

# Monthly Flash Estimates of Electric Power Data

Data for:  
September 2010

## Section 1. Commentary

The contiguous United States, as a whole, experienced temperatures that were significantly above average in September 2010. Accordingly, the total population-weighted cooling degree days for the United States were 26.5 percent above the September normal.

Retail sales of electricity increased 6.1 percent compared to September 2009. Over the same period, the average U.S. retail price of electricity increased 0.5 percent. For the 12-month period ending September 2010, total sales of electricity increased 3.5 percent over the previous 12-month period ending September 2009.

In September 2010, total electric power generation in the United States increased 5.3 percent compared to September 2009. Over the same period, coal generation increased 7.9 percent, natural gas generation increased 0.4 percent and petroleum liquids generation also increased 2.5 percent. Nuclear generation increased 5.6 percent compared to September 2009. Generation from all other sources increased by 22 percent from September 2009, led by large increases in wind generation in Texas and the Midwest.

Consistent with the year-over-year increase in coal generation, the consumption of coal to produce electricity increased 7.5 percent when compared to September 2009. Over the same time period, petroleum liquids consumption increased 4.7 percent, while natural gas consumption increased 1.0 percent.

Total coal stocks decreased 17.5 percent from the previous year and increased 2.3 percent from the previous month. The month-to-month change in total coal stocks observed over the first half of 2010 is an indication that Electric Power sector coal stocks are assuming a seasonal pattern that resembles what was observed in 2008 and prior years.

### References for weather data:

<http://www.ncdc.noaa.gov/sotc/?report=national&year=2010&month=9>

### References for petroleum prices:

[http://www.eia.gov/dnav/pet/pet\\_pri\\_spt\\_s1\\_d.htm](http://www.eia.gov/dnav/pet/pet_pri_spt_s1_d.htm)

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

Data for:  
September 2010

### Table 2.1 Key Generation Indicators

	Total Generation	Nuclear Generation	Hydroelectric Generation
<b>Total Change From:</b>			
August 2010	-15.8%	-3.1%	-14.6%
September 2009	5.3%	5.6%	-2.4%
<b>Year to Date</b>	<b>5.0%</b>	<b>-0.5%</b>	<b>-5.1%</b>
<b>Latest 12 Month Period*</b>	<b>3.3%</b>	<b>-1.8%</b>	<b>1.1%</b>

### Table 2.2 Key Consumption and Stocks Indicators

	Natural Gas Consumption	Coal Consumption	Coal Stocks
<b>Total Change From:</b>			
August 2010	-26.4%	-16.1%	2.3%
September 2009	1.0%	7.5%	-17.5%
<b>Year to Date</b>	<b>7.7%</b>	<b>6.8%</b>	<b>--</b>
<b>Latest 12 Month Period*</b>	<b>6.7%</b>	<b>3.6%</b>	<b>--</b>

\* Change in total consumption or generation for the latest 12 month period (October 2009 to September 2010) compared to the prior 12 month period (October 2008 to September 2009).

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

Data for:  
September 2010

### Net Generation (Total, All Sectors)

Table 3.1 Total Net Generation (All Sectors)

Net Generation (thousand megawatthours)	Sep-10	Sep-09	% Change	Aug-10	% Change
Coal	149,014	138,087	7.9%	178,354	-16.5%
Petroleum Liquids	1,748	1,705	2.5%	2,443	-28.4%
Natural Gas	91,765	91,413	0.4%	121,268	-24.3%
Nuclear	69,371	65,662	5.6%	71,574	-3.1%
Hydroelectric Conventional	16,845	17,265	-2.4%	19,717	-14.6%
All Other	15,810	13,043	21.2%	15,737	0.5%
Total (All Energy Sources)	344,553	327,175	5.3%	409,095	-15.8%

### 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	Sep-10	Sep-09	% Change	Aug-10	% Change
Coal (Thousand Short Tons)	79,579	74,051	7.5%	94,872	-16.1%
Petroleum Liquids (Thousand Barrels)	2,972	2,838	4.7%	4,273	-30.4%
Natural Gas (Million Cubic Feet)	715,485	708,414	1.0%	971,993	-26.4%

### Fossil Fuel Stocks (Electric Power Sector)

Table 3.3 Total Fossil Fuel Stocks (Electric Power Sector)

