

# Monthly Flash Estimates of

# Electric Power Data

Data for:  
August 2005

## Section 1. Commentary

The summer of 2005 continued to be unusually hot in August, with cooling degree days 37 percent higher than August 2004. Year-to-date, cooling degree days were up 13.8 percent. The retail sales of electricity in August 2005 were driven primarily by higher cooling needs, and increased 10.0 percent from August 2004. Residential sector retail sales showed the greatest response to the hot weather -- up 16.2 percent from August 2004. The commercial sector was up 8.8 percent from August 2004. Average retail prices, at 8.65 cents per kilowatthour, increased 6.7 percent above the August 2004 level in response to the higher electricity demand and high fuel prices. Year-to-date total retail sales through August were up 3.1 percent from 2004, driven by the increase in the cooling load. Average retail prices for the rolling 12 months ending in August continue to run ahead of 2004 prices by 4.3 percent, with higher fuel prices the major factor.

Electricity generation increased 9.8 percent from the previous August, closely tracking growth in retail sales. The strong growth in sales and generation is reflected in the use of natural gas and petroleum liquids, the fuels typically used to meet incremental demand. Natural gas-fired generation increased 30.8 percent from July 2004, and petroleum-fired generation was up 33.6 percent. Year to date, natural gas consumption for power generation is up 9.7 percent, reflecting both demand growth and the continuing introduction of new gas-fired power plants.

Coal generation was up 5.0 percent in August 2005 compared to August 2004. August hydroelectric generation started a seasonal down trend, dropping 17.1 percent from July 2005. Year to date, however, hydro generation was up 5.5 percent, indicating easing of last year's drought conditions. Nuclear generation continued to lag its 2004 performance -- down 0.1 percent from August 2004 and down 2.5 percent year to date. The lower output from base-load nuclear plants, due to greater lost capacity than in 2004 from planned and unplanned maintenance, is another factor contributing to the increased use of natural gas and petroleum.

All through 2005 monthly coal inventories have been below their historical 2003 and 2004 monthly levels. The improvement seen in coal stocks in April and May of 2005 reversed as the Powder River Basin rail problems began in late May. Once again, coal stocks in August 2005 are off from August 2004, with a drop of 9.2 million tons, or 8.5 percent. (For more information on coal related issues visit <http://www.eia.doe.gov/cneaf/coal/page/coalnews/coalmar.html>.) In addition to the decline in coal stocks, normally stable oil inventories are down by 19.3 percent from August, reaching the lowest level of the year so far. It appears that high oil product prices are leading generators to burn down petroleum liquid inventories in lieu of making new purchases of oil. Petroleum inventories at power plants may bear watching as generators approach the winter.

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

**Data for:  
August 2005**

### Table 2.1 Key Generation Indicators

	Total Generation	Nuclear Generation	Hydroelectric Generation
<b>Total Change From:</b>			
July 2005	0.5%	0.4%	-17.1%
August 2004	9.8%	-0.1%	-0.7%
<b>Year to Date</b>	<b>2.4%</b>	<b>-2.5%</b>	<b>5.5%</b>
<b>Latest 12 Month Period*</b>	<b>2.3%</b>	<b>-1.2%</b>	<b>6.3%</b>

### Table 2.2 Key Consumption and Stocks Indicators

	Natural Gas Consumption	Coal Consumption	Coal Stocks
<b>Total Change From:</b>			
July 2005	0.9%	1.1%	-5.8%
August 2004	28.5%	5.2%	-8.5%
<b>Year to Date</b>	<b>9.7%</b>	<b>2.0%</b>	<b>n/a</b>
<b>Latest 12 Month Period*</b>	<b>10.3%</b>	<b>1.7%</b>	<b>n/a</b>

\* Change in total consumption or generation for the latest 12 month period (September 2004 to August 2005) compared to the prior 12 month period (September 2003 to August 2004).

