98,507	1,396	329,676	274	59,057	72	8,783
2012	716	218,285	1,286	297,880	629	101,593	1,438	343,233	287	63,709	80	10,424
2013	691	218,121	1,209	288,210	635	104,226	1,445	349,727	260	61,160	93	12,740
2014	689	222,626	1,163	282,968	619	105,885	1,459	356,920	277	68,697	98	15,918
2015	680	222,919	1,027	263,848	620	110,073	1,464	358,007	361	105,860	115	22,418

Note:

'Associated Net Summer Capacity' is defined as the net summer capacity of the generators that are associated with the operation of this environmental equipment. In some cases respondents have reported equipment late. Counts and capacity may have changed from prior publications of this table because of late reporting. Data for 2005 and earlier are based primarily on Form EIA-767 data. In 2006, the Form EIA-767 was suspended. Data for 2007 and later are based primarily on Form EIA-860 data. All data for 2006 are inferred based on submissions from subsequent years. Beginning in 2013 environmental data was collected at a more detailed level, which increases its accuracy and in some cases reduces the equipment counts.

Source: U.S. Energy Information Administration, Forms EIA-767, "Steam-Electric Plant Operation and Design Report" and Form EIA-860, "Annual Electric Generator Report."

**Table 9.3. Quantity and Net Summer Capacity of Operable Cooling Systems, by Energy Source and Cooling System Type, 2005 - 2015**

Energy Source	Once-Through Cooling Systems		Recirculating Cooling Systems		Cooling Ponds		Dry Cooling Systems		Hybrid Wet and Dry Cooling Systems		Other Cooling System Types	
	Quantity	Associated Net Summer Capacity (MW)	Quantity	Associated Net Summer Capacity (MW)	Quantity	Associated Net Summer Capacity (MW)	Quantity	Associated Net Summer Capacity (MW)	Quantity	Associated Net Summer Capacity (MW)	Quantity	Associated Net Summer Capacity (MW)
2005												
Coal	473	134,241	350	153,791	103	50,113	--	--	--	--	14	6,002
Natural Gas	209	53,599	418	78,827	65	27,571	39	9,470	2	272	7	2,071
Petroleum	85	22,842	23	6,852	3	3,174	--	--	--	--	2	2,004
Other	15	1,029	21	1,981	--	--	2	100	--	--	4	424
2006												
Coal	463	132,567	351	154,164	101	49,609	--	--	--	--	13	5,828
Natural Gas	202	51,672	414	79,377	67	28,323	41	9,946	2	272	9	2,504
Petroleum	81	22,259	23	6,824	3	2,513	--	--	--	--	2	2,017
Other	16	1,072	28	2,462	--	--	2	100	--	--	4	424
2007												
Coal	458	131,692	353	155,518	101	49,609	--	--	--	--	13	5,828
Natural Gas	202	51,836	421	80,755	66	27,563	41	9,946	2	272	9	2,668
Petroleum	81	22,259	23	6,824	3	2,513	--	--	--	--	2	2,017
Other	16	1,072	28	2,522	--	--	2	100	--	--	4	424
2008												
Coal	453	131,909	358	157,602	100	48,787	--	--	--	--	8	3,912
Natural Gas	197	51,110	422	81,627	59	25,261	42	10,209	2	272	10	2,957
Petroleum	80	22,299	20	6,614	3	4,104	--	--	--	--	2	2,022
Other	16	1,162	25	2,251	--	--	2	100	--	--	4	424
2009												
Coal	445	129,350	366	160,545	100	47,960	1	335	--	--	6	2,582
Natural Gas	192	48,737	426	83,226	57	23,022	51	12,338	3	482	3	1,175
Petroleum	77	21,756	18	6,575	3	4,104	--	--	--	--	2	2,022
Other	16	1,160	25	2,316	2	344	4	356	--	--	1	33
2010												
Coal	437	129,554	367	162,186	101	48,929	2	435	1	766	7	2,632
Natural Gas	180	48,398	422	82,414	57	22,746	54	13,078	3	542	3	1,172
Nuclear	49	51,465	39	43,363	13	14,996	--	--	--	--	7	7,901
Petroleum	76	20,878	17	5,513	3	4,064	--	--	--	--	2	2,022
Other	17	1,190	26	2,546	2	344	4	356	--	--	2	63
2011												
Coal	415	127,412	365	165,192	104	50,476	3	840	1	766	7	2,636
Natural Gas	176	48,361	437	86,462	58	21,944	57	13,471	3	542	2	870
Nuclear	49	51,642	39	43,422	13	15,011	--	--	--	--	8	8,890
Petroleum	66	17,099	17	5,443	4	4,692	--	--	--	--	2	2,022
Other	18	1,318	20	1,641	--	--	1	26	--	--	2	63
2012												
Coal	372	124,589	362	166,148	88	39,933	4	1,412	1	766	13	6,463
Natural Gas	172	52,020	442	91,589	54	18,533	59	13,813	4	637	2	499
Nuclear	49	51,846	38	39,561	13	15,105	--	--	--	--	8	8,900
Petroleum	59	14,971	17	4,046	4	4,692	--	--	--	--	2	2,022
Other	15	1,258	27	2,167	--	--	1	53	--	--	2	63
2013												
Coal	345	120,340	353	164,059	77	39,482	4	1,422	1	750	9	4,342
Natural Gas	159	51,291	423	88,002	57	18,843	58	12,828	4	637	4	2,481
Nuclear	45	50,266	38	40,013	13	15,251	--	--	--	--	8	11,181
Petroleum	45	11,556	11	3,481	4	4,692	--	--	--	--	--	--
Solar Thermal	--	--	2	591	--	--	4	516	--	--	--	--
Other	15	1,301	31	2,561	1	66	--	--	--	--	1	128
2014												
Coal	328	115,930	336	159,768	74	38,906	4	1,422	1	750	20	7,868
Natural Gas	161	50,985	415	84,278	55	20,254	58	11,878	4	637	3	2,419
Nuclear	44	49,586	35	37,650	13	15,237	--	--	--	--	9	11,886
Petroleum	36	9,689	11	3,473	4	4,691	--	--	--	--	--	--
Solar Thermal	--	--	4	841	--	--	5	900	--	--	--	--
Other	16	1,332	31	2,756	1	66	1	72	--	--	1	128
2015												
Coal	259	93,180	309	153,151	77	45,026	4	1,422	1	750	23	9,429
Natural Gas	160	49,219	432	88,276	58	22,311	58	11,936	3	475	3	2,410
Nuclear	43	47,268	35	37,610	14	17,663	--	--	--	--	9	12,062
Petroleum	23	7,900	9	2,308	4	4,299	--	--	--	--	--	--
Solar Thermal	--	--	4	866	--	--	5	900	--	--	--	--
Other	18	1,676	26	2,104	1	66	1	72	--	--	1	128

Notes:

'Associated Net Summer Capacity' is defined as the net summer capacity of the generators that are associated with the operation of this environmental equipment. In some cases respondents have reported equipment late. Counts and capacity may have changed from prior publications of this table because of late reporting. Coal includes anthracite, bituminous, subbituminous, lignite, and waste coal; coal synfuel 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. EIA did not collect cooling system data for nuclear units before 2010. Other Energy Sources consists of wood and wood waste products, biomass, blast furnace gas and other gases. Data for 2005 and earlier are based primarily on Form EIA-767 data. In 2006, the Form EIA-767 was suspended. Data for 2007 and later are based primarily on Form EIA-860 data. All data for 2006 are inferred based on submissions from subsequent years.

Source: U.S. Energy Information Administration, Forms EIA-767, "Steam-Electric Plant Operation and Design Report" and Form EIA-860, "Annual Electric Generator Report."

**Table 9.4. Average Costs of Existing Flue Gas Desulfurization Units**

**Operating in Electric Power Sector, 2005 - 2015**

<b>Year</b>	<b>Average Operation and Maintenance Costs (Dollars per Megawatthour)</b>	<b>Average Installed Capital Costs (Dollars per Kilowatt)</b>
2005	1.37	142.67
2006	--	148.14
2007	1.26	239.76
2008	1.44	262.28
2009	1.44	357.70
2010	1.52	359.72
2011	1.79	329.37
2012	1.87	275.49
2013	1.74	259.04
2014	1.84	196.26
2015	2.03	164.60

Notes: Average Installed Capital Costs reflect units which began operating in the specified year. Prior publications of this table reported the average installation cost of all units that were operating during each year; the new metric is intended to portray a more accurate understanding of how installation costs have changed over time.

Years in which Operation and Maintenance Costs were not collected display a '--' to indicate data was not collected.

Commercial and industrial facilities had significantly different costs than units used in the electric power sector. In order to give a more accurate reflection of the electric power sector, commercial and industrial facilities have been excluded from this publication table; prior publications of this table included commercial and industrial facilities when calculating average costs.

Sources:

U.S. Energy Information Administration, Form EIA-860, 'Annual Electric Generator Report'

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

U.S. Energy Information Administration, Form EIA-767, 'Steam-Electric Plant Operations and Design Report'

**Table 9.5. Emissions from Energy Consumption at Conventional Power Plants and Combined-Heat-and-Power Plants, by State, 2014 and 2015 (Thousand Metric Tons)**

Census Division and State	Carbon Dioxide (CO2)		Sulfur Dioxide (SO2)		Nitrogen Oxides (NOx)	
	Year 2015	Year 2014	Year 2015	Year 2014	Year 2015	Year 2014
New England	31,965	30,810	19	21	31	33
Connecticut	9,049	8,452	1	2	7	8
Maine	2,956	3,403	11	10	8	8
Massachusetts	13,422	12,917	5	6	11	13
New Hampshire	3,653	3,458	2	3	3	4
Rhode Island	2,874	2,566	0	0	1	1
Vermont	11	14	0	0	1	1
Middle Atlantic	143,131	154,457	226	302	151	182
New Jersey	19,427	18,364	3	3	12	14
New York	32,731	34,072	22	29	35	40
Pennsylvania	90,973	102,022	201	270	104	128
East North Central	369,356	407,934	700	993	310	369
Illinois	84,275	96,624	139	170	42	53
Indiana	89,045	104,636	157	270	97	115
Michigan	67,119	64,264	137	157	61	70
Ohio	83,722	98,650	214	322	76	96
Wisconsin	45,195	43,760	54	74	34	36
West North Central	219,199	239,379	304	387	189	248
Iowa	35,043	39,312	44	69	31	38
Kansas	27,341	31,794	13	29	19	26
Minnesota	30,307	32,677	27	36	28	35
Missouri	67,995	75,735	114	136	44	71
Nebraska	25,326	26,348	59	58	23	25
North Dakota	31,246	30,420	43	48	42	44
South Dakota	1,941	3,093	4	13	3	10
South Atlantic	378,419	399,688	345	503	301	334
Delaware	4,091	4,276	1	1	2	3
District of Columbia	36	48	0	0	0	0
Florida	111,863	113,146	77	115	76	82
Georgia	59,274	62,516	67	97	48	53
Maryland	18,314	20,701	31	38	15	19
North Carolina	53,824	58,578	52	58	51	55
South Carolina	29,849	33,083	26	40	18	20
Virginia	34,898	33,734	31	62	34	37
West Virginia	66,270	73,606	61	93	57	66
East South Central	204,017	218,872	351	498	149	181
Alabama	64,442	67,635	117	139	51	57
Kentucky	76,427	85,795	122	186	62	81
Mississippi	25,171	24,037	33	92	15	22
Tennessee	37,977	41,405	79	81	21	22
West South Central	369,898	392,975	432	557	301	340
Arkansas	28,587	37,289	54	81	29	43
Louisiana	56,299	57,137	69	87	71	70
Oklahoma	41,626	44,063	61	71	29	41
Texas	243,386	254,488	247	317	172	187
Mountain	228,381	234,802	126	148	254	279
Arizona	50,201	53,684	16	20	43	48
Colorado	37,413	38,474	22	26	35	40
Idaho	1,866	1,492	4	5	12	18
Montana	18,136	17,678	13	13	19	19
Nevada	14,752	16,222	5	9	10	15
New Mexico	24,850	24,712	11	11	42	42
Utah	33,688	35,204	16	21	47	53
Wyoming	47,476	47,337	40	41	45	45
Pacific Contiguous	76,054	78,361	22	25	102	101
California	55,481	57,507	1	3	73	74
Oregon	8,987	8,370	9	10	15	12
Washington	11,586	12,484	12	12	14	15
Pacific Noncontiguous	11,033	11,006	23	20	37	32
Alaska	3,676	3,558	4	4	19	14
Hawaii	7,356	7,448	20	17	17	18
U.S. Total	2,031,452	2,168,284	2,548	3,454	1,824	2,100

Notes:

The emissions data presented include total emissions from both electricity generation and the production of useful thermal output.

See Appendix A, Technical Notes, for a description of the sources and methodology used to develop the emissions estimates. 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.

