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Testimony

of Ross Eisenberg

Vice President

Energy and Resources Policy

National Association of Manufacturers

*before the House Committee on Energy and Commerce
Subcommittee on Energy and Power*

on "Discussion Draft of the Promoting New Manufacturing Act"

May 21, 2014



Summary of Written Testimony

The boom in domestic energy production—in particular, increased oil and gas production made possible by advances in shale technology—is driving major new investment in domestic manufacturing and contributing to increased U.S. competitiveness around the world. With U.S. manufacturing on the verge of a major comeback fueled by a dominant position on energy, there is no better time than now for the Subcommittee to examine the existing air permitting process to determine whether and how it can be improved.

Manufacturers and regulators alike continue to struggle with the complex requirements of the New Source Review (NSR) program. Manufacturers have identified a wide range of challenges with NSR, ranging from relatively minor impediments to major problems. These include: changed permit conditions that derail the project; mandatory stay when a project is challenged at the Environmental Appeals Board (EAB); modeling issues; barriers to installation of combined heat and power (CHP) and energy efficiency measures; threats of litigation create delays on the front end; remand issues; and minor source problems. The EPA air office has listened to manufacturers' permitting concerns and is actively working to fix many of them, but these fixes do not always trickle down to the state permitting authorities as easily as EPA or industry would prefer.

Manufacturers also continue to be concerned with the NSR process as applied to greenhouse gases (GHGs), which appears to be acting as a deterrent to new construction. When EPA extended NSR to GHGs in early 2011, it forecasted that it would need to issue 900 new preconstruction permits per year; however, in the three-plus years since the GHGs became covered, only 166 permits have been issued *in total*.

Manufacturers believe the preconstruction process can be improved. However, we do not believe this should be a partisan, or even particularly contentious, issue. Many of the problems identified can be addressed through a collaborative process involving the EPA, Congress and the regulated community. The Promoting New Manufacturing Act would take positive steps toward addressing several of the preconstruction permitting issues raised by manufacturers. It diagnoses the problem on GHG permitting (if one exists) and provides the best available information so that the EPA and Congress can then decide if steps are needed to improve the process. By requiring that any guidance or regulations implementing a new or revised National Ambient Air Quality Standard (NAAQS) be published concurrently to the NAAQS, the bill will help minimize any disruption caused by potentially major revisions to the NAAQS for ground-level ozone in 2015. All but a handful of the new manufacturing facilities driven by the shale boom would fall in nonattainment areas for Ozone at 60 parts per billion (ppb), the low end of the range the EPA is expected to consider.

TESTIMONY OF ROSS EISENBERG
BEFORE THE HOUSE COMMITTEE ON ENERGY AND COMMERCE
SUBCOMMITTEE ON ENERGY AND POWER

Hearing on:
“Discussion Draft of the ‘Promoting New Manufacturing Act’”

