Monthly Flash Estimates of Electric Power Data

Data for: May 2010

Section 1. Commentary

In May 2010, the heavily populated Northeast experienced temperatures that were significantly above average. The total population-weighted cooling degree days for the United States were 35.1 percent above the May average.

Retail sales of electricity increased 3.0 percent compared to May 2009. Over the same period, the average U.S. retail price of electricity remained relatively unchanged. For the 12-month period ending May 2010, the U.S. average retail price of electricity decreased by 1.9 percent over the previous 12-month period ending May 2009.

Total electric power generation in the United States increased 5.3 percent compared to May 2009 (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 increased 8.9 percent, and natural gas generation increased 7.6 percent. Petroleum liquids generation decreased 6.3 percent as a result of the increased cost of petroleum liquids as a fuel used in electricity generation. For example, the price for WTI crude oil increased 24.9 percent from May 2009 to May 2010. May 2010 electricity generation from conventional hydroelectric sources decreased 15.4 percent compared to May 2009. This occurred because the Northwest experienced unusually wet conditions in the first half of 2009.

Consistent with the year-over-year increase in coal generation, the consumption of coal to produce electricity increased 7.7 percent when compared to May 2009. Over the same time period, petroleum liquids consumption decreased 3.1 percent, while natural gas consumption increased 10.3 percent.

In May 2010, total coal stocks remained relatively unchanged from April 2010. This differs from the typical May pattern, in which total coal stocks in the Electric Power sector have increased from April as coal plants continue the spring build-up of coal for consumption in the summer months. This is an indication that Electric Power sector coal stocks are receding from historically high levels observed the previous year and may point to coal stocks assuming a seasonal pattern that more closely resembles what was observed prior to 2009.

References for weather data:
http://www.ncdc.noaa.gov/oa/climate/research/2010/may/national.html
http://www.cpc.noaa.gov/products/monitoring_and_data/drought.shtml

References for petroleum prices:
http://www.eia.gov/dnav/pet/pet_pri_spt_s1_d.htm

Table of Contents

This report was prepared by the U.S. Energy Information Administration, the independent statistical and analytical agency within the U.S. Department of Energy. Th information contained herein should be attributed to the U.S. Energy Information Administration and should not be construed as advocating or reflecting any policy 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: May 2010

Table 2.1 Key Generation Indicators

	Total Generation	Nuclear Generation	Hydroelectric Generation
Total Change From:			
April 2010	**14.1%**	**15.7%**	**34.2%**
May 2009	**5.3%**	**2.0%**	**-15.4%**
Year to Date	**2.4%**	**-1.1%**	**-9.9%**
Latest 12 Month Period*	**-1.3%**	**-2.3%**	**-0.8%**

Table 2.2 Key Consumption and Stocks Indicators

	Natural Gas Consumption	Coal Consumption	Coal Stocks
Total Change From:			
April 2010	**19.8%**	**13.0%**	**0.1%**
May 2009	**10.3%**	**7.7%**	**-4.3%**
Year to Date	**5.1%**	**4.1%**	**--**
Latest 12 Month Period*	**4.6%**	**-4.2%**	**--**

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

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

Data for: May 2010

Net Generation (Total, All Sectors)

Table 3.1 Total Net Generation (All Sectors)					
Net Generation (thousand megawatthours)	**May-10**	**May-09**	**% Change**	**Apr-10**	**% Change**
Coal	143,944	132,204	8.9%	127,821	12.6%
Petroleum Liquids	1,922	2,052	-6.3%	1,185	62.2%
Natural Gas	73,928	68,697	7.6%	64,595	14.4%
Nuclear	66,658	65,375	2.0%	57,611	15.7%
Hydroelectric Conventional	24,879	29,419	-15.4%	18,543	34.2%
All Other	17,147	14,250	20.3%	18,017	-4.8%
Total (All Energy Sources)	328,478	311,996	5.3%	287,773	14.1%

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	**May-10**	**May-09**	**% Change**	**Apr-10**	**% Change**
Coal (Thousand Short Tons)	76,113	70,665	7.7%	67,329	13.0%
Petroleum Liquids (Thousand Barrels)	3,387	3,495	-3.1%	1,969	72.0%
Natural Gas (Million Cubic Feet)	591,124	536,153	10.3%	493,287	19.8%

Fossil Fuel Stocks (Electric Power Sector)

