Questions from the Honorable John Shimkus

1. **Currently, pollution control projects are considered exempt from the New Source Performance Standards (NSPS) but are not exempt from the NSR program, meaning that an owner must receive an NSR permit to carry out a pollution control project.**

    a. **Can you explain why it would be beneficial to exempt pollution control projects from having to obtain an NSR preconstruction permit?**

The NSR process is long, cumbersome, and often very costly. As a result, facility owners try to avoid it whenever they can. In some cases, it would be in their interest to carry out pollution control projects, but they choose not to do so because they do not want to trigger NSR. If there were an NSR exemption for pollution control projects (as there already is for NSPS), it would remove this disincentive, and we would see more facilities carrying out such projects – especially energy efficiency projects that would reduce CO2 emissions.

2. **In your testimony you note that EPA enforcement officials have tried to expand the definition of major modification in order capture more facilities in the NSR program.**

    a. **What are the potential penalties or costs if a company does not correctly comply with NSR requirements?**

If EPA takes the position that a facility has not complied with NSR, the potential costs to the facility owner are enormous.

By statute, EPA may impose fines of more than $95,000 per day for Clean Air Act violations. EPA has taken the position that, if a facility should have gone through NSR before undertaking a project but failed to do so, the Agency can fine the facility owner $95,000 per day for every day it has operated since the project was started. For a project that was done 3 years ago, this means potential fines of more than $100 million.

In addition, EPA has in a number of cases argued that, even when a facility has undertaken a relatively minor project, it triggered NSR and now needs to install new and very costly pollution control equipment. In cases involving power plants, EPA has often argued that component replacements costing a few million dollars have triggered the need for the plant to install pollution control equipment costing several hundred million dollars.

    b. **As a general matter, should the enforcement office be expanding definitions or should that be the role of the policy office?**

The policy office should be establishing clear definitions based on congressional intent and sound public policy. The enforcement office should simply be enforcing those definitions – not expanding them. One of the main problems with NSR is that EPA's position on key issues has been announced in enforcement actions and not through the regulatory process. As a result, EPA's position on what constitutes a major modification is based on the desire to bring

enforcement cases, not what makes sense from a policy perspective. This is not the way any regulatory program should work.

c. Also, can you explain how this fits with the statutory goals of the NSR program and whether this is a result of unclear guidance.

The NSR program was designed to ensure that when someone builds a new major source or expands the capacity of an existing major source, the new or modified source will use the modern pollution equipment to control its emissions. Over the years, EPA has tried to expand this program to force existing facilities to go through NSR even when they simply replace components with identical components. This has discouraged plants from doing things that we should want them to do – such as improving reliability or energy efficiency. This is not consistent with the goals of the NSR program.

3. Do current NSR program regulations make it more difficult for owners to carry out maintenance, repair, or replacement activities aimed at maintaining or improving safety or reliability? Please explain.

Yes. In numerous enforcement cases, EPA has argued that facility owners should have gone through the cumbersome and costly NSR permitting process before undertaking projects to improve the reliability or safety of their plants. Seeing these enforcement actions, facility owners sometimes forgo energy efficiency projects and make suboptimal decisions when it comes to improving the reliability of their plants because of concerns about triggering NSR.

4. Do you have concerns that revising the NSR program to match the maximum hourly test under NSPS could create a scenario where a modification carried out at an existing facility could result in higher levels of annual pollution which air regulators would not have the ability to regulate or address? Please explain.

Absolutely not. There are many different Clean Air Act programs that give EPA and state and local regulators the authority – and the obligation – to protect air quality by regulating existing sources of air pollution. Regardless of whether a plant carries out a modification, regulators have authority and an obligation to impose more stringent emission limitations on plants to protect public health and prevent other types of environmental harm.

Questions from the Honorable David B. McKinley

One of the more frustrating aspects of EPA's NSR program is uncertainty surrounding the exemption for "Routine Maintenance, Repair and Replacement" -or RMRR – at existing sources. What falls under the RMRR exemption has been left up to case-by-case- interpretations by the EPA and various states, leaving utilities constantly second-guessing whether or not a change at a facility will open themselves up to lawsuit or EPA enforcement action.

1. If there was greater certainty surrounding the RMRR exemption, do you believe that utilities and other manufacturers would be more likely to take actions at their facilities to improve efficiency and to reduce pollution?

Yes. I am aware of a number of instances in which a company was considering a project that would have reduced emissions but chose not to undertake it because of concerns about triggering NSR. There is no question that facility owners would take actions to improve the efficiency of their facilities if there were clear and sensible rules about RMRR. It would be even better if Congress passed legislation to make it clear than energy efficiency and pollution control projects do not trigger NSR.

