

# ELR

## NEWS & ANALYSIS

### New Source Review: Should It Survive?

by Arnold W. Reitze Jr.

The Clean Air Act's (CAA's) new source review (NSR) program has not been effective. Some of the worst emitters of air pollutants today were among the worst polluters when control of new source emissions by the CAA began in 1970.<sup>1</sup> Moreover, the program as applied to existing sources, despite its marginal successes, is characterized by uncertainty, complexity, vagueness concerning its requirements, and the potential high costs associated with unpredictable enforcement. Moreover, the discretionary power claimed by the government in the exercise of its power to implement NSR results in regulators having far more involvement in business decisionmaking than is necessary for an effective environmental protection program.

Since 1970, the U.S. Environmental Protection Agency (EPA) has been tasked with developing new source performance standards (NSPS) for industry classifications. The U.S. Congress when enacting new source requirements expected that air quality would improve as old sources were replaced by sources subject to NSPS.<sup>2</sup> This did not happen. Control of existing sources usually was left to the states, and unless they were subject to CAA regulations to improve air quality in nonattainment areas (NAAs), states often imposed few controls. Today, for areas that meet national ambient air quality standards (NAAQS), controls on existing facilities are often still minimal, although, as discussed later in the Article, this is changing. The economic benefits from not having to meet CAA requirements encouraged companies to keep facilities operating beyond their originally projected useful life.

If a new facility is constructed, NSPS rarely creates legal problems. It usually is not difficult to determine what is new, and the applicable requirements are set out in regulations created through notice-and-comment rulemaking. The program adds considerable time and money to the process of building a new source, but it works reasonably well. The definition of new sources, however, includes existing sources that are modified or reconstructed. It is frequently not obvious that a source is modified, and the rules used to determine NSPS applicability are not always easy to understand. If an existing source avoids becoming a modified or reconstructed source, it need not install costly air pollution controls because under the CAA new sources are controlled more stringently than existing sources. Thus, the challenge under the CAA is to perform the repairs and maintenance

necessary to keep a facility operating at an acceptable level without triggering NSPS requirements. The Federal Water Pollution Control Act (FWPCA)<sup>3</sup> has, since 1972, treated existing sources effluent discharge requirements only modestly less stringently than the requirements imposed on new sources.<sup>4</sup> For some industries, such as electric power plants, there is essentially no difference in the effluent discharge requirements for new and existing sources.<sup>5</sup> Thus, in the water pollution field there is not a pollution control-based incentive to keep old facilities alive.

NSPS have numerous weaknesses. They apply only after an industry-based regulation is promulgated. They often favor thermally inefficient plants, because emissions limits are based on heat input not on the amount of product produced.<sup>6</sup> They are based on emission rates per hour rather than on annual emissions. The regulations are difficult to update to keep pace with technological advances, and EPA, faced with resource constraints, has allowed many of them to become obsolete.

In 1977, to deal with widespread failure of states to achieve NAAQS, Congress enacted the CAA Amendments of 1977 that included new requirements for preconstruction permits for new or modified major stationary sources.<sup>7</sup> This program, known as NSR, includes two components. In areas that meet NAAQS, a prevention of significant deterioration (PSD) permit is required.<sup>8</sup> In areas that fail to meet NAAQS, an NAA/NSR permit is required.<sup>9</sup> The programs apply to each criteria pollutant, so an area can be a PSD area for some pollutants and an NAA for others.

The NSR program is based on site-specific requirements. This gives EPA and state environmental agencies substantially more discretionary power than under the prior NSPS program. The NSR permits are contracts between the government and the permit holder, and the terms of the contract are the result of the skill of the negotiators as well as the bargaining power of the parties. The government has great bargaining power and can prevent building or modifying sources by the terms it imposes on the private sector. However, rarely are permits for new sources the subject of litigation because applicants do not want projects delayed.<sup>10</sup> If a permit cannot be obtained under terms acceptable to an applicant its application will usually be withdrawn. After the

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1. Pub. L. No. 91-604, §4(a), 84 Stat. 1683 (1970).

2. *National Asphalt Pavement Ass'n v. Train*, 539 F.2d 775, 783, 6 ELR 20688 (D.C. Cir. 1976).

