

# Monthly Flash Estimates of Electric Power Data

Data for:  
December 2007

## Section 1. Commentary

While average temperatures prevailed across the majority of the Nation in December 2007, warmer-than-average temperatures in the more heavily populated eastern United States led to a decrease in total heating degree-days for the contiguous U.S. of 3.3 percent below the average for the month of December. However, heating degree days were still 14.5 percent above the level from December 2006, leading to an increase in electricity demand from a year ago.

Retail sales of electricity for the month of December 2007 increased 2.1 percent compared to December 2006. The average U.S. retail price of electricity for December 2007 showed a 4.2-percent increase from December 2006 and a 0.8-percent decrease from November 2007. For the 12-month period ending December 2007, the U.S. average retail price of electricity increased by 2.7 percent over the previous 12-month period ending December 2006.

In December 2007, total electric power generation increased 2.9 percent when compared to December 2006. Much needed precipitation fell across the Nation as the contiguous United States recorded its eighteenth wettest December over the 1895 to 2007 time period. Despite the increased precipitation, States in the Southeast and parts of the West are still experiencing severe drought conditions. Accordingly, conventional hydroelectric generation was 17.4 percent lower than for December 2006. For the 12-month period ending December 2007, conventional hydroelectric generation decreased by 14.4 percent over the previous 12-month period ending December 2006.

December 2007 natural gas generation was up 18.6 percent, while petroleum liquids generation was down 4.4 percent when compared to December 2006. For the 12-month period ending December 2007, natural gas generation increased by 9.8 percent and petroleum liquids generation increased by 12.4 percent over the previous 12-month period ending December 2006. Likewise, natural gas consumption increased by 9.3 percent and petroleum liquids consumption increased 13.6 percent over the previous 12-month period ending December 2006.

Total coal stocks in the electric power sector were down 4.7 percent from the previous month. The November 2007-to-December 2007 change in coal stocks consisted of a 5.5-percent decrease for bituminous and 4.6-percent decrease for subbituminous coal. Petroleum liquids stocks were 10.5 percent lower than December 2006 as a result of increased generation attributed to petroleum liquids in the first half of 2007.

References for weather data:

<http://www.ncdc.noaa.gov/oa/climate/research/2007/dec/national.html>

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

Data for:  
December 2007

### Table 2.1 Key Generation Indicators

	Total Generation	Nuclear Generation	Hydroelectric Generation
<b>Total Change From:</b>			
November 2007	10.3%	10.8%	13.5%
December 2006	2.9%	2.1%	-17.4%
<b>Year to Date</b>	2.3%	2.4%	-14.4%
<b>Latest 12 Month Period*</b>	2.3%	2.4%	-14.4%

### Table 2.2 Key Consumption and Stocks Indicators

	Natural Gas Consumption	Coal Consumption	Coal Stocks
<b>Total Change From:</b>			
November 2007	10.1%	10.6%	-4.7%
December 2006	16.9%	1.5%	7.2%
<b>Year to Date</b>	9.3%	1.7%	n/a
<b>Latest 12 Month Period*</b>	9.3%	1.7%	n/a

\* Change in total consumption or generation for the latest 12 month period (January 2007 to December 2007) compared to the prior 12 month period (January 2006 to December 2006).

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

Data for:  
December 2007

### Net Generation (Total, All Sectors)

Table 3.1 Total Net Generation (All Sectors)

Net Generation (thousand megawatthours)	Dec-07	Dec-06	% Change	Nov-07	% Change
Coal	174,501	173,547	0.5%	159,525	9.4%
Petroleum Liquids	2,979	3,117	-4.4%	1,969	51.3%
Natural Gas	66,186	55,829	18.6%	60,159	10.0%
Nuclear	71,983	70,490	2.1%	64,969	10.8%
Hydroelectric Conventional	17,848	21,596	-17.4%	15,727	13.5%
All Other	12,424	11,705	6.1%	11,212	10.8%
Total (All Energy Sources)	345,921	336,283	2.9%	313,561	10.3%

