

Monthly Flash Estimates of Electric Power Data

Data for:
December 2009

Section 1. Commentary

The contiguous United States as a whole experienced temperatures that were below average in December 2009. This occurred because almost all States west of the Mississippi River experienced below average temperatures. In addition, Maine and parts of Florida were the only States that experienced above average temperatures. Accordingly, total population-weighted heating degree days for the contiguous United States were 6.1 percent above the average for the month of December.

Retail sales of electricity remained relatively unchanged from December 2008. The average U.S. retail price of electricity decreased 2.0 percent in December 2009 compared to the previous year. This decrease in price can in part be attributed to the lower fuel costs for natural gas used for electricity generation.

Total electric power generation in the United States increased 1.6 percent from December 2008 (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). Over the same period, coal generation decreased 0.7 percent, while natural gas generation increased 10.8 percent. Petroleum liquids generation had the largest percentage decline, decreasing 55.4 percent from the previous year, as a result of the increased cost of petroleum liquids as a fuel used in electricity generation. Following record-setting precipitation totals observed during the Fall of 2009 and throughout December 2009, conventional hydroelectric generation increased 18.8 percent when compared to December 2008.

Following the year-over-year decrease in coal generation, the consumption of coal to produce electricity decreased 1.4 percent when compared to December 2008. Over the same time period, petroleum liquids consumption decreased 55.6 percent, while natural gas consumption increased 10.4 percent.

In December 2009, total coal stocks in the Electric Power Sector finally began to recede from historically high levels set in previous months, decreasing 6.7 percent from November 2009. The November 2009 to December 2009 change in coal stocks consisted of a 6.9-percent decrease in bituminous coal and a 7.0-percent decrease in subbituminous coal. Petroleum liquid stocks increased 1.4 percent from November 2009.

References for weather data:

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

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Section 2. Key Indicators of Generation, Consumption & Stocks

Data for:
December 2009

Table 2.1 Key Generation Indicators

	Total Generation	Nuclear Generation	Hydroelectric Generation
Total Change From:			
November 2009	17.8%	19.3%	18.6%
December 2008	1.6%	-3.4%	18.8%
Year to Date	-4.1%	-1.2%	6.8%
Latest 12 Month Period*	-4.1%	-1.2%	6.8%

Table 2.2 Key Consumption and Stocks Indicators

	Natural Gas Consumption	Coal Consumption	Coal Stocks
Total Change From:			
November 2009	13.5%	19.9%	-6.7%
December 2008	10.4%	-1.4%	17.5%
Year to Date	3.0%	-10.1%	--
Latest 12 Month Period*	3.0%	-10.1%	--

* Change in total consumption or generation for the latest 12 month period (January 2009 to December 2009) compared to the prior 12 month period (January 2008 to December 2008).

Net Generation (Total, All Sectors)

Table 3.1 Total Net Generation (All Sectors)

Net Generation (thousand megawatthours)	Dec-09	Dec-08	% Change	Nov-09	% Change
Coal	166,599	167,786	-0.7%	137,407	21.2%
Petroleum Liquids	1,454	3,257	-55.4%	1,327	9.6%
Natural Gas	71,308	64,364	10.8%	63,325	12.6%
Nuclear	70,441	72,931	-3.4%	59,069	19.3%
Hydroelectric Conventional	24,792	20,861	18.8%	20,905	18.6%
All Other	14,893	14,699	1.3%	14,702	1.3%
Total (All Energy Sources)	349,486	343,898	1.6%	296,735	17.8%

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	Dec-09	Dec-08	% Change	Nov-09	% Change
Coal (Thousand Short Tons)	88,092	89,353	-1.4%	73,459	19.9%
Petroleum Liquids (Thousand Barrels)	2,435	5,482	-55.6%	2,195	10.9%
Natural Gas (Million Cubic Feet)	542,323	491,412	10.4%	477,828	13.5%

Fossil Fuel Stocks (Electric Power Sector)

Table 3.3 Total Fossil Fuel Stocks (Electric Power Sector)

Fossil Fuel Stocks	Dec-09	Dec-08	% Change	Nov-09	% Change
Coal (Thousand Short Tons)	189,833	161,589	17.5%	203,409	-6.7%
Petroleum Liquids (Thousand Barrels)	38,685	40,804	-5.2%	38,165	1.4%

