

**A Primer on New Source Review**  
**By STAPPA/ALAPCO for ECOS**  
**September 9, 2005**

**Q: What is New Source Review?**

A: New Source Review (NSR) was enacted by Congress in 1977 in order to preserve air quality in clean areas that had attained the national ambient air quality standards, and to achieve faster progress toward clean air in nonattainment areas.

**Q: Which facilities are subject to New Source Review?**

A: Construction of new facilities and modifications of certain existing facilities are subject to NSR. In attainment areas, the prevention of significant deterioration program requires new and modifying facilities to obtain preconstruction permits, to install best achievable control technology (BACT), and to protect against local impacts. In nonattainment areas, new facilities, and modifying facilities must obtain preconstruction permits, install pollution controls that will result in the lowest achievable emissions rate (LAER), obtain emissions offsets, and protect against local impacts.

**Q: What triggers NSR requirements when an existing facility makes a modification?**

A: NSR is triggered when an existing facility makes a physical change that results in a significant net emissions increase.

**Q: How is a significant net emissions increase measured?**

A: The increase is measured by determining a process unit's baseline emissions and then calculating the amount that will be emitted after the change, or upgrade. Much of the controversy about NSR over the years has been about how to calculate an increase in emissions for a process unit that is making a modification. A change in either the baseline or the emissions increase side of the calculation can mean the difference between triggering—or not triggering—NSR permitting and installation of pollution control equipment.

**Q: How does this calculation work?**

A: Here is an example of how the calculation works: EPA regulations require NSR when a modification results in an increase of 40 tons per year of sulfur dioxide. This amount would be the “significant net emissions increase” of that pollutant. A unit is being upgraded, or modified, by replacement of worn-out equipment. The baseline actual emissions for the unit could be calculated using the average

annual emissions for the last two years, or, again using a hypothetical example, 120 tons. The unit's full potential to emit after the change is 170 tons per year. Subtraction of the past actual emissions from the future potential emissions results in a 50-ton-per-year increase, thereby triggering NSR permitting and pollution control requirements. However, the same facility making the same change could reach a different result if it were allowed by EPA regulations to use any two consecutive years in the last 10 to establish baseline emissions. Again, using the hypothetical example, it could chose as its baseline a consecutive two-year period in which its emissions had been greater, say 135 tons per year. And, again if allowed by EPA regulations, it could choose a lower figure for its future emissions, such as an amount projected to be its actual emissions rather than its full potential to emit, say 155 tons per year. In such a case, the significant net increase in emissions would be only 20 tons per year—and no NSR requirements would apply.

**Q: Are there any exemptions from NSR requirements?**

A: Yes. There are several exemptions, the most significant of which is the “routine maintenance, repair, and replacement” exemption, which allows “routine maintenance” activities to be performed without NSR requirements applying.

**Q: What are the 2002 NSR reforms?**

A: Over the years, some industry groups felt that NSR requirements were overly burdensome and prevented them from making efficiency-enhancing improvements to their facilities, which, they said, would be undertaken but for the need to comply with NSR. Public health and environmental groups, on the other hand, pointed to the quantifiable health benefits that were achieved by reductions in emissions, and noted that major reductions were attributable to NSR. All stakeholder groups agreed, at any rate, that NSR should be simplified and made more flexible. Following stakeholder meetings throughout the 1990s, and proposed—though not finalized—reform regulations in 1996, efforts to reform NSR were abandoned. On December 31, 2002, however, EPA promulgated a package of NSR reforms. These were:

- **Baseline changes** allow a source to look back and select any 24-month period over the past 10 years to establish an emissions baseline—as opposed to pre-reform use of the last two years as most representative of normal operations
- **Changes in calculating post-change (upgrade) emissions** allow the source to estimate future actual emissions—as opposed to pre-reform use of total emissions potential after the change

- **Plantwide Applicability Limits (PALS)** allow a source to impose a plantwide cap on a facility—as opposed to specific emissions limitations for process units
- **Clean Unit Exclusion** allows a source to exempt a unit from NSR for a 10-, and in some cases 15-year period, if BACT or LAER has been installed, without regard to air quality or advances in technology
- **Pollution Control Project (PCP)** allows projects that provided an environmental benefit, as determined by the source, to be exempt from NSR

**Q: What deadlines do states have to meet the 2002 NSR reforms?**

A: The 13 states that have been delegated the federal program were required to adopt the reforms by March 3, 2003. A few have returned the NSR program for major source permitting to EPA. “SIP states,” which enact their own programs, are required to adopt the reforms by January 2, 2006. Some of these states are adopting EPA’s reforms without much change; some are making adjustments using the STAPPA/ALAPCO *Menu of Options*; and some are waiting for EPA guidance in the wake of the decision to the rule challenge, which has left aspects of the reforms unclear.

