

# Monthly Flash Estimates of Electric Power Data

Data for:  
April 2009

## Section 1. Commentary

The contiguous United States experienced near normal temperatures in April 2009. However, regional differences in temperature occurred as the Upper Midwest and parts of the Northwest experienced below average temperatures, while much of the Northeast experienced above average temperatures. Heating degree days for the contiguous United States as a whole were 0.3 percent above the average for the month of April and 8.5 percent above a much warmer April 2008.

In April 2009, retail sales of electricity decreased 4.9 percent compared to April 2008. This decrease in retail sales was caused by the significant decline in industrial consumption as observed by the 13.6-percent decrease in industrial retail sales over the same period. The average U.S. retail price of electricity continued to show an upward trend in April 2009 from the previous year, increasing 4.2 percent from April 2008. This increase in average U.S. retail price from April 2008 can be attributed to the higher cost of coal used in electricity generation and the expiration of price caps observed in several deregulated States.

Total electric power generation in the United States decreased 4.8 percent from April 2008. Coal generation decreased 13.4 percent when compared to April 2008. This drop was caused by 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 April 2009 decreased 1.8 percent compared to April 2008. Petroleum liquids generation had the largest year-over-year percentage decline, decreasing 26.0 percent when compared to April 2008. Conventional hydroelectric generation was 18.4 percent higher than April 2008 and 17.9 percent higher than March 2009 as a majority of the contiguous United States, particularly areas of the Northwest, experienced above normal precipitation during the winter months.

Following the year-over-year decrease in coal generation, the consumption of coal to produce electricity decreased 12.3 percent when compared to April 2008. Over the same time period, natural gas consumption decreased 1.3 percent, while petroleum liquids consumption decreased 25.9 percent.

In April 2009, total coal stocks in the Electric Power Sector increased 6.4 percent from the previous month. The March 2009-to-April 2009 change in coal stocks consisted of a 9.2-percent increase in bituminous coal and a 3.0-percent increase in subbituminous coal. Petroleum liquids stocks remained relatively unchanged from March 2009.

References for weather data:

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

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

Data for:  
April 2009

### Table 2.1 Key Generation Indicators

	Total Generation	Nuclear Generation	Hydroelectric Generation
<b>Total Change From:</b>			
March 2009	-6.6%	-11.6%	17.9%
April 2008	-4.8%	3.1%	18.4%
<b>Year to Date</b>	<b>-4.6%</b>	<b>2.3%</b>	<b>8.2%</b>
<b>Latest 12 Month Period*</b>	<b>-2.9%</b>	<b>1.1%</b>	<b>8.0%</b>

### Table 2.2 Key Consumption and Stocks Indicators

	Natural Gas Consumption	Coal Consumption	Coal Stocks
<b>Total Change From:</b>			
March 2009	-8.7%	-6.3%	6.4%
April 2008	-1.3%	-12.3%	21.7%
<b>Year to Date</b>	<b>0.0%</b>	<b>-10.4%</b>	<b>--</b>
<b>Latest 12 Month Period*</b>	<b>-5.3%</b>	<b>-4.3%</b>	<b>--</b>

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

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

Data for:  
April 2009

### Net Generation (Total, All Sectors)

Table 3.1 Total Net Generation (All Sectors)

Net Generation (thousand megawatthours)	Apr-09	Apr-08	% Change	Mar-09	% Change
Coal	127,698	147,391	-13.4%	136,625	-6.5%
Petroleum Liquids	1,614	2,181	-26.0%	2,016	-19.9%
Natural Gas	61,282	62,407	-1.8%	68,084	-10.0%
Nuclear	59,135	57,333	3.1%	66,920	-11.6%
Hydroelectric Conventional	25,230	21,306	18.4%	21,394	17.9%
All Other	14,751	13,715	7.6%	14,985	-1.6%
Total (All Energy Sources)	289,709	304,334	-4.8%	310,024	-6.6%

### 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	Apr-09	Apr-08	% Change	Mar-09	% Change
Coal (Thousand Short Tons)	67,687	77,139	-12.3%	72,268	-6.3%
Petroleum Liquids (Thousand Barrels)	2,653	3,582	-25.9%	3,465	-23.4%
Natural Gas (Million Cubic Feet)	472,484	478,887	-1.3%	517,498	-8.7%

### Fossil Fuel Stocks (Electric Power Sector)

Table 3.3 Total Fossil Fuel Stocks (Electric Power Sector)