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:
December 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
Current Period	January 2009	December 2009	1,763,843	25,795	920,116	796,751	272,131	171,590	3,950,226
Prior Period	January 2008	December 2008	1,985,801	31,917	882,981	806,208	254,831	157,650	4,119,388
Percent Difference			-11.2%	-19.2%	4.2%	-1.2%	6.8%	8.8%	-4.1%

Comparison to Prior Twelve-Month Period

	Starting Month	Ending Month	Coal	Petroleum Liquids	Natural Gas	Nuclear	Hydroelectric Conventional	All Other	Total
Current Period	January 2009	December 2009	1,763,843	25,795	920,116	796,751	272,131	171,590	3,950,226
Prior Period	January 2008	December 2008	1,985,801	31,917	882,981	806,208	254,831	157,650	4,119,388
Percent Difference			-11.2%	-19.2%	4.2%	-1.2%	6.8%	8.8%	-4.1%

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

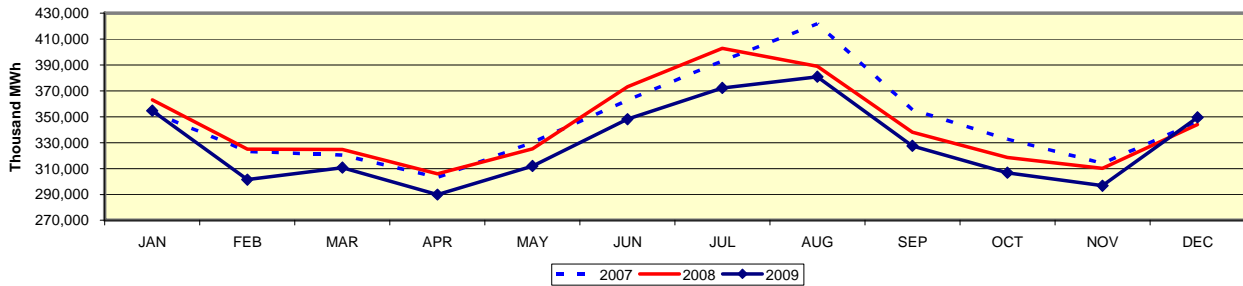


Figure 4.2 Fossil Fuel Generation Trends (Values as Indices, Jan. 2002 = 1.0)

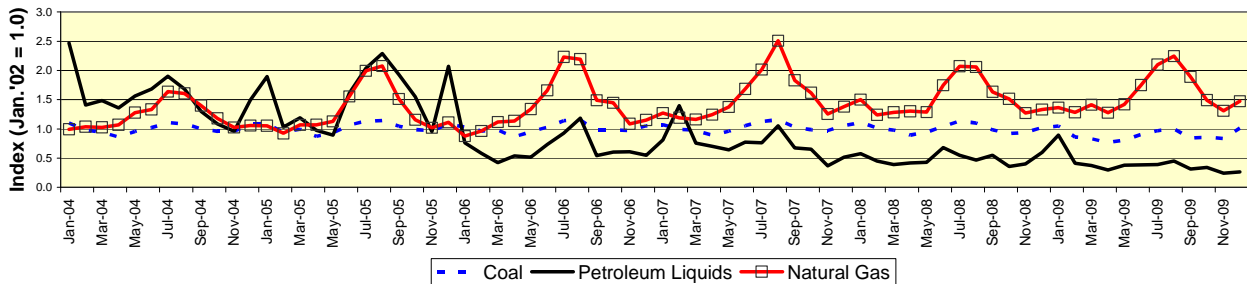
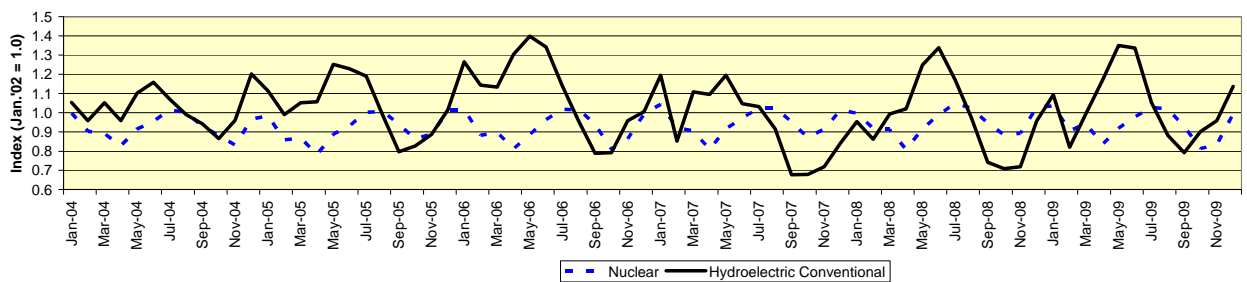


