

# Monthly Flash Estimates of Electric Power Data

Data for:  
October 2008

## Section 1. Commentary

For the second straight month, near normal temperatures were observed throughout the contiguous United States in October 2008. On the regional level, temperatures did deviate above normal in the western United States while parts of the South, Southeast, and Northeast experienced below average temperatures. Accordingly, heating degree days for the contiguous United States as a whole were 1.4 percent above the average for the month of October, and 63.4 percent above a much warmer October 2007.

In October 2008, retail sales of electricity decreased 4.4 percent compared to October 2007, which had warmer temperatures and subsequent higher demand for electricity. The average U.S. retail price of electricity continued to show an upward trend in October 2008, increasing 9.3 percent from October 2007. However, as the contiguous United States entered autumn and temperatures began to moderate, the month-to-month change in average U.S. retail price showed a 2.7-percent decrease from September 2008. For the 12-month period ending October 2008, the U.S. average retail price of electricity increased by 0.6 percent over the previous 12-month period ending October 2007.

Total electric power generation in the United States decreased 4.0 percent when compared to October 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. The western U.S. continued to experience below average rainfall totals, with the Northwest recording its seventeenth driest October on record. Conventional hydroelectric generation was 10.9 percent higher than for October 2007 as drought conditions across the country were more prevalent during this time last year. For the 12-month period ending October 2008, conventional hydroelectric generation increased by 1.7 percent over the previous 12-month period ending October 2007.

Due to the much cooler temperatures observed in October 2008, natural gas and petroleum liquids generation were both down 7.0 percent and 47.4 percent, respectively, from a year ago. For the 12-month period ending October 2008, natural gas generation decreased by 0.2 percent and petroleum liquids generation decreased by 39.9 percent over the previous 12-month period ending October 2007. Accordingly, natural gas consumption decreased by 3.9 percent and petroleum liquids consumption decreased 39.9 percent over the previous 12-month period ending October 2007.

The seasonal build-up of coal in the United States continued in October 2008, as total coal stocks in the electric power sector were up 8.7 percent from the previous month. The October 2008-to-September 2008 change in coal stocks consisted of a 14.4-percent increase for bituminous coal and 5.0-percent increase for subbituminous coal. Petroleum liquids stocks were 1.1 percent higher than September 2008.

References for weather data:

<http://www.ncdc.noaa.gov/oa/climate/research/2008/oct/national.html>

## Table of Contents

1. Commentary	Page 1
2. Key Indicators of Generation, Consumption & Stocks	Page 2
3. Month-to-Month Comparisons: Generation, Consumption and Stocks (Total)	Page 3
4. Net Generation Trends	Page 4
5. Fossil Fuel Consumption Trends	Page 5
6. Fossil Fuel Stock Trends	Page 6
7. Month-to-Month Comparisons: Electric Power Retail Sales and Average Prices	Page 7
8. Retail Sales Trends	Page 8
9. Average Retail Price Trends	Page 9
10. Heating and Cooling Degree Days	Page 10
11. Documentation	Page 11

This report was prepared by the Energy Information Administration, the independent statistical and analytical agency within the U.S. Department of Energy. The information contained herein should be attributed to the Energy Information Administration and should not be construed as advocating or reflecting any policy of the Department of Energy or any other organization. For additional information, contact Chris Cassar at 202-586-5448, or at Christopher.Cassar@eia.doe.gov.



## Section 2. Key Indicators of Generation, Consumption & Stocks

Data for:  
October 2008

### Table 2.1 Key Generation Indicators

	Total Generation	Nuclear Generation	Hydroelectric Generation
<b>Total Change From:</b>			
September 2008	-5.1%	-6.3%	-0.6%
October 2007	-4.0%	1.8%	10.9%
<b>Year to Date</b>	-1.1%	0.0%	5.6%
<b>Latest 12 Month Period*</b>	-0.6%	0.6%	1.7%

### Table 2.2 Key Consumption and Stocks Indicators

	Natural Gas Consumption	Coal Consumption	Coal Stocks
<b>Total Change From:</b>			
September 2008	-8.1%	-6.1%	8.7%
October 2007	-13.8%	-4.4%	4.3%
<b>Year to Date</b>	-7.5%	-0.5%	n/a
<b>Latest 12 Month Period*</b>	-3.9%	-0.2%	n/a

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

## Section 3. Month-to-Month Comparisons: Generation, Consumption and Stocks (Total)

Data for:  
October 2008

### Net Generation (Total, All Sectors)

Table 3.1 Total Net Generation (All Sectors)

Net Generation (thousand megawatthours)	Oct-08	Oct-07	% Change	Sep-08	% Change
Coal	153,538	162,642	-5.6%	162,207	-5.3%
Petroleum Liquids	1,869	3,551	-47.4%	2,994	-37.6%
Natural Gas	72,809	78,321	-7.0%	77,490	-6.0%
Nuclear	62,793	61,690	1.8%	67,003	-6.3%
Hydroelectric Conventional	16,439	14,826	10.9%	16,530	-0.6%
All Other	11,877	11,579	2.6%	10,360	14.6%
Total (All Energy Sources)	319,325	332,609	-4.0%	336,584	-5.1%

