# Monthly Flash Estimates of

# **Electric Power Data**

# Section 1. Commentary

For the contiguous U.S., the overall temperature for May 2007 was 2.1°F (1.2°C) above the average temperature observed for the month of May over the 1971-2000 time period. This was the 11th warmest May on record, with most of the contiguous U.S. observing warmer-than-normal temperatures except for Texas and South Carolina. Heating degree days for May 2007 were 32.7 percent below the normal observed over the 1971-2000 time period, and 21.9 percent lower than what was recorded in May 2006. As a further indicator of the warmer-than-normal temperatures observed across the U.S., cooling degree days for May 2007 were 7.7 percent above the 1971-2000 normal, and 2.8 percent higher than what was recorded in May 2006.

Retail sales of electricity for the month of May 2007 increased 2.0 percent compared to May 2006, while May 2007 generation for electric power was essentially flat, decreasing by 0.3 percent compared to May 2006. The average U.S. retail price of electricity for May 2007 showed a 3.6-percent increase from May 2006 and a 1.4-percent increase from April 2007. For the 12-month period ending May 2007, the U.S. average retail price increased by 6.1 percent over the previous 12-month period ending May 2006.

In May 2007, extreme drought conditions continued for areas east of the Mississippi River and in the Far West. Accordingly, conventional hydroelectric generation decreased by 15.1 percent from May 2006. Relative to May 2006, both petroleum liquids and natural gas generation increased in May 2007. Petroleum liquids generation increased by 23.6 percent and natural gas generation increased by 2.3 percent as both fuels are utilized mainly for peak load generation. Nuclear generation for May 2007 increased 12.0 percent from April 2007, as we are now coming out of the time of year where scheduled nuclear plant outages normally occur.

Coal stocks in the electric power sector for May 2007 increased 4.4 percent from April 2007. The April 2007-to-May 2007 increase in coal stocks consisted of a 5.1-percent increase for subbituminous, a 3.6-percent increase in bituminous, and a 5.9-percent increase in lignite. Year-over-year coals stocks increased 17.6 percent from May 2006, with subbituminous coal having the greatest percentage growth of 20.0 percent from May 2006 to May 2007. These increases in coal stocks can be attributed to the seasonal build-up beginning in March. Petroleum liquid stocks continued to decrease, falling 16.6 percent from May 2006 as a result of increased petroleum liquids generation.

References:

Weather data - http://www.publicaffairs.noaa.gov/releases2007/jun07/noaa07-033.html

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Table 2.1 Key Generation Indicators									
	TotalNuclearHydroelectricGenerationGenerationGeneration								
Total Change From:									
April 2007	8.3%	12.0%	8.8%						
May 2006	-0.3%	2.3%	-15.1%						
Year to Date	3.1%	2.0%	-12.8%						
Latest 12 Month Period*	0.8%	0.5%	-5.7%						

# Table 2.2 Key Consumption and Stocks Indicators

	Natural Gas Consumption	Coal Consumption	Coal Stocks	
Total Change From:				
April 2007	9.8%	7.0%	4.4%	
May 2006	-0.3%	0.3%	17.6%	
Year to Date	12.6%	2.0%	n/a	
Latest 12 Month Period*	9.2%	0.2%	n/a	

Change in total consumption or generation for the latest 12 month period (June 2006 to May 2007) compared to the prior 12 month period (June 2005 to May 2006).

