

MERCATUS CENTER
GEORGE MASON UNIVERSITY

REGULATORY STUDIES PROGRAM

**Public Interest Comment on
The Environmental Protection Agency’s
“New Source Review 90-Day Review Background Paper”¹**

The Regulatory Studies Program (RSP) of the Mercatus Center at George Mason University is dedicated to advancing knowledge of the impact of regulation on society. As part of its mission, RSP conducts careful and independent analyses employing contemporary economic scholarship to assess rulemaking proposals from the perspective of the public interest. Thus RSP’s comment on the EPA’s New Source Review background paper does not represent the views of any particular affected party or interest group, but is intended to evaluate the effect of the agency’s decisions on overall consumer welfare.

I. Introduction

In the past couple of years the United States has experienced some unsettling episodes of high energy prices—for gasoline, diesel fuel, home heating oil, natural gas, and electricity. Some of these episodes have been brief or geographically limited, but they nonetheless recall to mind the very serious “energy crises” of 1974 and 1979 and the worldwide recessions that accompanied them. This has prompted a national debate and a broad examination of the nation’s energy markets: their vulnerability to external supply shocks, the long run sustainability of energy supplies, the environmental consequences of energy use, and the regulatory constraints that may prevent markets from achieving what they ordinarily are so good at achieving—the reliable satisfaction of consumer demand at the least cost.

The background of this public debate about energy markets differs in important ways from that of the 1970s: there have been profound geopolitical changes in the world; energy technology has made great advances; price and allocation controls have been removed from oil and its products; natural gas deregulation is now largely complete; and electricity deregulation is well underway. All of these developments have made our energy markets much more resilient than they once were.

¹ This comment was prepared by Brian F. Mannix, Senior Research Fellow, Mercatus Center, George Mason University. It is one in a series of Public Interest Comments from the Mercatus Center’s Regulatory Studies Program, and it does not represent an official position of George Mason University.

While economic deregulation has injected much-needed competition and flexibility into energy markets, there remains a wide array of natural resource policies and environmental regulations that put important constraints on their operation. One concern is that environmental regulations have inhibited new investment in energy conversion facilities (refineries and electric power plants), thereby limiting the capacity of these industries to meet consumer demand and also preventing them from achieving some of the environmental benefits that would result from the use of improved technologies.

The May 2001 report of the National Energy Policy Development Group (NEPDG) included the recommendation: “that the President direct the Administrator of the Environmental Protection Agency, in consultation with the Secretary of Energy and other relevant agencies, to review New Source Review regulations, including administrative interpretation and implementation, and to report to the President within 90 days on the impact of the regulations on investment in new utility and refinery generation capacity, energy efficiency, and environmental protection.”

As part that 90-day review, on June 22 EPA issued a background paper for public comment and scheduled public hearings. The background paper on the New Source Review (NSR) program does not present policy options nor make recommendations. One important purpose is to publish the data that EPA has compiled on energy conversion facilities subject to NSR constraints; in many cases the affected companies may have information to add or correct. EPA continues to work with other agencies to prepare a report with recommendations to the President by August 17, 2001—90 days from the NEPDG report. EPA should be commended for finding the time within that 90 days to write a useful background paper and expose it to public comment.

It is important to note that, in accord with another recommendation of the NEPDG, the Justice Department is conducting a parallel review of the NSR program. In recent years EPA’s Office of Environmental Compliance and Enforcement has initiated several aggressive enforcement actions under the NSR program, including actions against some large electric utilities. EPA alleged that these companies have made major modifications to their plants while unlawfully avoiding New Source Review. Companies allege that EPA has acted unlawfully, by retroactively changing the triggers for NSR and otherwise violating the Clean Air Act. The Justice Department’s review is intended to determine whether EPA’s recent enforcement actions are consistent with existing law.

These comments do not address the legality of company actions or EPA’s enforcement actions. Nor do we have new data to offer or corrections to EPA’s data. Rather, the purpose of these comments is contribute to EPA’s policy review by exploring some of the reasons why the NSR program has come to be seen as both costly and ineffective, and why it has created such a polarized legal situation. We suggest a possible avenue for resolving these controversies to the public benefit. The structure of the Clean Air Act has encouraged high-stakes advocacy focused on the NSR program, but creative settlements can convert these high stakes to large gains for both sides—i.e., both the advocates for reliable, affordable energy and the advocates for clean air—and therefore large gains for the public.

II. The Statutory Context of New Source Review

The Clean Air Act is complicated in several dimensions. An unusually prescriptive statute when it passed in 1970,² it has been amended (but never simplified) by Congress in 1972, 1977, and 1990, and it has been significantly footnoted by several court decisions. It divides responsibilities among the national and state governments. It pursues multiple objectives (including human health, welfare, scenic values, etc.) through the reduction of multiple pollutants, which arise from a wide variety of stationary, mobile, and natural sources, and which cross political boundaries while interacting in complex ways with natural environmental elements like wind, heat, humidity, sunlight, and precipitation.