### 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	Oct-08	Oct-07	% Change	Sep-08	% Change
Coal (Thousand Short Tons)	80,948	84,679	-4.4%	86,173	-6.1%
Petroleum Liquids (Thousand Barrels)	3,215	6,176	-47.9%	5,052	-36.4%
Natural Gas (Million Cubic Feet)	571,997	663,528	-13.8%	622,656	-8.1%

### Fossil Fuel Stocks (Electric Power Sector)

Table 3.3 Total Fossil Fuel Stocks (Electric Power Sector)

Fossil Fuel Stocks	Oct-08	Oct-07	% Change	Sep-08	% Change
Coal (Thousand Short Tons)	157,585	151,141	4.3%	144,948	8.7%
Petroleum Liquids (Thousand Barrels)	40,144	42,254	-5.0%	39,710	1.1%

#### 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:  
October 2008

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

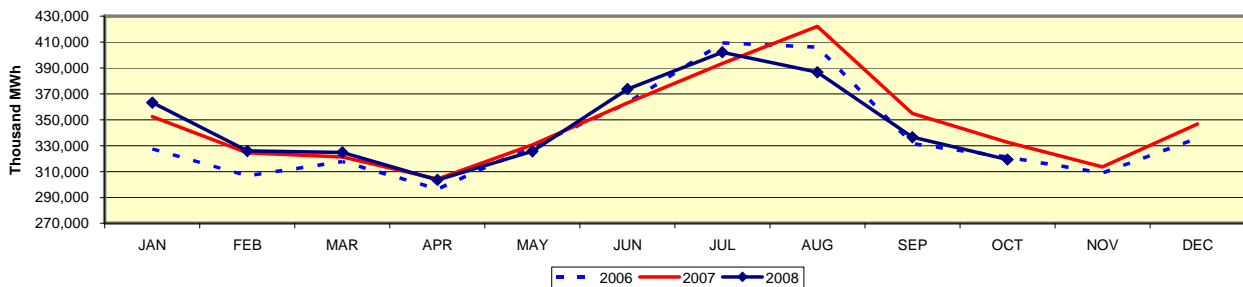
### Year-to-Date Comparison

	Starting Month	Ending Month	Coal	Petroleum Liquids	Natural Gas	Nuclear	Hydroelectric Conventional	All Other	Total
<b>Current Period</b>	January 2008	October 2008	1,669,748	26,302	747,059	669,283	226,141	122,941	3,461,474
<b>Prior Period</b>	January 2007	October 2007	1,686,356	45,222	766,356	669,536	214,087	117,665	3,499,222
<b>Percent Difference</b>			-1.0%	-41.8%	-2.5%	0.0%	5.6%	4.5%	-1.1%

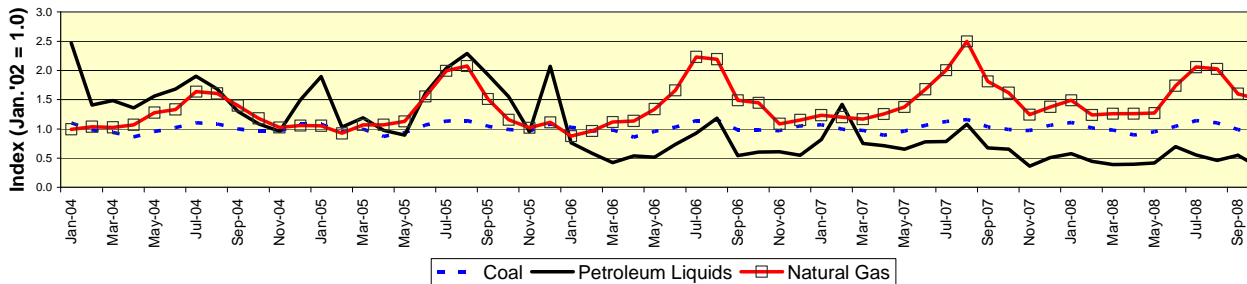
### Comparison to Prior Twelve-Month Period

	Starting Month	Ending Month	Coal	Petroleum Liquids	Natural Gas	Nuclear	Hydroelectric Conventional	All Other	Total
<b>Current Period</b>	November 2007	October 2008	2,003,964	31,037	873,914	806,235	260,367	146,249	4,121,766
<b>Prior Period</b>	November 2006	October 2007	2,019,305	51,682	875,924	801,418	255,955	140,380	4,144,664
<b>Percent Difference</b>			-0.8%	-39.9%	-0.2%	0.6%	1.7%	4.2%	-0.6%