Table 3.3 Total Fossil Fuel Stocks (Electric Power Sector)					
Fossil Fuel Stocks	**May-10**	**May-09**	**% Change**	**Apr-10**	**% Change**
Coal (Thousand Short Tons)	186,936	195,288	-4.3%	186,741	0.1%
Petroleum Liquids (Thousand Barrels)	36,941	40,696	-9.2%	37,501	-1.5%

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: May 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
Current Period	January 2010	May 2010	744,316	8,761	340,676	326,690	106,515	80,671	1,607,629
Prior Period	January 2009	May 2009	708,903	12,769	326,870	330,354	118,244	72,740	1,569,880
Percent Difference			5.0%	-31.4%	4.2%	-1.1%	-9.9%	10.9%	2.4%

Comparison to Prior Twelve-Month Period

	Starting Month	Ending Month	Coal	Petroleum Liquids	Natural Gas	Nuclear	Hydroelectric Conventional	All Other	Total
Current Period	June 2009	May 2010	1,799,898	21,784	934,185	795,081	260,402	179,510	3,990,860
Prior Period	June 2008	May 2009	1,882,520	32,387	889,721	813,823	262,383	164,590	4,045,424
Percent Difference			-4.4%	-32.7%	5.0%	-2.3%	-0.8%	9.1%	-1.3%

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

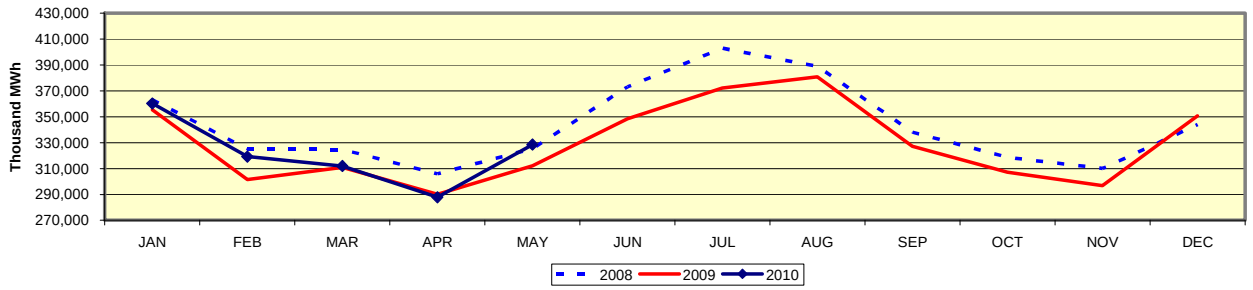


Figure 4.2 Fossil Fuel Generation Trends (Values as Indices, Jan. 2002 = 1.0)

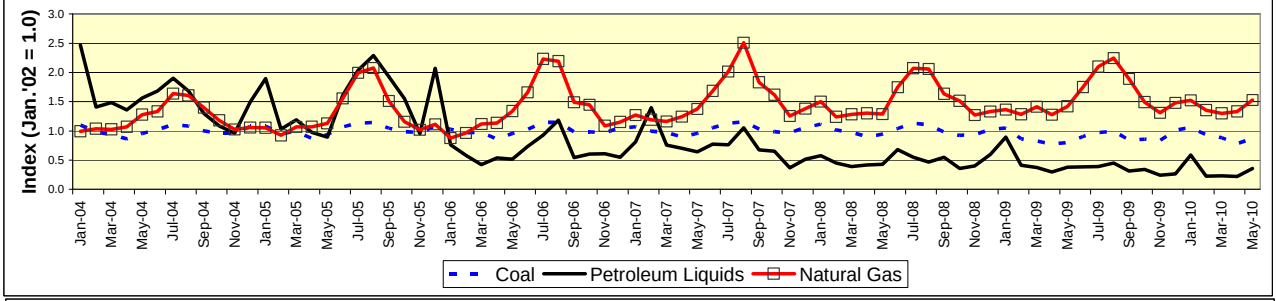
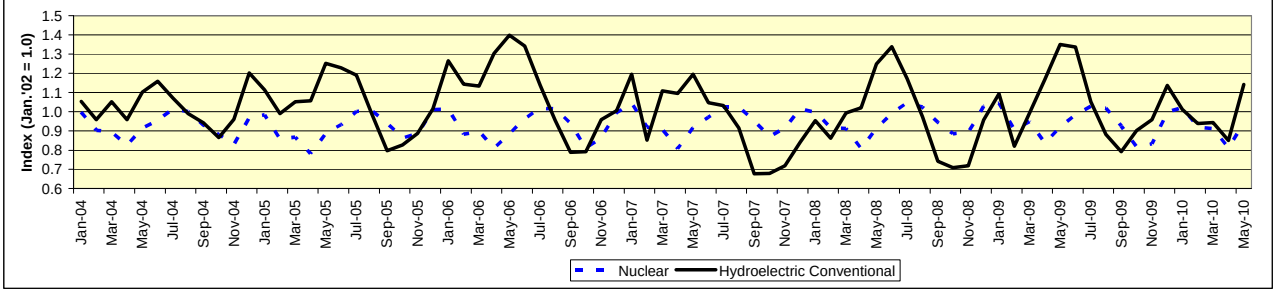


