

# Monthly Flash Estimates of Electric Power Data

Data for:  
August 2009

## Section 1. Commentary

The contiguous United States as a whole experienced temperatures that were below normal in August 2009, particularly many States in the Central and Upper Midwest. However, above normal temperatures dominated the higher populated regions of the Northeast and Southeast, so on balance, total population-weighted cooling degree days for the contiguous United States were 6.6 percent above the average for the month of August.

In August 2009, retail sales of electricity decreased 2.3 percent compared to August 2008. This decrease in retail sales was caused in part by the significant decline in industrial activity as observed by the 7.7-percent decrease in industrial retail sales over the same period. The average U.S. retail price of electricity decreased 2.4 percent in August 2009 compared to the previous year. This decrease in price can in part be attributed to lower fuel costs for natural gas used for electricity generation.

Total electric power generation in the United States decreased 2.0 percent from August 2008. Over the same period, coal generation decreased 9.4 percent as a result of the increased cost of coal as a fuel used in electricity generation and the decrease in demand for electric power due to the economic downturn in the United States. Natural gas generation in August 2009 increased by 8.9 percent compared to August 2008, while petroleum liquids generation decreased 2.5 percent over the same period. Conventional hydroelectric generation was 3.8 percent lower than August 2008 and 15.5 percent lower than July 2009.

Total coal stocks in the Electric Power Sector remained at a historically high level in August 2009 and only decreased slightly by 1.1 percent from the previous month. The July 2009 to August 2009 change in coal stocks consisted of a 1.0-percent decrease in bituminous coal and a 1.0-percent decrease in subbituminous coal. Petroleum liquid stocks decreased 1.0 percent from July 2009.

References for weather data:

<http://www.ncdc.noaa.gov/oa/climate/research/2009/aug/national.html>

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

Data for:  
August 2009

### Table 2.1 Key Generation Indicators

	Total Generation	Nuclear Generation	Hydroelectric Generation
<b>Total Change From:</b>			
July 2009	2.3%	-1.0%	-15.5%
August 2008	-2.0%	-0.5%	-3.8%
<b>Year to Date</b>	<b>-4.9%</b>	<b>0.7%</b>	<b>4.1%</b>
<b>Latest 12 Month Period*</b>	<b>-4.3%</b>	<b>0.5%</b>	<b>4.4%</b>

### Table 2.2 Key Consumption and Stocks Indicators

	Natural Gas Consumption	Coal Consumption	Coal Stocks
<b>Total Change From:</b>			
July 2009	8.2%	3.4%	-1.1%
August 2008	10.2%	-8.6%	37.1%
<b>Year to Date</b>	<b>2.4%</b>	<b>-11.1%</b>	<b>--</b>
<b>Latest 12 Month Period*</b>	<b>-1.0%</b>	<b>-8.3%</b>	<b>--</b>

\* Change in total consumption or generation for the latest 12 month period (September 2008 to August 2009) compared to the prior 12 month period (September 2007 to August 2008).

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

Data for:  
August 2009

### Net Generation (Total, All Sectors)

Table 3.1 Total Net Generation (All Sectors)

Net Generation (thousand megawatthours)	Aug-09	Aug-08	% Change	Jul-09	% Change
Coal	164,444	181,469	-9.4%	159,404	3.2%
Petroleum Liquids	2,442	2,505	-2.5%	2,117	15.4%
Natural Gas	107,680	98,880	8.9%	100,664	7.0%
Nuclear	72,245	72,617	-0.5%	72,949	-1.0%
Hydroelectric Conventional	19,617	20,385	-3.8%	23,225	-15.5%
All Other	13,637	12,119	12.5%	13,271	2.8%
Total (All Energy Sources)	380,066	387,975	-2.0%	371,631	2.3%

### 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	Aug-09	Aug-08	% Change	Jul-09	% Change
Coal (Thousand Short Tons)	87,518	95,726	-8.6%	84,650	3.4%
Petroleum Liquids (Thousand Barrels)	4,192	4,198	-0.1%	3,635	15.3%
Natural Gas (Million Cubic Feet)	860,182	780,800	10.2%	795,274	8.2%

### Fossil Fuel Stocks (Electric Power Sector)

Table 3.3 Total Fossil Fuel Stocks (Electric Power Sector)

Fossil Fuel Stocks	Aug-09	Aug-08	% Change	Jul-09	% Change
Coal (Thousand Short Tons)	193,809	141,405	37.1%	196,052	-1.1%
Petroleum Liquids (Thousand Barrels)	43,015	43,690	-1.5%	43,461	-1.0%