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

Data for:  
August 2005

### Net Generation (Total, All Sectors)

Table 3.1 Total Net Generation (All Sectors)

Net Generation (thousand megawatthours)	Aug-05	Aug-04	% Change	Jul-05	% Change
Coal	187,391	178,424	5.0%	186,043	0.7%
Petroleum Liquids	12,162	9,104	33.6%	10,894	11.6%
Natural Gas	100,424	76,750	30.8%	96,494	4.1%
Nuclear	70,963	71,064	-0.1%	70,703	0.4%
Hydroelectric Conventional	21,572	21,730	-0.7%	26,037	-17.1%
All Other	10,861	10,235	6.1%	11,130	-2.4%
Total (All Energy Sources)	403,373	367,307	9.8%	401,301	0.5%

### 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	Aug-05	Aug-04	% Change	Jul-05	% Change
Coal (Thousand Short Tons)	98,342	93,452	5.2%	97,275	1.1%
Petroleum Liquids (Thousand Barrels)	20,781	15,745	32.0%	18,643	11.5%
Natural Gas (Million Cubic Feet)	846,922	658,880	28.5%	839,420	0.9%

### Fossil Fuel Stocks (Electric Power Sector)

Table 3.3 Total Fossil Fuel Stocks (Electric Power Sector)

Fossil Fuel Stocks	Aug-05	Aug-04	% Change	Jul-05	% Change
Coal (Thousand Short Tons)	99,527	108,714	-8.5%	105,601	-5.8%
Petroleum Liquids (Thousand Barrels)	36,422	45,145	-19.3%	37,735	-3.5%

#### 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:  
August 2005

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

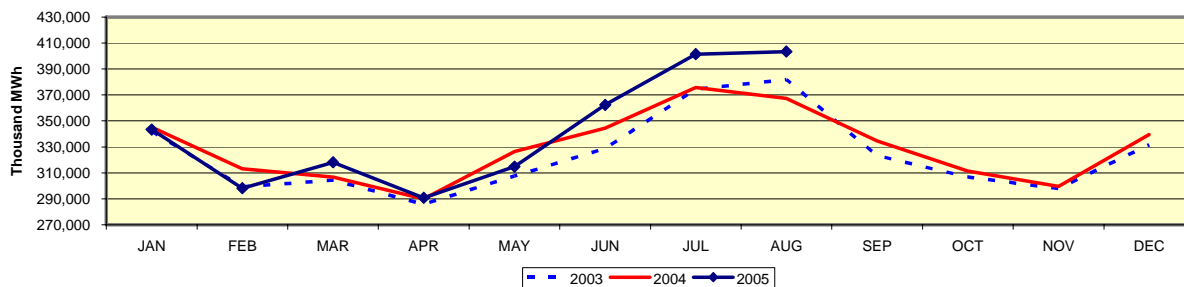
### Year-to-Date Comparison

	Starting Month	Ending Month	Coal	Petroleum Liquids	Natural Gas	Nuclear	Hydroelectric Conventional	All Other	Total
<b>Current Period</b>	January 2005	August 2005	1,342,037	64,018	528,830	519,232	192,448	85,385	2,731,950
<b>Prior Period</b>	January 2004	August 2004	1,322,133	72,907	477,431	532,536	182,434	80,802	2,668,243
<b>Percent Change</b>			1.5%	-12.2%	10.8%	-2.5%	5.5%	5.7%	2.4%

