## Monthly Flash Estimates of

# **Electric Power Data**

## Data for: November 2008

## Section 1. Commentary

Throughout the contiguous United States, near normal temperatures were observed for the third straight month in November 2008. However, regional differences in temperature occurred as the southeastern and central United States experienced colder than normal temperatures while much of the West, Northwest, and Southwest experienced warmer than normal temperatures. Accordingly, heating degree days for the contiguous United States as a whole were 0.4 percent below the average for the month of November 2008 and 3.1 percent above November 2007.

Retail sales of electricity decreased 1.6 percent compared to November 2007. This decrease in retail sales continues the downward trend observed in previous months and can be attributed to the economic downturn being experienced in the United States. However, the average U.S. retail price of electricity continued to show an upward trend in November 2008 from the previous year, increasing 8.5 percent from November 2007. This increase in average U.S. retail price from November 2007 can be attributed to higher fuel costs involved in the generation of electricity. For the 12-month period ending November 2008, the U.S. average retail price of electricity increased 6.8 percent over the previous 12-month period ending November 2007.

In November 2008, total electric power generation in the United States decreased by 0.6 percent from November 2007. The change in electric power generation does not necessarily coincide with the change in retail sales of electricity because utility billing cycles tend to lag electricity production in many areas. Conventional hydroelectric generation was 8.6 percent higher than for November 2007 as drought conditions across the country were more prevalent during this time last year. For the 12-month period ending November 2008, conventional hydroelectric generation increased by 4.1 percent over the previous 12-month period ending November 2007.

Natural gas and petroleum liquids generation were both up when compared to November 2007, increasing by 2.5 percent and 7.5 percent, respectively, from a year ago. This increase in natural gas and petroleum liquids generation occurred because these two fuel types replaced the 2.7 percent decrease in November 2007-to-November 2008 coal generation. This replacement of coal generation in November 2008 by an increase in natural gas and petroleum liquids generation partially explains the increase in the average U.S. retail price of electricity from November 2007.

For the 12-month period ending November 2008, coal, natural gas, and petroleum liquids generation decreased by 1.0 percent, 0.9 percent, and 38.0 percent, respectively, over the previous 12-month period ending November 2007. Accordingly, coal, natural gas, and petroleum liquids consumption decreased by 0.4 percent, 5.1 percent, and 38.4 percent, respectively, over the previous 12-month period ending November 2007.

As the United States entered into the final month of the seasonal build-up of coal, total coal stocks continued to show an upward trend, increasing by 5.4 percent from the previous month. The October 2008-to-November 2008 change in coal stocks consisted of a 5.3-percent increase for bituminous coal and 5.8-percent increase for subbituminous coal. Petroleum liquids stocks were 1.3 percent higher than October 2008.

#### References for weather data:

http://www.ncdc.noaa.gov/oa/climate/research/2008/nov/national.html

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Table 2.1 Key Generation Indicators									
	TotalNuclearHydroelectriGenerationGenerationGeneration								
Total Change From:									
October 2008	-2.2%	1.0%	3.9%						
November 2007	-0.6%	-2.4%	8.6%						
Year to Date	-1.1%	-0.2%	5.8%						
Latest 12 Month Period*	-0.7%	0.0%	4.1%						

## Table 2.2 Key Consumption and Stocks Indicators

	Natural Gas Consumption	Coal Consumption	Coal Stocks	
Total Change From:				
October 2008	-14.6%	0.8%	5.4%	
November 2007	-2.4%	-1.8%	7.5%	
Year to Date	-7.1%	-0.6%	n/a	
Latest 12 Month Period*	-5.1%	-0.4%	n/a	

\* Change in total consumption or generation for the latest 12 month period (December 2007 to November 2008) compared to the prior 12 month period (December 2006 to November 2007).