## Net Generation (Total, All Sectors)

Table 3.1 Total Net Generation (All Sectors)										
Net Generation (thousand megawatthours)	May-07	May-06	% Change	Apr-07	% Change					
Coal	156,813	156,790	0.0%	145,929	7.5%					
Petroleum Liquids	3,454	2,794	23.6%	3,797	-9.0%					
Natural Gas	66,341	64,860	2.3%	60,685	9.3%					
Nuclear	64,200	62,776	2.3%	57,301	12.0%					
Hydroelectric Conventional	25,858	30,466	-15.1%	23,761	8.8%					
All Other	11,697	11,787	-0.8%	11,825	-1.1%					
Total (All Energy Sources)	328,363	329,472	-0.3%	303,300	8.3%					

# 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-07 May-06 % Change Apr-07 % Change										
Coal (Thousand Short Tons)	81,431	81,147	0.3%	76,099	7.0%					
Petroleum Liquids (Thousand Barrels)	5,909	4,857	21.7%	6,428	-8.1%					
Natural Gas (Million Cubic Feet)         559,043         560,454         -0.3%         509,376         9.8%										

# Fossil Fuel Stocks (Electric Power Sector)

Table 3.3 Total Fossil Fuel Stocks (Electric Power Sector)										
Fossil Fuel Stocks	Fossil Fuel Stocks     May-07     May-06     % Change     Apr-07     % Change									
Coal (Thousand Short Tons)	156,786	133,266	17.6%	150,210	4.4%					
Petroleum Liquids (Thousand Barrels) 43,952 52,682 -16.6% 41,846 5.0%										

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: May 2007

#### 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 2007	May 2007	800,865	23,219	300,671	325,037	118,731	58,515	1,627,038	
Prior Period	January 2006	May 2006	786,113	15,324	262,969	318,591	136,129	58,505	1,577,631	
Percent Difference			1.9%	51.5%	14.3%	2.0%	-12.8%	0.0%	3.1%	

#### Comparison to Prior Twelve-Month Period

	Starting Month	Ending Month	Coal	Petroleum Liquids	Natural Gas	Nuclear	Hydroelectric Conventional	All Other	Total
Current Period	June 2006	May 2007	2,001,976	51,238	845,299	793,665	270,908	139,288	4,102,374
Prior Period	June 2005	May 2006	2,005,661	82,923	767,175	789,809	287,298	136,483	4,069,349
Percent Difference			-0.2%	-38.2%	10.2%	0.5%	-5.7%	2.1%	0.8%



### 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 2007	May 2007	415,781	39,686	2,515,754						
Prior Period	January 2006	May 2006	407,676	26,750	2,234,432						
Percent Difference			2.0%	48.4%	12.6%						

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 2006	May 2007	1,043,574	88,570	7,159,408						
Prior Period	June 2005	May 2006	1,041,690	140,987	6,553,311						
Percent Difference			0.2%	-37.2%	9.2%						







### Section 6. Fossil Fuel Stock Trends

Table 6.1 Trends in Total Fossil Fuel Stocks (Electric Power Sector)										
Fossil Fuel Stocks May-07 May-06 % Change Apr-07 % Change										
Coal, Total (Thousand Short Tons)	156,786	133,266	17.6%	150,210	4.4%					
Bituminous (includes anthracite and coal synfuel)	78,125	67,582	15.6%	75,379	3.6%					
Subbituminous	73,589	61,346	20.0%	70,042	5.1%					
Lignite	5,073	4,338	16.9%	4,789	5.9%					
Petroleum Liquids (Thousand Barrels)	43,952	52,682	-16.6%	41,846	5.0%					







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

# **Retail Sales**

Table 7.1 Retail Sales (Million kWh)											
Ultimate Customer	May-07	May-06	% Change	Apr-07	% Change						
Residential	96,912	94,213	2.9%	90,661	6.9%						
Commercial	111,015	106,684	4.1%	102,413	8.4%						
Industrial	84,359	85,547	-1.4%	81,110	4.0%						
Transportation	655	630	3.9%	670	-2.2%						
All Sectors	292,941	287,075	2.0%	274,853	6.6%						

# **Average Retail Price**

Table 7.2 Average Retail Price (Cents/kWh) U.S. Total										
Ultimate Customer	May-07	May-06	% Change	Apr-07	% Change					
Residential	10.75	10.60	1.4%	10.65	0.9%					
Commercial	9.49	9.15	3.7%	9.37	1.3%					
Industrial	6.25	5.91	5.8%	6.17	1.3%					
Transportation	9.72	8.87	9.6%	9.54	1.9%					
All Sectors	8.97	8.66	3.6%	8.85	1.4%					