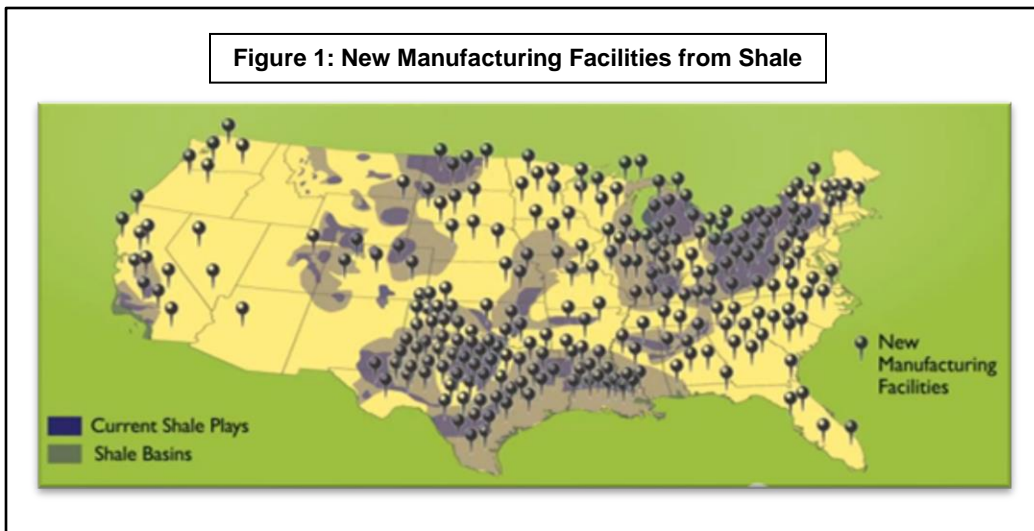
MAY 21, 2014

Good morning, Chairman Whitfield, Ranking Member Rush and members of the Subcommittee on Energy and Power. My name is Ross Eisenberg, and I am the vice president of energy and resources policy at the National Association of Manufacturers (NAM). The NAM is the nation’s largest industrial trade association, representing nearly 12,000 small, medium and large manufacturers in every industrial sector and in all 50 states. I am pleased to represent the NAM and its members at today’s hearing to evaluate the discussion draft of the Promoting New Manufacturing Act.

The NAM appreciates the subcommittee’s interest in the permitting process for manufacturing facilities. This oft-overlooked aspect of the regulatory process can provide a great deal of headaches—and at times great cost and delays—for a manufacturer looking to build a new facility, expand an existing one, or even modify an already-operational plant so it can run better. With manufacturing in the United States on the verge of a major comeback fueled by a dominant position on energy, there is no better time than now for the subcommittee to examine the existing air permitting process to determine whether and how it can be improved. For all of these reasons, the NAM supports the Promoting New Manufacturing Act.

Energy Is Fueling Exciting New Opportunities for Manufacturers

As the subcommittee has heard from the NAM and countless others in recent years, the boom in domestic energy production—in particular, increased oil and gas production made possible by advances in shale technology—is driving major new investment in domestic manufacturing and contributing to increased U.S. competitiveness around the world. A recent report by the global research firm IHS predicted that combined upstream, midstream and downstream unconventional oil and gas production processes, and the chemical industry benefiting from it, will support more than 460,000 combined manufacturing jobs by 2020, rising to nearly 515,000 by 2025.¹



The potential gains to manufacturing are even more pronounced when other energy-intensive manufacturing projects driven by low-cost energy are included. PricewaterhouseCoopers (PwC) forecasts that full-scale and robust development of U.S. shale plays could result in one million new manufacturing jobs by 2025 in chemicals, iron and steel, aluminum, plastics, cement and other

¹ *America's New Energy Future: The Unconventional Oil and Gas Revolution and the U.S. Economy*, September 2013, available at <http://www.ihs.com/info/ecc/a/americas-new-energy-future-report-vol-3.aspx>.

industries.² In addition, PwC estimates that lower feedstock and energy costs could help manufacturers in the United States reduce natural gas expenses by as much as \$11.6 billion annually in that same time frame.³

Permitting Challenges Persist

Manufacturers understand the risks inherent in making investments of this magnitude in the U.S. We understand that even with our built-in energy advantage, U.S. policies on taxes, torts and regulations make it more expensive to manufacture here than in our largest trading partners. We understand that new regulations will be issued while we wait for our permit, moving the goalposts and forcing us to change our entire plan. We understand that law firms masquerading as public interest groups will exploit every step of the approval process for our projects and ultimately sue us, seeking to delay a decision and drive up project costs in the hopes that market conditions will change or we will walk away. We understand that all of this will happen. But it doesn't make it right.

The Clean Air Act preconstruction permitting process is an area that can be improved. Manufacturers and regulators alike continue to struggle with the complex requirements of the New Source Review (NSR) program. NSR requires that any new construction or major modification to a "major source" in an attainment area first obtain a Prevention of Significant Deterioration (PSD) permit and install the Best Available Control Technology (BACT) before construction can begin. NSR often triggers evaluations that can last for several years, despite a 12-month aspirational deadline set by the Environmental Protection Agency

² *Shale Gas: A renaissance in US manufacturing?* December 2011, available at <http://www.pwc.com/us/en/industrial-products/publications/shale-gas.jhtml>.

³ Id.

(EPA). PSD permits are often issued by state air quality control agencies, in consultation with the EPA, and can vary widely. The BACT selection process itself is done on a case-by-case basis for each affected facility. When the construction or modification occurs in a nonattainment area, NSR requires a “Nonattainment NSR” permit, which has a much stricter set of requirements than PSD.