Figure 4.3 Nuclear and Hydroelectric Generation Trends (Values as Indices, Jan. 2002 = 1.0)



Section 5. Fossil Fuel Consumption Trends

Data for: May 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)
Current Period	January 2010	May 2010	391,442	15,182	2,619,513
Prior Period	January 2009	May 2009	375,853	21,600	2,493,269
Percent Difference			4.1%	-29.7%	5.1%

Comparison to Prior 12 Month Period

	Starting Month	Ending Month	Coal (Thousand Tons)	Petroleum Liquids (Thousand Barrels)	Natural Gas (Million Cubic Feet)
Current Period	June 2009	May 2010	953,649	37,253	7,230,844
Prior Period	June 2008	May 2009	995,408	54,763	6,914,384
Percent Difference			-4.2%	-32.0%	4.6%

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

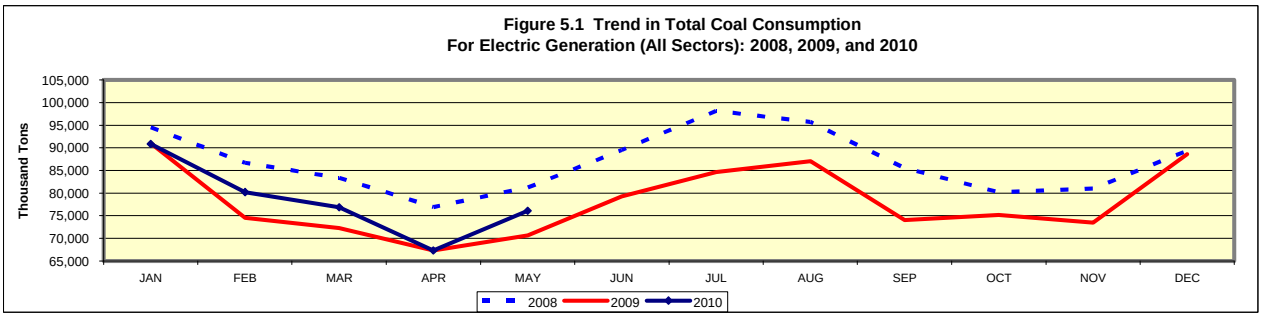


Figure 5.2 Trend in Total Petroleum Liquids Consumption For Electric Generation (All Sectors): 2008, 2009, and 2010

