

**Testimony of Jeffrey R. Holmstead  
before the  
House Committee on Energy and Commerce  
Subcommittee on Environment**

**Hearing on  
New Source Review Permitting Challenges  
for Manufacturing and Infrastructure  
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Chairman Shimkus, Ranking Member Tonko, and distinguished members of the Subcommittee, thank you very much for inviting me to participate in today's hearing. My name is Jeff Holmstead. I am a partner in the law firm of Bracewell LLP and have been the head of the firm's Environmental Strategies Group (ESG) since 2006.

For almost 30 years, my professional career has been focused on policy, regulatory, and legal issues arising under the Clean Air Act. From 1989 to 1993, I served in the White House Counsel's Office as Associate Counsel to President George H.W. Bush. In that capacity I was involved in many of the discussions and debates that led to the passage of the 1990 Amendments to the Clean Air Act – and was then deeply involved in the initial efforts to implement the 1990 Amendments. From 2001 to 2005, I was the Assistant Administrator of EPA for Air and Radiation and headed the EPA Office in charge of implementing the Clean Air Act. I am well acquainted with the legal, policy, and practical issues associated with the Clean Air Act and the many regulatory and permitting programs that have been designed to protect and improve air quality in the U.S.

When not in the federal government, I have been an attorney in private practice, representing a wide variety of clients on Clean Air Act (CAA) and other environmental issues. Since I joined Bracewell in 2006, I have worked primarily with companies and trade groups in the energy and manufacturing sectors. Today, however, I am not appearing on behalf of my firm or any of my clients, and I have not submitted my testimony to anyone else for their review or approval. Instead, I speak as someone who has worked on CAA issues for many years – as a policymaker, a regulator, and an attorney in private practice representing companies who are trying to manufacture products or develop energy resources in the U.S. in an environmentally responsible manner. Based on my experience in all these roles, I can say that one particular CAA program known as New Source Review (NSR) is badly in need of reform.

Over the years, the NSR program has become a complicated mess that makes it more difficult for companies to do things that we should all want them to do – like maintaining the reliability and safety of their facilities and making them more efficient. In some parts of the country, it effectively bans the construction of new facilities even if they use state-of-the-art pollution controls and would not have a meaningful impact on the environment – and even though the communities where they would be located desperately want them to be built.

It is certainly true that the NSR program does result in environmental benefits, especially as it applies to new facilities. But these benefits can be preserved by reforming NSR in a thoughtful way that would provide regulatory certainty and dramatically reduce the burden that it imposes on U.S. businesses, workers, and consumers.

### Background

The Clean Air Act has been a remarkable success. Since it was adopted in 1970 – and especially since the passage of the 1990 Amendments – air quality has dramatically improved in virtually every part of the country. Since 1970, emissions of the six common pollutants that EPA has targeted for reduction – particles (generally called particulate matter or PM), ozone, lead, carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>) and sulfur dioxide (SO<sub>2</sub>) – have dropped by more than 70 percent while gross domestic product has grown more than 250 percent.

More importantly, the emissions reductions have dramatically improved the quality of the air that we breathe. Between 1990 (when the current CAA was put in place) and 2015, national concentrations of air pollutants improved 85 percent for lead, 84 percent for CO, 67 percent for SO<sub>2</sub>, and 60 percent for NO<sub>2</sub>.

Most important of all have been the recent reductions in concentrations of fine particles (PM<sub>2.5</sub>), which EPA and many outside researchers have identified as representing the greatest risk to public health of all pollutants. Just since 2000, shortly after EPA began to regulate fine particles, daily average concentrations of fine particles have improved by more than 40 percent nationwide.

However, these very substantial emission reductions and improvements in air quality do not mean that everything about the Clean Air Act is working well. The CAA created dozens of different regulatory programs, and, using the authority of the CAA, EPA has issued hundreds of different regulations. Since 1990, when Congress last amended the CAA in a meaningful way, we have learned a great deal about regulatory policy. We now understand that some CAA programs are very effective and others are not. Some programs actually create unforeseen problems that make them counterproductive.