3. The FWPCA, as amended in 1977, is usually called the Clean Water Act (CWA).

4. See 40 C.F.R. pts. 400-424 (2003).

5. *Id.* pt. 423.

6. See *e.g., id.* pt. 60, subpt. Da.

7. Pub. L. No. 95-95 (Aug. 7, 1977).

8. CAA subch. 1, pt. C, 42 U.S.C. §§7470-7491 (pre-1990).

9. *Id.* pt. D, 42 U.S.C. §§7501-7508 (pre-1990).

10. TERRY DAVIES, *REFORMING PERMITTING 20* (Resources for the Future 2001).

private sector comes to an agreement with the permitting authority, which is usually the state, EPA can intervene and seek to impose additional more stringent standards, although this is not a common practice.<sup>11</sup>

The 1977 CAA Amendments<sup>12</sup> required a new regulatory program to be developed by EPA to implement the new law, but after the regulations were promulgated they had only modest impacts on private sector decisions. Industry has the same strong incentive to keep existing facilities operating to avoid the cost of constructing a new facility as it has under the NSPS program, but changes in the applicable requirements makes it more difficult to perform needed maintenance while avoiding government attention that would result in being considered a modification that imposes costly NSR requirements. Avoiding NSR, however, was aided by the absence of an effective method for EPA or the states to obtain information about potential modifications. Moreover, enforcement of NSR requirements did not appear to be a high priority of EPA. Thus, industry was able to keep facilities operating with little interference from environmental agencies.

The status quo began to change in 1990 with the *Wisconsin Electric Power Co. (WEPCO) v. Reilly*<sup>13</sup> decision by the U.S. Court of Appeals for the Seventh Circuit. The court held that a life extension project for an electric power plant that cost at least \$70.5 million was not routine, but rather was a modification requiring compliance with the NSR program.<sup>14</sup> One of the exceptions from NSR requirements is for routine maintenance, repair, and replacement,<sup>15</sup> but the court held that the action did not meet the regulatory definition. The *WEPCO* decision put the business community on notice that extreme rehabilitation efforts could be considered a modification triggering NSPS and/or NSR. However, most existing sources continued to avoid these requirements.

On November 17, 1998, the bomb dropped in the form of EPA's *NSR Guidance*.<sup>16</sup> The document stated that the NSR programs are a means to terminate the benefits given to existing sources that were grandfathered from the need to comply with CAA requirements promulgated after they were built. If a source makes a change in its plant or operations that increase emissions, NSR requirements will be imposed. The regulatory exception for routine maintenance, repair, and replacement (RMRR) will narrowly be construed to limit its use. Violations of operating permits exposes the source to the usual civil penalties, but now may also require compliance with NSR, including installing the current level of NSR control technology.

On November 3, 1999, EPA initiated NSR enforcement actions against seven private electric utilities including the

Tennessee Valley Authority.<sup>17</sup> Many other sources subsequently received an EPA-issued notice of violation (NOV), or were sued.<sup>18</sup> At least 24 cases were settled with consent decrees by the end of 2003. The few litigated cases did not go well for industry.<sup>19</sup> Industry wanted relief.

On December 31, 2002, EPA promulgated a final NSR rule on certain aspects of the program and proposed a rule dealing with what is RMRR.<sup>20</sup> This final rule deals with five aspects of NSR: (1) baseline emissions determinations; (2) the use of actual-to-future actual methodology; (3) the use of plantwide applicability limitations (PALs); (4) new rules for clean units; and (5) an exclusion from NSR requirements for pollution control projects (PCPs).

The changes in how baseline emissions are determined makes little sense and has the potential for a serious reversal of progress made under the CAA. Under the prior rule the baseline was usually the plantwide average of emissions for the two most recent years. Under the 2002 rule, existing emissions units, other than electric utilities, may use the emissions from the worst 24 months in the past 10 years. Electric utilities may only use the past five years.<sup>21</sup> Because of the overall downward trend in emissions over the past decade, industry potentially will be able to increase emissions without triggering NSR because it has the right to select higher emission base years, although this potential increase is limited by other CAA programs which are discussed later in the Article.