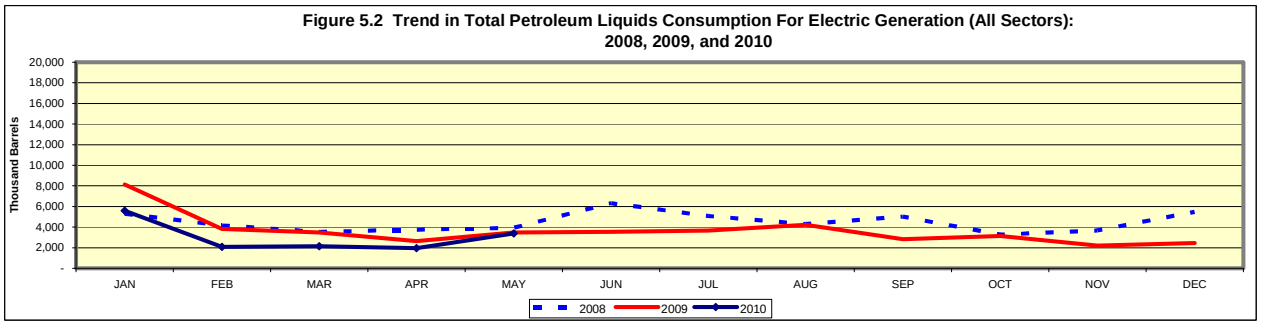
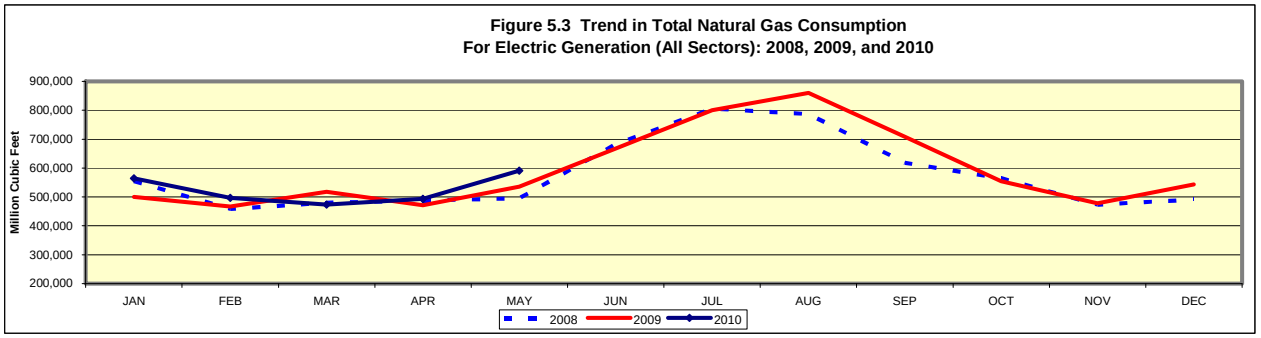


Figure 5.3 Trend in Total Natural Gas Consumption For Electric Generation (All Sectors): 2008, 2009, and 2010



Section 6. Fossil Fuel Stock Trends

Data for: May 2010

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

Fossil Fuel Stocks	May-10	May-09	% Change	Apr-10	% Change
Coal, Total (Thousand Short Tons)	186,936	195,288	-4.3%	186,741	0.1%
Bituminous (includes anthracite and coal synfuel)	88,554	89,278	-0.8%	89,244	-0.8%
Subbituminous	90,782	99,975	-9.2%	90,265	0.6%
Lignite	7,600	6,035	25.9%	7,232	5.1%
Petroleum Liquids (Thousand Barrels)	36,941	40,696	-9.2%	37,501	-1.5%

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

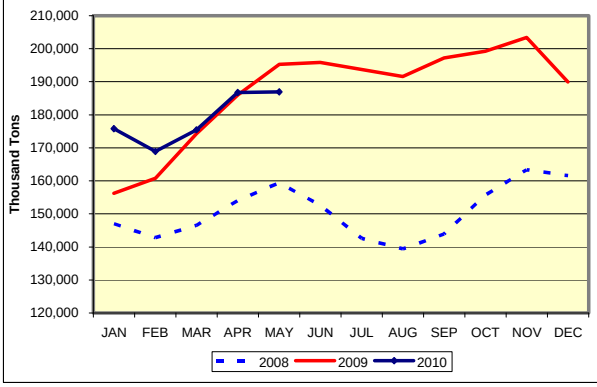


Figure 6.2 Trend in Petroleum Liquids Stocks (Electric Power Sector): 2008, 2009, and 2010

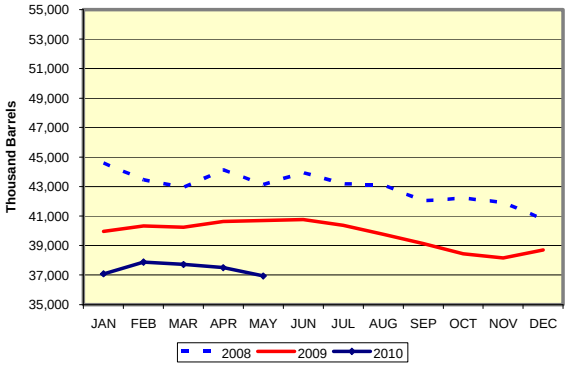


Figure 6.3 Trend in Bituminous Coal Stocks (Electric Power Sector): 2008, 2009, and 2010