#### 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:  
August 2009

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

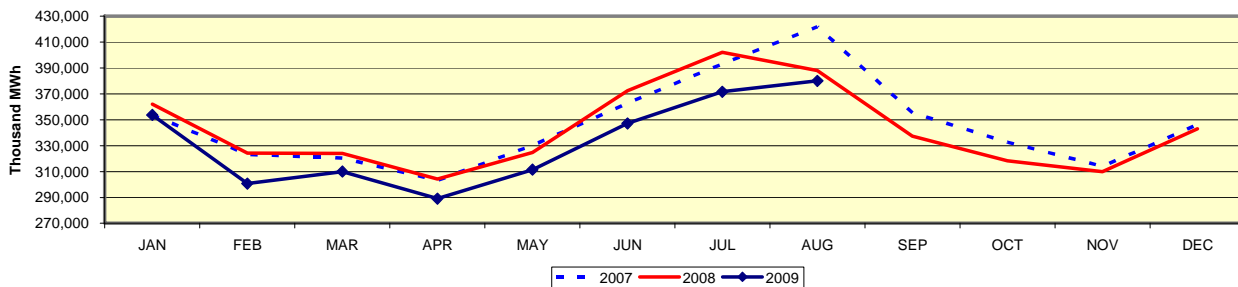
### Year-to-Date Comparison

	Starting Month	Ending Month	Coal	Petroleum Liquids	Natural Gas	Nuclear	Hydroelectric Conventional	All Other	Total
<b>Current Period</b>	January 2009	August 2009	1,184,123	19,447	617,743	543,612	188,650	109,994	2,663,569
<b>Prior Period</b>	January 2008	August 2008	1,355,217	21,105	600,589	539,996	181,256	103,614	2,801,777
<b>Percent Difference</b>			-12.6%	-7.9%	2.9%	0.7%	4.1%	6.2%	-4.9%

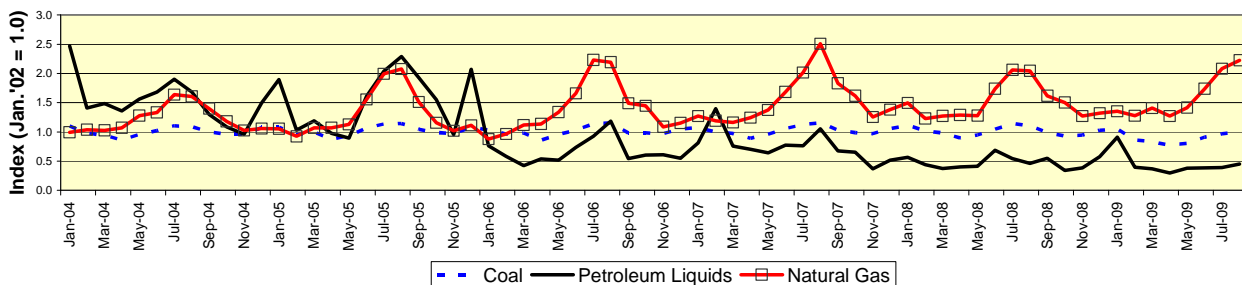
### Comparison to Prior Twelve-Month Period

	Starting Month	Ending Month	Coal	Petroleum Liquids	Natural Gas	Nuclear	Hydroelectric Conventional	All Other	Total
<b>Current Period</b>	September 2008	August 2009	1,823,291	29,503	894,102	809,798	255,478	159,879	3,972,051
<b>Prior Period</b>	September 2007	August 2008	2,020,055	33,115	894,923	806,146	244,819	151,122	4,150,180
<b>Percent Difference</b>			-9.7%	-10.9%	-0.1%	0.5%	4.4%	5.8%	-4.3%

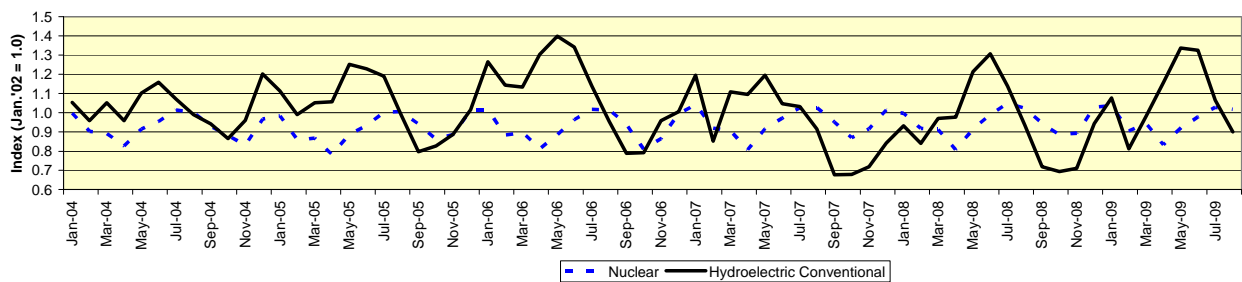
**Figure 4.1 Trends in Total Net Generation (All Sectors): 2007, 2008, and 2009**