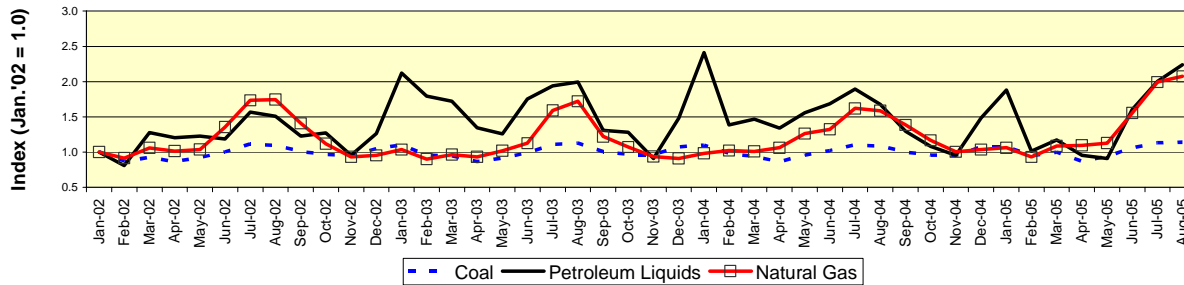
### Comparison to Prior 12 Month Period

	Starting Month	Ending Month	Coal	Petroleum Liquids	Natural Gas	Nuclear	Hydroelectric Conventional	All Other	Total
<b>Current Period</b>	September 2004	August 2005	1,996,237	90,139	751,009	775,252	279,651	124,826	4,017,114
<b>Prior Period</b>	September 2003	August 2004	1,980,881	99,970	677,708	784,347	263,102	121,659	3,927,667
<b>Percent Change</b>			0.8%	-9.8%	10.8%	-1.2%	6.3%	2.6%	2.3%

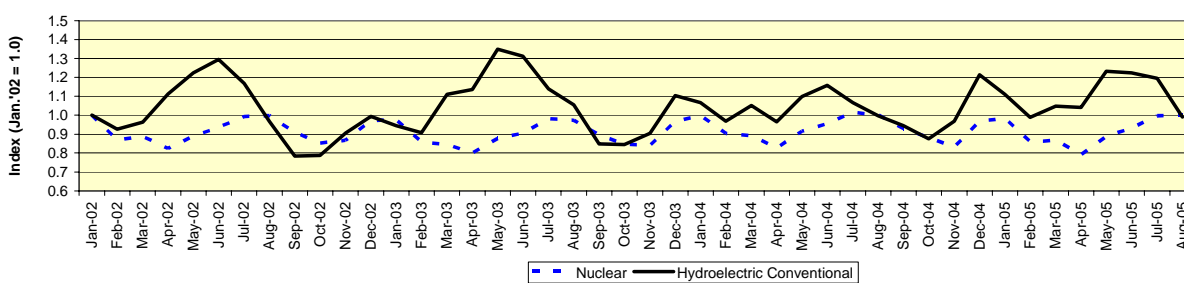
**Figure 4.1 Trends in Total Net Generation (All Sectors): 2003, 2004, and 2005**



**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:  
August 2005

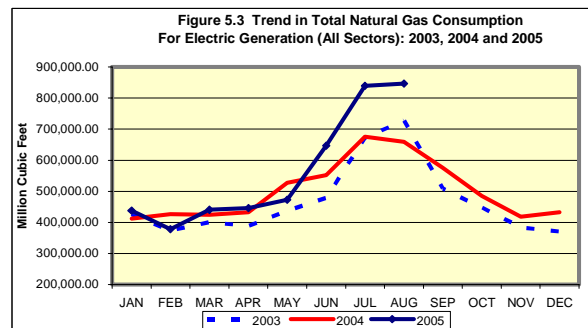
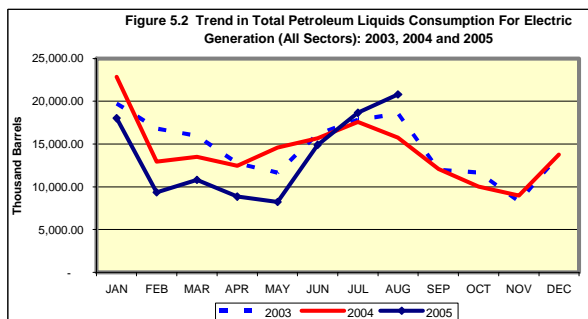
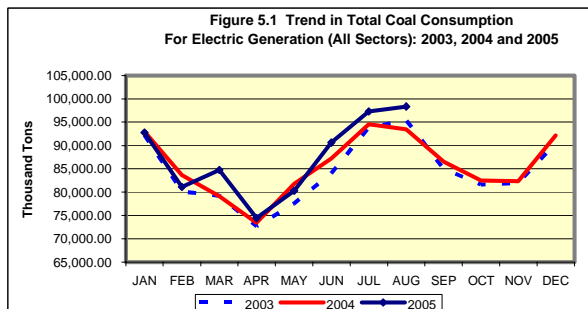
## Table 5.1 Trends in Fossil Fuel Consumption For Electric Generation, Total (All Sectors)