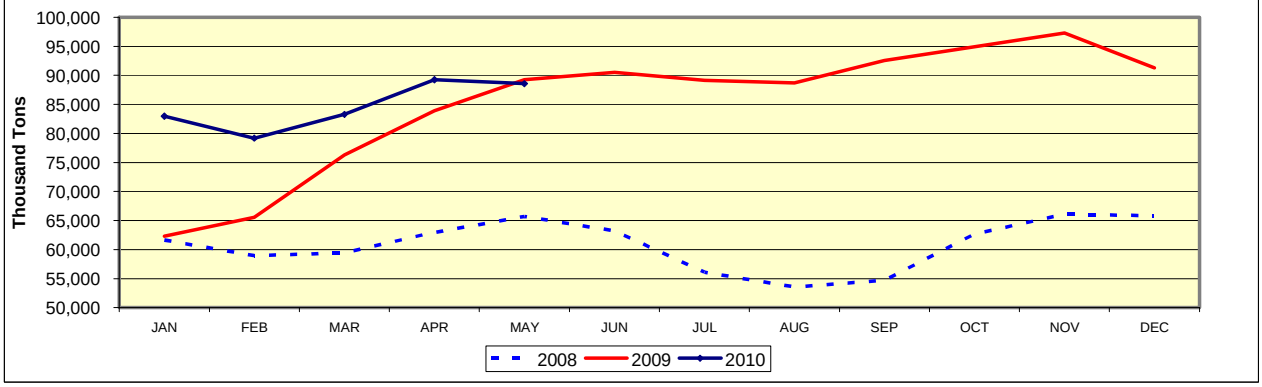
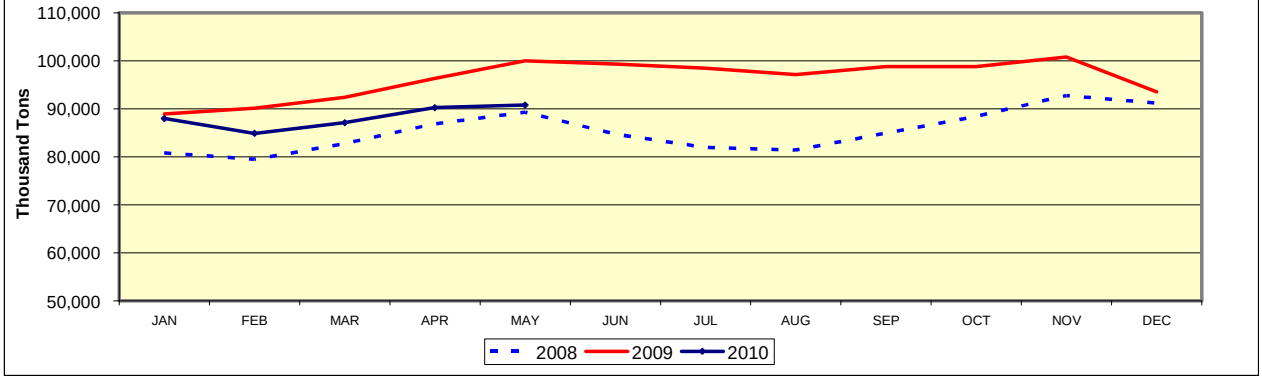


Figure 6.4 Trend in Subbituminous Coal Stocks (Electric Power Sector): 2008, 2009, and 2010



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

Data for: May 2010

Retail Sales

Table 7.1 Retail Sales (Million kWh)

Ultimate Customer	May-10	May-09	% Change	Apr-10	% Change
Residential	94,860	94,084	0.8%	88,111	7.7%
Commercial	107,134	106,401	0.7%	101,487	5.6%
Industrial	78,974	72,267	9.3%	76,084	3.8%
Transportation	603	587	2.6%	598	0.8%
All Sectors	281,571	273,340	3.0%	266,279	5.7%

Average Retail Price

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

Ultimate Customer	May-10	May-09	% Change	Apr-10	% Change
Residential	11.98	11.80	1.5%	11.75	2.0%
Commercial	10.21	10.08	1.3%	9.97	2.4%
Industrial	6.69	6.86	-2.5%	6.57	1.8%
Transportation	10.94	11.64	-6.0%	11.21	-2.4%
All Sectors	9.82	9.83	-0.1%	9.59	2.4%

