

# Monthly Flash Estimates of

# Electric Power Data

Data for:  
April 2005

## Section 1. Commentary

Generation in April 2005 was down by 8.7 percent from March 2005 as the power market entered the trough of the spring shoulder season. As shown in Figures 9.1 and 9.2, heating degree days dropped by about half from March and cooling degree days increased only slightly. This mild weather caused the sharp month-to-month drop in power output.

Year-to-date, generation is down 0.4 percent (Table 4.1). Through the first third of the year, 2005 has been milder than 2004, with fewer heating and cooling degree days. Compared to the small change in total generation, the generation mix by energy source has been relatively volatile. Gas generation is up 2 percent while oil-fired generation is off by almost 24 percent. This is indicative of the recent large additions to the stock of gas-fired generators and suggests that at current prices generators that can fuel-switch will choose gas over oil.

The growth in coal-fired generation continues to be outpaced by increases in the volume of coal consumed. Coal generation is up 0.5 percent year-to-date and 0.2 percent compared to the prior 12 month period; in comparison, coal consumption measured in tons is up, respectively, 1.2 percent and 1.4 percent. The more rapid growth in tons consumed reflects the continuing shift toward lower heat-content coal, such as western Powder River Basin subbituminous coal.

Hydroelectric generation is up by 3.7 percent, due to a wet spring. Monthly hydroelectric generation has now exceeded 2004 levels in three of the first four months of 2005 as drought conditions ease. In mid-June the National Weather Service predicted stable or improving precipitation conditions for most of the country through September, suggesting that hydroelectric output will continue to outpace 2004 into the summer (see: [http://www.cpc.ncep.noaa.gov/products/expert\\_assessment/seasonal\\_drought.html](http://www.cpc.ncep.noaa.gov/products/expert_assessment/seasonal_drought.html)).

Nuclear generation is down 3.2 percent year-to-date (off by 4.2 percent comparing April 2004 and 2005). A review of Nuclear Regulatory Commission data shows that more nuclear units were entirely off-line for planned or forced outages in the first four months of 2005 than in 2004. During April 2005, about 20,000 MW of nuclear capacity were off-line each day, compared to about 17,000 MW off-line daily in April 2004.

Decreased nuclear generation contributed to increases in the price of power. The average retail price of electricity shows an increase over the prior 12 month period of 2.6 percent and an increase year-to-date of 4 percent. The increases are primarily due to the price of fuel and the fuel mix used in generating power. The price of natural gas has been consistently above \$6.50 per million Btu (Henry Hub spot price) since October 2004 and the average price of delivered coal has also been increasing. The decline in nuclear output caused generators to make up part of the difference with these higher cost fuels.

Coal stocks increased sharply for the second month in a row, up by 10 percent from March 2005 but still 4.4 percent less than in April 2004. Whether this trend can continue is uncertain, as seasonal demand for coal-fired generation should increase in May and reported problems in rail shipments of coal may limit the ability of generators to build stocks. On a year-to-year basis, coal stocks appear to be continuing their downward trend.

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

**Data for:  
April 2005**

### Table 2.1 Key Generation Indicators

	Total Generation	Nuclear Generation	Hydroelectric Generation
<b>Total Change From:</b>			
March 2005	-8.7%	-8.8%	0.4%
April 2004	0.2%	-4.2%	9.2%
<b>Year to Date</b>	<b>-0.4%</b>	<b>-3.2%</b>	<b>3.7%</b>
<b>Latest 12 Month Period*</b>	<b>1.1%</b>	<b>0.8%</b>	<b>-0.7%</b>

### Table 2.2 Key Consumption and Stocks Indicators

	Natural Gas Consumption	Coal Consumption	Coal Stocks
<b>Total Change From:</b>			
March 2005	-0.8%	-12.1%	10.0%
April 2004	1.0%	1.5%	-4.4%
<b>Year to Date</b>	<b>-0.1%</b>	<b>1.2%</b>	<b>n/a</b>
<b>Latest 12 Month Period*</b>	<b>5.2%</b>	<b>1.4%</b>	<b>n/a</b>

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

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

Data for:  
April 2005

### Net Generation (Total, All Sectors)

Table 3.1 Total Net Generation (All Sectors)

