# Monthly Flash Estimates of

# **Electric Power Data**

## Data for: November 2005

### **Section 1. Commentary**

The hotter than normal weather pattern since May continued into November. Heating degree days for November 2005 were 3.7 percent lower than in November 2004 and 13.5 percent lower than normal. Year-to-date, heating degree days are down 1.5 percent compared to 2004 and cooling degree days are up 15.1 percent.

Total generation dropped 3.1 percent from October, but the warm weather and a strong economy contributed to a 1 percent increase in generation compared to November 2004. Sales grew by a similar 1.8 percent. Year to date, generation has increased by 1.7 percent and electricity sales are up 3.0 percent. The average retail price of electricity – which beginning with this issue of the Flash Estimates is shown on a national and regional level (page 6) – is up 9.7 percent, reflecting higher fossil fuel prices and decreased nuclear power output (as discussed below).

In contrast to much of the year, nuclear generation was especially strong in November 2005, increasing almost 7 percent from last year due to less capacity being lost to maintenance and refueling than in November 2004. For most of 2005, nuclear capacity lost to maintenance and refueling has been running higher than in 2004, and year-to-date nuclear generation is down 1.6 percent.

Coal generation declined 2.2 percent between October and November 2005, a decrease which based on recent history is larger than typical. The decrease in coal generation and consumption (down 2.7 percent) assisted generators in rebuilding stocks. Coal stocks in the electric power sector increased strongly for the second consecutive month, up 8.3 percent from October and only 3.4 percent below the November 2004 level. Significantly, stocks increased for both bituminous and sub-bituminous coal, although rail transportation maintenance and weather-related problems continue to constrain sub-bituminous shipments from the Powder River Basin. From October, electric power sector bituminous coal stocks increased from 44.8 to 50.6 million tons (up 12.9 percent) and sub-bituminous stocks increased from 52.6 to 55.1 million tons (up 4.8 percent).

Natural gas-fired generation dropped 10.8 percent from October and liquid petroleum-fired generation dropped 38.5 percent, as the mild weather required less use of peaking capacity. The sharp drop in liquid petroleum generation helped generators to rebuild stocks, which increased 18.7 percent from October and are now close to 2004 levels. Hydroelectric generation increased from October (up 6.4 percent) but was down 10.2 percent from November 2004. Although November was a wet month in the key Pacific Northwest hydroelectric region, reservoirs throughout the western U.S. are below normal due to water demand growth and years of drought conditions.

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Monthly Flash Estimates of Electric Power Data

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Table 2.1 Key Generation Indicators									
	TotalNuclearHydroelectricGenerationGenerationGeneration								
Total Change From:									
October 2005	-3.1%	2.7%	6.4%						
November 2004	1.0%	6.7%	-10.2%						
Year to Date	1.7%	-1.6%	0.4%						
Latest 12 Month Period*	1.9%	-1.4%	1.2%						

### Table 2.2 Key Consumption and Stocks Indicators

	Natural Gas Consumption	Coal Consumption	Coal Stocks
Total Change From:			
October 2005	-11.2%	-2.7%	8.3%
November 2004	-2.8% 0.2%		-3.4%
Year to Date	6.3%	2.6%	n/a
Latest 12 Month Period*	7.1%	2.6%	n/a

Change in total consumption or generation for the latest 12 month period (December 2004 to November 2005) compared to the prior 12 month period (December 2003 to November 2004).

#### Net Generation (Total, All Sectors)

Table 3.1 Total Net Generation (All Sectors)											
Net Generation (thousand megawatthours)	Nov-05	Nov-04	% Change	Oct-05	% Change						
Coal	159,001	157,458	1.0%	162,547	-2.2%						
Petroleum Liquids	5,181	5,228	-0.9%	8,428	-38.5%						
Natural Gas	48,990	49,638	-1.3%	54,942	-10.8%						
Nuclear	62,913	58,941	6.7%	61,236	2.7%						
Hydroelectric Conventional	18,796	20,937	-10.2%	17,667	6.4%						
All Other	10,307	9,899	4.1%	10,215	0.9%						
Total (All Energy Sources)	305,187	302,101	1.0%	315,034	-3.1%						