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

Census Division	Residential			All Sectors		
	May-10	May-09	% Change	May-10	May-09	% Change
New England	17.10	17.92	-4.6%	14.97	15.48	-3.3%
Middle Atlantic	16.16	14.94	8.2%	13.61	12.64	7.7%
East North Central	11.80	11.47	2.9%	9.03	9.04	-0.1%
West North Central	10.05	9.57	5.0%	7.79	7.58	2.8%
South Atlantic	11.21	11.34	-1.1%	9.49	9.76	-2.8%
East South Central	9.93	9.79	1.4%	8.05	8.08	-0.4%
West South Central	11.33	11.66	-2.8%	8.84	9.18	-3.7%
Mountain	10.92	10.37	5.3%	8.73	8.38	4.2%
Pacific Contiguous	12.60	12.48	1.0%	11.11	11.16	-0.4%
Pacific Noncontiguous	23.93	20.40	17.3%	21.71	17.64	23.1%
U.S. Total	11.98	11.80	1.5%	9.82	9.83	-0.1%

Section 8. Retail Sales Trends

Data for: May 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)
Current Period	January 2010	May 2010	566,207	523,587	374,967	3,276	1,468,037
Prior Period	January 2009	May 2009	543,282	523,617	354,793	3,257	1,424,950
Percent Difference			4.2%	0.0%	5.7%	0.6%	3.0%

Comparison to Prior Twelve-Month Period

	Starting Month	Ending Month	Residential	Commercial	Industrial	Transportation	Total (All Sectors)
Current Period	June 2009	May 2010	1,385,794	1,322,960	902,077	7,708	3,618,538
Prior Period	June 2008	May 2009	1,380,803	1,334,161	943,029	7,731	3,665,724
Percent Difference			0.4%	-0.8%	-4.3%	-0.3%	-1.3%

Figure 8.1
Trends in Total Retail Sales of Electricity (All Sectors): 2008, 2009, and 2010

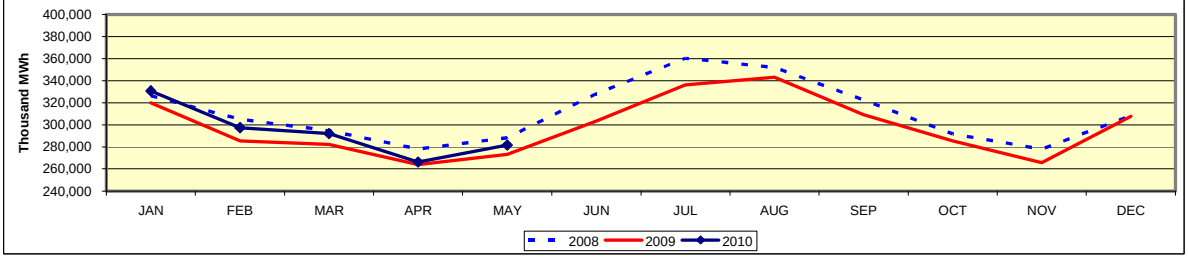


Figure 8.2
Retail Sales of Electricity Trends
(Values as Indices, Jan. 2002 = 1.0)

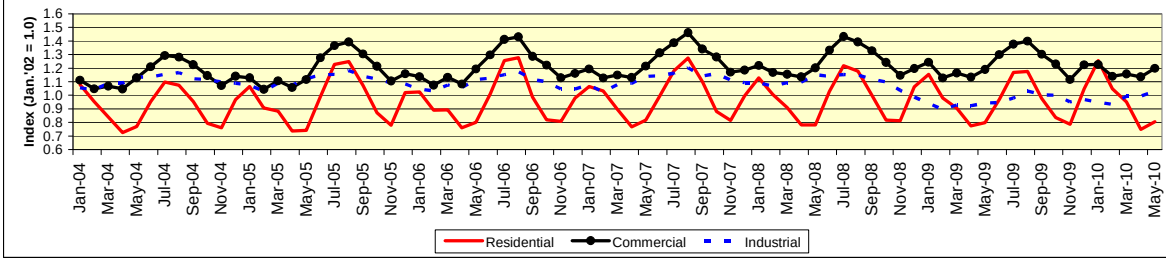
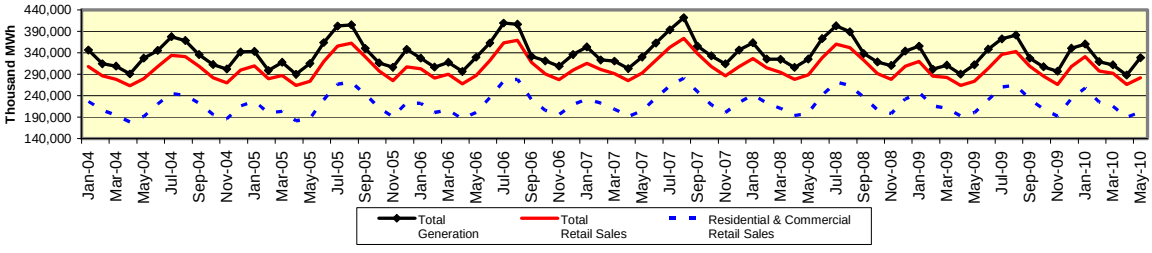