### Year-to-Date Comparison

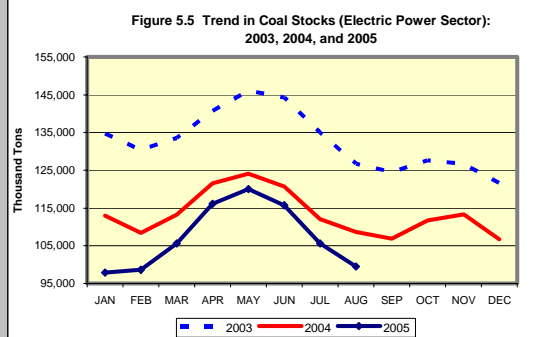
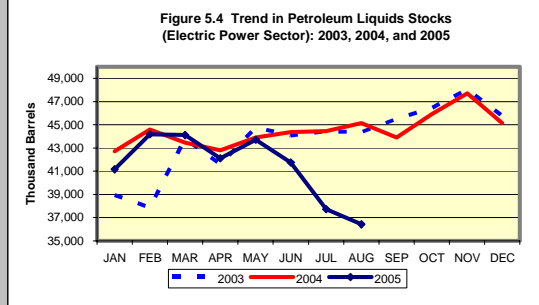
	Starting Month	Ending Month	Coal (Thousand Tons)	Petroleum Liquids (Thousand Barrels)	Natural Gas (Million Cubic Feet)
<b>Current Period</b>	January 2005	August 2005	699,531	109,574	4,508,750
<b>Prior Period</b>	January 2004	August 2004	686,115	125,362	4,109,551
<b>Percent Change</b>			2.0%	-12.6%	9.7%

### 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>	September 2004	August 2005	1,042,980	154,458	6,419,534
<b>Prior Period</b>	September 2003	August 2004	1,025,237	171,065	5,820,349
<b>Percent Change</b>			1.7%	-9.7%	10.3%



## 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:  
August 2005

### Retail Sales

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

Ultimate Customer	Aug-05	Aug-04	% Change	Jul-05	% Change
Residential	147,292	126,724	16.2%	144,754	1.8%
Commercial	124,654	114,569	8.8%	122,565	1.7%
Industrial	92,057	89,703	2.6%	89,917	2.4%
Transportation	680	662	2.7%	694	-2.0%
All Sectors	364,683	331,658	10.0%	357,929	1.9%

### Average Retail Price

**Table 6.2 Average Retail Price (Cents/kWh)**

Ultimate Customer	Aug-05	Aug-04	% Change	Jul-05	% Change
Residential	9.90	9.47	4.5%	9.73	1.7%
Commercial	9.10	8.67	5.0%	8.97	1.4%
Industrial	6.04	5.49	10.0%	5.96	1.3%
Transportation	8.30	6.81	21.9%	8.12	2.2%
All Sectors	8.65	8.11	6.7%	8.52	1.5%