2. What actions could the EPA take to clarify and standardize what qualifies as RMRR to encourage these common-sense actions?

In my view, EPA could and should provide industry specific guidance about the projects that are routinely done to maintain existing facilities. In some industries, there is now a great deal of information about such projects. Even if EPA cannot provide a definitive list of all the projects that qualify as RMRR, it can certainly provide a list that would cover the vast majority of such projects for many industries.

Even so, I firmly believe that Congress should make certain key NSR reforms through legislation to provide long-term certainty. In my view, the most important reforms are addressed in the bills introduced by Congressman Griffith.

Questions from the Honorable Richard Hudson

1. In your written testimony, you cite how the NSR program is the primary regulatory tool for controlling emissions from new plants, but it was not intended to be a key program for existing facilities. Could you elaborate on this and discuss what tools are better suited to regulate emissions from existing facilities?

There are many different Clean Air Act programs that regulate the same pollutants from the same facilities. For example, emissions from existing coal-fired power plants are regulated under at least 14 different Clean Air Act programs:

Acid Rain
NOx SIP Call
MATS
NSPS
Regional Haze
Section 126
CSAPR (and the CSAPR Update)
BART
The CSAPR update
The SO2 NAAQS
The NO2 NAAQS

The Ozone NAAQS
The PM2.5 NAAQS
NSR

Over the last 25 years, regulators and policy analysts have learned a lot about regulatory policy and design and will tell you that some of these programs are much more effective than others. When it comes to reducing emissions from existing facilities, NSR is certainly the least effective and most counterproductive. Emissions from existing facilities have decreased dramatically since 1990, but very little of this decrease can be attributed to NSR. Yet it has made it much harder to maintain and improve the reliability and efficiency of existing plants.

2. When existing facilities conduct "major modifications" they trigger NSR. As we have heard from others already, there can be a significant cost and time associated with this. In your experience, do you think this label has been applied appropriately to facilities that seek to make modifications to their facilities? What standards would you like to see included in the "major modifications" category?

Until the mid-1990s, the definition of a "major modification" was generally appropriate. But over the last 20 years, EPA has tried to expand it to capture as many existing sources as possible, and the NSR program has become a convoluted, burdensome, and completely unnecessary mess. I believe that the reforms being proposed by Mr. Griffith would simply re-introduce some common sense into the NSR program and make sure that it does what it was intended to do:

1. Ensure that, when a new industrial facility is built or an existing facility is significantly expanded, modern pollution controls will be used to minimize its emissions; and

2. Ensure that the NSR program does not make it hard for companies to keep their facilities in good working order and, where possible, to reduce the operating cost of these facilities by making them more efficient.

<u>Questions from the Honorable H. Morgan Griffith</u>

The goal of the NSR program is to regulate emissions at new sources and at existing sources undertaking major physical or operational changes, rather than regulating projects that simply maintain or improve upon existing plant operations. And the Clean Air Act attempts to make that distinction by defining an NSR modification as any physical change which "increases the amount of any air pollutant emitted by such source. . . ."

However, EPA's current interpretation of this language -which looks at emissions on an annual basis – could, for example, trigger NSR for a power plant simply because it can operate more often or reliably after the changes.

1. Wouldn't it make more sense, and still advance the goals of the Clean Air Act, for EPA to instead measure a change in emissions on an hourly basis -to actually capture those modifications that should be considered new sources of emissions?

Yes. Because of the uncertainty and controversy caused by the current annual-actual-to projected-actual "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 SO2 and NO2), eight hours (for ozone and CO), and 24 hours (for PM2.5). 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.

2. Would making this change to an hourly emission test provide greater certainty to power plants and manufacturers, while still ensuring that modifications that actually do increase emissions go through the NSR permitting process?

Yes. Congress should provide certainty by making it clear that, for purposes of NSR, a change increases emissions only if it will increase the maximum hourly emissions rate of the facility. This ensures that increases in capacity (as evidenced by maximum hourly emissions) would still be required to go through the NSR permitting process.

3. Do you believe that EPA has the ability to address this issue through regulation?

Yes. The Supreme Court has made it clear that EPA has discretion under the Clean Air Act to define the term "emissions increase" based on hourly emissions or annual emissions. However, if EPA issues a regulation to change the current test to an hourly emissions test, a future EPA could probably change it back again.