### 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	Dec-07	Dec-06	% Change	Nov-07	% Change
Coal (Thousand Short Tons)	91,733	90,415	1.5%	82,928	10.6%
Petroleum Liquids (Thousand Barrels)	5,353	5,422	-1.3%	3,519	52.1%
Natural Gas (Million Cubic Feet)	551,477	471,566	16.9%	500,908	10.1%

### Fossil Fuel Stocks (Electric Power Sector)

Table 3.3 Total Fossil Fuel Stocks (Electric Power Sector)

Fossil Fuel Stocks	Dec-07	Dec-06	% Change	Nov-07	% Change
Coal (Thousand Short Tons)	151,127	140,964	7.2%	158,643	-4.7%
Petroleum Liquids (Thousand Barrels)	43,143	48,216	-10.5%	43,692	-1.3%

#### 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 2007

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

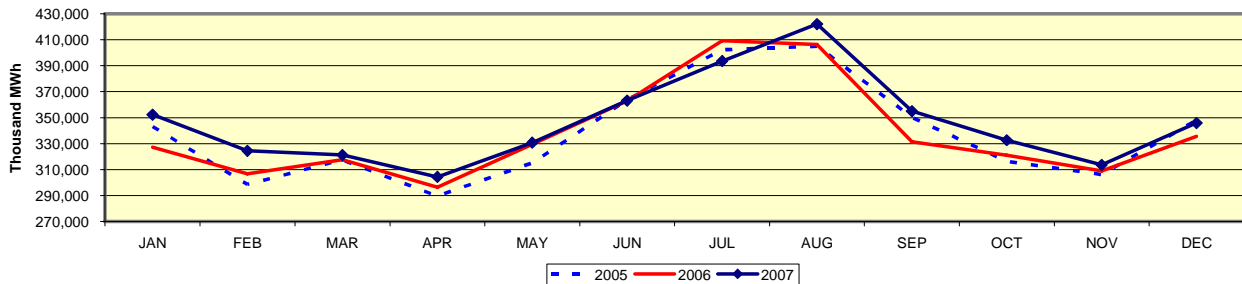
### Year-to-Date Comparison

	Starting Month	Ending Month	Coal	Petroleum Liquids	Natural Gas	Nuclear	Hydroelectric Conventional	All Other	Total
<b>Current Period</b>	January 2007	December 2007	2,020,382	50,171	892,702	806,487	247,663	141,299	4,158,704
<b>Prior Period</b>	January 2006	December 2006	1,990,926	44,655	813,044	787,219	289,246	139,612	4,064,702
<b>Percent Difference</b>			1.5%	12.4%	9.8%	2.4%	-14.4%	1.2%	2.3%

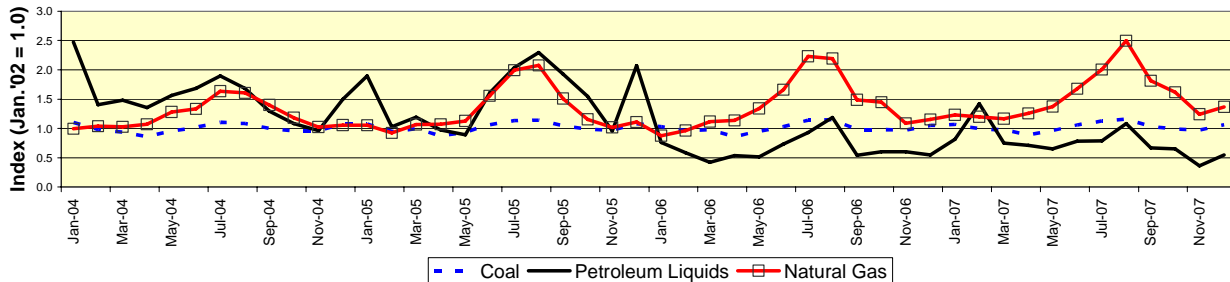
### Comparison to Prior Twelve-Month Period

	Starting Month	Ending Month	Coal	Petroleum Liquids	Natural Gas	Nuclear	Hydroelectric Conventional	All Other	Total
<b>Current Period</b>	January 2007	December 2007	2,020,382	50,171	892,702	806,487	247,663	141,299	4,158,704
<b>Prior Period</b>	January 2006	December 2006	1,990,926	44,655	813,044	787,219	289,246	139,612	4,064,702
<b>Percent Difference</b>			1.5%	12.4%	9.8%	2.4%	-14.4%	1.2%	2.3%