Fossil Fuel Stocks	Sep-10	Sep-09	% Change	Aug-10	% Change
Coal (Thousand Short Tons)	162,691	197,167	-17.5%	159,072	2.3%
Petroleum Liquids (Thousand Barrels)	35,898	39,151	-8.3%	35,080	2.3%

#### Notes:

- Coal consumption and generation includes subbituminous coal, bituminous coal, anthracite, lignite, and waste coal.
- Coal stocks include the coal categories listed immediately above, except for waste coal. The bituminous category includes anthracite.
- 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, only waste oil is excluded.
- 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:  
September 2010

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

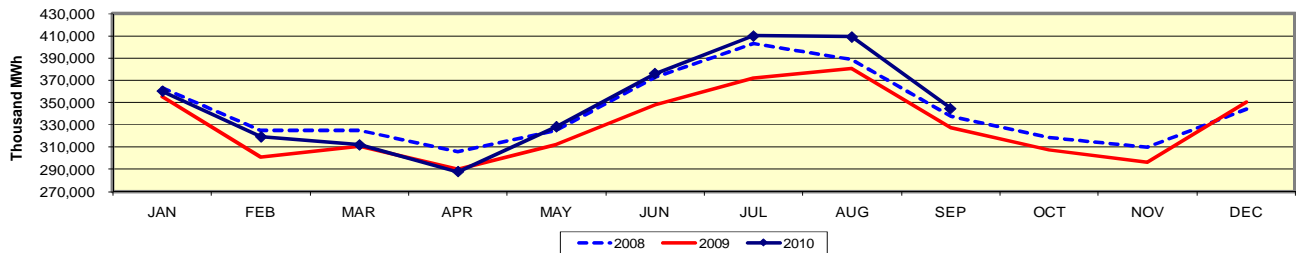
### Year-to-Date Comparison

	Starting Month	Ending Month	Coal	Petroleum Liquids	Natural Gas	Nuclear	Hydroelectric Conventional	All Other	Total
<b>Current Period</b>	January 2010	September 2010	1,418,323	18,577	761,092	607,850	196,309	145,109	3,147,260
<b>Prior Period</b>	January 2009	September 2009	1,318,846	21,158	713,279	610,944	206,784	127,562	2,998,573
<b>Percent Difference</b>			7.5%	-12.2%	6.7%	-0.5%	-5.1%	13.8%	5.0%

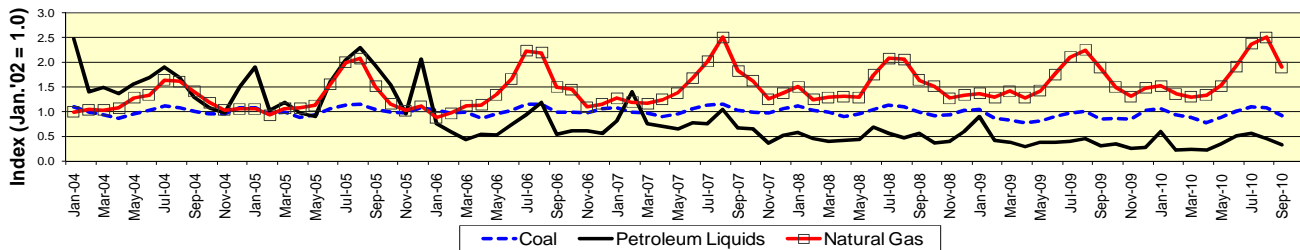
### Comparison to Prior Twelve-Month Period

	Starting Month	Ending Month	Coal	Petroleum Liquids	Natural Gas	Nuclear	Hydroelectric Conventional	All Other	Total
<b>Current Period</b>	October 2009	September 2010	1,863,963	23,211	968,190	795,651	261,656	189,127	4,101,798
<b>Prior Period</b>	October 2008	September 2009	1,792,753	28,549	912,381	810,104	258,783	168,495	3,971,065
<b>Percent Difference</b>			4.0%	-18.7%	6.1%	-1.8%	1.1%	12.2%	3.3%