The other changes in the 2002 final rule represent useful reforms that attempt to balance the needed efforts to improve air quality with the need to allow managers to effectively run their operations. The change to actual-to-projected actual methodology is long overdue. It is the test that has been used for electric utilities since 1992 regulatory changes were made to comply with the *WEPCO* decision. These changes should help avoid the unfairness created by basing emissions projections on an assumed operation of 24 hours a day for every day of the year by existing plants with no reasonable expectations that such operations will occur. The actual-to-potential test will continue to be used for new units.<sup>22</sup>

PALs involve a cap on actual emissions. If a facility monitors all of its emissions and stays below its cap, it can alter the facility or individual emissions units without first obtaining an NSR permit or going through a netting review.<sup>23</sup>

11. See, e.g., *Alaska Dep't of Env'tl. Conservation v. EPA*, 124 S. Ct. 983, 34 ELR 20012 (2004).

12. Pub. L. No. 95-95, 91 Stat. 735 (Aug. 7, 1977).

13. 893 F.2d 901, 20 ELR 20414 (7th Cir. 1990).

14. *Id.* at 912.

15. 40 C.F.R. §§51.165(a)(1)(v)(1)(c), 51.166(b)(2)(iii) (2003); see Approval and Promulgation of Implementation Plans, Prevention of Significant Deterioration of Air Quality, 40 C.F.R. §52.21(b)(2)(iii) (2002).

16. U.S. EPA, GUIDANCE ON THE APPROPRIATE INJUNCTIVE RELIEF FOR VIOLATIONS OF MAJOR NEW SOURCE REVIEW REQUIREMENTS (1998) [hereinafter U.S. EPA, NSR GUIDANCE].

17. Pamela Najor, *House Panel Seeks Answers From EPA on Enforcement Actions on Electric Utilities*, Daily Env't Rep. (BNA), Mar. 8, 2000, at A-1. EPA also instituted NSR-based enforcement action against petroleum refiners. See Pamela Najor, *Three Refiners Settle Alleged NSR Violations, Will Install \$400 Million in Emission Controls*, Daily Env't Rep. (BNA), Mar. 23, 2001, at A-2.

18. See, e.g., Larry B. Parker & John E. Blodgett, *Air Quality and Initiative to Increase Pollution Controls*, Cong. Research Serv. Rep. at 6 (Mar. 9, 2001); see also Steve Cook, *Southern Company Emissions Targeted in Campaign by Environmental Groups*, Daily Env't Rep. (BNA), Apr. 4, 2001, at A-8.

19. See, e.g., *United States v. Ohio Edison Co.*, 276 F. Supp. 2d 829, 33 ELR 20253 (S.D. Ohio 2003).

20. Prevention of Significant Deterioration (PSD) and Nonattainment New Source Review (NSR); Baseline Emissions Determination, Actual-to-Future Actual Methodology, Plantwide Applicability Limitations, Clean Units, Pollution Control Projects, 67 Fed. Reg. 80185 (Dec. 31, 2002) [hereinafter PSD/NSR regs. of Dec. 31, 2002].

21. See 40 C.F.R. §51.166(b)(47).

22. PSD/NSR regs. of Dec. 31, 2002, *supra* note 20, at 80188.

23. *Id.* at 80207.

This should provide more flexibility to business managers, but a high level of transparency and effective monitoring will be required to protect air quality.

New rules are provided to identify the emissions units that qualify for designation as “clean units.” If a unit goes through a major NSR and installs the best available control technology (BACT) in PSD areas or lowest achievable emissions rate (LAER) in NAAs, changes at the facility can be made for 10 years without triggering an additional NSR.<sup>24</sup> This relief is available only if the changes do not alter the physical or operational characteristics that formed the basis for the BACT or LAER determination.

The regulatory change to exempt the installation of PCPs from NSR requirements should be noncontroversial. Automatic exclusion only occurs for listed environmentally beneficial technologies<sup>25</sup> and only if the installation will not cause or contribute to a violation of a NAAQS or a PSD increment or adversely impact an air quality-related value (AQRV), such as visibility.<sup>26</sup> PCPs not listed also may qualify for the exclusion after a case-specific review by the permitting authority.<sup>27</sup>

On October 27, 2003, EPA promulgated its final rule on the RMRR exclusion.<sup>28</sup> Pursuant to the 2003 rule, replacement RMRR activities are excluded from NSR if they meet specified criteria. Facility owners or operators may, as an alternative, use existing case law to determine if an activity is excluded from NSR requirements.

