# Monthly Flash Estimates of Electric Power Data

**Data for: April 2010**

## Section 1. Commentary

The contiguous United States as a whole experienced temperatures that were above average in April 2010. This occurred because almost all States east of the Rocky Mountains experienced significantly above average temperatures. Accordingly, total population-weighted heating degree days for the United States were 21.4 percent below the average for the month of April.

Retail sales of electricity increased 0.9 percent compared to April 2009. Over the same period, the average U.S. retail price of electricity decreased 0.6 percent. For the 12-month period ending April 2010, the U.S. average retail price of electricity decreased by 1.6 percent over the previous 12-month period ending April 2009.

In April 2010, total electric power generation in the United States decreased 1.2 percent compared to April 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 1.4 percent, while natural gas generation increased 5.0 percent. Petroleum liquids generation had the largest percentage decline, 25.4 percent from the previous year, as a result of the increased cost of petroleum liquids as a fuel used in electricity generation. April 2010 electricity generation from conventional hydroelectric sources decreased 24.3 percent compared to April 2009. This decrease in conventional hydroelectric generation occurred as a result of below average precipitation observed across almost all States east of the Mississippi River in April 2010.

Following the year-over-year increase in coal generation, the consumption of coal to produce electricity increased 0.5 percent when compared to April 2009. Over the same time period, petroleum liquids consumption decreased 24.6 percent, while natural gas consumption increased 5.8 percent.

Total coal stocks in the Electric Power Sector increased 6.4 percent from the previous month. The March 2010 to April 2010 change in coal stocks consisted of a 7.3-percent increase in bituminous coal and a 3.7-percent increase in subbituminous coal. Petroleum liquid stocks decreased 0.6 percent from March 2010.

References for weather data:

http://www.ncdc.noaa.gov/oa/climate/research/2010/apr/national.html

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

**Data for: April 2010**

## Table 2.1 Key Generation Indicators

| | Total Generation | Nuclear Generation | Hydroelectric Generation |
|---|---|---|---|
| **Total Change From:** | | | |
| **March 2010** | **-8.1%** | **-10.9%** | **-6.5%** |
| **April 2009** | **-1.2%** | **-3.0%** | **-24.3%** |
| | | | |
| **Year to Date** | **1.6%** | **-1.9%** | **-7.3%** |
| **Latest 12 Month Period*** | **-2.1%** | **-2.4%** | **2.1%** |

## Table 2.2 Key Consumption and Stocks Indicators

| | Natural Gas Consumption | Coal Consumption | Coal Stocks |
|---|---|---|---|
| **Total Change From:** | | | |
| **March 2010** | **5.3%** | **-12.0%** | **6.4%** |
| **April 2009** | **5.8%** | **0.5%** | **0.4%** |
| | | | |
| **Year to Date** | **3.9%** | **3.4%** | **--** |
| **Latest 12 Month Period*** | **4.5%** | **-5.7%** | **--** |

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

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

**Data for: April 2010**

## Net Generation (Total, All Sectors)

**Table 3.1 Total Net Generation (All Sectors)**

| Net Generation (thousand megawatthours) | Apr-10 | Apr-09 | % Change | Mar-10 | % Change |
|---|---|---|---|---|---|
| Coal | 128,269 | 126,461 | 1.4% | 145,198 | -11.7% |
| Petroleum Liquids | 1,199 | 1,607 | -25.4% | 1,249 | -4.0% |
| Natural Gas | 64,833 | 61,770 | 5.0% | 62,882 | 3.1% |
| Nuclear | 57,611 | 59,408 | -3.0% | 64,639 | -10.9% |
| Hydroelectric Conventional | 19,242 | 25,418 | -24.3% | 20,574 | -6.5% |
| All Other | 15,533 | 15,458 | 0.5% | 17,390 | -10.7% |
| Total (All Energy Sources) | 286,687 | 290,120 | -1.2% | 311,933 | -8.1% |

## 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 | Apr-10 | Apr-09 | % Change | Mar-10 | % Change |
|---|---|---|---|---|---|
| Coal (Thousand Short Tons) | 67,667 | 67,328 | 0.5% | 76,855 | -12.0% |
| Petroleum Liquids (Thousand Barrels) | 1,994 | 2,646 | -24.6% | 2,142 | -6.9% |
| Natural Gas (Million Cubic Feet) | 498,623 | 471,198 | 5.8% | 473,659 | 5.3% |

## Fossil Fuel Stocks (Electric Power Sector)

**Table 3.3 Total Fossil Fuel Stocks (Electric Power Sector)**

| Fossil Fuel Stocks | Apr-10 | Apr-09 | % Change | Mar-10 | % Change |
|---|---|---|---|---|---|
| Coal (Thousand Short Tons) | 186,711 | 185,989 | 0.4% | 175,432 | 6.4% |
| Petroleum Liquids (Thousand Barrels) | 37,482 | 40,633 | -7.8% | 37,724 | -0.6% |