Figure 8.3
Trends in Total Generation and Retail Sales of Electricity



Section 9. Average Retail Price Trends

Data for: May 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)
Current Period	January 2010	May 2010	11.19	9.94	6.57	10.98	9.56
Prior Period	January 2009	May 2009	11.33	10.07	6.83	11.36	9.74
Percent Difference			-1.2%	-1.3%	-3.8%	-3.3%	-1.8%

Comparison to Prior 12 Month Period

	Starting Month	Ending Month	Residential	Commercial	Industrial	Transportation	Total (All Sectors)
Current Period	June 2009	May 2010	11.48	10.16	6.74	11.02	9.81
Prior Period	June 2008	May 2009	11.57	10.48	7.03	11.29	10.00
Percent Difference			-0.8%	-3.1%	-4.1%	-2.4%	-1.9%

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

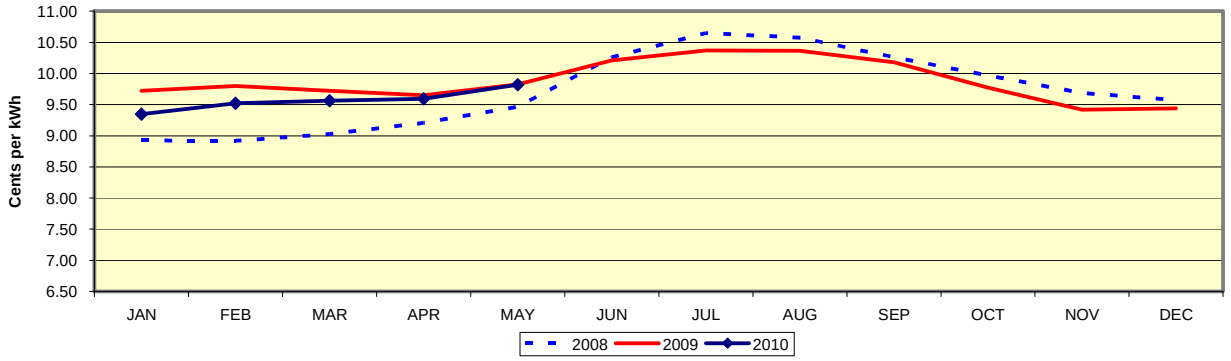
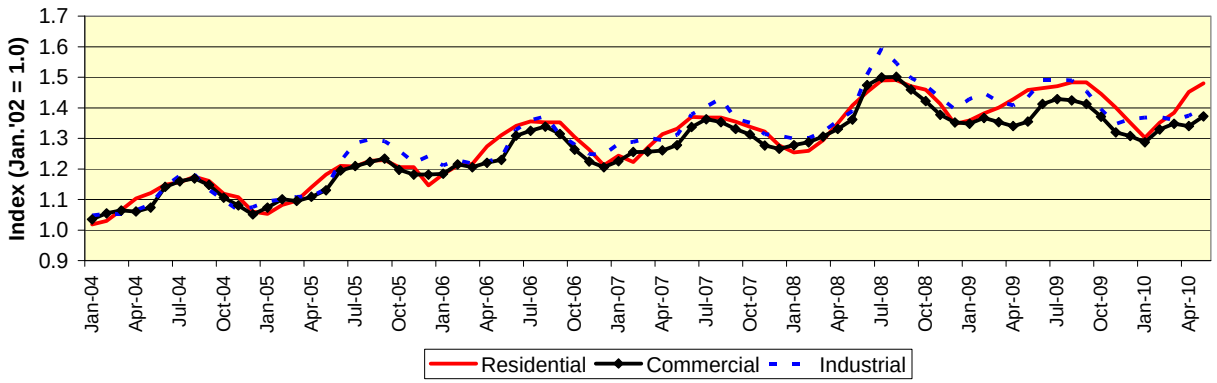


Figure 9.2 Average Retail Price of Electricity: Trends by Sector (Values as Indices, Jan. 2002 = 1.0)



