



Backgroundunder

Executive Summary

No. 1518

February 21, 2002

WHY THE NEW SOURCE REVIEW PROGRAM NEEDS REFORM: A PRIMER ON NSR

DANA JOEL GATTUSO

The Bush Administration is expected to introduce much-needed reforms of the New Source Review (NSR) program, the federal program that controls air emissions from industrial facilities. The Administration's ability to restructure the program and reform its perverse incentives will determine how rapidly the nation can meet its growing energy needs while controlling air pollution.

NSR was enacted in 1977 under the Clean Air Act to control air pollutants from newly built or reconstructed industrial facilities, including electric utilities, oil refineries, paper mills, and steel mills. The law requires new or reconstructed plants to go through extensive permitting requirements and install top-technological pollution control equipment. Because Congress recognized that applying these regulations to existing plants would be an extreme and unnecessary cost burden, the law was written to hold existing plants to NSR requirements at the time they underwent "major modifications"—defined under NSR as any change resulting in a "significant" increase in air emissions. Activities involving routine maintenance, repair, and replacement within the plant did not fall under the NSR requirements.

Under the Clinton Administration, however, the Environmental Protection Agency (EPA) adopted a new and extreme interpretation of the law, imposing NSR rules on modifications made by existing plants even if the changes actually decrease emissions, improve energy efficiency, or increase the safety of operations. Under this new application, companies would have little incentive to upgrade and modernize their plants or even make routine changes and repairs.

Among the adverse effects of the NSR program are the following:

- **Confusion and complexity.** New Source Review was mired in confusion and complexity even before the Clinton Administration expanded its reach. While the initial ruling is only 20 pages long, the EPA has released over

Produced by the
Thomas A. Roe Institute
for Economic Policy Studies

Published by
The Heritage Foundation
214 Massachusetts Ave., NE
Washington, DC
20002-4999
(202) 546-4400
<http://www.heritage.org>



This paper, in its entirety, can be found at: www.heritage.org/library/backgroundunder/bg1518es.html

4,000 pages of guidance documents and memos that detail and revise the requirements. In many cases, the newer documents contradict the agency's earlier guidance text, compounding the confusion.

- **Permitting delays and disruption in operations.** Facilities now wait one to three years while the EPA and/or states process their applications for construction permits, even though the EPA is required by statute to issue a permit within a year of the application. The new NSR interpretation would increase the number of permit reviews by the thousands for every industry, creating a permanent backlog. In the meantime, plants that need even the most basic repairs could shut down or suffer disruptions, with productivity and revenue losses rippling across industries that depend on them.
- **Adverse environmental impact.** Such a far-reaching program would have devastating effects on the environment, as modifications that improve energy efficiency and reduce industrial emissions would be delayed or even avoided altogether.
- **Diminished innovation.** Industries that otherwise would adopt state-of-the-art technologies to improve the plant's operation and reliability and consume less fuel would delay upgrades to avoid NSR—putting them at a competitive disadvantage in the global market.
- **Threatened energy supply.** Utilities could be forced to choose between avoiding modifications that improve operations—risking black-

outs and higher costs—or closing a facility for up to three years while the permit is being processed and technology installed. Limited sources of energy could have grave repercussions on the elderly, for example, who face severe health problems should they lose or try to conserve expensive heat in the winter or air conditioning in the summer. Moreover, oil supplies could be jeopardized since modifications to upgrade refineries also would be subject to exhaustive NSR rules. No refineries have been built since the 1970s, and many aging refineries have shut down, placing an enormous burden on remaining refineries to meet growing demands for petroleum.

Restructuring New Source Review. The Bush Administration, working with Congress, should end the perverse NSR incentive structure that discourages efficiency, safety, and environmental improvements in industry. To ensure that facilities do not increase air pollution as they expand or rebuild, the government should require facilities to meet an overall emissions cap after a fixed amount of time, rather than at the time a modification is made. Other market incentives should be introduced over time, such as allowing facilities to trade credits on emissions. Such an incentive-based approach relies on flexibility and accountability, not punitive and costly measures, to promote clean air.

—Dana Joel Gattuso is Washington liaison with the Bozeman, Montana-based Political Economy Research Center (PERC) and an adjunct scholar with the Washington, D.C.-based Competitive Enterprise Institute.

WHY THE NEW SOURCE REVIEW PROGRAM NEEDS REFORM: A PRIMER ON NSR

DANA JOEL GATTUSO

The Bush Administration will soon introduce much-needed reforms of the New Source Review (NSR) program. NSR, adopted in 1977 in an amendment to the Clean Air Act (CAA), was intended to regulate air pollution from new “sources” by requiring newly constructed facilities and old facilities undergoing “major modifications” to go through extensive permitting requirements and to install top-technological pollution control equipment.¹ But since 1996, the Environmental Protection Agency (EPA) has applied a new and extreme interpretation of the law, subjecting old and existing plants to the stringent NSR rules in cases where the modifications were not significant and where they had actually improved the safety of operations, increased energy efficiency, or reduced the emissions of the regulated air pollutants.

Congress intended the New Source Review program to target plants that were built after 1977; it exempted older ones, unless companies made extensive physical modifications to them. Congress

recognized when it enacted the program that to require existing plants to be retrofitted with the most up-to-date technological emissions controls would be an extreme, prohibitively costly, and unnecessary burden on industry.² Congress also recognized that it is “cheaper to install control technologies” at the time a plant is being constructed or extensively modified than “to retrofit old units.”³ It therefore intended that existing plants would be subjected to NSR at the time they underwent “major modifications,” defined under NSR as “any physical change or change in the method of operation of a

Produced by the
Thomas A. Roe Institute
for Economic Policy Studies

Published by
The Heritage Foundation
214 Massachusetts Ave., NE
Washington, DC
20002-4999
(202) 546-4400
<http://www.heritage.org>



This paper, in its entirety, can be
found at: [www.heritage.org/library/
backgrounder/bg1518.html](http://www.heritage.org/library/backgrounder/bg1518.html)

1. CAA, 42 U.S.C. §§ 7470–7492, and CAA, 42 U.S.C. §§ 7501–7515.
2. CAA § 111(a)(2), (6); see S. Rep. No. 91–1196, 91st Cong., 2d Sess., 15–16 (1970).
3. *Lignite Energy Council v. EPA*, Nos. 98–1525, *et al.* (D.C. Cir. 1999), in the Tennessee Valley Authority’s Response to Administrative Order, Docket No. CAA–2000–04–0008 (cited hereafter as TVA’s Response to Administrative Order), December 20, 1999, p. 9.

major stationary source that would result in a significant net emissions increase of any pollutant subject to regulation under CAA.”⁴ Activities of old plants that were not “major modifications,” such as “routine maintenance, repair, and replacement,” did not fall under the modification rule and therefore did not trigger NSR.⁵

Despite Congress’s intent, the Clinton Administration expanded the NSR program by making it applicable to existing facilities that make efficiency or operational improvements, even if the changes are routine and regardless of whether or not those activities actually increase emissions. Under the EPA’s reinterpretation of the law, existing facilities that improve their capacity, efficiency, or even the safety of their operations would now fall under NSR’s costly and exhaustive modification requirements. The direct result has been to discourage energy-efficient modification and the safety of plant operations.

The new interpretation imposes enormous costs on businesses that in turn will produce significant unintended economic consequences. Essentially, under this new interpretation, any changes that improve a facility’s operation could be considered a major modification that would require the company to go through a lengthy, comprehensive permit application process and then to retrofit the plant with new top-technological pollution control equipment. It would have to go through this process at each plant for almost any modification made, impeding its ability to respond quickly to changes in consumer demand.

The two sectors most affected by these changes are electric utilities and refineries—the industries upon which the United States relies most heavily for its day-to-day energy and fuel supply. Widespread application of the NSR requirements could threaten the nation’s power and fuel supply severely by discouraging companies from upgrading and modernizing—and even making routine changes in—their plants. Major disruptions in energy supply would be particularly harmful to the elderly, infirm, and other more vulnerable segments of the

population whose well-being is directly tied to reliable sources of power. Moreover, the extreme interpretation is likely to cause air quality to deteriorate—exactly the opposite of the intended result—if companies are discouraged from making technological improvements in their facilities, particularly those that reduce air emissions.

The Bush Administration’s restructuring of NSR is not expected to roll back regulations on industrial air emissions. Plants would still be required to install state-of-the-art pollution controls if they exceeded a predetermined facility-wide emissions cap.⁶ But the Administration is expected to change the perverse NSR incentive structure that discourages companies from upgrading and improving the operation of their plants. Furthermore, the new rule is expected to clarify the law’s definition of “major modification” and “routine maintenance”—currently the primary source of confusion and disagreement over what plant activities trigger NSR. Finally, the Administration’s plan is expected to simplify the program itself, a crucial and needed change to improve the NSR program.

