# Monthly Flash Estimates of

# **Electric Power Data**

# Section 1. Commentary

The contiguous United States experienced above average temperatures in February 2009. These above average temperatures were a departure from the close to average temperatures that the U.S. has experienced since September 2008. Accordingly, heating degree days for the contiguous United States as a whole were 4.2 percent below the average for the month of February 2009 and 5.4 percent below a colder February 2008.

Retail sales of electricity in February 2009 decreased 6.2 percent compared to February 2008. This decrease in February 2008-to-February 2009 retail sales was caused by the warmer weather observed in February 2009 and by the significant decline in industrial consumption as observed by the 13.8-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 February 2009 from the previous year, increasing 9.4 percent from February 2008. This increase in average U.S. retail price from February 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.

In February 2009, total electric power generation in the United States decreased 6.9 percent from February 2008. Coal generation in the contiguous United States decreased 13.9 percent when compared to February 2008. This drop in February 2008-to-February 2009 coal generation was caused by the warmer weather in February 2009, 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 U.S. Natural gas generation in February 2009 increased 2.8 percent compared to February 2008. This increase in natural gas generation is due to the year-over-year decrease in the cost of natural gas as a fuel used in electricity generation. Petroleum liquids generation decreased 7.4 percent when compared to February 2008. Conventional hydroelectric generation was 2.7 percent lower than February 2008 and 24.0 percent lower than January 2009 as a majority of the contiguous U.S. experienced below normal precipitation during February 2009.

Following the year-over-year decrease in coal generation, the consumption of coal to produce electricity decreased 13.4 percent when compared to February 2008. Over the same time period, natural gas consumption increased 2.4 percent, while petroleum liquids consumption decreased 6.0 percent.

Total coal stocks in the contiguous United States increased 2.3 percent from the previous month. The January 2009-to-February 2009 change in coal stocks consisted of a 6.3-percent increase in bituminous coal and a 0.6-percent decrease in subbituminous coal. Petroleum liquids stocks were 3.3 percent lower than February 2008.

References for weather data:

http://www.ncdc.noaa.gov/oa/climate/research/2009/feb/national.html

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Table 2.1 Key Generation Indicators									
	TotalNuclearHydroelectrGenerationGenerationGeneration								
Total Change From:									
January 2009	-14.6%	-13.3%	-24.0%						
February 2008	-6.9%	-2.2%	-2.7%						
Year to Date	-4.5%	1.0%	6.8%						
Latest 12 Month Period*	-2.1%	0.6%	3.8%						

# Table 2.2 Key Consumption and Stocks Indicators

	Natural Gas Consumption	Coal Consumption	Coal Stocks
Total Change From:			
January 2009	-7.3%	-17.8%	2.3%
February 2008	2.4%	-13.4%	13.1%
Year to Date	-4.1%	-8.2%	
Latest 12 Month Period*	-5.2%	-2.1%	

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

### Net Generation (Total, All Sectors)

Table 3.1 Total Net Generation (All Sectors)										
Net Generation (thousand megawatthours)	Feb-09	Feb-08	% Change	Jan-09	% Change					
Coal	143,873	167,178	-13.9%	172,924	-16.8%					
Petroleum Liquids	2,221	2,399	-7.4%	4,953	-55.2%					
Natural Gas	61,078	59,443	2.8%	65,474	-6.7%					
Nuclear	63,714	65,130	-2.2%	73,479	-13.3%					
Hydroelectric Conventional	17,832	18,323	-2.7%	23,476	-24.0%					
All Other	13,244	11,801	12.2%	13,384	-1.0%					
Total (All Energy Sources)	301,963	324,275	-6.9%	353,690	-14.6%					

## 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 Feb-09 Feb-08 % Change Jan-09 % Change											
Coal (Thousand Short Tons)	74,765	86,290	-13.4%	90,986	-17.8%						
Petroleum Liquids (Thousand Barrels)	3,773	4,013	-6.0%	8,163	-53.8%						
Natural Gas (Million Cubic Feet)         460,423         449,525         2.4%         496,593         -7.3%											

