

# Monthly Flash Estimates of Electric Power Data

Data for:  
December 2006

## Section 1. Commentary

The National Oceanic and Atmospheric Administration (NOAA) Climatic Data Center reports 2006 as the warmest year on record for the contiguous United States, with El Niño contributing to milder winter temperatures. NOAA also reports that December 2006 was the fourth warmest December since 1895. (For more information see <http://www.noaanews.noaa.gov/stories2007/s2772.htm>.)

As a consequence of the warmer weather, December 2006 generation lagged behind the December 2005 generation by 3.6 percent, although it increased 8.7 percent from November 2006. Mirroring generation, December 2006 retail sales of electricity were up 8.4 percent from November 2006 and were down 2.5 percent from December 2005. Overall, in 2006 total net generation and retail sales of electricity were little changed from 2005, with a 0.1 percent decline for generation and a 0.1 percent increase for retail sales. Reflecting weaker seasonal demand for electricity, the average U.S. retail price of electricity in December 2006 declined 1.0 percent from November 2006. For the year, however, the average retail price of electricity was 8.7 percent higher than in 2005.

Comparing December 2006 to November 2006, while generation by petroleum liquids was down 9.1 percent, generation by all other fuel categories was up – coal up 8.6 percent, natural gas up 5.9 percent, nuclear up 14.8 percent and hydroelectric up 4.8 percent. Comparing December 2006 to December 2005, on the other hand, except for natural gas, generation by all major fuel categories saw a decline – coal down 2.8 percent, petroleum liquids down 73.4 percent, nuclear down 1.7 percent and hydroelectric down 1.1 percent. In December 2006, natural gas generation was up by 3.8 percent year over year, due to much lower average natural gas prices.

In 2006, natural gas generation was 6.6 percent higher than in 2005, while coal generation was down 1.3 percent and petroleum liquids generation was down 56.7 percent over the same period. The 2006 hydroelectric generation was up 6.7 percent from 2005, because of improved precipitation levels in the Northern coastal areas, and the 2006 nuclear generation was up 0.7 percent from 2005.

The December 2006 end-of-year overall coal stocks were up 0.2 percent from November 2006, mainly due to warmer than normal weather. The December 2006 subbituminous stocks were up 0.8 percent from November 2006, whereas, bituminous stocks were down 0.2 percent over the same period. The decline of bituminous stocks from November 2006 to December 2006, however, occurred at a much lower rate than in the previous couple of years. At the end of December 2006, bituminous stocks were 67.0 million tons and subbituminous stocks were 67.9 million tons. The December 2006 petroleum liquids stocks, at 49.2 million barrels, were 1.2 percent higher than in November 2006.

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

Data for:  
December 2006

### Table 2.1 Key Generation Indicators

	Total Generation	Nuclear Generation	Hydroelectric Generation
<b>Total Change From:</b>			
November 2006	8.7%	14.8%	4.8%
December 2005	-3.6%	-1.7%	-1.1%
<b>Year to Date</b>	<b>-0.1%</b>	<b>0.7%</b>	<b>6.7%</b>
<b>Latest 12 Month Period*</b>	<b>-0.1%</b>	<b>0.7%</b>	<b>6.7%</b>

### Table 2.2 Key Consumption and Stocks Indicators

	Natural Gas Consumption	Coal Consumption	Coal Stocks
<b>Total Change From:</b>			
November 2006	4.8%	8.7%	0.2%
December 2005	3.9%	-2.5%	38.1%
<b>Year to Date</b>	<b>6.1%</b>	<b>-1.0%</b>	<b>n/a</b>
<b>Latest 12 Month Period*</b>	<b>6.1%</b>	<b>-1.0%</b>	<b>n/a</b>

\* Change in total consumption or generation for the latest 12 month period (January 2006 to December 2006) compared to the prior 12 month period (January 2005 to December 2005).

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

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

Net Generation (thousand megawatthours)	Dec-06	Dec-05	% Change	Nov-06	% Change
Coal	173,072	177,987	-2.8%	159,349	8.6%
Petroleum Liquids	2,991	11,242	-73.4%	3,292	-9.1%
Natural Gas	55,776	53,738	3.8%	52,655	5.9%
Nuclear	70,490	71,735	-1.7%	61,392	14.8%
Hydroelectric Conventional	21,905	22,141	-1.1%	20,892	4.8%
All Other	11,498	11,258	2.1%	11,261	2.1%
Total (All Energy Sources)	335,731	348,101	-3.6%	308,841	8.7%