Figure 4.3 Nuclear and Hydroelectric Generation Trends (Values as Indices, Jan. 2002 = 1.0)



Section 5. Fossil Fuel Consumption Trends

Data for:
December 2009

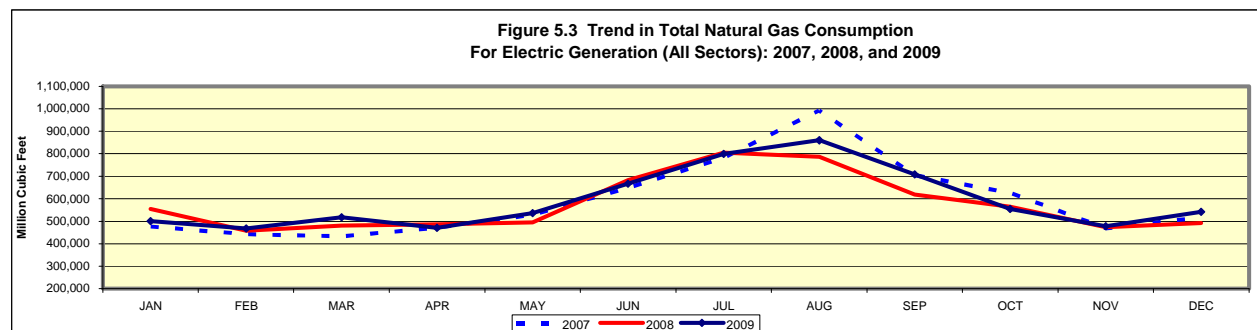
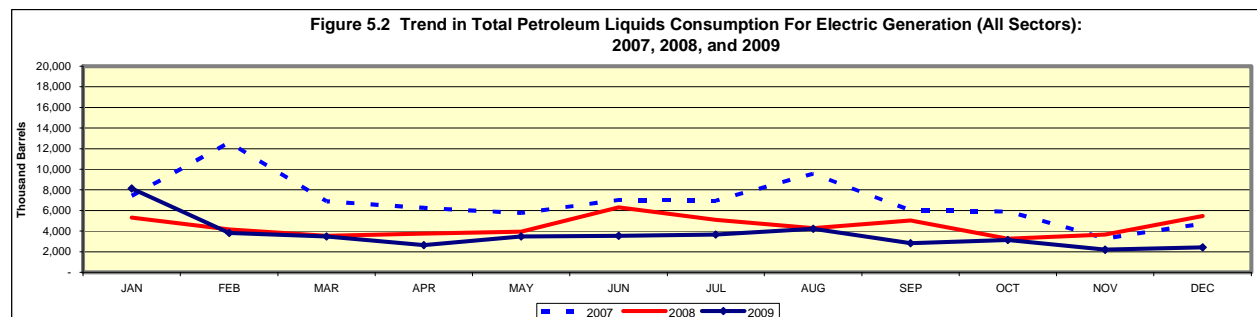
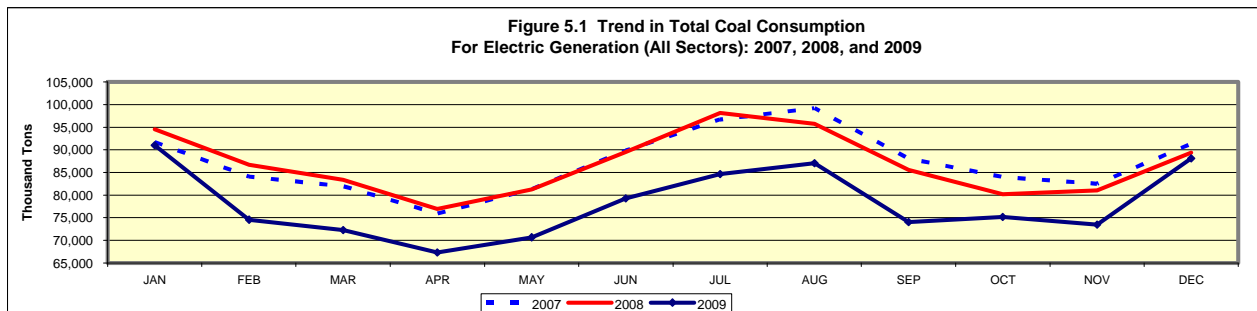
Table 5.1 Trends in Fossil Fuel Consumption For Electric Generation, Total (All Sectors)

