

# Monthly Flash Estimates of

# Electric Power Data

Data for:  
December 2005

## Section 1. Commentary

The warmer than normal weather pattern in place since May 2005 was broken by a colder than normal December. Heating degree days for December 2005 were 3.3 percent above normal and 7.1 percent higher than in December 2004. Year-to-date heating degree days were essentially unchanged, 0.1 percent higher in comparison to 2004, while cooling degree days were up 14.9 percent, due to the warmer than normal trend from May through November 2005.

In line with the change in the weather pattern, total generation in December increased by 13.4 percent from November 2005, and 1.1 percent from December of 2004. Similarly, retail sales of electricity were up 12.5 percent from November 2005, and 2.6 percent from December of a year ago. Year-to-date, electricity generation increased by 1.7 percent and sales increased by 2.9 percent. The average retail price of electricity, declined by 0.4 percent from November 2005, but still was up 10.2 percent compared to a year ago, largely as the result of increased fossil fuel prices.

Nuclear generation in December 2005 was the highest monthly output for the year and the highest since July 2004. All commercial reactors were in service for at least part of the month. For the year, nuclear generation was down 1.0 percent compared to 2004 due to higher levels of maintenance and refueling downtime.

In response to the increased demand due to colder weather, coal generation increased 12.0 percent between November and December 2005, and 0.7 percent from December 2004. The increased coal-fired generation resulted in a 5.1 percent reduction in coal stocks in the electric power sector from November 2005. December 2005 coal stocks remained below 2004 levels, finishing the year 5.3 percent below December 2004 coal stocks. Bituminous and subbituminous coal stocks in the electric power sector both decreased from December 2004. Bituminous stocks dropped 4.2 percent (from 55.0 to 52.7 million tons) and subbituminous stocks dropped 6.7 percent (from 47.6 to 44.4 million tons). Rail transportation maintenance and weather-related problems continued to constrain subbituminous shipments from the Powder River Basin.

Natural gas-fired generation was up 2.8 percent from November, and liquid petroleum-fired generation was up 109.8 percent, in response to the increased demand due to colder weather. Stocks of liquid petroleum increased 2.2 percent from November 2005, and are now above the 2004 levels. Hydroelectric generation increased significantly from November, up 15.4 percent, but was down 17.1 percent from December 2004. Although December was a wet month in the key Pacific Northwest hydroelectric region, reservoirs throughout the western United States are below normal due to water demand growth and years of drought conditions.

## Table of Contents

1. Commentary	Page 1
2. Key Indicators of Generation, Consumption & Stocks	Page 2
3. Month-to-Month Comparisons: Generation, Consumption and Stocks (Total)	Page 3
4. Net Generation Trends	Page 4
5. Fossil Fuel Consumption and Stock Trends	Page 5
6. Month-to-Month Comparisons: Electric Power Retail Sales and Average Prices	Page 6
7. Retail Sales Trends	Page 7
8. Average Retail Price Trends	Page 8
9. Heating and Cooling Degree Days	Page 9
10. Documentation	Page 10

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

Data for:  
December 2005

### Table 2.1 Key Generation Indicators

	Total Generation	Nuclear Generation	Hydroelectric Generation
<b>Total Change From:</b>			
November 2005	13.4%	14.0%	15.4%
December 2004	1.1%	4.5%	-17.1%
<b>Year to Date</b>	<b>1.7%</b>	<b>-1.0%</b>	<b>-1.3%</b>
<b>Latest 12 Month Period*</b>	<b>1.7%</b>	<b>-1.0%</b>	<b>-1.3%</b>

### Table 2.2 Key Consumption and Stocks Indicators

	Natural Gas Consumption	Coal Consumption	Coal Stocks
<b>Total Change From:</b>			
November 2005	8.3%	12.4%	-5.1%
December 2004	0.4%	0.7%	-5.3%
<b>Year to Date</b>	<b>5.8%</b>	<b>2.5%</b>	<b>n/a</b>
<b>Latest 12 Month Period*</b>	<b>5.8%</b>	<b>2.5%</b>	<b>n/a</b>

