CHARLOTTE
PIPE AND FOUNDRY COMPANY

Testimony
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Before the

U.S. House of Representatives
Committee on Energy and Commerce,
Subcommittee on Energy and Power

The American Energy Initiative: A Focus on the New Proposal to Tighten National Standards for Fine Particulate Matter

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Summary for Testimony of Brad Muller
On Behalf of Charlotte Pipe and Foundry Company

- **Overview**
  Charlotte Pipe and Foundry Company of Charlotte, North Carolina is a family-owned fourth generation business that has been manufacturing cast iron pipe and fittings for plumbing systems since 1901. Our pipes and fittings are used primarily in building construction for sanitary and storm drain, waste and vent piping applications. Charlotte Pipe, employing 450 associates, is one of only three U.S. foundries left in America that produces these types of castings.

- **Impact of EPA's New Proposed Rule on Particulate Matter (PM 2.5) on Charlotte Pipe**
  In June, the U.S. Environmental Protection Agency (EPA) announced a proposed rule that would increase the stringency of the National Ambient Air Quality Standard (NAAQS) for fine particulate matter (PM 2.5) from its current level of 15 micrograms per cubic meter (µg/m3) to between 12 (µg/m3) and 13 (µg/m3). The new standards will put many regions out of attainment, and manufacturers considering a place to build a plant and/or expand production will not be able to obtain the permits in non-attainment areas. The proposed new rule will come at a significant economic cost and lost investments in some areas of the country. EPA should have retained the current standards as part of the new proposal.

  It will certainly be more difficult for foundries to expand and/or build new operations in some areas of the country. In our example, naturally occurring levels in rural North Carolina, where we were considering building our new state-of-the-art foundry are at 12.8 ppb. It is clear, we will not be able to locate a plant on the area of real estate that Charlotte Pipe owns and meet these naturally-occurring background levels based on EPA's new proposed PM 2.5 standards.

- **Challenges to Charlotte Pipe and U.S. Foundry Industry**
  The U.S. metalcasting industry is facing the most intense global competition in our history and significant challenges from the increasing costs associated with federal regulations, tax structure and other actions by our government. Imported castings now comprise nearly 25% of the market, with more than a quarter of these imports are coming from China.

- **Wave of new EPA Regulations Impacting the Power Sector & Foundries**
  We are alarmed by of new regulations that EPA is imposing on the utility sector over the next five years with little regard for their impact on manufacturers. As an energy-intensive industry, foundries are troubled by the increased electricity costs and reliability issues that will undoubtedly result from these new regulations. Of particular concern is EPA's Utility MACT for coal-fueled power plants. The rule requires major overhauls at power plants around the country. It is forecasted to result in double digit electricity prices in about 30 states and threaten electric reliability. EPA also proposed in March the first-ever greenhouse gas (GHG) New Source Performance Standards (NSPS) for new power plants—a rule that will effectively ban any new coal-fired power plants in this country. The other major EPA regulations that will impact electric reliability include: Cross State Air Pollution Rule (CSAPR); the National Ambient Air Quality Standards (NAAQS) for ozone, sulfur oxides, nitrogen dioxide, and particulate matter; the Coal Combustion Residuals Rule; and the Cooling Water Intake Structure regulations.

Good Morning. Chairman Whitfield, Ranking Member Rush and Members of the Subcommittee, thank you for the opportunity to testify as part of today's discussion on The American Energy Initiative and EPA's new proposal to tighten national standards for fine particulate matter.

My name is Brad Muller, and I am Vice President of Marketing for Charlotte Pipe and Foundry Company of Charlotte, North Carolina. I have the good fortune to work for this family-owned fourth generation company which has been in continuous operation since 1901 producing cast iron pipe and fittings for plumbing systems. Iron pipe has been the backbone of our country's water systems and is still the most prevalent and preferred water pipe material used for drinking water systems in the U.S. Our pipes and fittings are used primarily in building construction for sanitary and storm drain, waste and vent piping applications. Charlotte Pipe is one of only three U.S. foundries left in America that produces these types of metal castings, with dozens of competing foundries having closed their doors over the last two decades.

We currently employ 450 associates at our foundry, many have 20, 30, even 40 plus years of service. In recent years, Charlotte Pipe and the entire metalcasting industry has been hard hit by the recession. Since the recession began in December 2007, unfortunately 150 metal casters have shut their doors forcing thousands to lose their jobs.

