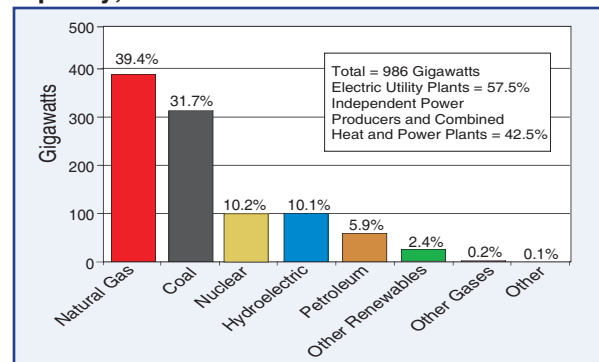


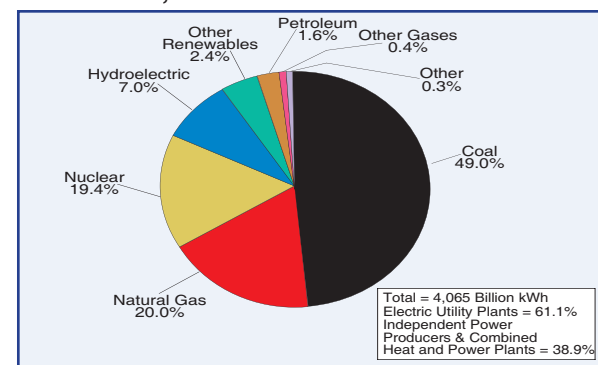
**Figure 1. U.S. Electric Power Industry Net Summer Capacity, 2006**



Source: Energy Information Administration, *Electric Power Annual 2006*.

- Total net summer generating capacity in the United States as of January 1, 2007 was 986 gigawatts (GW), an increase of 0.8 percent from January 1, 2006.
- Natural gas, coal, and nuclear, the three leading fuels for net summer generating capacity, accounted for 388,294 megawatts (MW) (39.4 percent), 312,956 MW (31.7 percent), and 100,334 MW (10.2 percent) of total generating capacity, respectively.
- Since the late 1990's, natural gas has been the fuel of choice for the majority of new generating units.
- As of January 1, 2007 reported planned capacity additions scheduled to start commercial operation from 2007 through 2011 totaled 87 GW. Planned natural gas-fired capacity totaled 46 GW, or 53 percent of total planned capacity additions.
- As of January 1, 2007 other renewables accounted for 24 GW, or 2.4 percent of total net summer generating capacity.
- Planned additions to total net summer generating capacity in 2007 was 16 GW.
- A total of 186 generators retired in 2006, accounting for 4 GW.

**Figure 2. U.S. Electric Power Industry Net Generation, 2006**



Source: Energy Information Administration, *Electric Power Annual 2006*.

- The three primary energy sources for generating electric power in the United States are coal, natural gas, and nuclear energy, accounting for 49.0, 20.0 and 19.4 percent of total electric power net generation, respectively, in 2006.
- The average annual growth in natural gas-fired electric power generation from 1995 to 2006 was 4.6 percent, compared to 1.4 percent average annual growth for both coal and nuclear power generation.
- In 2006, the continued growth in nuclear generation was due to the improved capacity utilization and incremental capacity upgrades to existing units, resulting in 346 MW of incremental capacity.
- According to the National Oceanic and Atmospheric Administration (NOAA), heating degree days were 7.4 percent lower and cooling degree days were 2.1 percent lower in 2006 than in 2005. Milder temperatures in 2006 contributed significantly to the relatively flat rate of increase in electric power generation.
- Net generation from conventional hydroelectric plants increased 7.0 percent to 289 million megawatthours (MWh) from 270 million MWh in 2005. Above average precipi-

tation in 2006 accounted for the increase in hydroelectric generation, mainly in Washington, Oregon, and Idaho.