Net Generation (thousand megawatthours)	Apr-05	Apr-04	% Change	Mar-05	% Change
Coal	143,368	141,503	1.3%	164,003	-12.6%
Petroleum Liquids	5,201	7,287	-28.6%	6,378	-18.5%
Natural Gas	52,288	51,367	1.8%	52,529	-0.5%
Nuclear	56,137	58,620	-4.2%	61,539	-8.8%
Hydroelectric Conventional	22,946	21,012	9.2%	22,850	0.4%
All Other	10,339	9,986	3.5%	10,703	-3.4%
Total (All Energy Sources)	290,279	289,775	0.2%	318,001	-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	Apr-05	Apr-04	% Change	Mar-05	% Change
Coal (Thousand Short Tons)	74,525	73,420	1.5%	84,740	-12.1%
Petroleum Liquids (Thousand Barrels)	8,887	12,447	-28.6%	10,800	-17.7%
Natural Gas (Million Cubic Feet)	437,099	432,778	1.0%	440,492	-0.8%

### Fossil Fuel Stocks (Electric Power Sector)

Table 3.3 Total Fossil Fuel Stocks (Electric Power Sector)

Fossil Fuel Stocks	Apr-05	Apr-04	% Change	Mar-05	% Change
Coal (Thousand Short Tons)	116,182	121,575	-4.4%	105,601	10.0%
Petroleum Liquids (Thousand Barrels)	42,356	42,788	-1.0%	44,107	-4.0%

#### 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:  
April 2005

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

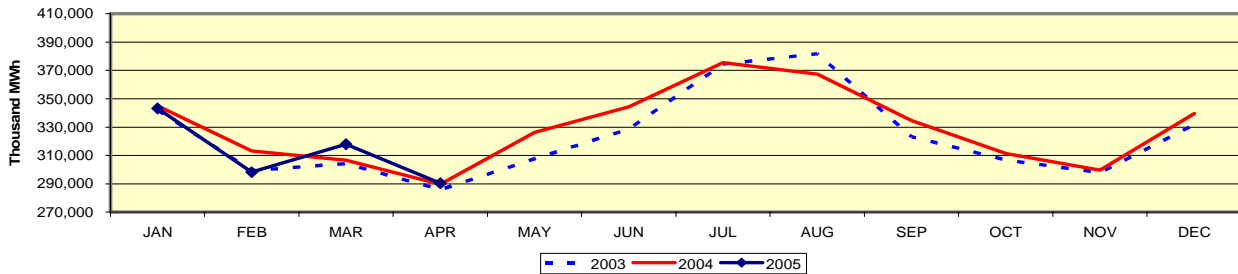
**Year-to-Date Comparison**

	Starting Month	Ending Month	Coal	Petroleum Liquids	Natural Gas	Nuclear	Hydroelectric Conventional	All Other	Total
<b>Current Period</b>	January 2005	April 2005	640,224	27,314	201,259	248,451	91,546	40,896	1,249,690
<b>Prior Period</b>	January 2004	April 2004	637,197	35,891	197,255	256,792	88,281	39,252	1,254,668
<b>Percent Change</b>			0.5%	-23.9%	2.0%	-3.2%	3.7%	4.2%	-0.4%

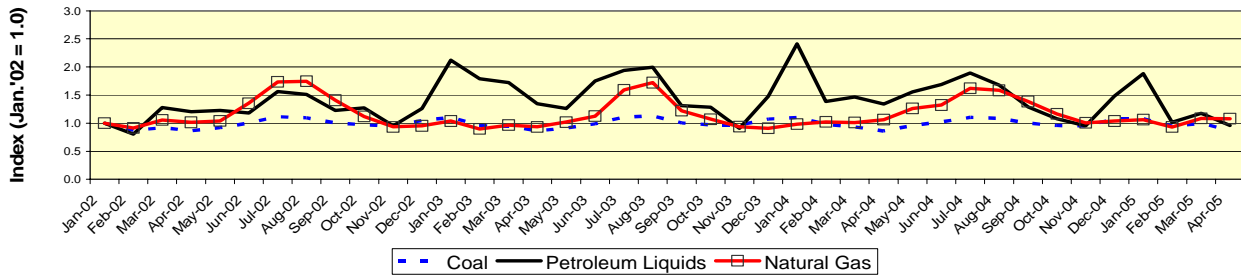
**Comparison to Prior 12 Month Period**

	Starting Month	Ending Month	Coal	Petroleum Liquids	Natural Gas	Nuclear	Hydroelectric Conventional	All Other	Total
<b>Current Period</b>	May 2004	April 2005	1,979,359	90,451	703,615	780,214	272,900	121,887	3,948,426
<b>Prior Period</b>	May 2003	April 2004	1,975,675	100,707	661,546	773,663	274,745	120,204	3,906,540
<b>Percent Change</b>			0.2%	-10.2%	6.4%	0.8%	-0.7%	1.4%	1.1%