### 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	Nov-05	Nov-04	% Change	Oct-05	% Change						
Coal (Thousand Short Tons)	82,860	82,671	0.2%	85,147	-2.7%						
Petroleum Liquids (Thousand Barrels)	9,025	8,879	1.6%	14,336	-37.0%						
Natural Gas (Million Cubic Feet)	415,490	427,441	-2.8%	467,734	-11.2%						

### Fossil Fuel Stocks (Electric Power Sector)

Table 3.3 Total Fossil Fuel Stocks (Electric Power Sector)										
Fossil Fuel Stocks         Nov-05         Nov-04         % Change         Oct-05         % Change										
Coal (Thousand Short Tons)	109,463	113,299	-3.4%	101,110	8.3%					
Petroleum Liquids (Thousand Barrels) 46,931 49,363 -4.9% 39,525 18.7%										

Notes:

- Coal consumption and generation includes subbituminous coal, bituminous coal, anthracite, lignite, waste coal and synthetic coal (synfuel).

- Coal stocks includes the coal categories listed immediately above except for waste coal.

- 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

#### Table 4.1 Trends in Total Generation by Fuel (All Sectors) Millions of Kilowatthours

Year-to-Date Comparison											
			1						1		
	Starting Month	Ending Month	Coal	Petroleum Liquids	Natural Gas	Nuclear	Hydroelectric Conventional	All Other	Total		
Current Period	January 2005	November 2005	1,836,163	88,954	698,983	708,730	243,263	115,929	3,692,022		
Prior Period	January 2004	November 2004	1,801,857	91,777	657,825	719,912	242,207	115,029	3,628,607		
Percent Change			1.9%	-3.1%	6.3%	-1.6%	0.4%	0.8%	1.7%		

#### Comparison to Prior 12 Month Period

	Starting Month	Ending Month	Coal	Petroleum Liquids	Natural Gas	Nuclear	Hydroelectric Conventional	All Other	Total
Current Period	December 2004	November 2005	2,012,926	97,092	750,137	777,346	269,474	126,995	4,033,970
Prior Period	December 2003	November 2004	1,978,149	99,817	701,860	788,523	266,251	125,688	3,960,288
Percent Change			1.8%	-2.7%	6.9%	-1.4%	1.2%	1.0%	1.9%



Hydroelectric Conventional

- Nuclear -

#### 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 2005	November 2005	958,309	153,214	6,023,858						
Prior Period	January 2004	November 2004	933,683	156,062	5,668,663						
Percent Change			2.6%	-1.8%	6.3%						

Comparison to Prior 12 Month Period												
	Starting Month	Ending Month	Coal (Thousand Tons)	Petroleum Liquids (Thousand Barrels)	Natural Gas (Million Cubic Feet)							
Current Period	December 2004	November 2005	1,050,637	166,939	6,466,502							
Prior Period	December 2003	November 2004	1,024,243	169,765	6,038,906							
Percent Change			2.6%	-1.7%	7.1%							









### **Retail Sales**

Table 6.1 Retail Sales (Million kWh)											
Ultimate Customer	Nov-05	Nov-04	% Change	Oct-05	% Change						
Residential	92,008	89,601	2.7%	103,483	-11.1%						
Commercial	99,045	95,535	3.7%	108,693	-8.9%						
Industrial	83,123	84,394	-1.5%	85,610	-2.9%						
Transportation	654	560	16.7%	679	-3.7%						
All Sectors	274,830	270,090	1.8%	298,465	-7.9%						

### **Average Retail Price**

Table 6.2 Average Retail Price (Cents/kWh) U.S. Total											
Ultimate Customer	Nov-05	Nov-04	% Change	Oct-05	% Change						
Residential	9.74	8.99	8.3%	9.73	0.1%						
Commercial	8.74	8.04	8.7%	8.89	-1.7%						
Industrial	5.74	5.12	12.1%	5.89	-2.5%						
Transportation	7.02	7.04	-0.3%	8.19	-14.3%						
All Sectors	8.16	7.44	9.7%	8.32	-1.9%						