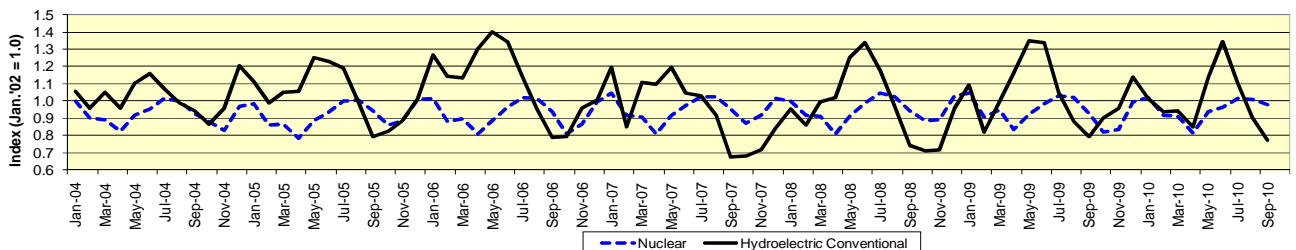
**Figure 4.1 Trends in Total Net Generation (All Sectors): 2008, 2009, and 2010**



**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:  
September 2010

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

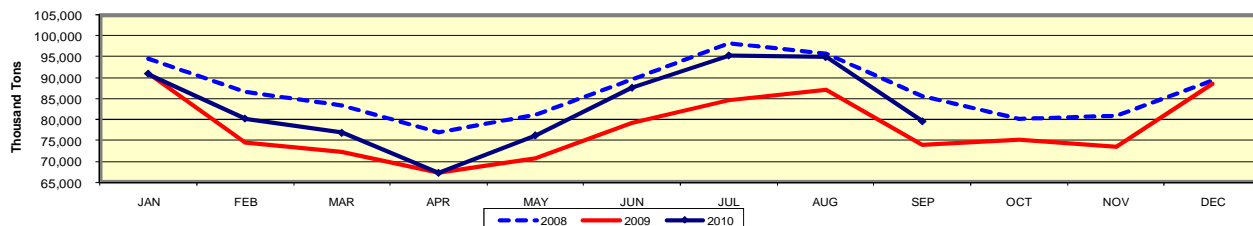
### Year-to-Date Comparison

	Starting Month	Ending Month	Coal (Thousand Tons)	Petroleum Liquids (Thousand Barrels)	Natural Gas (Million Cubic Feet)
<b>Current Period</b>	January 2010	September 2010	748,793	31,962	5,955,059
<b>Prior Period</b>	January 2009	September 2009	700,866	35,874	5,528,724
<b>Percent Difference</b>			6.8%	-10.9%	7.7%

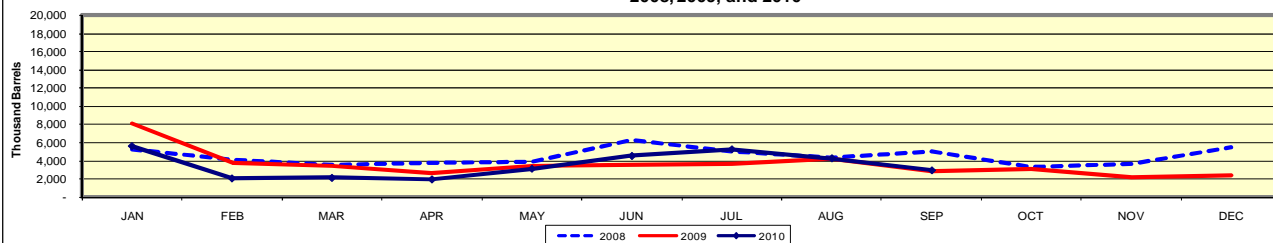
### Comparison to Prior 12 Month Period

	Starting Month	Ending Month	Coal (Thousand Tons)	Petroleum Liquids (Thousand Barrels)	Natural Gas (Million Cubic Feet)
<b>Current Period</b>	October 2009	September 2010	985,987	39,760	7,530,935
<b>Prior Period</b>	October 2008	September 2009	951,398	48,311	7,057,866
<b>Percent Difference</b>			3.6%	-17.7%	6.7%

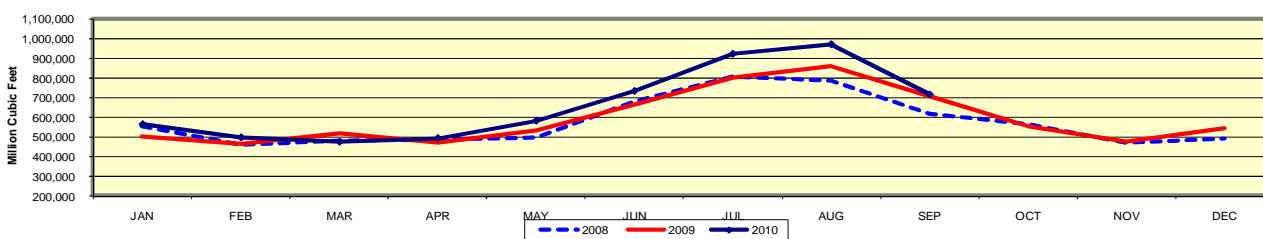
**Figure 5.1 Trend in Total Coal Consumption For Electric Generation (All Sectors): 2008, 2009, and 2010**