Moreover, the Clean Air Act was conceived as something of an experiment in administrative law. Bruce Ackerman and William Hassler argued in 1981 that the Act was intended to replace a failed model of administrative law (in which agencies were “insulated” from politics and given wide discretion to apply their objective “expertise”) with a new model in which agencies were accountable to the President, but bound by “agency-forcing” legislation and exposed to special interest litigation. The unfortunate result, they argued, was an arena in which special interest advocacy can produce regulations that harm the public interest by raising both costs *and* emissions.³

The New Source Review (NSR) program is located at a particularly sensitive pressure-point in the overall statutory scheme: it is the mechanism by which EPA polices the border between stationary sources that are considered “existing,” and those that are considered “new.” The distinction is easy in the case of a greenfield development, but certain modifications of existing sources are also deemed “new” and subjected to NSR requirements. Important economic and environmental consequences flow from this legal classification.

EPA establishes primary National Ambient Air Quality Standards (NAAQS) for conventional pollutants at a level that “protects public health with an adequate margin of safety.” The strategy for attaining and maintaining those standards is mostly embodied in State Implementation Plans (SIPs) reviewed and approved by EPA. The NSR program (generally operated by states, through a SIP and in compliance with federal regulations) applies to major stationary sources of emissions in two distinct types of geographic areas. In nonattainment areas (including the ozone transport region, comprising eleven northeastern states), new sources are presumed to harm public health. In attainment areas where air quality exceeds the NAAQS but where the “prevention of significant deterioration” (PSD) would provide other benefits (by, for example, protecting the view in National Parks from haze), NSR is used to pursue those non-health benefits.

² An earlier 1963 statute was very different; 1970 marks the beginning of the Clean Air Act as we know it.

³ Bruce A. Ackerman and William T. Hassler, “Clean Coal / Dirty Air, or How the Clean Air Act Became a Multibillion-Dollar Bail-Out for High-Sulfur Coal Producers and What Should Be Done about It.” New Haven: Yale University Press, 1981.

The NSR program is motivated by two very reasonable considerations: that emissions reductions are more valuable in particular locations (nonattainment and PSD areas), and are most economical at particular times (during initial construction or major modification).⁴ If a source is deemed new, it must apply for a new permit, which will be subject to public notice and comment and to judicial review.

In nonattainment areas the permit will require the new source to operate at the lowest achievable emissions rate (LAER), and then to offset those emissions by securing emissions reductions from other sources in the nonattainment area—typically a very challenging task.⁵ In addition, the source must consider alternative “sites, sizes, production processes, and environmental control techniques” and demonstrate that the benefits of its proposed source outweigh all the social costs.⁶ Other permit conditions may also be imposed.

In PSD areas new sources must apply the best available control technology (BACT),⁷ and must demonstrate through monitoring and modeling that air quality will not deteriorate significantly or have an adverse impact on federal Class I areas such as wilderness areas and national parks. Any nearby federal land managers will have a strong say in the decision whether to grant a permit.

III. The Consequences of the NSR Requirement

Through NSR and a variety of other provisions, the Clean Air Act demands more stringent environmental controls from new sources than it does from existing sources. Up to a point, there are sound reasons for making this distinction, since the marginal cost of control at new sources will generally be lower. There are other forces at work, however, that aggravate the “new source bias” in the Act. Existing sources (and their employees, and their customers) are identifiable and politically organized; new sources are not. So there is strong public pressure to focus more regulatory attention on new sources. When new sources are potential competitors with existing sources, this regulatory bias creates an economic barrier to entry. Regulatory “rents” are created—economically valuable franchises protected by regulation. These are most

⁴ Note how this implicit balancing of incremental benefits and costs contrasts with the view of NAAQS as a delineating a sharp boundary between “safe” air and air that is unsafe and intolerable. One premise of NSR is that, whether ambient air quality is lower or higher than the NAAQS, reducing pollution a little bit more has both benefits and costs—and therefore will sometimes be worthwhile, and sometimes not.

⁵ Offsets, in theory, provide needed flexibility. Unfortunately, while emissions are not scarce enough in nonattainment areas, offsets are too scarce. After all these years, through the process of developing SIPs the states have exhausted the low-hanging fruit.

⁶ Note that it is the business that must pass a benefit-cost test; not the environmental regulations. The LAER requirement, for example, is determined by looking at what is achievable without regard to cost.