Manufacturers have identified a wide range of challenges with NSR, ranging from relatively minor impediments to major problems. These include:

- Changed permit conditions that derail the project. One of our members, Charlotte Pipe and Foundry, a company that testified before this Subcommittee two years ago, had to abandon a new “green foundry” project in North Carolina due to new fine particulate matter (PM_{2.5}) National Ambient Air Quality Standards (NAAQS). Charlotte Pipe had already purchased land for the project and even paid to have its permit placed in the state’s nine-month fast-track process. Eighteen months of delay later, the new standards were issued, the rules were changed mid-stream—to comply, the project would have needed 4,500 acres instead of 450—and Charlotte Pipe was forced to give up.
- Mandatory “stay” when a project is challenged at the Environmental Appeals Board (EAB). If a permit is challenged in federal district court, the project applicant may choose to begin construction activities at its own risk. However, when the same permit is challenged at the EAB, the project is effectively “stayed,” and construction is placed on indefinite hold pending the outcome, delay and uncertainty that can cost the applicant millions of dollars. Opposition groups frequently cause this delay by filing an appeal to the EAB.
- Modeling issues. Air quality modeling has become the most critical step in obtaining a PSD permit in recent years. The EPA’s models, which manufacturers report are overly conservative and prone to errors, are a consistent source of delays in the permitting process and can often lead to abandoned projects. In one case, a manufacturer’s small facility with relatively low emissions could only demonstrate compliance via modeling by raising stack heights from 20 feet to more than 150 feet, at a cost of millions of dollars. The project did not go forward. Another manufacturer that produces natural gas compressor stations reports that disagreements with the EPA’s nitrogen dioxide (NO₂) models are preventing the issuance of a PSD permit, and the applicant may need to do a seven-figure study to

address these modeling issues. Yet another manufacturer's project failed multiple modeling runs because it has a rail line bisecting the facility; even though only a few trains run through the property, the facility is required to place modeling receptors (points of impact on the environment being modeled) along the rail line because the EPA claims the public has access to the site, and hence could be exposed to worst-case emissions. The EPA-required American Meteorological Society/EPA Regulatory Improvement Committee Model (AERMOD), which predicts ambient impacts of criteria pollutants that will be emitted from the NSR source, itself could use improvements. Manufacturers report that AERMOD over-predicts short-term pollutant impacts during low wind-speed scenarios; Overstates fugitive PM2.5 particulate emissions from sources such as roadways and material handling and storage facilities; and predicts high building downwash concentrations during low wind speed and stable conditions. Finally, AERMOD is a 32-bit program that has a limitation of only accessing a maximum of two gigabytes of memory and only is approved to use a single processor. Many NSR modeling projects will entail 30,000 to 100,000 receptors and 200 to 500 emission points that have to be modeled. In addition, modelers must use either one year of on-site meteorological data or five years of meteorological data from an approved weather station. These models are approved only to be run on a personal computer (PC) with a single processor. These modeling runs can take in excess of 35 to 40 days to run on a PC for just one year of data. If an applicant must run five years of data, it will take months to run the model on a PC with a single processor.

- Barriers to installation of combined heat and power (CHP) and energy-efficiency measures. NSR is often triggered when a facility attempts to upgrade or install technologies that lead to increased energy efficiency, making some manufacturers reluctant to move forward with an end-use energy-efficiency project if it could potentially lead to NSR. For instance, an energy-efficiency project that allows a plant to increase its hours of operation would trigger NSR due to a net increase in emissions, even though the facility is using energy more efficiently and producing more of its product.
- Threats of litigation create delays on the front end. The EAB does not defer to states' expertise in permitting when appeals are brought forth by environmental groups. As a result, state environmental regulatory agencies constantly second-guess their decisions and try to draft "litigation-proof" permits, driving a longer permitting process. In addition, all correspondence (e-mails, draft documents, data, notes to file, meeting notes, etc.) between industry and environmental regulatory agencies is discoverable under federal and state Freedom of Information Act (FOIA) laws. This often makes industry and agencies think twice about sharing ideas and confidential business information/data that may become public, stifling communication and resulting in a longer permitting process.