Because the CAA and regulations issued under the CAA have been developed over time, there are often several different regulations that apply to the same pollutants from the same facilities. Some of these programs have been very successful at reducing pollution and improving air quality cost-effectively – like the acid rain program and the various cap-and-trade programs around the country that have been modeled on it. Yet there are other CAA programs that target the same pollutants from the same facilities and impose significant costs with little benefit. Because there are so many overlapping programs, we, as a society, are paying much more than we should for preserving and improving air quality. If we take advantage of the lessons that have been learned over the last 30 years and use the most effective and efficient approaches for reducing air pollution, we can achieve our air quality goals at a much lower cost.

As noted above, I have spent almost 30 years working on and studying the various regulatory programs created under the Clean Air Act. I can say with confidence that the NSR program, as it

applies to existing facilities, is the least successful and most counterproductive of all the Clean Air Act programs. To the extent that it provides environmental benefits, those same benefits can be preserved by reforming the program in a thoughtful way and by relying on other, much more effective CAA programs that regulate the same pollutants from the same facilities.

### Claims Made by NSR Proponents

Proponents of the current NSR program like to point to settlements (usually in the form of consent decrees) that have been reached over the years in a number of NSR enforcement cases. They argue that the current program should remain unchanged so that EPA enforcement officials can bring more NSR cases.

If you take the claims made in government press releases at face value, you might think that these NSR settlements have achieved large reductions in air pollution – especially from coal-fired power plants. But if you look carefully at the terms of the settlement agreements, you’ll find that most of the things that a company has agreed to do in terms of reducing pollution from its plants are things that the company is already required to do under other Clean Air Act regulations. If you look at some settlements, you’ll see that the companies are simply agreeing to do things *that they have already done*. This means that government enforcement officials, in their press releases, are claiming credit for things that have already been done or pollution reductions that would be achieved anyway – i.e., even without the settlement. And if you’re familiar with the other CAA programs that regulate the same emissions from the same facilities, you would see that all the pollution reductions that have been claimed for these NSR enforcement could be achieved by other, more cost-effective CAA programs.

Again, it is instructive to look at the NSR program as it has been imposed on the power sector. The NSR settlements that have required companies to reduce emissions from their coal-fired power plants apply almost exclusively to plants located in areas that, under other CAA programs, have “caps” on the total amount of pollution that can be emitted by the coal-fired plants in these areas. Because of the area-wide cap, a settlement requiring emission reductions from certain plants does nothing to reduce total emissions in that area. It simply ensures that they are achieved at some plants rather than others – and not necessarily where the emission reductions are most needed or where they can be achieved most cost-effectively.

### The NSR Program as it Applies to New Facilities

In a recent paper published in the Environmental Law Reporter (ELR), Art Fraas (a Visiting Fellow at Resources for the Future), John Graham (the Dean of the School for Public and Environmental Affairs at Indiana University), and I discuss the NSR Program at some length and outline a number of reforms that would make it easier to build new manufacturing facilities in the U.S. as long as they use the best available technology to control their emissions. That paper, entitled “EPA’s New Source Review Program: Time for Reform?” is focused primarily on the ways in which the NSR Program applies to new facilities. Rather than summarize that paper here, I have asked that it be included in the record for this hearing. That said, I would be happy to answer questions that any members of the Subcommittee might have about it.

## The NSR Program as it Applies to Existing Facilities

As the name implies, the New Source Review or NSR program was designed primarily for “new sources” of emissions (new manufacturing facilities and power plants). Before any new major source can be constructed, it must first go through a permitting process that identifies the “best available control technology” to minimize emissions from the new facility. The permit applicant must then obtain an NSR permit that requires the new facility to meet emission limits that can be achieved with that technology. The basic theory of the program is that modern pollution controls should be part of the design and construction of any new major source of emissions. The NSR program is probably the most important CAA program for controlling pollution from new sources.

The NSR program also applies to existing sources, but only if they make “major modifications” as defined under EPA regulations. Again, the theory is that, when there will be a modification to an existing plant that will significantly increase emissions, modern pollution controls should be designed into the modification. Although the NSR program is the primary regulatory tool for controlling emissions from new plants, it was *not* intended to be a key program for controlling emissions from existing facilities. As EPA stated in a 2002 Report on the NSR program:

The NSR program is by no means the primary regulatory tool to address air pollution from existing sources. The Clean Air Act provides for several other public health-driven and visibility-related control efforts: for example, the National Ambient Air Quality Standards Program implemented through enforceable State Implementation Plans, the NOX SIP Call, the Acid Rain Program, the Regional Haze Program, etc. Thus, while NSR was designed by Congress to focus particularly on sources that are newly constructed or that make major modifications, Congress provided numerous other tools for assuring that emissions from existing sources are adequately controlled.