**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	Dec-06	Dec-05	% Change	Nov-06	% Change
Coal (Thousand Short Tons)	90,296	92,577	-2.5%	83,054	8.7%
Petroleum Liquids (Thousand Barrels)	5,300	18,887	-71.9%	5,707	-7.1%
Natural Gas (Million Cubic Feet)	469,637	451,996	3.9%	447,989	4.8%

**Fossil Fuel Stocks (Electric Power Sector)**

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

Fossil Fuel Stocks	Dec-06	Dec-05	% Change	Nov-06	% Change
Coal (Thousand Short Tons)	139,686	101,137	38.1%	139,476	0.2%
Petroleum Liquids (Thousand Barrels)	49,195	47,414	3.8%	48,591	1.2%

**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:  
December 2006

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

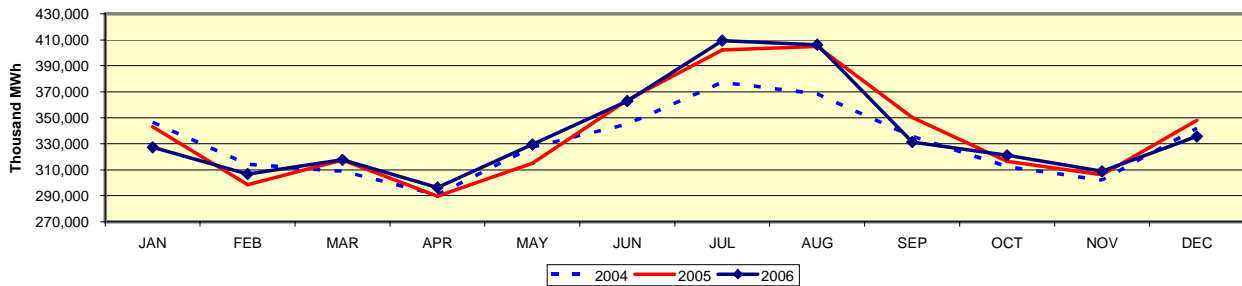
**Year-to-Date Comparison**

	Starting Month	Ending Month	Coal	Petroleum Liquids	Natural Gas	Nuclear	Hydroelectric Conventional	All Other	Total
<b>Current Period</b>	January 2006	December 2006	1,987,085	43,341	807,870	787,219	288,312	139,258	4,053,085
<b>Prior Period</b>	January 2005	December 2005	2,013,179	100,095	757,974	781,986	270,321	131,868	4,055,423
<b>Percent Difference</b>			-1.3%	-56.7%	6.6%	0.7%	6.7%	5.6%	-0.1%

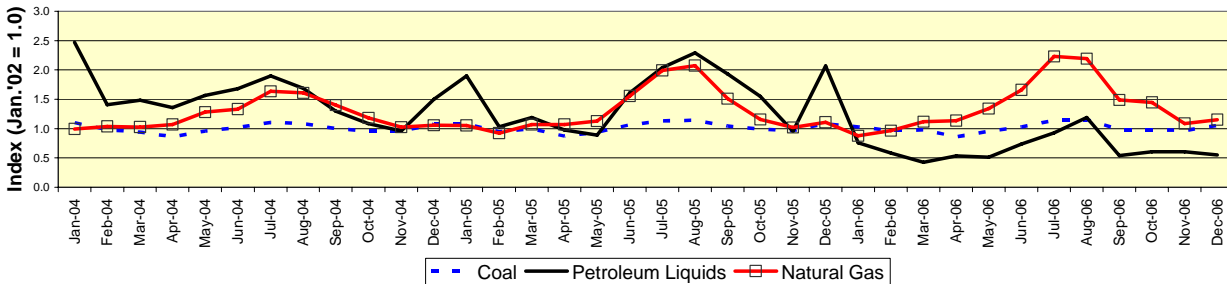
**Comparison to Prior Twelve-Month Period**

	Starting Month	Ending Month	Coal	Petroleum Liquids	Natural Gas	Nuclear	Hydroelectric Conventional	All Other	Total
<b>Current Period</b>	January 2006	December 2006	1,987,085	43,341	807,870	787,219	288,312	139,258	4,053,085
<b>Prior Period</b>	January 2005	December 2005	2,013,179	100,095	757,974	781,986	270,321	131,868	4,055,423
<b>Percent Difference</b>			-1.3%	-56.7%	6.6%	0.7%	6.7%	5.6%	-0.1%