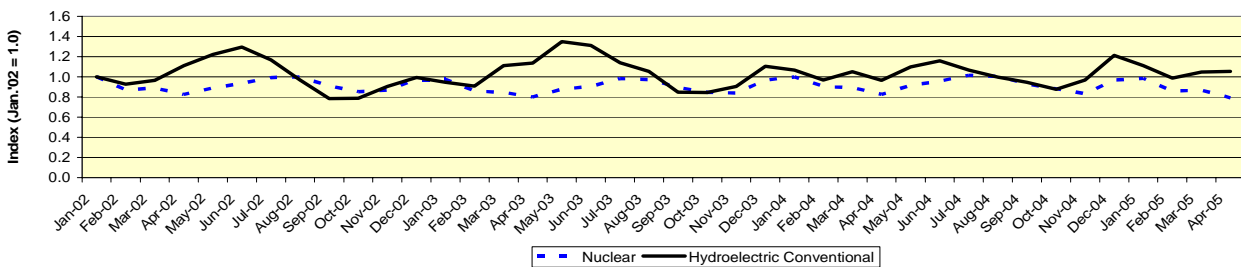
**Figure 4.1 Trends in Total Net Generation (All Sectors): 2003, 2004, and 2005**



**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:  
April 2005

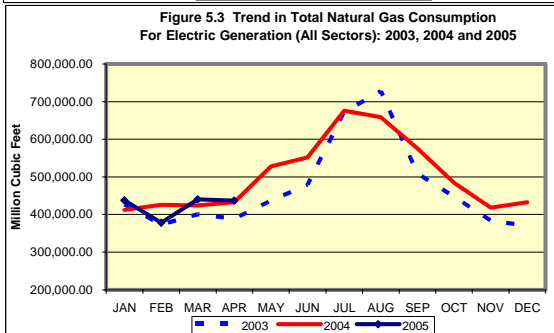
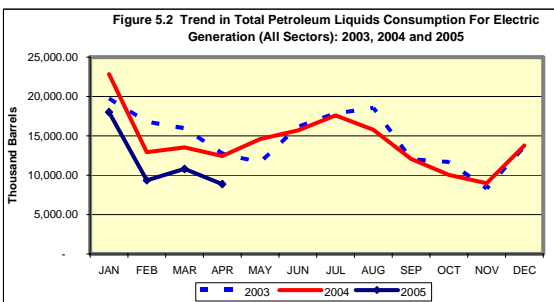
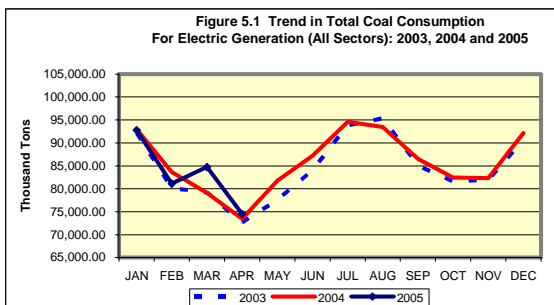
## Table 5.1 Trends in Fossil Fuel Consumption For Electric Generation, Total (All Sectors)

### Year-to-Date Comparison

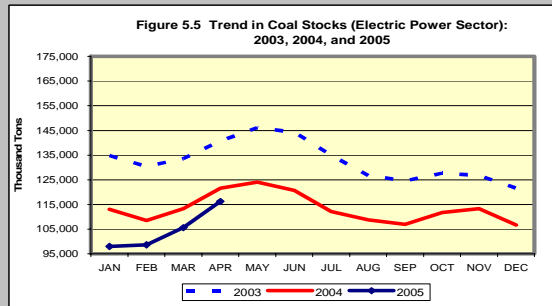
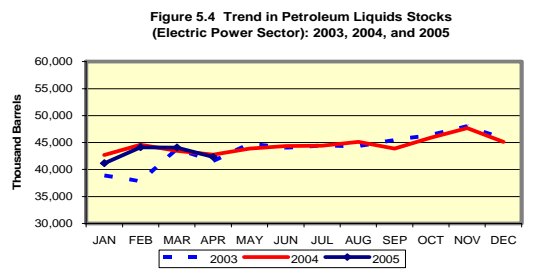
	Starting Month	Ending Month	Coal (Thousand Tons)	Petroleum Liquids (Thousand Barrels)	Natural Gas (Million Cubic Feet)
<b>Current Period</b>	January 2005	April 2005	333,144	47,046	1,693,513
<b>Prior Period</b>	January 2004	April 2004	329,145	61,745	1,695,268
<b>Percent Change</b>			1.2%	-23.8%	-0.1%