Section 10. Heating and Cooling Degree Days

Data for: May 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
Current Period	May 2010	141	159	-18	-11.3%	131	97	34	35.1%
Prior Period	May 2009	132	159	-27	-17.0%	117	97	20	20.6%
Percent Difference		6.8%				12.0%			

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
Current Period	January 2010	May 2010	2,713	174	**Current Period**	June 2009	May 2010	4,487	1,226
Prior Period	January 2009	May 2009	2,719	177	**Prior Period**	June 2008	May 2009	4,461	1,297
Percent Difference			-0.2%	-1.7%	**Percent Difference**			0.6%	-5.5%

Figure 10.1 Deviation From Normal: Heating Degree Days, 2010

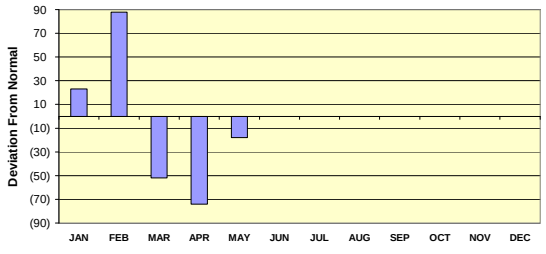


Figure 10.2 Deviation From Normal Cooling Degree Days, 2010

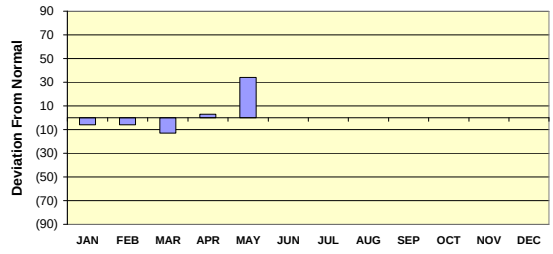


Figure 10.3 Trend in Heating Degree Days: 2009, 2010, and Normal

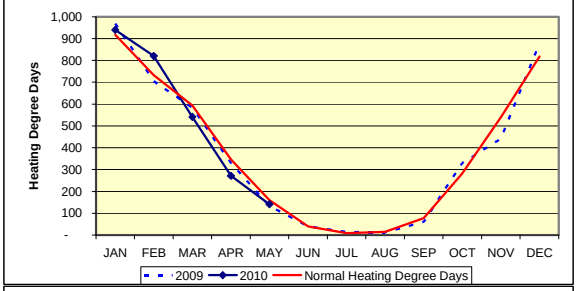


Figure 10.4 Trend in Cooling Degree Days: 2009, 2010, and Normal

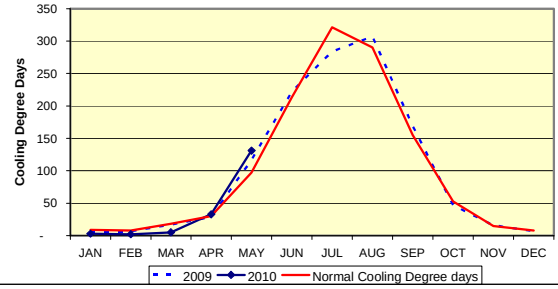


Figure 10.5 Trend in Cumulative Heating Degree Days: 2009, 2010, and Normal

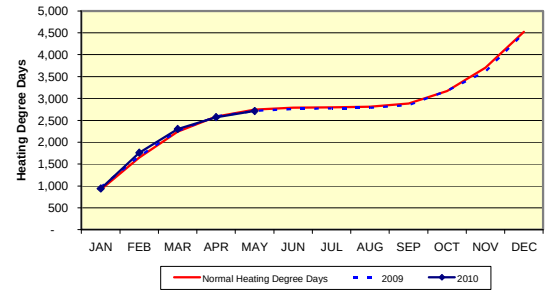
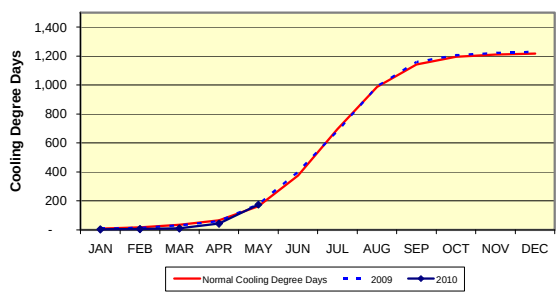


Figure 10.6 Trend in Cumulative Cooling Degree Days: 2009, 2010, and Normal



Section 11. Documentation

Data for: May 2010

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).