Fossil Fuel Stocks	Apr-09	Apr-08	% Change	Mar-09	% Change
Coal (Thousand Short Tons)	187,885	154,409	21.7%	176,639	6.4%
Petroleum Liquids (Thousand Barrels)	42,964	44,803	-4.1%	42,984	0.0%

#### 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:  
April 2009

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

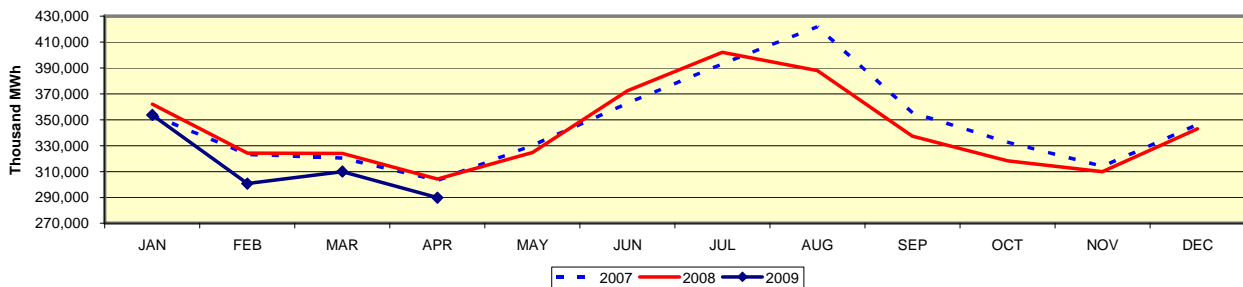
### Year-to-Date Comparison

	Starting Month	Ending Month	Coal	Petroleum Liquids	Natural Gas	Nuclear	Hydroelectric Conventional	All Other	Total
<b>Current Period</b>	January 2009	April 2009	579,255	10,745	256,665	263,761	87,805	55,805	1,254,036
<b>Prior Period</b>	January 2008	April 2008	658,750	9,683	255,918	257,915	81,130	51,287	1,314,683
<b>Percent Difference</b>			-12.1%	11.0%	0.3%	2.3%	8.2%	8.8%	-4.6%

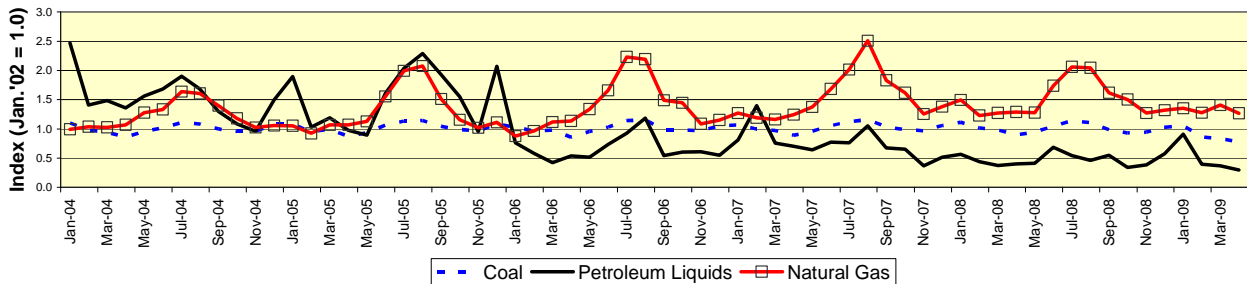
### Comparison to Prior Twelve-Month Period

	Starting Month	Ending Month	Coal	Petroleum Liquids	Natural Gas	Nuclear	Hydroelectric Conventional	All Other	Total
<b>Current Period</b>	May 2008	April 2009	1,914,890	32,224	877,695	812,028	254,761	158,014	4,049,612
<b>Prior Period</b>	May 2007	April 2008	2,029,802	39,222	917,055	803,502	235,974	145,510	4,171,065
<b>Percent Difference</b>			-5.7%	-17.8%	-4.3%	1.1%	8.0%	8.6%	-2.9%