⁷ In contrast to LAER, BACT is determined by looking at both benefits and costs. This is because, in an attainment area, human health is presumably not part of the equation. Note that BACT must be at least as stringent as New Source Performance Standards (NSPS)—the standard that applies to new sources that are not subject to NSR because they not located in nonattainment or PSD areas.

familiar in old-fashioned economic regulation—taxi medallions and radio licenses and truck routes—but also are an important feature of health and safety regulation. Drugs and pesticides, for example, may be protected from competitors by the entry barriers created by new product approval requirements. Similarly, a regulatory bias against new sources of emissions can result in “grandfathered” facilities—existing sources that have a substantial economic asset in the form of an operating permit that would not be approved for any similar new source.

The large economic rents associated with these older permits can only be retained by continuing to operate the source and defending the permit. As environmental requirements have become stricter over the years, the implicit value of older permits has increased. Electricity deregulation may be making these permits even more important, to the extent that regulatory rents associated with existing permits are more likely to accrue to the holder rather than get transferred to ratepayers.

The NSR permit process itself has become expensive, time consuming, intensely political at times, and highly uncertain in outcome. If a permit is obtained, it will have expensive requirements. Various parties to the process have adverse incentives. In PSD areas federal land managers have the opportunity to create virtually insurmountable procedural barriers; and they will often be under pressure to veto projects, with no incentive to be anything less than obstinate.

Since NSR permit requirements are contingent on new investments, NSR clearly does discourage new investment. In the case of existing sources, it discourages modifications that would likely increase efficiency and introduce technologies that are cleaner. While the NSR trigger nominally applies only to projects that increase emissions, in practice all sorts of unambiguous improvements are discouraged. For example, under the “actual-to-potential rule” (EPA compares prior *actual* emissions with subsequent *maximum potential* emissions) NSR can even be triggered by modifications that reduce actual emissions, and reduce potential emissions. And a power plant that installs a cleaner and more reliable technology may be subject to NSR because less downtime, in theory, could mean more net emissions. Whatever legal merits this reasoning may or may not have, it is clearly not a wise strategy to protect air quality by rendering our power plants and refineries unreliable, just as we would not try to reduce automobile emissions by making engines less reliable.

EPA’s background paper presents some statistics on permits that have been granted in recent years. There have been numerous successful permit applications—new combined-cycle gas turbine power plants account for most of these. But, as is always the case with new source bias in regulatory programs, most of the real costs are hidden from view. No one can provide data on the number of potential permits that were never applied for, nor the number modifications of existing sources that were deemed too risky. Nonetheless we can recognize some of the consequences.

The example used in Ackerman and Hassler’s seminal book on the Clean Air Act was the agency’s treatment of coal-burning power plants.

“At present these plants contribute 48 percent of all electric power produced in the United States. This share will grow over the next half century. With oil scarce, nuclear risky, solar embryonic, and hydro limited, the nation’s rich and cheap coal reserves call for exploitation. At the same time, coal burning generates environmental burdens. Coal fired power plants are major sources for several pollutants; they are currently the single most important source of sulfur oxides.”⁸

This was written 20 years ago. Today one might shade the statement a little differently: hydro is still limited; but oil is less scarce, nuclear might be less risky, solar is less embryonic, and natural gas is now an important option. Yet during that time coal-fired plants have raised their market share three more percentage points.⁹ What is more striking is that, by and large, they are the same plants—not just at the same location, but often using the same technologies and operating procedures that they did 20 years ago. Two-thirds of all coal-fired generating capacity is more than 20 years old,¹⁰ and some of those plants were considered old when the Clean Air Act first passed. New investments could upgrade these plants, raise their capacity, improve efficiency, improve environmental performance, and in many cases replace them altogether. But NSR and new source bias discourage these options, and thereby tend to preserve the older plants and the emissions that go with them.

The EPA has clearly been frustrated by the persistence of old and relatively dirty sources, but has limited authority to force emissions reductions on them. The agency’s aggressive use of NSR appears to be, in part, a response to that frustration. The motivation for applying NSR to modifications that do not appear to be environmentally harmful, for example, may be to bring an existing source to the settlement table where real emissions reductions can be negotiated. Such a strategy, if pursued without proper legal foundation, amounts to extortion and cannot be condoned. It is true, however, that some existing sources have potentially large emissions reductions to offer, and may be willing to make those reductions if at the same time they can secure permission to make other investments to upgrade their plants.

The NSR line as applied to existing sources is fuzzy and there is room for argument on both sides, each of which stands to gain a great deal by prevailing over the other. But there is much more to be gained by settling.

⁸ Op. cit., pp. 1-2.

⁹ Energy Information Administration, *Annual Energy Outlook 2001*, p. 75. The coal market share in 1999 was 51 percent, compared to Ackerman and Hassler’s 48 percent in 1979, also taken from EIA data.