Year-to-Date Comparison

	Starting Month	Ending Month	Coal (Thousand Tons)	Petroleum Liquids (Thousand Barrels)	Natural Gas (Million Cubic Feet)
Current Period	January 2009	December 2009	937,579	43,654	7,103,459
Prior Period	January 2008	December 2008	1,042,335	53,846	6,895,843
Percent Difference			-10.1%	-18.9%	3.0%

Comparison to Prior 12 Month Period

	Starting Month	Ending Month	Coal (Thousand Tons)	Petroleum Liquids (Thousand Barrels)	Natural Gas (Million Cubic Feet)
Current Period	January 2009	December 2009	937,579	43,654	7,103,459
Prior Period	January 2008	December 2008	1,042,335	53,846	6,895,843
Percent Difference			-10.1%	-18.9%	3.0%

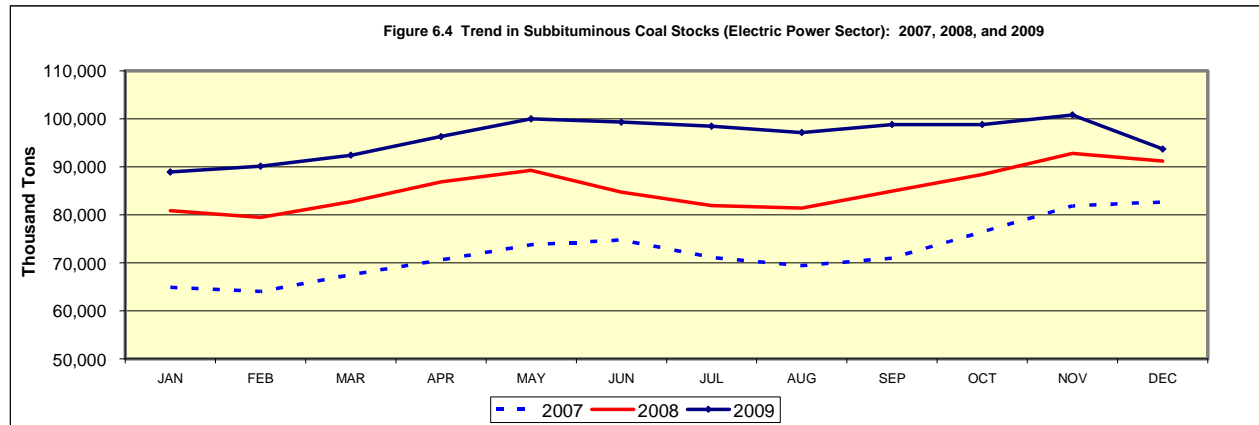
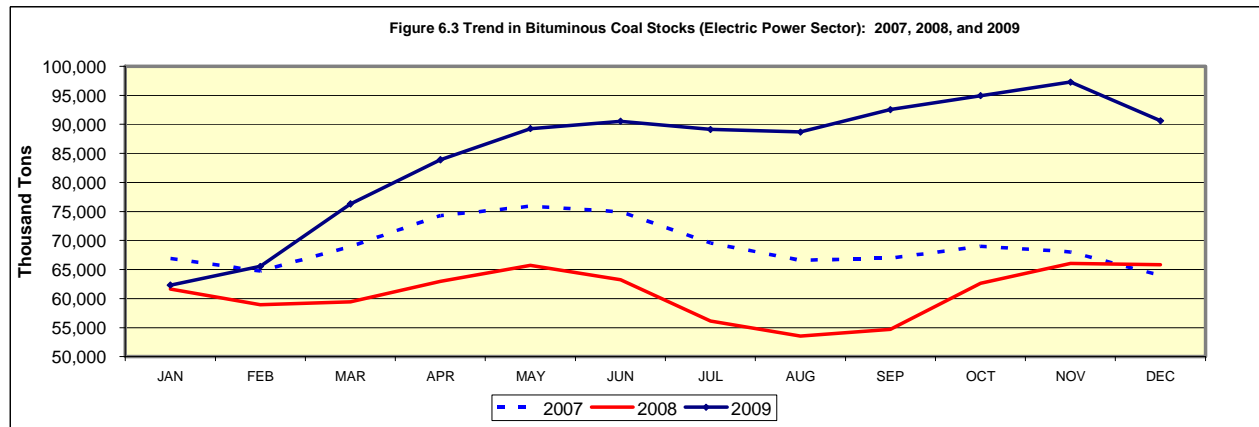
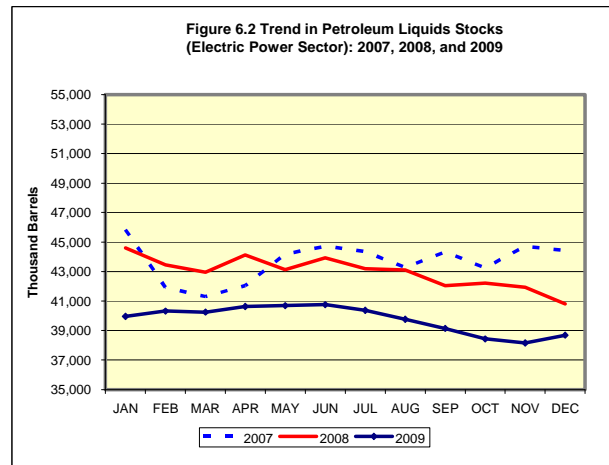
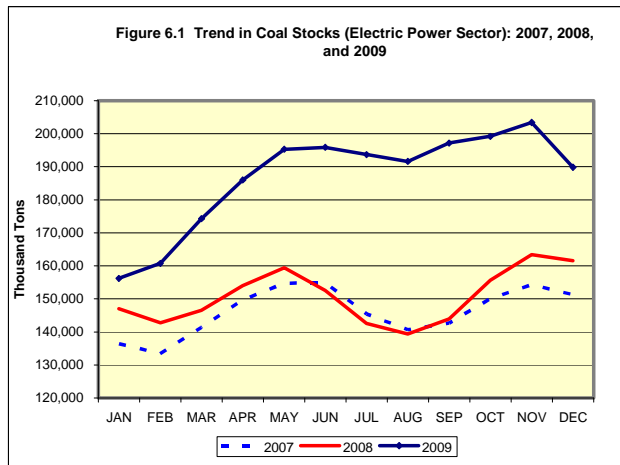