# Section 7. Retail Sales Trends

Data for:  
August 2005

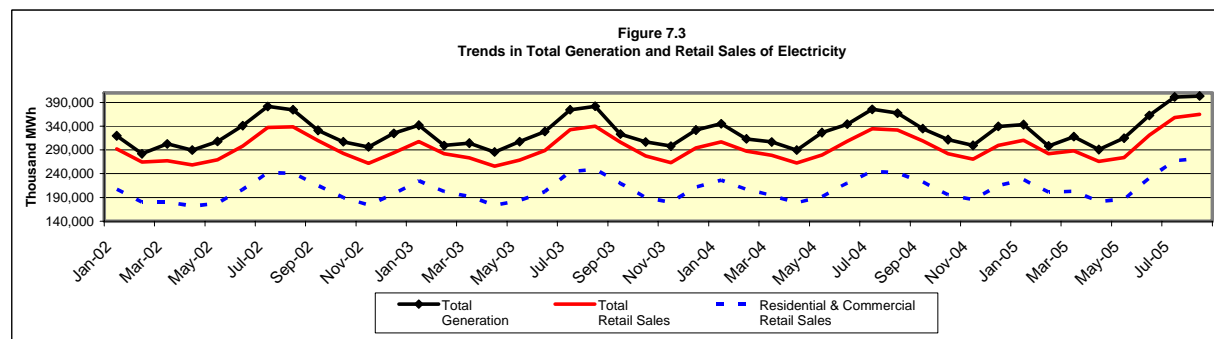
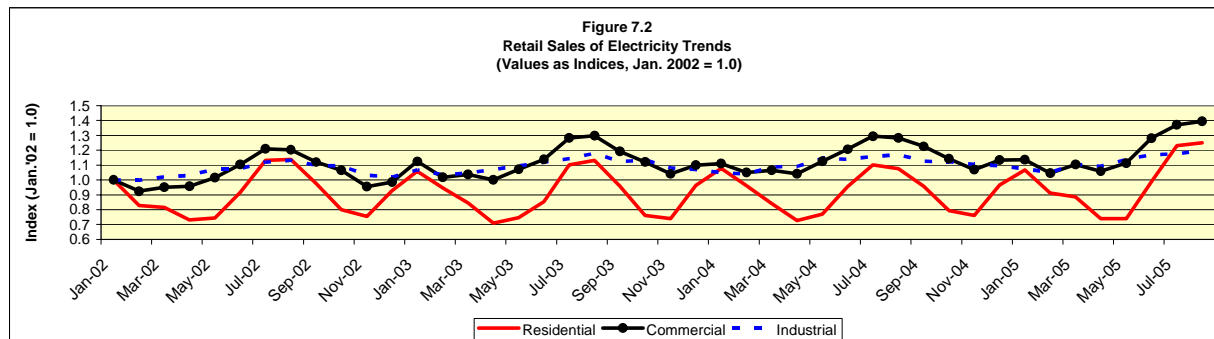
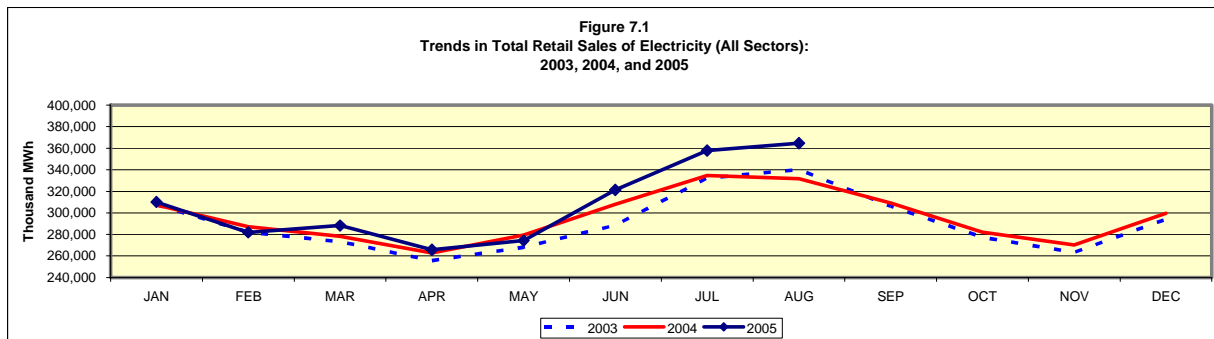
**Table 7.1 Trends in Total Retail Sales of Electricity (All Sectors)**  
Millions of Kilowatthours

### Year-to-Date Comparison

	Starting Month	Ending Month	Residential	Commercial	Industrial	Transportation	Total (All Sectors)
<b>Current Period</b>	January 2005	August 2005	919,640	849,325	689,839	5,481	2,464,285
<b>Prior Period</b>	January 2004	August 2004	884,036	820,020	680,193	5,110	2,389,359
<b>Percent Change</b>			4.0%	3.6%	1.4%	7.3%	3.1%

### Comparison to Prior 12 Month Period

	Starting Month	Ending Month	Residential	Commercial	Industrial	Transportation	Total (All Sectors)
<b>Current Period</b>	September 2004	August 2005	1,329,053	1,257,811	1,030,529	8,045	3,625,438
<b>Prior Period</b>	September 2003	August 2004	1,286,933	1,217,927	1,017,711	7,388	3,529,960
<b>Percent Change</b>			3.3%	3.3%	1.3%	8.9%	2.7%