**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:  
August 2009

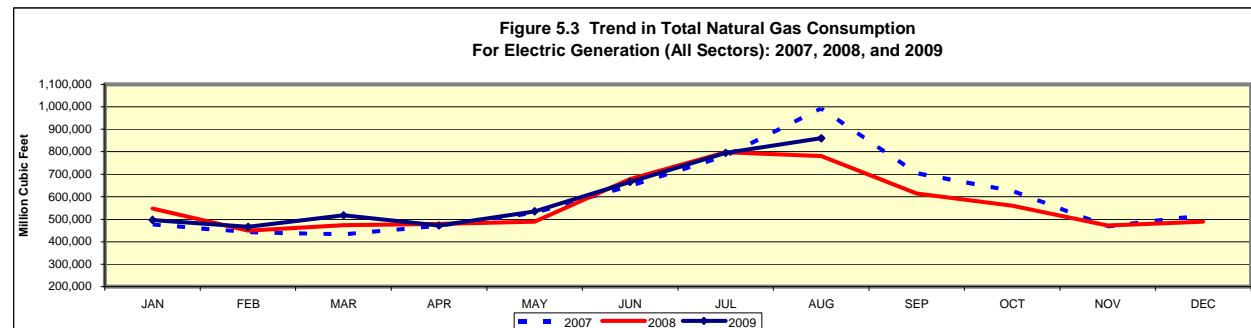
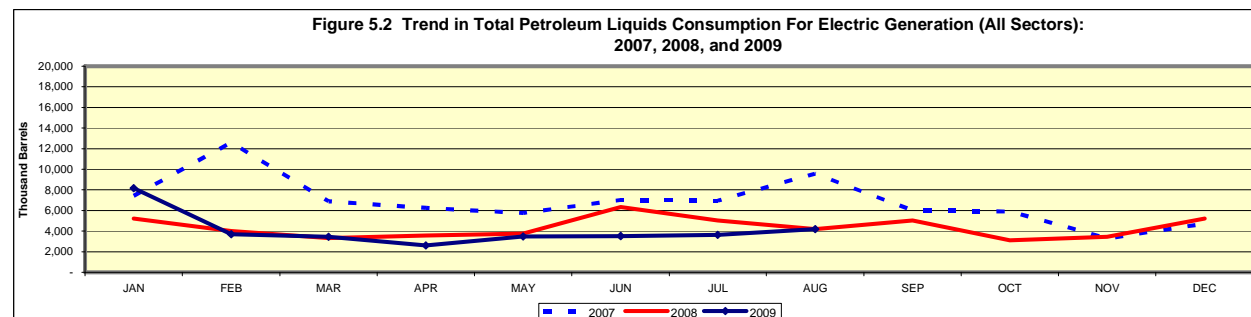
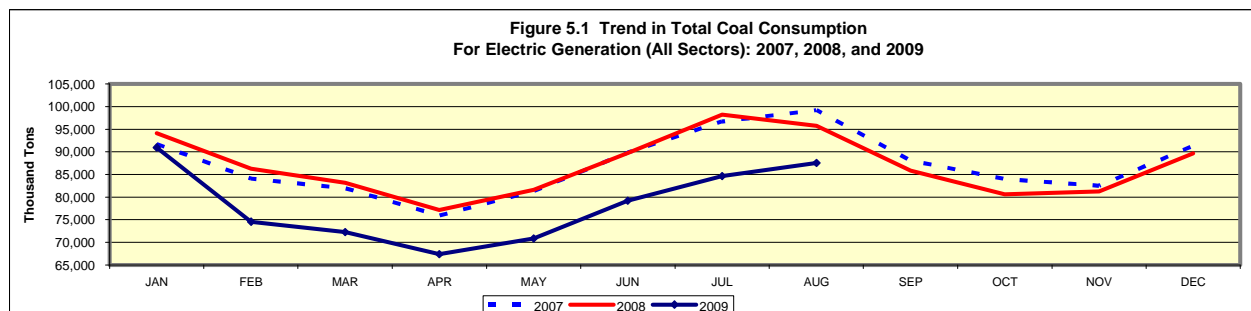
**Table 5.1 Trends in Fossil Fuel Consumption For Electric Generation, Total (All Sectors)**