Section 6. Fossil Fuel Stock Trends

Data for:
December 2009

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

Fossil Fuel Stocks	Dec-09	Dec-08	% Change	Nov-09	% Change
Coal, Total (Thousand Short Tons)	189,833	161,589	17.5%	203,409	-6.7%
Bituminous (includes anthracite and coal synfuel)	90,614	65,818	37.7%	97,296	-6.9%
Subbituminous	93,729	91,214	2.8%	100,814	-7.0%
Lignite	5,491	4,556	20.5%	5,298	3.6%
Petroleum Liquids (Thousand Barrels)	38,685	40,804	-5.2%	38,165	1.4%



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

Data for:
December 2009

Retail Sales

Table 7.1 Retail Sales (Million kWh)

Ultimate Customer	Dec-09	Dec-08	% Change	Nov-09	% Change
Residential	123,398	125,003	-1.3%	92,614	33.2%
Commercial	109,370	106,909	2.3%	99,669	9.7%
Industrial	74,379	75,619	-1.6%	72,945	2.0%
Transportation	701	672	4.2%	597	17.4%
All Sectors	307,847	308,203	-0.1%	265,825	15.8%

Average Retail Price

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

Ultimate Customer	Dec-09	Dec-08	% Change	Nov-09	% Change
Residential	10.83	10.90	-0.6%	11.33	-4.4%
Commercial	9.70	10.06	-3.6%	9.82	-1.2%
Industrial	6.48	6.67	-2.8%	6.44	0.6%
Transportation	11.01	10.76	2.3%	10.58	4.1%
All Sectors	9.38	9.57	-2.0%	9.42	-0.4%

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

Census Division	Residential			All Sectors		
	Dec-09	Dec-08	% Change	Dec-09	Dec-08	% Change
New England	16.32	18.12	-9.9%	14.99	16.40	-8.6%
Middle Atlantic	14.52	13.76	5.5%	12.76	12.27	4.0%
East North Central	10.32	10.09	2.3%	8.63	8.64	-0.1%
West North Central	8.27	8.05	2.7%	6.99	6.84	2.2%
South Atlantic	10.69	10.53	1.5%	9.51	9.56	-0.5%
East South Central	8.84	9.69	-8.8%	7.63	8.32	-8.3%
West South Central	10.40	11.41	-8.9%	8.64	9.72	-11.1%
Mountain	9.70	9.22	5.2%	7.99	7.68	4.0%
Pacific Contiguous	11.10	11.14	-0.4%	9.86	9.95	-0.9%
Pacific Noncontiguous	21.63	23.24	-6.9%	19.82	21.09	-6.0%
U.S. Total	10.83	10.90	-0.6%	9.38	9.57	-2.0%