**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 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, 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: April 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 | April 2010 | 600,819 | 6,853 | 266,986 | 260,032 | 82,336 | 61,038 | 1,278,064 |
| **Prior Period** | January 2009 | April 2009 | 576,699 | 10,716 | 258,173 | 264,979 | 88,825 | 58,491 | 1,257,883 |
| **Percent Difference** | | | 4.2% | -36.0% | 3.4% | -1.9% | -7.3% | 4.4% | 1.6% |

**Comparison to Prior Twelve-Month Period**

| | Starting Month | Ending Month | Coal | Petroleum Liquids | Natural Gas | Nuclear | Hydroelectric Conventional | All Other | Total |
|---|---|---|---|---|---|---|---|---|---|
| **Current Period** | May 2009 | April 2010 | 1,788,606 | 21,928 | 929,192 | 793,798 | 265,642 | 174,125 | 3,973,291 |
| **Prior Period** | May 2008 | April 2009 | 1,905,232 | 32,678 | 883,295 | 813,273 | 260,185 | 164,009 | 4,058,672 |
| **Percent Difference** | | | -6.1% | -32.9% | 5.2% | -2.4% | 2.1% | 6.2% | -2.1% |

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

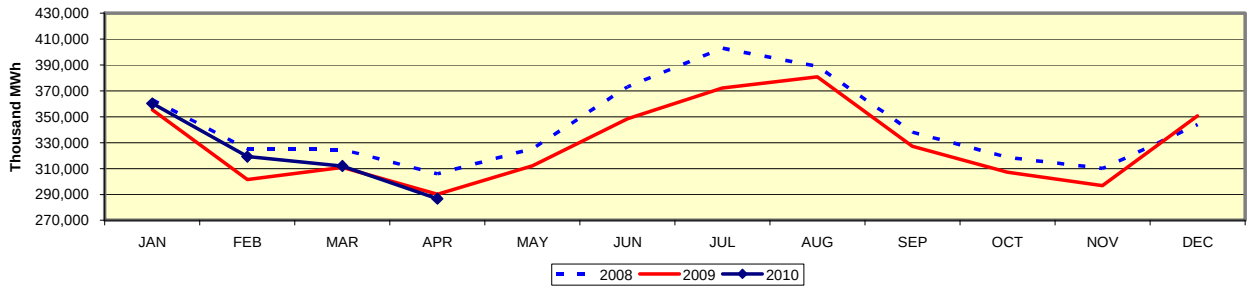



**Figure 4.2 Fossil Fuel Generation Trends (Values as Indices, Jan. 2002 = 1.0)**

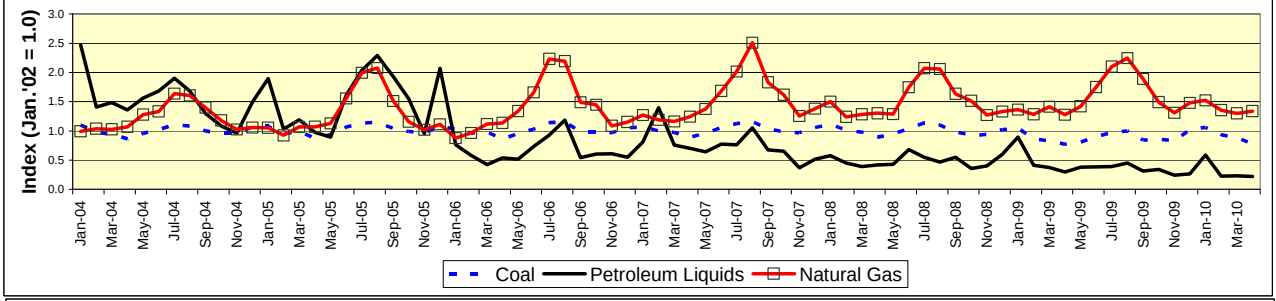
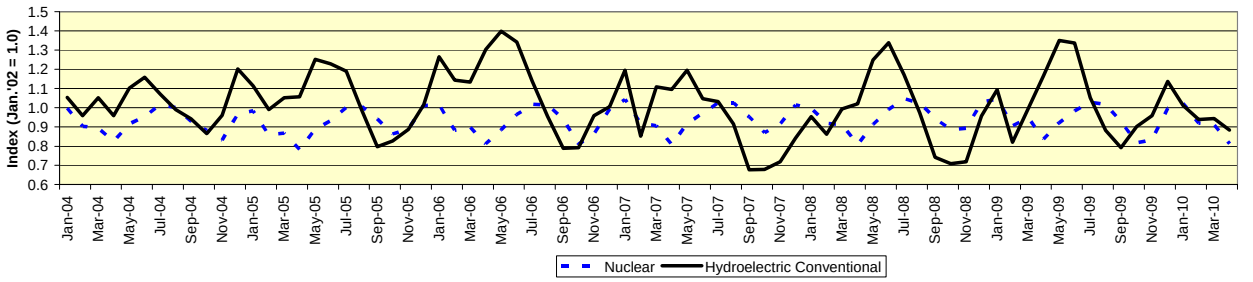