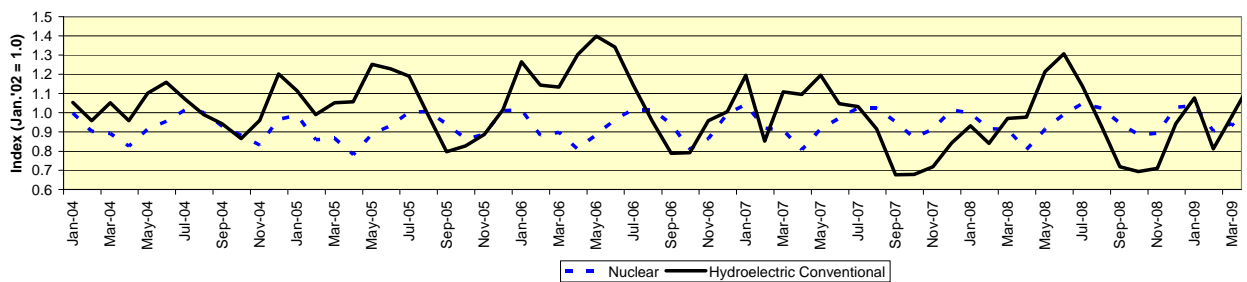
**Figure 4.1 Trends in Total Net Generation (All Sectors): 2007, 2008, and 2009**



**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:  
April 2009

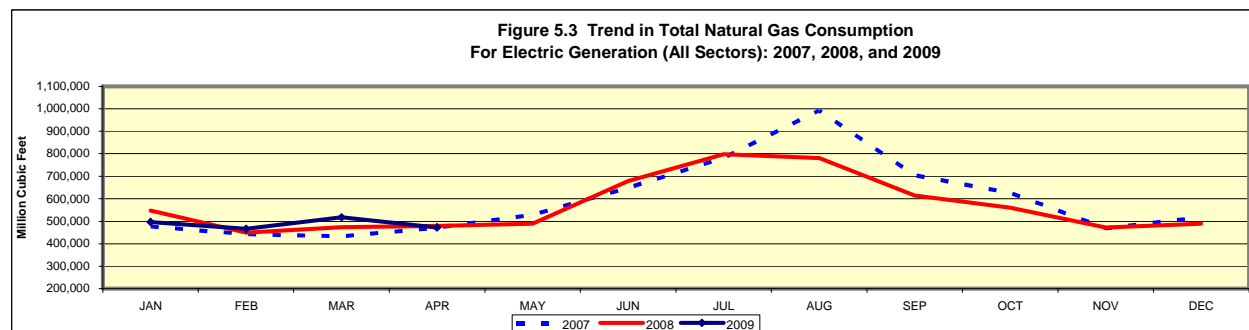
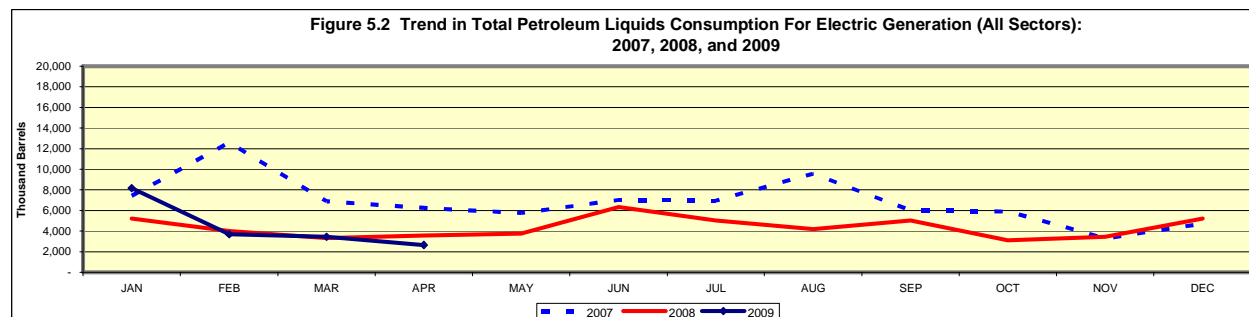
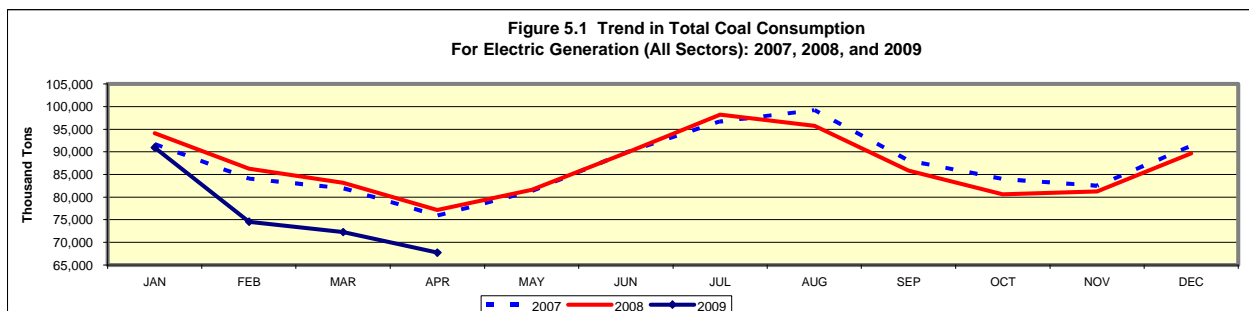
**Table 5.1 Trends in Fossil Fuel Consumption For Electric Generation, Total (All Sectors)**