## 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 2009	August 2009	627,406	32,810	4,807,538
<b>Prior Period</b>	January 2008	August 2008	706,104	35,468	4,696,999
<b>Percent Difference</b>			-11.1%	-7.5%	2.4%

## 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>	September 2008	August 2009	964,891	49,610	6,943,937
<b>Prior Period</b>	September 2007	August 2008	1,052,046	55,429	7,014,038
<b>Percent Difference</b>			-8.3%	-10.5%	-1.0%

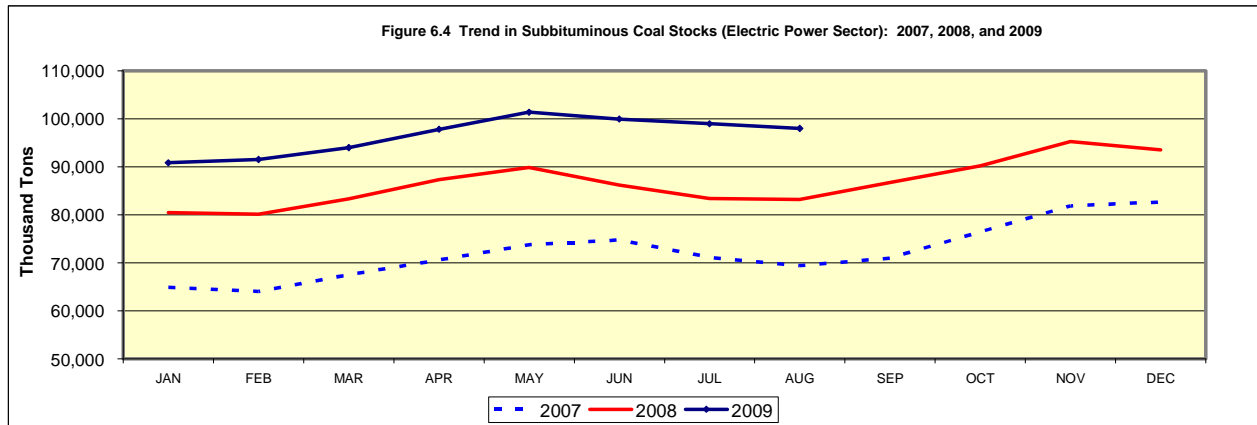
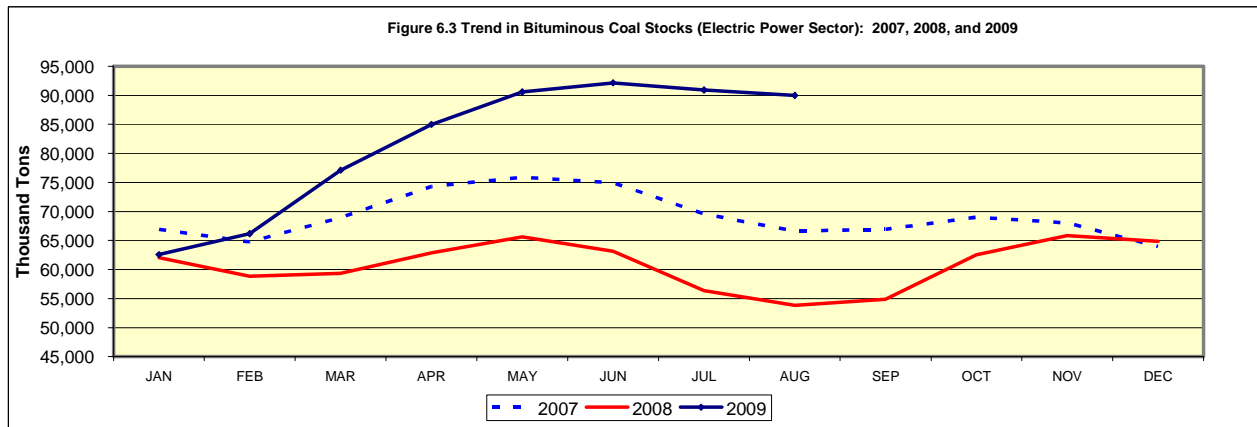
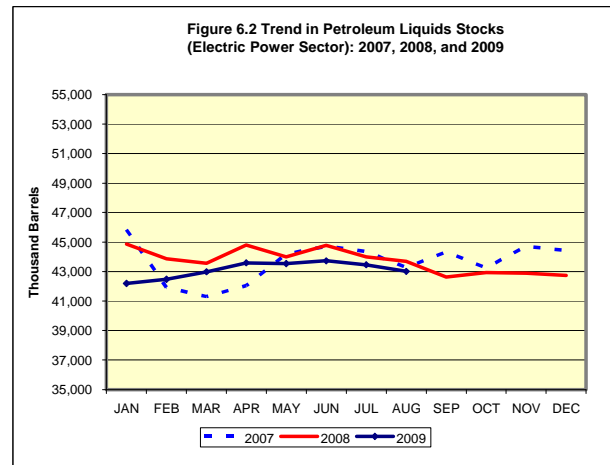
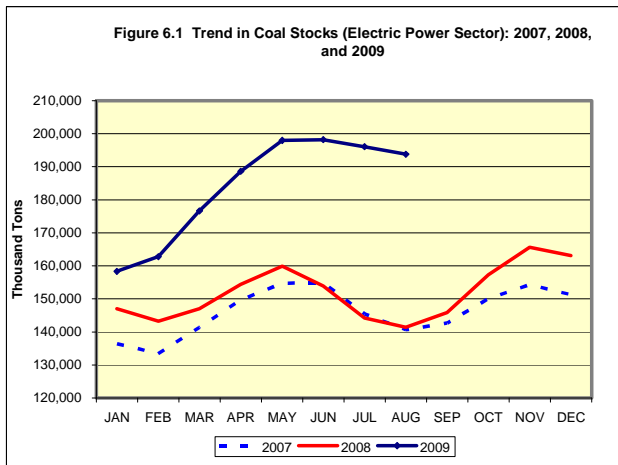