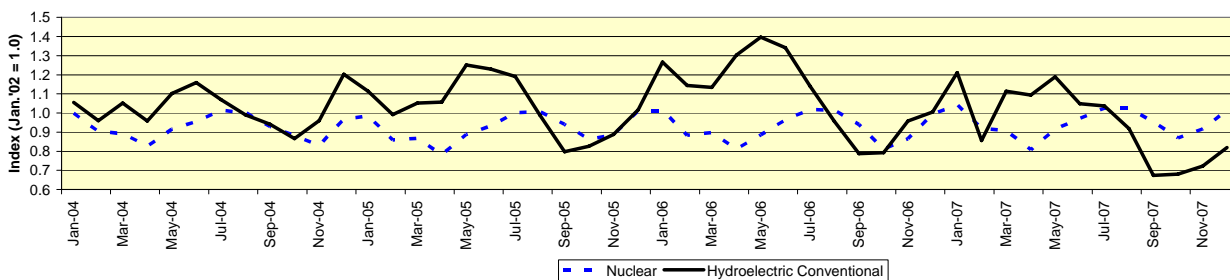
**Figure 4.1 Trends in Total Net Generation (All Sectors): 2005, 2006, and 2007**



**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 2007

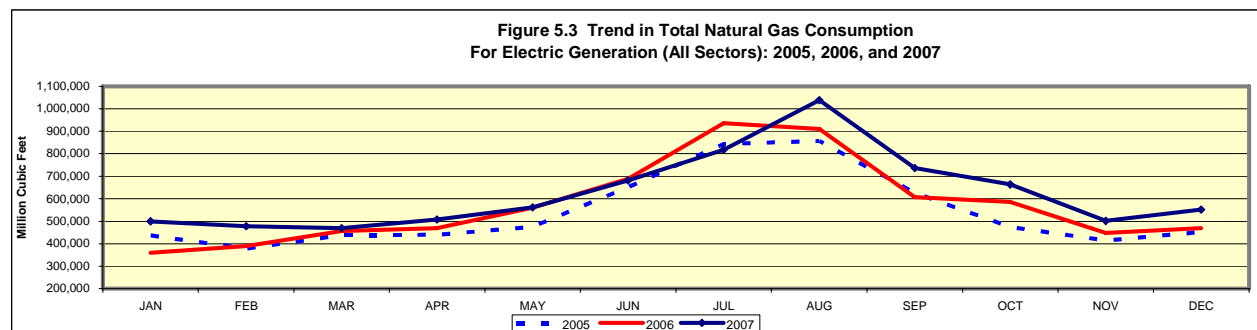
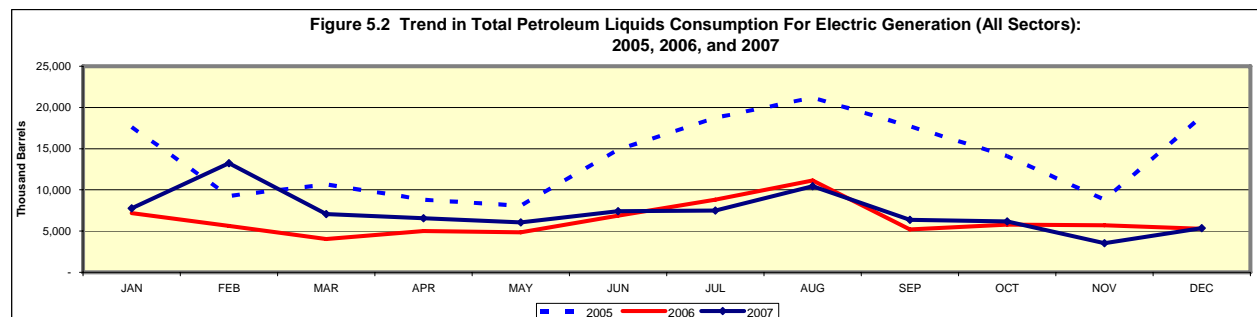
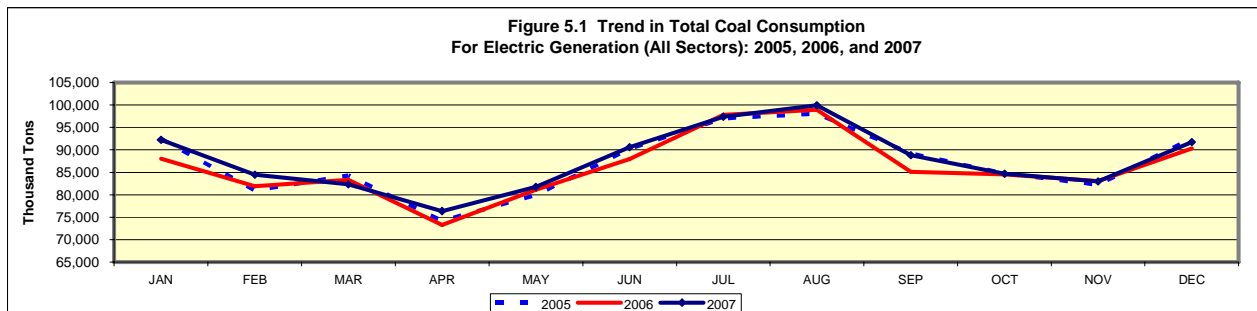
**Table 5.1 Trends in Fossil Fuel Consumption For Electric Generation, Total (All Sectors)**