An equipment replacement activity automatically is excluded from NSR requirements if: (1) existing components of a process unit are replaced with identical or functionally equivalent components; (2) the capital costs plus related repair and maintenance costs do not exceed 20% of the replacement value for the entire process unit; (3) the replacement activity does not change the basic design parameter of the process unit; and (4) the replacement action does not cause the unit to exceed any emission limits.<sup>29</sup> The replacement value may be determined by the source based on the replacement cost, invested cost, the insurance value of complete replacement of a process unit, or another generally accepted accounting procedure.<sup>30</sup>

The new RMRR rule is designed to allow management to make the rapid changes necessary to stay competitive while ensuring environmental protection. It may be used to avoid triggering NSR while spending substantial sums. The 20% rule, however, should help keep old, dirty plants operating. The RMRR rule calls into question some of the assumptions used by EPA in bringing enforcement actions for alleged NSR violations. EPA’s implementation of this rule was stayed by the U.S. Court of Appeals for the District of Columbia (D.C.) Circuit on December 24, 2003.<sup>31</sup>

## Alternatives to NSR

The complexities of NSR and its adverse impact on the business community caused by its application to modifications could be avoided while still protecting the environment by utilizing other provisions of the CAA more effectively. At the same time, it should be understood that NSR applies to all major sources, but many potentially available CAA programs have exceptions that allow sources to escape air pollution controls. For example, a modification could trigger NSPS but these requirements apply only to sources in industrial classifications regulated by 40 C.F.R. part 60. In addition, NSPS modifications are those that increase a facility’s hourly emission rate; operating more hours and increasing annual emissions does not trigger NSPS. Moreover, these requirements apply only to “reconstruction” if replacement components cost more than 50% of the fixed capital cost required to construct a comparable new facility.

Sources may be subject to requirements of a state implementation plan (SIP), but if a source is located in a PSD area it may be subject to few requirements, yet its emissions can be adversely impacting downwind areas. If such areas are in a different state, protection from air pollution will depend on the effectiveness of programs discussed below that are still in the early stages of implementation.

Maximum achievable control technology (MACT) standards that are applicable to hazardous air pollutants pursuant to §112 may impose limits on emissions, but they apply only to the subset of volatile organic compounds (VOCs) or particulate emissions that are listed as hazardous. The acid rain sulfur dioxide (SO<sub>2</sub>) program in subchapter IV of the CAA applies primarily to electric utilities and not to the many industrial sources subject to NSR. The nitrogen oxides (NO<sub>x</sub>) SIP Call and other similar programs, discussed below, apply to a limited number of sources in about one-half of the states. This brief discussion of some major stationary source air pollution control requirements demonstrates that any effort to terminate the NSR program should be done carefully to assure facilities do not escape CAA regulation.

A better approach to protecting air quality would be an inclusive cap-and-trade system. This approach is made possible by advances in monitoring technology that allows emissions to be quantified accurately, which is a prerequisite to an effective trading program. The first broad cap-and-trade program was created to control SO<sub>2</sub> by subtitle IV of the CAA Amendments of 1990. In Phase I of the program, which ended on January 1, 2000, approximately 263 units at 110 power plants located in 21 eastern and midwestern states were required to cap their SO<sub>2</sub> emissions at 2.5 pounds (lbs.) multiplied by the average annual fuel use in million British thermal units (Btus) for 1985, 1986, and 1987.<sup>32</sup>

On January 1, 2000, Phase II began. About 700 fossil-fueled electric power plants in the 48 contiguous states and the District of Columbia are covered.<sup>33</sup> SO<sub>2</sub> emissions are reduced in Phase II to 1.2 lbs./millimeter (mm) Btus of heat

24. *Id.* at 80189, 80222.

25. *Id.* at 80234, tbl. 2.

26. *Id.* at 80236.

