Electric Market National Overview

June 2007
Weekly U.S. Electric Generation Output and Temperatures

Source: Derived from EEI and NOAA data.
Financial Trading on ICE

Source: Derived from ICE data. ICE on-peak swap volumes include monthly, dual monthly, quarterly, and calendar year contracts traded for each month.

Updated June 7, 2007
A RPS requires a percent of energy sales or installed capacity to come from renewable resources.

23 states and DC have renewable energy standards. Three have goals only. Oregon passed an RPS in May. Bills in North Carolina and Florida ordered studies of RPS feasibility.

States that adopted transmission planning and cost recovery policies to support new renewable generation include California, Colorado, Minnesota, New Mexico and Texas.

* Minnesota’s requirement for Xcel Energy exceeds the state RPS; it is 30% by 2020.

Sources: Derived from data in: EEI, EIA, LBNL, PUCs, State legislative tracking services, Database of State Incentives for Renewables and Efficiency, and the Union of Concerned Scientists.
Energy Efficiency Resource Standards

- An energy efficiency resource standard aims to reduce or flatten electric load growth through energy efficiency measures.
- Goals may specify reductions in energy (MWh), demand (MW), or both.
- 14 states have energy efficiency standards or goals. Six include energy efficiency in a renewable portfolio standard (RPS) or goal.
- Four states and Congress have proposed an EERS or mandated its design.
- States encourage participation through public benefit funds or by decoupling utilities’ revenues from power sales. Not all use financial penalties for non-compliance.

**Abbreviations:** DR: demand response; EE: energy efficiency; EERS: Energy Efficiency Resource Standard; RPS: Renewable Portfolio Standard

* Colorado’s standard applies only to Public Service of Colorado

Derived from data in: ACEEE, EPA, the Regulatory Assistance Project, and the Union of Concerned Scientists.
Central Appalachian and Powder River Basin Coal Prices

Source: Derived from Bloomberg data.
SO$_2$ and NO$_x$ Allowance Spot Prices

Source: Derived from Cantor Fitzgerald data.

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SO\textsubscript{2}  

In the 2006 EPA-administered SO\textsubscript{2} auction, merchants and retirement funds won more than 98% of the 125,000 2006 SO\textsubscript{2} spot allowances available for auction. Virtually no traditional investor owned utilities bid into this auction.

2006 SO\textsubscript{2} spot allowance prices peaked on January 3rd at $1,583/ton. Allowance prices dropped to $465/ton on November 21st – their lowest price in 2006. SO\textsubscript{2} spot closed the year at $483/ton on December 29th.

**Factors contributing to lower SO\textsubscript{2} prices for 2006 are:**

- **Below-cap SO\textsubscript{2} emissions output**: The 2006 SO\textsubscript{2} emissions cap established by the EPA’s Acid Rain Program was 9.5 million tons. Preliminary EPA data show power plant SO\textsubscript{2} emissions came in under the cap at 9.39 million tons which is down 8% compared with 2005’s SO\textsubscript{2} output of 10.22 million tons.

- **Surplus allowances**: Of the 15.7 million SO\textsubscript{2} allowances available for 2006 compliance, 6.16 million allowances were carried over from previous years.

- **Increased use of low-sulfur, Powder River Basin coal** due to improved rail deliverability.

- **Greater use of natural gas in running power plants** due to lower relative costs compared to residual fuel oil.

- **Increased hydro-electric and nuclear output**.

- **Regional factors**: Increased use of scrubbers in NC and KY and the mothballing of the Mohave generating station in Nevada.
NO\textsubscript{X}

Although the EPA administers the NO\textsubscript{X} trading program, allowance allocation is determined by state specifications and is generally based on the historical performance of the plant. As of 2007, the NO\textsubscript{X} trading program, called the NO\textsubscript{X} SIP Call, includes 22 states. The NO\textsubscript{X} compliance season runs from May 1st through September 30th, however NO\textsubscript{X} 2006 vintage trades take place throughout the 2006 calendar year.

In calendar year 2006, NO\textsubscript{X} SIP Call Allowance prices peaked on January 27th at $2,766. Prices dropped to their calendar-year low of $711 on December 8th. The NO\textsubscript{X} compliance season opened on May 1st at $2,433/ton. NO\textsubscript{X} 2006 vintage closed the 2006 compliance season at approximately $700/ton.

Factors contributing to lower NO\textsubscript{X} vintage prices for 2006 include:

- **Below-cap NO\textsubscript{X} emissions output**: Preliminary EPA data show total 2006 NO\textsubscript{X} emissions came in at 492,000 tons, down 7\% compared with 530,000 tons in 2005 and below the 2006 cap of 520,957 tons.
- **Surplus allowances**: Generators currently have a bank of approximately 217,000 allowances, 30,000 of which are carried over from 2006.
- **Pollution controls** such as selective catalytic reduction (SCR) units outperforming expectations.
- **Declining natural gas prices** compared to 2005 prices.