# Section 6. Fossil Fuel Stock Trends

Data for:  
August 2009

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

Fossil Fuel Stocks	Aug-09	Aug-08	% Change	Jul-09	% Change
<b>Coal, Total (Thousand Short Tons)</b>	193,809	141,405	37.1%	196,052	-1.1%
Bituminous (includes anthracite and coal synfuel)	89,984	53,812	67.2%	90,927	-1.0%
Subbituminous	97,997	83,202	17.8%	98,977	-1.0%
Lignite	5,829	4,391	32.7%	6,148	-5.2%
<b>Petroleum Liquids (Thousand Barrels)</b>	43,015	43,690	-1.5%	43,461	-1.0%



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

Data for:  
August 2009

### Retail Sales

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

Ultimate Customer	Aug-09	Aug-08	% Change	Jul-09	% Change
Residential	138,255	138,699	-0.3%	137,443	0.6%
Commercial	125,090	126,088	-0.8%	122,889	1.8%
Industrial	78,954	85,535	-7.7%	75,096	5.1%
Transportation	651	639	1.9%	653	-0.3%
All Sectors	342,949	350,961	-2.3%	336,081	2.0%

### Average Retail Price

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

Ultimate Customer	Aug-09	Aug-08	% Change	Jul-09	% Change
Residential	12.05	12.15	-0.8%	11.96	0.8%
Commercial	10.60	11.08	-4.3%	10.72	-1.1%
Industrial	7.17	7.63	-6.0%	7.12	0.7%
Transportation	11.17	12.59	-11.3%	11.72	-4.7%
All Sectors	10.40	10.66	-2.4%	10.42	-0.2%

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

Census Division	Residential			All Sectors		
	Aug-09	Aug-08	% Change	Aug-09	Aug-08	% Change
New England	16.88	18.25	-7.5%	15.46	16.68	-7.3%
Middle Atlantic	16.24	17.10	-5.0%	14.02	15.17	-7.6%
East North Central	11.38	10.95	3.9%	9.27	9.02	2.8%
West North Central	10.21	9.66	5.7%	8.46	8.05	5.1%
South Atlantic	11.58	11.41	1.5%	10.07	10.03	0.4%
East South Central	9.63	9.67	-0.4%	8.35	8.40	-0.6%
West South Central	11.19	12.77	-12.4%	9.29	11.20	-17.1%
Mountain	10.97	10.53	4.2%	9.20	8.91	3.3%
Pacific Contiguous	13.89	13.09	6.1%	12.71	12.17	4.4%
Pacific Noncontiguous	22.32	29.35	-24.0%	19.60	26.50	-26.0%
U.S. Total	12.05	12.15	-0.8%	10.40	10.66	-2.4%