### 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	April 2009	305,515	17,994	1,952,092
<b>Prior Period</b>	January 2008	April 2008	340,787	16,147	1,951,225
<b>Percent Difference</b>			-10.4%	11.4%	0.0%

### 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>	May 2008	April 2009	1,008,317	54,115	6,834,265
<b>Prior Period</b>	May 2007	April 2008	1,053,857	65,423	7,218,255
<b>Percent Difference</b>			-4.3%	-17.3%	-5.3%

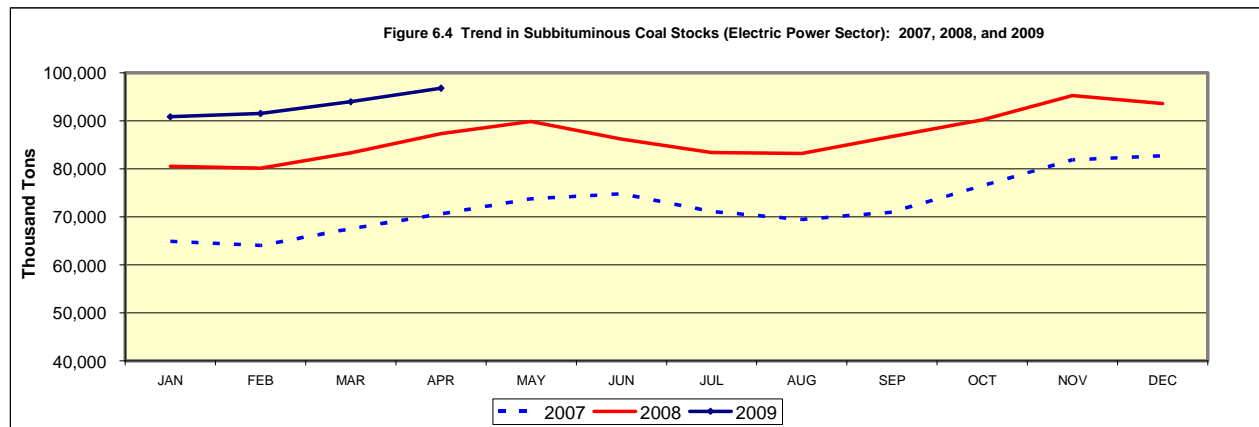
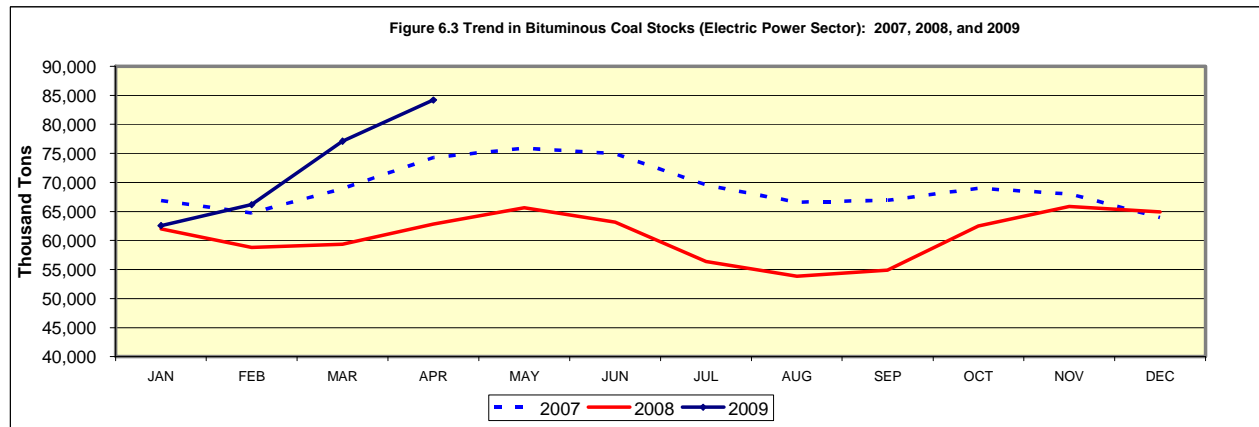
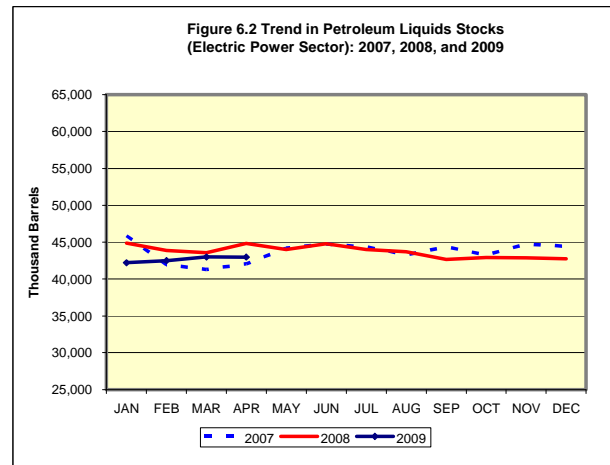
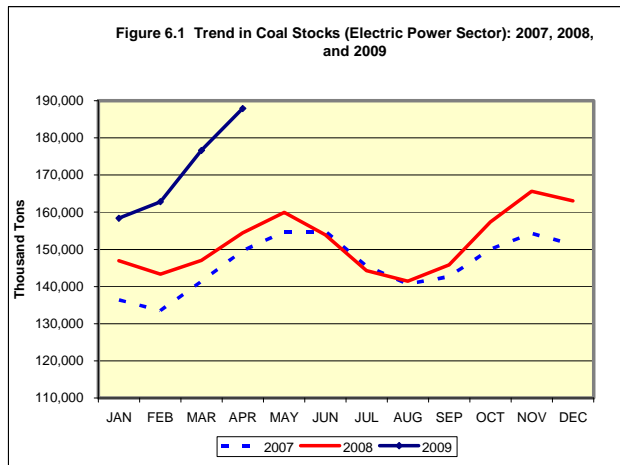