The Administration, working with Congress, clearly should reform NSR to end its perverse incentive structure, which discourages efficiency, safety, and environmental improvements in affected industries. To ensure that facilities do not increase air pollution as they expand or rebuild, the government should require facilities to meet an overall emissions cap after a fixed amount of time, rather than at the time a modification is made. Other market incentives should be introduced over time, such as allowing facilities to trade credits on emissions. Such an incentive-based approach relies on flexibility and accountability, not punitive and economically costly measures, to further America’s goal of reducing air pollution.

NSR: MIRED IN CONFUSION AND COMPLEXITY

Over the past two decades, the EPA has issued thousands of pages of guidance documents and memos on the New Source Review provisions in

4. 40 C.F.R. §§ 51.166(b)(2)(i).

5. 40 C.F.R. §§ 51.165(a)(1)(v)(C), 51.166(b)(2)(iii).

6. Traci Watson, “Clean-Air Rules Overhaul Faces Fight,” *USA Today*, January 9, 2002, and John J. Fialka, “Nine East Coast States Threaten to Sue if Bush Relaxes Utility Pollution Controls,” *The Wall Street Journal*, January 9, 2002.

law. But rather than clarify which activities fall under NSR's requirements, these promulgations have caused enormous confusion and consternation among the industries affected.⁷ In 1988, a legal case involving the Wisconsin Electric Power Company (WEPCo) attempted to force the EPA to clarify what types of plant improvements or changes would activate NSR, and to clarify the law's intent.

The Case Against Wisconsin Electric

Wisconsin Electric submitted a proposal to the EPA in 1988 to replace deteriorating steam drums, air heaters, and other worn machinery at five old units within its Port Washington generating plant. WEPCo believed that because these modifications were being made to old (pre-1977) plants and involved the replacement of old equipment—"routine maintenance, repair, and replacement" rather than major modifications—the plant would be exempt from the New Source Review requirements.

But the EPA released an administrative decision that WEPCo's activities would extend the life of the plant, and therefore were nonroutine and fell under New Source Review requirements for pollution-control technology upgrades. According to the agency, it had arrived at a "commonsense finding" by "weighing the nature, extent, purpose, frequency, and cost of the work, as well as other relevant factors."⁸ Among its considerations, in addition to the cost of the project, were (1) that replacements included "numerous major components," (2) that WEPCo's intentions were to extend the plant's life beyond its initial retirement date, and (3) that the project was "highly unusual, if not unprecedented."⁹

Significantly, the EPA also determined that WEPCo was making "major modifications" based on projected future emissions, since NSR require-

ments apply if major modifications result in "a significant net emissions increase."¹⁰ But in this case, the EPA altered the way it measured future emissions. Previously, it had measured the change by comparing actual emissions before installation to predicted actual emissions after installation—an "actual-to-future-actual" test, as stipulated under law by the modification rule.¹¹

In WEPCo's case, however, the EPA measured the plant's "potential to emit" after installation—that is, it estimated the largest amount that the plant could possibly emit, assuming the modification would result in maximum operation 24 hours a day, 365 days a year—rather than measuring predicted future emissions from actual emissions records. The EPA's assumption was that a source undergoing nonroutine modifications had not yet begun normal operations. In other words, the agency had applied an assumption of maximum emission increases based on an assumption of future full operation.

WEPCo believed this was a gross misrepresentation of the plant's change in emissions. Other companies were equally concerned about this new definition and what it could mean for their activities that, under the traditional definition, did not increase emissions. Even the EPA had observed in an earlier document that a "potential" emissions level is "considerably higher than what it is actually emitting."¹² In fact, under this new definition, *any* modification would show an increase in emissions, even if there were no actual increase in pollution, due to an assumption of increased productivity. Such a change in the method of measuring emissions would trigger stringent NSR requirements for any stationary source making modifications to improve plant operational efficiency, no matter how small.

7. Congressional Press Releases, "EPA's New Source Review Regulations," Senator James M. Inhofe, February 28, 2000. See also Testimony of Bob Slaughter, General Counsel and Director, Public Policy, National Petrochemical and Refiners Association, before the Senate Environment and Public Works Subcommittee on Clean Air, Wetlands, Private Property and Nuclear Safety, February 28, 2000.

8. Memorandum from Don R. Clay, Acting Assistant Administrator for Air and Radiation, EPA, to David A. Kee, Director, Air and Radiation Division, Region V, EPA, September 9, 1988.

9. *Ibid.*

10. 40 C.F.R. §§ 51.166(b)(2)(i).

11. 40 C.F.R. §§ 51.166(b)(21)(ii), in TVA's Response to Administrative Order, p. 23.

12. 45 Fed. Reg. 52,700 (1980), in *ibid.*, p. 25.

Court Rules Against “Actual-to-Potential”

Test. WEPCo appealed the EPA’s decision, and the case went before the federal Seventh Circuit Court of Appeals. In 1990, the court ruled that because WEPCo’s activities were both “massive” and “unprecedented,” they were in fact “nonroutine.”¹³ Of particular significance, however, the court also ruled against the EPA, stating that WEPCo was not subject to NSR’s modification rule. It found that the agency’s test using the “potential to emit”—also called the “actual-to-potential” test—did not follow existing law, and it was not clear that the plant would increase actual emissions as a result of renovations, even though its activities were nonroutine. The judge wrote that if the EPA so wished, it could change its definition of “major modification” under the rulemaking process. But under the law as currently written, the EPA was unlawfully changing its method of measuring future emissions.¹⁴

Following the court’s ruling, the EPA sought to appease concerns—both within the affected industries and at the U.S. Department of Energy (DOE)—that old power generating plants universally could be subjected to EPA’s new application of “life extension projects” if they replaced old equipment, since the court had concurred with the EPA that WEPCo’s activities were “nonroutine.” The DOE, in particular, was concerned over the reliability and cost-efficiency of electricity service, since the new application could seriously discourage utilities from refurbishing antiquated equipment.¹⁵ But the EPA assured officials that WEPCo was an unusual case and did not apply to facilities’ “life extension projects” per se. According to the EPA (as reported by the U.S. General Accounting Office), “WEPCo’s life extension project is not typical of the majority of utilities’ life extension projects, and concerns that the agency will broadly apply the ruling it applied to WEPCo’s project are unfounded.”¹⁶

EPA Rule Effectively Codifies “Actual-to-Actual” Test. In 1992, the EPA codified the “actual-to-actual” test as the proper means of measuring emission changes for nonroutine modifications, rather than the “actual-to-potential” test. Called the “WEPCo Rule,” it intended to clarify what specific activities trigger NSR and the proper way to measure projected emissions.

The EPA established in the WEPCo Rule’s preamble that an existing plant that, responding to market forces, increases production or hours of operation and in the process increases its net emissions should not be subjected to the modification rule. The agency acknowledged that it “in no way intends to discourage [routine] physical or operational changes that increase efficiency or reliability or lower operating costs, or improve other operational characteristics of the unit,” and that Congress “obviously did not intend to make every activity at a source subject to new source requirements.”¹⁷

Calls for Reform. Though the EPA’s WEPCo Rule in many ways clarified and codified which activities would trigger the NSR modification rule and which would not, its WEPCo administrative decision had nonetheless caused enormous confusion, as many stationary source companies feared that actions to improve or upgrade their plants would fall under NSR.

In addition to confusing industry, the NSR program had gained the reputation of being excessively burdensome, complex, unfair, and ineffective. Although the initial NSR ruling is only 20 pages long, the EPA has released over 4,000 pages of guidance documents and memos that detail and revise the requirements. In many cases, the newer documents contradict the earlier guidance text, compounding the confusion.¹⁸

13. *Wisconsin Electric Power Co. v. Reilly* (“WEPCo”), 893 F.2d 901 (7th Cir. 1990).

14. *Electric Utility Week*, “Utilities: EPA Ought to Return to Traditional Reading of NSPS,” February 19, 1990.

15. Federal News Service, Hearing of the House Subcommittee on Health and the Environment on Clean Air Implementation: Special Rules for Utilities, Remarks of Linda G. Stuntz, Department of Energy, July 22, 1991.

16. U.S. General Accounting Office, *Electricity Supply: Older Plants’ Impact on Reliability and Air Quality*, GAO/RCED-90-200, 1990, pp. 30-31, in TVA’s Response to Administrative Order, p. 12.

17. 57 Fed. Reg. 32,314; 32,316; 32,327 (1992).