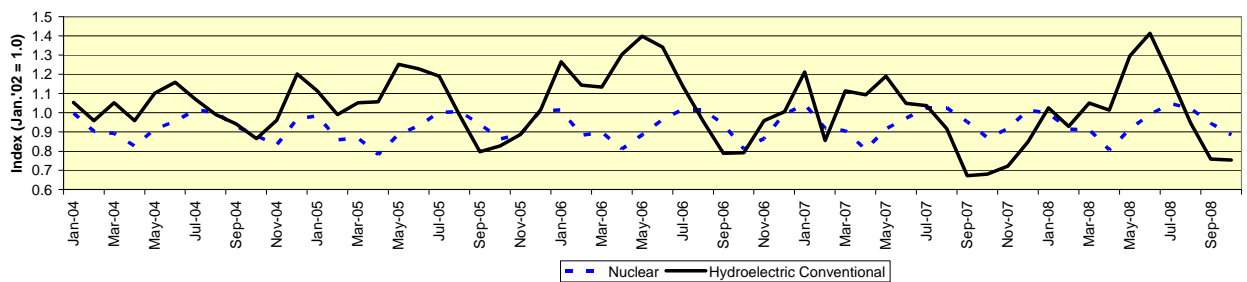
**Figure 4.1 Trends in Total Net Generation (All Sectors): 2006, 2007, and 2008**



**Figure 4.2 Fossil Fuel Generation Trends (Values as Indices, Jan. 2002 = 1.0)**



**Figure 4.3 Nuclear and Hydroelectric Generation Trends (Values as Indices, Jan. 2002 = 1.0)**



# Section 5. Fossil Fuel Consumption Trends

Data for:  
October 2008

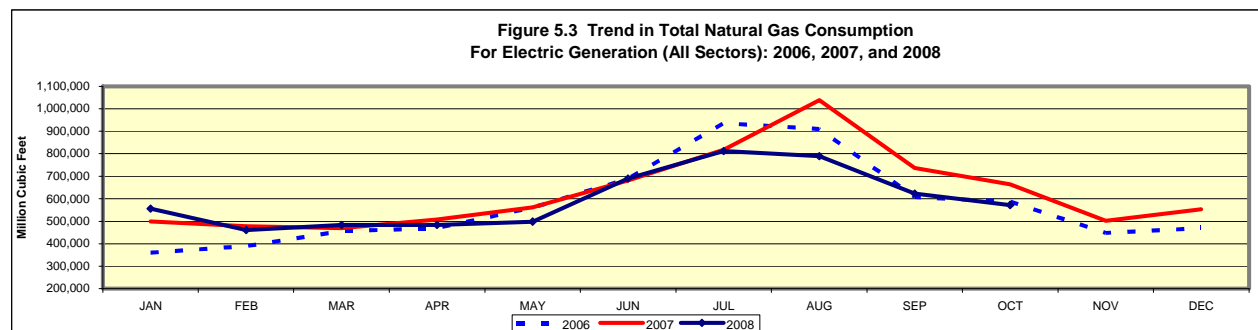
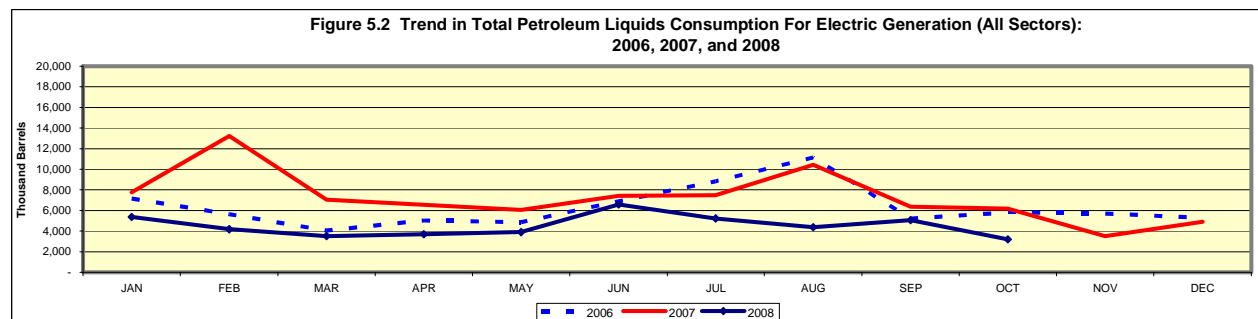
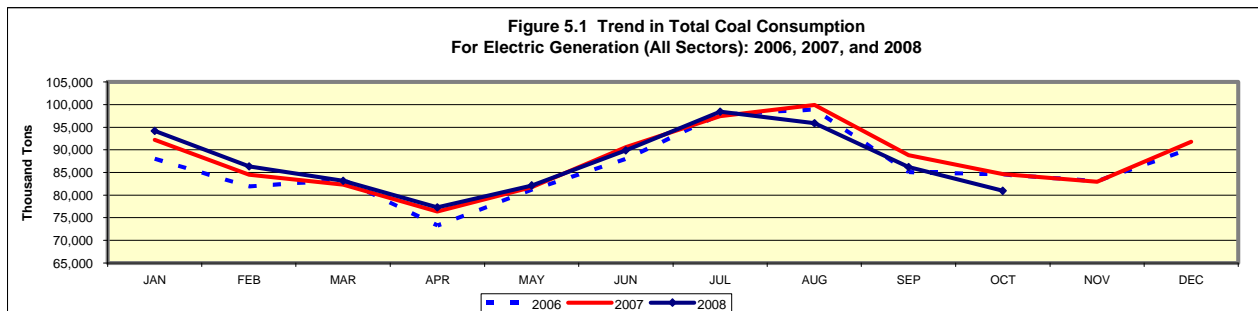
**Table 5.1 Trends in Fossil Fuel Consumption For Electric Generation, Total (All Sectors)**