**Q: What is the status of the legal challenge to the 2002 rule?**

A: On December 31, 2003, 14 states filed suits in DC Circuit Court of Appeals alleging that the reform rules were unlawful. Eight states also intervened on behalf of EPA. The decision was rendered on June 24, 2005:

- Provisions on calculating baseline, the “actual-to-projected-actual” emissions test, and PALS upheld
- Clean Unit Test and PCP vacated as unlawful
- Lack of record-keeping remanded to EPA
- Court did not rule on whether EPA precluded adoption of more stringent rules by states, deeming such determination “unripe,” but invited state litigants to resubmit “old NSR” rules to EPA as test cases

**Q: What is the Equipment Replacement Rule (ERP)?**

A. The ERP, promulgated October 27, 2003, carved out a large exception from NSR by allowing facilities to replace existing equipment with new equipment costing

up to 20 percent of current value of the entire process unit without NSR permitting and installation of pollution controls. Such changes would be exempt from NSR as “routine maintenance, repair, and replacement.”

**Q: What is the status of the challenge to the Equipment Replacement Rule?**

A: Fourteen states filed suit against EPA in the DC Circuit Court of Appeals claiming the rule was unlawful under the Clean Air Act; nine states intervened on behalf of EPA. A stay of the rule was granted by the Court on December 24, 2003, and environmental groups petitioned on the same day for administrative reconsideration of the rule. In June 2005, EPA completed its reconsideration and made no changes in the rule. Now that the reconsideration has been completed, the judicial case in the DC Circuit is starting up again and a briefing schedule is in effect. The rule continues to be stayed.

**Q: What is the status of the NSR enforcement cases?**

A: Eleven cases have been filed by EPA against coal-fired power plants for making modifications of generating units without NSR permitting. Most were filed in 1999; one was filed in 2004. The following cases have been settled:

- *U.S. v. Tampa Electric* [settled 2000; reductions of 85 percent by 2010]
- *U.S. v. Southern Indiana Gas & Electric* [settled 2003; annual reductions of 10,600 tons of NO<sub>x</sub> and SO<sub>x</sub>]
- *U.S. v. Illinois Power and Dynegy Midwest* [settled in 2005; annual reductions of 54,000 tons of NO<sub>x</sub> and SO<sub>x</sub>]
- *U.S. v. Ohio Edison* [settled 2005; annual reductions of 134,000 tons of NO<sub>x</sub> and SO<sub>x</sub>]

In two cases, EPA has received adverse decisions—*U.S. v. Alabama Power* and *U.S. v. Duke Energy*. One case is proceeding to trial—*U.S. v. Cinergy* in February 2006. *U.S. v. American Electric Power Service Corp.* was tried in July, and the decision is pending. In *U.S. v. Eastern Kentucky Power Cooperative*, a trial date of March 2006 has been scheduled, and the parties may be holding settlement discussions. EPA has not filed a new case against the Tennessee Valley Authority following an adverse decision by the Eleventh Circuit Court of Appeals holding unconstitutional the order of EPA’s Environmental Appeals Board on the grounds that it (and all of EPA’s administrative orders) did not provide for adequate due process.

**Q: What are the significant issues in these cases and how are the courts resolving them?**

A: One main issue has emerged from the enforcement cases, with the decisions more or less evenly split. The question is: how should significant increases in emissions be measured when a modification to a process unit is made? In *Ohio*

*Edison*, the Court decided, in addressing a summary judgment motion, that increases in emissions resulting from modifications should be measured by comparing actual annual emissions before and after the change. In a decision on summary judgment rendered August 29, 2005, the court in the *Cinergy* case issued an opinion adopting the *Ohio Edison* approach. On the other hand, the Fourth Circuit Court of Appeals affirmed the district court's opinion on June 15, 2005 in *Duke Energy*, ruling that only when a modification results in an increase in the hourly rate of emissions does NSR apply. In such a case, a plant could significantly increase its hours of operation following modification of a process unit without being subject to NSR—as long as there was no increase in the hourly rate of emissions. In the *Alabama Power* case, decided on June 3, 2005, the court arrived at the same conclusion.

**Q: What action may EPA take now?**

A: The current speculation is that EPA may develop a rule that reflects the *Duke Energy* approach to NSR applicability. That is, NSR would not apply to electric generating units at power plants unless a modification resulted in an increase in the hourly rate of emissions. This could apply only in the states that are subject to the Clean Air Interstate Rule, or it could apply nationwide.

**Q: What steps should states take now?**

A: States should revise and submit NSR reforms by January 2, 2006, or by a revised deadline that EPA determines. States are free to adopt their own NSR reforms, provided they are “as stringent as” the federal rules. The STAPPA/ALAPCO *Menu of Options* is available. States may also choose to submit their SIPs to EPA without Clean Unit and PCP provisions. They may choose to develop their own recordkeeping requirements or wait for EPA for further guidance. Whatever course they take, States should monitor closely outstanding policy, legal, and technical issues relating to EPA's NSR reforms.