# Section 6. Fossil Fuel Stock Trends

Data for:  
April 2009

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

Fossil Fuel Stocks	Apr-09	Apr-08	% Change	Mar-09	% Change
<b>Coal, Total (Thousand Short Tons)</b>	187,885	154,409	21.7%	176,639	6.4%
Bituminous (includes anthracite and coal synfuel)	84,191	62,848	34.0%	77,090	9.2%
Subbituminous	96,787	87,360	10.8%	93,983	3.0%
Lignite	6,907	4,201	64.4%	5,566	24.1%
<b>Petroleum Liquids (Thousand Barrels)</b>	42,964	44,803	-4.1%	42,984	0.0%



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

Data for:  
April 2009

### Retail Sales

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

Ultimate Customer	Apr-09	Apr-08	% Change	Mar-09	% Change
Residential	91,289	91,979	-0.7%	106,368	-14.2%
Commercial	101,074	102,796	-1.7%	103,818	-2.6%
Industrial	70,562	81,711	-13.6%	71,062	-0.7%
Transportation	589	614	-4.1%	652	-9.7%
All Sectors	263,515	277,100	-4.9%	281,900	-6.5%

### Average Retail Price

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

Ultimate Customer	Apr-09	Apr-08	% Change	Mar-09	% Change
Residential	11.59	11.02	5.2%	11.38	1.8%
Commercial	9.99	9.86	1.3%	10.07	-0.8%
Industrial	6.79	6.64	2.3%	6.84	-0.7%
Transportation	12.44	10.49	18.6%	12.02	3.5%
All Sectors	9.69	9.30	4.2%	9.75	-0.6%

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

Census Division	Residential			All Sectors		
	Apr-09	Apr-08	% Change	Apr-09	Apr-08	% Change
New England	18.06	16.90	6.9%	15.77	15.03	4.9%
Middle Atlantic	14.68	14.58	0.7%	12.70	12.74	-0.3%
East North Central	11.13	10.42	6.8%	8.82	8.36	5.5%
West North Central	8.96	8.46	5.9%	7.28	6.72	8.3%
South Atlantic	11.35	10.40	9.1%	9.77	8.86	10.3%
East South Central	9.73	8.99	8.2%	7.96	7.16	11.2%
West South Central	11.58	11.39	1.7%	9.18	9.66	-5.0%
Mountain	9.78	9.54	2.5%	7.93	7.85	1.0%
Pacific Contiguous	11.56	11.06	4.5%	10.50	9.93	5.7%
Pacific Noncontiguous	20.01	24.98	-19.9%	17.32	22.44	-22.8%
U.S. Total	11.59	11.02	5.2%	9.69	9.30	4.2%