# Section 8. Retail Sales Trends

Data for:  
August 2009

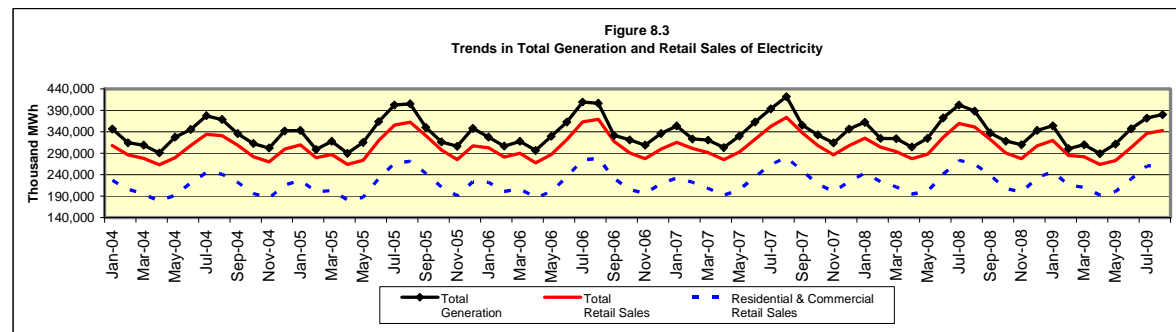
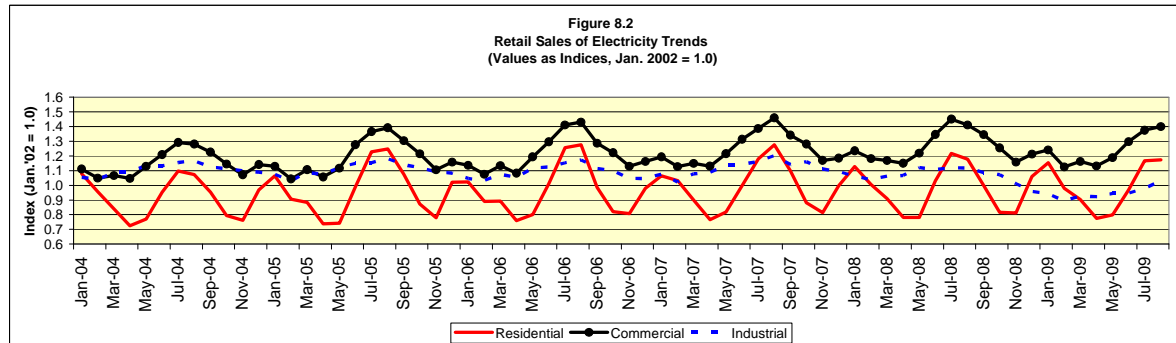
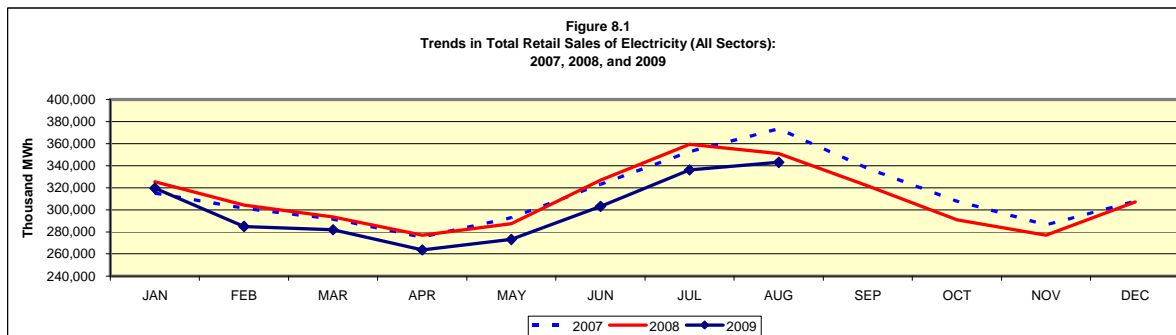
**Table 8.1 Trends in Total Retail Sales of Electricity (All Sectors)**  
Millions of Kilowatthours

### Year-to-Date Comparison

	Starting Month	Ending Month	Residential	Commercial	Industrial	Transportation	Total (All Sectors)
<b>Current Period</b>	January 2009	August 2009	932,617	886,487	581,096	5,095	2,405,296
<b>Prior Period</b>	January 2008	August 2008	945,337	908,236	665,896	5,116	2,524,585
<b>Percent Difference</b>			-1.3%	-2.4%	-12.7%	-0.4%	-4.7%

### Comparison to Prior Twelve-Month Period

	Starting Month	Ending Month	Residential	Commercial	Industrial	Transportation	Total (All Sectors)
<b>Current Period</b>	September 2008	August 2009	1,366,587	1,330,705	897,350	7,631	3,602,273
<b>Prior Period</b>	September 2007	August 2008	1,391,916	1,353,127	1,011,062	7,790	3,763,896
<b>Percent Difference</b>			-1.8%	-1.7%	-11.2%	-2.0%	-4.3%