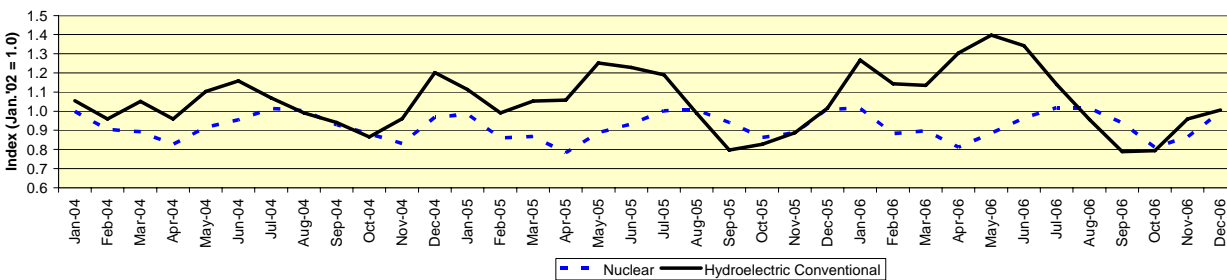
**Figure 4.1 Trends in Total Net Generation (All Sectors): 2004, 2005, and 2006**



**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:  
December 2006

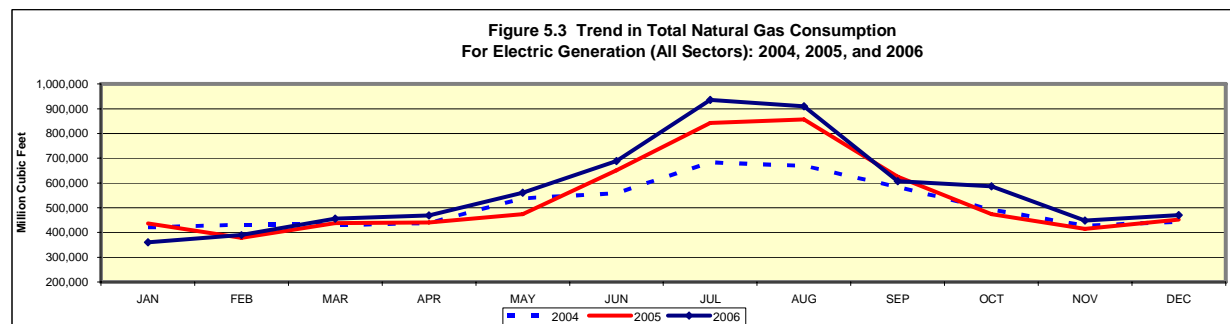
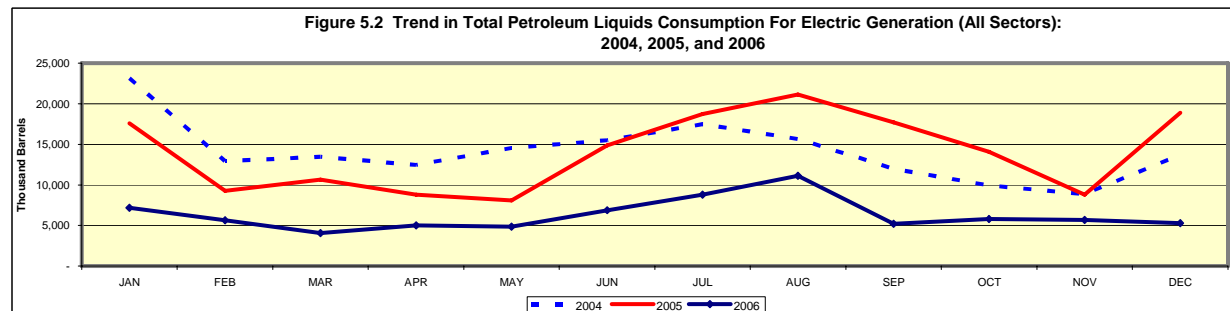
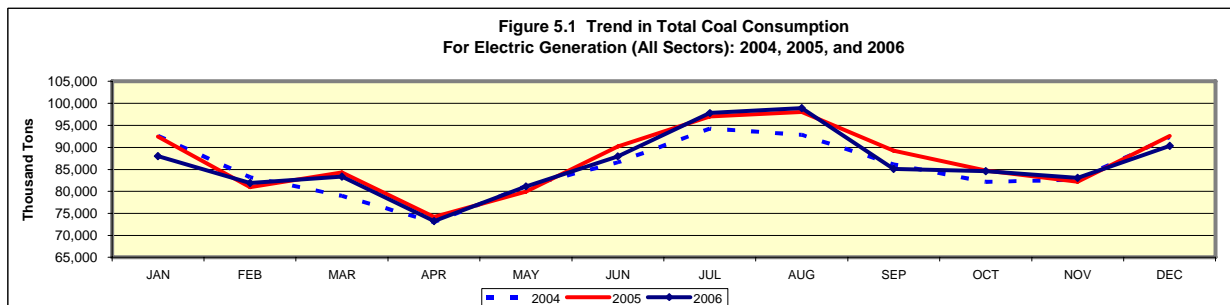
**Table 5.1 Trends in Fossil Fuel Consumption For Electric Generation, Total (All Sectors)**