- Remand issues. When NSR/PSD permits are remanded by the EAB, there are often questions regarding how to address issues raised by the remand. State environmental regulatory agencies look to the EPA for guidance when such questions arise, and these questions are not always easily resolved. This ultimately results in a longer permitting process as state agencies struggle to find a path forward to address remand items to the satisfaction of the EPA.
- Minor source problems. Simple permit modifications for minor sources—which do not go through PSD—are taking anywhere from six to twelve months for approval. One member reports that the NSR process for a synthetic minor source has already taken fifteen months, and the project has not even received a draft construction permit. At the current pace, the member may not receive approval until the end of the summer.

The EPA's air office has listened to manufacturers' permitting concerns, and to its credit, the EPA is aware of many of the problems listed above and is actively working to fix them. But these fixes do not always come to fruition in a timely way in light of opposition or trickle down to the state permitting authorities as easily as the EPA or industry would prefer. For instance, it became apparent that the EPA's models had a built-in bias that led to a gross overestimate of particulate matter (PM) emissions from sources like gas-fired boilers, which have virtually no PM emissions. Industry conducted a long-term study quantifying these overestimates, and the EPA issued a guidance memorandum to states and regions allowing bias corrections to address the problem. However, it took more than six months for the memorandum to come out, and now manufacturers are being told that states will not allow sources to make the corrections. The EPA has also made model corrections to deal with low wind speeds, but they are beta options, meaning applicants need permission to use them based on a detailed justification. Many states and regions have been unwilling to grant permission for their use.

The Curious Case of PSD for Greenhouse Gases (GHGs)

As a consequence of the 2009 Endangerment Finding for Greenhouse Gases (GHGs) and the ensuing Light-Duty Vehicle GHG Rule, the EPA extended the reach of NSR to GHGs. Sensing an immediate problem—PSD for GHGs at the statutorily required levels would expose six million buildings to preconstruction permitting—the agency issued the GHG Tailoring Rule, which raised the NSR/PSD thresholds for GHGs. The agency estimated that, even at the GHG Tailoring Rule levels, it would still need to issue 900 PSD permits per year for GHGs.

However, recent information from the EPA shows that in the three-plus years since NSR/PSD was extended to GHGs, only 166 permits have been issued *in total*.⁴ That is a stunning drop-off in PSD permits, one for which the agency does not seem to have an easy answer. Manufacturers fear that PSD for GHGs may be acting as a deterrent to new construction.

Regulated sources have approached NSR with trepidation for years; this is information the agency is already aware of. However, PSD for GHGs carries with it an additional set of challenges that could be scaring manufacturers off. First of all, the likelihood of a costly and time consuming permit challenge or lawsuit from an environmental group increases substantially when GHGs are involved. Once an NGO appeals a permit to the EAB, the EPA is barred from finalizing the permit and authorizing construction to proceed. Such delays can result in costs costing many millions of dollars per month, uncertainties in

⁴ Presentation of Anna Marie Wood, director, Air Quality Policy Division, Office of Air Quality Policy and Standards, at the Clean Air Act Advisory Committee Spring Meeting, April 2014.

obtaining needed materials and labor force, and the risk of further delay associated with any remand which cause further months of delay but typically involve only minute issues to address the administrative record. Second, there is no easily accessible resource for PSD permit information to inform potential applicants what to expect. The EPA did, for the first 18 months of PSD for GHGs, post copies of its BACT opinion letters online.⁵ However, in early 2013, the agency stopped posting these letters, reserving the right to post new letters only if an issue had not been previously addressed. As a result, there is no record of what the EPA considers as a GHG BACT for any project since 2012. Finally, because the only real control technology for GHGs is energy-efficiency, the BACT process for a manufacturer is significantly more involved and intrusive than for any other pollutant (which usually can be controlled by technologies bolted onto a smokestack). Energy-efficiency changes are process changes, and the EPA and state air quality agencies simply are not qualified to make these judgments.

The table below provides examples of the requirements manufacturers could be forced to meet to obtain a GHG PSD permit. The examples below are taken entirely from the EPA's own materials.

⁵ Available at <http://www.epa.gov/nsr/ghgcomment.html>.