27. *Id.* at 80235 (codified at 40 C.F.R. §51.165(a)(1)(xxv) (2002).

28. Prevention of Significant Deterioration (PSD) and Non-Attainment New Source Review (NSR): Equipment Replacement Provision of the Routine Maintenance, Repair and Replacement Exclusion, 68 Fed. Reg. 61248 (Oct. 27, 2003).

29. *Id.* at 61252.

30. *See id.* at 61277.

31. *New York v. EPA*, No. 03-1380 (D.C. Cir. Dec. 24, 2003).

32. *See* CAA §404(e).

33. Acid Rain Allowance Allocations and Resources, 57 Fed. Reg. 29940, 29944 (proposed July 7, 1992) (to be codified at 40 C.F.R. pts. 72, 73); Acid Rain Program: Permits, Allowance System, Continuous Emissions Monitoring, and Excess Emissions, 56 Fed. Reg. 63002, 63152-76 (proposed Dec. 3, 1991).

input<sup>34</sup> with an overall national cap of 8.95 million tons per year.<sup>35</sup> This cap is 10 million tons per year of SO<sub>2</sub> lower than 1980 emission levels.<sup>36</sup> SO<sub>2</sub> emissions from the 2,792 units subject to Phase II in 2001 were 10.6 million tons, which was one-third lower than 1990 emissions.

The SO<sub>2</sub> trading program is a useful model for a program that could be a substitute for NSR permitting. However, it would have to be expanded to include all significant sources of SO<sub>2</sub> emissions including smelters, iron and steel mills, acid plants, coke oven batteries, primary and secondary metal production plants, chemical process plants, petroleum refineries, storage and transfer facilities, sulfur recovery plants, and fuel conversion plants. A comprehensive cap-and-trade program should include the criteria pollutants or their precursors. The efforts to use a cap-and-trade program for the control of NO<sub>x</sub>, primarily from electric utilities, indicates the complexity of this program will increase as additional pollutants and industries are added to a cap-and-trade program. Moreover, implementing the SO<sub>2</sub> control program was aided by the availability of inexpensive low sulfur coal. The control of other criteria pollutants, such as NO<sub>x</sub>, will be more difficult and expensive.

NO<sub>x</sub> emissions have been the subject of various efforts to cap regional emissions with emissions trading being used to supplement the program. On September 27, 1994, the 11 northeastern states, the District of Columbia, and northern Virginia that are in the Ozone Transport Region signed a memorandum of understanding (MOU) to have the Ozone Transport Commission (OTC) develop a regional strategy to control stationary sources of NO<sub>x</sub> emissions.<sup>37</sup>

The OTC NO<sub>x</sub> emissions trading program began in 1999, and involves the northeastern OTC states, but the District of Columbia and Virginia do not participate.<sup>38</sup> Affected sources were allocated 195,401 allowances in 2000; each allowance permits a source to emit one ton of NO<sub>x</sub> during the May through September ozone season. The 2003 budget was 142,874 tons of NO<sub>x</sub>. This program was credited with producing an 11% reduction in NO<sub>x</sub> below allowable levels in 2000.<sup>39</sup> The NO<sub>x</sub> budget program is a requirement that is in addition to the "Phase I and II" NO<sub>x</sub> reduction requirements imposed by the CAA's subchapter IV Acid Rain Program. In the year 2000, there were 937 affected sources, i.e., large electric power plant units and industrial boilers, subject to this NO<sub>x</sub> budget program.<sup>40</sup>

On November 7, 1997, EPA offered to develop and administer a multistate NO<sub>x</sub> program in its proposed SIP Call rulemaking.<sup>41</sup> A NO<sub>x</sub> budget program was included in the

SIP Call final rule promulgated on October 27, 1998, which is codified at 40 C.F.R. part 96.<sup>42</sup> When issued in 1998 the rule required 22 eastern states and the District of Columbia to reduce NO<sub>x</sub> emissions. The SIP Call does not apply to Maine and New Hampshire, which are subject to the OTC NO<sub>x</sub> budget program. EPA promulgated a model trading program that states may select for their SIP submittal to achieve over 90% of the emissions reductions required under the transport rulemaking.