- Petroleum-fired generation decreased 48 percent to 64.4 million MWh and accounted for only 1.6 percent of total net generation. The decrease in 2006 is directly attributed to the 50 percent price increase in 2005.
- The utilization of coal-fired generators, a measure of actual generation compared to the potential output, has increased from 63 percent in 1995 to 73 percent in 2006.

**Table 1. U.S. Electric Power Industry Receipts and Average Cost of Fossil Fuels for Electricity Generation, 2006**

	Physical Units	Fuel Receipts	
		Btu Equivalent (Trillion Btu)	Average Cost (\$ per MMBtu)
Coal (thousand tons)	1,079,943	21,735	\$1.69
Petroleum (thousand barrels)	100,965	610	\$6.23
Natural Gas (million cubic feet)	6,675,246	6,856	\$6.94
Total/ Weighted Average	NM	29,201	\$3.02

NM=Not meaningful.

Source: Energy Information Administration, *Electric Power Annual 2006*.

- The 2006 average delivered cost for all fossil fuels used at electric power plants (coal, petroleum, and natural gas) combined for electricity generation was \$3.02 per million British thermal units (MMBtu), a decrease of 7.1 percent from 2005.
- The cost of natural gas and petroleum at electric power plants in 2006 decreased to \$6.94 and \$6.23 per MMBtu, respectively from 2005 levels of \$8.21 for natural gas and \$6.44 MMBtu for petroleum.

- The disruptions in natural gas production in and around the Gulf of Mexico caused by hurricanes Katrina, Rita, and Wilma in 2005 drove natural gas prices to an all-time high of \$8.21 per MMBtu. Prices began to drop at the beginning of 2006 as the gas and petroleum industries recovered from these adverse weather events.
- The cost of coal delivered to electric plants has increased every year since 2000. The delivered cost of coal in 2006 was \$1.69 per MMBtu, 9.7 percent higher than in 2005.
- The sustained high price of petroleum in 2006 led to fuel switching at electric power plants, as dual-fired plants consumed larger amounts of natural gas.

**Table 2. U.S. Electric Power Industry Emissions 1990, 2005, and 2006 (Thousand Metric Tons)**

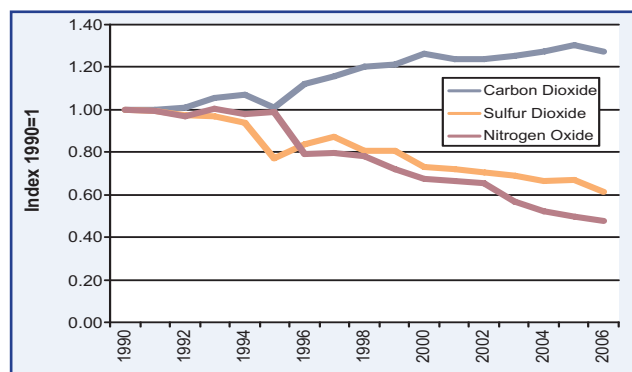
	1990	2005	2006
	(Thousand Metric Tons)		
Carbon Dioxide	1,931,248	2,513,609	2,459,800
Sulfur Dioxide	15,462	10,340	9,524
Nitrogen Oxides	7,961	3,961	3,799

Source: Energy Information Administration, *Electric Power Annual 2006*, State Electricity Profiles 2006, United States.

- Carbon dioxide emissions by U.S. electric generators and combined heat and power facilities are estimated at 2,460 million metric tons in 2006, a decrease of 2.1 percent from 2005. The decline reflects both the decrease in total net generation of electric power from most fossil fuels and the shift from petroleum to natural gas for electric power generation.
- Sulfur dioxide and nitrogen oxides emissions have declined since 1990 by 38 percent and 52 percent, respectively. The decline is attributable to the changing fuel mix, especially the increased use of subbituminous coal and the implemen-

tation of pollution control equipment such as scrubbers, resulting from Federal and State pollution control regulations.