### 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>	May 2004	April 2005	1,033,562	155,548	6,018,578
<b>Prior Period</b>	May 2003	April 2004	1,019,035	171,615	5,722,349
<b>Percent Change</b>			1.4%	-9.4%	5.2%



## Stocks Trends



Note: the Stocks data table is on page 2 of the report.

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

Data for:  
April 2005

### Retail Sales

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

Ultimate Customer	Apr-05	Apr-04	% Change	Mar-05	% Change
Residential	87,208	85,440	2.1%	104,233	-16.3%
Commercial	94,538	93,076	1.6%	98,653	-4.2%
Industrial	83,486	83,529	-0.1%	84,662	-1.4%
Transportation	669	610	9.7%	701	-4.6%
All Sectors	265,901	262,655	1.2%	288,250	-7.8%

### Average Retail Price

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

Ultimate Customer	Apr-05	Apr-04	% Change	Mar-05	% Change
Residential	9.17	8.93	2.7%	8.85	3.6%
Commercial	8.19	7.90	3.7%	8.15	0.5%
Industrial	5.17	4.96	4.2%	5.16	0.2%
Transportation	7.27	6.29	15.6%	7.03	3.4%
All Sectors	7.56	7.29	3.7%	7.52	0.5%

# Section 7. Retail Sales Trends

Data for:  
April 2005

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

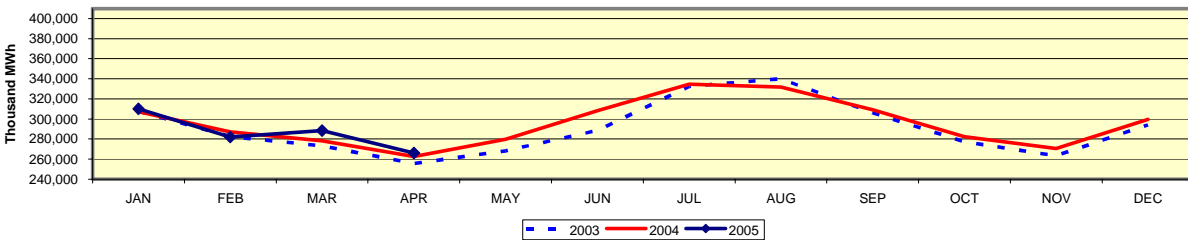
### Year-to-Date Comparison

	Starting Month	Ending Month	Residential	Commercial	Industrial	Transportation	Total (All Sectors)
<b>Current Period</b>	January 2005	April 2005	424,305	388,118	330,893	2,844	1,146,160
<b>Prior Period</b>	January 2004	April 2004	424,526	381,358	326,887	2,558	1,135,329
<b>Percent Change</b>			-0.1%	1.8%	1.2%	11.2%	1.0%

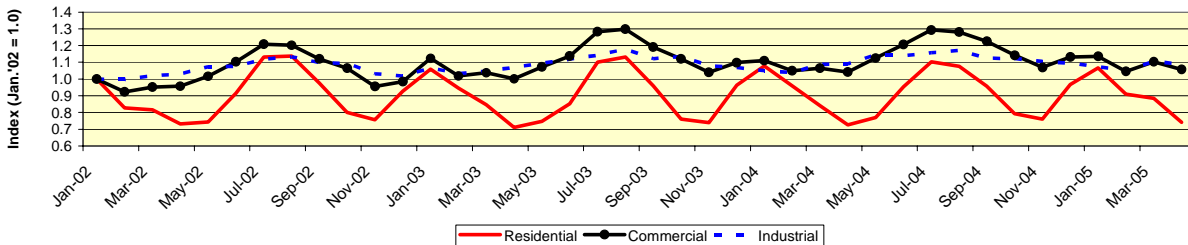
### Comparison to Prior 12 Month Period

	Starting Month	Ending Month	Residential	Commercial	Industrial	Transportation	Total (All Sectors)
<b>Current Period</b>	May 2004	April 2005	1,293,228	1,235,266	1,024,891	7,961	3,561,346
<b>Prior Period</b>	May 2003	April 2004	1,278,542	1,207,467	1,011,816	7,193	3,505,018
<b>Percent Change</b>			1.1%	2.3%	1.3%	10.7%	1.6%