# Section 9. Average Retail Price Trends

Data for:  
August 2009

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

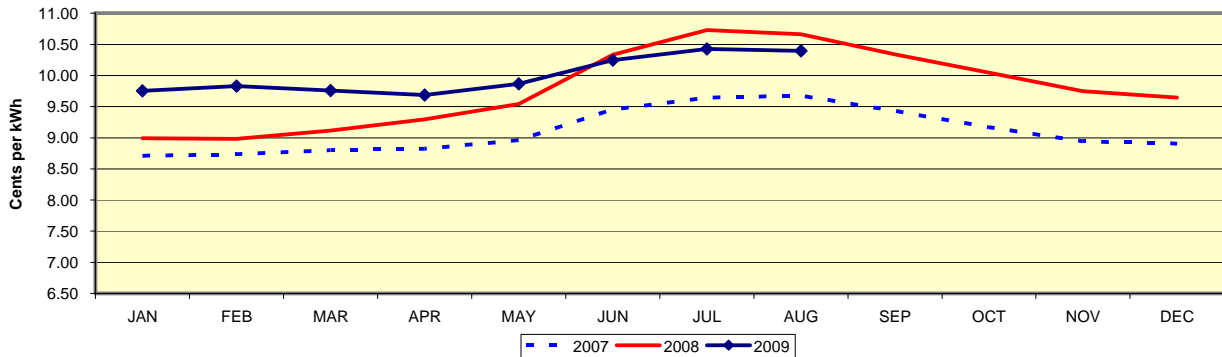
### Year-to-Date Comparison

	Starting Month	Ending Month	Residential	Commercial	Industrial	Transportation	Total (All Sectors)
<b>Current Period</b>	January 2009	August 2009	11.63	10.30	6.99	11.47	10.01
<b>Prior Period</b>	January 2008	August 2008	11.25	10.24	6.96	11.11	9.75
<b>Percent Difference</b>			3.4%	0.6%	0.4%	3.2%	2.7%

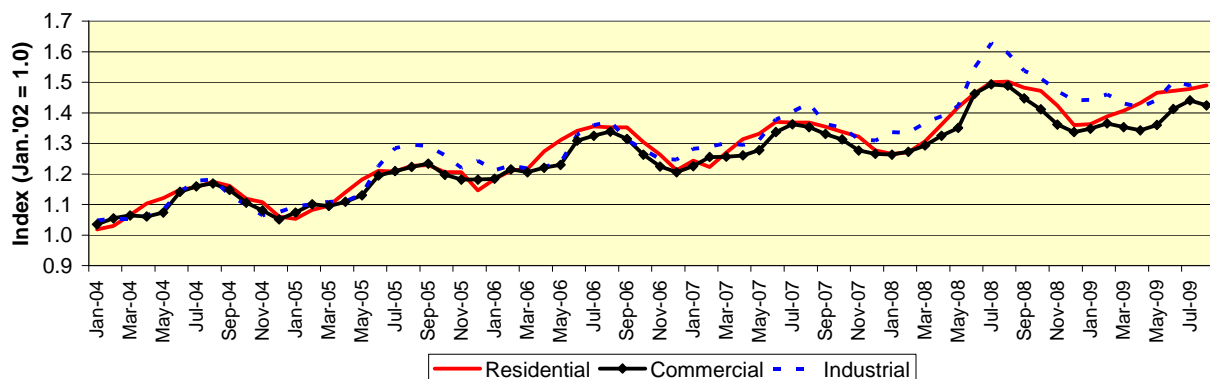
### Comparison to Prior 12 Month Period

	Starting Month	Ending Month	Residential	Commercial	Industrial	Transportation	Total (All Sectors)
<b>Current Period</b>	September 2008	August 2009	11.61	10.31	7.04	11.52	9.99
<b>Prior Period</b>	September 2007	August 2008	11.08	10.05	6.76	10.50	9.55
<b>Percent Difference</b>			4.8%	2.6%	4.1%	9.7%	4.6%

**Figure 9.1 Trends in Average Retail Price of Electricity (All Sectors):  
2007, 2008, and 2009**



**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:  
August 2009

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>	August 2009	14	15	-1	-6.7%	309	290	19	6.6%
<b>Prior Period</b>	August 2008	13	15	-2	-13.3%	283	290	-7	-2.4%
<b>Percent Difference</b>		7.7%				9.2%			