Source: Calculations made by the Office of Electricity, Renewables, and Uranium Statistics, U.S. Energy Information

# Chapter 10

## Demand-Side Management and Advanced Metering

**Table 10.1. Demand-Side Management Program Annual Effects by Program Category, 2005 through 2012 (Table Discontinued)**

Year	Energy Efficiency		Load Management			Total	
	Energy Savings (Thousand MWh)	Actual Peak Load Reduction (MW)	Energy Savings (Thousand MWh)	Potential Peak Load Reduction (MW)	Actual Peak Load Reduction (MW)	Energy Savings (Thousand MWh)	Actual Peak Load Reduction (MW)
2005	59,000	15,394	930	21,259	10,341	59,930	25,735
2006	63,076	16,006	790	21,254	11,268	63,866	27,274
2007	67,278	17,773	1,859	23,091	12,545	69,137	30,318
2008	74,871	19,708	1,822	26,318	12,064	76,693	31,772
2009	76,912	19,761	1,027	26,310	11,972	77,939	31,732
2010	86,914	20,828	447	26,100	12,536	87,361	33,364
2011	120,659	26,314	556	26,596	12,126	121,214	38,439
2012	138,525	28,924	712	28,503	13,200	139,237	42,124

2012 was the last year this data was collected.

Previously, annual effects were reported for large respondents only. Now the annual effects include large and small respondents, combined.

Non-Utility DSM Administrators are included in the 2011 data. See technical notes for list.

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

Source: U.S. Energy Information Administration, Form EIA-861, "Annual Electric Power Industry Report."

**Table 10.2. Demand-Side Management Program Annual Effects by Program**

**Category, by Sector, 2005 through 2012 (Table Discontinued)**

Year	Residential	Commercial	Industrial	Transportation	Total
<b>Energy Efficiency - Energy Savings (Thousand MWh)</b>					
2005	18,894	28,073	11,986	47	59,000
2006	21,150	28,720	13,155	50	63,076
2007	22,772	30,359	14,038	108	67,278
2008	25,396	34,634	14,766	75	74,871
2009	27,395	34,831	14,610	76	76,912
2010	32,150	37,416	17,259	89	86,914
2011	46,790	50,732	23,061	76	120,659
2012	54,516	58,894	25,023	92	138,525
<b>Energy Efficiency - Actual Peak Load Reduction (MW)</b>					
2005	6,057	6,395	2,935	7	15,394
2006	6,900	6,067	3,032	7	16,006
2007	8,275	6,241	3,250	7	17,773
2008	8,764	7,838	2,991	114	19,708
2009	8,724	7,954	3,074	9	19,761
2010	9,404	8,046	3,368	10	20,828
2011	11,391	10,422	4,490	11	26,314
2012	12,821	11,743	4,348	12	28,924
<b>Load Management - Energy Savings (Thousand MWh)</b>					
2005	408	383	138	--	930
2006	321	331	138	1	790
2007	953	463	442	--	1,859
2008	1,151	239	431	--	1,822
2009	436	197	394	--	1,027
2010	215	113	118	--	447
2011	237	194	125	--	556
2012	257	368	87	--	712
<b>Load Management - Potential Peak Load Reduction (MW)</b>					
2005	6,075	3,832	11,297	55	21,259
2006	6,176	3,957	11,064	57	21,254
2007	7,022	3,984	12,030	55	23,091
2008	8,097	6,029	12,137	55	26,318
2009	7,308	6,460	12,462	81	26,310
2010	7,998	6,080	11,750	272	26,100
2011	7,882	6,023	12,380	311	26,596
2012	8,600	6,462	13,261	180	28,503
<b>Load Management - Actual Peak Load Reduction (MW)</b>					
2005	3,407	1,544	5,388	2	10,341
2006	3,863	1,730	5,643	32	11,268
2007	4,949	1,837	5,749	10	12,545
2008	4,158	3,270	4,625	12	12,064
2009	3,899	3,464	4,606	3	11,972
2010	4,726	2,854	4,819	137	12,536
2011	4,105	2,808	5,108	105	12,126
2012	4,152	3,208	5,732	108	13,200

2012 was the last year this data was collected.

Transportation data is not available before 2003.

Previously, annual data included only large respondents. Now it includes large and small respondents, combined.

Non-Utility DSM Administrators are included in the 2011 data. See technical notes for list.

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

Source: U.S. Energy Information Administration, Form EIA-861, "Annual Electric Power Industry Report."

**Table 10.3. Demand-Side Management Program Incremental Effects by Program Category, 2005 through 2012 (Table Discontinued)**

Year	Energy Efficiency		Load Management			Total	
	Energy Savings (Thousand MWh)	Actual Peak Load Reduction (MW)	Energy Savings (Thousand MWh)	Potential Peak Load Reduction (MW)	Actual Peak Load Reduction (MW)	Energy Savings (Thousand MWh)	Actual Peak Load Reduction (MW)
2005	5,879	1,705	137	2,223	1,162	6,016	2,867
2006	5,394	1,268	99	2,817	1,690	5,492	2,958
2007	7,680	1,998	137	4,765	2,392	7,817	4,390
2008	10,428	6,327	168	7,253	3,292	10,596	9,619
2009	12,907	3,721	65	6,042	2,224	12,972	5,945
2010	13,592	3,215	46	5,234	2,709	13,639	5,923
2011	21,421	3,974	135	4,043	2,062	21,556	6,036
2012	21,478	3,764	41	5,357	2,671	21,520	6,435

2012 was the last year this data was collected.

Previously, large and small respondents were published separately, now they are combined.

Non-Utility DSM Administrators are included in the 2011 data. See technical notes for list.

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

Source: U.S. Energy Information Administration, Form EIA-861, "Annual Electric Power Industry Report."

**Table 10.4. Demand-Side Management Program Incremental Effects by Program**

**Category, by Sector, 2005 through 2012 (Table Discontinued)**

Year	Residential	Commercial	Industrial	Transportation	Total
<b>Energy Efficiency - Energy Savings (Thousand MWh)</b>					
2005	2,249	2,559	1,071	--	5,879
2006	2,127	2,281	986	--	5,394
2007	3,659	2,830	1,178	13	7,680
2008	4,568	4,383	1,477	1	10,428
2009	5,030	4,959	2,918	1	12,907
2010	6,492	5,325	1,771	5	13,592
2011	9,989	8,166	3,261	6	21,421
2012	9,531	8,924	3,019	4	21,478
<b>Energy Efficiency - Actual Peak Load Reduction (MW)</b>					
2005	913	562	230	--	1,705
2006	665	433	170	--	1,268
2007	994	763	240	1	1,998
2008	4,543	1,168	614	1	6,327
2009	1,849	1,044	827	1	3,721
2010	1,378	1,053	783	1	3,215
2011	1,628	1,545	800	1	3,974
2012	1,775	1,562	426	1	3,764
<b>Load Management - Energy Savings (Thousand MWh)</b>					
2005	34	84	19	--	137
2006	23	62	14	--	99
2007	13	98	26	--	137
2008	32	62	74	--	168
2009	34	21	10	--	65
2010	13	21	12	--	46
2011	29	86	21	--	135
2012	20	14	7	--	41
<b>Load Management - Potential Peak Load Reduction (MW)</b>					
2005	765	636	822	--	2,223
2006	905	776	1,136	--	2,817
2007	2,342	1,324	1,045	54	4,765
2008	3,013	2,156	2,083	1	7,253
2009	1,922	1,971	2,127	22	6,042
2010	1,976	1,171	2,087	--	5,234
2011	1,324	1,327	1,392	--	4,043
2012	1,369	1,155	2,833	1	5,357
<b>Load Management - Actual Peak Load Reduction (MW)</b>					
2005	378	224	560	--	1,162
2006	478	389	823	--	1,690
2007	1,221	562	567	42	2,392
2008	1,179	1,445	667	1	3,292
2009	793	781	648	3	2,224
2010	666	948	1,095	--	2,709
2011	817	619	625	--	2,062
2012	686	737	1,248	*	2,671

2012 was the last year this data was collected.

Transportation data is not available before 2003.

Previously, large and small respondents were published separately, now they are combined.

Non-Utility DSM Administrators are included in the 2011 data. See technical notes for list.

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

Source: U.S. Energy Information Administration, Form EIA-861, "Annual Electric Power Industry Report."

**Table 10.5. Demand-Side Management Program Direct and Indirect Costs,**

**2005 through 2012 (Thousand Dollars) (Table Discontinued)**

Year	Energy Efficiency	Load Management	Direct Cost	Indirect Cost	Total Cost
2005	1,180,576	622,287	1,802,863	127,925	1,939,115
2006	1,270,602	663,980	1,934,582	128,886	2,072,962
2007	1,677,969	700,362	2,378,331	160,326	2,604,711
2008	2,137,452	836,359	2,973,811	181,843	3,186,742
2009	2,221,480	944,261	3,165,741	394,193	3,607,076
2010	2,906,906	1,048,356	3,955,262	275,158	4,230,420
2011	4,002,672	1,213,102	5,215,774	328,622	5,544,396
2012	4,397,635	1,270,391	5,668,026	332,440	6,000,466

2012 was the last year this data was collected.

Direct Costs reflect electric utility costs incurred during the year that are identified with Energy Efficiency and Load Management. Total Costs are the sum of Direct and Indirect Costs.

Previously, this table included only large respondents. Now it includes large and small respondents, combined.

For the total cost data, prior to 2010, both large and small respondents reported total costs, however small respondents did not break out the costs into direct and indirect. The direct and indirect costs were reported for large respondents only. Therefore, prior to 2010 the total cost does not equal the sum of the direct and indirect costs.

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

Non-Utility DSM Administrators are included in the 2011 data. See technical notes for list.

Source: U.S. Energy Information Administration, Form EIA-861, "Annual Electric Power Industry Report."

**Table 10.6. Energy Efficiency  
Category, by Sector, 2013 through 2015**

Year	Residential	Commercial	Industrial	Transportation	Total
<b>Incremental Annual Savings - Energy Savings (MWh)</b>					
2013	11,031,419	10,478,997	3,141,213	29,894	24,681,523
2014	11,442,191	11,928,895	3,074,819	19,316	26,465,221
2015	11,015,779	12,288,889	2,871,418	13,414	26,189,500
<b>Incremental Annual Savings - Peak Demand Savings (MW)</b>					
2013	6,812	11,319	1,463	5	19,599
2014	3,031	2,920	564	2	6,517
2015	2,683	2,965	407	--	6,055
<b>Incremental Costs - Customer Incentive (thousand dollars)</b>					
2013	1,252,085	1,274,406	345,676	5	2,872,171
2014	1,522,335	1,561,408	327,227	64	3,411,034
2015	1,488,796	1,617,816	342,753	20	3,449,385
<b>Incremental Costs - All Other Costs (thousand dollars)</b>					
2013	1,015,842	750,299	179,719	33	1,945,877
2014	1,088,970	911,968	208,096	122	2,209,148
2015	1,152,713	935,435	193,015	40	2,281,188

Source: U.S. Energy Information Administration, Form EIA-861, "Annual Electric Power Industry Report."

**Table 10.7. Energy Efficiency - Life Cycle Category, by Sector, 2013 through 2015**

Year	Residential	Commercial	Industrial	Transportation	Total
<b>Life Cycle Savings - Energy Savings (MWh)</b>					
2013	84,525,515	128,026,835	38,500,862	448,421	251,464,746
2014	100,729,499	149,493,353	39,631,016	287,925	290,141,793
2015	104,449,512	162,983,049	39,452,115	199,328	307,084,004
<b>Life Cycle Savings - Peak Demand Savings (MW)</b>					
2013	44,351	70,979	19,524	6	134,861
2014	17,911	46,600	12,248	2	76,760
2015	14,773	15,562	2,657	--	32,991
<b>Life Cycle Costs - Customer Incentive (thousand dollars)</b>					
2013	2,698,741	2,875,605	455,357	5	6,029,552
2014	1,749,387	1,912,327	346,218	64	4,007,996
2015	1,844,797	1,998,650	413,396	30	4,256,873
<b>Life Cycle Costs - All Other Costs (thousand dollars)</b>					
2013	2,134,979	1,626,658	234,577	33	3,996,230
2014	1,558,256	1,348,673	216,674	122	3,123,719
2015	2,087,072	1,405,072	216,226	40	3,708,393

Source: U.S. Energy Information Administration, Form EIA-861, "Annual Electric Power Industry Report."

**Table 10.8. Demand Response - Yearly Energy and Demand Savings  
Category, by Sector, 2013 through 2015**

Year	Residential	Commercial	Industrial	Transportation	Total
<b>Number of Customers Enrolled</b>					
2013	8,419,233	611,826	155,893	398	9,187,350
2014	8,603,402	605,094	57,129	4	9,265,629
2015	8,140,688	890,284	63,163	3	9,094,138
<b>Energy Savings (MWh)</b>					
2013	799,743	486,348	115,895	1	1,401,987
2014	881,563	462,337	92,549	--	1,436,449
2015	855,017	273,089	122,900	--	1,251,006
<b>Potential Peak Demand Savings (MW)</b>					
2013	7,003	5,124	14,800	168	27,095
2014	8,118	6,215	16,505	353	31,191
2015	8,703	6,989	17,169	14	32,875
<b>Actual Peak Demand Savings (MW)</b>					
2013	3,381	2,548	5,805	149	11,883
2014	3,147	2,652	6,883	1	12,683
2015	3,430	3,047	6,546	13	13,036

Source: U.S. Energy Information Administration, Form EIA-861, "Annual Electric Power Industry Report."