# Section 8. Retail Sales Trends

Data for:  
April 2009

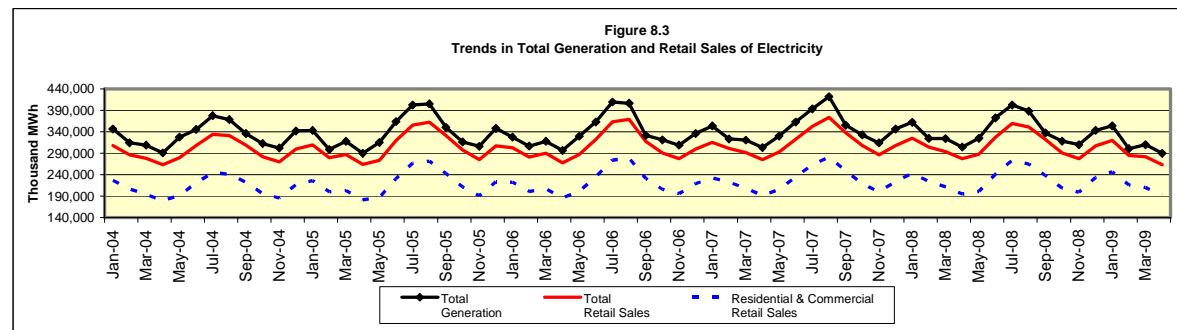
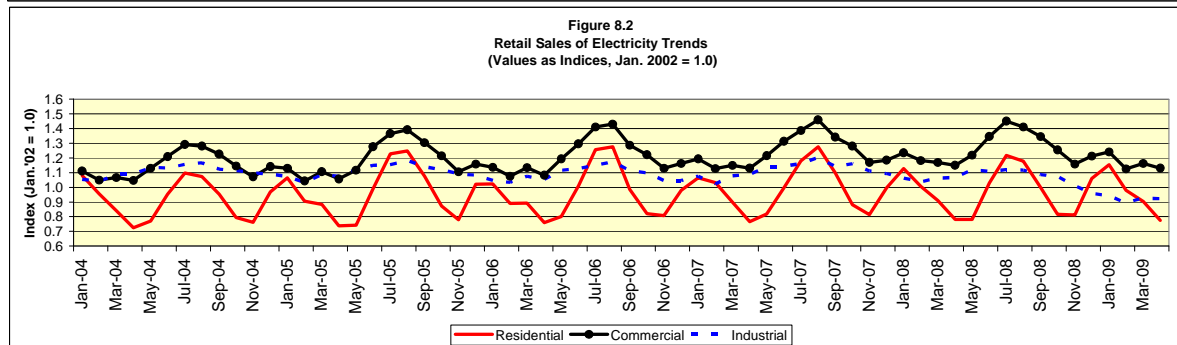
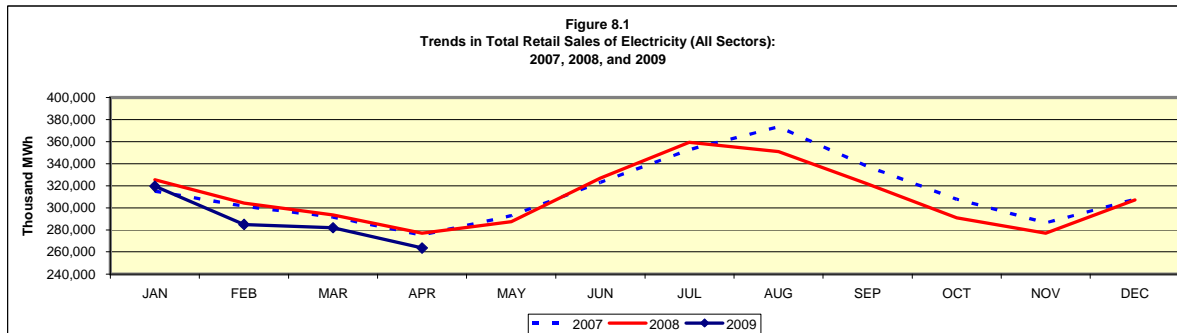
**Table 8.1 Trends in Total Retail Sales of Electricity (All Sectors)**  
Millions of Kilowatthours