18. Congressional Press Releases, Senator James M. Inhofe. See also Testimony of Slaughter.

Another serious problem has been the amount of time it takes the EPA to process a pre-construction permit—on average, 18 months¹⁹—even though the agency is required by statute to issue a permit within 12 months of application.²⁰ Such delays severely hurt industries and restrict competition, particularly among those with time-sensitive products.

EPA officials first promised to reduce the confusion and streamline the review process as far back as 1991.²¹ The following year, the agency created the NSR Reform Subcommittee comprised of agency officials, industry representatives, environmental groups, and state and local government officials “for the purpose of making recommendations on improving NSR.”²² Statements of commitment to reform NSR intensified in the early 1990s; acknowledging that “the rules seem to work against the purpose of why they were established,”²³ new EPA officials promised “to examine ways to simplify and streamline the NSR process...to reduce chances of legal challenge, and enhance the ability of EPA and state and local governments to achieve effective implementation of the Act.”²⁴

In the summer of 1995, following five years of review, meetings, and testimony, the EPA outlined its recommendations for reforming NSR. These included:²⁵

- A flexible permit structure to enable plants “to operate without changes to its permit as long as the plant’s emissions do not exceed a cap.”
- Exemptions for plants that undertake pollution control and prevention projects “as long as it is

‘environmentally beneficial’ and will not cause or contribute to [Clean Air Act violations].”

- Elimination of penalties against plants that practice failed good-faith efforts.
- Reduction in delays and disputes over permits.

EPA BROADENS ITS INTERPRETATION OF THE LAW

Despite the stated commitment of the EPA under President Clinton to “simplify and streamline” the New Source Review program, the agency took a very different approach. In fact, between 1996 and 2000, the agency issued new proposed rules that failed to improve the current program and, worse, assumed a broad new interpretation of the law, bringing any activity that improves a plant’s efficiency under the requirements of the modification rule. Even more troubling, the EPA changed existing law without following the required rulemaking process to receive public comment and seek congressional approval.

1996 Proposed Rule: Contradicts Both the Law and WEPCo Rule

The EPA’s 1995 recommendations led to the release in the summer of 1996 of a new Notice for Proposed Rulemaking that recommended significant changes in the 1977 NSR rule.²⁶ Its stated goal was “to reduce costs and regulatory burdens” without sacrificing air quality as stipulated under the Clean Air Act.²⁷ The EPA released its proposed rule, stating the following key objectives:²⁸

19. See Testimony of W. Henson Moore, President and CEO, American Forest and Paper Association, before the Senate Environment and Public Works Subcommittee on Clean Air, Wetlands, Private Property and Nuclear Safety, February 28, 2000.

20. 42 U.S.C. § 7475(c).

21. Testimony of Moore.

22. Testimony of John Seitz, Director, Office of Air Quality Planning and Standards, Office of Air and Radiation, EPA, before the Senate Environment and Public Works Subcommittee on Clean Air, Wetlands, Private Property and Nuclear Safety, February 28, 2000.

23. Ed Lillis, Chief of EPA’s Permits Program Branch, at an NSR Simplification Workshop, 1993, cited in Testimony of Moore.

24. Testimony of Carol M. Browner, EPA Administrator, before the Senate Environment and Public Works Committee, September 23, 1993.

25. Memo from Mary Nichols, Assistant EPA Administrator for Air and Radiation, 1995, cited in Steve Kidney, “EPA to Relax NSR Permitting Rules,” *The Energy Daily*, July 20, 1995.

26. 61 Fed. Reg. 38,250 (1996).

27. *Ibid.*

- Reducing the number and size of plants' activities subjected to NSR.
- Giving states greater flexibility to design their own programs for meeting NSR requirements.
- Exempting "clean"²⁹ facilities from NSR requirements.
- Qualifying pollution prevention programs for exemption from NSR requirements.
- Streamlining the NSR permitting process.

Buried within the 1996 proposal's recommendations to "streamline" and "reduce costs," however, was EPA's direct reinterpretation of existing law. Specifically, the rule stated that under existing law the EPA was not required to use the "actual-to-future-actual" method of measuring future emissions for plants that are *not* electric utility steam generating units. This contradicted both the WEPCo decision's statement of law and the agency's 1992 WEPCo Rule.

In the 1990 WEPCo court decision, the judge ruled that in situations in which a facility has an established history of operation, a projection of after-change emissions should be used, as opposed to the broad "potential to emit."³⁰ The court did not limit this application to utilities. The relevant stipulation for the court is whether or not the facility had "begun normal operations."³¹ In other words, unlike a newly constructed plant that has no emissions history, a plant that already exists "has begun normal operations," and so has an emissions history; the "actual-to-actual" test is adequate, therefore, and should be used.³² Even more relevant is the EPA's clarification in the WEPCo Rule that while "*Puerto Rican Cement* involved a cement

plant, not an electric utility...the court's legal analysis of the phrase 'begun normal operations' in the current regulations is *relevant to all facilities*."³³

1998 Proposed Rule: Inconsistent with Law and Expands the Scope of NSR

The EPA's 1996 proposal laid the groundwork for a 1998 proposed rule, which it introduced via a "Notice of Availability." Like the 1996 proposal, this notice greatly changed existing interpretation of the law and of the intent of Congress in enacting the NSR. Specifically, the EPA changed completely the statute's definition of "modification," creating a new assumption that any change in an existing unit will result in future annual emissions and therefore will fall under NSR requirements. This reinterpretation of the modification rule significantly expanded the circumstances under which an existing facility would be subject to the cumbersome and costly requirements of NSR.

Essentially, the EPA had revoked its own WEPCo Rule by:

- **Reinterpreting the rule's prohibition on the "actual-to-potential" test as applying only to electric generating plants.** In 1998, the EPA again reinterpreted the WEPCo Rule by stating that projected emissions for nonroutine activities should be determined by the "actual-to-potential" test unless the facility is an electric utility generating plant.³⁴
- **Reinterpreting the rule's "demand growth exclusion" as applying only to utilities, not other stationary sources.** The "demand growth exclusion" in the WEPCo Rule states

28. EPA, Office of Air Quality, Planning and Standards, "Proposed NSR Reform Rules," Summary Sheet, April 9, 1996, p. 1 (November 9, 2000).

29. EPA defines "clean" facilities as "an emissions unit [that] must have a federally enforceable emission limit that is comparable to the Best Available Control Technology (BACT)/Lowest Achievable Emissions Rate (LAER) requirements for that type of unit." 61 Fed. Reg. 38,250 (1996).

30. WEPCo, 893 F.2d at 917-18.

31. *Ibid.*

32. *Ibid.*

33. 57 Fed. Reg. 32,314 (1992); emphasis added. The *Puerto Rican Cement* decision found that plant changes went beyond "normal operations" and warranted use of future potential emissions as the test for an emissions increase over past actual emissions in contrast to the WEPCo holding, which concluded that the "actual-to-potential" test could not be applied, under EPA's regulations, to units simply undergoing "like-kind replacements."

34. 63 Fed. Reg. 39,857-39,866 (1998).

that existing facilities that make nonroutine modifications in response to market demand (i.e., to improve efficiency, increase production, extend hours of operation, etc. in response to market forces) should not be held to the “actual-to-potential test” in calculating future emissions.³⁵ This provision applies to all existing stationary sources, not just utilities. The reasoning behind the rule is that Congress did not intend to apply restrictive regulations to industry for improving efficiency or plant operation. That is, emission projections should be based on actual modifications, not on increased productivity or efficiency.

To make this intention clear, the EPA included in the 1992 WEPCo Rule’s preamble that it “declines to create a presumption that every emissions increase that follows a change in efficiency is inextricably linked to the efficiency change.”³⁶ It did not limit this clarification to utilities. Yet the 1998 proposed rule directly reinterpreted this provision, stating that the demand growth exclusion applies only to utilities, not to plants in other industrial categories.

- **Determining that utility facilities as well as non-utilities should not use the demand growth exclusion.** The EPA stated in the 1998 proposed rule that it disagreed with the WEPCo Rule’s decision to exempt demand growth as a factor in calculating future emissions for utilities. According to the EPA, since sources generally make nonroutine changes “in order to increase reliability, lower operating costs, or

improve operational characteristics of the unit,” emissions resulting from these efficiencies should not be excluded in projections simply because facilities are responding to market demand.³⁷ In other words, improving the reliability (to avoid unplanned outages) and efficiency (to reduce emissions per unit of output) of a plant increases emissions and therefore should be counted.