4. Would statutory direction from Congress provide greater, long-term certainty?

As my prior answer suggests, I believe it would be much better for Congress to adopt legislation to ensure than an hourly emissions test is used to determine whether a change to an existing source would cause an emissions increase. In my view, this is only way to provide long-term certainty.

Questions from the Honorable Frank Pallone, Jr.

1. Do you agree that under today's PSD and nonattainment NSR regulations, a non-exempt physical change at a stationary source could increase its actual annual emissions and be considered a "modification," and not increase its hourly potential to emit and therefore not be considered an NSPS modification?

Yes, but I do not believe that this is a concern for the reasons discussed below.

Your question suggests that increases in annual emissions at a facility should trigger NSR, regardless of whether there is an increase in the facility's maximum hourly emission rate (*i.e.*, its capacity). But even under the current NSR program, a facility is usually allowed to increase its annual emissions – even dramatically – without triggering NSR. If a facility is not increasing its capacity, an increase in its annual emissions is not a concern because the facility is already subject to a number of regulatory requirements that are designed to ensure that air quality is protected when the facility is operating at full capacity. For any facility covered by the NSR program, these requirements are incorporated into its operating permit.

In some cases, a permit will limit a facility's annual emissions, but this is unusual because regulators and air quality experts are primarily concerned about air quality problems that are caused by pollutants that are emitted over a short period of time – an hour, 8 hours, or 24 hours. From an air quality perspective, hourly emissions are much more important than annual emissions. As a result, most permit limits are set in terms of a maximum allowable hourly emission rate (or a rate per unit of production, such as lbs/MMbtu.). Of course an hourly limit also limits the emissions that a facility can emit over any longer time period, including a year.

Annual emissions from stationary sources increase and decrease all the time for business reasons. Most often, emissions will increase at a facility because it wants to increase production in response to market demand for the product it produces, whether it be electricity, or steel, or widgets. Increased demand at a particular facility is often caused by an overall increase in demand for the product being produced at such facilities, but it also caused by the closure or curtailment of other facilities making the same product.

The only time an increase in annual emission implicates NSR is when the increase is caused by a non-routine physical change at the facility, and there has been enormous controversy and uncertainty over what is "routine" and how to determine whether a change will actually cause an emissions increase. Because of this uncertainty, companies are often reluctant to do things that we should want them to do – like improve their efficiency, safety or reliability. By adopting an hourly emissions test, so that a facility would trigger NSR only if it increases its capacity, Congress would ensure that NSR is triggered only when it makes sense to require a facility to go through the long NSR permitting process.

Permit limits are based on a variety of different regulatory requirements, but the main underlying reason is to protect air quality – to ensure that emissions from a facility, even when combined

with emissions from many other different types of "sources" (industrial facilities, cars, trucks, etc.) do not cause unhealthy levels of pollution in the air. If any particular facility or group of facilities is causing unhealthy levels of pollution, then local, state, and federal regulators are required to take action (usually by imposing more stringent regulatory requirements on them) to remedy the problem – regardless of whether there has been or will be an NSR or NSPS modification at any of the facilities involved.

As noted above, facilities increase their annual emissions all the time for business reasons – perhaps because total demand for a product has increased or because other competing facilities have closed down. Unless a facility has increased its capacity (which can be measured in terms of its maximum hourly emission rate), there is often no truly objective way to determine whether a particular physical change has caused an increase in annual emissions or whether the increase was caused by something else. There have been dozens – perhaps hundreds – of cases where this issue has been the subject of protracted litigation.

Even more difficult is that, under NSR, a facility must predict, before undertaking a project, whether its emissions will increase after a change and, if so, whether any part of that increase is caused by the change. There have actually been several cases where (1) a facility predicted that a change would not cause an increase in annual emissions; (2) years passed after the change and there was never an increase in annual emissions; and (3) EPA enforcement officials nevertheless brought an enforcement action based on a claim that the facility "should have" predicted that the change would cause an increase in annual emissions even though such a prediction clearly would have been incorrect.

Determining whether a particular change at a facility would cause an increase in a facility's maximum hourly emissions is a more objective test, and there is rarely any controversy about it because it's a straightforward engineering question. As noted above, in terms of protecting air quality and human health, hourly emissions are also much more relevant than annual emissions.

1. Do you agree that under today's PSD and nonattainment NSR regulations, a non-exempt physical change at a stationary source could increase its actual annual emissions and be considered a "modification," and not increase its hourly potential to emit and therefore not be considered an NSPS modification?

a. Would you consider this to be an increase in air pollution?

Yes, but not necessarily a concern.