### Year-to-Date Comparison

	Starting Month	Ending Month	Coal (Thousand Tons)	Petroleum Liquids (Thousand Barrels)	Natural Gas (Million Cubic Feet)
<b>Current Period</b>	January 2008	October 2008	874,524	45,160	5,968,066
<b>Prior Period</b>	January 2007	October 2007	878,613	78,576	6,453,590
<b>Percent Difference</b>			-0.5%	-42.5%	-7.5%

### Comparison to Prior 12 Month Period

	Starting Month	Ending Month	Coal (Thousand Tons)	Petroleum Liquids (Thousand Barrels)	Natural Gas (Million Cubic Feet)
<b>Current Period</b>	November 2007	October 2008	1,049,256	53,590	7,021,922
<b>Prior Period</b>	November 2006	October 2007	1,051,173	89,223	7,305,249
<b>Percent Difference</b>			-0.2%	-39.9%	-3.9%

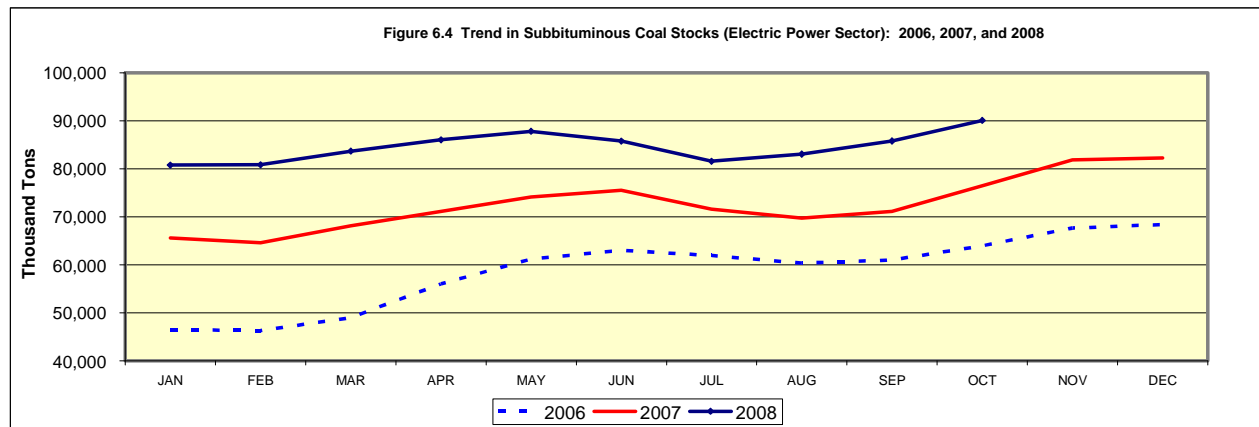
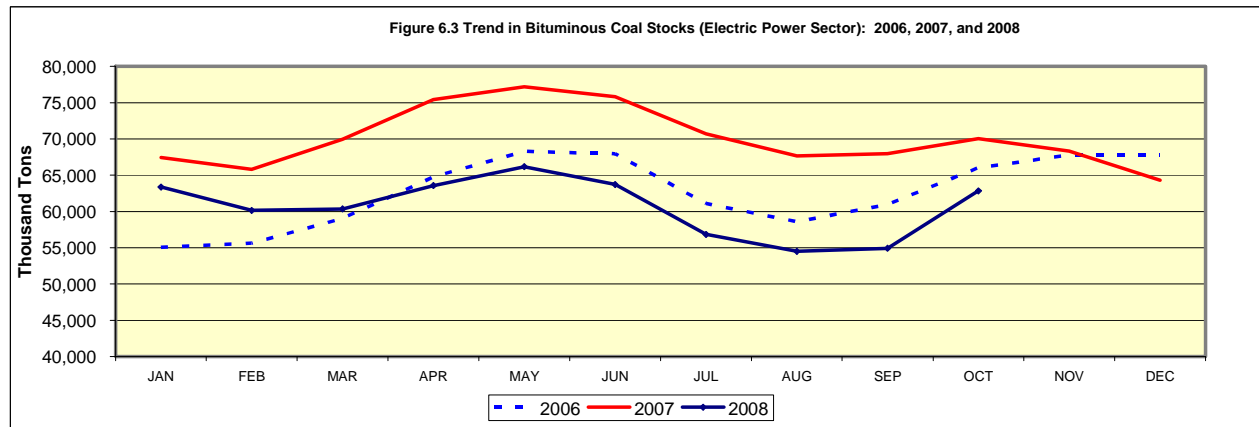
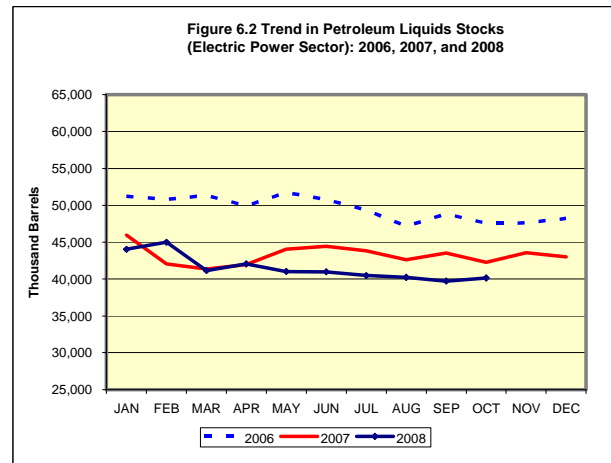
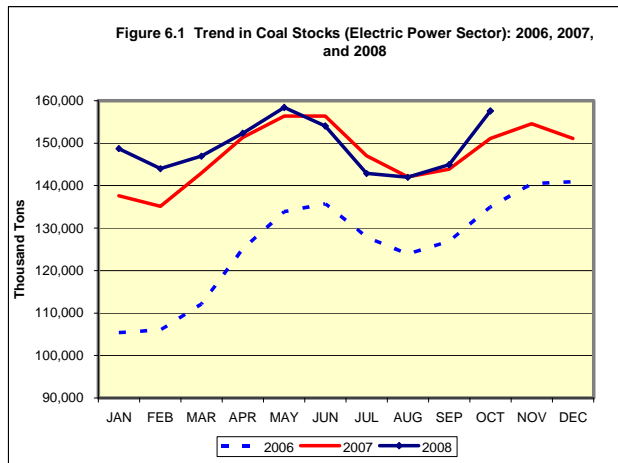