### 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 2007	December 2007	1,053,274	87,447	7,505,975
<b>Prior Period</b>	January 2006	December 2006	1,035,346	77,003	6,869,624
<b>Percent Difference</b>			1.7%	13.6%	9.3%

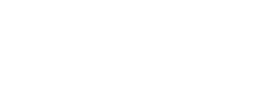
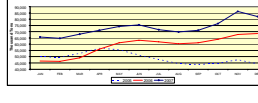
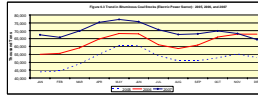
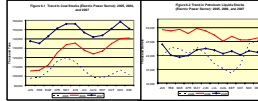
### Comparison to Prior 12 Month Period

	Starting Month	Ending Month	Coal (Thousand Tons)	Petroleum Liquids (Thousand Barrels)	Natural Gas (Million Cubic Feet)
<b>Current Period</b>	January 2007	December 2007	1,053,274	87,447	7,505,975
<b>Prior Period</b>	January 2006	December 2006	1,035,346	77,003	6,869,624
<b>Percent Difference</b>			1.7%	13.6%	9.3%



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

Year	Coal	Oil	Gas	Other	Total
2000	1,000,000	1,000,000	1,000,000	1,000,000	4,000,000
2001	1,000,000	1,000,000	1,000,000	1,000,000	4,000,000
2002	1,000,000	1,000,000	1,000,000	1,000,000	4,000,000
2003	1,000,000	1,000,000	1,000,000	1,000,000	4,000,000
2004	1,000,000	1,000,000	1,000,000	1,000,000	4,000,000
2005	1,000,000	1,000,000	1,000,000	1,000,000	4,000,000
2006	1,000,000	1,000,000	1,000,000	1,000,000	4,000,000
2007	1,000,000	1,000,000	1,000,000	1,000,000	4,000,000
2008	1,000,000	1,000,000	1,000,000	1,000,000	4,000,000
2009	1,000,000	1,000,000	1,000,000	1,000,000	4,000,000
2010	1,000,000	1,000,000	1,000,000	1,000,000	4,000,000
2011	1,000,000	1,000,000	1,000,000	1,000,000	4,000,000
2012	1,000,000	1,000,000	1,000,000	1,000,000	4,000,000
2013	1,000,000	1,000,000	1,000,000	1,000,000	4,000,000
2014	1,000,000	1,000,000	1,000,000	1,000,000	4,000,000
2015	1,000,000	1,000,000	1,000,000	1,000,000	4,000,000
2016	1,000,000	1,000,000	1,000,000	1,000,000	4,000,000
2017	1,000,000	1,000,000	1,000,000	1,000,000	4,000,000
2018	1,000,000	1,000,000	1,000,000	1,000,000	4,000,000
2019	1,000,000	1,000,000	1,000,000	1,000,000	4,000,000
2020	1,000,000	1,000,000	1,000,000	1,000,000	4,000,000
2021	1,000,000	1,000,000	1,000,000	1,000,000	4,000,000
2022	1,000,000	1,000,000	1,000,000	1,000,000	4,000,000
2023	1,000,000	1,000,000	1,000,000	1,000,000	4,000,000
2024	1,000,000	1,000,000	1,000,000	1,000,000	4,000,000
2025	1,000,000	1,000,000	1,000,000	1,000,000	4,000,000
2026	1,000,000	1,000,000	1,000,000	1,000,000	4,000,000
2027	1,000,000	1,000,000	1,000,000	1,000,000	4,000,000
2028	1,000,000	1,000,000	1,000,000	1,000,000	4,000,000
2029	1,000,000	1,000,000	1,000,000	1,000,000	4,000,000
2030	1,000,000	1,000,000	1,000,000	1,000,000	4,000,000