### Year-to-Date Comparison

	Starting Month	Ending Month	Coal (Thousand Tons)	Petroleum Liquids (Thousand Barrels)	Natural Gas (Million Cubic Feet)
<b>Current Period</b>	January 2006	December 2006	1,035,391	75,637	6,880,988
<b>Prior Period</b>	January 2005	December 2005	1,045,878	168,700	6,486,761
<b>Percent Difference</b>			-1.0%	-55.2%	6.1%

### Comparison to Prior 12 Month Period

	Starting Month	Ending Month	Coal (Thousand Tons)	Petroleum Liquids (Thousand Barrels)	Natural Gas (Million Cubic Feet)
<b>Current Period</b>	January 2006	December 2006	1,035,391	75,637	6,880,988
<b>Prior Period</b>	January 2005	December 2005	1,045,878	168,700	6,486,761
<b>Percent Difference</b>			-1.0%	-55.2%	6.1%

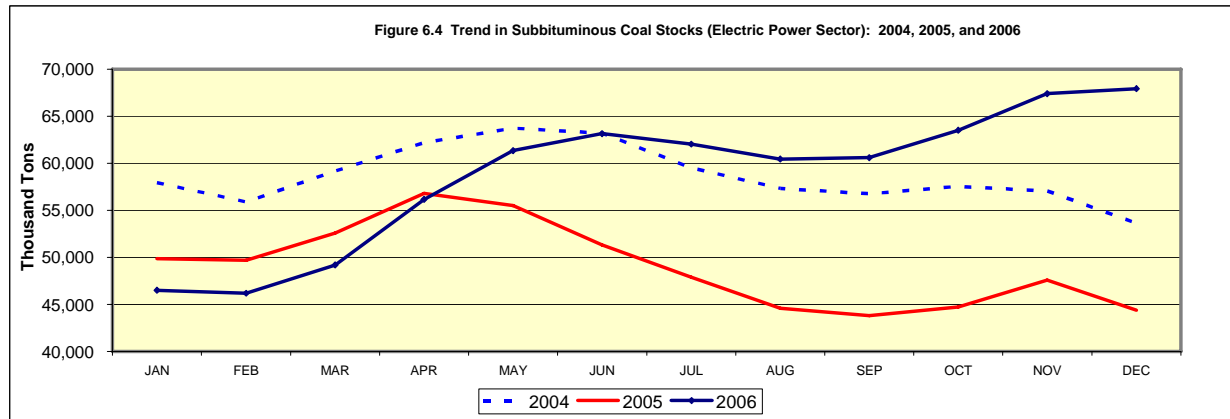
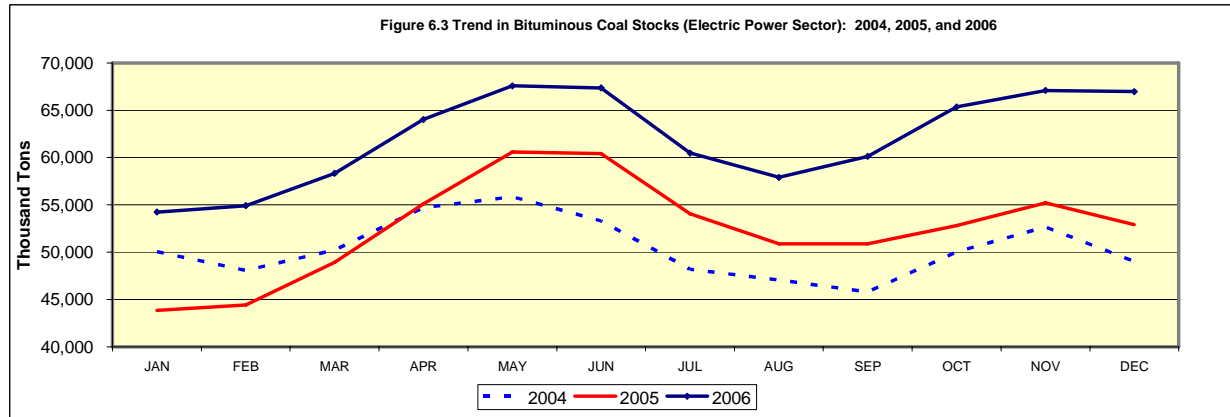
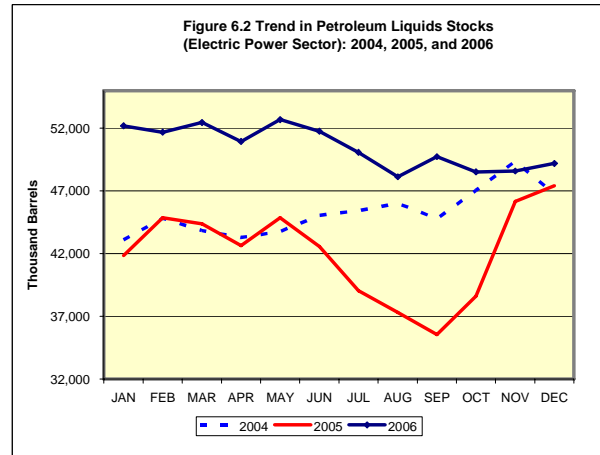
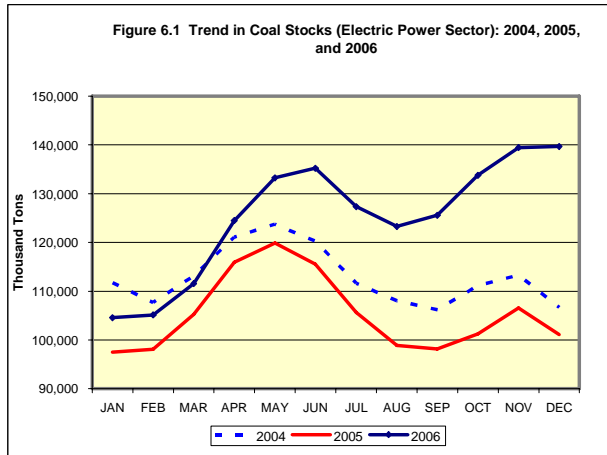