**Table 10.9. Demand Response - Program Costs  
Category, by Sector, 2013 through 2015**

Year	Residential	Commercial	Industrial	Transportation	Total
<b>Customer Incentives (thousand dollars)</b>					
2013	398,598	286,057	421,208	6,919	1,112,782
2014	345,894	345,435	514,751	11,716	1,217,796
2015	320,683	338,153	461,271	339	1,120,446
<b>All Other Costs (thousand dollars)</b>					
2013	338,353	95,748	50,982	50	485,133
2014	301,389	101,127	45,028	115	447,659
2015	256,519	78,758	46,613	28	381,918

Source: U.S. Energy Information Administration, Form EIA-861, "Annual Electric Power Industry Report."

**Table 10.10. Advanced Metering Count by Technology Type, 2007 through 2015**

Year	Residential	Commercial	Industrial	Transportation	Total
<b>Automated Meter Reading (AMR)</b>					
2007	25,785,782	2,322,329	44,015	109	28,152,235
2008	36,425,943	3,529,985	77,122	13	40,033,063
2009	41,462,111	4,239,531	107,033	11	45,808,686
2010	43,913,225	4,611,877	159,315	626	48,685,043
2011	41,451,888	4,341,105	172,692	77	45,965,762
2012	43,455,437	4,691,018	185,862	125	48,330,822
2013	42,491,242	4,632,744	196,132	1,202	47,321,320
2014	41,830,781	4,781,167	216,459	1,252	46,829,659
2015	42,326,302	5,049,978	226,908	1,023	47,604,211
<b>Advanced Metering Infrastructure (AMI)</b>					
2007	2,202,222	262,159	9,106	2	2,473,489
2008	4,190,244	444,003	12,757	12	4,647,016
2009	8,712,297	876,419	22,675	10	9,611,401
2010	18,369,908	1,904,983	59,567	67	20,334,525
2011	33,453,548	3,682,159	154,659	7	37,290,373
2012	38,524,639	4,461,350	179,159	35	43,165,183
2013	47,321,995	5,770,067	248,515	845	53,341,422
2014	51,710,725	6,563,614	270,683	916	58,545,938
2015	57,107,785	7,324,345	310,889	813	64,743,832
<b>Standard (non-AMR/AMI) Meters</b>					
2007					
2008					
2009					
2010					
2011					
2012					
2013	32,059,522	5,104,322	244,114	132	37,408,090
2014	32,995,176	5,642,247	254,621	1,331	38,893,375
2015	32,430,105	5,744,831	290,354	432	38,465,722
<b>Total Number of Meters</b>					
2007					
2008					
2009					
2010					
2011					
2012					
2013	121,872,759	15,507,133	688,761	2,179	138,070,832
2014	126,536,682	16,987,028	741,763	3,499	144,268,972
2015	131,864,192	18,119,154	828,151	2,268	150,813,765

Prior to 2010, the count was the number of customers, not number of meters.

Starting in 2013 Standard (Non-AMR/AMI) meter data was collected on the EIA-861.

This data is not collected on the EIA-861S.

Source: U.S. Energy Information Administration, Form EIA-861, "Annual Electric Power Industry Report." Form EIA-861S, "Annual Electric Power Industry Report (Short Form)."

# Appendix

## Technical Notes

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This appendix describes how the U.S. Energy Information Administration collects, estimates, and reports electric power data in the Electric Power Annual.

### Data Quality and Submission

The Electric Power Annual (EPA) is prepared by the Office of Electricity, Renewables, and Uranium Statistics (ERUS), U.S. Energy Information Administration (EIA), U.S. Department of Energy (DOE). ERUS performs routine reviews of the data collection respondent frames, survey forms, and reviews the quality of the data received.

Data are entered directly by respondents into the ERUS Internet Data Collection (IDC) system. A small number of hard copy forms are keyed into the system by ERUS personnel. All data are subject to review via interactive edits built into the IDC system, internal quality assurance reports, and review by ERUS subject matter experts. Questionable data values are verified through contacts with respondents, and survey non-respondents are identified and contacted.

IDC edits include both deterministic checks, in which records are checked for the presence of data in required fields, and statistical checks, in which the data are checked against a range of values based on historical data values and for logical or mathematical consistency with data elements reported in the survey. Discrepancies found in the data, as a result of these checks, must either be corrected by the respondent or the respondent must enter an explanation as to why the data are correct. If these explanations are unsatisfactory the respondent is contacted by EIA for clarification or corrected data.

Those respondents unable to use the electronic reporting method provide the data in hard copy, typically via fax and email. These data are manually entered into the computerized database and are subjected to the same data edits as those performed during e-filing by the respondent.

### Reliability of Data

Annual survey data have non-sampling errors. Non-sampling errors can be attributed to many sources: (1) inability to obtain complete information about all cases (i.e., non-response); (2) response errors; (3) definitional difficulties; (4) differences in the interpretation of questions; (5) mistakes in recording or coding the data; and (6) other errors of collection, response, coverage, and estimation for 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 to minimize their influence.

**Imputation:** If the reported values appear to be in error and the data issue cannot be resolved with the respondent, or if the facility is a non-respondent, a regression methodology is used to impute for the facility. The regression methodology relies on other data to make estimates for erroneous or missing responses. The basis for the current methodology involves a 'borrowing of strength' technique for small domains.<sup>1</sup>

## Data Revision Procedure

The EPA presents the most current and complete data available to the EIA. The statistics may differ from those published previously in EIA publications due to corrections, revisions, or other adjustments to the data subsequent to its original release.

After data are disseminated as final, revisions will be considered if a correction would 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.

**Sensitive Data (Formerly Identified as Data Confidentiality):** Most of the data collected on the electric power surveys are not considered business sensitive. However, the data that are classified as sensitive are handled by ERUS consistent with EIA's "Policy on the Disclosure of Individually Identifiable Energy Information in the Possession of the EIA" (45 Federal Register 59812 (1980)).

## Rounding and Percent Change Calculations

**Rounding Rules for Data:** To round a number to n digits (decimal places), add one unit to the nth digit if the (n+1) digit is 5 or larger and keep the nth digit unchanged if the (n+1) digit is less than 5. The symbol for a number rounded to zero is (\*).

**Percent Change:** The following formula is used to calculate percent changes:

$$\text{Percent Change} = \left( \frac{x(t_2) - x(t_1)}{x(t_1)} \right) \times 100,$$

where  $x(t_1)$  and  $x(t_2)$  denote the quantity at period  $t_1$  and subsequent period  $t_2$ .

## Data Sources for Electric Power Annual

Data published in the EPA are compiled from forms filed annually or aggregated to an annual basis from monthly forms (see figure on EIA Electric Industry Data Collection in Appendix A). The respondents to these forms include electric utilities, other generators and sellers of electricity, and North American Electric Reliability Corporation (NERC) reliability entities. The EIA forms used are:

- Form EIA-411, "Coordinated Bulk Power Supply Program Report;"
- Form EIA-826, "Monthly Electric Utility Sales and Revenues with State Distributions Report;"
- Form EIA-860, "Annual Electric Generator Report;"
- Form EIA-861, "Annual Electric Power Industry Report;"
- Form EIA-861S, "Annual Electric Power Industry Report (Short Form);"
- Form EIA-923, "Power Plant Operations Report."

These forms can be found on the EIA Internet website at:

<http://www.eia.gov/cneaf/electricity/page/forms.html>.

Survey data from other Federal sources are also utilized for this publication. They include:

- FERC Form 1, “Annual Report of Major Electric Utilities, Licensees, and Others;”
- U. S. Department of Agriculture (USDA) Rural Utility Service Form 7, “Financial and Statistical Report;” and
- USDA Rural Utility Service Form 12, “Operating Report – Financial.”

In addition to the above-named forms, the historical data published in the EPA are compiled from the following inactive forms:

- Form EIA-412, “Annual Electric Industry Financial Report,” FERC Form 423, “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-767, “Steam-Electric Plant Operation and Design Report;”
- Form EIA-860A, “Annual Electric Generator Report–Utility,”
- Form EIA-860B, “Annual Electric Generator Report–Nonutility,”
- Form EIA-867, “Annual Nonutility Power Producer Report,”
- Form EIA-900, “Monthly Nonutility Power Report,”
- Form EIA-906, “Power Plant Report;” and
- Form EIA-920, “Combined Heat and Power Plant Report.”

Additionally, some data reported in this publication were acquired from public reports of the National Energy Board of Canada on electricity imports and exports.

**Meanings of Symbols Appearing in Tables:** The following symbols have the meaning described below:

- \* The value reported is less than half of the smallest unit of measure, but is greater than zero.
- P Indicates a preliminary value.
- W Withheld to avoid disclosure of individual company data.
- 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).
- (\* Usage of this symbol indicates a number rounded to zero.

## Form EIA-411

The information reported on the mandatory Form EIA-411 includes: (1) actual energy and peak demand for the preceding year and five additional years; (2) existing and future generating capacity and capacity reserve margins; (3) scheduled capacity transfers; (4) projections of capacity, demand, purchases, sales, and scheduled maintenance; (5) power flow cases; and (6) bulk power system maps. The data is collected for EIA by NERC from NERC regional reliability entities, which in turn aggregate reports from regional members. Non-member data is also included. The compiled data is reviewed and edited by NERC and submitted to EIA annually on July 15. The data undergoes additional review by EIA. EIA resolves any quality issues with NERC.

**Instrument and Design History:** The Form EIA-411 program was initiated under the Federal Power Commission (FPC) Docket R-362, Reliability and Adequacy of Electric Service, and Orders 383-2, 383-3, and 383-4. The DOE, established in October 1977, assumed the responsibility for this activity. The responsibility for collecting these data was delegated to the Office of Emergency Planning and Operations within the DOE and was transferred to EIA for the reporting year 1996. Until 2008, this form was voluntary. The data are collected under the authority of the Federal Power Act (Public Law 88-280), the Federal Energy Administration Act of 1974 (Public Law 93-275), and the DOE Organization Act (Public Law 95-91).

**Issues within Historical Data Series:** The Florida Reliability Coordinating Council (FRCC) separated itself from the Southeastern Electric Reliability Council (SERC) in the mid-1990s and all time series data have been adjusted. In 1998, several utilities realigned from Southwest Power Pool (SPP) to SERC. Adjustments were made to the information to account for the separation and to address the tracking of shared reserve capacity that was under long-term contracts with multiple members. Name changes altered the Mid-Continent Area Power Pool (MAPP) to the Midwest Reliability Organization (MRO) and the Western Systems Coordinating Council (WSCC) to the Western Electricity 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. (Alaska and, obviously, Hawaii are not electrically interconnected with the coterminous 48 States).

At the close of calendar year 2005, the following reliability regional councils were dissolved: East Central Area Reliability Coordination 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 to handle the regional reliability responsibilities of the Electric Reliability Council of Texas (ERCOT). The revised delegation agreements covering all the regions were approved by the FERC on March 21, 2008. Reliability Councils that are unchanged include: Florida Reliability Coordinating Council (FRCC), Northeast Power Coordinating Council (NPCC), and the Western Electricity Coordinating Council (WECC). The historical time series have not been adjusted to account for individual membership shifts.

The current NERC regional entity 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).

**Changes Introduced in 2011:** Starting in 2011, NERC modified the bulk power system reporting regions (in contrast to regional reliability entity organizational boundaries) to align them with electric market operations. Consequently, reliability data will be reported for the PJM and MISO regional transmission organization areas and the MAPP area rather than for the MRO and RFC regional areas. This new framework, along with the other NERC regions, now forms the bulk power system reliability assessment areas.

Historically the MRO, RFC, SERC, and SPP regional boundaries were altered as utilities changed reliability organizations. In published EIA reports the historical data series for these regions have not been adjusted. Instead, starting in 2011, EIA has introduced the Balance of Eastern Region category to provide a consistent trend for the Eastern interconnection.

**Concept of Demand within the EIA-411:** The EIA-411 uses the following categorization of electricity demand:

- **Net Internal Demand:** Internal Demand less Direct Control Load Management and Interruptible Demand.
- **Internal Demand:** To collect these data, NERC develops a Total Internal Demand that is the sum of the metered (net) outputs of all generators within the system and the metered line flows into the system, less the metered line flows out of the system. The demand of station service or auxiliary needs (such as fan motors, pump motors, and other equipment essential to the operation of the generating units) is not included nor are any requirement customer (utility) load or capacity found behind the line meters on the system.
- **Direct Control Load Management:** Demand-Side Management that is under the direct control of the system operator. DCLM may control the electric supply to individual appliances or equipment on customer premises; it does not include Interruptible Demand.
- **Interruptible Demand:** The magnitude of customer demand that, in accordance with contractual arrangements, can be interrupted at the time of the Regional Council's seasonal peak by direct control of the System Operator or by action of the customer at the direct request of the System Operator.

For additional information on demand, refer to the NERC's Long-Term Reliability Assessments at <http://www.nerc.com/page.php?cid=4|61>.