#### Net Generation (Total, All Sectors)

Table 3.1 Total Net Generation (All Sectors)											
Net Generation (thousand megawatthours)	Nov-08	Nov-07	% Change	Oct-08	% Change						
Coal	155,288	159,525	-2.7%	152,925	1.5%						
Petroleum Liquids	2,117	1,969	7.5%	1,859	13.9%						
Natural Gas	61,659	60,159	2.5%	72,515	-15.0%						
Nuclear	63,408	64,969	-2.4%	62,793	1.0%						
Hydroelectric Conventional	17,081	15,727	8.6%	16,436	3.9%						
All Other	12,103	11,212	7.9%	12,084	0.2%						
Total (All Energy Sources)	311,657	313,561	-0.6%	318,613	-2.2%						

### Fossil Fuel Consumption for Electric Generation (Total, All Sectors)

Table 3.2 Total Consumption of Fossil Fuels for Electric Generation (All Sectors)											
Consumption of Fossil Fuels Nov-08 Nov-07 % Change Oct-08 % Change											
Coal (Thousand Short Tons)	81,453	82,928	-1.8%	80,843	0.8%						
Petroleum Liquids (Thousand Barrels)	3,645	3,519	3.6%	3,231	12.8%						
Natural Gas (Million Cubic Feet)         489,106         500,908         -2.4%         572,761         -14.6%											

### Fossil Fuel Stocks (Electric Power Sector)

Table 3.3 Total Fossil Fuel Stocks (Electric Power Sector)											
Fossil Fuel Stocks	Fossil Fuel Stocks         Nov-08         Nov-07         % Change         Oct-08         % Change										
Coal (Thousand Short Tons) 166,085 154,551 7.5% 157,552											
Petroleum Liquids (Thousand Barrels) 40,599 43,566 -6.8% 40,082 1.3%											

Notes:

- Coal consumption and generation includes subbituminous coal, bituminous coal, anthracite, lignite, waste coal and coal synfuel.

- Coal stocks include the coal categories listed immediately above except for waste coal. The bituminous category includes anthracite and coal synfuel.

- Petroleum Liquids consumption and generation includes distillate oil, residual oil, jet fuel, kerosene and waste oil.

- Petroleum Liquids stocks includes the oil categories listed immediately above, except waste oil is excluded from data collected for January 2004 and subsequently. Data prior to 2004 contains small quantities of waste oil.

- The "All Other" generation category includes biomass, solar, wind, geothermal, hydroelectric pumped storage, petroleum coke, other gases, and other miscellaneous energy sources.

#### Section 4. Net Generation Trends

#### Data for: November 2008

#### Table 4.1 Trends in Total Generation by Fuel (All Sectors) Millions of Kilowatthours

Year-to-Date Comparison												
	Starting Month	Ending Month	Coal	Petroleum Liquids	Natural Gas	Nuclear	Hydroelectric Conventional	All Other	Total			
Current Period	January 2008	November 2008	1,824,424	28,410	808,424	732,692	243,220	135,249	3,772,419			
Prior Period	January 2007	November 2007	1,845,881	47,191	826,515	734,504	229,814	128,878	3,812,783			
Percent Difference			-1.2%	-39.8%	-2.2%	-0.2%	5.8%	4.9%	-1.1%			

#### Comparison to Prior Twelve-Month Period

	Starting Month	Ending Month	Coal	Petroleum Liquids	Natural Gas	Nuclear	Hydroelectric Conventional	All Other	Total
Current Period	December 2007	November 2008	1,999,115	31,175	875,120	804,674	261,718	147,348	4,119,150
Prior Period	December 2006	November 2007	2,019,390	50,296	882,644	804,994	251,410	140,333	4,149,067
Percent Difference			-1.0%	-38.0%	-0.9%	0.0%	4.1%	5.0%	-0.7%



-Hydroelectric Conventional

- - Nuclear -

#### Table 5.1 Trends in Fossil Fuel Consumption For Electric Generation, Total (All Sectors)

Year-to-Date Comparison											
	-										
	Starting Month	Ending Month	Coal (Thousand Tons)	Petroleum Liquids (Thousand Barrels)	Natural Gas (Million Cubic Feet)						
Current Period	January 2008	November 2008	955,871	48,821	6,457,936						
Prior Period	January 2007	November 2007	961,540	82,094	6,954,498						
Percent Difference			-0.6%	-40.5%	-7.1%						

Comparison to Prior 12 Month Period											
			1								
	Starting Month	Ending Month	Coal (Thousand Tons)	Petroleum Liquids (Thousand Barrels)	Natural Gas (Million Cubic Feet)						
Current Period	December 2007	November 2008	1,047,676	53,732	7,010,884						
Prior Period	December 2006	November 2007	1,051,552	87,239	7,389,887						
Percent Difference			-0.4%	-38.4%	-5.1%						