¹⁰ National Coal Council, *Increased Electricity Availability from Coal-fired Generation in the Near-Term* (a report to the Secretary of Energy), p. 9, May 2001.

IV. Conclusions and Recommendations

Although it is impossible to quantify the unseen costs of the NSR program, there is little doubt that it constitutes a substantial deterrent to investment in new oil refinery and power generation capacity. For “greenfield” new sources, EPA does not have discretion to change the fundamental features of the NSR program. Without amending the Clean Air Act, the best it can do is to continue its efforts to reduce permitting times and to clarify BACT and LAER requirements. In PSD areas, EPA needs to explore ways to provide balance to the permitting process. When federal land managers intervene in a state-run permit process, there should be safeguards to ensure that the federal government’s views are fairly represented.

For existing sources EPA has significant opportunities, using the settlement process, to alter its NSR policy in ways that will improve the environment while giving much needed flexibility and regulatory certainty to the refining and power generation industries.¹¹ In order to remove the perverse incentives of NSR, the parties should decouple the NSR process from the investment decision by agreeing that new, lower emissions rates will be required after a fixed amount of time, rather than when a particular modification is made. That way companies can plan their investment decisions around a known regulatory requirement and deadline, without fear of stumbling on an NSR “tripwire.” For its part, EPA would ensure that the largest existing sources of emissions would not continue indefinitely, but would be abated after an agreed upon interim period.

This type of settlement can be made even more useful if the excess emissions during the interim period are liquidated—that is, if they are deemed “offsets” that are available to be used, banked, or sold. This would provide additional flexibility, not only to the affected existing sources, but to the entire NSR program and to the economic incentive program as it applies to offsets in nonattainment areas.

A constructive approach to settling these disputes could involve the following elements:

- 1) In order to settle a disagreement about when NSR should be (or should have been) triggered, EPA and an existing source or category of sources can agree to require compliance with new, stricter emissions limits after a fixed time period, regardless of whether or when actual modifications are made. For purposes of illustration, consider that time period to be 10 years from the date of settlement.
- 2) In order to provide certainty to both parties, the new emissions limits are agreed upon in advance and incorporated into a permit. While these limits may be related to LAER and BACT and NSPS levels, the availability of emissions reductions from the existing source gives wide latitude for the parties to agree on an outcome that is unambiguously better for the environment than any outcome that could be obtained without a settlement.

¹¹ Settlements should only be used in cases where EPA can legitimately cite a violation, or where the parties volunteer to participate.

- 3) In order to provide flexibility, the EPA can certify that the incremental emissions during the interim period are available as offsets. The quantity of offsets is equal to the difference between the old and new emissions rates, times the 10 year period before the new rates will be required. In effect, the new emissions rates are being applied immediately—but the source is using these granted offsets to bridge the gap between new and old rates.
- 4) The granted offsets can be banked (so that the source can move halfway to the new rates, for example, and thereby make them last 20 years) or sold. The availability of these offsets would make it much easier for greenfield facilities to build in nonattainment areas, without harming air quality. The offsets “granted” to existing sources (in consideration for agreeing to the new emissions limits) would provide liquidity to the market.

The agency should structure its NSR strategy to give priority to sources where there is a clear opportunity to make both economic and environmental improvements, and it should seek settlements that produce gains for both sides.

Note that the availability of the offsets for trading will make it far less likely that a future court or Congress or administration will find it necessary to grant extensions to agreed upon deadlines. The history of the Clean Air Act is replete with examples of statutory and regulatory deadlines that were missed. When a deadline approaches, the affected parties may plead infeasibility, leaving little choice but to grant relief. As a counterexample, consider EPA’s lead phasedown rule of 1982. For years, small refiners had sought, and obtained, exemptions from EPA’s lead rules. But the 1982 rule created an active market for lead offsets. Small refiners appealed to the courts for special relief, but were unsuccessful because of the availability of the lead offset market. With sufficient liquidity in the NSR offset market, compliance with emissions limits will become just another business decision, and not one for which relief need be granted outside the market.

The framework of the Clean Air Act, and New Source Review provisions in particular, create an adversarial tension that is difficult to resolve by issuing a general rule. The NSR as it now stands forces the agency to put any given source unambiguously on one side or another of a fuzzy line. Such a high-stakes all-or-nothing decision invites adversarial effort. It is important to realize that this is not a zero-sum game, however. There are substantial gains to be had if these disputes can be settled.

Many other source-specific constraints will need to be negotiated as part of any settlement. But the approach outlined above will have the benefit of decoupling the regulatory hammer from the decision to make new investments. It will “sunset” many of the grandfathered permits that account for a significant share of emissions. And it will create liquidity in the offset market, so that the market can make the best use of what emissions remain.