The SIP Call-based NO<sub>x</sub> budget program employs a cap on total emissions in the regional area based on an emission limit of 0.15 lb./mm Btu for large combustion sources.<sup>43</sup> EPA has SIP approval criteria that must be met.<sup>44</sup> States, regardless of whether they adopt the model NO<sub>x</sub> budget trading programs, must adopt appropriate rules and submit them as part of a SIP revision.<sup>45</sup> However, each state is to select the sources it will regulate and the regulations it will impose to achieve its NO<sub>x</sub> budget.<sup>46</sup> Gas and oil-fired boilers should easily be able to operate at NO<sub>x</sub> levels below 0.15 lb./mm Btu, but coal-fired boilers generally will need to use selective catalytic reduction (SCR) to meet this emission level.

On May 25, 1999, the D.C. Circuit issued an indefinite stay of the deadline for submitting plans pursuant to the SIP Call of October 27, 1998.<sup>47</sup> On December 17, 1999, EPA responded to CAA §126 petitions by northeastern states with findings that imposed significant NO<sub>x</sub> reduction requirements on 392 power plants and other stationary sources in 12 states and the District of Columbia. On January 18, 2000, EPA promulgated an emissions trading rule, similar to the SIP Call, pursuant to CAA §126, which is codified at 40 C.F.R. part 97.<sup>48</sup> On March 2, 2000, EPA revised the emissions budgets of the states subject to the NO<sub>x</sub> SIP Call.<sup>49</sup> This revision was further modified by the D.C. Circuit on March 3, 2000, that limited the NO<sub>x</sub> SIP Call to 19 states and the District of Columbia, which is more states than are subject to the §126 petition, but includes all states subject to the §126 rule.<sup>50</sup> On May 15, 2001, the D.C. Circuit upheld most aspects of the §126 rule establishing a NO<sub>x</sub> budget for the 12 states and the District of Columbia.<sup>51</sup> On June 8, 2001, the D.C. Circuit upheld most of EPA's NO<sub>x</sub> SIP Call but ordered the Agency to reconsider the factors it used to devise state

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*Comparing Apples to Oranges? EPA Faces Difficulties in Bringing to Fruition an Emissions Trading Program for NO<sub>x</sub>*, 6 ENVTL. LAW 603 (2000).

34. CAA §405(b)(1), 42 U.S.C. §7651d(b)(1).

35. *Id.* §403(a)(1), 42 U.S.C. §7651b(a)(1).

36. *See* CAA §405.

37. Michael R. Miner, *A Market-Based Solution to Ozone Nonattainment: New Jersey's Nitrogen Oxide Budget Program*, 4 ENVTL. LAW 891, 892 (1998).

38. Steve Cook, *EPA, Northeast Group Claims Reductions in Emissions Due to NO<sub>x</sub> Trading Program*, Daily Env't Rep. (BNA), June 15, 2001, at A-1.

39. *Id.*

40. U.S. EPA, 2000 OTC NO<sub>x</sub> BUDGET PROGRAM COMPLIANCE REPORT 1 (2001).

41. Finding of Significant Contribution and Rulemaking for Certain States in the Ozone Transport Assessment Group Region for Purposes of Reducing Regional Transport of Ozone, 62 Fed. Reg. 60318, 60371 (proposed Nov. 7, 1997). *See also* Jamie Larmann,

42. Findings of Significant Contribution and Rulemaking in Section 126 Petitions for Purposes of Reducing Interstate Ozone Transport, 63 Fed. Reg. 56291 (proposed Oct. 21, 1998).

43. Finding of Significant Contribution and Rulemaking for Certain States in the Ozone Transport Assessment Group Region for Purposes of Reducing Regional Transport of Ozone, 63 Fed. Reg. 57356, 57457 (Oct. 27, 1998) (codified at 40 C.F.R. pt. 96 (2002)).

44. *Id.* at 57458.

45. *Id.*

46. *Id.*

47. *Michigan v. EPA*, No. 98-1497 (D.C. Cir. May 25, 1999).

48. Findings of Significant Contribution and Rulemaking on Section 126 Petitions for Purposes of Reducing Interstate Ozone Transport, 65 Fed. Reg. 2674 (Jan. 18, 2000).