Section 8. Retail Sales Trends

Data for:
December 2009

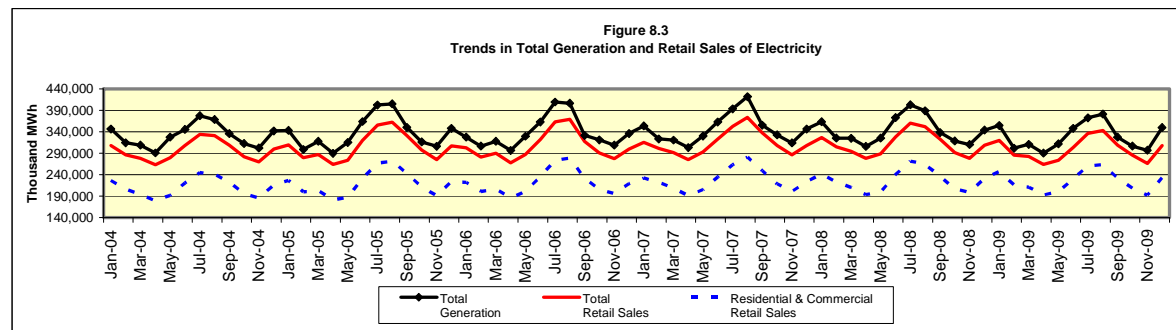
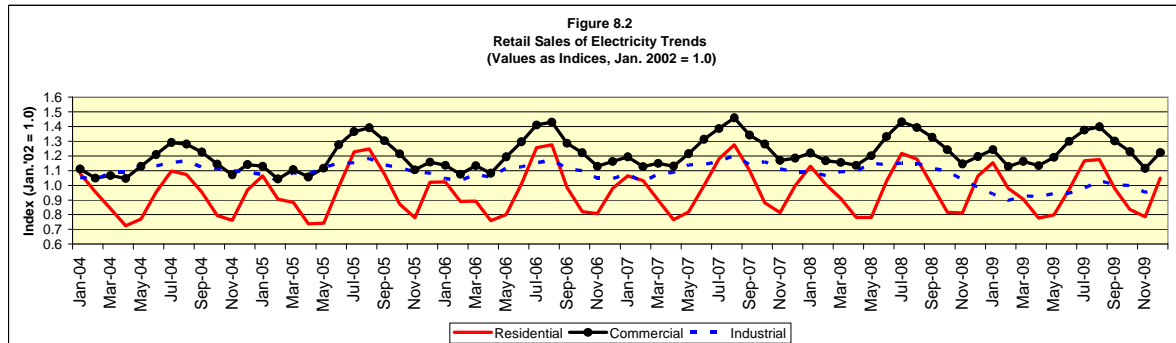
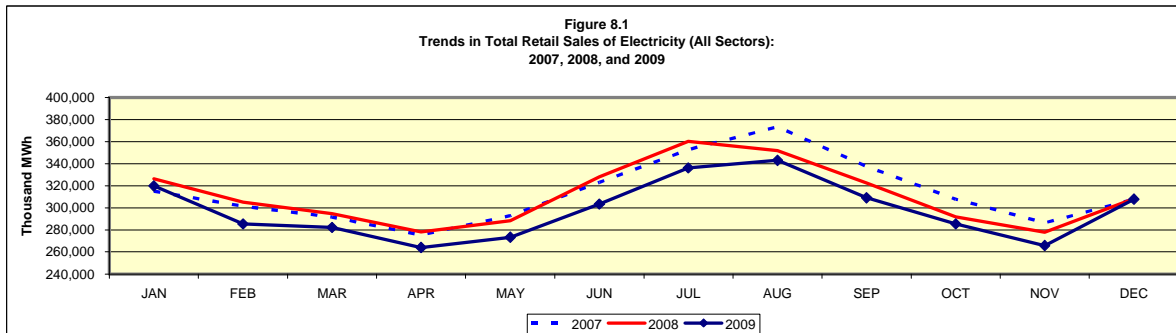
Table 8.1 Trends in Total Retail Sales of Electricity (All Sectors)
Millions of Kilowatthours