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

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

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

Net Generation (thousand megawatthours)	Dec-05	Dec-04	% Change	Nov-05	% Change
Coal	178,082	176,763	0.7%	158,947	12.0%
Petroleum Liquids	11,031	8,138	35.5%	5,259	109.8%
Natural Gas	52,597	51,154	2.8%	48,711	8.0%
Nuclear	71,735	68,617	4.5%	62,913	14.0%
Hydroelectric Conventional	21,740	26,211	-17.1%	18,846	15.4%
All Other	10,471	11,066	-5.4%	10,224	2.4%
Total (All Energy Sources)	345,657	341,948	1.1%	304,899	13.4%

**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-05	Dec-04	% Change	Nov-05	% Change
Coal (Thousand Short Tons)	92,993	92,328	0.7%	82,743	12.4%
Petroleum Liquids (Thousand Barrels)	18,760	13,725	36.7%	9,120	105.7%
Natural Gas (Million Cubic Feet)	444,400	442,644	0.4%	410,180	8.3%

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

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

Fossil Fuel Stocks	Dec-05	Dec-04	% Change	Nov-05	% Change
Coal (Thousand Short Tons)	101,010	106,669	-5.3%	106,481	-5.1%
Petroleum Liquids (Thousand Barrels)	48,144	46,750	3.0%	47,125	2.2%

**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

Data for:  
December 2005

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

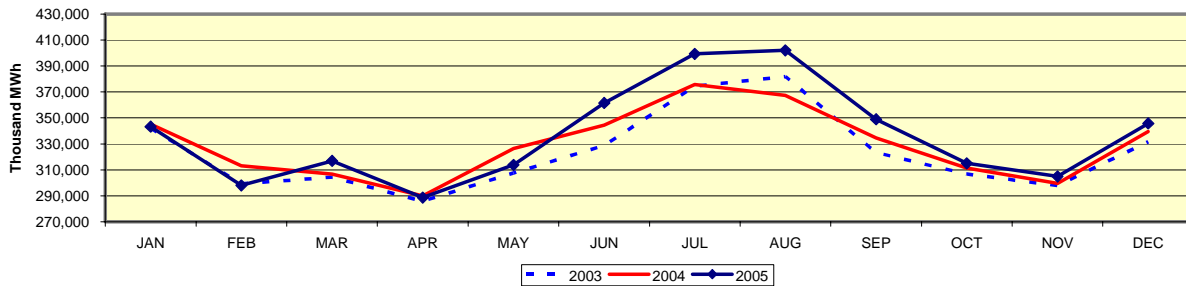
### Year-to-Date Comparison

	Starting Month	Ending Month	Coal	Petroleum Liquids	Natural Gas	Nuclear	Hydroelectric Conventional	All Other	Total
<b>Current Period</b>	January 2005	December 2005	2,014,191	100,063	751,302	780,465	265,053	126,318	4,037,392
<b>Prior Period</b>	January 2004	December 2004	1,978,620	99,915	708,979	788,528	268,417	126,096	3,970,555
<b>Percent Change</b>			1.8%	0.1%	6.0%	-1.0%	-1.3%	0.2%	1.7%