**Figure 5.2 Trend in Total Petroleum Liquids Consumption For Electric Generation (All Sectors): 2008, 2009, and 2010**



**Figure 5.3 Trend in Total Natural Gas Consumption For Electric Generation (All Sectors): 2008, 2009, and 2010**



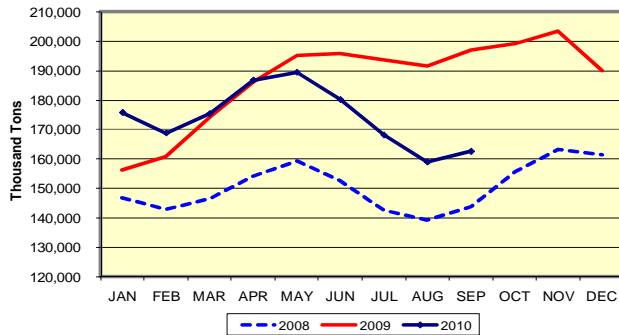
# Section 6. Fossil Fuel Stock Trends

Data for:  
September 2010

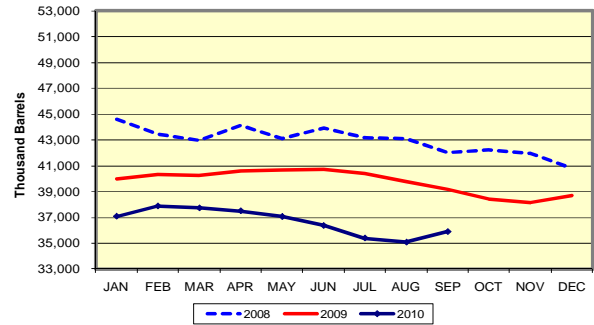
**Table 6.1 Trends in Total Fossil Fuel Stocks (Electric Power Sector)**

Fossil Fuel Stocks	Sep-10	Sep-09	% Change	Aug-10	% Change
<b>Coal, Total (Thousand Short Tons)</b>	162,691	197,167	-17.5%	159,072	2.3%
Bituminous (includes anthracite and coal synfuel)	78,082	92,555	-15.6%	76,016	2.7%
Subbituminous	78,203	98,813	-20.9%	76,494	2.2%
Lignite	6,405	5,798	10.5%	6,562	-2.4%
<b>Petroleum Liquids (Thousand Barrels)</b>	35,898	39,151	-8.3%	35,080	2.3%

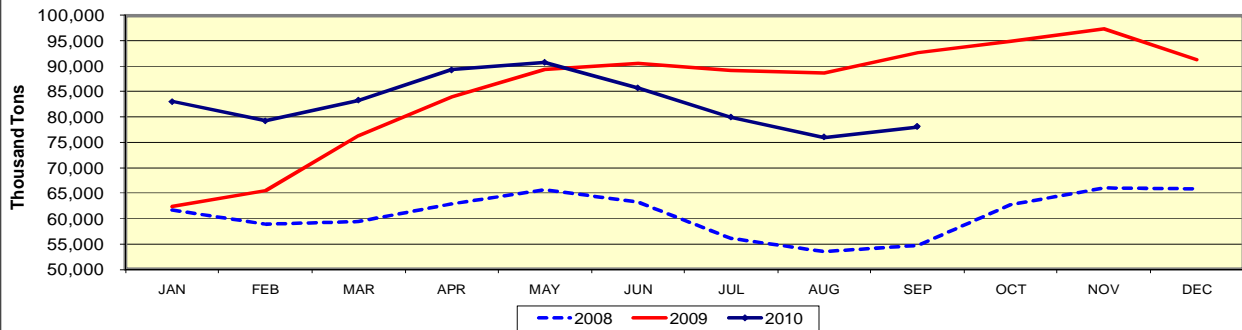
**Figure 6.1 Trend in Coal Stocks (Electric Power Sector): 2008, 2009, and 2010**