49. Technical Amendment to the Finding of Significant Contribution and Rulemaking for Certain States for Purposes of Reducing Regional Transport of Ozone, 65 Fed. Reg. 11222 (Mar. 2, 2000) (codified at 40 C.F.R. pt. 51 (2002)).

50. *Michigan v. EPA*, 213 F.3d 663, 30 ELR 20407 (D.C. Cir. 2000).

51. *Id.*

emissions budgets.<sup>52</sup> The D.C. Circuit ruled that the three-year compliance deadline that began when EPA made a “finding of significant contribution” was being “tolled” for affected electric-generating units (EGUs). Non-EGU sources remained subject to a 2003 compliance date.

On February 14, 2002, President George W. Bush proposed the Clear Skies Initiative (CSI). The proposal would reduce 2002 SO<sub>2</sub> emissions 73% by 2018; it would cut NO<sub>x</sub> emissions 67% by 2018; and it would cut mercury emissions 69% by 2018. It would accomplish this by using federally enforceable emission limits (or caps) for SO<sub>2</sub>, NO<sub>x</sub>, and mercury emitted from fossil-fueled electric power generators larger than 25 megawatts (MW). The president’s proposal was introduced in Congress in 2002. An important part of the bill was the provision to remove much of the NSR requirements for existing plants. A bill introduced by Sen. Thomas Carper (D-Del.) had more stringent emission reduction requirements, but also included NSR relief.

In 2003, the effort to enact the CSI continued. The CSI would create a two-phase national SO<sub>2</sub> reduction program (2010 and 2018). In the West, it would essentially codify the Western Regional Air Partnership (WRAP) SO<sub>2</sub> backstop cap-and-trade program that would come into effect if the WRAP states did not meet their 2018 emissions targets. NO<sub>x</sub> reductions would be handled with two caps: (1) zone 1 would include 31 eastern states and eastern Texas; and (2) zone 2 would include the western WRAP states as well as Kansas, Nebraska, Oklahoma, and western Texas. California would not be subject to CSI requirements because it does not have significant emissions from coal-fired power plants. Power plants would not have to go through the NSR program for modifications. New power plants would have to meet NSPS, not cause or contribute to NAAQS violations, and they would have to meet additional requirements if located within 50 kilometers of a Class I area.

Under the CSI legislation the benefits of avoiding many CAA requirements go to utilities and existing industrial facilities that generate 25 MW or more and sell more than one-third of their electricity. Other industries, including 170 cogenerators, seek to become beneficiaries of the legislation. Because of the opposition of many Democrats, CSI was not enacted in 2003. Another bill (S. 843) introduced by Senator Carper also failed. This bill would have achieved greater emission reductions because it contained both earlier compliance dates and lower emissions caps, but at twice the cost of the CSI legislation.

On January 30, 2004, EPA promulgated a proposed rule to accomplish the CSI goals administratively.<sup>53</sup> The Interstate Air Quality rule is designed to implement the 1997 changes to the NAAQS that created a fine particulate matter with a diameter of 2.5 microns or less (PM<sub>2.5</sub>) standard and an eight-hour ozone standard. The proposal would reduce SO<sub>2</sub> by 3.6 million tons, or about 40%, of 2002 emissions from electric-generation units in 29 states and the District of Columbia by 2010 and another 2 million tons would need to be cut by 2015 to achieve about a 70% reduction. NO<sub>x</sub> emissions would be cut by 1.4 million tons by 2010 and by 1.7

million tons by 2015, which is about a 65% reduction. Unlike the CSI, this program would be implemented by states, who would be assigned tradable emission allowances by EPA. The emission allowances would be distributed to electric power plants by the state. The system is similar to the NO<sub>x</sub> SIP Call program being implemented by EPA to reduce NO<sub>x</sub> emissions in 19 states and the District of Columbia, but it is more stringent and applies in more states.