#### Section 6. Fossil Fuel Stock Trends

Table 6.1 Trends in Total Fossil Fuel Stocks (Electric Power Sector)											
Fossil Fuel Stocks Nov-08 Nov-07 % Change Oct-08 % Change											
Coal, Total (Thousand Short Tons)	166,085	154,551	7.5%	157,552	5.4%						
Bituminous (includes anthracite and coal synfuel)	66,294	68,307	-2.9%	62,943	5.3%						
Subbituminous	95,225	81,833	16.4%	90,018	5.8%						
Lignite	4,566	4,411	3.5%	4,591	-0.5%						
Petroleum Liquids (Thousand Barrels)	40,599	43,566	-6.8%	40,082	1.3%						







## Section 7. Month-to-Month Comparisons: Electric Power Retail Sales and Average Prices

### **Retail Sales**

Table 7.1 Retail Sales (Million kWh)											
Ultimate Customer	Nov-08	Nov-07	% Change	Oct-08	% Change						
Residential	96,203	95,892	0.3%	96,607	-0.4%						
Commercial	104,382	104,651	-0.3%	112,892	-7.5%						
Industrial	78,700	83,188	-5.4%	83,007	-5.2%						
Transportation	Transportation 614 637 -3.5% 628 -2.2%										
All Sectors	279,899	284,368	-1.6%	293,134	-4.5%						

## **Average Retail Price**

Table 7.2 Average Retail Price (Cents/kWh) U.S. Total									
Ultimate Customer	Nov-08	Nov-07	% Change	Oct-08	% Change				
Residential	11.47	10.69	7.3%	11.86	-3.3%				
Commercial	10.16	9.60	5.8%	10.49	-3.1%				
Industrial	7.07	6.22	13.7%	7.24	-2.3%				
Transportation	10.71	9.46	13.2%	10.91	-1.8%				
All Sectors	9.74	8.98	8.5%	10.02	-2.8%				

Table 7.3 Average Retail Price (Cents/kWh) by Census Division										
Census Division		Residential			All Sectors					
	Nov-08	Nov-07	% Change	Nov-08	Nov-07	% Change				
New England	18.00	16.18	11.2%	16.28	14.62	11.4%				
Middle Atlantic	14.29	13.94	2.5%	12.47	12.11	3.0%				
East North Central	10.84	9.99	8.5%	8.78	8.07	8.8%				
West North Central	8.56	7.98	7.3%	6.87	6.34	8.4%				
South Atlantic	10.85	10.10	7.4%	9.44	8.60	9.8%				
East South Central	9.91	8.59	15.4%	8.35	6.91	20.8%				
West South Central	12.06	11.00	9.6%	9.88	9.02	9.5%				
Mountain	9.43	8.94	5.5%	7.66	7.38	3.8%				
Pacific Contiguous	11.94	11.60	2.9%	10.79	10.36	4.2%				
Pacific Noncontiguous	25.88	21.76	18.9%	23.77	19.62	21.2%				
U.S. Total	11.47	10.69	7.3%	9.74	8.98	8.5%				

#### Section 8. Retail Sales Trends

## Table 8.1 Trends in Total Retail Sales of Electricity (All Sectors) Millions of Kilowatthours

Year-to-Date Comparison										
	1		1		1		1			
	Starting Month	Ending Month	Residential	Commercial	Industrial	Transportation	Total (All Sectors)			
Current Period	January 2008	November 2008	1,261,860	1,249,002	927,192	6,977	3,445,031			
Prior Period	January 2007	November 2007	1,274,544	1,236,348	923,809	7,118	3,441,819			
Percent Difference			-1.0%	1.0%	0.4%	-2.0%	0.1%			

#### Comparison to Prior Twelve-Month Period

	Starting Month	Ending Month	Residential	Commercial	Industrial	Transportation	Total (All Sectors)
Current Period	December 2007	November 2008	1,379,227	1,355,327	1,009,211	7,596	3,751,361
Prior Period	December 2006	November 2007	1,389,425	1,341,021	1,003,746	7,746	3,741,938
Percent Difference			-0.7%	1.1%	0.5%	-1.9%	0.3%





## Section 9. Average Retail Price Trends

## Table 9.1 Trends in Average Retail Price of Electricity (All Sectors) Cents per Kilowatthour

Year-to-Date Comparison										
		1			n		1			
	Starting Month	Ending Month	Residential	Commercial	Industrial	Transportation	Total (All Sectors)			
Current Period	January 2008	November 2008	11.35	10.32	7.02	11.37	9.81			
Prior Period	January 2007	November 2007	10.66	9.69	6.37	10.43	9.16			
Percent Difference			6.5%	6.5%	10.2%	9.0%	7.1%			