Year-to-Date Comparison

	Starting Month	Ending Month	Residential	Commercial	Industrial	Transportation	Total (All Sectors)
Current Period	January 2009	December 2009	1,362,844	1,322,989	882,030	7,689	3,575,552
Prior Period	January 2008	December 2008	1,379,981	1,335,981	1,009,300	7,700	3,732,962
Percent Difference			-1.2%	-1.0%	-12.6%	-0.1%	-4.2%

Comparison to Prior Twelve-Month Period

	Starting Month	Ending Month	Residential	Commercial	Industrial	Transportation	Total (All Sectors)
Current Period	January 2009	December 2009	1,362,844	1,322,989	882,030	7,689	3,575,552
Prior Period	January 2008	December 2008	1,379,981	1,335,981	1,009,300	7,700	3,732,962
Percent Difference			-1.2%	-1.0%	-12.6%	-0.1%	-4.2%



Section 9. Average Retail Price Trends

Data for:
December 2009

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

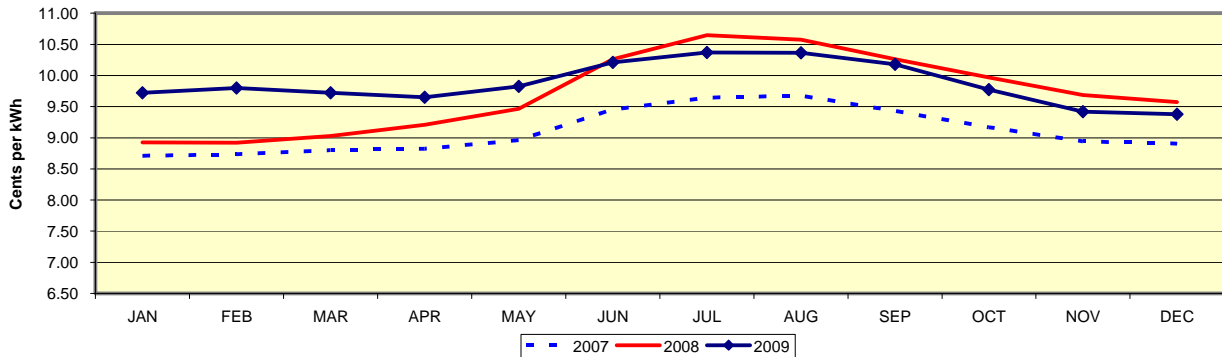
Year-to-Date Comparison

	Starting Month	Ending Month	Residential	Commercial	Industrial	Transportation	Total (All Sectors)
Current Period	January 2009	December 2009	11.54	10.21	6.84	11.17	9.89
Prior Period	January 2008	December 2008	11.26	10.36	6.83	10.74	9.74
Percent Difference			2.5%	-1.4%	0.1%	4.0%	1.5%

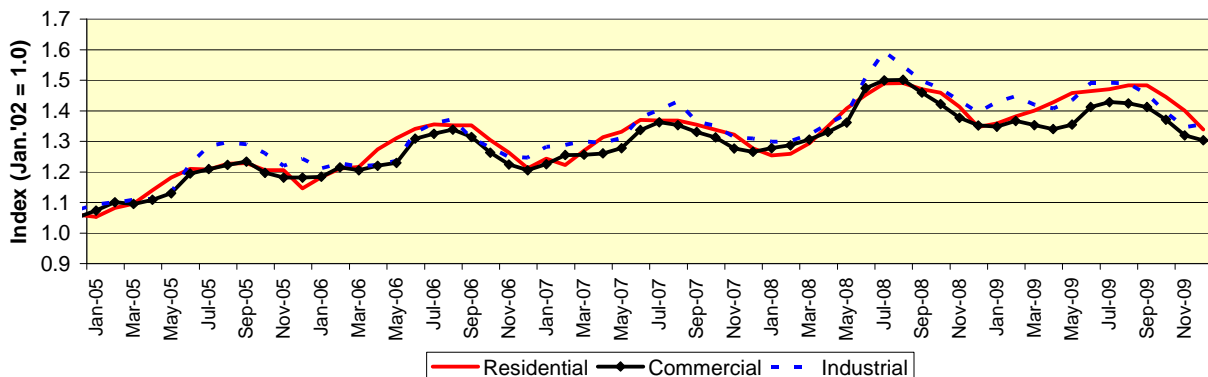
Comparison to Prior 12 Month Period

	Starting Month	Ending Month	Residential	Commercial	Industrial	Transportation	Total (All Sectors)
Current Period	January 2009	December 2009	11.54	10.21	6.84	11.17	9.89
Prior Period	January 2008	December 2008	11.26	10.36	6.83	10.74	9.74
Percent Difference			2.5%	-1.4%	0.1%	4.0%	1.5%