### Fossil Fuel Stocks (Electric Power Sector)

Table 3.3 Total Fossil Fuel Stocks (Electric Power Sector)											
Fossil Fuel Stocks	Fossil Fuel Stocks     Feb-09     Feb-08     % Change     Jan-09     % Change										
Coal (Thousand Short Tons)	162,069	143,309	13.1%	158,358	2.3%						
Petroleum Liquids (Thousand Barrels)         42,429         43,864         -3.3%         42,202         0.5%											

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: February 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	February 2009	316,797	7,174	126,552	137,193	41,308	26,629	655,653		
Prior Period	January 2008	February 2008	350,077	5,461	131,857	135,866	38,664	24,492	686,417		
Percent Difference			-9.5%	31.4%	-4.0%	1.0%	6.8%	8.7%	-4.5%		

#### Comparison to Prior Twelve-Month Period

	Starting Month	Ending Month	Coal	Petroleum Liquids	Natural Gas	Nuclear	Hydroelectric Conventional	All Other	Total
Current Period	March 2008	February 2009	1,961,105	32,874	871,643	807,509	250,730	155,634	4,079,495
Prior Period	March 2007	February 2008	2,027,191	42,949	909,350	803,060	241,562	142,288	4,166,400
Percent Difference			-3.3%	-23.5%	-4.1%	0.6%	3.8%	9.4%	-2.1%





### 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	February 2009	165,751	11,936	957,016					
Prior Period	January 2008	February 2008	180,463	9,242	997,917					
Percent Difference			-8.2%	29.1%	-4.1%					

Comparison to Prior 12 Month Period												
	Starting Month	Ending Month	Coal (Thousand Tons)	Petroleum Liquids (Thousand Barrels)	Natural Gas (Million Cubic Feet)							
Current Period	March 2008	February 2009	1,028,876	54,963	6,792,497							
Prior Period	March 2007	February 2008	1,051,383	71,666	7,168,701							
Percent Difference			-2.1%	-23.3%	-5.2%							







### Section 6. Fossil Fuel Stock Trends

Table 6.1 Trends in Total Fossil Fuel Stocks (Electric Power Sector)											
Fossil Fuel Stocks     Feb-09     Feb-08     % Change     Jan-09     % Change											
Coal, Total (Thousand Short Tons)	162,069	143,309	13.1%	158,358	2.3%						
Bituminous (includes anthracite and coal synfuel)	66,496	58,822	13.0%	62,563	6.3%						
Subbituminous	90,258	80,135	12.6%	90,838	-0.6%						
Lignite	5,315	4,351	22.2%	4,957	7.2%						
Petroleum Liquids (Thousand Barrels)	42,429	43,864	-3.3%	42,202	0.5%						







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

## **Retail Sales**

Table 7.1 Retail Sales (Million kWh)											
Ultimate Customer	Feb-09	Feb-08	% Change	Jan-09	% Change						
Residential	115,583	118,503	-2.5%	135,787	-14.9%						
Commercial	100,602	105,615	-4.7%	110,869	-9.3%						
Industrial	68,437	79,428	-13.8%	72,116	-5.1%						
Transportation	Transportation 636 656 -3.1% 735 -13.5%										
All Sectors	285,257	304,202	-6.2%	319,507	-10.7%						

# **Average Retail Price**

Table 7.2 Average Retail Price (Cents/kWh) U.S. Total									
Ultimate Customer	Feb-09	Feb-08	% Change	Jan-09	% Change				
Residential	11.22	10.28	9.1%	11.03	1.7%				
Commercial	10.15	9.47	7.2%	10.03	1.2%				
Industrial	6.98	6.38	9.4%	6.90	1.2%				
Transportation	11.13	10.43	6.7%	11.32	-1.7%				
All Sectors	9.82	8.98	9.4%	9.75	0.7%				