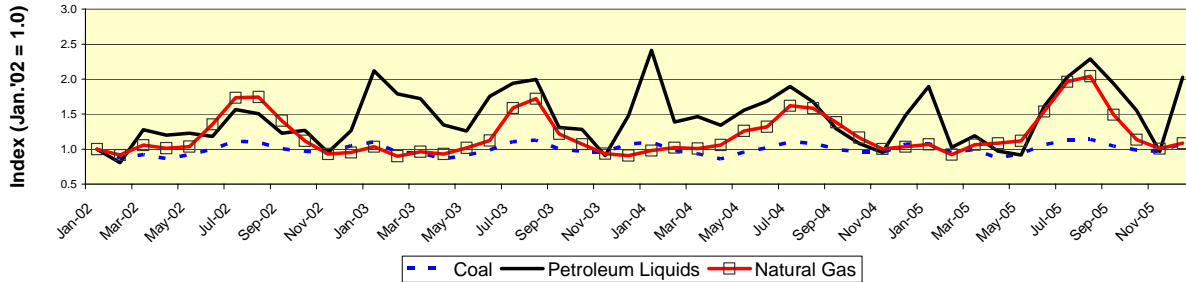
### Comparison to Prior 12 Month Period

	Starting Month	Ending Month	Coal	Petroleum Liquids	Natural Gas	Nuclear	Hydroelectric Conventional	All Other	Total
<b>Current Period</b>	January 2005	December 2005	2,014,191	100,063	751,302	780,465	265,053	126,318	4,037,392
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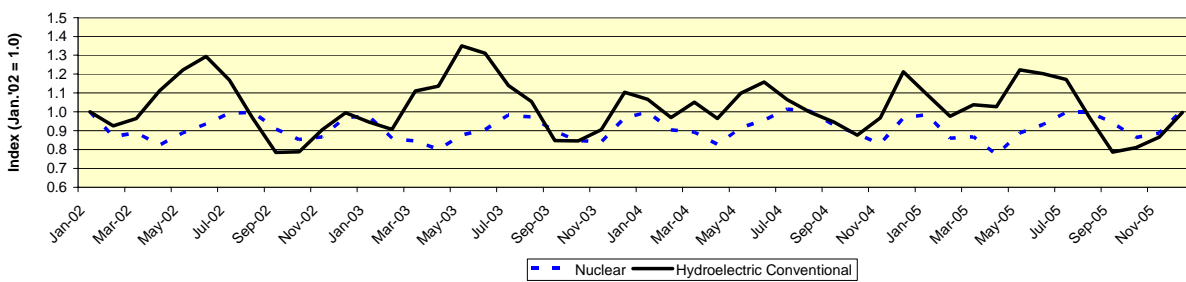
**Figure 4.1 Trends in Total Net Generation (All Sectors): 2003, 2004, and 2005**



**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 and Stock Trends

Data for:  
December 2005

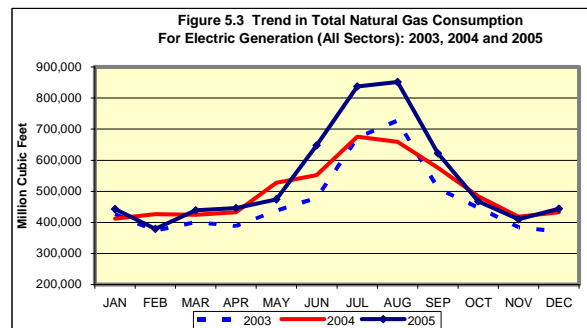
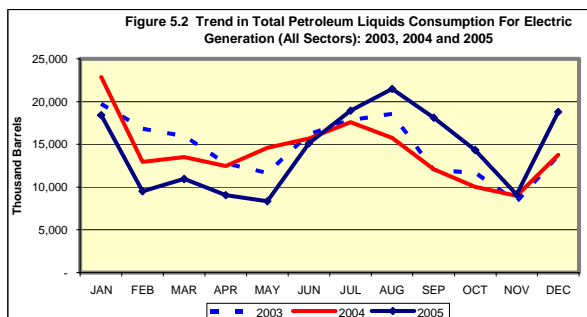
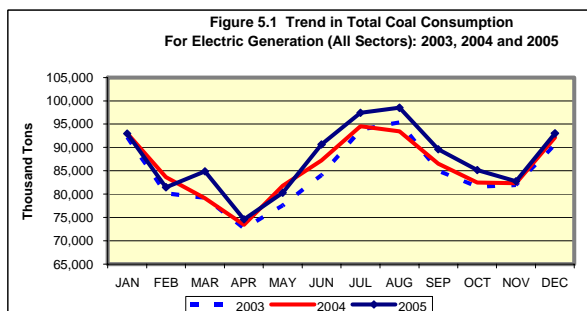
## Table 5.1 Trends in Fossil Fuel Consumption For Electric Generation, Total (All Sectors)