Comparison to Prior 12 Month Period									
	Starting Month	Ending Month	Residential	Commercial	Industrial	Transportation	Total (All Sectors)		
Current Period	December 2007	November 2008	11.26	10.25	6.95	11.26	9.73		
Prior Period	December 2006	November 2007	10.60	9.64	6.34	10.36	9.11		
Percent Difference			6.2%	6.3%	9.6%	8.7%	6.8%		





#### Section 10. Heating and Cooling Degree Days

Data for: November 2008

#### Table 10.1 Degree Days

Heating Degree Days					Cooling Degree Days				
	Month	Heating Degree Days	Normal Heating Degree Days	Deviation From Normal	Pecent Difference From Normal	Cooling Degree Days	Normal Cooling Degree Days	Deviation From Normal	Pecent Difference From Normal
Current Period	November 2008	537	539	-2	-0.4%	11	15	-4	-26.7%
Prior Period	November 2007	521	539	-18	-3.3%	16	15	1	6.7%
Percent Difference		3.1%				-31.3%			

#### Table 10.2 Trends in Heating and Cooling Degree Days

Year-to-Date Comparison				Comparison to Prior 12 Month Period					
	Starting Month	Ending Month	Heating Degree Days	Cooling Degree Days	Starting Month Ending Month			Heating Degree Days	Cooling Degree Days
Current Period	January 2008	November 2008	3,671	1,270	Current Period	December 2007	November 2008	4,471	1,282
Prior Period	January 2007	November 2007	3,455	1,383	Prior Period	December 2006	November 2007	4,145	1,394
Percent Difference			6.3%	-8.2%	Percent Difference	e		7.9%	-8.0%





## Section 11. Documentation

**General:** The *Monthly Flash Estimates of Electric Power Data* (*"Flash Estimates"*) is prepared by the Electric Power Division, Office of Coal, Nuclear, Electric and Alternate Fuels, Energy Information Administration (EIA), U.S. Department of Energy. Data published in the *Flash Estimates* are compiled from the following sources: Form EIA-826, "Monthly Electric Utility Sales and Revenues with State Distributions Report," and Form EIA-923, "Power Plant Operations Report."

The survey data is collected monthly from a statistically-derived sample of power plants and electricity retailers. The nominal sample sizes are: for the Form EIA-826, approximately 450 electric utilities and other energy service providers; for the Form EIA-923, approximately 1590 plants. With the exception of stocks, a regression-based method is used to estimate totals from the sample. Essentially complete samples are collected for the *Electric Power Monthly*, which includes State-level values. The *Flash Estimates* is based on an incomplete sample and includes only national-level estimates. Stocks data for out-of-sample plants and any monthly non-respondents are estimated by bringing forward the last reported value for a plant.

For complete documentation on EIA monthly electric data collection and estimation, see the Technical Notes to the *Electric Power Monthly*, at: http://www.eia.doe.gov/cneaf/electricity/epm/epm.pdf. Values displayed in the *Flash Estimates* may differ from values published in the *Electric Power Monthly* due to independent rounding. This report represents the EIA's initial release for national level electricity data. Updated information will be released in the *Electric Power Monthly*.

**Sector definitions**: The Electric Power Sector comprises electricity-only and CHP plants within the North American Industrial Classification System 22 category whose primary business is to sell electricity, or electricity and heat, to the public (i.e., electric utility plants and Independent Power Producers (IPP), including IPP plants that operate as combined heat and power producers). The All Sectors totals include the Electric Power Sector and the Commercial and Industrial sectors (Commercial and Industrial power producers are primarily CHP plants).

#### Composition of fuel categories: See notes on page 3.

**Degree Days:** Notes: Degree-days are relative measurements of outdoor air temperature used as an index for heating and cooling energy requirements. Heating degree-days are the number of degrees that the daily average temperature falls below 65° F. Cooling degree-days are the number of degrees that the daily average temperature rises above 65° F. The daily average temperature is the mean of the maximum and minimum temperatures in a 24-hour period. For example, a weather station recording an average daily temperature of 40° F would report 25 heating degree-days for that day (and 0 cooling degree-days). If a weather station recorded an average daily temperature of 78° F, cooling degree-days for that station would be 13 (and 0 heating degree days).