**Figure 4.3 Nuclear and Hydroelectric Generation Trends (Values as Indices, Jan. 2002 = 1.0)**



# Section 5. Fossil Fuel Consumption Trends

**Data for: April 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 | April 2010 | 315,667 | 11,819 | 2,033,726 |
| **Prior Period** | January 2009 | April 2009 | 305,188 | 18,105 | 1,957,116 |
| **Percent Difference** | | | 3.4% | -34.7% | 3.9% |

### Comparison to Prior 12 Month Period

| | Starting Month | Ending Month | Coal (Thousand Tons) | Petroleum Liquids (Thousand Barrels) | Natural Gas (Million Cubic Feet) |
|---|---|---|---|---|---|
| **Current Period** | May 2009 | April 2010 | 948,538 | 37,386 | 7,181,209 |
| **Prior Period** | May 2008 | April 2009 | 1,005,991 | 55,206 | 6,873,419 |
| **Percent Difference** | | | -5.7% | -32.3% | 4.5% |

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

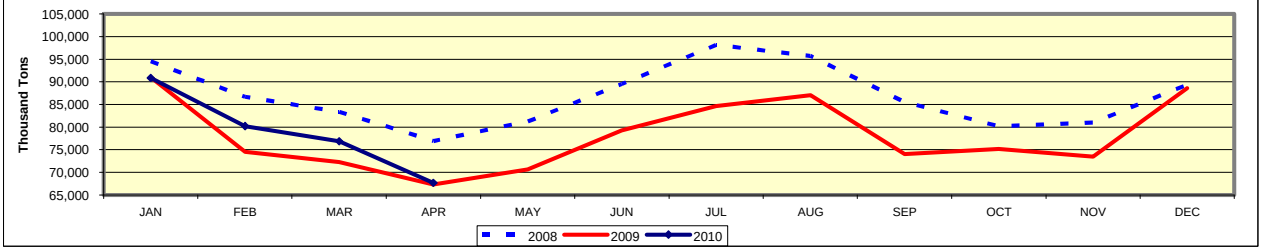



**Figure 5.2 Trend in Total Petroleum Liquids Consumption For Electric Generation (All Sectors): 2008, 2009, and 2010**

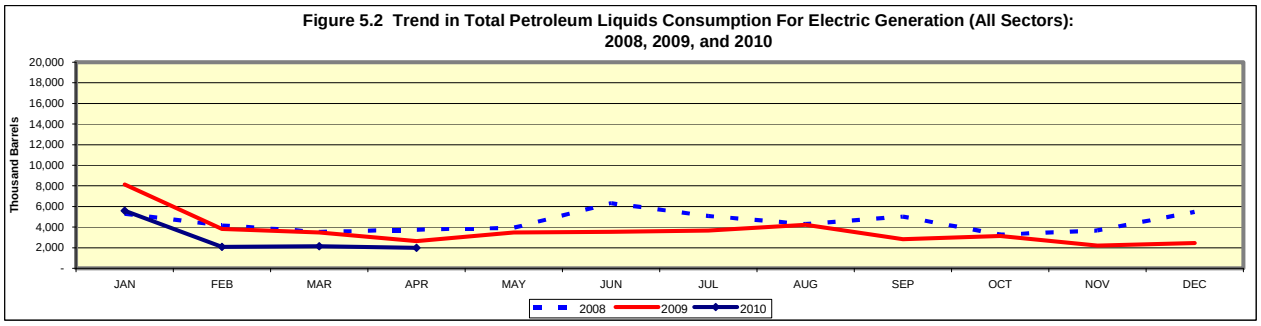
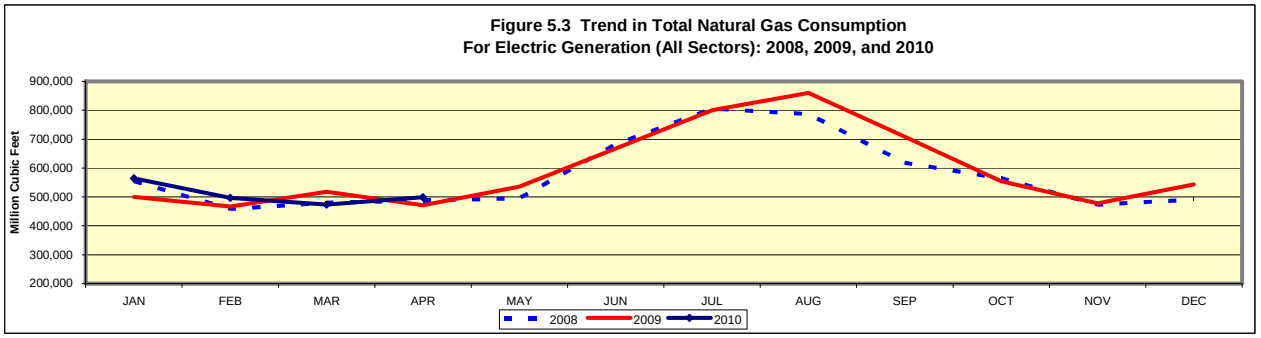