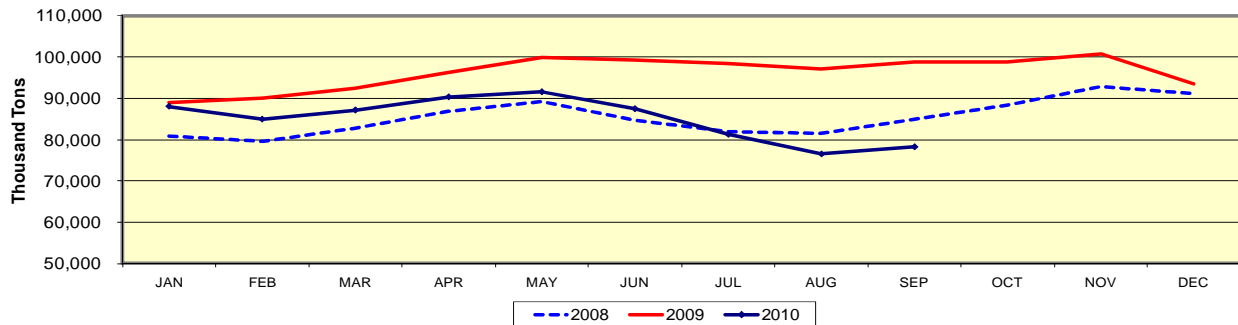
**Figure 6.2 Trend in Petroleum Liquids Stocks (Electric Power Sector): 2008, 2009, and 2010**



**Figure 6.3 Trend in Bituminous Coal Stocks (Electric Power Sector): 2008, 2009, and 2010**



**Figure 6.4 Trend in Subbituminous Coal Stocks (Electric Power Sector): 2008, 2009, and 2010**



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

Data for:  
September 2010

### Retail Sales

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

Ultimate Customer	Sep-10	Sep-09	% Change	Aug-10	% Change
Residential	125,673	115,217	9.1%	154,838	-18.8%
Commercial	121,084	116,315	4.1%	130,749	-7.4%
Industrial	80,463	76,884	4.7%	84,330	-4.6%
Transportation	628	636	-1.3%	609	3.1%
All Sectors	327,848	309,051	6.1%	370,525	-11.5%

### Average Retail Price

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

Ultimate Customer	Sep-10	Sep-09	% Change	Aug-10	% Change
Residential	11.94	12.00	-0.5%	12.02	-0.7%
Commercial	10.56	10.51	0.5%	10.69	-1.2%
Industrial	7.07	6.95	1.7%	7.21	-1.9%
Transportation	11.39	10.72	6.2%	11.51	-1.0%
All Sectors	10.23	10.18	0.5%	10.45	-2.1%

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

Census Division	Residential			All Sectors		
	Sep-10	Sep-09	% Change	Sep-10	Sep-09	% Change
New England	16.54	17.68	-6.4%	15.15	15.63	-3.1%
Middle Atlantic	16.74	15.95	5.0%	13.93	13.69	1.8%
East North Central	11.66	11.38	2.5%	9.22	9.00	2.4%
West North Central	10.12	9.68	4.5%	8.24	7.82	5.4%
South Atlantic	11.21	11.57	-3.1%	9.72	9.97	-2.5%
East South Central	9.96	9.61	3.6%	8.55	8.06	6.1%
West South Central	11.03	11.27	-2.1%	9.05	9.06	-0.1%
Mountain	11.11	10.81	2.8%	9.20	9.02	2.0%
Pacific Contiguous	13.40	13.74	-2.5%	12.73	12.64	0.7%
Pacific Noncontiguous	23.57	22.58	4.4%	21.40	20.05	6.7%
U.S. Total	11.94	12.00	-0.5%	10.23	10.18	0.5%