# Section 6. Fossil Fuel Stock Trends

Data for:  
October 2008

**Table 6.1 Trends in Total Fossil Fuel Stocks (Electric Power Sector)**

Fossil Fuel Stocks	Oct-08	Oct-07	% Change	Sep-08	% Change
<b>Coal, Total (Thousand Short Tons)</b>	157,585	151,141	4.3%	144,948	8.7%
Bituminous (includes anthracite and coal synfuel)	62,843	70,028	-10.3%	54,924	14.4%
Subbituminous	90,095	76,487	17.8%	85,810	5.0%
Lignite	4,647	4,626	0.5%	4,214	10.3%
<b>Petroleum Liquids (Thousand Barrels)</b>	40,144	42,254	-5.0%	39,710	1.1%



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

Data for:  
October 2008

### Retail Sales

**Table 7.1 Retail Sales (Million kWh)**

Ultimate Customer	Oct-08	Oct-07	% Change	Sep-08	% Change
Residential	96,662	103,770	-6.8%	118,343	-18.3%
Commercial	113,070	115,095	-1.8%	121,521	-7.0%
Industrial	82,973	87,330	-5.0%	84,899	-2.3%
Transportation	630	617	2.2%	625	0.8%
All Sectors	293,336	306,812	-4.4%	325,388	-9.9%

### Average Retail Price

**Table 7.2 Average Retail Price (Cents/kWh) -- U.S. Total**

Ultimate Customer	Oct-08	Oct-07	% Change	Sep-08	% Change
Residential	11.84	10.81	9.5%	11.94	-0.8%
Commercial	10.52	9.79	7.5%	10.77	-2.3%
Industrial	7.25	6.44	12.6%	7.36	-1.5%
Transportation	10.92	10.46	4.4%	13.16	-17.0%
All Sectors	10.03	9.18	9.3%	10.31	-2.7%

**Table 7.3 Average Retail Price (Cents/kWh) by Census Division**

Census Division	Residential			All Sectors		
	Oct-08	Oct-07	% Change	Oct-08	Oct-07	% Change
New England	18.76	16.43	14.2%	16.41	14.66	11.9%
Middle Atlantic	15.00	14.38	4.3%	13.04	12.47	4.6%
East North Central	11.13	10.00	11.3%	8.80	7.91	11.3%
West North Central	9.06	8.19	10.6%	6.95	6.48	7.3%
South Atlantic	11.34	10.34	9.7%	9.74	8.76	11.2%
East South Central	10.25	8.58	19.5%	8.44	7.00	20.6%
West South Central	12.25	11.43	7.2%	10.39	9.48	9.6%
Mountain	10.05	9.57	5.0%	8.24	7.94	3.8%
Pacific Contiguous	11.83	10.87	8.8%	11.08	10.78	2.8%
Pacific Noncontiguous	28.10	22.24	26.3%	25.68	19.95	28.7%
U.S. Total	11.84	10.81	9.5%	10.03	9.18	9.3%