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 2009	August 2009	2,791	1,002	<b>Current Period</b>	September 2008	August 2009	4,489	1,241
<b>Prior Period</b>	January 2008	August 2008	2,796	1,038	<b>Prior Period</b>	September 2007	August 2008	4,336	1,339
<b>Percent Difference</b>			-0.2%	-3.5%	<b>Percent Difference</b>			3.5%	-7.3%

Figure 10.1 Deviation From Normal: Heating Degree Days, 2009

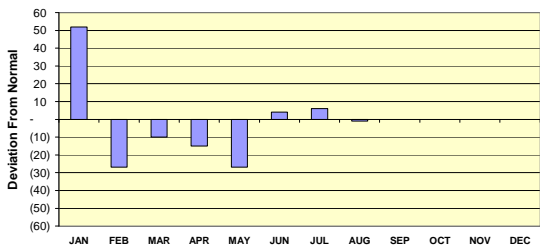


Figure 10.2 Deviation From Normal Cooling Degree Days, 2009

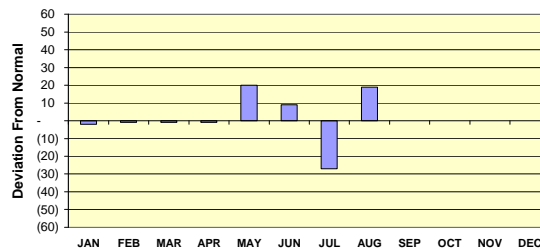


Figure 10.3 Trend in Heating Degree Days: 2008, 2009, and Normal

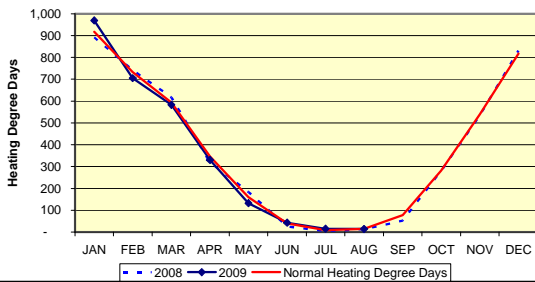


Figure 10.4 Trend in Cooling Degree Days: 2008, 2009, and Normal

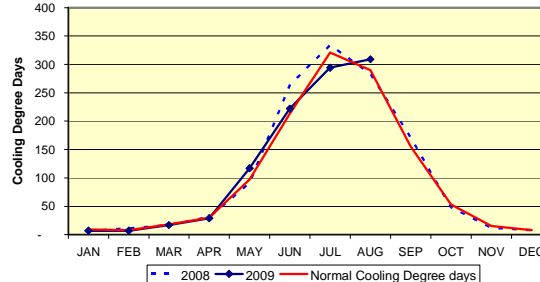


Figure 10.5 Trend in Cumulative Heating Degree Days: 2008, 2009, and Normal

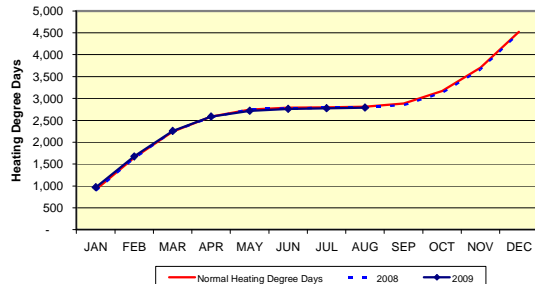
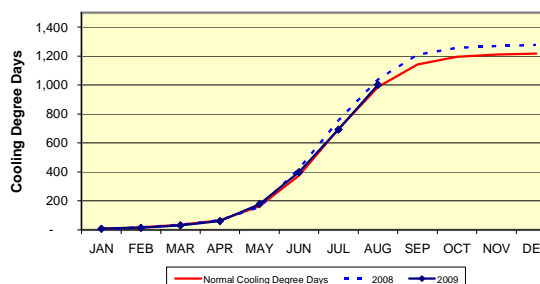


Figure 10.6 Trend in Cumulative Cooling Degree Days: 2008, 2009, and Normal



**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 are collected monthly using multiple-attribute cutoff sampling of power plants and electric retailers for the purpose of estimation for various data elements (generation, stocks, revenue, etc.), for various categories, such as geographic regions. (The data elements and categories are "attributes.") 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. Regression-based (i.e., "prediction") methodologies are used to estimate totals from the sample. Essentially complete samples are collected for the Electric Power Monthly (EPM), which includes State-level values. The Flash Estimates is based on an incomplete sample and includes only national-level estimates. Using 'prediction,' it is generally possible to make estimates based on the incomplete EPM sample, and still estimate variances.

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 the additional data collection and data revisions that may occur between the release of these two publications. 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).