But the EPA had recognized in the past that this was not Congress’s intent. As it acknowledged in the WEPCo Rule, “[Congress] did not intend to make every activity at a source subject to new source requirements,” and the EPA “in no way intends to discourage physical or operational changes that increase efficiency or reliability or lower operational costs, or improve other operational characteristics of the unit.”³⁸ Similarly, in another guidance document, the EPA alluded to the importance of avoiding activities that would “unduly hamper the ability of any company to take advantage of favorable market conditions.”³⁹

Despite the direct change in its application of the modification rule, the EPA sought public comment only on the “streamlining” recommendations. It failed to seek comment or to follow any of the procedures required in the rulemaking process for changes in the reading of existing law.⁴⁰ The agency maintained that there is no need for notice and comment or congressional review because, rather than changing the interpretation of the law, it is simply acting under the existing provisions of the Clean Air Act.⁴¹

35. According to language in the WEPCo Rule, nonroutine modifications that “increase capacity utilization as a consequence of ‘independent factors’ such as demand growth” are excluded in calculating future emissions. *Ibid.*

36. 57 Fed. Reg. 32,327 (1992).

37. 63 Fed. Reg. 39,860 (1998).

38. 57 Fed. Reg. 32,327 (1992).

39. 45 Fed. Reg. 52,704 (1980).

40. “Once an agency gives its regulation an interpretation, it can only change that interpretation as it would formally modify the regulation itself: through the process of notice and comment rulemaking.” *Paralyzed Veterans of America v. D.C. Arena L.P.*, 117 F.3d 579, 586 (D.C. Cir. 1997).

41. Letter by Steven A. Herman, Assistant Administrator for Enforcement and Compliance Assurance, EPA, to the Honorable David M. McIntosh, March 3, 2000.

Stepping Up Enforcement Actions

In 1999, the EPA began an enforcement initiative against industries for activities that they conducted within the prior two decades but which it now believed violate NSR requirements. Without statutory authorization, it applied a new and more stringent interpretation of NSR to penalize plants for improvements that increase operational efficiency and reliability, regardless of whether those activities increase emissions of regulated pollutants.

On November 3, 1999, the U.S. Department of Justice, on behalf of the EPA, filed a multibillion-dollar lawsuit against seven investor-owned utility companies⁴² and issued an Administrative Compliance Order against the federally owned Tennessee Valley Authority (TVA) for alleged NSR violations at 24 coal-fired plants. An additional eight plants received a Notice of Violation. The EPA's Office of Enforcement and Compliance Assurance claimed that these plants had undergone "major modifications" to enhance capacity without obtaining the required NSR permit or installing the required emission controls. In the compliance action, the EPA required the eight companies to install costly NSR-required pollution control technology immediately or face being shut down. The agency is seeking as much as \$27,500 per day in civil penalties for each alleged violation, going back as far as 15 to 20 years for some of these companies.⁴³

The utilities maintain that their activities—such as replacing aging boiler tubes, furnace ash hoppers, superheaters, and other components of electricity generation, and making standard repairs to deteriorating equipment—should not trigger NSR

because they are not "major modifications." Rather, they constitute routine maintenance and repairs—activities that are exempt from NSR requirements⁴⁴ and necessary for ensuring the reliability, safety, and efficiency of plant operations.⁴⁵ They argue that they have been making such modifications for over two decades with EPA's knowledge and approval, and that EPA is revising the rules to penalize them retroactively. In some instances, the activities named in the suit had been approved by federal or state regulators—such as the approval given by federal regulators at Cinergy Corporation's Beckjord, Ohio, plant for the same maintenance projects cited in the lawsuit.⁴⁶

For decades, the EPA had allowed facilities in all industries to undertake thousands of repair and replacement projects to maintain operations at design levels without suggesting that these commonplace projects would trigger NSR.⁴⁷ Indeed, since the inception of the routine exclusion, only a small number of projects in any of the many industries subject to Clean Air Act provisions qualified as nonroutine repair or replacement.⁴⁸ Moreover, as noted above, on a number of instances, such as the WEPCo Rule, the EPA tried to assure industry that existing plants were in compliance. In 1996, the Director of the EPA's Office of Air Quality Planning, John Seitz, even wrote to Senator Robert C. Byrd (D-WV) to explain that "[t]o date, no existing unit has become subject to the...modification [rule]" and that "it is anticipated that no existing utility unit will become subject to [NSR requirements] due to being modified or reconstructed."⁴⁹

42. These companies are American Electric Power, Cinergy, FirstEnergy, Illinois Power, Southern Indiana Gas and Electric Company, Southern Company, and Tampa Electric Company (TECO).

43. Kenneth S. Kaufman and Scott M. DuBoff, "EPA Expands Clean Air Authority Through Enforcement Actions," Washington Legal Foundation *Legal Backgrounder*, Vol. 15, No. 16 (February 18, 2000).

44. "[A] physical change or change in the method of operation shall not include...[r]outine maintenance, repair, and replacement." 40 C.F.R. §§ 51.165(a)(1)(v)(C), 51.166(b)(2)(iii).

45. Testimony of Joe Bynum, Executive Vice President, Tennessee Valley Authority, and William F. Tyndall, Vice President, Cinergy Services, Inc., before the U.S. Senate Subcommittee on Clean Air, Wetlands, Private Property and Nuclear Safety, February 28, 2000.

46. See "EPA Blitzes Utilities with Seven Lawsuits," *Coal Outlook*, November 8, 1999.

47. Petition of the Industry Petitioners for Further Notice and Comment, *Rulemaking on EPA's Proposed Rule on New Source Review*, Environmental Protection Agency, Docket No. A-90-37 (cited hereafter as *Petition of Industry Petitioners*), November 2000, p. 9.

48. *Ibid.*

The EPA, under Administrator Carol Browner, however, claimed that it did not change the modification rule; it determined that, since the projects were nonroutine, increased generating capacity, and extended the life of a plant, the rule applied.⁵⁰ It argued that Congress, in passing the Clean Air Act, had exempted utility plants built before 1977 because it intended them to be phased out and retired. In effect, the EPA claimed that Congress did not intend to allow utilities alternatively to extend the life of older plants.⁵¹

EPA's Sudden Departure from Past Guidance on "Routine"

Some legal scholars assert that "routine maintenance, repair, and replacement" is not clearly defined in the Clean Air Act.⁵² While the EPA now claims that it applies a "case-specific determination" and takes into consideration "relevant factors,"⁵³ as noted above it has long demonstrated a different understanding of "routine maintenance, repair and replacement."

Specifically, the EPA in 1975 characterized exempted maintenance activities as those that were "routine for a source category"⁵⁴—that is, typically or frequently performed by units of the same industry. The 1977 NSR modification rule did not clarify this definition further, and since then, the EPA has issued rules, guidance, and statements that show this understanding of activities that qualify as "routine maintenance."⁵⁵

As the EPA argued in its 1988 administrative decision against WEPCo, changes were considered "routine" after "weighing the nature, extent, purpose, frequency, and cost of the work, as well as other relevant factors, to arrive at a commonsense finding."⁵⁶ In other words, in the absence of a clear definition, the EPA applied a rational and reasonable understanding of "routine." As the court later concurred, WEPCo's activities were considered nonroutine because (1) "numerous major components" would be replaced; (2) the projects were "highly unusual, if not unprecedented"; and (3) the modifications would be costly (the court used the term "massive")—about \$87.5 million or 15 percent of the cost of a new facility.⁵⁷ In today's dollars, these modifications would cost at least \$100 million, or \$250 per kilowatt of capacity.⁵⁸

Yet, consider the activities conducted at some of the utility plants that the EPA is now suing, which are neither "unprecedented" nor "massive": (1) The replaced components are, in the words of the EPA's enforcement office, "parts of electric generation units that do not increase maximum capacity or emission rates";⁵⁹ (2) far from being "unusual," the activities include standard upkeep or replacement of aging components, such as pressure parts in boilers and turbine blades; and (3) their costs are a fraction of the cost of the projects in the WEPCo suit.⁶⁰ Moreover, the EPA had assured industry after the WEPCo case was decided that this case was "not typical of the majority of utilities' life extension projects" and that concerns that EPA was broaden-

49. Letter from John S. Seitz, EPA, to the Honorable Robert C. Byrd, January 26, 1996.

50. Carol M. Browner, EPA, "Remarks Prepared for Delivery: Clean Air Enforcement Press Conference," November 3, 1999, at <http://es.epa.gov/oeca/ore/aed/coal/browner.html> (December 13, 2000).

51. Letter from Steven Herman to the Honorable David M. McIntosh, March 3, 2000, p. 2.

52. Utility Air Regulatory Group, "The Clean Air Act Modification Rule, EPA's Proposed Revision, and the Enforcement Initiative—What's the Law?" *Backgrounder Memo*, 2000. See also Testimony of Moore.

53. Letter from Francis X. Lyons, Regional Administrator, EPA, to Henry Nickel, Counsel for the Detroit Edison Company, May 23, 2000.