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

Data for:  
December 2007

### Retail Sales

Table 7.1 Retail Sales (Million kWh)

Ultimate Customer	Dec-07	Dec-06	% Change	Nov-07	% Change
Residential	117,345	114,882	2.1%	95,892	22.4%
Commercial	106,318	104,673	1.6%	104,651	1.6%
Industrial	82,021	79,937	2.6%	83,188	-1.4%
Transportation	619	627	-1.3%	637	-2.8%
All Sectors	306,303	300,119	2.1%	284,368	7.7%

### Average Retail Price

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

Ultimate Customer	Dec-07	Dec-06	% Change	Nov-07	% Change
Residential	10.31	9.84	4.8%	10.69	-3.6%
Commercial	9.41	9.08	3.6%	9.60	-2.0%
Industrial	6.25	6.00	4.2%	6.22	0.5%
Transportation	10.06	9.56	5.2%	9.46	6.3%
All Sectors	8.91	8.55	4.2%	8.98	-0.8%

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

Census Division	Residential			All Sectors		
	Dec-07	Dec-06	% Change	Dec-07	Dec-06	% Change
New England	15.85	16.27	-2.6%	14.58	14.66	-0.5%
Middle Atlantic	13.49	12.62	6.9%	12.15	11.37	6.9%
East North Central	9.39	8.56	9.7%	7.85	7.26	8.1%
West North Central	7.60	7.29	4.3%	6.38	6.11	4.4%
South Atlantic	9.78	9.34	4.7%	8.55	8.25	3.6%
East South Central	8.30	7.71	7.7%	6.91	6.50	6.3%
West South Central	10.61	10.42	1.8%	9.03	8.74	3.3%
Mountain	8.79	8.33	5.5%	7.36	7.08	4.0%
Pacific Contiguous	11.45	11.35	0.9%	10.02	10.18	-1.6%
Pacific Noncontiguous	22.62	18.80	20.3%	20.78	16.92	22.8%
U.S. Total	10.31	9.84	4.8%	8.91	8.55	4.2%