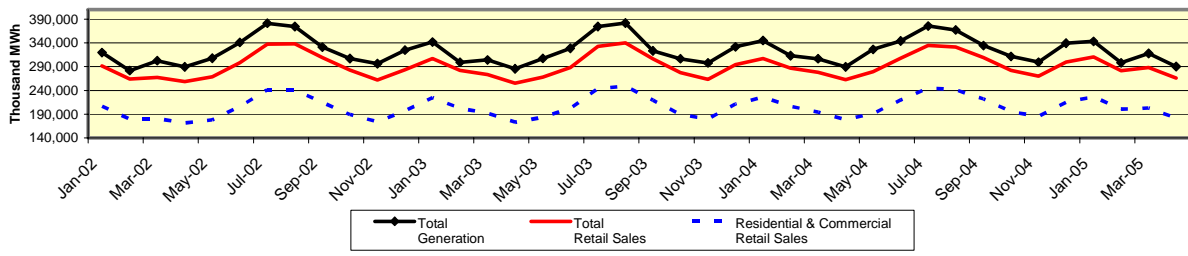
**Figure 7.1**  
Trends in Total Retail Sales of Electricity (All Sectors):  
2003, 2004, and 2005



**Figure 7.2**  
Retail Sales of Electricity Trends  
(Values as Indices, Jan. 2002 = 1.0)



**Figure 7.3**  
Trends in Total Generation and Retail Sales of Electricity



# Section 8. Average Retail Price Trends

Data for:  
April 2005

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

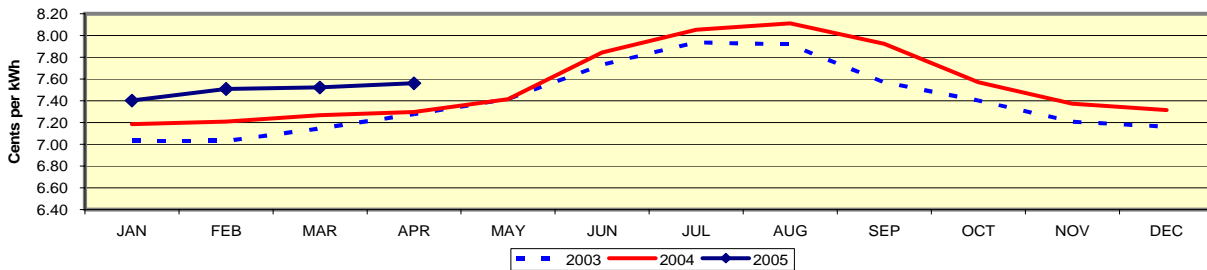
### Year-to-Date Comparison

	Starting Month	Ending Month	Residential	Commercial	Industrial	Transportation	Total (All Sectors)
<b>Current Period</b>	January 2005	April 2005	8.78	8.11	5.14	7.07	7.49
<b>Prior Period</b>	January 2004	April 2004	8.49	7.84	4.92	6.25	7.24
<b>Percent Change</b>			3.4%	3.4%	4.5%	13.1%	3.5%

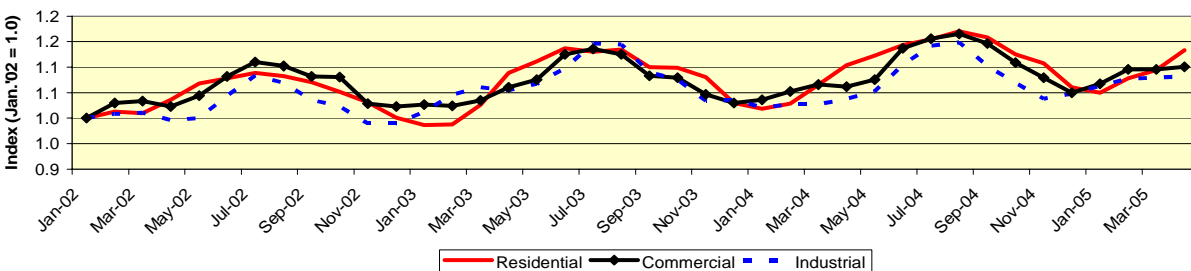
### Comparison to Prior 12 Month Period

	Starting Month	Ending Month	Residential	Commercial	Industrial	Transportation	Total (All Sectors)
<b>Current Period</b>	May 2004	April 2005	9.03	8.25	5.18	6.77	7.65
<b>Prior Period</b>	May 2003	April 2004	8.78	8.02	5.11	7.15	7.46
<b>Percent Change</b>			2.8%	2.9%	1.4%	-5.3%	2.5%