### Year-to-Date Comparison

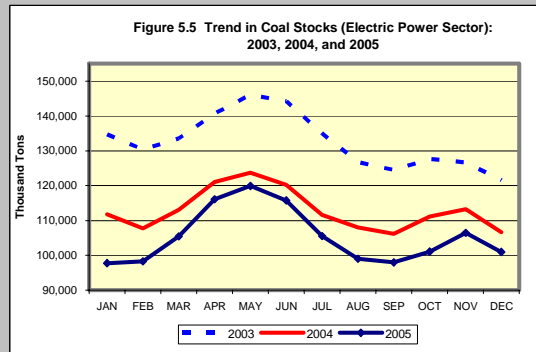
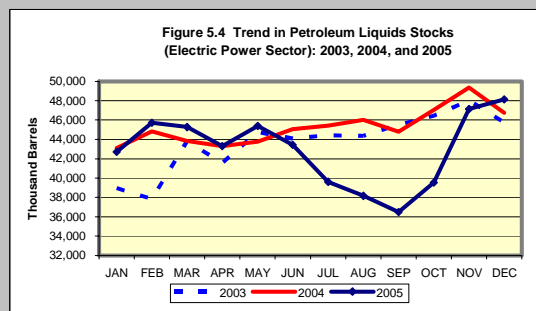
	Starting Month	Ending Month	Coal (Thousand Tons)	Petroleum Liquids (Thousand Barrels)	Natural Gas (Million Cubic Feet)
<b>Current Period</b>	January 2005	December 2005	1,051,184	172,070	6,462,948
<b>Prior Period</b>	January 2004	December 2004	1,026,011	169,788	6,111,307
<b>Percent Change</b>			2.5%	1.3%	5.8%

### 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 2005	December 2005	1,051,184	172,070	6,462,948
<b>Prior Period</b>	January 2004	December 2004	1,026,011	169,788	6,111,307
<b>Percent Change</b>			2.5%	1.3%	5.8%



## Stocks Trends



Note: the Stocks data table is on page 3 of the report.

## Section 6. Month-to-Month Comparisons: Electric Power Retail Sales and Average Prices

Data for:  
December 2005

### Retail Sales

**Table 6.1 Retail Sales (Million kWh)**

Ultimate Customer	Dec-05	Dec-04	% Change	Nov-05	% Change
Residential	120,573	114,338	5.5%	92,012	31.0%
Commercial	104,167	101,954	2.2%	99,047	5.2%
Industrial	83,193	83,780	-0.7%	82,698	0.6%
Transportation	737	638	15.4%	654	12.7%
All Sectors	308,669	300,711	2.6%	274,412	12.5%

### Average Retail Price

**Table 6.2 Average Retail Price (Cents/kWh) -- U.S. Total**

Ultimate Customer	Dec-05	Dec-04	% Change	Nov-05	% Change
Residential	9.27	8.62	7.5%	9.74	-4.8%
Commercial	8.72	7.81	11.7%	8.74	-0.2%
Industrial	5.75	5.17	11.2%	5.72	0.5%
Transportation	7.13	6.99	2.0%	7.02	1.6%
All Sectors	8.13	7.38	10.2%	8.16	-0.4%

**Table 6.3 Average Retail Price (Cents/kWh) by Census Division**

Census Division	Residential			All Sectors		
	Dec-05	Dec-04	% Change	Dec-05	Dec-04	% Change
New England	13.98	11.44	22.2%	12.60	10.24	23.0%
Mid Atlantic	12.39	11.35	9.2%	10.89	9.94	9.6%
East North Central	7.90	7.96	-0.8%	6.71	6.45	4.0%
West North Central	7.16	7.28	-1.6%	6.03	5.98	0.8%
South Atlantic	8.62	8.01	7.6%	7.66	6.83	12.2%
East South Central	7.56	6.84	10.5%	6.37	5.67	12.3%
West South Central	10.43	8.70	19.9%	9.06	7.25	25.0%
Mountain	8.35	7.92	5.4%	7.32	6.65	10.1%
Pacific Contiguous	9.99	9.93	0.6%	9.09	9.29	-2.2%
Pacific Noncontiguous	18.68	15.23	22.7%	16.99	13.60	24.9%
U.S. Total	9.27	8.62	7.5%	8.13	7.38	10.2%