# Section 8. Average Retail Price Trends

Data for:  
August 2005

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

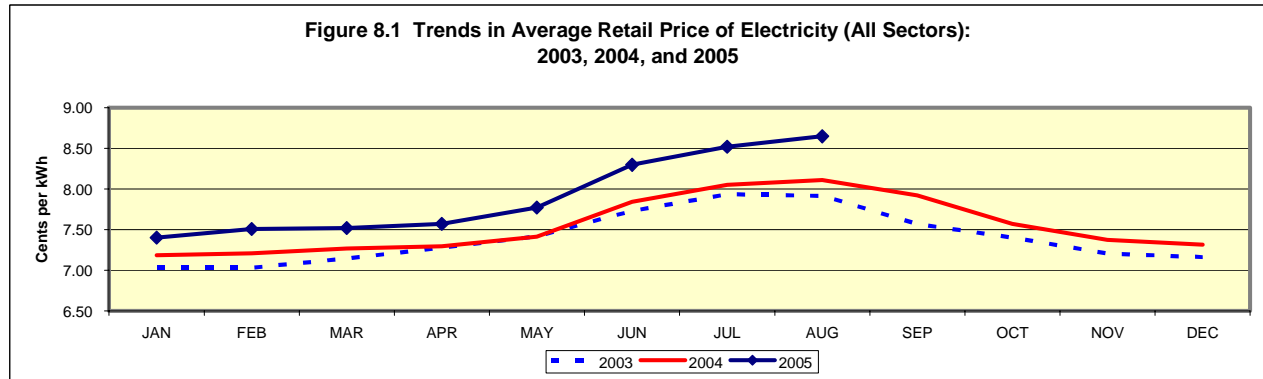
### Year-to-Date Comparison

	Starting Month	Ending Month	Residential	Commercial	Industrial	Transportation	Total (All Sectors)
<b>Current Period</b>	January 2005	August 2005	9.30	8.51	5.47	7.42	7.95
<b>Prior Period</b>	January 2004	August 2004	8.91	8.17	5.12	6.43	7.57
<b>Percent Change</b>			4.4%	4.2%	6.8%	15.4%	5.0%

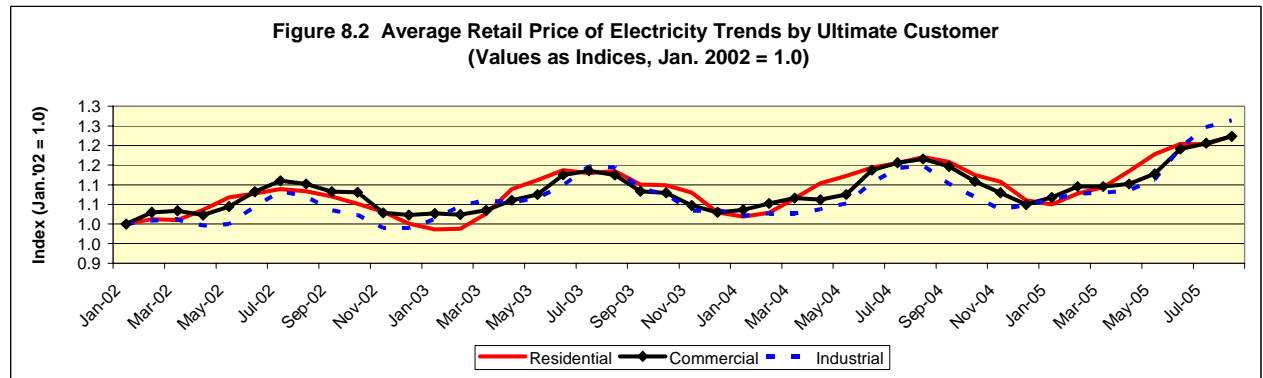
### Comparison to Prior 12 Month Period

	Starting Month	Ending Month	Residential	Commercial	Industrial	Transportation	Total (All Sectors)
<b>Current Period</b>	September 2004	August 2005	9.21	8.40	5.34	7.16	7.82
<b>Prior Period</b>	September 2003	August 2004	8.85	8.08	5.10	6.73	7.50
<b>Percent Change</b>			4.1%	4.0%	4.7%	6.4%	4.3%