*New Source Review: A Report to the President* (2002) at pp. 3-4.

The question of what is a “major modification” that triggers NSR at an existing source has been the source of much controversy and is discussed in several EPA regulations, more than a thousand pages of guidance documents and Federal Register notices, and dozens of court cases – and there is still much uncertainty about how to determine whether something is a major modification.

This is important to industry because, if a company makes a “major modification” to a facility, the cost of going through NSR, and the delays it can cause, are very substantial. In some cases, companies that have undertaken a \$500,000 project that, according to EPA, is a “major modification” have been forced to spend hundreds of millions of dollars in new control equipment. Even without the cost of new equipment, the time it takes to go through the NSR permitting process can be very long – perhaps a year on average but, in some cases, many years. Because of the cost and delays, companies are very reluctant to do anything that might trigger NSR.

Over the last 15 years, EPA enforcement officials have tried to expand the definition of major modification in an effort to capture more facilities into the NSR program. At the same time, companies have spent much more time and effort figuring out how they can maintain their facilities without triggering NSR. I know of companies that actually employ teams of people full-time to make sure that the investments they make to maintain their facilities do not trigger NSR, and companies often make suboptimal decisions about investing in their facilities because of the current NSR program. As a result, the NSR program makes it more difficult for companies to do things that we should all want them to do – like maintaining the reliability and safety of their facilities and making them more efficient.

### *The Emissions Increase Test*

Under the statute and EPA’s regulations, a major modification is a “physical change or change in the method of operations” at an existing source that will cause a “significant emission increase,” which is defined as an increase in annual emissions that is greater than certain thresholds (which are different for different pollutants). As EPA has noted, this definition essentially creates a two-step test that a plant operator must use in order to determine the applicability of NSR requirements to any particular project at an existing source: “first, you will determine whether a physical or operational change will occur. If so, then you will proceed to determine whether the physical or operational change will result in an emissions increase over baseline levels.” 67 Fed. Reg. 80186, 80187 (Dec. 31, 2002).

Under EPA regulations, “routine maintenance, repair, and replacement” projects are exempted from the definition of a physical change, so there has been much litigation over whether certain specific projects are “routine.” But, perhaps surprisingly, there has also been much controversy over the question of how to determine if a physical or operational change will result in an emissions increase.

Another CAA program, referred to as the New Source Performance Standards or NSPS program, employs the exact same definition of the term “modification.” In fact, when Congress added the NSR program to the CAA in 1977, it simply adopted the existing statutory definition of “modification” that had been used since 1970 for the NSPS program. Under the NSPS, EPA determines whether a project at a plant is a “modification” by looking at the maximum hourly emission rate of the plant before the project and comparing it to the maximum hourly emission rate of the plant after it. If a project does not increase this rate – that is, if the plant has not been changed in a way that would increase its maximum hourly emissions rate – then the project is not a modification. There is rarely any controversy about this issue because the maximum hourly emission rate is a readily available number that is based on the design of the facility.

Under the NSR program, however, EPA has adopted a very different approach for determining if a physical or operational change will cause an emissions increase – not based on plant design but on projections of future annual emissions that depend on many other factors besides the physical design of a facility. First, a company must determine its “baseline” emissions. For power plants, this is annual average emissions of the highest 2-year period of operation over the last 5 years. For other facilities, it is the highest yearly emissions during the last 10 years.

Then, a company must make a projection of what its future annual emissions will be during the 5- or 10-year period after the change (depending on the type of project being undertaken). If projected future emissions are higher than baseline emissions by more than the “significance thresholds,” then the company is allowed to subtract the amount of its projected future emissions that are unrelated to the physical change at the facility (such as increased demand for the product being produced). If projected future emissions are still higher than the “significance threshold,” then the physical change is a “major modification” that triggers NSR.