# Section 6. Fossil Fuel Stock Trends

Data for:  
December 2006

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

Fossil Fuel Stocks	Dec-06	Dec-05	% Change	Nov-06	% Change
<b>Coal, Total (Thousand Short Tons)</b>	139,686	101,137	38.1%	139,476	0.2%
Bituminous (includes anthracite and coal synfuel)	66,968	52,923	26.5%	67,083	-0.2%
Subbituminous	67,929	44,377	53.1%	67,417	0.8%
Lignite	4,789	3,836	24.8%	4,975	-3.7%
<b>Petroleum Liquids (Thousand Barrels)</b>	49,195	47,414	3.8%	48,591	1.2%



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

Data for:  
December 2006

## Retail Sales

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

Ultimate Customer	Dec-06	Dec-05	% Change	Nov-06	% Change
Residential	115,251	120,177	-4.1%	95,052	21.3%
Commercial	103,793	103,531	0.3%	100,859	2.9%
Industrial	80,093	82,974	-3.5%	80,161	-0.1%
Transportation	674	660	2.1%	627	7.5%
All Sectors	299,811	307,343	-2.5%	276,699	8.4%

## Average Retail Price

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

Ultimate Customer	Dec-06	Dec-05	% Change	Nov-06	% Change
Residential	9.81	9.27	5.8%	10.22	-4.0%
Commercial	8.97	8.79	2.0%	9.11	-1.5%
Industrial	5.96	5.94	0.3%	5.97	-0.2%
Transportation	9.26	8.23	12.5%	9.16	1.1%
All Sectors	8.49	8.21	3.4%	8.58	-1.0%

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

Census Division	Residential			All Sectors		
	Dec-06	Dec-05	% Change	Dec-06	Dec-05	% Change
New England	16.40	13.86	18.3%	14.80	12.66	16.9%
Middle Atlantic	12.54	12.29	2.0%	10.88	11.23	-3.1%
East North Central	8.67	7.88	10.0%	7.33	6.75	8.6%
West North Central	7.25	7.12	1.8%	6.06	6.02	0.7%
South Atlantic	9.38	8.58	9.3%	8.27	7.70	7.4%
East South Central	7.74	7.55	2.5%	6.54	6.35	3.0%
West South Central	10.09	10.39	-2.9%	8.52	9.04	-5.8%
Mountain	8.30	8.34	-0.5%	7.03	7.25	-3.0%
Pacific Contiguous	11.31	10.25	10.3%	10.21	9.36	9.1%
Pacific Noncontiguous	18.91	18.88	0.2%	16.96	17.25	-1.7%
U.S. Total	9.81	9.27	5.8%	8.49	8.21	3.4%