**Sensitive Data:** Power flow cases and maps are considered business sensitive.

### Form EIA-412 (Terminated)

The Form EIA-412 was used annually to collect accounting, financial, and operating data from publicly owned electric utilities engaged in the generation, transmission, or distribution of electricity which had 150,000 megawatthours of sales to ultimate consumers and/or 150,000 megawatthours of sales for resale for the two previous years. Data was collected annually.

Beginning with the 2001 data collection, the plant statistics reported on Schedule 9 were also collected from unregulated entities that own plants with a nameplate capacity of 10 megawatts or greater. Beginning with the 2003 collection, the transmission data reported in Schedules 10 and 11 were collected from each generation and transmission cooperative owning transmission lines having a nominal voltage of 132 kilovolts or greater.

**Instrument and Design History:** The FPC created the FPC Form 1M in 1961 as a mandatory survey. It became the responsibility of the EIA in October 1977 when the FPC was merged with DOE and renamed the Federal Energy Regulatory Commission (FERC). In 1979, the FPC Form 1M was superseded by the Economic Regulatory Administration (ERA) Form ERA-412 and in January 1980 by the Form EIA-412.

The criteria used to select the respondents for this survey fit approximately 500 publicly owned electric utilities. Federal electric utilities were required to file the Form EIA-412. The financial data for the U.S. Army Corps of Engineers (except for Saint Mary's Falls at Sault Ste. Marie, Michigan); the U.S. Department of Interior, Bureau of Reclamation; and the U.S. International Boundary and Water Commission were collected on the Form EIA-412 from the Federal power marketing administrations. The form was terminated after the 2003 data year.

**Issues within Historical Data Series:** For 2001 - 2003, the California Department of Water Resources (CDWR) Electric Energy Fund data were included in the EIA-412 data tables. In response to the energy shortfall in California, in 2001 the California State legislature authorized the CDWR, using its undamaged borrowing capability, to enter the wholesale markets on behalf of the California retail customers effective on January 17, 2001 and for the period ending December 31, 2002. Their 2001 revenue collected was \$5,501,000,000 with purchased power costs of \$12,055,000,000. Their 2002 revenue collected was \$4,210,000,000 with purchased power costs of \$3,827,749,811. Their 2003 revenue collected was \$4,627,000,000 with purchased power costs of \$4,732,000,000. The California Public Utility Commission was required by statute to establish the procedures for retail revenue recovery mechanisms for their purchase power costs in the future.

**Sensitive Data:** The nonutility data collected on Schedule 9 "Electric Generating Plant Statistics" for "Cost of Plant" and "Production Expenses," are considered business sensitive. .

### **Form EIA-423 (Replaced in 2008 by the Form EIA-923)**

The Form EIA-423, "Monthly Cost and Quality of Fuels for Electric Plants Report," collected the cost and quality of fossil fuels delivered to nonutility plants to produce electricity. These plants included independent power producers (including those facilities that formerly reported on the FERC Form 423) and commercial and industrial combined heat and power (CHP) producers whose total fossil-fueled nameplate generating capacity was 50 or more megawatts (MW). (CHP plants are sometimes referred to as co-generators. They produce heat, such as steam for use in a manufacturing process, along with electricity).

**Instrument and Design History:** The Form EIA-423<sup>2</sup> was implemented in January 2002 to collect monthly cost and quality data for fossil fuel receipts from owners or operators of nonutility electricity

generating plants. It was terminated on January 1, 2008, and replaced by the Form EIA-923, "Power Plant Operations Report."

**Issues within Historical Data Series:** Natural gas values do not include blast furnace gas or other gas.

**Sensitive Data:** Plant fuel cost data collected on the survey are considered business sensitive. State- and national-level aggregations are published if sufficient data are available to avoid disclosure of individual company and plant level costs.

### **FERC Form 423 (Replaced in 2008 by Form EIA-923)**

The FERC Form 423, "Monthly Report of Cost and Quality of Fuels for Electric Plants," was administered by FERC. The data were downloaded from the Commission's website into an EIA database. The Form was filed by approximately 600 regulated plants. To meet the criteria for filing, a plant must have had a total steam turbine electric generating capacity and/or combined-cycle (gas turbine with associated steam turbine) generating capacity of 50 or more megawatts. Only fuel delivered for use in steam-turbine and combined-cycle units was reported. Fuel received for use in gas-turbine or internal-combustion units that was not associated with a combined-cycle operation was not reported. The FERC Form 423 was replaced after 2007 by the Form EIA-923.

**Instrument and Design History:** On July 7, 1972, the FPC issued Order Number 453 enacting the New Code of Federal Regulations, Section 141.61, 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. When DOE was formed in 1977, most of FPC became FERC. The FERC Form 423 replaced the FPC Form 423 in January 1983. The FERC Form 423 dropped stand-alone combustion turbines. 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. On January 1, 2008, EIA assumed responsibility for collection of these data and both the utility and nonutility plants began to report their cost and quality of fuels information on Schedule 2 of Form EIA-923, "Power Plant Operations Report."

**Issues within Historical Data Series:** 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 survey. The data were quality reviewed by EIA and when possible quality issues were resolved with FERC.

Natural gas values for 2001 forward do not include blast furnace gas or other gas.

Due to the estimation procedure described below in the discussion of the Form EIA-923, 2003 and later data cannot be directly compared to previous years' data.

**Sensitive Data:** Data collected on FERC Form 423 are not business sensitive.

## Form EIA-767 (Replaced by Forms EIA-860 and EIA-923)

The Form EIA-767 was used to collect data annually on plant operations and equipment design, including boiler, generator, cooling system, air pollution control equipment, and stack characteristics. Data were collected from a mandatory restricted-universe census of all electric power plants with a total existing or planned organic-fueled or combustible renewable steam-electric generator nameplate rating of 10 or more megawatts. The entire form was filed by approximately 800 power plants with a nameplate capacity of 100 or more megawatts. An additional 600 power plants with a nameplate capacity under 100 megawatts submitted information only on fuel consumption and quality, boiler and generator configuration, and nitrogen oxides, mercury, particulate matter, and sulfur dioxide controls.

**Instrument and Design History:** The Federal Energy Administration Act of 1974 (Public Law 93-275) defines the legislative authority to collect these data. The predecessor form, FPC-67, "Steam-Electric Plant Air and Water Quality Control Data," was used to collect data from 1969 to 1980, when the form number was changed to Form EIA-767. In 1982, the form was completely redesigned and re-titled Form EIA-767, "Steam-Electric Plant Operation and Design Report." In 1986, the respondent universe of 700 plants was increased to 900 plants to include plants with nameplate capacity from 10 megawatts to 100 megawatts. In 2002, the respondent universe was increased by almost 1,370 plants with the addition of nonutility plants.

Collection of data via the form was suspended for the 2006 data year. Starting with the collection of 2007 calendar year data, most of the Form EIA-767 information is now collected on either the revised Form EIA-860, "Annual Electric Generator Report" or the new Form EIA-923, "Power Plant Operations Report."

**Estimation of EIA-767 Data:** No estimation of Form EIA-767 data was performed. Normally the survey had no non-response.

**Issues within Historical Data Series:** As noted above, no data were collected for calendar year 2006.

**Sensitive Data:** Latitude and longitude data collected on the Form EIA-767 were considered business sensitive.

## 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 520 of the largest electric utilities (primarily investor and publicly owned) as well as a census of energy service providers with sales to ultimate consumers in deregulated States. Form EIA-861 (see below), 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 on a monthly basis.

**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 retail price of electricity 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 retail energy providers 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 Electric Power Monthly, April 2001, p.1.)

With the October 2004 issue of the Electric Power Monthly (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 retail 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.

**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 (see below) 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 retail price of electricity at the State level. The estimates are accumulated separately to produce the Census division and U.S. level estimates<sup>3</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 retail price of electricity 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 retail price of electricity represents the cost per unit of electricity sold and is calculated by dividing retail electric revenue by the corresponding sales of electricity. The average retail price of electricity is calculated for all consumers and for each end-use sector.

The electric revenue used to calculate the average retail price of electricity 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 retail price of electricity 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, monthly 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 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 individual generator level. Certain power plant environmental-related data are collected at the boiler level. These data include environmental equipment design parameters and boiler air emission standards and boiler emission controls.

**Instrument and Design History:** The Form EIA-860 was originally implemented in January 1985 to collect plant data on electric utilities 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 411. In January 1999, the Form EIA-860 was renamed the Form EIA-860A and was implemented to collect data 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. The Federal Energy Administration Act of 1974 (Public Law 93-275) defines the legislative authority to collect these data.

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.

**Estimation of EIA-860 Data:** No imputation was required for EIA-860 data.

**Issues within Historical Data Series Regarding Categorization of Capacity by Business Sector:** There are a small number of electric utility CHP plants, as well as a small number of industrial and commercial generating facilities that are not CHP. For the purposes of this report the data for these plants are included, respectively, in the following categories: "Electricity Generators, Electric Utilities," "Combined Heat and Power, Industrial," and "Combined Heat and Power, Commercial."

Some capacity in 2001 through 2004 is classified based on the operating company's classification as an electric utility or an independent power producer. Starting in the EPA 2006, capacity by producer type was determined at the power plant level for 2005 and all subsequent data collections. This change required revisions to the original published 2005 data.

**Issues within Historical Data Series Regarding Planned Capacity:** Delays and cancellations may have occurred subsequent to respondent data reporting as of December 31 of the data year.

**Issues within Historical Data Series Regarding Capacity by Energy Source:** Prior to the EPA 2005, the capacity for generators for which natural gas or petroleum was the most predominant energy source was presented in the following three categories: petroleum only, natural gas only, and dual-fired. The dual-fired category, which was EIA's effort to infer which generators could fuel-switch between natural gas and fuel oil, included only the capacity of generators for which the most predominant energy source and second most predominant energy source were reported as natural gas or petroleum. Beginning in 2005, capacity is assigned to energy source based solely on the most predominant (primary) energy source reported for a generator. The "dual-fired" category was eliminated. Separately, summaries of capacity associated with generators with fuel-switching capability are presented for 2005 and later years. These summaries are based on data collected from new questions added to the Form EIA-860 survey that directly address the ability of generators to switch fuels and co-fire fuels.

In the EPA 2005, certain petroleum-fired capacity was misclassified as natural gas-fired capacity for 1995 – 2003. This was corrected in the EPA 2006. Corrections were noted as revised data.

**Prime Movers:** The Form EIA-860 sometimes represents a generator’s prime mover by using the abbreviations in the table below.

<b>Prime Mover Code</b>	<b>Prime Mover Description</b>
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
Petroleum Products	WC	Waste/Other Coal (including anthracite culm, bituminous gob, fine coal, lignite waste, waste coal)
	DFO	Distillate Fuel Oil (including diesel, No. 1, No. 2, and No. 4 fuel oils)
	JF	Jet Fuel
	KER	Kerosene
	PC	Petroleum Coke
	PG	Gaseous Propane
	RFO	Residual Fuel Oil (including No. 5, and No. 6 fuel oils, and bunker C fuel oil)
Natural Gas and Other Gases	SG	Synthesis Gas from Petroleum Coke
	WO	Waste/Other Oil (including crude oil, liquid butane, liquid propane, naphtha, oil waste, re-refined motor oil, sludge oil, tar oil, or other petroleum-based liquid wastes)
	BFG	Blast Furnace Gas
Nuclear	NG	Natural Gas
	OG	Other Gas
Hydroelectric Conventional	NUC	Nuclear (including Uranium, Plutonium, and Thorium)
	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
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
Other Renewable Energy Sources	SLW	Sludge Waste
	SUN	Solar (including solar thermal)
	WND	Wind
Other Energy Sources	GEO	Geothermal
	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-861

The Form EIA-861 is a mandatory annual census of electric power industry participants in the United States. Prior to data year 2012, the survey was used to collect information on power sales and revenue data from approximately 3,300 respondents. About 3,100 are electric utilities, and the remainders are nontraditional entities such as energy service providers or the unregulated subsidiaries of electric utilities and power marketers.

For data year 2012 and forward, EIA modified the frame of the Form EIA-861, “Annual Electric Power Industry Report,” from a census to a sample, and EIA is using model-based methods to estimate the sales, revenues, and customer counts by sector and state for those respondents that have been removed from the frame. EIA created a new Form EIA-861S, “Annual Electric Power Industry Report (Short Form),” for the respondents that have been removed from the Form EIA-861 frame. The form collects limited data such as total sales, revenues, and customer counts by state.

**Transportation Sector:** Prior to 2003, sales of electric power for transportation (e.g., city subway systems) were included in the Other Sector, along with sales to customers for public buildings, traffic signals, public street lighting, and sales to irrigation consumers. Beginning with the 2003 data collection, sales to the Transportation Sector were collected separately. The balance of the Other Sector was reclassified as Commercial Sector sales except that sales to irrigation customers, where separately identified, were reclassified to the Industrial Sector.

On the Form EIA-861, the Transportation Sector is defined as electrified rail, primarily urban transit, light rail, automated guideway, and other rail systems whose primary propulsive energy source is electricity. Electricity sales to Transportation Sector consumers whose primary propulsive energy source is not electricity (i.e., gasoline, diesel fuel, etc.) are not included.