# Section 8. Retail Sales Trends

Data for:  
October 2008

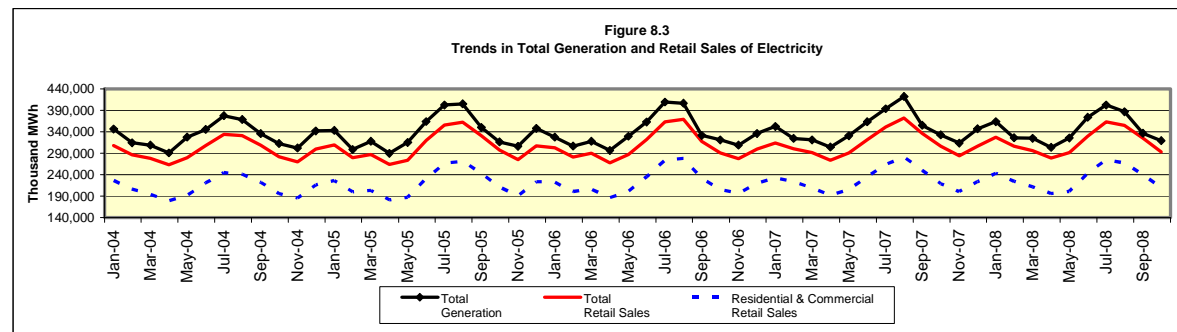
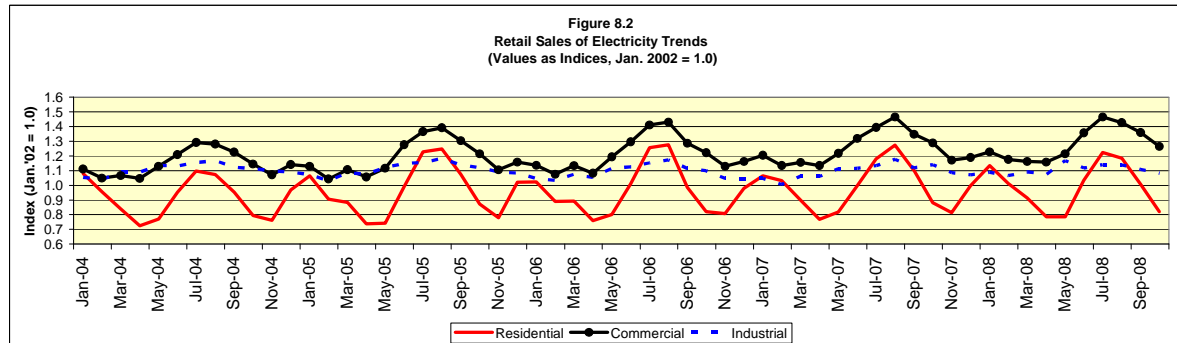
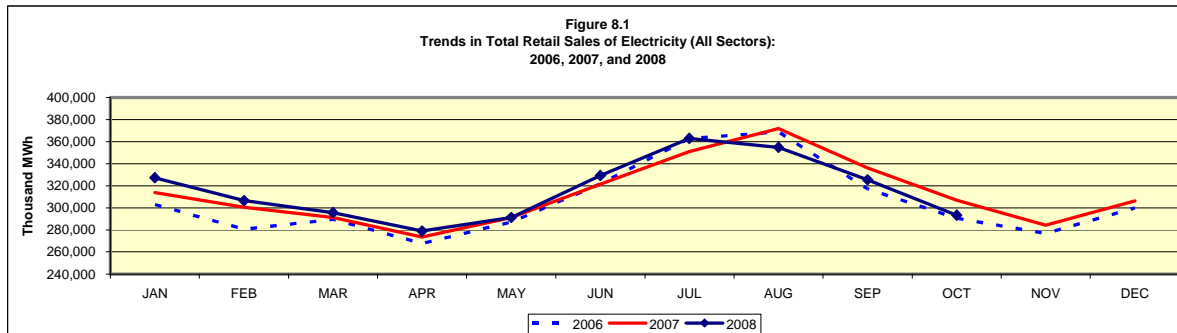
**Table 8.1 Trends in Total Retail Sales of Electricity (All Sectors)**  
Millions of Kilowatthours