# Section 8. Retail Sales Trends

Data for:  
December 2006

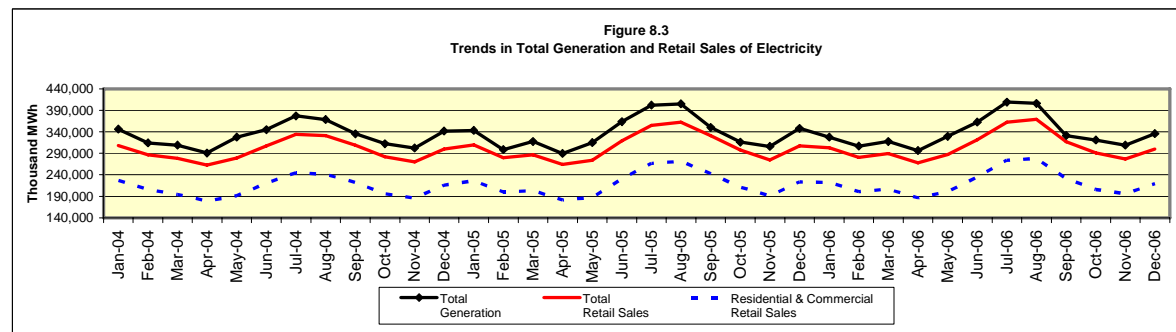
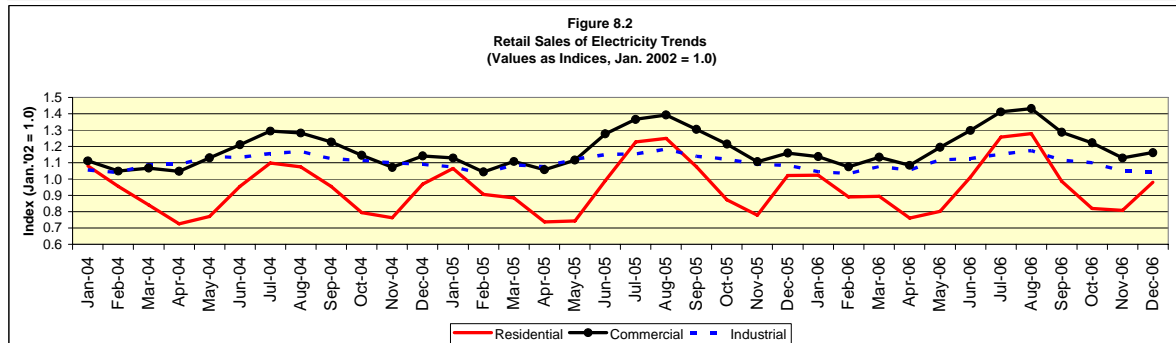
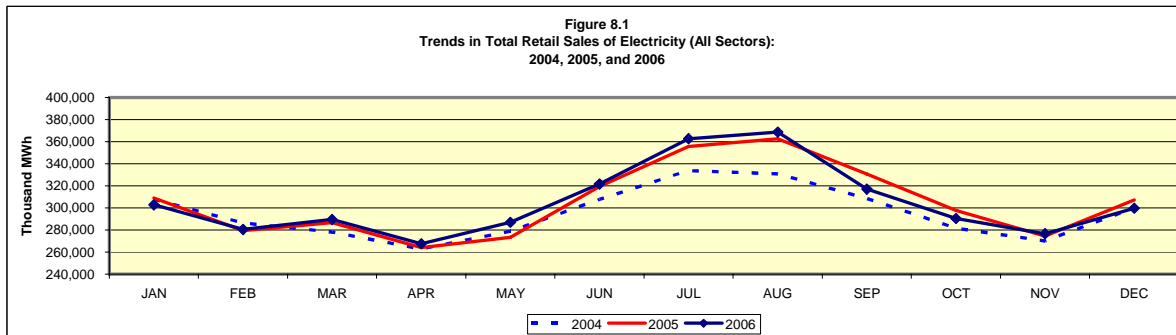
**Table 8.1 Trends in Total Retail Sales of Electricity (All Sectors)**  
Millions of Kilowatthours

**Year-to-Date Comparison**

	Starting Month	Ending Month	Residential	Commercial	Industrial	Transportation	Total (All Sectors)
<b>Current Period</b>	January 2006	December 2006	1,354,258	1,300,868	1,002,019	8,086	3,665,231
<b>Prior Period</b>	January 2005	December 2005	1,359,227	1,275,079	1,019,156	7,506	3,660,969
<b>Percent Difference</b>			-0.4%	2.0%	-1.7%	7.7%	0.1%