2. Do you consider an increase in annual pollution emissions even, if hourly potential emissions do not increase, to be "an increase in air pollution"?

Yes, but not necessarily a concern. It is important to note that the current NSR program does not prevent facilities from increasing their annual emissions, and such increases fairly often. Thankfully, we have many other Clean Air Act programs that are designed to ensure that an increase in annual emissions from any particular facility does not cause unhealthy levels of air pollution.

3. Do you consider an increase in annual pollution emissions, even if a maximum hourly emission rate does not increase, to be "an increase in air pollution"?

Yes, but not necessarily a concern. It is important to note that the NSR program does not prevent facilities from increasing their annual emissions, and such increases happen fairly often. Thankfully, we have many other Clean Air Act programs that are designed to ensure that an increase in annual emissions from any particular facility does not cause unhealthy levels of air pollution.

In your oral statement, you stated that: "Even -and I can guarantee you this - even if the NSR program disappeared completely tomorrow, there would not be a massive increase in air pollution. In fact, there would not be any increase in air pollution at all and we would see, because of the many other programs that regulate the same pollutants from the same facilities, air pollution would continue to decrease as it has since 1990.

I am very confident that these statement are correct.

4. Is it your contention that for each stationary source in the United States subject, or potentially subject, to the PSD/NSR program, there are "other programs" that would prevent there from being "any increases in air pollution" from any or all of these sources "if the NSR program disappeared completely tomorrow"?

I did not say that, if the NSR program disappeared completely tomorrow, there would not be any increase in air pollution from any source. But no one who understands the Clean Air Act would ever say that, with the current NSR program, there would not be any increase in air pollution from any source.

As explained above, the current NSR program does *not* prevent facilities from increasing their emissions. Because most facilities do not operate at full capacity, they can increase their production (and thus increase emissions) without triggering NSR. A facility triggers NSR only if (1) it makes a non-routine change and (2) this change (and not an increase in demand) would cause an increase in annual emissions.

Even if a facility *does* trigger NSR, this does not necessarily mean that it will decrease its annual emissions. The NSR program is designed to ensure that new facilities and facilities that undergo major modifications will be well-controlled. If a facility increases its capacity and thus must go through NSR, it can still increase its emissions, but it must use the best available control technology to minimize the emissions increase.

Nor do other Clean Air Act programs ensure that there can never be “any increases in air pollution” from any source. But this is hardly the point. Air quality problems are caused by the combined emissions from many different sources. What policymakers care about is improving and protecting air quality, which involves reducing the collective emissions from many different sources.

When I said that, even if the NSR program disappeared entirely, there would not be any increases in air pollution, I was referring to the fact total emissions would continue to decrease as they have since 1990, and air quality would continue to improve throughout the country. The NSR program has not played a significant role in reducing air pollution from existing sources in the past, and there is no reason to believe that it will do so in the future.

5. Please identify those programs, laws and regulations and explain your responses.

I am not aware of any federal regulatory program that "would prevent there from being any increases in air pollution from any source." In my oral statement, I listed the major Clean Air Act programs that have reduced and will continue to reduce air pollution from power plants and other stationary sources and will continue to improve air quality even if the NSR program were to disappear entirely:

The Acid Rain Program
NOx SIP Call
MATS
NSPS
Regional Haze
Section 126
CSAPR
BART
The CSAPR update
The SO2 NAAQS
The NO2 NAAQS
The Ozone NAAQS
The PM2.5 NAAQS

This list includes only programs that apply to power plants, but many of them apply to other stationary sources as well – and there are other programs that apply to other types of stationary sources that do not apply to power plants. In terms of improving air quality in urban areas, more important are the regulatory programs that have dramatically reduced (and will continue to reduce) emissions from cars, trucks, and other mobile sources.

6. Please identify all instances you are aware of in which a facility undertook a "modification" as defined under EPA's NSPS regulations, and triggered the obligation to comply with the applicable standards of an NSPS. Please be specific concerning the facility or facilities, locations and date ranges to allow the Committee to examine those instances.

It is not uncommon for sources to make NSPS modifications and thus become subject to more stringent regulatory requirements. This usually happens when sources increase their capacity. I have heard of this happening a number of times, but there is rarely any controversy about such modifications, so I have not been personally involved. Because the

NSPS test is objective and usually clear-cut, engineers and technical experts simply take the steps necessary to meet the more stringent standards without the need to involve lawyers or government officials.

I do not believe that EPA or anyone else keeps track of facilities that make NSPS modifications, so it would be very difficult to put together such a list.