# Section 8. Retail Sales Trends

Data for:  
September 2010

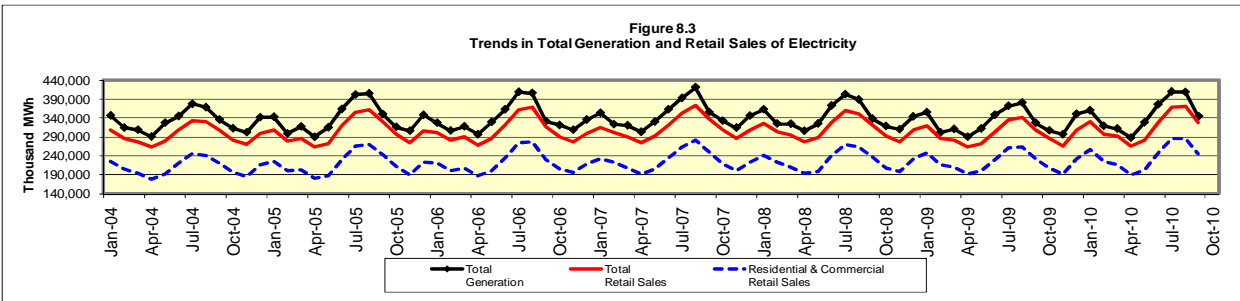
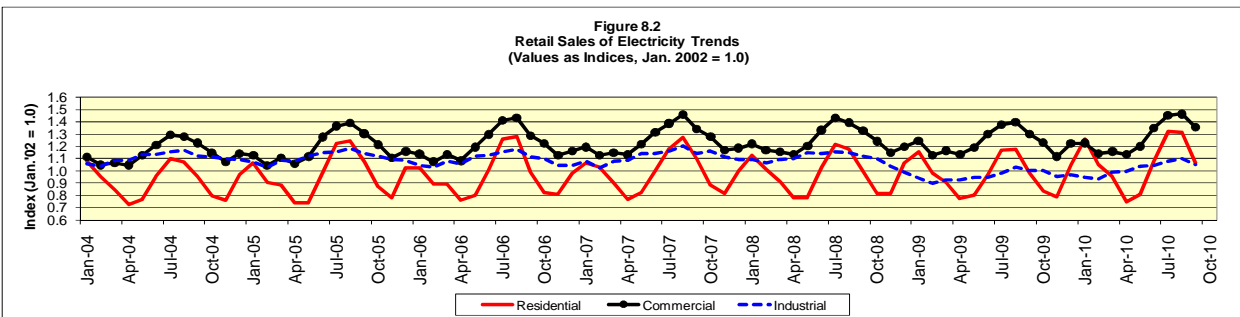
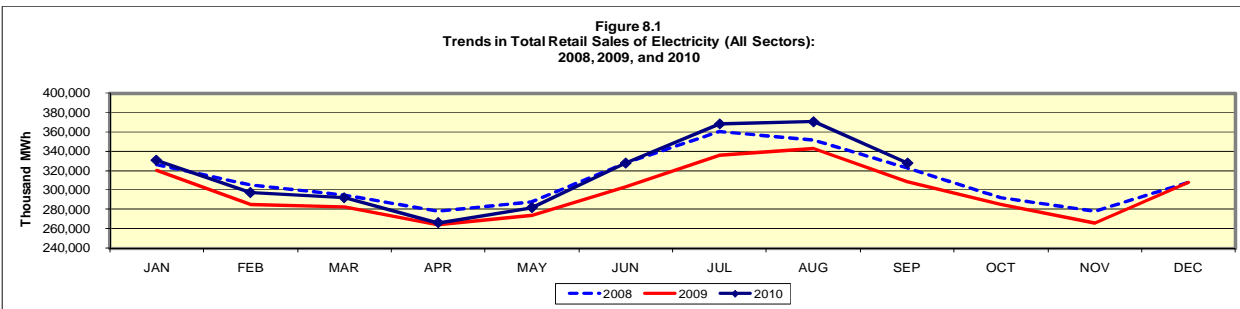
**Table 8.1 Trends in Total Retail Sales of Electricity (All Sectors)**  
Millions of Kilowatthours

### Year-to-Date Comparison

	Starting Month	Ending Month	Residential	Commercial	Industrial	Transportation	Total (All Sectors)
<b>Current Period</b>	January 2010	September 2010	1,128,935	1,025,791	702,351	5,827	2,862,904
<b>Prior Period</b>	January 2009	September 2009	1,048,434	1,004,056	658,150	5,787	2,716,428
<b>Percent Difference</b>			7.7%	2.2%	6.7%	0.7%	5.4%

### Comparison to Prior Twelve-Month Period

	Starting Month	Ending Month	Residential	Commercial	Industrial	Transportation	Total (All Sectors)
<b>Current Period</b>	October 2009	September 2010	1,443,370	1,344,724	926,104	7,728	3,721,926
<b>Prior Period</b>	October 2008	September 2009	1,365,195	1,324,337	897,175	7,709	3,594,417
<b>Percent Difference</b>			5.7%	1.5%	3.2%	0.2%	3.5%