# Section 8. Retail Sales Trends

Data for:  
December 2007

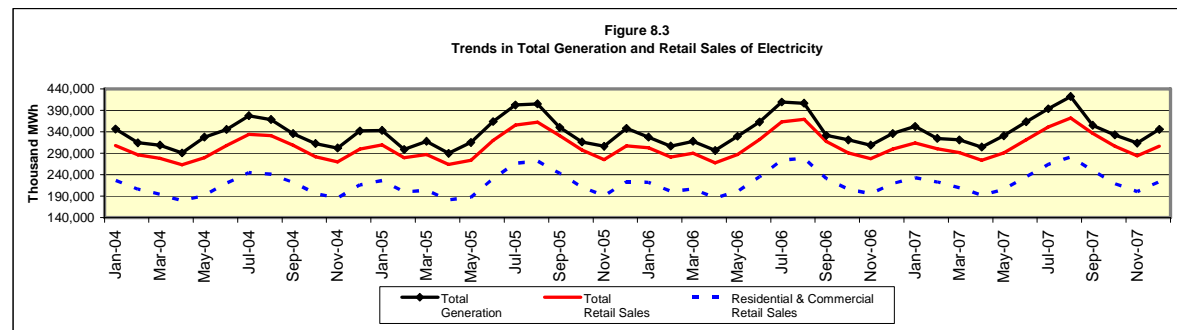
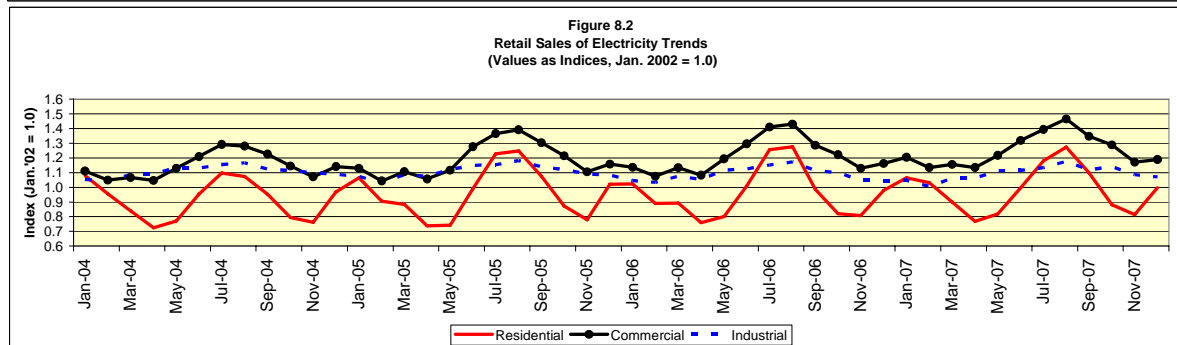
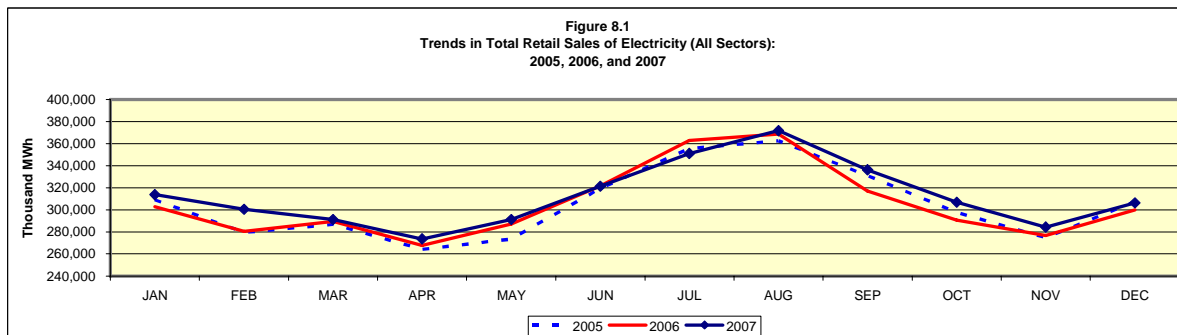
**Table 8.1 Trends in Total Retail Sales of Electricity (All Sectors)**  
Millions of Kilowatthours

### Year-to-Date Comparison

	Starting Month	Ending Month	Residential	Commercial	Industrial	Transportation	Total (All Sectors)
<b>Current Period</b>	January 2007	December 2007	1,391,889	1,342,666	1,005,830	7,738	3,748,122
<b>Prior Period</b>	January 2006	December 2006	1,351,520	1,299,744	1,011,298	7,358	3,669,919
<b>Percent Difference</b>			3.0%	3.3%	-0.5%	5.2%	2.1%

### Comparison to Prior Twelve-Month Period

	Starting Month	Ending Month	Residential	Commercial	Industrial	Transportation	Total (All Sectors)
<b>Current Period</b>	January 2007	December 2007	1,391,889	1,342,666	1,005,830	7,738	3,748,122
<b>Prior Period</b>	January 2006	December 2006	1,351,520	1,299,744	1,011,298	7,358	3,669,919
<b>Percent Difference</b>			3.0%	3.3%	-0.5%	5.2%	2.1%