Benchmark statistics were reviewed from outside surveys, most notably the U.S. Department of Transportation (DOT) Federal Transit Administration’s National Transportation Database, a source previously used by EIA to estimate electricity transportation consumption. The DOT survey indicated the State and City locations of expected respondents. The Form EIA-861 survey methodology assumed that sales, revenue, and customer counts associated with these mass transit systems would be provided by the incumbent utilities in these areas, relying on information drawn routinely from rate schedules and classifications designed to serve the sector separately and distinctly. In 2010, 64 respondents reported transportation data in 28 States.

**Data Reconciliation:** The Electric Power Annual reports total sales volumes (megawatthours) of electricity to ultimate consumers and customer counts in States with deregulated markets as the sum of bundled sales reported by full-service providers and delivery reported by transmission and distribution utilities. ERUS has concluded that the sales of electricity to ultimate consumers data reported by delivery utilities are more reliable than data reported by power marketers and Energy Service Providers (ESPs).

The reporting methodology change uses sales volumes and a customer count reported by distribution utilities, and modifies only an incremental revenue value, representing revenue associated with misreported sales assumed to be attributable to the ESPs that were under-represented in the survey frame.

**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.

**Average Retail Price of Electricity:** This value represents the average cost per unit of electricity sold and is calculated by dividing retail electric revenue by the corresponding sales of electricity. The average retail price of electricity is calculated for all consumers and for each end-use sector.

The electric revenue used to calculate the average retail price of electricity 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 ratepayer reimbursements for State and Federal income taxes and other taxes paid by the utility.

This computed average retail price of electricity reported in this publication by is 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 of the electric power industry participant for providing electrical service.

**Issues within Historical Data Series:** 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. 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. The number of ultimate customers is an average of the number of customers at the close of each month. Also see the discussion of the Transportation Sector, above.

**Net-Metering:** This section was expanded in 2011. Previously, customer count by sector was the only data collected and published. In 2010, the EIA-861 started collecting the capacity of the net-metered installations by sector and technology. The technology types are: photovoltaic (PV), wind and other.

**Demand-Side Management (DSM):** Prior to 2011, DSM data was separated into two categories, large and small utilities. Some tables contained data for just large utilities and others contained both categories, published separately. Starting in 2011, there is no longer a division in the data. All tables now include all DSM data from utilities; this change is also reflected in the historical data.

Starting in 2011, a new category of respondents were added to the EIA-861, non-utility DSM administrators: Efficiency Maine Trust, Energy trust of Oregon, Focus on Energy, NYSERDA and Vermont Energy Investment Corporation.

The following definitions are supplied to assist in interpreting DSM data. Utility costs reflect the total cash expenditures for the year, in nominal dollars, that used to support DSM programs.

- **Actual Peak Load Reduction** is the actual reduction in annual peak load achieved by all program participants during the reporting year, at the time of annual peak load, as opposed to the installed peak load reduction capability (potential peak load reduction). Actual peak load reduction is reported by large utilities only.
- **Energy Savings** is the change in aggregate electricity use (measured in megawatthours) for consumers that participate in a utility DSM program. These savings represent changes at the consumer's meter (i.e., exclude transmission and distribution effects) and reflect only activities that are undertaken specifically in response to utility-administered programs, including those activities implemented by third parties under contract to the utility.
- **Large Utilities** are those electric utilities with annual sales to ultimate customers or sales for resale greater than or equal to 150 million kilowatthours in 1998-2009 and, for years prior, the threshold was set at 120 million kilowatthours.
- **Potential Peak Load Reduction** is the potential peak load reduction as a result of load management.

**Advanced Metering:** New in 2011, Automated Meter Reading (AMR) and Advanced Metering Infrastructure (AMI), including historical data back to 2007. From 2007-2009, the count by sector is for number of customers, for 2010-2011, the count is the actual number of meters. For example; if an industrial customer had 12 meters, in 2007-2009 the count would have been 1, in 2010-2011, the count would be 12.

**Sensitive Data:** None.

### **Forms EIA-906 and EIA-920 (Replaced in 2008 by Form EIA-923)**

The Form EIA-906 was used to collect plant-level data on generation, fuel consumption, stocks, and fuel heat content, from electric utilities and nonutilities. Data were collected monthly from a model-based sample of approximately 1,700 utility and nonutility electric power plants. The form was also used to collect these statistics from another 2,667 plants (i.e., all other generators 1 MW or greater) on an annual basis. The form was ended after the 2007 data collection and replaced by the Form EIA-923.

**Instrument and Design History:** 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 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 EIA-900 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 data on the production of useful thermal output (typically process steam) by combined heat and power (CHP) plants.

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 CHP plants; all other plants that generated electricity continued 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 2008, the Form EIA-923 superseded this form.

**Issues within Historical Data Series:** A relatively small number electric commercial- and industrial-only plants are, for the purposes of this report, are included in the CHP data categories. The small number of electric utility plants that are CHP units are reported together with other utility plants. No information on the production of useful thermal output (UTO) or fuel consumption for UTO was collected or estimated for the electric utility CHP plants.

**Sensitive Data:** The only business sensitive data element collected on the Forms EIA-906 and EIA-920 was fuel stocks at the end of the reporting period.

### Form EIA-923

Form EIA-923, "Power Plant Operations Report," is used to collect information on receipts and cost of fossil fuels, fuel stocks, generation, consumption of fuel for generation, nonutility source and disposition of electricity, combustion by-product collection and disposal, and cooling systems, as well as operational data for flue gas desulfurization, particulates, and nitrous oxide controls. Data are collected from a monthly sample of approximately 1,900 plants, which includes a census of nuclear and pumped-storage hydroelectric plants. The plants in the monthly sample report their receipts, cost and stocks of fossil fuels, electric power generation, and the total consumption of fuels for both electric power generation and, at combined heat and power (CHP) plants, useful thermal output. At the end of the year, the monthly respondents report their annual source and disposition of electric power (nonutilities only), operational data for air emissions controls and cooling systems, and the collection and disposal of combustion by-products on the Form EIA-923 Supplemental Form (Schedules 6, 7, and 8A to 8F). Approximately 4,200 plants, representing all generators not included in the monthly sample and with a nameplate capacity of 1 MW or more, report applicable data on the entire form annually. In addition to electric power generating plants, respondents include fuel storage terminals without generating capacity that receive shipments of fossil fuel 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. Fuel receipts and costs are collected from plants with a nameplate capacity of 50 MW or more and burn fossil fuels. 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 each month, regardless of whether the plant reports in the monthly sample or reports annually. For all other plants, consumption is reported at the prime-mover level and generation is reported at the prime-mover level or, for noncombustible sources (e.g., wind, nuclear), at the prime-

mover and energy source levels (including generating units for nuclear only). The source and disposition of electricity are reported annually for nonutilities at the plant level, as is revenue from sales for resale. Operational data for air emissions equipment are collected annually from facilities that have a steam turbine capacity of at least 10 megawatts, and operational data on cooling systems and data on the collection and disposal of combustion by-products are collected from facilities that have a steam turbine capacity of at least 100 megawatts.

**Instrument and Design History:** See discussion of predecessor forms (EIA-906, -920, -767, and -423, and FERC Form 423).

**Imputation:** For data collected monthly, regression prediction, or imputation, is done for all 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). Approximately 0.02 percent of the national total generation for is imputed, although this will vary by State and energy source.

When gross generation is reported and net generation is not available, or vice versa, net or gross generation is estimated by using a fixed ratio of net to gross generation by prime-mover type and installed emissions equipment. These ratios are:

<b>Net Generation = (Factor) x Gross Generation</b>
<b>Prime Movers:</b>
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
<b>Environmental Equipment:</b>
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 is 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. Power plants include independent power producers, electric utilities, and commercial and industrial CHP

facilities with a total fossil-fueled nameplate capacity of 50 megawatts or more. 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.

The units for receipts are: 1) coal and petroleum coke, tons and million Btu per ton; 2) petroleum, barrels and million Btu per barrel.; and gases, thousand cubic feet (Mcf) and million Btu per thousand cubic feet.

**Net and Gross Generation and Fuel Consumption and Stocks:** Generation data are collected in megawatthours from all power plants with a sum of nameplate capacity at least 1 MW. The fuels consumed are collected in tons (solids), barrels (liquids) and thousand cubic feet (gases). Fuels are grouped into coal, petroleum liquids, petroleum coke, natural gas, other gases, and other miscellaneous fuels. Energy consumption is not collected for nuclear, wind, solar, geothermal or other plants that do not burn fuels. For information on fuel groupings, see the instructions to the Form EIA-923 at [http://www.eia.gov/survey/form/eia\\_923/instructions.pdf](http://www.eia.gov/survey/form/eia_923/instructions.pdf). **Combustion By-Product Collection and Disposal:** Data are collected in thousand tons. Associated financial data for by-products (O&M and capital expenses and revenue) are collected in thousand dollars.

**Air Emissions Equipment:** Operational efficiencies and emission rates are collected for flue gas desulfurization, particulate matter, and nitrous oxide control equipment for steam-electric units with at least 10 MW nameplate capacity.

**Cooling Systems:** Operational data on water use is collected from steam-electric plants, including nuclear plants, with at least 100 MW nameplate capacity.

**Methodology to Estimate Biogenic and Non-biogenic Municipal Solid Waste:**<sup>4</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 (EPA) 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.

In 2011, the components of MSW as a percentage of the total were updated. The updated values were applied to final 2011 data and to preliminary 2012 and 2013 data. Although updated component percentages for 2006 through 2010 were available, historical EIA data series for consumption of MSW and net generation were not revised for 2005 to 2010. The tables below are the percentages applied to the EIA data for each year.

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 Table 1 and 2, below).<sup>5</sup>

These values are used to allocate consumption of municipal solid waste and net generation published in the Electric Power Monthly 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	2011
Biogenic	57	56	55	55	56	56	56	56	56	56	51
Non-biogenic	43	44	45	45	44	44	4	44	44	44	49

**Table 2. Tonnage consumption for biogenic and non-biogenic municipal solid waste (percent)**

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Biogenic	77	77	76	76	75	75	75	75	75	75	64
Non-biogenic	23	23	24	24	25	25	25	25	25	25	36

**Useful Thermal Output (UTO):** With the implementation of the Form EIA-923, “Power Plant Operations Report,” in 2008, combined heat and power (CHP) plants were required to report total fuel consumed and electric power generation. Beginning with preliminary January 2008 data, EIA estimated the allocation of the total fuel consumed at CHP plants between electric power generation and UTO.

The estimated allocation methodology is summarized in the following paragraphs. The methodology was retroactively applied to 2004-2007 data. Prior to 2004, UTO was collected on the Form EIA-906 and an estimated allocation of fuel for electricity was not necessary.

First, an efficiency factor is determined for each plant and prime mover type. Based on data for electric power generation and UTO 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 UTO, divided by the total input in Btu. Electric power is converted to Btu at 3,412 Btu per kilowatthour.

Second, to calculate the amount of fuel for electric power, the gross generation in Btu is divided 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.

**Issues within Historical Data Series for 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 that were required 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.

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 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. Also beginning with January 2008 data, tables for total receipts included imputed quantities for plants with capacity one megawatt or more, to be consistent with other electric power data. Previous published receipts data were from plants at or over a 50 megawatt threshold, which was 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 Electric Power Annual (i.e., one megawatt and above), with associated relative standard errors, provides a more complete assessment of the market.

**Issues within Historical Data Series for Generation and Consumption:** Beginning in 2008, a new method of allocating fuel consumption between electric power generation and UTO was implemented (see above). This new methodology evenly distributes a 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 lower while the fuel for UTO is higher 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:** The total delivered cost of fuel delivered to nonutilities, the commodity cost of fossil fuels, and fuel stocks are considered business sensitive.

## 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:

$$capacity\ factor = \frac{\sum_{x,m} generation_{x,m}}{\sum_{x,m} capacity_x * available\ time_{x,m}}$$

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.

## Air Emissions

This section describes the methodology for calculating estimated emissions of carbon dioxide (CO<sub>2</sub>) from electric generating plants for 1989 through the present, as well as the estimated emissions of sulfur dioxide (SO<sub>2</sub>) and nitrogen oxides (NO<sub>x</sub>) from electric generating plants for 2001 through the present. For a description of the methodology used for other years, see the technical notes to the EPA 2003.

**Methodology Overview:** Initial estimates of uncontrolled SO<sub>2</sub> and NO<sub>x</sub> emissions for all plants are made by applying an emissions factor to fuel consumption data collected by EIA on the Form EIA-923. An emission factor is the average quantity of a pollutant released from a power plant when a unit of fuel is burned, assuming no use of pollution control equipment. The basic relationship is:

$$\text{Emissions} = \text{Quantity of Fuel Consumed} \times \text{Emission Factor}$$

Quantity is defined in physical units (e.g., tons of solid fuels, million cubic feet of gaseous fuels, and thousands of barrels of liquid fuels) for determining NO<sub>x</sub> and SO<sub>2</sub> emissions. As discussed below, physical quantities are converted to millions of Btus for calculating CO<sub>2</sub> emissions.