**Comparison to Prior Twelve-Month Period**

	Starting Month	Ending Month	Residential	Commercial	Industrial	Transportation	Total (All Sectors)
<b>Current Period</b>	January 2006	December 2006	1,354,258	1,300,868	1,002,019	8,086	3,665,231
<b>Prior Period</b>	January 2005	December 2005	1,359,227	1,275,079	1,019,156	7,506	3,660,969
<b>Percent Difference</b>			-0.4%	2.0%	-1.7%	7.7%	0.1%





# Section 9. Average Retail Price Trends

Data for:  
December 2006

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

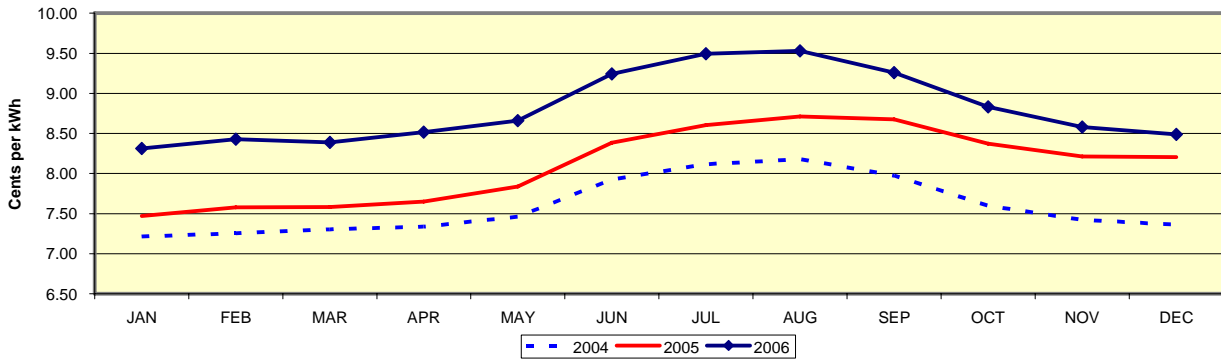
### Year-to-Date Comparison

	Starting Month	Ending Month	Residential	Commercial	Industrial	Transportation	Total (All Sectors)
<b>Current Period</b>	January 2006	December 2006	10.40	9.36	6.09	9.06	8.85
<b>Prior Period</b>	January 2005	December 2005	9.45	8.67	5.73	8.57	8.14
<b>Percent Difference</b>			10.1%	8.0%	6.3%	5.7%	8.7%

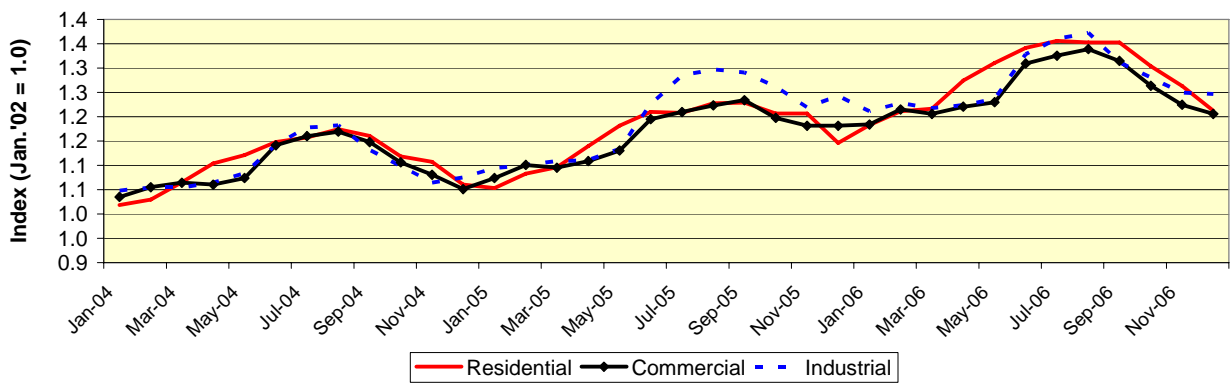
### Comparison to Prior 12 Month Period

	Starting Month	Ending Month	Residential	Commercial	Industrial	Transportation	Total (All Sectors)
<b>Current Period</b>	January 2006	December 2006	10.40	9.36	6.09	9.06	8.85
<b>Prior Period</b>	January 2005	December 2005	9.45	8.67	5.73	8.57	8.14
<b>Percent Difference</b>			10.1%	8.0%	6.3%	5.7%	8.7%