<p>Manufacturers That Use Commercial or Industrial Boilers</p>	<ul style="list-style-type: none"> • Change energy sources to costly alternatives. • Perform system integration, calibration and maintenance (\$1 million). • Install an economizer (\$2.3 million). • Install an air preheater (\$200,000–\$250,000). • Install a condensate return system (\$75,000). • Reduce slagging and fouling of heat transfer surfaces (\$50,000–\$125,000). • Perform network-based optimization (\$100,000).
<p>Cement Manufacturers (also applies to glass and other similar manufacturing processes)</p>	<ul style="list-style-type: none"> • Change energy sources to alternative fuels and sources, such as hybrid solar plants. • Substitute the raw materials used. • Blend cement with other materials. • Change the way the facility operates, including everything from motors to fans to compressed air systems to lighting.
<p>Iron and Steel Manufacturers</p>	<ul style="list-style-type: none"> • Change energy sources to costly alternatives. • Make changes to the coke-making, casting and hot rolling process, which will add on costs for potentially decades (with changes to the coke-making process costing as much as \$110 per metric tonne and payback times of more than 50 years).
<p>Pulp and Paper Manufacturers</p>	<ul style="list-style-type: none"> • Change energy sources to costly alternatives. • Replace boilers. • Install new technologies for chemical recovery furnaces and combustion units. • Install new combined heat and power (CHP) units or switch the type of CHP system used. • Install control measures to reduce GHG emissions from pulp and paper landfills.
<p>Oil Refiners</p>	<ul style="list-style-type: none"> • Change energy sources to costly alternatives. • Install carbon capture technologies. • Install or upgrade power or waste heat recovery systems.

Manufacturers remain concerned that PSD for GHGs will ultimately dictate fuel choice. For instance, if a manufacturer selects natural gas as its BACT, does it then create a precedent that natural gas is the BACT for all similar projects going forward? Put another way, if a similar project wishes to use a different fuel, does the prior choice of natural gas as a BACT operate as a barrier to that choice?

Improvements Made by the Promoting New Manufacturing Act

As this testimony makes clear, manufacturers believe the preconstruction process can be improved. However, we do not believe this should be a partisan, or even particularly contentious, issue. Many of the problems identified can be addressed through a collaborative process involving the EPA, Congress and the regulated community.

The Promoting New Manufacturing Act would take positive steps toward addressing several of the preconstruction permitting issues raised by manufacturers. It would require the EPA to publish annually information on the number of NSR/PSD permits issued and the length of time permitting authorities and the EAB are taking to complete their jobs. In other words, it diagnoses the problem (if one exists) and provides the best available information so that the EPA and Congress can then decide if steps are needed to improve the process.

The bill would also ensure that any guidance or regulations implementing a new or revised NAAQS be published concurrently to the NAAQS; if the implementing guidance is not published at the time of the NAAQS, then preconstruction permits need not be revised until the implementing guidance has been issued. This is a very important issue that could present major problems in 2015 when the EPA revises its NAAQS for ground-level Ozone. All but a handful of the new manufacturing facilities driven by the shale boom would fall in nonattainment areas for Ozone at 60 parts per billion (ppb), the low end of the range the EPA is expected to consider.

Figure 2: New Manufacturing Facilities Impacted by 60 ppb Ozone NAAQS



The NAAQS for most criteria pollutants are already so tight that most large projects trigger NSR, discouraging investment in these larger ventures that create more jobs and economic growth. If the EPA lowers the NAAQS for Ozone, even by an amount as small as 5ppb, many new areas will be subject not only to NSR but to nonattainment NSR, a process that requires emission offsets, installation of the strictest technology on the market, and a rigorous set of permitting hurdles that effectively prevent new construction. If the EPA expects implementation of a new Ozone NAAQS to begin immediately upon its promulgation, it must, at a minimum, develop the tools manufacturers will need to comply.

Conclusion

Manufacturers appreciate the time and attention the subcommittee is giving the preconstruction permitting process. With GHGs, Ozone and several other new air regulations on the immediate horizon that will impose new permitting requirements, it is critical that Congress and the EPA try to diagnose

and address as many challenges as they can before it is too late. Manufacturers look forward to working with the members of the subcommittee on the Promoting New Manufacturing Act and other measures that will enhance our manufacturing comeback.