For some fuels, the calculation of SO<sub>2</sub> emissions requires including in the formula the sulfur content of the fuel measured in percentage of weight. Examples include coal and fuel oil. In these cases the formula is:

$$\text{Emissions} = \text{Quantity of Fuel Consumed} \times \text{Emission Factor} \times \text{Sulfur Content}$$

The fuels that require the percent sulfur as part of the emissions calculation are indicated in Table A.1., which lists the SO<sub>2</sub> emission factors used for this report.

In the case of SO<sub>2</sub> and NO<sub>x</sub> emissions, the factor applied to a fuel can also vary with the combustion system: a steam-producing boiler, a combustion turbine, or an internal combustion engine. In the case of boilers, NO<sub>x</sub> emissions can also vary with the firing configuration of a boiler and whether or not the boiler is a wet-bottom or dry-bottom design.<sup>6</sup> These distinctions are shown in Tables A.1. and A.2.

For SO<sub>2</sub> and NO<sub>x</sub>, the initial estimate of uncontrolled emissions is reduced to account for the plant's operational pollution control equipment, when data on control equipment are available from the historical Form EIA-767 survey (i.e., data for the years 2005 and earlier) and the EIA-860 and EIA-923 surveys for the years 2007 through 2010. A special case for removal of SO<sub>2</sub> is the fluidized bed boiler, in which the sulfur removal process is integral with the operation of the boiler. The SO<sub>2</sub> emission factors shown in Table A.1. for fluidized bed boilers already account for 90 percent removal of SO<sub>2</sub> since, in effect, the plant has no uncontrolled emissions of this pollutant.

Although SO<sub>2</sub> and NO<sub>x</sub> emission estimates are made for all plants, in many cases the estimated emissions can be replaced with actual emissions data collected by the U.S. Environmental Protection Agency's (U.S. EPA's) Continuous Emissions Monitoring System (CEMS) program. (CEMS data for CO<sub>2</sub> are incomplete and are not used in this report.) The CEMS data account for the bulk of SO<sub>2</sub> and NO<sub>x</sub> emissions from the electric power industry. For those plants for which CEMS data are available, the EIA estimates of SO<sub>2</sub> and NO<sub>x</sub> emissions are employed for the limited purpose of allocating emissions by fuel, since the CEMS data itself do not provide a detailed breakdown of plant emissions by fuel. For plants for which CEMS data are unavailable, the EIA-computed values are used as the final emissions estimates.

There are a number of reasons why the historical data are periodically revised. These include data revisions, revisions in emission and technology factors, and changes in methodology. For instance, the 2008 Electric Power Annual report features a revision in historic CO<sub>2</sub> values. This revision occurred due to a change in the accepted methodology regarding adjustments made for the percentage combustion of fuels.

The emissions estimation methodologies are described in more detail below.

**CO<sub>2</sub> Emissions:** CO<sub>2</sub> emissions are estimated using the information on fuel consumption in physical units and the heat content of fuel collected on the Form EIA-923 and predecessors. Heat content information is used to convert physical units to millions of Btu (MMBtu) consumed. To estimate CO<sub>2</sub> emissions, the fuel-specific emission factor from Table A.3. is multiplied by the fuel consumption in MMBtu.

The estimation procedure calculates uncontrolled CO<sub>2</sub> emissions. CO<sub>2</sub> control technologies are currently in the early stages of research and there are no commercial systems installed. Therefore, no estimates of controlled CO<sub>2</sub> emissions are made.

**SO<sub>2</sub> and NO<sub>x</sub> Emissions:** To comply with environmental regulations controlling SO<sub>2</sub> emissions, many coal-fired generating plants have installed flue gas desulfurization (FGD) units. Similarly, NO<sub>x</sub> control regulations require many fossil-fueled plants to install low-NO<sub>x</sub> burners, selective catalytic reduction systems, or other technologies to reduce emissions. It is common for power plants to employ two or even three NO<sub>x</sub> control technologies; accordingly, the NO<sub>x</sub> emissions estimation approach accounts for the combined effect of the equipment (Table A.4.). However, control equipment information is available only for plants that reported on the Form EIA-923 and for historical data from the Form EIA-767. The Form EIA-860, EIA-923, and the historical EIA-767 surveys are limited to plants with boilers fired by combustible fuels<sup>7</sup> with a minimum generating capacity of 10 megawatts (nameplate). Pollution control equipment data are unavailable from EIA sources for plants that did not report on the historical EIA-767 survey, or the Forms EIA-860 and EIA-923.

The following method is used to estimate SO<sub>2</sub> and NO<sub>x</sub> emissions:

- For steam electric plants, uncontrolled emissions are estimated using the emission factors shown in Tables A.1. and A.2. as well as reported data on fuel consumption, sulfur content, and boiler firing configuration. Controlled emissions are then determined when pollution control equipment is present. Although information on control equipment was not collected in 2006, updates for new installations during this period were made based on EPA data. Beginning in 2007, these data were collected on the Forms EIA-860 and EIA-923. For SO<sub>2</sub>, the reported efficiency of the plant's FGD units is used to convert uncontrolled to controlled emission estimates. For NO<sub>x</sub>, the reduction percentages shown in Table A.4. are applied to the uncontrolled estimates.
- For plants and prime movers not reported on the historical Form EIA-767 survey or Forms EIA-860 and EIA-923, uncontrolled emissions are estimated using the Table A.1. and Table A.2. emission factors and the following data and assumptions:
  - Fuel consumption is taken from the Form EIA-923 and predecessors.
  - The sulfur content of the fuel is estimated from fuel receipts for the plant reported on the Form EIA-923. When plant-specific sulfur content data are unavailable, the national average sulfur content for the fuel, computed from the Form EIA-923 is applied to the plant.
  - As noted earlier, the emission factor for plants with boilers depends in part on the type of combustion system, including whether a boiler is wet-bottom or dry-bottom, and the boiler firing configuration. However, this boiler information is unavailable for steam electric plants that did not report on the historical Forms EIA-767 or EIA-860. For these cases, the plant is assumed to have a dry-bottom, non-cyclone boiler using a firing method that falls into the "All Other" category shown on Table A.1.<sup>8</sup>  
For the plants that did not report on the historical Form EIA-767 or EIA-860, pollution control equipment data are unavailable and the uncontrolled estimates are not reduced.
- If actual emissions of SO<sub>2</sub> or NO<sub>x</sub> are reported in the EPA's CEMS data, the EIA estimates are replaced with the CEMS values, using the EIA estimates to allocate the CEMS plant-level data by fuel. If CEMS data are unavailable, the EIA estimates are used as the final values.

### Conversion Factors for Propane, Petroleum Coke, and Synthesis Gases.

The quantity conversion for petroleum coke is 5 barrels (of 42 U.S. gallons each) per short ton (2,000 pounds), propane is 1.53 thousand cubic feet per barrel, coal-derived synthesis gas is 98.06 thousand cubic feet per ton, and petroleum coke-derived synthesis gas is 107.31 thousand cubic feet per ton.

### Relative Standard Error

The relative standard error (RSE) statistic, usually given as a percent, 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 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. Note that reported RSEs are always estimates, themselves, and are usually, as here, reported as percents. As an example, suppose that a net generation from coal value is estimated to be 1,507 total 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 represents 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.

## Business Classification

Nonutility power producers consist of entities that own or operate electric generating units but are not subject to direct economic regulation of rates, such as by state utility commissions. 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, for example, manufacturing facilities and paper mills.

The EIA, in the Electric Power Annual and other data products, classifies nonutility power producers into the following categories:

- **Electric Utility (Sector 1):** All regulated plants with a primary purpose of selling electricity in the public markets (NAICS = 22).
- **Independent Power Producers (Sector 2):** All non-regulated plants with a primary purpose of electric power generation and a primary purpose of selling electricity in the public markets (NAICS = 22) with no ability to cogenerate heat and power.
- **Electric Power, Combined Heat and Power (Sector 3):** All non-regulated plants with a primary purpose of electric power generation and a primary purpose of selling electricity in the public markets (NAICS = 22) with the ability to cogenerate heat and power.
- **Commercial, Non-Combined Heat and Power (Sector 4):** All plants with a commercial primary purpose with no ability to cogenerate heat and power.

- **Commercial, Combined Heat and Power (Sector 5):** All plants with a commercial primary purpose with the ability to cogenerate heat and power.
- **Industrial, Non-Combined Heat and Power (Sector 6):** All plants with an industrial primary purpose with no ability to cogenerate heat and power.
- **Industrial, Combined Heat and Power (Sector 7):** All plants with an industrial primary purpose with the ability to cogenerate heat and power.

The following is a list of the North American Industry Classification System (NAICS) classifications used by EIA.

	<b>Agriculture, Forestry, Fishing and Hunting</b>
111	Crop Production
112	Animal Production
113	Forestry and Logging
114	Fishing, Hunting and Trapping
115	Support Activities for Agriculture and Forestry
	<b>Mining, Quarrying, and Oil and Gas Extraction</b>
211	Oil and Gas Extraction
2121	Coal Mining
2122	Metal Ore Mining
2123	Nonmetallic Mineral Mining and Quarrying
	<b>Utilities</b>
22	Electric Power Generation, Transmission and Distribution (other than 2212, 2213, 22131, 22132 or 22133)
2212	Natural Gas Distribution
22131	Water Supply and Irrigation Systems
22132	Sewage Treatment Facilities
22133	Steam and Air-Conditioning Supply
	<b>Manufacturing</b>
311	Food Manufacturing
312	Beverage and Tobacco Product Manufacturing
313	Textile Mills (Fiber, Yarn, Thread, Fabric, and Textiles)
314	Textile Product Mills
315	Apparel Manufacturing
316	Leather and Allied Product Manufacturing
321	Wood Product Manufacturing
322	Paper Manufacturing (other than 322122 or 32213)
322122	Newsprint Mills
32213	Paperboard Mills
323	Printing and Related Support Activities
324	Petroleum and Coal Products Manufacturing (other than 32411)
32411	Petroleum Refineries
325	Chemical Manufacturing (other than 32511, 32512, 325193, 325188, 3252 325211, 3253 or 325311)
32511	Petrochemical Manufacturing
32512	Industrial Gas Manufacturing
325193	Ethyl Alcohol Manufacturing (including Ethanol)
325188	Industrial Inorganic Chemicals
3252	Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing (other than

325211)
   
325211 Plastics Material and Resin Manufacturing
   
3253 Pesticide, Fertilizer, and Other Agricultural Chemical Manufacturing (other than 325311)
   
325311 Nitrogenous Fertilizer Manufacturing
   
326 Plastics and Rubber Products Manufacturing
   
327 Nonmetallic Mineral Product Manufacturing (other than 32731)
   
32731 Cement Manufacturing
   
331 Primary Metal Manufacturing (other than 331111 or 331312)
   
331111 Iron and Steel Mills
   
331312 Primary Aluminum Production
   
332 Fabricated Metal Product Manufacturing
   
333 Machinery Manufacturing
   
334 Computer and Electronic Product Manufacturing
   
335 Electrical Equipment, Appliance, and Component Manufacturing
   
336 Transportation Equipment Manufacturing
   
337 Furniture and Related Product Manufacturing
   
339 Miscellaneous Manufacturing

421 **Wholesale Trade**

441 **Retail Trade**

**Transportation and Warehousing**

481 Air Transportation
   
482 Rail Transportation
   
483 Water Transportation
   
484 Truck Transportation
   
485 Transit and Ground Passenger Transportation
   
486 Pipeline Transportation
   
487 Scenic and Sightseeing Transportation
   
488 Support Activities for Transportation (other than 4881, 4882, 4883 or 4884)
   
4881 Support Activities for Air Transportation (including Airports)
   
4882 Support Activities for Rail Transportation (including Rail Stations)
   
4883 Support Activities for Water Transportation (including Marinas)
   
4884 Support Activities for Road Transportation
   
491 Postal Service
   
492 Couriers and Messengers
   
493 Warehousing and Storage

**Information**

511 Publishing Industries (except Internet)
   
512 Motion Picture and Sound Recording Industries
   
515 Broadcasting (except Internet)
   
517 Telecommunications
   
518 Data Processing, Hosting, and Related Services
   
519 Other Information Services

521 **Finance and Insurance**

53 **Real Estate and Rental and Leasing (including Convention Centers and Office Buildings)**

541 **Professional, Scientific, and Technical Services**

55 **Management of Companies and Enterprises**

	<b>Administrative and Support and Waste Management and Remediation Services</b>
561	Administrative and Support Services
562	Waste Management and Remediation Services (other than 562212 or 562213)
562212	Solid Waste Landfill
562213	Solid Waste Combustors and Incinerators
611	<b>Educational Services</b>
	<b>Health Care and Social Assistance</b>
621	Ambulatory Health Care Services
622	Hospitals
623	Nursing and Residential Care Facilities
624	Social Assistance
	<b>Arts, Entertainment, and Recreation</b>
711	Performing Arts, Spectator Sports, and Related Industries
712	Museums, Historical Sites, and Similar Institutions
713	Amusement, Gambling, and Recreation Industries
	<b>Accommodation and Food Services</b>
721	Accommodation
722	Food Services and Drinking Places
	<b>Other Services (except Public Administration)</b>
811	Repair and Maintenance
812	Personal and Laundry Services
813	Religious, Grantmaking, Civic, Professional, and Similar Organizations
814	Private Households
	<b>Public Administration (other than 921, 922, 92214 or 928)</b>
92	Executive, Legislative, and Other General Government Services
921	Executive, Legislative, and Other General Government Services
922	Justice, Public Order and Safety Activities (other than 92214)
92214	Correctional Facilities
928	National Security and International Affairs (including Military Bases)