### Year-to-Date Comparison

	Starting Month	Ending Month	Residential	Commercial	Industrial	Transportation	Total (All Sectors)
<b>Current Period</b>	January 2008	October 2008	1,165,713	1,144,799	848,457	6,364	3,165,333
<b>Prior Period</b>	January 2007	October 2007	1,178,652	1,131,697	840,621	6,481	3,157,451
<b>Percent Difference</b>			-1.1%	1.2%	0.9%	-1.8%	0.2%

### Comparison to Prior Twelve-Month Period

	Starting Month	Ending Month	Residential	Commercial	Industrial	Transportation	Total (All Sectors)
<b>Current Period</b>	November 2007	October 2008	1,378,972	1,355,775	1,013,664	7,620	3,756,032
<b>Prior Period</b>	November 2006	October 2007	1,388,376	1,337,474	1,001,211	7,691	3,734,752
<b>Percent Difference</b>			-0.7%	1.4%	1.2%	-0.9%	0.6%





# Section 9. Average Retail Price Trends

Data for:  
October 2008

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

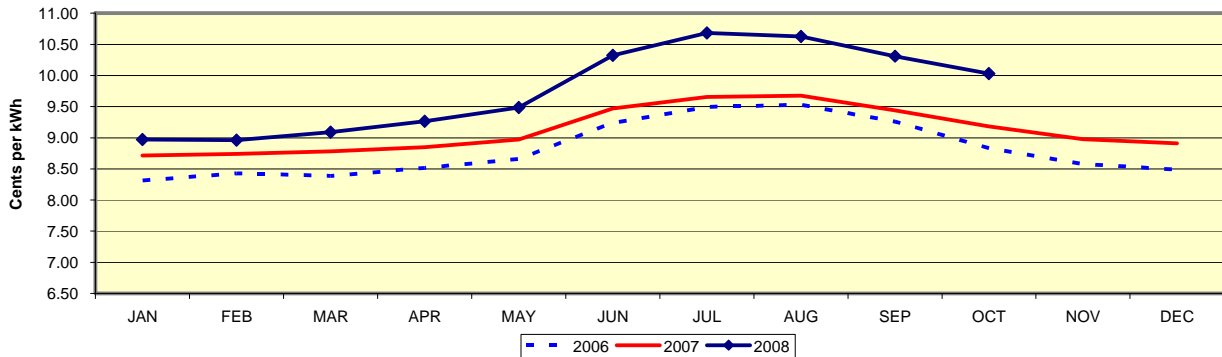
### Year-to-Date Comparison

	Starting Month	Ending Month	Residential	Commercial	Industrial	Transportation	Total (All Sectors)
<b>Current Period</b>	January 2008	October 2008	11.33	10.33	7.01	11.43	9.81
<b>Prior Period</b>	January 2007	October 2007	10.66	9.70	6.38	10.53	9.18
<b>Percent Difference</b>			6.3%	6.5%	9.9%	8.5%	6.9%

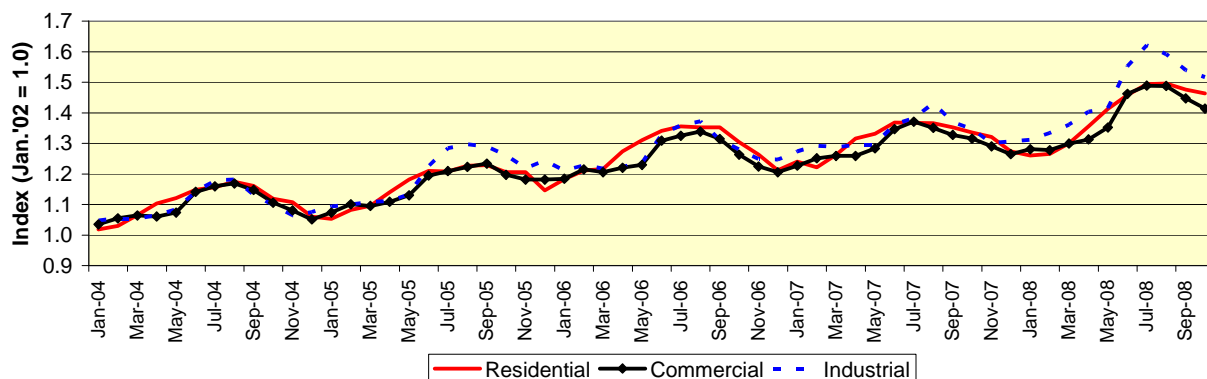
### Comparison to Prior 12 Month Period

	Starting Month	Ending Month	Residential	Commercial	Industrial	Transportation	Total (All Sectors)
<b>Current Period</b>	November 2007	October 2008	11.20	10.20	6.89	11.15	9.68
<b>Prior Period</b>	November 2006	October 2007	10.56	9.61	6.33	10.36	9.09
<b>Percent Difference</b>			6.1%	6.1%	8.8%	7.6%	6.5%