**Figure 5.3 Trend in Total Natural Gas Consumption For Electric Generation (All Sectors): 2008, 2009, and 2010**

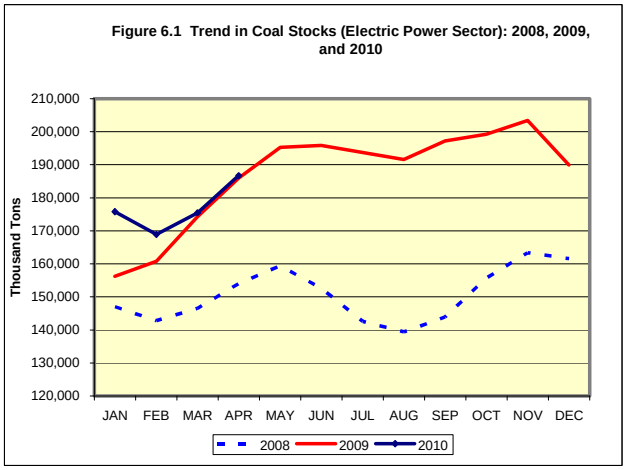


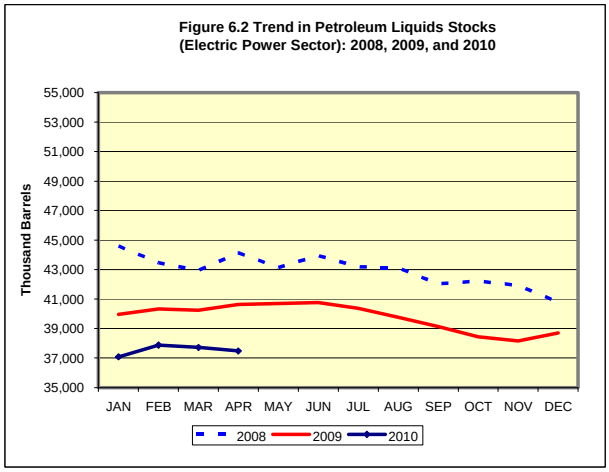
# Section 6. Fossil Fuel Stock Trends

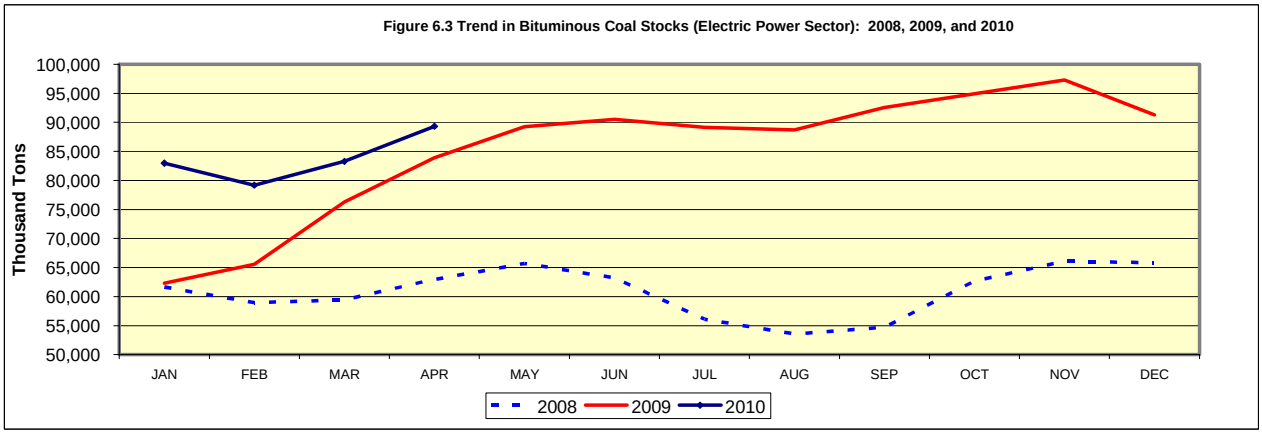
**Data for: April 2010**

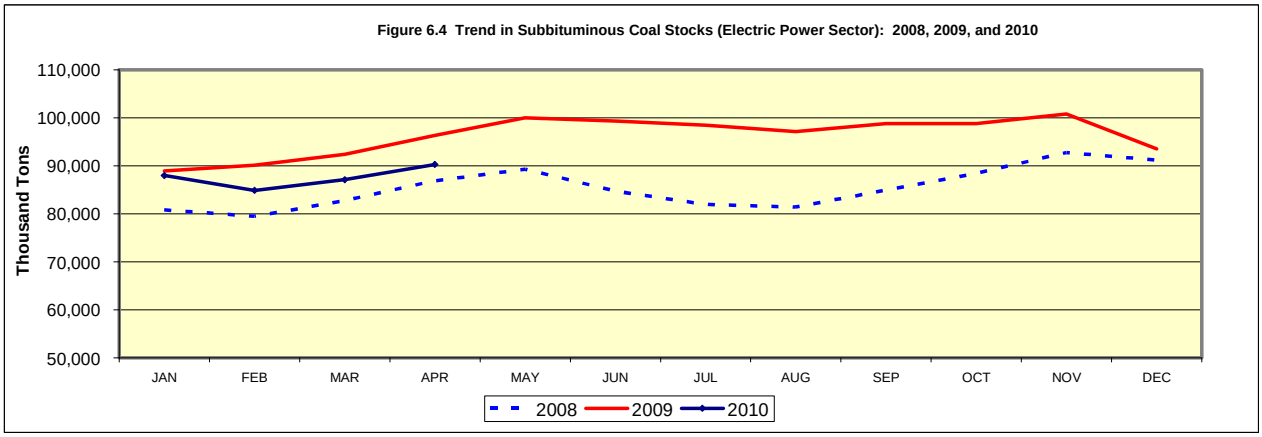
## Table 6.1 Trends in Total Fossil Fuel Stocks (Electric Power Sector)

| Fossil Fuel Stocks | Apr-10 | Apr-09 | % Change | Mar-10 | % Change |
|---|---|---|---|---|---|
| **Coal, Total (Thousand Short Tons)** | 186,711 | 185,989 | 0.4% | 175,432 | 6.4% |
| Bituminous (includes anthracite and coal synfuel) | 89,330 | 83,900 | 6.5% | 83,287 | 7.3% |
| Subbituminous | 90,284 | 96,306 | -6.3% | 87,097 | 3.7% |
| Lignite | 7,097 | 5,783 | 22.7% | 5,049 | 40.6% |
| **Petroleum Liquids (Thousand Barrels)** | 37,482 | 40,633 | -7.8% | 37,724 | -0.6% |



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

**Data for: April 2010**

## Retail Sales

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

| Ultimate Customer | Apr-10 | Apr-09 | % Change | Mar-10 | % Change |
|---|---|---|---|---|---|
| Residential | 88,128 | 91,395 | -3.6% | 112,057 | -21.4% |
| Commercial | 101,486 | 101,302 | 0.2% | 103,426 | -1.9% |
| Industrial | 76,105 | 70,730 | 7.6% | 75,905 | 0.3% |
| Transportation | 598 | 604 | -1.0% | 651 | -8.1% |
| All Sectors | 266,318 | 264,032 | 0.9% | 292,039 | -8.8% |

## Average Retail Price

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

| Ultimate Customer | Apr-10 | Apr-09 | % Change | Mar-10 | % Change |
|---|---|---|---|---|---|
| Residential | 11.75 | 11.55 | 1.7% | 11.20 | 4.9% |
| Commercial | 9.97 | 9.97 | 0.0% | 10.03 | -0.6% |
| Industrial | 6.57 | 6.73 | -2.4% | 6.50 | 1.1% |
| Transportation | 11.21 | 11.19 | 0.2% | 11.17 | 0.4% |
| All Sectors | 9.59 | 9.65 | -0.6% | 9.56 | 0.3% |