# Section 9. Average Retail Price Trends

Data for:  
December 2007

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

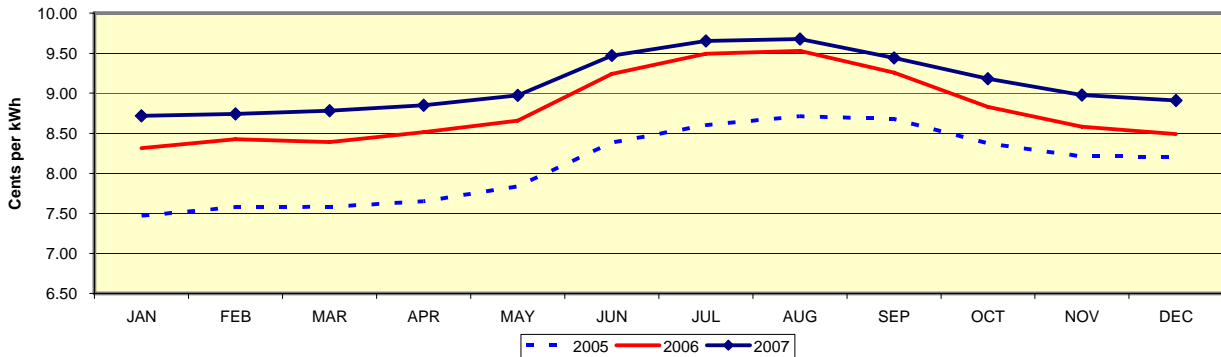
### Year-to-Date Comparison

	Starting Month	Ending Month	Residential	Commercial	Industrial	Transportation	Total (All Sectors)
<b>Current Period</b>	January 2007	December 2007	10.64	9.67	6.36	10.40	9.14
<b>Prior Period</b>	January 2006	December 2006	10.40	9.46	6.16	9.54	8.90
<b>Percent Difference</b>			2.3%	2.2%	3.2%	9.0%	2.7%

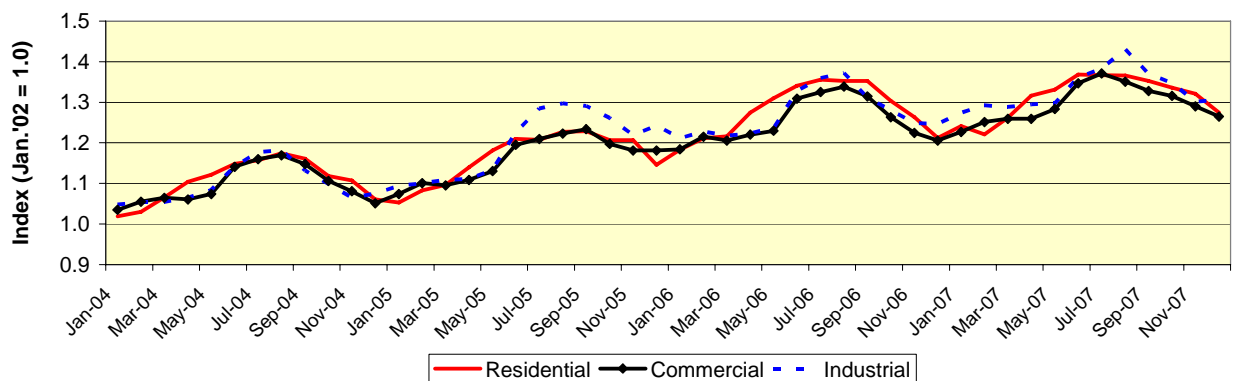
### Comparison to Prior 12 Month Period

	Starting Month	Ending Month	Residential	Commercial	Industrial	Transportation	Total (All Sectors)
<b>Current Period</b>	January 2007	December 2007	10.64	9.67	6.36	10.40	9.14
<b>Prior Period</b>	January 2006	December 2006	10.40	9.46	6.16	9.54	8.90
<b>Percent Difference</b>			2.3%	2.2%	3.2%	9.0%	2.7%