Table 7.3 Average Retail Price (Cents/kWh) by Census Division										
Census Division		Residential		All Sectors						
	May-07	May-06	% Change	May-07	May-06	% Change				
New England	16.32	16.58	-1.6%	14.29	14.11	1.3%				
Middle Atlantic	14.15	13.08	8.2%	12.15	10.88	11.7%				
East North Central	10.04	9.74	3.1%	7.97	7.56	5.4%				
West North Central	8.53	8.49	0.5%	6.74	6.64	1.5%				
South Atlantic	9.91	9.94	-0.3%	8.34	8.20	1.7%				
East South Central	8.50	8.49	0.1%	6.91	6.71	3.0%				
West South Central	11.46	11.34	1.1%	9.33	9.15	2.0%				
Mountain	9.53	9.43	1.1%	7.67	7.51	2.1%				
Pacific Contiguous	11.52	11.43	0.8%	10.29	10.23	0.6%				
Pacific Noncontiguous	20.19	20.33	-0.7%	17.56	18.05	-2.7%				
U.S. Total	10.75	10.60	1.4%	8.97	8.66	3.6%				

### 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 2007	May 2007	540,613	526,711	405,564	3,516	1,476,404			
Prior Period	January 2006	May 2006	514,169	502,290	407,860	3,387	1,427,707			
Percent Difference			5.1%	4.9%	-0.6%	3.8%	3.4%			

### Comparison to Prior Twelve-Month Period

Jul-04

-							
	Starting Month	Ending Month	Residential	Commercial	Industrial	Transportation	Total (All Sectors)
Current Period	June 2006	May 2007	1,380,676	1,325,271	999,633	8,216	3,713,796
Prior Period	June 2005	May 2006	1,363,243	1,290,186	1,014,414	7,781	3,675,623
Percent Difference			1.3%	2.7%	-1.5%	5.6%	1.0%





Jul-05

Jul-06

# 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										
	1						1			
	Starting Month	Ending Month	Residential	Commercial	Industrial	Transportation	Total (All Sectors)			
Current Period	January 2007	May 2007	10.27	9.32	6.18	9.65	8.81			
Prior Period	January 2006	May 2006	9.99	9.01	5.85	8.57	8.46			
Percent Difference			2.8%	3.4%	5.6%	12.6%	4.1%			

Comparison to Prior 12 Month Period										
	Starting Month	Ending Month	Residential	Commercial	Industrial	Transportation	Total (All Sectors)			
Current Period	June 2006	May 2007	10.50	9.47	6.22	9.51	8.98			
Prior Period	June 2005	May 2006	9.84	8.98	5.96	8.75	8.46			
Percent Difference			6.7%	5.5%	4.4%	8.7%	6.1%			





### Section 10. Heating and Cooling Degree Days

Data for: May 2007

			Heating De	egree Days		Cooling Degree Days				
			1	1	1		1	1	1	
	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 2007	107	159	-52	-32.7%	112	104	8	7.7%	
Prior Period	May 2006	137	159	-22	-13.8%	109	104	5	4.8%	
Percent Difference		-21.9%				2.8%				

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

Table 10.1 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 Day				Cooling Degree Days
Current Period	January 2007	May 2007	2,683	181	Current Period	June 2006	May 2007	4,260	1,351
Prior Period	January 2006	May 2006	2,419	198	Prior Period	June 2005	May 2006	4,060	1,460
Percent Difference			10.9%	-8.6%	Percent Difference	9		4.9%	-7.5%





# 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," Form EIA-906, "Power Plant Report," and Form EIA-920, "Combined Heat and Power Plant 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-920, approximately 300 combined heat and power (CHP) plants; and for the Form EIA-906, approximately 1,440 non-CHP 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).