**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:  
August 2005

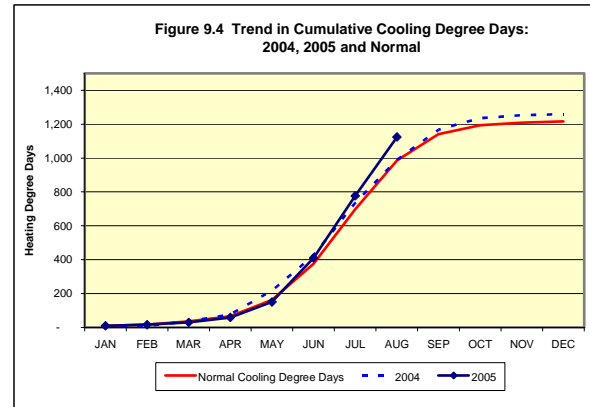
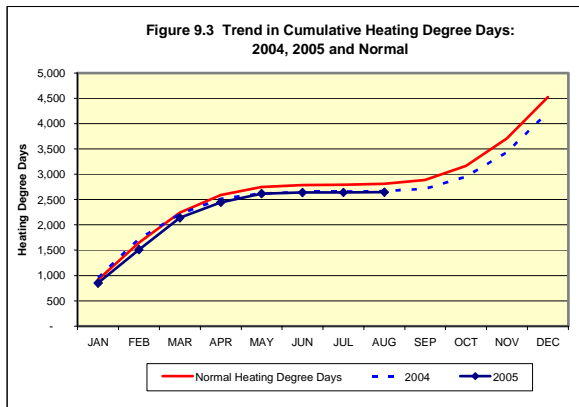
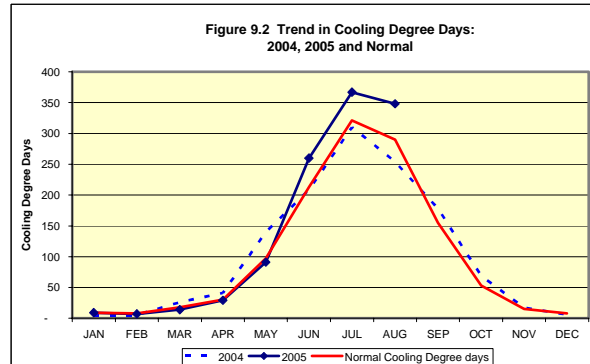
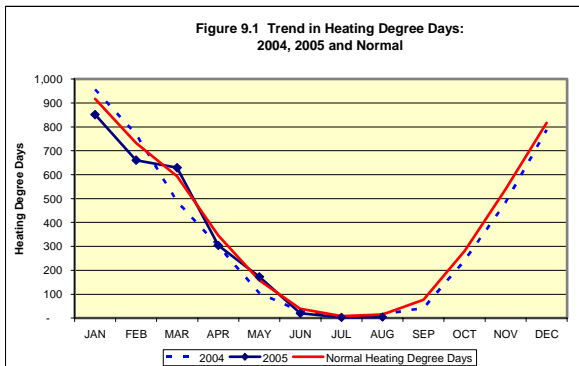
### Table 9.1 Degree Days

	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
Current Period	August 2005	4	15	-11	348	290	58
Previous Period	August 2004	16	15	1	254	290	-36
Percent Change		-75.0%			37.0%		

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

Year-to-Date Comparison				
	Starting Month	Ending Month	Heating Degree Days	Cooling Degree Days
Current Period	January 2005	August 2005	2,645	1,125
Prior Period	January 2004	August 2004	2,669	989
Percent Change			-0.9%	13.8%

Comparison to Prior 12 Month Period				
	Starting Month	Ending Month	Heating Degree Days	Cooling Degree Days
Current Period	September 2004	August 2005	4,200	1,395
Prior Period	September 2003	August 2004	4,230	1,236
Percent Change			-0.7%	12.9%



**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).