### Year-to-Date Comparison

	Starting Month	Ending Month	Residential	Commercial	Industrial	Transportation	Total (All Sectors)
<b>Current Period</b>	January 2009	April 2009	448,762	416,302	282,239	2,611	1,149,914
<b>Prior Period</b>	January 2008	April 2008	450,348	423,212	323,842	2,615	1,200,018
<b>Percent Difference</b>			-0.4%	-1.6%	-12.8%	-0.2%	-4.2%

### Comparison to Prior Twelve-Month Period

	Starting Month	Ending Month	Residential	Commercial	Industrial	Transportation	Total (All Sectors)
<b>Current Period</b>	May 2008	April 2009	1,377,721	1,345,543	940,547	7,648	3,671,459
<b>Prior Period</b>	May 2007	April 2008	1,399,862	1,348,412	1,024,954	7,914	3,781,142
<b>Percent Difference</b>			-1.6%	-0.2%	-8.2%	-3.4%	-2.9%





# Section 9. Average Retail Price Trends

Data for:  
April 2009

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

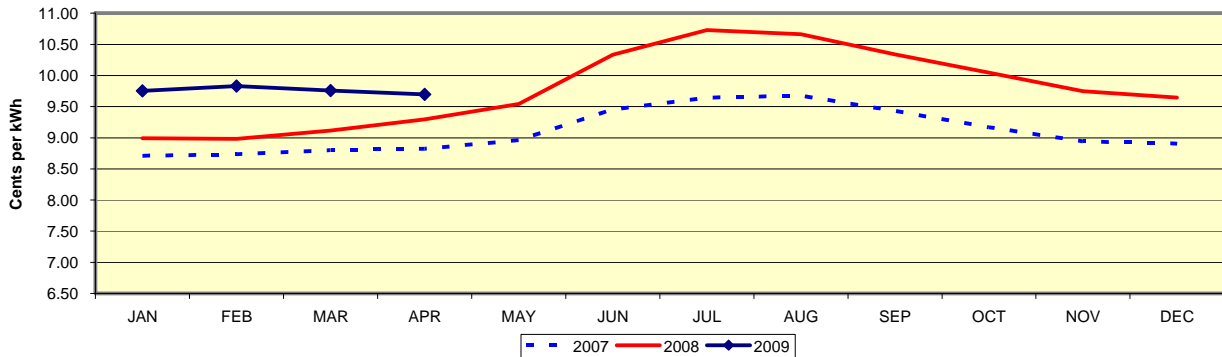
### Year-to-Date Comparison

	Starting Month	Ending Month	Residential	Commercial	Industrial	Transportation	Total (All Sectors)
<b>Current Period</b>	January 2009	April 2009	11.28	10.06	6.88	11.70	9.76
<b>Prior Period</b>	January 2008	April 2008	10.49	9.58	6.49	10.31	9.09
<b>Percent Difference</b>			7.5%	5.0%	6.0%	13.5%	7.4%

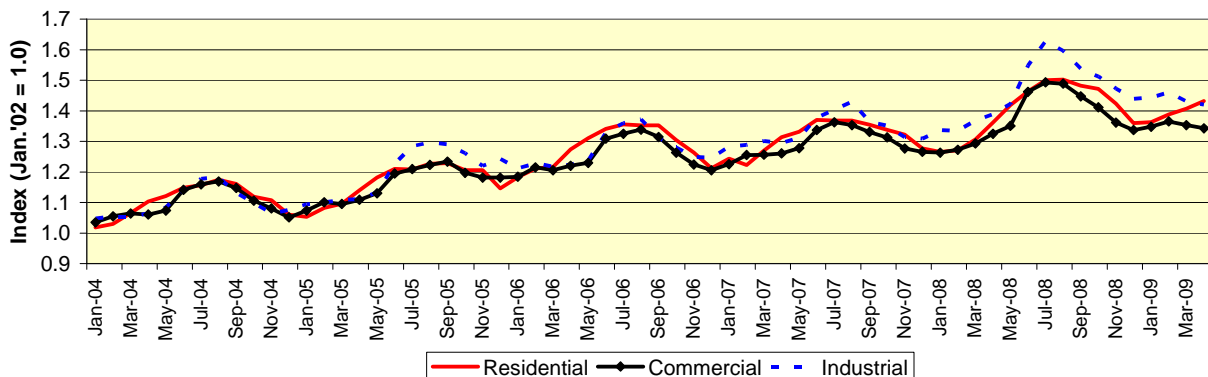
### Comparison to Prior 12 Month Period

	Starting Month	Ending Month	Residential	Commercial	Industrial	Transportation	Total (All Sectors)
<b>Current Period</b>	May 2008	April 2009	11.61	10.43	7.15	11.76	10.04
<b>Prior Period</b>	May 2007	April 2008	10.75	9.73	6.49	9.90	9.23
<b>Percent Difference</b>			8.0%	7.2%	10.2%	18.8%	8.8%