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

| Census Division | Residential | | | All Sectors | | |
|---|---|---|---|---|---|---|
| | Apr-10 | Apr-09 | % Change | Apr-10 | Apr-09 | % Change |
| New England | 17.15 | 18.06 | -5.0% | 15.07 | 15.90 | -5.2% |
| Middle Atlantic | 15.90 | 14.48 | 9.8% | 13.12 | 12.48 | 5.1% |
| East North Central | 11.57 | 11.11 | 4.1% | 8.83 | 8.82 | 0.1% |
| West North Central | 9.38 | 8.92 | 5.2% | 7.33 | 7.26 | 1.0% |
| South Atlantic | 11.17 | 11.27 | -0.9% | 9.37 | 9.70 | -3.4% |
| East South Central | 9.76 | 9.79 | -0.3% | 7.83 | 8.03 | -2.5% |
| West South Central | 11.34 | 11.57 | -2.0% | 8.80 | 9.12 | -3.5% |
| Mountain | 10.18 | 9.77 | 4.2% | 8.24 | 7.96 | 3.5% |
| Pacific Contiguous | 11.84 | 11.55 | 2.5% | 10.57 | 10.46 | 1.1% |
| Pacific Noncontiguous | 22.76 | 20.08 | 13.3% | 20.70 | 17.40 | 19.0% |
| U.S. Total | 11.75 | 11.55 | 1.7% | 9.59 | 9.65 | -0.6% |

# Section 8. Retail Sales Trends

**Data for: April 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 | April 2010 | 471,364 | 416,452 | 296,014 | 2,674 | 1,186,505 |
| **Prior Period** | January 2009 | April 2009 | 449,199 | 417,216 | 282,526 | 2,670 | 1,151,610 |
| **Percent Difference** | | | 4.9% | -0.2% | 4.8% | 0.1% | 3.0% |

### Comparison to Prior Twelve-Month Period

| | Starting Month | Ending Month | Residential | Commercial | Industrial | Transportation | Total (All Sectors) |
|---|---|---|---|---|---|---|---|
| **Current Period** | May 2009 | April 2010 | 1,385,035 | 1,322,226 | 895,392 | 7,693 | 3,610,345 |
| **Prior Period** | May 2008 | April 2009 | 1,378,737 | 1,335,139 | 958,928 | 7,742 | 3,680,546 |
| **Percent Difference** | | | 0.5% | -1.0% | -6.6% | -0.6% | -1.9% |

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

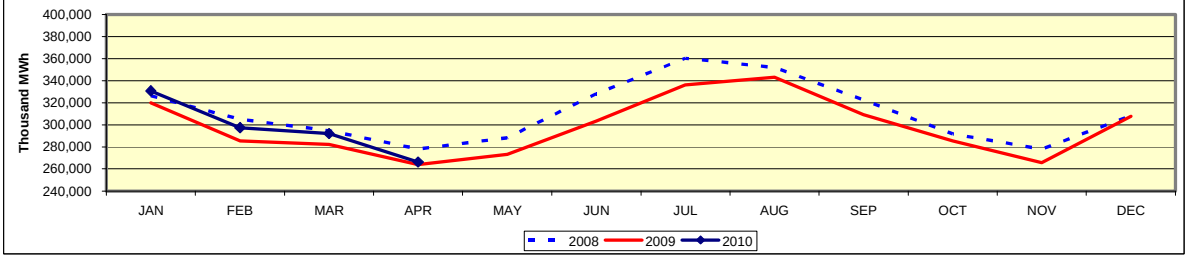



**Figure 8.2**
**Retail Sales of Electricity Trends (Values as Indices, Jan. 2002 = 1.0)**

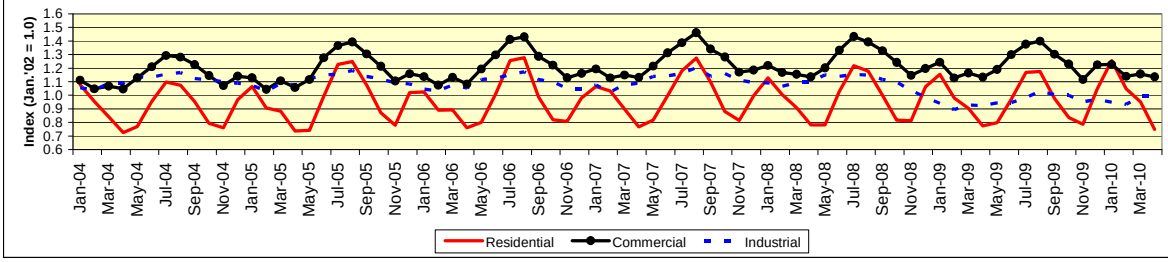
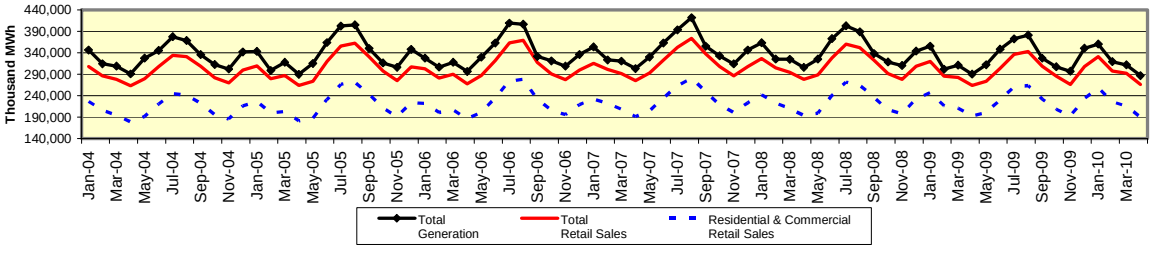