**Figure 9.1 Trends in Average Retail Price of Electricity (All Sectors):  
2004, 2005, and 2006**



**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:  
December 2006

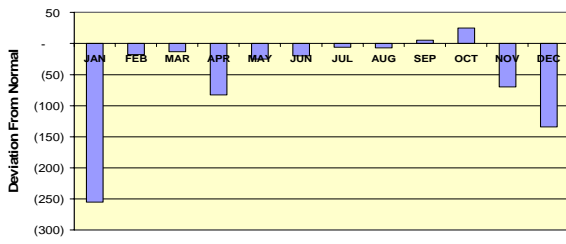
**Table 10.1 Degree Days**

		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
<b>Current Period</b>	December 2006	683	817	-134	-16.4%	11	8	3	37.5%
<b>Previous Period</b>	December 2005	844	817	27	3.3%	4	8	-4	-50.0%
<b>Percent Difference</b>		-19.1%				175.0%			

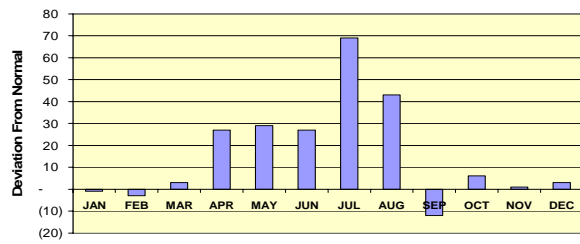
**Table 10.2 Trends in Heating and Cooling Degree Days**

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
<b>Current Period</b>	January 2006	December 2006	3,923	1,409	<b>Current Period</b>	January 2006	December 2006	3,923	1,409
<b>Prior Period</b>	January 2005	December 2005	4,229	1,445	<b>Prior Period</b>	January 2005	December 2005	4,229	1,445
<b>Percent Difference</b>			-7.2%	-2.5%	<b>Percent Difference</b>			-7.2%	-2.5%

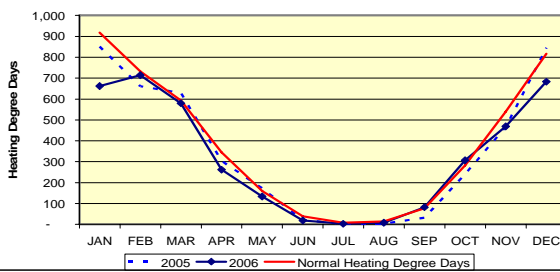
**Figure 10.1 Deviation From Normal: Heating Degree Days, 2006**



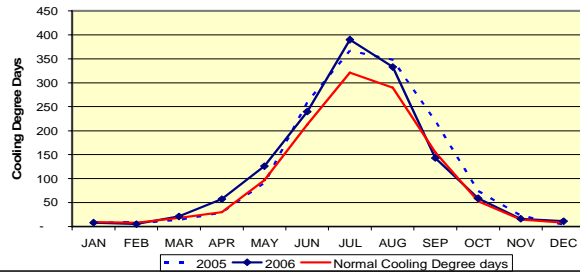
**Figure 10.2 Deviation From Normal: Cooling Degree Days, 2006**



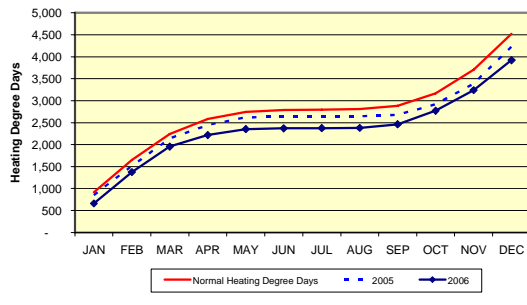
**Figure 10.3 Trend in Heating Degree Days: 2005, 2006, and Normal**



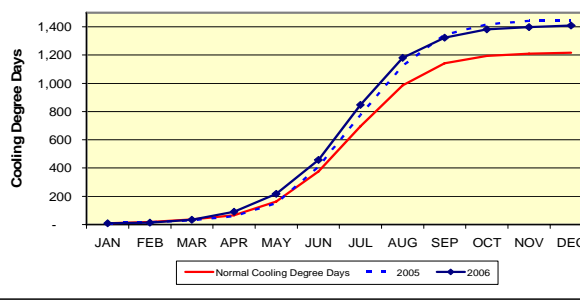
**Figure 10.4 Trend in Cooling Degree Days: 2005, 2006, and Normal**



**Figure 10.5 Trend in Cumulative Heating Degree Days: 2005, 2006, and Normal**



**Figure 10.6 Trend in Cumulative Cooling Degree Days: 2005, 2006, and Normal**



**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).