# Section 7. Retail Sales Trends

Data for:  
December 2005

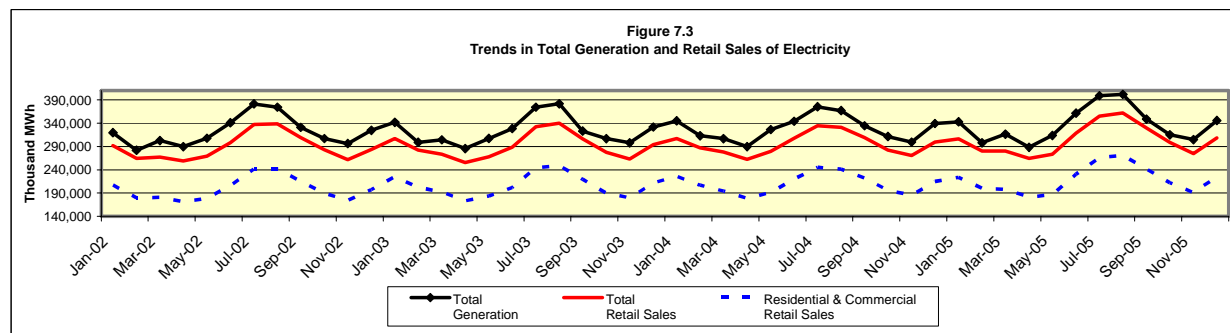
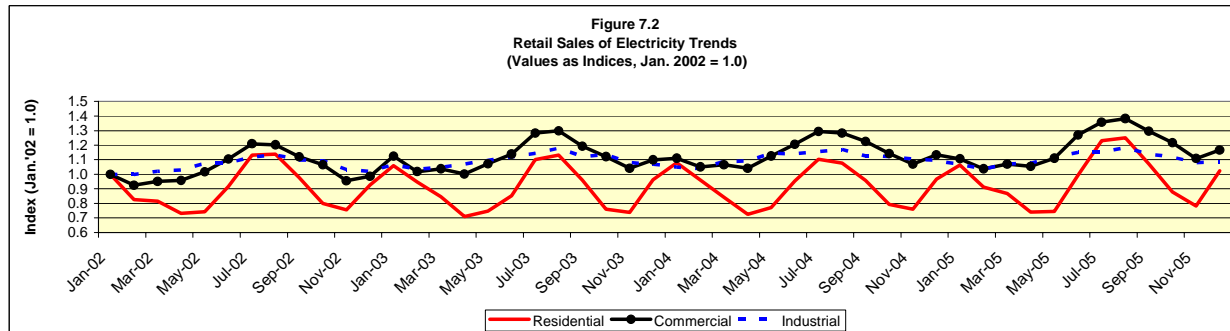
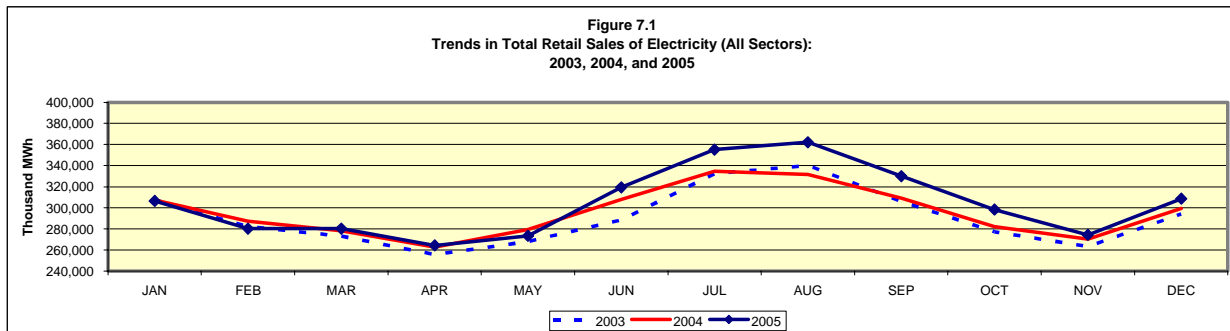
**Table 7.1 Trends in Total Retail Sales of Electricity (All Sectors)**  
Millions of Kilowatthours

### Year-to-Date Comparison

	Starting Month	Ending Month	Residential	Commercial	Industrial	Transportation	Total (All Sectors)
<b>Current Period</b>	January 2005	December 2005	1,361,081	1,266,602	1,016,851	8,261	3,652,794
<b>Prior Period</b>	January 2004	December 2004	1,293,587	1,229,045	1,018,522	7,064	3,548,218
<b>Percent Change</b>			5.2%	3.1%	-0.2%	16.9%	2.9%

### Comparison to Prior 12 Month Period

	Starting Month	Ending Month	Residential	Commercial	Industrial	Transportation	Total (All Sectors)
<b>Current Period</b>	January 2005	December 2005	1,361,081	1,266,602	1,016,851	8,261	3,652,794
<b>Prior Period</b>	January 2004	December 2004	1,293,587	1,229,045	1,018,522	7,064	3,548,218
<b>Percent Change</b>			5.2%	3.1%	-0.2%	16.9%	2.9%