**Figure 8.3**
**Trends in Total Generation and Retail Sales of Electricity**



# Section 9. Average Retail Price Trends

**Data for: April 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 | April 2010 | 11.03 | 9.86 | 6.54 | 10.99 | 9.50 |
| **Prior Period** | January 2009 | April 2009 | 11.23 | 10.06 | 6.82 | 11.29 | 9.72 |
| **Percent Difference** | | | -1.8% | -2.0% | -4.1% | -2.7% | -2.3% |

### Comparison to Prior 12 Month Period

| | Starting Month | Ending Month | Residential | Commercial | Industrial | Transportation | Total (All Sectors) |
|---|---|---|---|---|---|---|---|
| **Current Period** | May 2009 | April 2010 | 11.47 | 10.15 | 6.75 | 11.07 | 9.81 |
| **Prior Period** | May 2008 | April 2009 | 11.54 | 10.49 | 7.00 | 11.21 | 9.97 |
| **Percent Difference** | | | -0.6% | -3.2% | -3.6% | -1.2% | -1.6% |

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

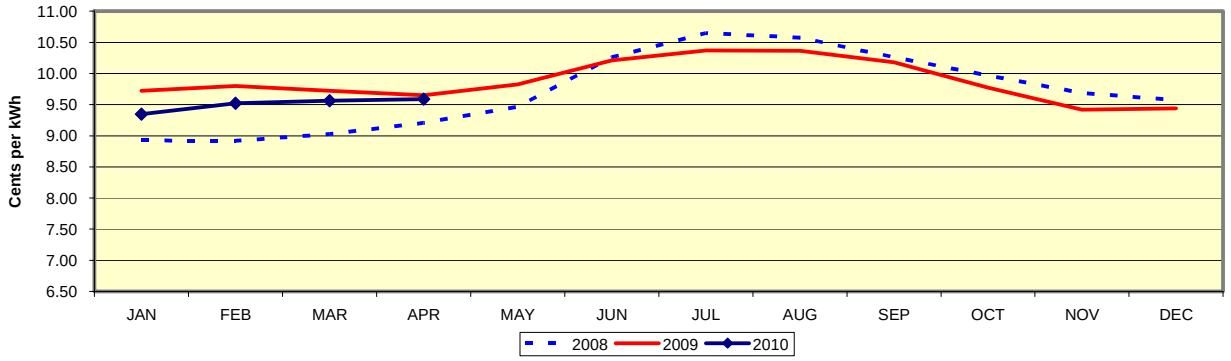
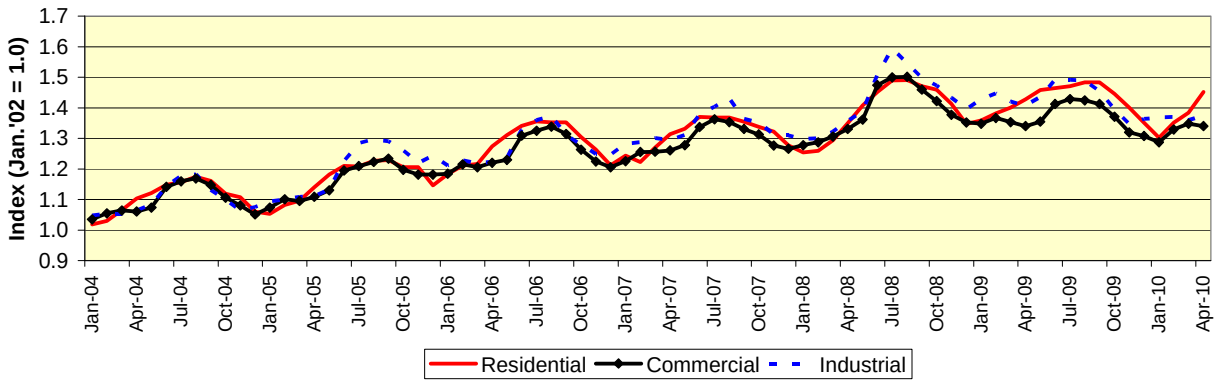