**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:
December 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
Current Period	December 2009	867	817	50	6.1%	7	8	-1	-12.5%
Prior Period	December 2008	831	817	14	1.7%	8	8	0	0.0%
Percent Difference		4.3%				-12.5%			

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 2009	December 2009	4,485	1,227	Current Period	January 2009	December 2009	4,485	1,227
Prior Period	January 2008	December 2008	4,494	1,277	Prior Period	January 2008	December 2008	4,494	1,277
Percent Difference			-0.2%	-3.9%	Percent Difference			-0.2%	-3.9%

Figure 10.1 Deviation From Normal: Heating Degree Days, 2009

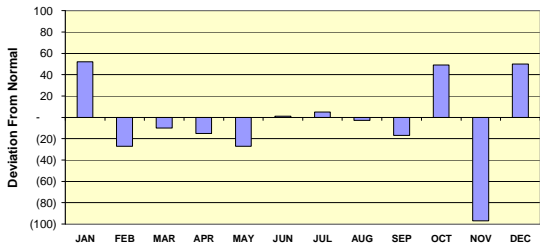


Figure 10.2 Deviation From Normal Cooling Degree Days, 2009

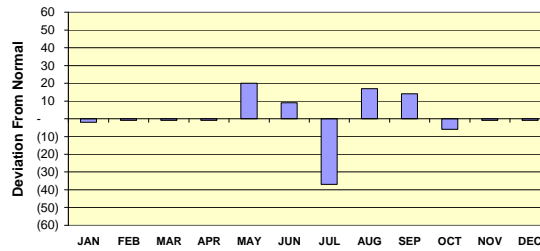


Figure 10.3 Trend in Heating Degree Days: 2008, 2009, and Normal

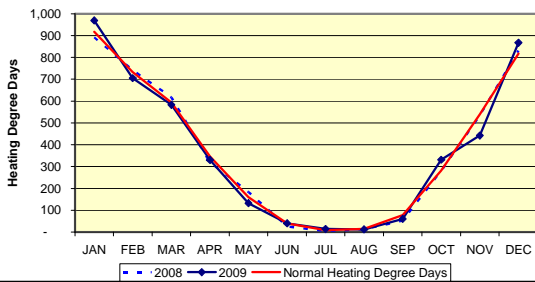


Figure 10.4 Trend in Cooling Degree Days: 2008, 2009, and Normal

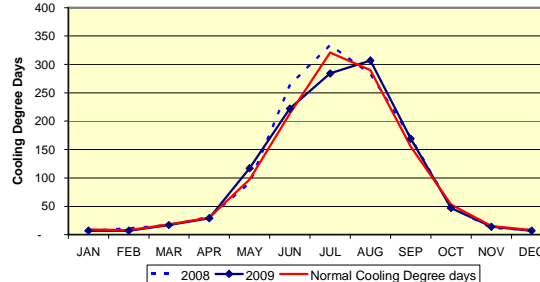


Figure 10.5 Trend in Cumulative Heating Degree Days: 2008, 2009, and Normal

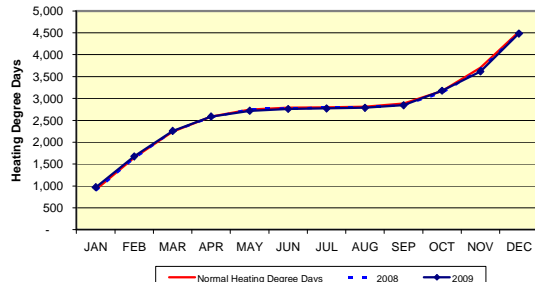
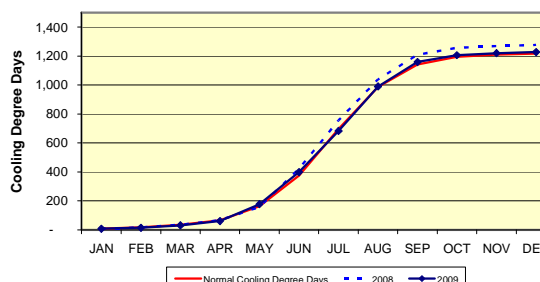


Figure 10.6 Trend in Cumulative Cooling Degree Days: 2008, 2009, and Normal



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, U.S. 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).