## 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

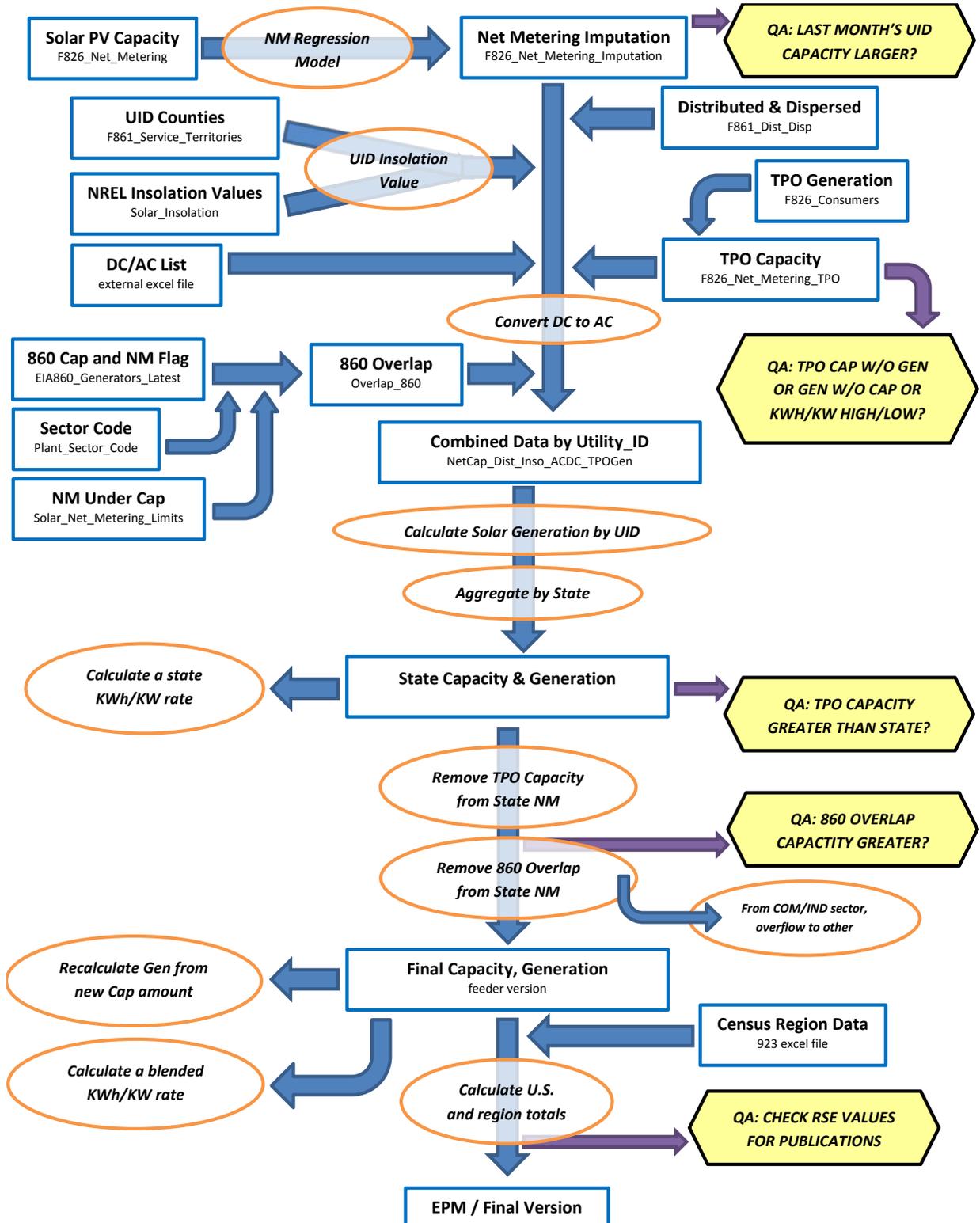
## TMY3 (1991-2005) Weather Stations by MSA

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



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<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> 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 subsequent section) 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 nonregulated power producers. Its design closely follows that of the FERC Form 423.

<sup>3</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>4</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

<sup>5</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.

<sup>6</sup> A boiler’s firing configuration relates to the arrangement of the fuel burners in the boiler, and whether the boiler is of conventional or cyclone design. Wet- and dry-bottom boilers use different methods to collect a portion of the ash that results from burning coal. For information on wet- and dry-bottom boilers, see the EIA Glossary at <http://www.eia.gov/glossary/index.html>. Additional information on wet- and dry-bottom boilers and on other aspects of boiler design and operation, including the differences between conventional and cyclone designs, can be found in Babcock and Wilcox, *Steam: Its Generation and Use*, 41<sup>st</sup> Edition, 2005.

<sup>7</sup> Boilers that rely entirely on waste heat to create steam, including the heat recovery portion of most combined cycle plants, did not report on the historical Form EIA-767 or EIA-923.

<sup>8</sup> The “All Other” firing configuration category includes, for example, arch firing and concentric firing. For a full list of firing method options for reporting on the historical Form EIA-767, see the form instructions, page xi, at [http://www.eia.gov/survey/form/eia\\_767/instructions\\_form.pdf](http://www.eia.gov/survey/form/eia_767/instructions_form.pdf).



**Table A.1. Sulfur Dioxide Uncontrolled Emission Factors**

Fuel, Code, Source and Emission Units			Combustion System Type / Firing Configuration							
Fuel	EIA Fuel Code	Source and Tables (As Appropriate)	Emissions Units Lbs = Pounds MMCF = Million Cubic Feet MG = Thousand Gallons	Cyclone Firing Boiler	Fluidized Bed Firing Boiler	Stoker Boiler	Tangential Firing Boiler	All Other Boiler Types	Combustion Turbine	Internal Combustion Engine
Distillate Fuel Oil*	DFO	Source: 2, Table 3.1-2a, 3.4-1 & 1.3-1	Lbs per MG	142.00	14.20	142.00	142.00	142.00	140.00	140.00
Jet Fuel*	JF	Assumed to have emissions similar to DFO.	Lbs per MG	142.00	14.20	142.00	142.00	142.00	140.00	140.00
Kerosene*	KER	Assumed to have emissions similar to DFO.	Lbs per MG	142.00	14.20	142.00	142.00	142.00	140.00	140.00
Other Biomass Liquids*	OBL	Source: 1 (including footnotes 3 and 16 within source)	Lbs per MG	142.00	14.20	142.00	142.00	142.00	140.00	140.00
Residual Fuel Oil*	RFO	Source: 2, Table 1.3-1; Combustion turbines and internal combustion engines assumed to have emissions similar to DFO.	Lbs per MG	157.00	15.70	157.00	157.00	157.00	140.00	140.00
Wood Waste Liquids*	WDL	Source: 1 (including footnotes 3 and 16 within source)	Lbs per MG	142.00	14.20	142.00	142.00	142.00	140.00	140.00
Waste Oil*	WO	Source: 2, Table 1.11-2; Combustion turbines and internal combustion engines assumed to have emissions similar to DFO.	Lbs per MG	147.00	14.70	147.00	147.00	147.00	140.00	140.00
Blast Furnace Gas	BFG	Sources: 1 (including footnote 7 within source); 2, Table 1.4-2 (including footnote d within source)	Lbs per MMCF	0.60	0.06	0.60	0.60	0.60	0.60	0.60
Landfill Gas	LFG	Sources: 1 (including footnote 7 within source); 2, Table 1.4-2 (including footnote d within source)	Lbs per MMCF	0.60	0.06	0.60	0.60	0.60	0.60	0.60
Natural Gas	NG	Sources: 1 (including footnote 7 within source); 2, Table 1.4-2 (including footnote d within source)	Lbs per MMCF	0.60	0.06	0.60	0.60	0.60	0.60	0.60
Other Biomass Gas	OBG	Sources: 1 (including footnote 7 within source); 2, Table 1.4-2 (including footnote d within source)	Lbs per MMCF	0.60	0.06	0.60	0.60	0.60	0.60	0.60
Other Gases	OG	Source: 1 (including footnote 7 within source)	Lbs per MMCF	0.60	0.06	0.60	0.60	0.60	0.60	0.60
Other	OTH	Assumed to have emissions similar to Natural Gas.	Lbs per MMCF	0.60	0.06	0.60	0.60	0.60	0.60	0.60
Propane Gas	PG	Sources: 1 (including footnote 7 within source); 2, Table 1.4-2 (including footnote d within source)	Lbs per MMCF	0.60	0.06	0.60	0.60	0.60	0.60	0.60
Coal-Derived Synthesis Gas	SGC	Assumed to have emissions similar to Natural Gas	Lbs per MMCF	0.60	0.06	0.60	0.60	0.60	0.60	0.60
Synthesis Gas from Petroleum Coke	SGP	Assumed to have emissions similar to Natural Gas	Lbs per MMCF	0.60	0.06	0.60	0.60	0.60	0.60	0.60
Agricultural Byproducts	AB	Source: 1	Lbs per ton	0.08	0.01	0.08	0.08	0.08	N/A	N/A
Bituminous Coal*	BIT	Source: 2, Table 1.1-3	Lbs per ton	38.00	3.80	38.00	38.00	38.00	N/A	N/A
Lignite Coal*	LIG	Source: 2, Table 1.7-1	Lbs per ton	30.00	3.00	30.00	30.00	30.00	N/A	N/A
Municipal Solid Waste	MSW	Source: 1	Lbs per ton	1.70	0.17	1.70	1.70	1.70	N/A	N/A
Other Biomass Solids	OBS	Source: 1 (including footnote 11 within source)	Lbs per ton	0.23	0.02	0.23	0.23	0.23	N/A	N/A
Petroleum Coke*	PC	Source: 1	Lbs per ton	39.00	3.90	39.00	39.00	39.00	N/A	N/A
Refined Coal*	RC	Assumed to have the emissions similar to Bituminous Coal.	Lbs per ton	38.00	3.80	38.00	38.00	38.00	N/A	N/A
Subbituminous Coal*	SUB	Source: 2, Table 1.1-3	Lbs per ton	35.00	3.50	35.00	35.00	35.00	N/A	N/A
Tire-Derived Fuel*	TDF	Source: 1 (including footnote 13 within source)	Lbs per ton	38.00	3.80	38.00	38.00	38.00	N/A	N/A
Waste Coal*	WC	Source: 1 (including footnote 20 within source)	Lbs per ton	30.00	3.00	30.00	30.00	30.00	N/A	N/A
Wood Waste Solids	WDS	Source: 1	Lbs per ton	0.29	0.08	0.08	0.29	0.29	N/A	N/A
Black Liquor	BLQ	Source: 1	Lbs per ton **	7.00	0.70	7.00	7.00	7.00	N/A	N/A
Sludge Waste	SLW	Source: 1 (including footnote 11 within source)	Lbs per ton **	2.80	0.28	2.80	2.80	2.80	N/A	N/A

Notes:

\* For these fuels, emissions are estimated by multiplying the emissions factor by the physical volume of fuel and the sulfur percentage of the fuel (other fuels do not require the sulfur percentage in the calculation). Note that EIA data do not provide the sulfur content of TDF. The value used (1.56 percent) is from U.S. EPA, Control of Mercury Emissions from Coal-Fired Electric Utility Boilers, April 2002, EPA-600/R-01-109, Table A-11 (available at: <http://www.epa.gov/appcdwww/aptb/EPA-600-R-01-109A.pdf>).

\*\* Although Sludge Waste and Black Liquor consist substantially of liquids, these fuels are measured and reported to EIA in tons.