# Section 9. Average Retail Price Trends

Data for:  
September 2010

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

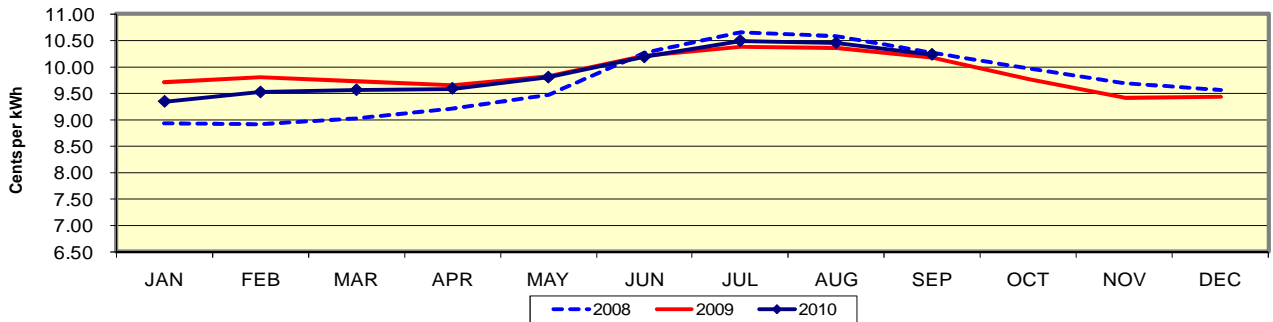
### Year-to-Date Comparison

	Starting Month	Ending Month	Residential	Commercial	Industrial	Transportation	Total (All Sectors)
<b>Current Period</b>	January 2010	September 2010	11.58	10.26	6.84	11.18	9.94
<b>Prior Period</b>	January 2009	September 2009	11.62	10.30	6.94	11.27	10.00
<b>Percent Difference</b>			-0.3%	-0.4%	-1.4%	-0.8%	-0.6%

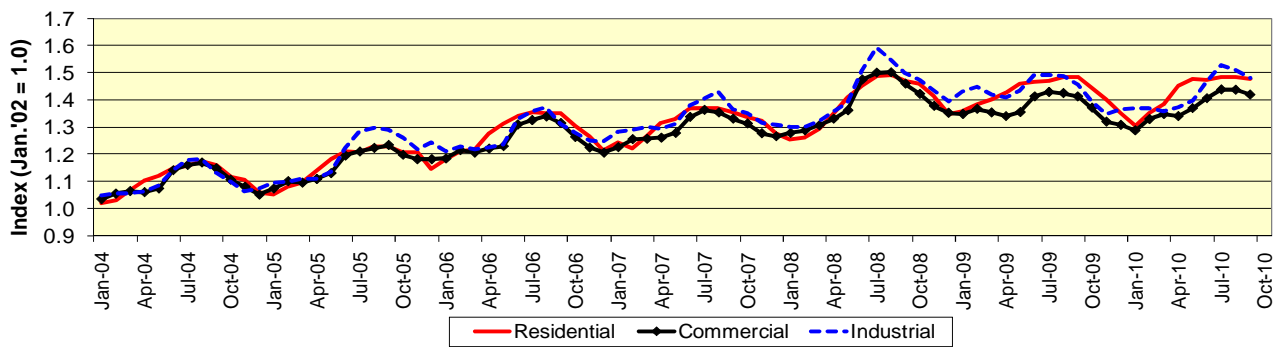
### Comparison to Prior 12 Month Period

	Starting Month	Ending Month	Residential	Commercial	Industrial	Transportation	Total (All Sectors)
<b>Current Period</b>	October 2009	September 2010	11.52	10.18	6.77	11.11	9.85
<b>Prior Period</b>	October 2008	September 2009	11.56	10.30	6.92	11.06	9.94
<b>Percent Difference</b>			-0.3%	-1.2%	-2.2%	0.5%	-0.9%

**Figure 9.1 Trends in Average Retail Price of Electricity (All Sectors):  
2008, 2009, and 2010**



**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:  
September 2010

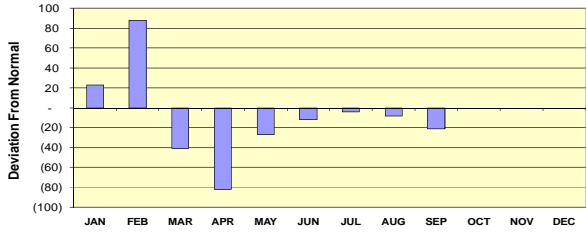
**Table 10.1 Degree Days**

		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>	September 2010	56	77	-21	-27.3%	196	155	41	26.5%
<b>Prior Period</b>	September 2009	60	77	-17	-22.1%	169	155	14	9.0%
<b>Percent Difference</b>				-6.7%				16.0%	