Table 6.3 Average Retail Price (Cents/kWh) by Census Region								
Census Region		Residential			All Sectors			
	Nov-05	Nov-04	% Change	Nov-05	Nov-04	% Change		
New England	14.11	11.93	18.3%	12.32	10.41	18.3%		
Mid Atlantic	13.15	11.84	11.1%	10.90	10.07	8.2%		
East North Central	8.48	8.30	2.2%	6.89	6.45	6.8%		
West North Central	7.60	7.59	0.1%	6.02	6.01	0.2%		
South Atlantic	8.99	8.35	7.7%	7.62	6.89	10.6%		
East South Central	7.96	7.14	11.5%	6.39	5.67	12.7%		
West South Central	10.79	9.07	19.0%	9.11	7.28	25.1%		
Mountain	8.57	8.26	3.8%	7.15	6.69	6.9%		
Pacific Contiguous	10.12	10.36	-2.3%	9.13	9.46	-3.5%		
Pacific Noncontiguous	19.14	15.88	20.5%	17.30	13.77	25.6%		
U.S. Total	9.74	8.99	8.3%	8.16	7.44	9.7%		

#### Section 7. Retail Sales Trends

#### Table 7.1 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 2005	November 2005	1,240,503	1,162,432	934,083	7,525	3,344,543	
Prior Period	January 2004	November 2004	1,179,248	1,127,090	934,741	6,426	3,247,506	
Percent Change			5.2%	3.1%	-0.1%	17.1%	3.0%	

Comparison to Prior 12 Month Period								
	Starting Month	Ending Month	Residential	Commercial	Industrial	Transportation	Total (All Sectors)	
Current Period	December 2004	November 2005	1,354,842	1,264,387	1,017,863	8,163	3,645,254	
Prior Period	December 2003	November 2004	1,292,590	1,225,061	1,017,001	6,960	3,541,612	
Percent Change			4.8%	3.2%	0.1%	17.3%	2.9%	







### Section 8. Average Retail Price Trends

## Table 8.1 Trends in Average Retail Price of Electricity (All Sectors) Cents Per Kilowatthours

Year-to-Date Comparison								
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	Starting Month	Ending Month	Residential	Commercial	Industrial	Transportation	Total (All Sectors)	
Current Period	January 2005	November 2005	9.44	8.67	5.56	7.47	8.08	
Prior Period	January 2004	November 2004	9.00	8.19	5.28	7.15	7.64	
Percent Change			4.9%	5.9%	5.3%	4.5%	5.8%	

Comparison to Prior 12 Month Period							
	Starting Month	Ending Month	Residential	Commercial	Industrial	Transportation	Total (All Sectors)
Current Period	December 2004	November 2005	9.37	8.60	5.53	7.43	8.03
Prior Period	December 2003	November 2004	8.95	8.15	5.25	7.12	7.60
Percent Change			4.7%	5.5%	5.3%	4.4%	5.7%





#### Section 9. Heating and Cooling Degree Days

#### Table 9.1 Degree Days

	Heating Degree Days					Cooling Degree Days			
	Month	Heating Degree Days	Normal Heating Degree Days	Deviation From the Normal	Cooling Degree Days	Normal Cooling Degree Days	Deviation From the Normal		
Current Period	November 2005	466	539	-73	23	15	8		
Previous Period	November 2004	484	539	-55	17	15	2		
Percent Change		-3.7%			35.3%				

#### Table 9.2 Trends in Heating and Cooling Degree Days

Year-to-Date Comparison									
Starting Month Ending Month Days Days									
Current Period	January 2005	November 2005	3,384	1,442					
Prior Period	January 2004	November 2004	3,436	1,253					
Percent Change			-1.5%	15.1%					

Comparison to Prior 12 Month Period								
Starting Month Ending Month Heating Degree Cooling Degree Days Days								
Current Period	December 2004	November 2005	4,172	1,448				
Prior Period	December 2003	November 2004	4,209	1,257				
Percent Change			-0.9%	15.2%				









### Section 10. 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).