54. 40 Fed. Reg. 58,416 (1975).

55. See TVA's Response Administrative Order, p. 10.

56. Memorandum from Clay, p. 11.

57. *Ibid.*

58. Kaufman and DuBoff, "EPA Expands Clean Air Authority Through Enforcement Actions."

59. Edison Electric Institute, *Straight Talk About Electric Utilities and New Source Review*, January 2000.

60. Kaufman and DuBoff, "EPA Expands Clean Air Authority through Enforcement Actions."

ing its application of the modification rule for routine maintenance were “unfounded.”⁶¹

The EPA in 1992 also stated that, based on its understanding of congressional intent, the NSR modification rule was not meant to “make every activity at a source subject to new source requirements.”⁶² Nor was it meant to “discourage physical or operational changes that increase efficiency or reliability or lower operating costs, or improve other operational characteristics.”⁶³ It reiterated the language in the Clean Air Act that “routine” would depend on “whether that type of equipment has been repaired or replaced by sources within the relevant industrial category,”⁶⁴ as opposed to sources within a specific unit.⁶⁵ In other words, an activity never before performed by a facility would be considered routine if performed consistently by facilities of the same industry. Finally, in 1997, the EPA wrote in the preamble to a proposed rule that

[f]ew if any changes typically made to existing steam generating units would be expected to bring such steam generating units under the proposed [modification rule].⁶⁶

The EPA’s expanded interpretation of “routine maintenance” contrasts starkly with these previous statements of policy. Moreover, vast numbers of commonplace repair and replacement projects at existing facilities will now be categorized as major modifications and subject to NSR requirements.⁶⁷ Indeed, under this interpretation, it is hard to imagine a company *not* violating the modification rule by following normal business operation practices.

Essentially, unless the Bush Administration takes steps to rein in this broad reinterpretation, any maintenance, repair, and replacement alteration will now be considered a physical or operational change in a facility. This approach flies in the face of the Clean Air Act’s provision that a “physical change or change in the method of operation shall not include... [r]outine maintenance, repair, and replacement.”⁶⁸

EPA’S EXPANSION OF ENFORCEMENT ACTIVITIES

Targeting Utilities. The EPA’s aggressive enforcement actions that began under the Clinton Administration are not limited to the suit against eight utility companies mentioned above. The agency alleges that between 80 percent and 90 percent of that industry is in violation of NSR requirements.⁶⁹ On top of those already named in a lawsuit or complaint, 25 to 30 companies received “Clean Air Act Section 114” letters from the EPA in 2000, covering approximately 140 plants.⁷⁰ These extensive audit and information requests typically are the EPA’s first step before taking enforcement action for purported CAA violations.

Many other companies that made modifications to improve plant efficiency also face enforcement actions under the EPA’s reinterpretation of the modification rule for activities such as replacing worn-out components with technologically improved or newly designed components. In June 1999, for example, Detroit Edison sought approval from the EPA to replace its eroded steam turbine blades with new state-of-the-art blades. The company estimated

61. U.S. General Accounting Office, *Electricity Supply: Older Plants’ Impact on Reliability and Air Quality*, September 1990.

62. 57 Fed. Reg. 32,316 (1992).

63. 57 Fed. Reg. 32,314; 32,327 (1992).

64. 57 Fed. Reg. 32,326 (1992). See also 40 C.F.R. §§ 60.14(e)(1) where maintenance, repair, and replacement activities are exempt from the modification rule if the activity is “routine for a source category.”

65. This is particularly relevant because EPA’s recent enforcement actions, including those against TVA, are against activities that are performed frequently by the utility industry, but not necessarily by the specific unit.

66. 62 Fed. Reg. 36,957 (1997).

67. Petition of the Industry Petitioners, p. 4.

68. 40 C.F.R. §§ 51.165(a)(1)(v)(C), 51.166(b)(2)(iii).

69. TVA, “EPA Enforcement Initiative,” *Environmental News and Events*, at www.tva.gov/environment/ongoing.htm (December 13, 2000).

70. “EPA Targets More Coal Plants, Attorney Charges,” *Coal Outlook*, October 30, 2000.

that the improvement would increase efficiency by 4.5 percent, enabling the unit to use less fuel while maintaining generated power.⁷¹ The improved materials in the blades also would reduce the need for blade repair and replacement, lower the chances of forced outages, and promote safer, more reliable power.⁷² The utility assumed that because it was performing a routine, comparatively inexpensive⁷³ activity to replace old blades that would improve the efficiency of operation without increasing emissions, its activity would not trigger the modification rule.

On May 23, 2000, however, the EPA in Region V issued a determination that Detroit Edison's proposed activity was nonroutine because it would increase efficiency.⁷⁴ The decision that component replacements to upgrade material or design also would be considered nonroutine⁷⁵ reverberated throughout the industry. The new interpretation would force such upgrades to be subject to NSR requirements.⁷⁶

Other Affected Industries. Nor are the EPA's legal enforcement actions limited to the utility industry. The agency has begun enforcement initiatives and formal investigations against stationary sources throughout such industrial sectors as U.S. refineries, paper mills, steel mills, and chemical plants.

- **Paperwork Requests on Refineries.** During the gasoline shortages of 2000, the EPA saddled

31 petroleum refiners—one-third of the industry—with Section 114 letters seeking extensive historical information on plant operations as far back as 1980.⁷⁷ The agency alleged widespread NSR noncompliance within the refinery industry in particular, even though these facilities' activities had received approval from federal and state regulators.⁷⁸

Refineries now fear the EPA's enforcement actions and possible shutdowns. The effects would be substantial, causing both an increase in the cost and difficulty of making significant improvements at refineries and a significant permitting backlog for state and federal officials.⁷⁹ A company's ability to make even the most minor changes to improve refining capacity, energy efficiency, and environmental performance would be compromised.⁸⁰ Furthermore, the enforcement policy places refineries between a regulatory rock and a market hard place: At the same time the EPA is preventing refineries from expanding capacity, the DOE has been asking the industry to do the opposite— increase production to relieve pressure on oil and gas prices.⁸¹

- **Investigations into Pulp and Paper Industries.** The EPA claimed that 80 percent to 90 percent of the paper and pulp industry is not in compliance with the NSR requirements.⁸² Simi-

71. Letter from Henry V. Nickel, Counsel, Detroit Edison Company, to Francis X. Lyons, Regional Administrator, EPA Region V, June 8, 1999, pp. 4–5.

72. *Ibid.*

73. \$12 million, or \$6 million for each of two turbines.

74. According to the EPA Regional Administrator, "The purpose of the [Detroit Edison] project, to significantly enhance the present efficiency of the high pressure section of the steam turbine, signifies that the project is not routine." See Letter from Lyons to Nickel.

75. *Ibid.*, p. 3.

76. Petition of the Industry Petitioners, p. 31.

77. For a list of the information EPA is requiring in the Section 114 letters, see Jeannie M. Stell, "EPA's Permitting Gauntlet," *Oil and Gas Journal*, October 16, 2000.

78. Testimony of Slaughter.

79. Testimony of D. H. Daigle, Director of Americas Refining, Exxon–Mobil Refining and Supply Company, before the Senate Energy and Natural Resources Committee, April 26, 2001, p. 4.