**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:  
April 2005

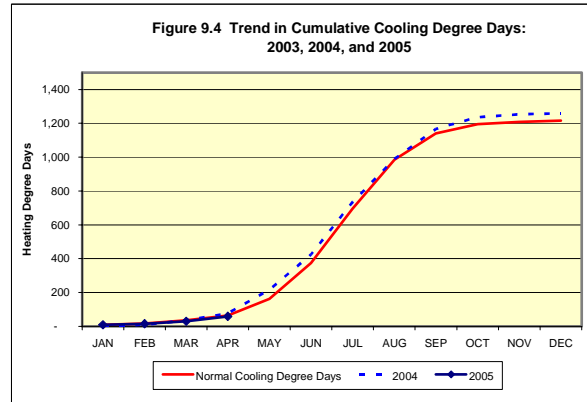
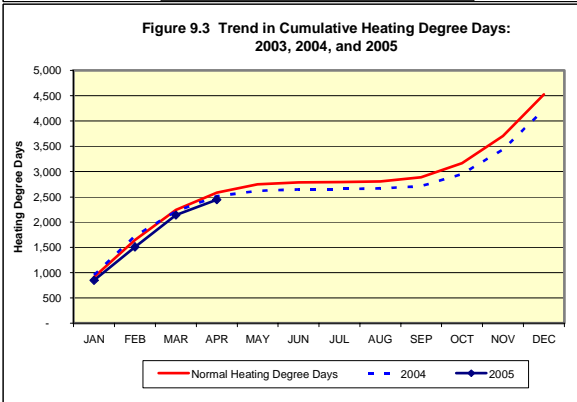
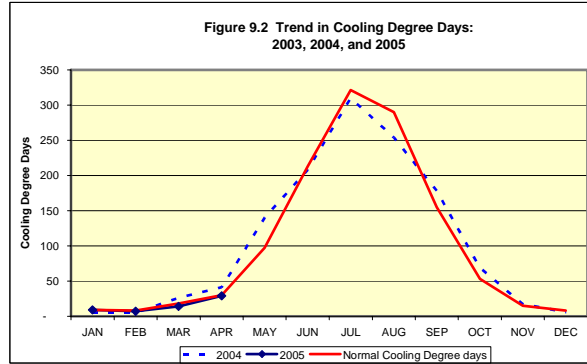
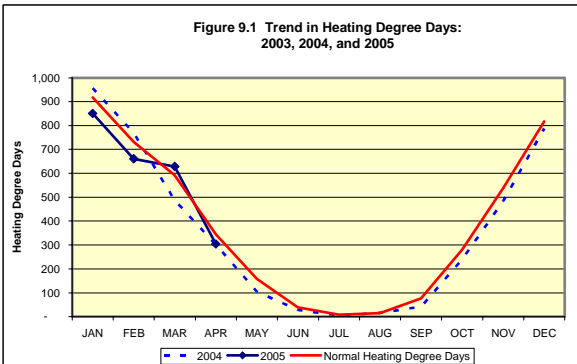
### Table 9.1 Degree Days

	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	April 2005	304	345	-41	29	30	-1
Previous Period	April 2004	302	345	-43	41	30	11
Percent Change		0.7%			-29.3%		

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

Year-to-Date Comparison				
	Starting Month	Ending Month	Heating Degree Days	Cooling Degree Days
Current Period	January 2005	April 2005	2,445	59
Prior Period	January 2004	April 2004	2,515	77
Percent Change			-2.8%	-23.4%

Comparison to Prior 12 Month Period				
	Starting Month	Ending Month	Heating Degree Days	Cooling Degree Days
Current Period	May 2004	April 2005	4,154	1,241
Prior Period	May 2003	April 2004	4,281	1,292
Percent Change			-3.0%	-3.9%



**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).