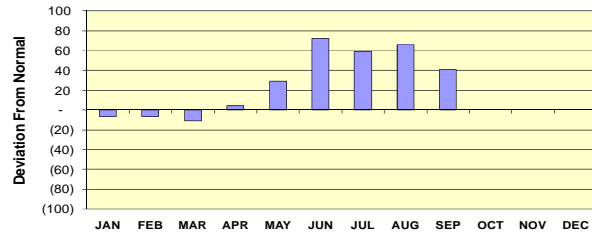
**Table 10.2 Trends in Heating and Cooling Degree Days**

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 2010	September 2010	2,802	1,389	<b>Current Period</b>	October 2009	September 2010	4,450	1,459
<b>Prior Period</b>	January 2009	September 2009	2,845	1,159	<b>Prior Period</b>	October 2008	September 2009	4,491	1,227
<b>Percent Difference</b>			-1.5%	19.8%	<b>Percent Difference</b>			-0.9%	18.9%

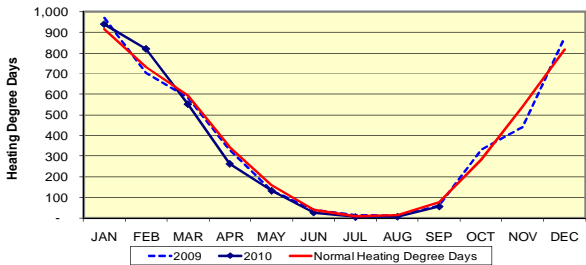
**Figure 10.1 Deviation From Normal: Heating Degree Days, 2010**



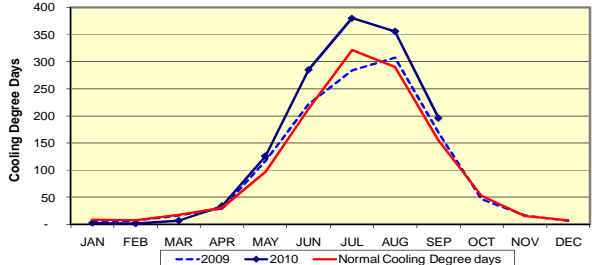
**Figure 10.2 Deviation From Normal: Cooling Degree Days, 2010**



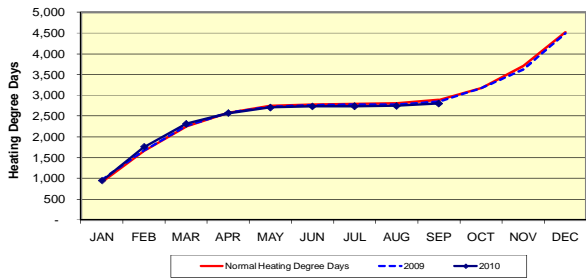
**Figure 10.3 Trend in Heating Degree Days: 2009, 2010, and Normal**



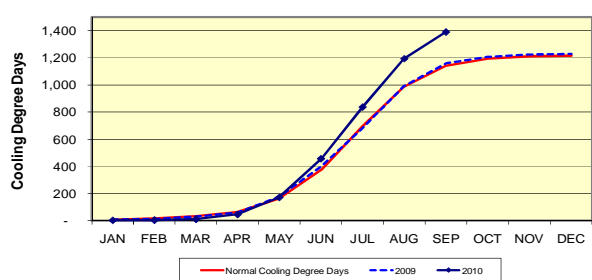
**Figure 10.4 Trend in Cooling Degree Days: 2009, 2010, and Normal**



**Figure 10.5 Trend in Cumulative Heating Degree Days: 2009, 2010, and Normal**



**Figure 10.6 Trend in Cumulative Cooling Degree Days: 2009, 2010, and Normal**



**General:** The Monthly Flash Estimates of Electric Power Data ("Flash Estimates") is prepared by the Electric Power Operations Team, Office of Electricity, Renewables and Uranium Statistics, U.S. Energy Information Administration (EIA), U.S. Department of Energy. Data published in the Flash Estimates are compiled from the following sources: U.S. Energy Information Administration, Form EIA-826, "Monthly Electric Utility Sales and Revenues with State Distributions Report," and U.S. Energy Information Administration, 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.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 releases 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).