**Figure 9.1 Trends in Average Retail Price of Electricity (All Sectors):  
2006, 2007, and 2008**



**Figure 9.2 Average Retail Price of Electricity: Trends by Sector  
(Values as Indices, Jan. 2002 = 1.0)**



# Section 10. Heating and Cooling Degree Days

Data for:  
October 2008

Table 10.1 Degree Days

		Heating Degree Days				Cooling Degree Days			
	Month	Heating Degree Days	Normal Heating Degree Days	Deviation From Normal	Percent Difference From Normal	Cooling Degree Days	Normal Cooling Degree Days	Deviation From Normal	Percent Difference From Normal
<b>Current Period</b>	October 2008	286	282	4	1.4%	50	53	-3	-5.7%
<b>Prior Period</b>	October 2007	175	282	-107	-37.9%	82	53	29	54.7%
<b>Percent Difference</b>		63.4%				-39.0%			

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
<b>Current Period</b>	January 2008	October 2008	3,141	1,261	<b>Current Period</b>	November 2007	October 2008	4,462	1,289
<b>Prior Period</b>	January 2007	October 2007	2,934	1,367	<b>Prior Period</b>	November 2006	October 2007	4,091	1,392
<b>Percent Difference</b>			7.1%	-7.8%	<b>Percent Difference</b>			9.1%	-7.4%

Figure 10.1 Deviation From Normal: Heating Degree Days, 2008

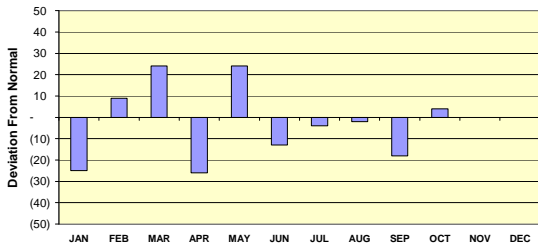


Figure 10.2 Deviation From Normal Cooling Degree Days, 2008

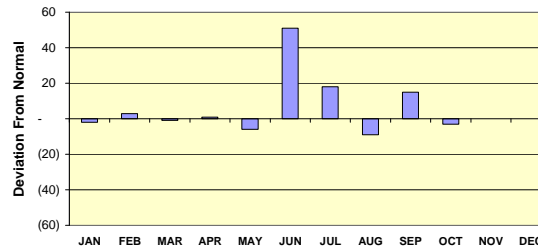


Figure 10.3 Trend in Heating Degree Days: 2007, 2008, and Normal

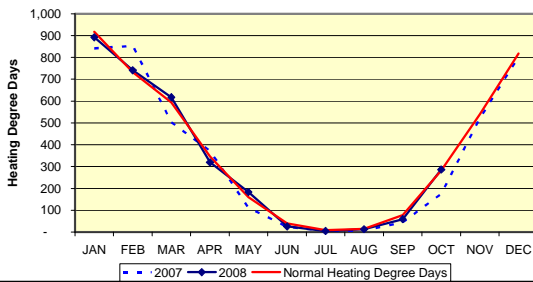


Figure 10.4 Trend in Cooling Degree Days: 2007, 2008, and Normal

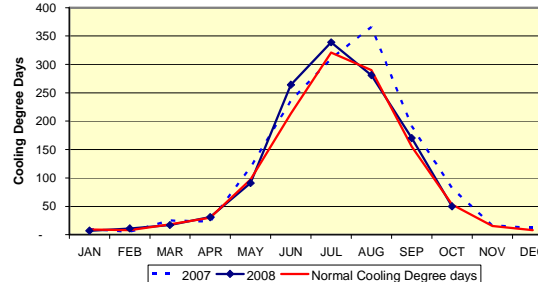


Figure 10.5 Trend in Cumulative Heating Degree Days: 2007, 2008, and Normal

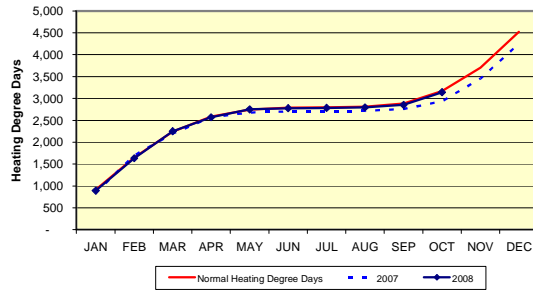
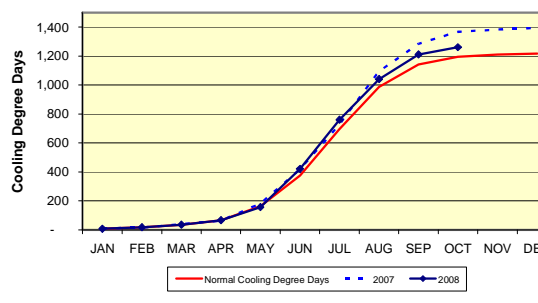


Figure 10.6 Trend in Cumulative Cooling Degree Days: 2007, 2008, and Normal



**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).