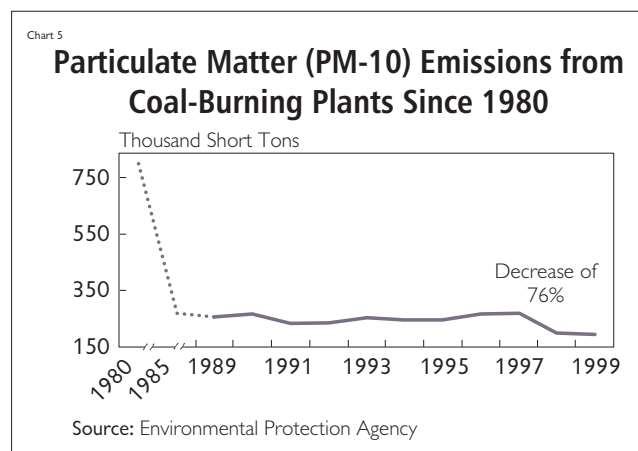
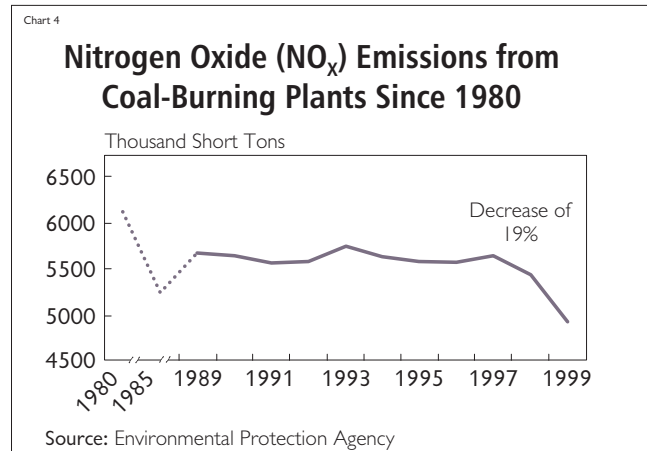
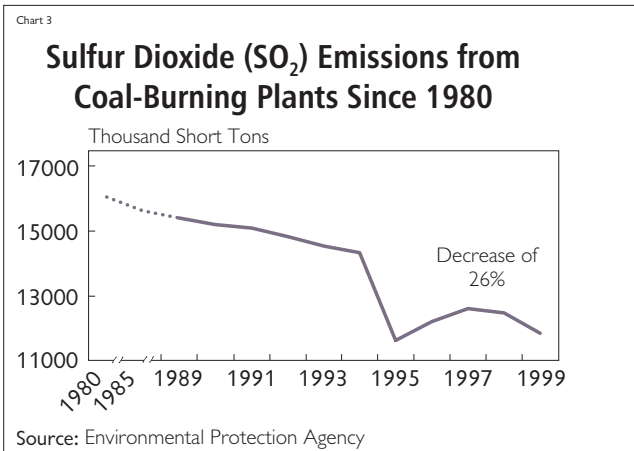
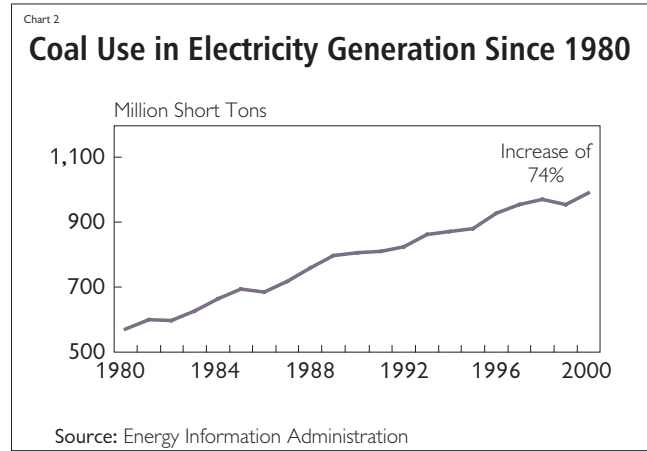
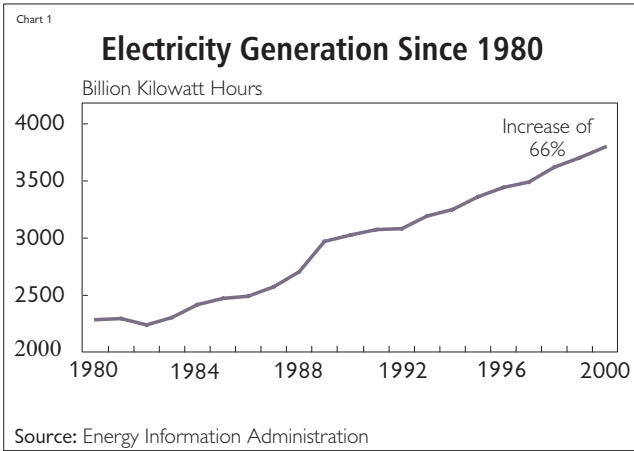
80. *Ibid.*

81. *Ibid.*

82. Testimony of Moore.

Charts 1-5

B1518

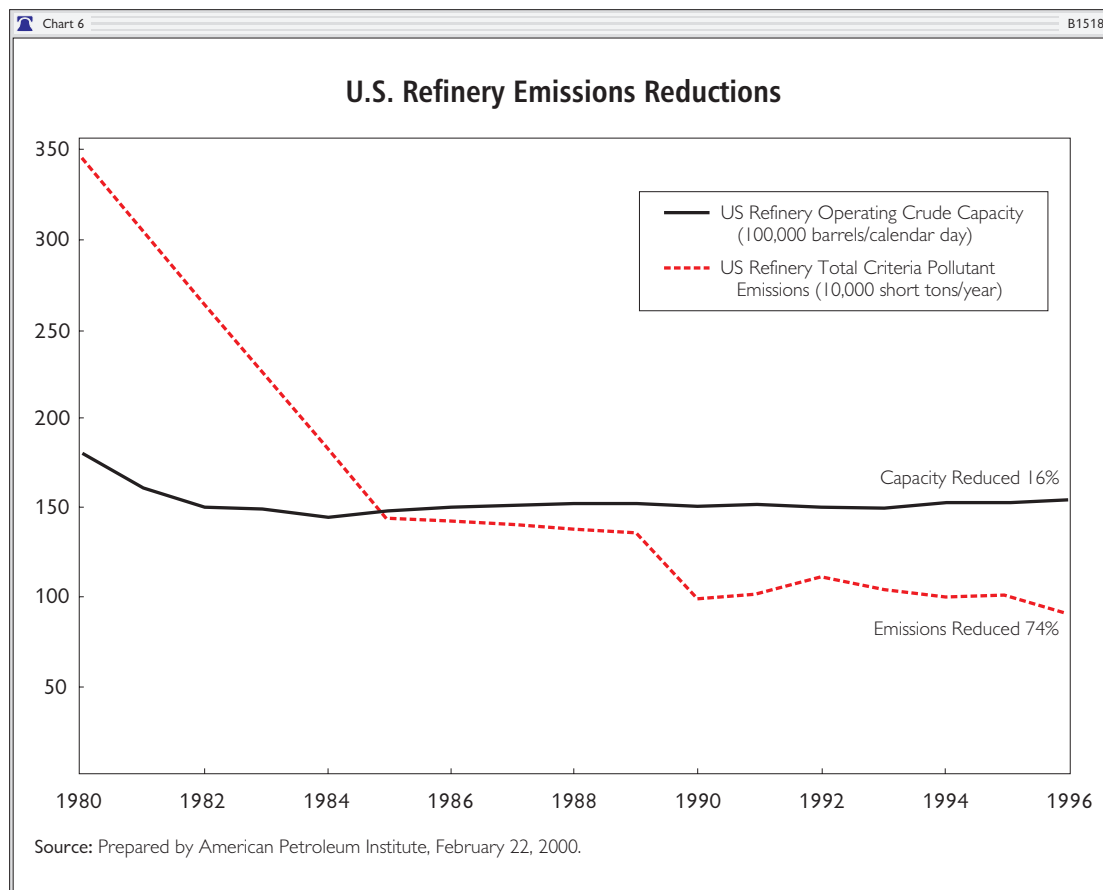


lar to the experience of the utilities and refineries, many of these projects were given the green light by regulators years ago and now face the threat of retroactive enforcement action.

Ten years ago, for example, one company replaced an old boiler at one of its mills after it received the go-ahead from state regulators who had solicited comments from the EPA.⁸³ The EPA now finds the mill in violation because the replaced boiler increased its operating capacity and, therefore, its potential emissions. It makes no difference that federal law requires the calculation of projected *actual* emissions.⁸⁴

EPA BROADENS ITS REACH EVEN THOUGH AIR QUALITY IS IMPROVING

The EPA's attempt to dramatically expand NSR runs counter to data showing significant improvements in air quality over the past two decades, both in emissions levels and ambient air quality. Various industries, in fact, have made substantial progress in reducing emissions while consumer demand rose sharply.



- Dramatic Emissions Reductions at Electric Utilities.** The three primary pollutants from electric utilities, as a percentage of total industrial emissions, are sulfur dioxide (SO₂), nitrogen oxides (NO_x), and particulate matter (PM), largely through the burning of coal. However, since the 1980s, emissions levels for these three pollutants have dropped dramatically. While electricity generation in the United States has increased by 66 percent since 1980 and usage of coal by 74 percent,⁸⁵ SO₂ emissions from coal-burning plants have dropped by 26 percent, NO_x by 19 percent, and particulate matter of 10 micrometers (PM₁₀) by 76 percent.⁸⁶ (See Charts 1–5.)
- Significant Reductions in Emissions by Refineries.** The EPA's own data show that, between 1980 and 1996, the refining industry

83. *Ibid.*

84. *Ibid.* See also prior discussion of the WEPCo Ruling.

85. U.S. Department of Energy, Energy Information Administration, *Monthly Energy Review*, at www.eia.doe.gov/emeu/mer/contents.html.