This is complicated enough, but there has been substantial controversy as to how future annual emissions should be projected. Some power companies have projected future emissions using sophisticated computer modeling techniques that they use to plan future investments – only to have EPA enforcement officials insist that they should have used another method that would have predicted higher emissions and thus that the project triggered NSR. Like virtually every other NSR issue, this has been the subject of protracted litigation.

Because of all the uncertainty and controversy caused by the “emission increase test,” it would be helpful for Congress to clarify this issue. In my view, the best approach would be to make clear that there is not a “major modification” under NSR if there is not a “modification” as defined under NSPS. Thus, companies (and EPA) would evaluate a project to determine whether it would increase the maximum hourly emission rate at the plant. If not, then the project does not trigger NSR. If so, then the project would be a modification and would then be evaluated under the current NSR test to determine whether it would be a “major modification” that would trigger NSR.

There are at least two important reasons for Congress to consider such an approach. First, it would provide much more certainty to EPA, states, and the regulated industry. As opposed to the current NSR approach, the maximum hourly emission rate is an objective measure based on the design of the facility and is easily ascertainable. As recent experience has shown, there is much subjectivity under the current approach and many different ways to project future annual emissions and then determine the amount of those emissions that are unrelated to the project being evaluated.

Second, from an environmental perspective, a one-hour test is much more meaningful because the most stringent EPA standards are based on maximum concentrations of a pollutant averaged over one hour (for SO<sub>2</sub> and NO<sub>2</sub>), eight hours (for ozone and CO), and 24 hours (for PM<sub>2.5</sub>). The only pollutant for which a longer “averaging time” is meaningful is lead, for which the air-quality standard is based on a 3-month average (and which has rarely, if ever, been addressed by NSR.) Simply put, in terms of protecting human health, the maximum amount of a pollutant that a facility emits in one hour is much more important than the amount it emits in a year.

### *Energy Efficiency Projects*

I believe that Congress should also consider legislation to ensure that NSR is not an impediment to improving energy efficiency. There is much interest in reducing carbon dioxide (CO<sub>2</sub>) emissions in the U.S. and around the world. And I believe that there is a consensus that the most cost-effective way to reduce CO<sub>2</sub> from existing facilities is to improve their energy efficiency – that is, to make physical or operational changes that would enable them burn less fossil fuel

(coal, oil, or natural gas) to produce a given amount of product (whether it be electricity or gasoline or widgets).

However, the current NSR program is a significant impediment to energy efficiency projects because EPA, in a number of NSR enforcement cases, has argued that energy efficiency projects trigger NSR – i.e., that an existing facility must go through the cumbersome and costly NSR permitting process before it can do such a project. I am aware that, for this reason, a number of companies have identified energy efficiency projects that they would like to undertake but have decided *not* to do them for fear of triggering NSR.

It may seem strange that EPA would take a position that actively discourages energy efficiency, but here is the theory espoused in several NSR enforcement cases against power plants: When a facility owner makes a physical or operational change at a facility to make it more energy efficient, this reduces the cost of operating the facility, because it uses less fuel per unit of production. For this reason, the more energy efficient facility would have a competitive advantage over other facilities that make the same product. As a result, the more energy efficient facility will take away business from less efficient facilities and operate longer hours. Because it operates longer hours, it will increase emissions and, as a result, the energy efficiency project triggers NSR.

If you have followed this convoluted reasoning, I think you will be outraged by it. For one thing, if a more energy efficient facility takes away business from its competitors, then it will certainly reduce total CO<sub>2</sub> emissions – because less fuel will be burned per unit of production. As a general rule, I think we should all agree that government should adopt policies that encourage energy efficiency.

However, in its zeal to bring NSR enforcement actions, EPA has implemented the NSR program in a way that clearly makes it more difficult and costly to make energy efficiency improvements to existing plants. If Congress wants to encourage energy efficiency, it should adopt legislation to make it clear that any physical or operational change at an existing facility that makes it more energy efficient – that enables it to reduce its CO<sub>2</sub> emissions per unit of production – does not trigger NSR.

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Again, I very much appreciate the opportunity to appear before the Subcommittee and hope my testimony will be helpful to you as you review the New Source Review program and decide whether Congress should take action to reform it.