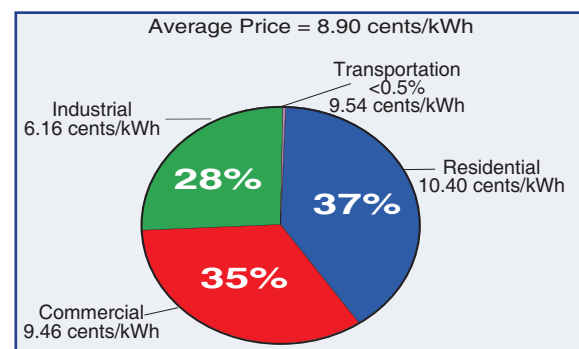
**Figure 3. U.S. Electric Power Industry Emissions, Indexed to 1990**



Sources: Energy Information Administration, *Electric Power Annual 2006*, State Electricity Profiles 2006, United States

- Since 1990, carbon dioxide emissions have increased almost every year; however, there was a slight decrease in 2006.
- Texas, Ohio, Florida, Pennsylvania, and Indiana produced the largest amounts of carbon dioxide emissions in 2006. These five States accounted for 761 thousand metric tons, or 31 percent, of carbon dioxide emissions from electricity generation in the United States.

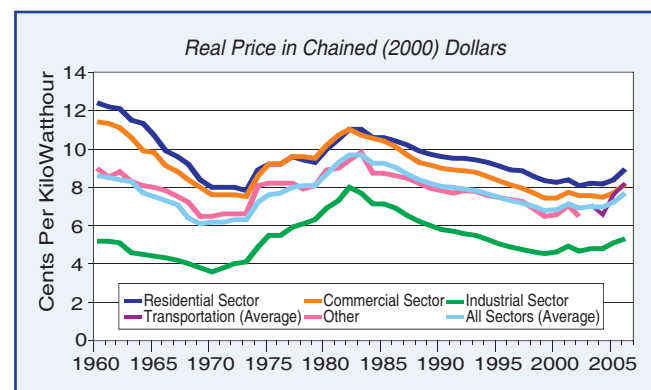
**Figure 4. Percent of U.S. Electricity Sales by Sector with Average Retail Price, 2006**



Source: Energy Information Administration, *Electric Power Annual 2006*.

- Total retail sales of electricity in 2006 were 3,670 million MWh. Annual growth in electricity sales in 2006 was 0.2 percent, well below the 1.8 percent average annual growth since 1995.
- The amount of electricity generated and used on-site at commercial and industrial facilities accounted for 147 million MWh in 2006, a slight decrease from 2005.
- Sales to the commercial sector increased by 1.9 percent, but sales to the industrial and residential sectors decreased 0.8 percent and 0.6 percent, respectively.
- In 2006, the average retail price for all customers was 8.90 cents per kilowatthour (kWh) compared to 8.14 in 2005.

**Figure 5. Average Retail Price of Electricity Sold by Sector, 1960-2006**



Source: Energy Information Administration, *Annual Energy Review 2006*.

- After a prolonged period of steadily falling prices in real terms, electricity prices began to increase in 2000.
- Retail sales to the residential sector accounted for the largest amount of electricity at 1,351 MWh, followed by sales to the commercial sector at 1,300 MWh.
- In 2006, the average industrial price of electricity was 6.16 cents per kWh, average commercial price of electricity was

9.46 cents per kWh, and the average residential price of electricity was 10.40 cents per kWh.

- Total revenue from retail sales of electricity to ultimate customers was \$326 billion.



*Electric Power Annual 2006* web site:  
[http://www.eia.doe.gov/cneaf/electricity/epa/epa\\_sum.html](http://www.eia.doe.gov/cneaf/electricity/epa/epa_sum.html)

The Energy Information Administration is an independent statistical agency within the U.S. Department of Energy whose purpose is to provide reliable and unbiased energy information.

For further information, contact:  
 National Energy Information Center  
 Washington, DC 20585  
 (202) 586-8800 E-Mail: [infoctr@eia.doe.gov](mailto:infoctr@eia.doe.gov)  
 EIA web site: [www.eia.doe.gov](http://www.eia.doe.gov)

# Electric Power Annual 2006

## A Summary



Energy Information Administration