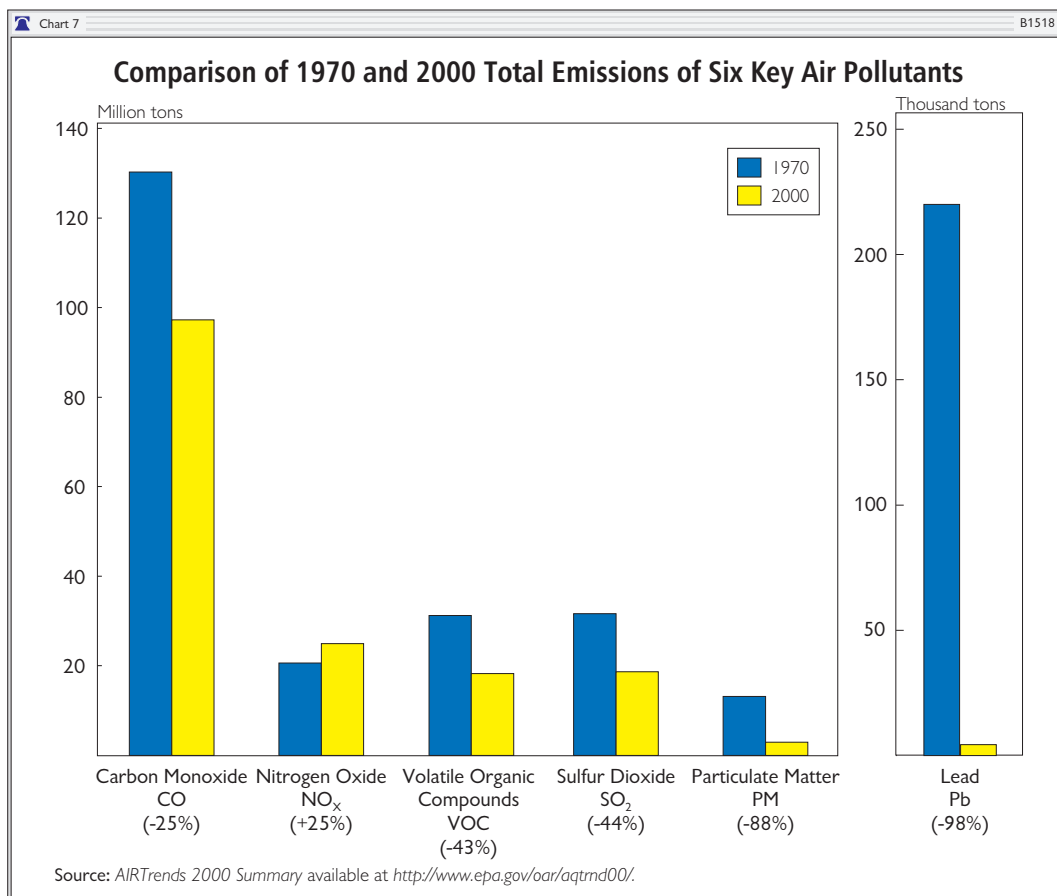
reduced emissions of all criteria pollutants—SO₂, NO_x, PM₁₀, volatile organic compounds (VOCs), and carbon monoxide (CO)—by 74 percent even though refining capacity had fallen by only 16 percent.⁸⁷ (See Chart 6.)

- **Overall Improvement in Ambient Air Quality.**

The United States has made substantial progress in reducing air pollutants and experiencing economic growth since the Clean Air Act was enacted in 1970. The levels of the six key air pollutants have decreased by 29 percent, while America's gross domestic product has increased by almost 160 percent, coal consumption by 77 percent, and energy consumption by 45 percent.⁸⁸ (See Chart 7.)

NSR'S DAMAGING EFFECTS ON ENERGY AND THE ENVIRONMENT

The broad interpretation of NSR would have damaging effects on the nation's power supply and on air quality.



Permitting Delays and Disruption in Operations. The 22,000 existing major industrial “sources” of emissions in the United States undertake great numbers of significant repair, replacement, and maintenance projects each year in order to continue normal operations.⁸⁹ According to the industry, the EPA and states receive about 200 applications for NSR/PSD (Prevention of Significant Deterioration) permits under current rules. Despite this modest number of applications, facilities generally must wait one to three years for the EPA and/or states to process each application before construction can proceed. The reinterpreted NSR policy would increase the number of permit reviews each

86. EPA, *National Air Pollutant Emission Trends, 1900–1998*, EPA 454/R-00-002, March 2000, Table 3-4, 3-5, pp. 3-10, 3-12, 3-13, and *National Air Quality and Emissions Trends Report, 1998*, EPA 454/R-00-003, March 2000, Table A-4, A-6, A-8, pp. 122, 124, 125, at www.epa.gov/ttn/chief/trends/index.html (December 4, 2001).

87. Testimony of Slaughter, p. 2.

88. Testimony of Jeff Holmstead, Assistant Administrator, Environmental Protection Agency, before the Senate Committee on Environment and Public Works, November 1, 2001, p. 3. See also U.S. Environmental Protection Agency, *National Air Quality 2000: Status and Trends*, September 2001, at www.epa.gov/oar/aqtrnd00/.

89. Petition of the Industry Petitioners, p. 19.

year by thousands in every industry. The current one-to-three-year time frame for completing review would expand into a permanent, multi-year backlog.⁹⁰

While some preventive maintenance projects are planned in advance, many are conducted in response to unexpected problems and emergencies. Facilities simply cannot wait one to three years to address such situations. An expanded NSR policy would force facilities requiring the most basic forms of repair to shut down or suffer substantial disruptions in operations. These disruptions would cause lost productivity, lost revenues, and a larger “ripple effect” in industries that depend on these companies.⁹¹ Worse, continued operation in lieu of repair needs would threaten worker safety.

Adverse Environmental Impact. Ironically, a far-reaching NSR program would also have a devastating impact on the environment because it would apply to projects that improve efficiency, including those that utilize new technology—the very activities that are likely to reduce industrial and greenhouse gas emissions. By discouraging greater efficiency and improved methods, the EPA impedes the replacement of dirty, outdated technologies with cleaner methods of operation. And although the EPA does not refute the environmental benefits of technological improvements, it still holds such changes to the harsh NSR requirements.

The Detroit Edison situation is but one example. The EPA, in its response to the company’s request to replace its old 1950-style turbine blades with newly designed blades, actually encouraged the company to “proceed with the project...since it appears to reduce emissions per unit of output,” even though the agency later determined the project to be “non-routine” and subject to NSR.⁹²

Reducing Innovation. This direct attack on improved efficiency also discourages innovation by punishing industries that adopt state-of-the-art technologies. Technological improvements increase the efficiency and reliability of industrial facilities, allowing them to consume less fuel and other resources associated with production.⁹³ Under the EPA’s reinterpretation, however, modifications that rely on new technology would be considered non-routine and subject to the costly and timely permit process. Rather than encourage facilities to install new and cleaner technologies, the EPA’s policy instead dissuades them from utilizing innovations. Forgoing such technological improvements would place U.S. facilities at a competitive disadvantage against their foreign competitors.

Effects on Energy Supply. Driven largely by economic growth and the information age, demand for electricity in the next two decades is expected to be more than 70 percent higher than 1990 consumption levels.⁹⁴ For utilities already struggling to meet current usage demands,⁹⁵ the NSR requirements will heighten uncertainty over what projects they can undertake to assure reliable energy supplies.⁹⁶

This challenge pales in comparison, however, with the potential effect of the new interpretation on routine maintenance activities. Utilities facing New Source Reviews for maintenance or efficiency improvements could be forced to choose between *not* making the changes and continuing to operate inefficiently, which adds tens to hundreds of billions of dollars in direct costs, in addition to risking outages, blackouts, and safety hazards,⁹⁷ or closing a facility for one to three years while the permit for the activity is being processed and the required “best available” technology is being installed.⁹⁸

90. *Ibid.*

91. *Ibid.*

92. Letter from Francis X. Lyons to Henry Nickel.

93. Petition of the Industry Petitioners, p. 33.

94. U.S. Department of Energy, Energy Information Administration, “International Energy Outlook 2001,” DOE/EIA-0484 (2001), Appendix A, Table A9, p. 184.

95. See Testimony of Bynum.

96. Letter from Senators James M. Inhofe (R-OK) and John B. Breaux (D-LA) to Vice President Richard Cheney, March 23, 2001.