## Conclusion

The present NSR program works reasonably well in lowering pollution from new facilities by requiring the installation of state-of-the-art technology, although the program can add one year or more to the review of a proposed modification of a facility and can cost over \$1 million. However, for existing facilities, the pre-2002 program protects neither the legitimate needs of business or the environment. From 1997 to 1999, only about 850 NSR permits were issued for about 17,000 facilities that are potentially subject to NSR.<sup>54</sup> This may be due to widespread failure to obtain NSR permits or the careful use of netting to stay below the NSR threshold. Either way, significant environmental improvement is not occurring from the NSR program. Nevertheless, NSR can affect the competitiveness of “fast-to-market” industries or those with short product cycles, or that have large-scale batch production, such as electronics, pharmaceuticals, and specialty chemicals. As areas continue to fail to meet NAAQS, the high polluting grandfathered sources may be responsible for more Draconian restrictions being imposed on even relatively clean facilities.

The new NSR regulations affect only a portion of the air pollution control program, but hold promise for increasing managerial discretion and saving time and money. At the same time, owners and operators of stationary sources will be able to more easily avoid NSR and the regulations may reduce the government’s ability to enforce the CAA’s provisions. They also may limit the public’s ability to participate in the process. One of the major weaknesses of the prior NSR program was the absence of requirements for sources to notify the state about changes with the potential to trigger NSR. This problem does not appear to have been effectively addressed.

Whether the new NSR program will work will depend on how the additional rules and guidance documents are drafted and how the rule ultimately is implemented. EPA will have to issue additional regulations and guidance documents. The states will have to change their regulations to conform to the NSR rules, and they are free to issue rules more restrictive than the federal rules. During the transition period, enforcement actions are likely to depend primarily on EPA’s interpretation of the applicable NSR law. This means that the regulated community and their attorneys must continue to be vigilant if they wish to avoid the involuntary imposition of NSR requirements, while the public must be concerned with keeping the process of modifying sources as transparent as possible.

The NSR program is only one part of the CAA’s program to control emissions from major facilities. Whether or not facilities are modified they are subject to increasingly stringent emission standards. The CAA imposes “bump up” re-

52. *Appalachian Power Co. v. EPA*, 249 F.3d 1032, 31 ELR 20635 (D.C. Cir. 2001).

53. Rule to Reduce Interstate Transport of Fine Particulate Matter and Ozone (Interstate Air Quality Rule), 69 Fed. Reg. 4566 (Jan. 30, 2004).

54. *Comments of EPA Administrator Mike Leavitt to Edison Electric Institute*, 35 Env’t Rep. (BNA) 147 (Jan. 16, 2004).

quirements on areas that fail to meet NAAQS, which require states to revise their SIPs to reduce emissions. Existing coal-fired electric utility units are subject to technology-based requirements pursuant to CAA §407. Major stationary sources are subject to the visibility protection program being implemented pursuant to CAA §§169A and 169B. New and existing sources increasingly are subject to emission standards for hazardous air pollutants. The implementation of the PM<sub>2.5</sub> standard and the eight-hour ozone standard will make more areas of the nation NAAs and require SIP revisions to reduce emissions. Thus, to focus solely on the need to increase the stringency of the NSR is to ignore the major changes that are occurring in implementation of the CAA.

Ultimately, however, it is the replacement of existing facilities with fundamentally cleaner plants that will improve air quality. Over one-half the electricity generated in the United States comes from coal-burning plants, most of which were built between 1950 and 1980. Congress did not intend for NSR to confer an economic advantage of unlimited duration for the worst polluters. Under the NSR pro-

gram, thermally inefficient existing plants are given an advantage because emission limitations are based on heat input not on the amount of electricity generated. Moreover, the NSR program provides little incentive to use nonpolluting methods of generating electricity. If emission limitations for the electric power industry were based on MW hours of electricity produced, the CAA would help shape the decisions concerning how electricity is produced.

The best way to achieve the phaseout of old plants is to help the marketplace work. A cap-and-trade program should be imposed on all industries on either a regional or national basis. Such a cap-and-trade approach is part of existing programs aimed at reducing emissions from the electric power industry, but it should be based on the amount of product produced to encourage the use of thermally efficient methods of production. This approach is far better than the facility-by-facility litigation presently being used by EPA to create NSR law. It has the added benefit of avoiding the difficulties inherent in trying to distinguish between the physical and operational changes that result in the imposition of NSR from those that do not.