**Figure 9.2 Average Retail Price of Electricity: Trends by Sector (Values as Indices, Jan. 2002 = 1.0)**



# Section 10. Heating and Cooling Degree Days

**Data for: April 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** | April 2010 | 271 | 345 | -74 | -21.4% | 33 | 30 | 3 | 10.0% |
| **Prior Period** | April 2009 | 330 | 345 | -15 | -4.3% | 29 | 30 | -1 | -3.3% |
| **Percent Difference** | | -17.9% | | | | 13.8% | | | |

## 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 | April 2010 | 2,562 | 42 | **Current Period** | May 2009 | April 2010 | 4,468 | 1,211 |
| **Prior Period** | January 2009 | April 2009 | 2,587 | 60 | **Prior Period** | May 2008 | April 2009 | 4,512 | 1,271 |
| **Percent Difference** | | | -1.0% | -30.0% | **Percent Difference** | | | -1.0% | -4.7% |

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

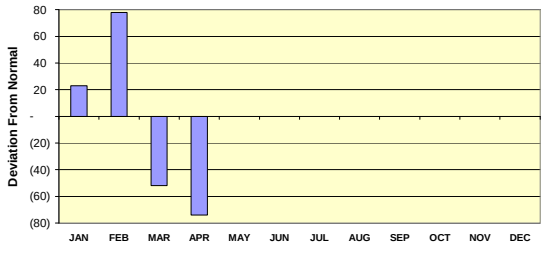



**Figure 10.2 Deviation From Normal Cooling Degree Days, 2010**

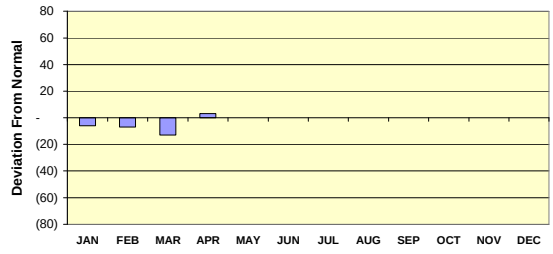



**Figure 10.3 Trend in Heating Degree Days: 2009, 2010, and Normal**

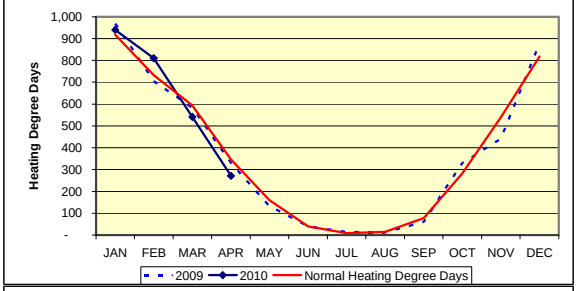



**Figure 10.4 Trend in Cooling Degree Days: 2009, 2010, and Normal**

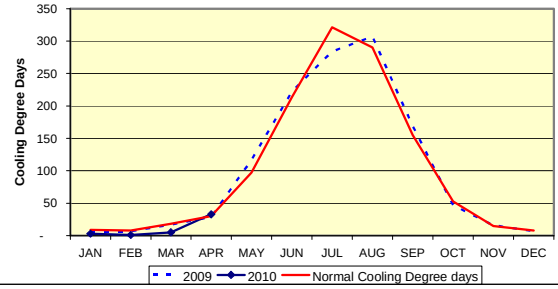



**Figure 10.5 Trend in Cumulative Heating Degree Days: 2009, 2010, and Normal**

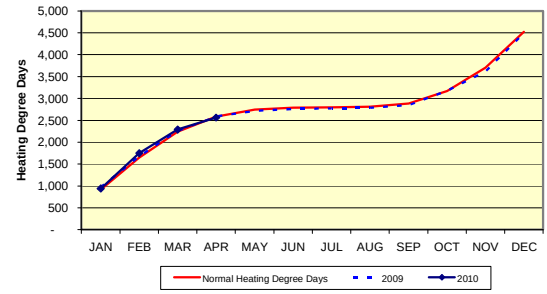
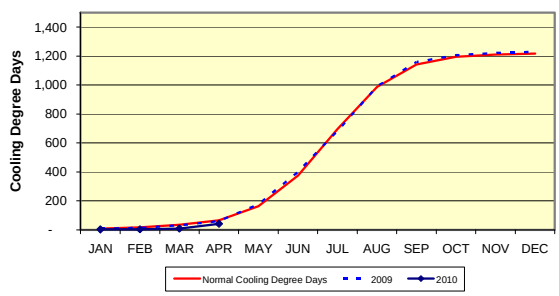



**Figure 10.6 Trend in Cumulative Cooling Degree Days: 2009, 2010, and Normal**



# Section 11. Documentation

**Data for: April 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).