**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:  
April 2009

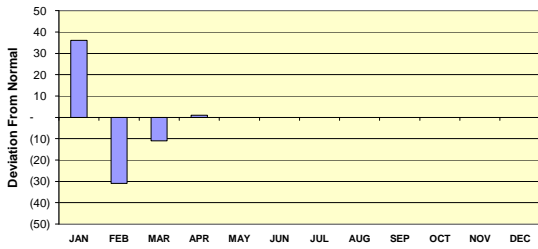
**Table 10.1 Degree Days**

		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>	April 2009	346	345	1	0.3%	41	30	11	36.7%
<b>Prior Period</b>	April 2008	319	345	-26	-7.5%	31	30	1	3.3%
<b>Percent Difference</b>		8.5%				32.3%			

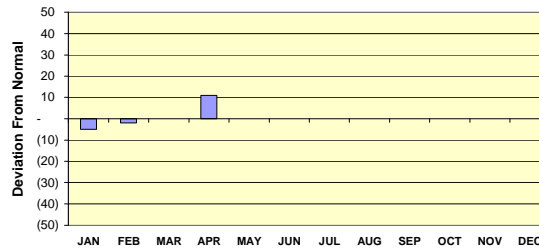
**Table 10.2 Trends in Heating and Cooling Degree Days**

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
<b>Current Period</b>	January 2009	April 2009	2,582	69	<b>Current Period</b>	May 2008	April 2009	4,507	1,280
<b>Prior Period</b>	January 2008	April 2008	2,569	66	<b>Prior Period</b>	May 2007	April 2008	4,256	1,398
<b>Percent Difference</b>			0.5%	4.5%	<b>Percent Difference</b>			5.9%	-8.4%

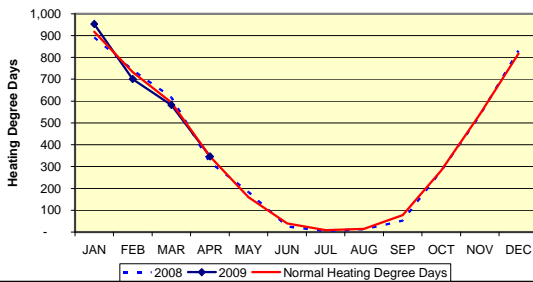
**Figure 10.1 Deviation From Normal: Heating Degree Days, 2009**



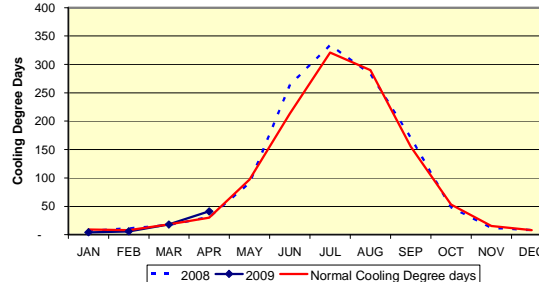
**Figure 10.2 Deviation From Normal Cooling Degree Days, 2009**



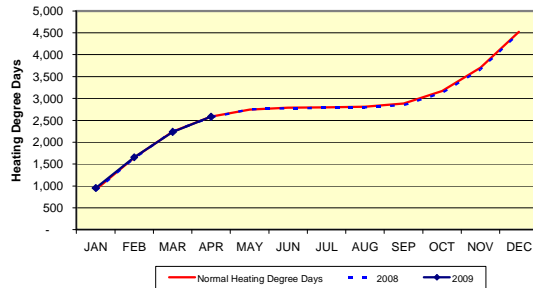
**Figure 10.3 Trend in Heating Degree Days: 2008, 2009, and Normal**



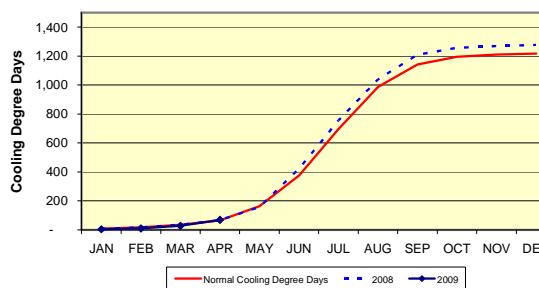
**Figure 10.4 Trend in Cooling Degree Days: 2008, 2009, and Normal**



**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 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).