# Section 8. Average Retail Price Trends

Data for:  
December 2005

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

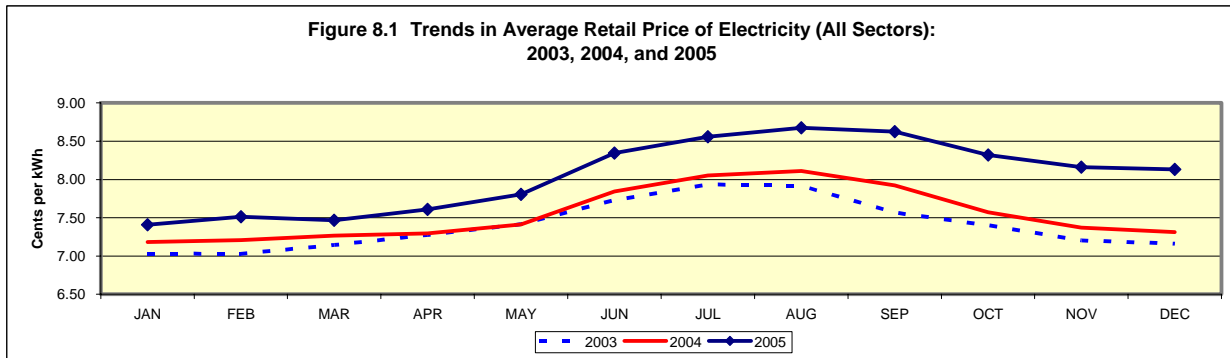
**Year-to-Date Comparison**

	Starting Month	Ending Month	Residential	Commercial	Industrial	Transportation	Total (All Sectors)
<b>Current Period</b>	January 2005	December 2005	9.42	8.68	5.57	7.44	8.09
<b>Prior Period</b>	January 2004	December 2004	8.97	8.16	5.27	7.13	7.62
<b>Percent Change</b>			5.0%	6.4%	5.7%	4.3%	6.2%

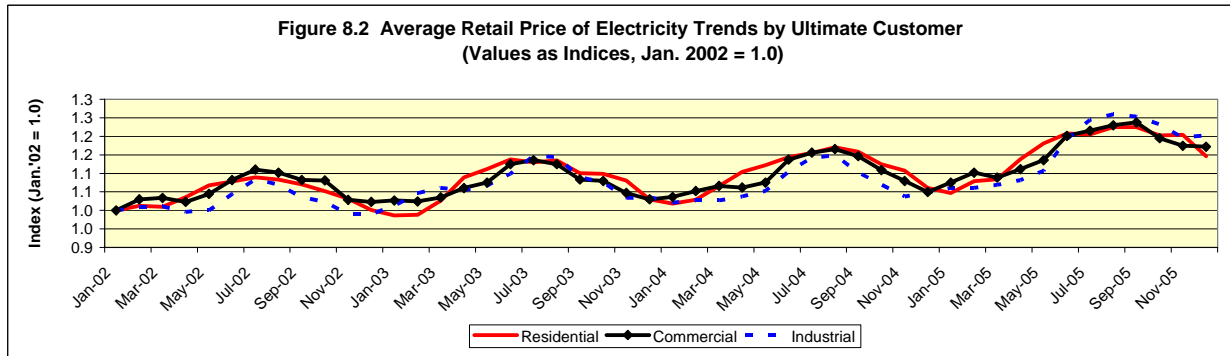
**Comparison to Prior 12 Month Period**

	Starting Month	Ending Month	Residential	Commercial	Industrial	Transportation	Total (All Sectors)
<b>Current Period</b>	January 2005	December 2005	9.42	8.68	5.57	7.44	8.09
<b>Prior Period</b>	January 2004	December 2004	8.97	8.16	5.27	7.13	7.62
<b>Percent Change</b>			5.0%	6.4%	5.7%	4.3%	6.2%