**Figure 9.1 Trends in Average Retail Price of Electricity (All Sectors):  
2005, 2006, and 2007**



**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 2007

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	December 2007	790	817	-27	-3.3%	12	8	4	50.0%
Prior Period	December 2006	690	817	-127	-15.5%	11	8	3	37.5%
Percent Difference		14.5%				9.1%			

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 2007	December 2007	4,245	1,396	Current Period	January 2007	December 2007	4,245	1,396
Prior Period	January 2006	December 2006	3,996	1,368	Prior Period	January 2006	December 2006	3,996	1,368
Percent Difference			6.2%	2.0%	Percent Difference			6.2%	2.0%

Figure 10.1 Deviation From Normal: Heating Degree Days, 2007

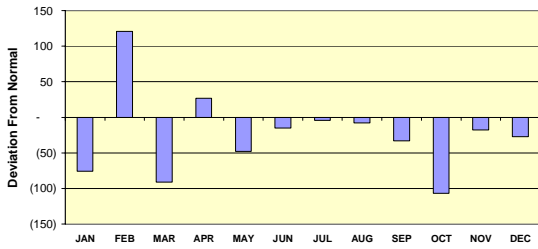


Figure 10.2 Deviation From Normal Cooling Degree Days, 2007

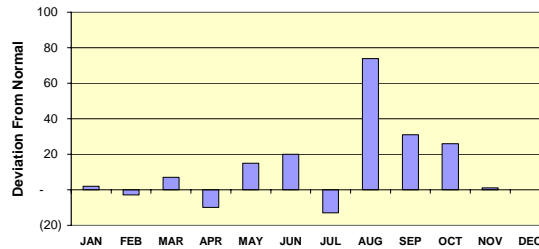


Figure 10.3 Trend in Heating Degree Days: 2006, 2007, and Normal

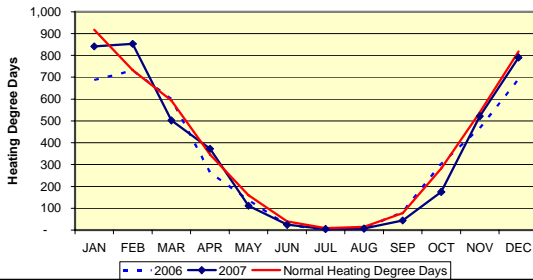


Figure 10.4 Trend in Cooling Degree Days: 2006, 2007, and Normal

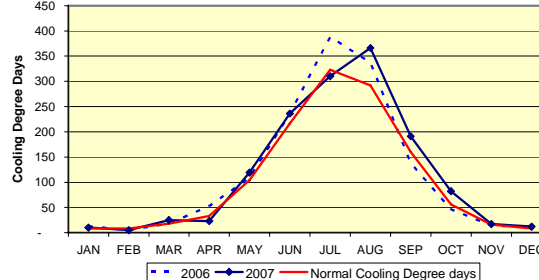


Figure 10.5 Trend in Cumulative Heating Degree Days: 2006, 2007, and Normal

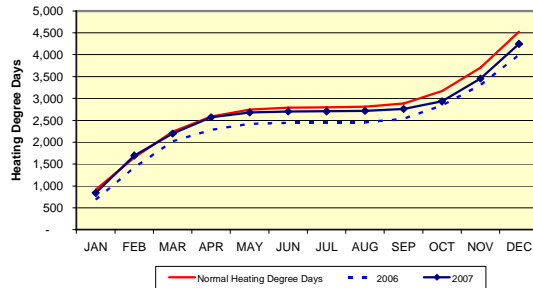
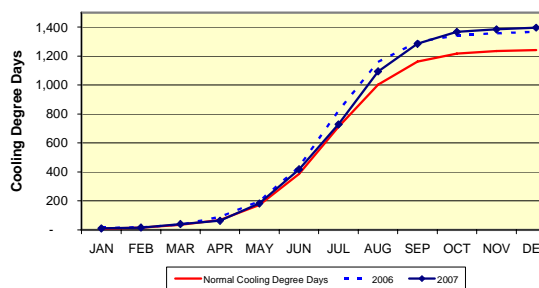


Figure 10.6 Trend in Cumulative Cooling Degree Days: 2006, 2007, and Normal



**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).