97. For further discussion, see TVA’s Response to Administrative Order, p. 35.

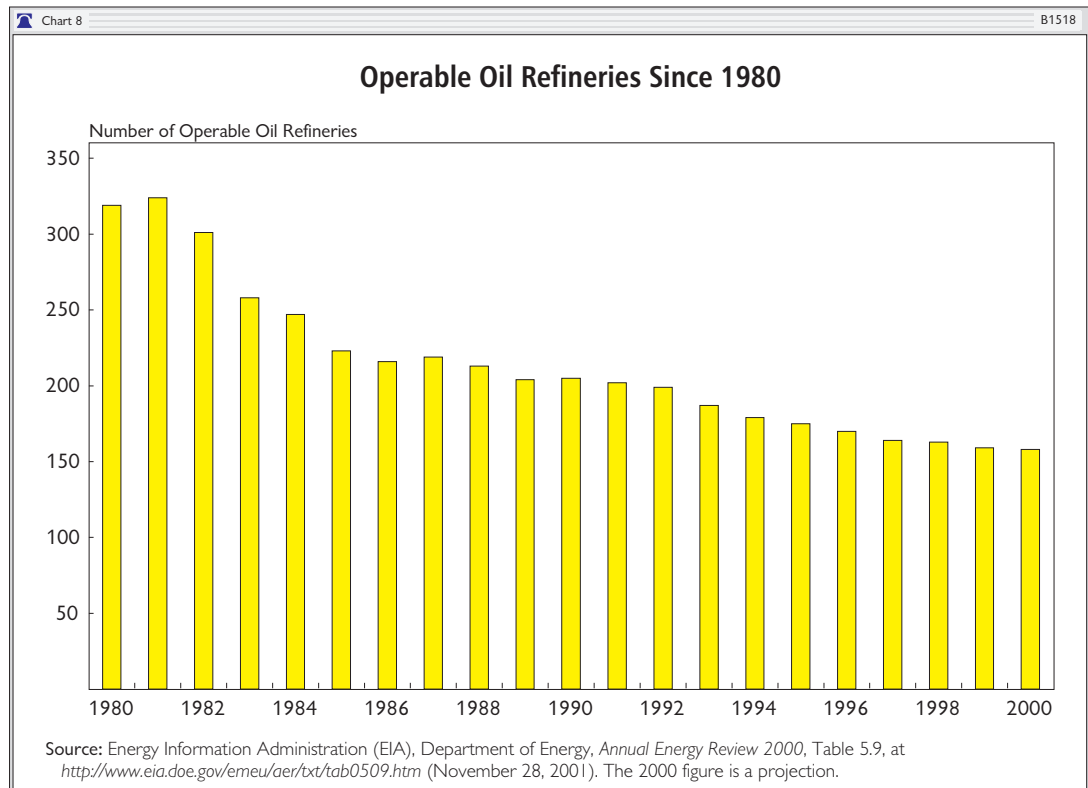
98. Petition of the Industry Petitioners, p. 6.

Such scenarios threaten service reliability, with grave repercussions for such vulnerable segments of the population as the elderly, who face severe health problems should they lose heat in the winter or air conditioning in the summer.⁹⁹ The EPA's new NSR policy poses additional regulatory and investment obstacles to utilities' efforts to expand capacity to meet increasing demand for electricity.

Effects on Workers in Affected Industries. In addition to threatening the reliability of service, NSR puts the safety of workers in affected industries at risk.¹⁰⁰ Boilers that are not routinely serviced can rupture or explode, causing serious or fatal injury to workers nearby.¹⁰¹ Since the era of early steam generators, organizations like the American Society of Mechanical Engineers have established industry codes to reduce the danger of working with boilers through routine maintenance activities to ensure safe operation. Many state agencies and insurance providers require maintenance and repair practices at utility plants to guarantee safe working conditions.¹⁰² By changing its NSR application rule to make such

activities subject to NSR permitting and technology requirements, the EPA may have made it less likely that those practices are conducted on a regular basis, thus compromising worker safety and jobs.

Effects on Refineries. As with electric utilities, petroleum refineries face the serious challenge of meeting consumer demand for oil and gas if NSR requirements apply to basic operational changes. U.S. oil production levels are already at risk, largely because of the nation's dependence on oil imports,¹⁰³ but also as a response to regulatory disincentives, such as the 1977 NSR restrictions that discouraged the construction of new plants. No



99. For more on this issue, see Senator Frank Murkowski, "EPA's Enforcement Actions Heighten Risk of Price Spikes and Outages," press release, March 30, 2000.

100. See Statement of John J. Barry, International President of International Brotherhood of Electrical Workers, before the Senate Environment and Public Works Subcommittee on Clean Air, Wetlands, Private Property and Nuclear Safety, February 28, 2000.

101. See OSHA, at www.osha.gov/cgi-bin/inv/inv1 (April 3, 2000), in Second Supplemental Comments of the Utility Air Regulatory Group, Docket No. A-90-37, May 4, 2000, p. 28.

102. Testimony of William F. Tyndall, Vice President for Cinergy Services, Inc., before the Senate Environment and Public Works Subcommittee on Clean Air, Wetlands, Private Property and Nuclear Safety, February 28, 2000.

103. For a description of this nation's dependence on foreign oil, see Charli E. Coon, J.D., "National Security Demands More Diverse Energy Supplies, Heritage Foundation Executive Memorandum No. 777, September 25, 2001.

new refineries have been built since the 1970s,¹⁰⁴ and many aging refineries have been shut down. As Chart 8 illustrates, the number of operating refineries has plummeted, from 319 in 1980 to an estimated 158 in 2000.¹⁰⁵

This decline places an enormous burden on existing refineries to meet the growing consumer demand for petroleum, which has increased 11.1 percent since 1995—twice the increase in the consumption of natural gas (5.5 percent).¹⁰⁶ Demand is expected to continue to rise at a steady rate, averaging 1.9 percent a year between 2000 and 2005.¹⁰⁷ In order to meet rising demand for oil and gas, the remaining refineries must increase their capacity. Yet doing so will trigger NSR modification rule requirements under the EPA's new interpretation. The refineries' ability to respond to rising demand is being crippled by regulation.

RESTRUCTURING NEW SOURCE REVIEW

The Bush Administration's soon-to-be-released NSR restructuring plan is expected to include some of the following changes, including some of the provisions recommended by the EPA back in 1995 and 1996:¹⁰⁸

- **Plant-wide Applicability Limits (PALs).** Under these limits, plants would be required to meet a facility-wide emissions cap before triggering NSR, rather than meeting individual controls on each emissions source within the plant. This revision was part of the 1996 reform recommendations made by the EPA and therefore would not require an additional comment period.
- **Clean Unit Exemption.** NSR would not apply to plants that installed new emission controls over the past 15 years. This reform also was

proposed by the Clinton Administration EPA in both 1995 and 1996.

- **Clarified Definitions of "Routine Maintenance."** "Major modification" and "routine maintenance" would be redefined, possibly in terms of the cost of the activity to the plant.
- **Clarified Definitions of Future Emissions.** Future emissions would be measured using the "actual-to-actual" test rather than "potential-to-emit," with the measurement of "actual" clearly defined.

The Administration and Congress clearly must reform the perverse incentives structure of the New Source Review program, which discourages efficiency, safety, and environmental improvements via facility upgrades. One possible way to do this and still ensure that plants do not increase air pollution emissions as they expand or rebuild would be to require them to meet an overall emissions cap after a fixed amount of time, similar to the PALs mentioned above. Over time, facilities would be allowed to trade credits on emissions, much as the current federal acid rain trading program allows and encourages the trading of sulfur dioxide emissions. It would also give utilities the flexibility to decide how best to meet the targets.

CONCLUSION

The New Source Review program is inefficient, ineffective, and counterproductive. It hampers innovation and competition, particularly in the important utility and refinery sectors, and thus directly threatens America's energy supply. The Clinton Administration EPA made the NSR process more confusing and damaging to the economy and environment by arbitrarily changing its long-standing interpretation of the plant modification rule and "routine maintenance and repairs."

104.Federal News Service, Press Conference with Senator James Inhofe, October 6, 2000.

105.U.S. Department of Energy, Energy Information Administration, *Annual Energy Review 2000*, Table 5.9, at <http://www.eia.doe.gov/emeu/aer/txt/tab0509.htm> (November 28, 2001). The 2000 figure is a projection.

106.Energy Information Administration, at <http://eia.doe.gov/emeu/mer/txt/mer1-4>.

107.Energy Information Administration, in National Petroleum Council, *U.S. Petroleum Refining: Assuring the Adequacy and Affordability of Cleaner Fuels*, Executive Summary, June 20, 2000, p. 11.

108.Fialka, "Nine East Coast States Threaten to Sue."

The Administration and Congress should make the necessary reforms in the NSR program that would encourage industry to invest in improvements that increase efficiency and safety at their facilities while improving air quality—long the goal of the Clean Air Act.

—Dana Joel Gattuso is Washington liaison with the Bozeman, Montana-based Political Economy Research Center (PERC) and an adjunct scholar with the Washington, D.C.-based Competitive Enterprise Institute.