**Figure 8.1 Trends in Average Retail Price of Electricity (All Sectors):  
2003, 2004, and 2005**



**Figure 8.2 Average Retail Price of Electricity Trends by Ultimate Customer  
(Values as Indices, Jan. 2002 = 1.0)**





# Section 9. Heating and Cooling Degree Days

Data for:  
December 2005

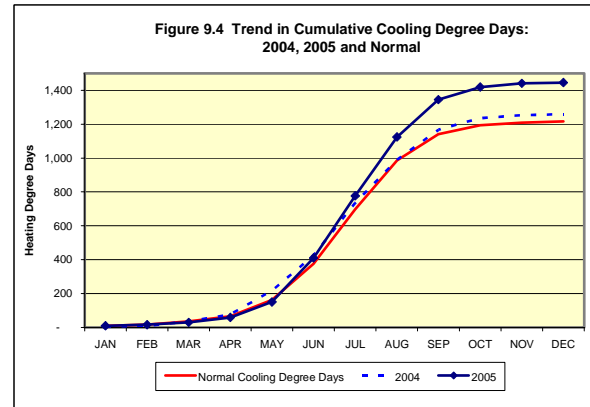
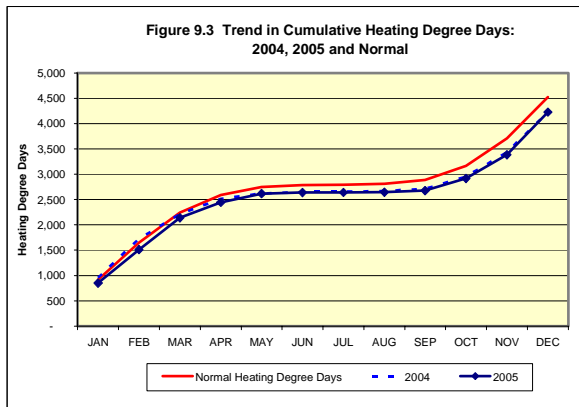
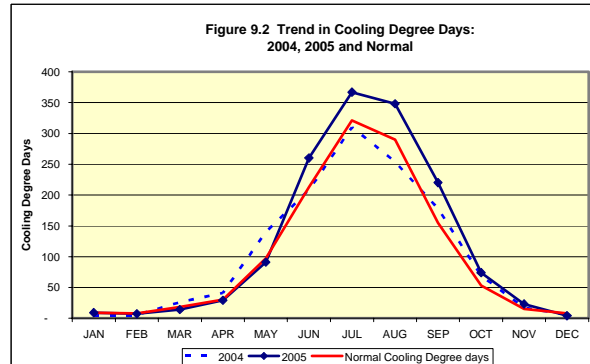
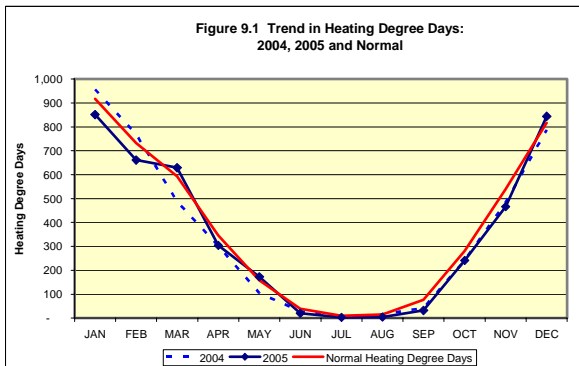
## Table 9.1 Degree Days

	Month	Heating Degree Days			Cooling Degree Days		
		Heating Degree Days	Normal Heating Degree Days	Deviation From the Normal	Cooling Degree Days	Normal Cooling Degree Days	Deviation From the Normal
<b>Current Period</b>	December 2005	844	817	27	4	8	-4
<b>Previous Period</b>	December 2004	788	817	-29	6	8	-2
<b>Percent Change</b>		7.1%			-33.3%		

## Table 9.2 Trends in Heating and Cooling Degree Days

Year-to-Date Comparison				
	Starting Month	Ending Month	Heating Degree Days	Cooling Degree Days
<b>Current Period</b>	January 2005	December 2005	4,228	1,446
<b>Prior Period</b>	January 2004	December 2004	4,224	1,259
<b>Percent Change</b>			0.1%	14.9%

Comparison to Prior 12 Month Period				
	Starting Month	Ending Month	Heating Degree Days	Cooling Degree Days
<b>Current Period</b>	January 2005	December 2005	4,228	1,446
<b>Prior Period</b>	January 2004	December 2004	4,224	1,259
<b>Percent Change</b>			0.1%	14.9%



**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).