

## EPA Update on NO<sub>x</sub> Regulation

2002 Conference on  
Selective Catalytic Reduction and Non-Catalytic Reduction for NO<sub>x</sub> Controls  
Pittsburgh, PA  
May 15-16, 2002

Kevin Culligan  
Mary Jo Krolewski  
Clean Air Markets Division  
US EPA  
Washington, DC 20001  
[culligan.kevin@epa.gov](mailto:culligan.kevin@epa.gov)  
[krolewski.maryjo@epa.gov](mailto:krolewski.maryjo@epa.gov)  
(202) 564-9172  
(202) 564-9847  
Fax: (202) 564-1980

In October 1998, EPA promulgated a rule to address long range transport of ozone by limiting summer season NO<sub>x</sub> emissions in 22 Northeast States and the District of Columbia that the Agency believes are significant contributors to ozone nonattainment in downwind areas (63 FR 57356, October 27, 1998). These States were required to amend their SIPs through a procedure established in Section 110 of the CAAA. EPA finalized a summer-season State NO<sub>x</sub> budget (in tons of NO<sub>x</sub>) and developed a State implemented and Federally enforced NO<sub>x</sub> trading program to provide for emissions trading by certain electric and industrial stationary sources. Each affected State's NO<sub>x</sub> budget is based on the application of a population-wide 0.15 lb/mmBtu NO<sub>x</sub> emission rate for large electricity generating units (EGUs) and a 60 percent reduction from uncontrolled emissions for large non-EGUs boilers and turbines, 30 percent reduction for large cement kilns and a 90% reduction for large IC engines. (Control levels that EPA believes are highly cost effective.) EPA also developed the framework for a multi-state NO<sub>x</sub> Budget Trading Program that States could use to control large EGUs and large non-EGU boilers and turbines.

In addition to promulgating the NO<sub>x</sub> SIP call, EPA responded to petitions filed by eight northeastern States under Section 126 of the CAA. The petitions requested that EPA make a finding that NO<sub>x</sub> emissions from certain major stationary sources significantly contribute to ozone nonattainment problems in the petitioning States. The final Section 126 rule requires upwind States to take action to reduce emissions of NO<sub>x</sub> that contribute to nonattainment of ozone standards in downwind States (64 FR 28250, May 25, 1999 and 65 FR 2674, January 18, 2000). The findings affect large EGUs and non-EGU boilers and turbines located in 12 northeast States and the District of Columbia. EPA has finalized a Federal NO<sub>x</sub> Budget Trading Program based on the application of a population-wide 0.15 lb/mmBtu NO<sub>x</sub> emission rate for large EGUs and a 60 percent reduction from uncontrolled emissions for large non-EGU boilers and turbines.

### Litigation Status

After extensive litigation, the DC Circuit upheld most aspects of the NO<sub>x</sub> SIP call and Section 126 rule. The Court changed the source compliance date for the NO<sub>x</sub> SIP call to May 31, 2004. The Court remanded specific elements of the rules to EPA for further action. EPA is currently responding to remands on several issues that include: electrical generating unit growth rates, cogeneration unit definition, geographic coverage, and internal combustion engine emission reduction requirements.

In February 2002, EPA issued a notice of proposed rulemaking in response to most of the Court's decisions. In that notice, EPA proposed to continue the classification of cogenerators as EGUs, and presents support for that classification. EPA also proposed to revise the control levels for stationary internal combustion engines that were assumed in calculating NO<sub>x</sub> SIP call budgets for each State. In addition, EPA proposed to exclude portions of Georgia, Missouri, Alabama and Michigan from the NO<sub>x</sub> SIP Call (the Court ruling focused on Georgia and Missouri, but the same issue is relevant to Alabama and Michigan) and exclude Wisconsin from NO<sub>x</sub> SIP Call requirements. The proposal also set a compliance date for Section 126 rule of May 31, 2004, for all sources except those in Georgia and Missouri; and sources in those two States would have a May 1, 2005 compliance date.

By notice dated August 3, 2001, EPA published its preliminary response to the remand on electrical generating unit growth rates in which EPA indicated that it believed its method for estimating growth in emissions from EGUs was reasonable. In that notice, EPA notified the public that it was examining additional data, and invited comment on that data.

### Status of State Rules

Most States have started or completed the SIP approval process. Eight Northeast States have fully adopted rules, including a 2003 source compliance date (Connecticut, Delaware, Massachusetts, Maryland, New Jersey, New York, Pennsylvania, and Rhode Island). Illinois, Indiana, Alabama, and the District of Columbia fully adopted rules with a 2004 compliance date. Kentucky, Michigan, North Carolina, Ohio, South Carolina, Virginia, and West Virginia submitted rules and EPA is process of working with these States to approve these rules.

### Status of Compliance

As discussed above the NO<sub>x</sub> SIP call allowed for States to participate in a cap-and-trade program based on the application of a population-wide 0.15 lb/mmBtu NO<sub>x</sub> emission rate for large electricity generating units (EGUs). A cap-and-trade system achieves cost-effective compliance by allowing the flexibility for sources to decide how to meet the limit and provides the regulatory framework to create an incentive for technological innovations in NO<sub>x</sub> controls. For example, besides the use of SCR sources have been using other newer technologies, like Mobotec's Rotamix System.[Rotamix System is a second generation SNCR (Selective Non-Catalytic Reduction) System designed to work with Mobotec's ROFA® (Rotating Opposed Fire Air) System.] In addition, the cap-and-trade program creates an incentive to install a technology which can reduce emissions beyond the required level. Through early reduction credits, the SIP call has encouraged sources to install controls early. At the time of promulgating the NO<sub>x</sub> SIP call in 1998, EPA predicted that about 75 GW of SCR would be installed to meet the NO<sub>x</sub> SIP call compliance. To date, over 10 GW of SCR has been installed with some operating during the ozone season to achieve early reduction credits.