Sources:

- Eastern Research Group, Inc. and E.H. Pechan & Associates, Inc., Documentation for the 2002 Electric Generating Unit National Emissions Inventory, Table 6, September 2004. Prepared for the U.S. Environmental Protection Agency, Emission Factor and Inventory Group (D205-01), Emissions, Monitoring and Analysis Division, Research Triangle Park
- U.S. Environmental Protection Agency, AP 42, Fifth Edition (Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Sources); available at: <http://www.epa.gov/ttn/chieff/ap42/>

**Table A.2. Nitrogen Oxides Uncontrolled Emission Factors**

Fuel, Code, Source and Emission Units				Combustion System Type / Firing Configuration									
Fuel	EIA Fuel Code	Source and Tables (As Appropriate)	Emissions Units Lbs = Pounds MMCF = Million Cubic Feet MG = Thousand Gallons				Tangential Boiler		All Other Boiler Types		Combustion Turbine	Internal Combustion Engine	
				Cyclone Firing Boiler	Fluidized Bed Firing Boiler	Stoker Boiler	Dry-Bottom Boilers	Wet-Bottom Boilers	Dry-Bottom Boilers	Wet-Bottom Boilers			
Distillate Fuel Oil	DFO	Source: 2, Tables 1.3-1, 3.1-1, & 3.4-1	Lbs per MG	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00	122.00	443.80
Jet Fuel	JF	Source: 2, Tables 1.3-1, 3.1-1, & 3.4-1	Lbs per MG	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00	118.80	432.00
Kerosene	KER	Source: 2, Tables 1.3-1, 3.1-1, & 3.4-1	Lbs per MG	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00	118.80	432.00
Other Biomass Liquids	OBL	Source: 1 (including footnote 3 within source); EIA estimates	Lbs per MG	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	112.30	408.30
Residual Fuel Oil	RFO	Source: 2, Table 1.3-1; EIA estimates	Lbs per MG	47.00	47.00	47.00	32.00	32.00	47.00	47.00	47.00	131.70	479.00
Wood Waste Liquids	WDL	Source: 1 (including footnote 16 within source); EIA estimates	Lbs per MG	5.43	5.43	5.43	5.43	5.43	5.43	5.43	5.43	230.50	838.10
Waste Oil	WO	Source: 2, Table 1.11-2; EIA estimates	Lbs per MG	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	92.20	335.20
Blast Furnace Gas	BFG	Sources: 1 (including footnote 7 within source); EIA estimates	Lbs per MMCF	15.40	15.40	15.40	15.40	15.40	15.40	15.40	15.40	30.40	256.55
Landfill Gas	LFG	Sources: 1 (including footnote 7 within source); EIA estimates	Lbs per MMCF	72.44	72.44	72.44	72.44	72.44	72.44	72.44	72.44	144.00	1,215.22
Natural Gas	NG	Source: 2, Tables 1.4-1, 3.1-1, and 3.4-1	Lbs per MMCF	280.00	280.00	280.00	170.00	170.00	280.00	280.00	280.00	328.00	2,768.00
Other Biomass Gas	OBG	Sources: 1 (including footnote 7 within source); EIA estimates	Lbs per MMCF	112.83	112.83	112.83	112.83	112.83	112.83	112.83	112.83	313.60	2,646.48
Other Gases	OG	Sources: 1 (including footnote 7 within source); EIA estimates	Lbs per MMCF	152.82	152.82	152.82	152.82	152.82	152.82	152.82	152.82	263.82	2,226.41
Other	OTH	Assumed to have emissions similar to Natural Gas.	Lbs per MMCF	280.00	280.00	280.00	170.00	170.00	280.00	280.00	280.00	328.00	2,768.00
Propane Gas	PG	Sources: 3; EIA estimates	Lbs per MMCF	522.26	522.26	522.26	522.26	522.26	522.26	522.26	522.26	803.36	6,779.57
Synthesis Gas from Petroleum Coke	SGC	Assumed to have emissions similar to Natural Gas	Lbs per MMCF	280.00	280.00	280.00	170.00	170.00	280.00	280.00	280.00	328.00	2,768.00
Coal-Derived Synthesis Gas	SGP	Assumed to have emissions similar to Natural Gas	Lbs per MMCF	280.00	280.00	280.00	170.00	170.00	280.00	280.00	280.00	328.00	2,768.00
Agricultural Byproducts	AB	Source: 1	Lbs per ton	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	N/A	N/A
Bituminous Coal	BIT	Source: 2, Table 1.1-3	Lbs per ton	33.00	5.00	11.00	10.00	14.00	12.00	31.00	31.00	N/A	N/A
Lignite Coal	LIG	Source: 2, Table 1.7-1	Lbs per ton	15.00	3.60	5.80	7.10	7.10	6.30	6.30	6.30	N/A	N/A
Municipal Solid Waste	MSW	Source: 1	Lbs per ton	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	N/A	N/A
Other Biomass Solids	OBS	Source: 1 (including footnote 11 within source)	Lbs per ton	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	N/A	N/A
Petroleum Coke	PC	Source: 1 (including footnote 8 within source)	Lbs per ton	21.00	5.00	21.00	21.00	21.00	21.00	21.00	21.00	N/A	N/A
Refined Coal	RC	Assumed to have the emissions similar to Bituminous Coal.	Lbs per ton	33.00	5.00	11.00	10.00	14.00	12.00	31.00	31.00	N/A	N/A
Subbituminous Coal	SUB	Source: 2, Table 1.1-3	Lbs per ton	17.00	5.00	8.80	7.20	7.20	7.40	24.00	24.00	N/A	N/A
Tire-Derived Fuel	TDF	Source: 1 (including footnote 13 within source)	Lbs per ton	33.00	5.00	11.00	10.00	14.00	12.00	31.00	31.00	N/A	N/A
Waste Coal	WC	Source: 1 (including footnote 20 within source)	Lbs per ton	15.00	3.60	5.80	7.10	7.10	6.30	6.30	6.30	N/A	N/A
Wood Waste Solids	WDS	Source: 1	Lbs per ton	2.51	2.00	1.50	2.51	2.51	2.51	2.51	2.51	N/A	N/A
Black Liquor	BLQ	Source: 1	Lbs per ton **	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	N/A	N/A
Sludge Waste	SLW	Source: 1 (including footnote 11 within source)	Lbs per ton **	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	N/A	N/A

Notes:

\*\* Although Sludge Waste and Black Liquor consist substantially of liquids, these fuels are measured and reported to EIA in tons.

Sources:

- Eastern Research Group, Inc. and E.H. Pechan & Associates, Inc., Documentation for the 2002 Electric Generating Unit National Emissions Inventory, Table 6, September 2004. Prepared for the U.S. Environmental Protection Agency, Emission Factor and Inventory Group (D205-01), Emissions, Monitoring and Analysis Division, Research Triangle Park
- U.S. Environmental Protection Agency, AP 42, Fifth Edition (Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Sources); available at: <http://www.epa.gov/ttn/chief/ap42/>
- U.S. Environmental Protection Agency, Factor Information Retrieval (FIRE) Database, Version 6.25; available at: <http://www.epa.gov/ttn/chief/software/fire/index.html>

**Table A.3. Carbon Dioxide Uncontrolled Emission Factors**

Fuel	EIA Fuel Code	Factor (Kilograms of CO2 Per Million Btu)**	Notes
Bituminous Coal	BIT	93.30	
Distillate Fuel Oil	DFO	73.16	
Geothermal	GEO	7.71	
Jet Fuel	JF	70.90	
Kerosene	KER	72.30	
Lignite Coal	LIG	97.70	
Municipal Solid Waste	MSW	41.69	
Natural Gas	NG	53.07	
Petroleum Coke	PC	102.10	
Propane Gas	PG	63.07	
Refined Coal	RC	93.30	Assumed to have emissions similar to Bituminous Coal.
Residual Fuel Oil	RFO	78.79	
Synthesis Gas Derived from Coal	SGC		* Factor is based on the fuel source used to produce the synthesis gas
Synthesis Gas Derived from Petroleum Coke	SGP		* Factor is based on the fuel source used to produce the synthesis gas
Subbituminous Coal	SUB	97.20	
Tire-Derived Fuel	TDF	85.97	
Waste Coal	WC	93.30	Assumed to have emissions similar to Bituminous Coal.
Waste Oil	WO	95.25	

Notes:

\* Factors for synthesis gas derived from coal and synthesis gas derived from petroleum coke are based on the fuel source used to produce the synthesis gas.

\*\* CO2 factors do not vary by combustion system type or boiler firing configuration.

Source: Energy Information Administration estimates:

[http://www.eia.gov/environment/emissions/co2\\_vol\\_mass.cfm](http://www.eia.gov/environment/emissions/co2_vol_mass.cfm)

**Table A.4. Nitrogen Oxides Control Technology Emissions Reduction Factors**

Nitrogen Oxides Control Technology	EIA Code	Reduction Factor							
		Coal	Residual Fuel Oil and Distillate Fuel Oil	Natural Gas	Wood	Other Solids	Other Liquids	Other Gases	Other Fuels
Burner Out of Service	BO	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%
Low Excess Air	LA	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%
Biased Firing (Alternative Burners)	BF	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%
Overfire Air	OV	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%
Advanced Overfire Air	AA	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%
Low NOx Burners	LN	45.00%	45.00%	50.00%	45.00%	45.00%	45.00%	50.00%	45.00%
Fuel Reburning	FU	55.00%	55.00%	55.00%	55.00%	55.00%	55.00%	55.00%	55.00%
Selective Noncatalytic Reduction	SN	45.00%	32.50%	32.50%	55.00%	45.00%	32.50%	32.50%	45.00%
Selective Catalytic Reduction	SR	80.00%	80.00%	85.00%	80.00%	80.00%	80.00%	85.00%	80.00%
Ammonia Injection	NH3	62.50%	56.25%	58.75%	67.50%	62.50%	56.25%	58.75%	62.50%
Flue Gas Recirculation	FR	45.00%	45.00%	45.00%	45.00%	45.00%	45.00%	45.00%	45.00%
Water Injection	H2O	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%
Steam Injection	STM	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%
Other	OT	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%

Nitrogen Oxides Control Technology	EIA Code	Source of Selected Reduction Factor							
		Coal	Residual Fuel Oil and Distillate Fuel Oil	Natural Gas	Wood	Other Solids	Other Liquids	Other Gases	Other Fuels
Burner Out of Service	BO	Source: 1	Source: 2	Source: 9	Source: 9	Source: 9	Source: 10	Source: 11	Source: 9
Low Excess Air	LA	Source: 1	Source: 2	Source: 9	Source: 9	Source: 9	Source: 10	Source: 11	Source: 9
Biased Firing (Alternative Burners)	BF	Source: 1	Source: 2	Source: 9	Source: 9	Source: 9	Source: 10	Source: 11	Source: 9
Overfire Air	OV	Source: 1	Source: 9	Source: 9	Source: 9	Source: 9	Source: 10	Source: 11	Source: 9
Advanced Overfire Air	AA	Source: 1	Source: 9	Source: 9	Source: 9	Source: 9	Source: 10	Source: 11	Source: 9
Low NOx Burners	LN	Source: 1	Source: 2	Source: 3	Source: 9	Source: 9	Source: 10	Source: 11	Source: 9
Fuel Reburning	FU	Source: 1	Source: 9	Source: 9	Source: 9	Source: 9	Source: 10	Source: 11	Source: 9
Selective Noncatalytic Reduction	SN	Source: 1	Source: 2	Source: 4	Source: 5	Source: 9	Source: 10	Source: 11	Source: 9
Selective Catalytic Reduction	SR	Source: 1	Source: 2	Source: 4	Source: 9	Source: 9	Source: 10	Source: 11	Source: 9
Ammonia Injection	NH3	Source: 6	Source: 6	Source: 6	Source: 6	Source: 9	Source: 10	Source: 11	Source: 9
Flue Gas Recirculation	FR	Source: 10	Source: 2	Source: 10	Source: 10	Source: 9	Source: 10	Source: 11	Source: 9
Water Injection	H2O	Source: 8	Source: 8	Source: 8	Source: 8	Source: 9	Source: 10	Source: 11	Source: 9
Steam Injection	STM	Source: 8	Source: 8	Source: 8	Source: 8	Source: 9	Source: 10	Source: 11	Source: 9
Other	OT	Source: 7	Source: 7	Source: 7	Source: 7	Source: 9	Source: 10	Source: 11	Source: 9

Source: U.S. Environmental Protection Agency, AP 42, Fifth Edition (Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Sources); available at: <http://www.epa.gov/ttn/chief/ap42/>

Source 1: AP-42, Table 1.1-2

Source 2: AP-42, Section 1.3.4.3 Text

Source 3: AP-42, Table 1.4-1

Source 4: AP-42, Section 1.4.4 Text

Source 5: AP-42, Section 1.6.4 Text

Source 6: Average of Selective Catalytic Reduction and Selective Noncatalytic Reduction

Source 7: Minimum of other technologies for fuel group

Source 8: Matches Other selection

Source 9: Assumed to have reduction similar to coal

Source 10: Assumed to have reduction similar to Residual Fuel Oil and Distillate Fuel Oil

Source 11: Assumed to have reduction similar to natural gas

**Notes:**

Coal reduction factors are applied to Bituminous Coal, Subbituminous Coal, Lignite Coal, and Waste Coal.

Wood reduction factors are applied to Wood Waste Solids, Black Liquor, and Wood Waste Liquids.

Other Solids reduction factors are applied to Petroleum Coke, Municipal Solid Waste, Tire-Derived Fuels, Sludge Waste, Agricultural Byproducts, and Other Biomass Solids.

Other Liquids reduction factors are applied to Jet Fuel, Kerosene, Waste Oil, and Other Biomass Liquids.

Other Gases reduction factors are applied to Blast Furnace Gas, Landfill Gas, Propane Gas, Coal-Derived Synthesis Gas, Synthesis Gas from Petroleum Coke, Other Biomass Gas, and Other Gas.

**Table A.5. Unit of Measure Equivalents**

<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
U.S. Dollar	1,000 (One Thousand) Mills
U.S. Cent	10 (Ten) Mills
Barrel of Oil	42 Gallons

Source: U.S. Energy Information Administration

# EIA Electric Industry Data Collection