Table 7.3 Average Retail Price (Cents/kWh) by Census Division										
Census Division		Residential		All Sectors						
	Feb-09	Feb-08	% Change	Feb-09	Feb-08	% Change				
New England	18.03	16.51	9.2%	16.12	14.87	8.4%				
Middle Atlantic	14.27	13.95	2.3%	12.80	12.39	3.3%				
East North Central	10.39	9.55	8.8%	8.81	8.07	9.2%				
West North Central	8.30	7.58	9.5%	7.11	6.46	10.1%				
South Atlantic	11.12	9.85	12.9%	9.98	8.68	15.0%				
East South Central	9.43	8.17	15.4%	8.26	6.94	19.0%				
West South Central	11.62	10.27	13.1%	9.73	8.91	9.2%				
Mountain	9.40	8.91	5.5%	7.77	7.50	3.6%				
Pacific Contiguous	11.33	11.16	1.5%	10.35	10.00	3.5%				
Pacific Noncontiguous	20.59	23.14	-11.0%	18.13	21.32	-15.0%				
U.S. Total	11.22	10.28	9.1%	9.82	8.98	9.4%				

### Section 8. Retail Sales Trends

# 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	February 2009	251,370	211,471	140,553	1,370	604,764			
Prior Period	January 2008	February 2008	251,363	215,947	160,759	1,366	629,435			
Percent Difference			0.0%	-2.1%	-12.6%	0.3%	-3.9%			

### Comparison to Prior Twelve-Month Period

	Starting Month	Ending Month	Residential	Commercial	Industrial	Transportation	Total (All Sectors)
Current Period	March 2008	February 2009	1,379,314	1,347,977	961,944	7,656	3,696,891
Prior Period	March 2007	February 2008	1,396,853	1,344,839	1,027,815	8,054	3,777,561
Percent Difference			-1.3%	0.2%	-6.4%	-4.9%	-2.1%







# Section 9. Average Retail Price Trends

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

Year-to-Date Comparison									
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	Starting Month	Ending Month	Residential	Commercial	Industrial	Transportation	Total (All Sectors)		
Current Period	January 2009	February 2009	11.11	10.09	6.94	11.23	9.79		
Prior Period	January 2008	February 2008	10.26	9.43	6.38	10.04	8.99		
Percent Difference			8.3%	7.0%	8.8%	11.9%	8.9%		

Comparison to Prior 12 Month Period									
	Starting Month	Ending Month	Residential	Commercial	Industrial	Transportation	Total (All Sectors)		
Current Period	March 2008	February 2009	11.51	10.38	7.11	11.49	9.95		
Prior Period	March 2007	February 2008	10.70	9.68	6.43	9.86	9.17		
Percent Difference			7.6%	7.2%	10.6%	16.5%	8.5%		





### Section 10. Heating and Cooling Degree Days

Data for: February 2009

### Table 10.1 Degree Days

		Heating Degree Days				Cooling Degree Days				
	Month	Heating Degree Days	Normal Heating Degree Days	Deviation From Normal	Pecent Difference From Normal	Cooling Degree Days	Normal Cooling Degree Days	Deviation From Normal	Pecent Difference From Normal	
Current Period	February 2009	701	732	-31	-4.2%	6	8	-2	-25.0%	
Prior Period	February 2008	741	732	9	1.2%	11	8	3	37.5%	
Percent Difference		-5.4%				-45.5%				

#### 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	February 2009	1,654	10	Current Period	March 2008	February 2009	4,507	1,269	
Prior Period	January 2008	February 2008	1,633	18	Prior Period	March 2007	February 2008	3,692	1,373	
Percent Difference			1.3%	-44.4%	Percent Difference	e		22.1%	-7.6%	





# Section 11. Documentation

**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).