For Charlotte Pipe, we have faced some challenging times. Commercial construction – the primary market for our cast iron pipe and fittings – was down 64 percent from its peak in 2006, before beginning a slight rebound this year. Despite such a massive loss of volume, we have not laid off any associates, sacrificing our profitability to keep our people working as many hours as possible while keeping their benefits and health insurance intact. In fact, we have not had a lay-off in our Cast Iron Division since the early 1950s when we mechanized the plant, despite several significant recessions since that time.

Today I have the privilege of speaking on behalf of not only our Company's associates and their families, but also the other domestic foundries that are part of the American Foundry Society (AFS) – our industry's major trade and technical association which is comprised of more than 8,500 members in every state in the country.

Background on Metalcasting Industry

The U.S. metalcasting industry is the sixth largest industry in America and is the second largest supplier of castings in world. The U.S. foundry industry consists of 2,040 operating casting facilities, of which approximately 700 produce ferrous castings and 1,400 produce nonferrous castings. U.S. metalcasters ship cast products valued at more than $20 billion annually and directly employs over 200,000 people. Our industry is dominated by small businesses, with over 80% of U.S. metalcasters employing 100 workers or less. In fact, many are still family-owned.

Metalcasters offer good-paying, blue-collar jobs with benefits that have allowed our employees to support their families and send their children to college. The industry is widely dispersed throughout the country with the highest geographic concentration of facilities is in Alabama, Ohio, Pennsylvania, Indiana, Illinois, Michigan, California, Texas, and Wisconsin.

Our industry is critical to the U.S. economy. More than 90% of all manufactured goods and capital equipment use metal castings as engineered components or rely on castings for their manufacture. From critical components for aircrafts and automobiles to home appliances and surgical equipment, cast metal products are integral to our economy and our way of life.

Castings are almost completely manufactured from recycled scrap materials. As a result, foundries take tens of thousands of old cars from our nation's highways and junkyards for use in the manufacture of our castings.

Our industry is diverse, employing a variety of casting processes and alloys to make a wide range of products. We produce both simple and complex components of infinite variety. Metalcasters produce more than 600 lbs of cast metal (aluminum, iron, steel, zinc and/or magnesium) for every vehicle on the road. Automobiles and other transportation equipment utilize 31% of all castings produced in the U.S. - including engine blocks, crankshafts, camshafts, cylinder heads, brake drums or calipers, intake manifolds, transmission housings, differential casings, U-joints, suspension parts, flywheels, engine mount brackets, front-wheel steering knuckles, hydraulic valves, and a multitude of other castings.

We are the mainstay of national defense. All sectors of the U.S. military are reliant on metal castings for jet fighters, ships, tanks, trucks, weapon systems and other vital components. In fact, the U.S. Department of Defense has established formal programs to convert fabricated components to single-piece castings, improving our military's ability to cost-effectively produce such equipment in the least amount of time.

Today, the U.S. metalcasting industry is facing unprecedented challenges - the most intense global competition in our history and by the increasing costs associated with new federal regulations and other actions by our government, as well as increasing energy prices and health care costs. A study conducted by the Manufacturing Institute and MAPI in 2011 calculated it is 20% more expensive to manufacture in the U.S. compared to nine trading partners The primary driver of this cost differential is policy in the areas of regulation, taxes, litigation, and energy.

In 2011, federal government agencies issued an unprecedented amount of costly final rules totaling 3,807, including 32 new major regulations (those costing over $100 million). These new major rules will add $10 billion annually in regulatory costs, along with $6.6 billion in implementation costs. Thousands of more rules are in the pipeline. These additional costs will only add to the obstacles foundries casters and manufacturers have to create jobs and expand their businesses.

Imported castings now comprise nearly 25% of the market, with more than a quarter of these imports are coming from China where energy, labor, tax and material costs are substantially lower partly due in part to government subsidies. When trying to export our pipes and fittings, some of our trading partners slap on tariffs of 30% or more, which essentially shuts us out from ever selling in those markets.

Impact of EPA Regulations on Metalcasting Industry

We are alarmed by a wave of new regulations that EPA is imposing on the utility sector over the next five years. As an energy-intensive industry, metalcasters are troubled by the increased electricity costs and reliability issues that will likely result from these new regulations.

U.S. foundries cannot produce castings without adequate and affordable supplies of natural gas and electricity. For many metalcasters energy is a key expense, only behind raw materials and labor in terms of costs of doing business. Melting is the most energy-intensive operation in metal casting operations, accounting for about 55% of the total energy use. Energy costs are highest in iron foundries such as Charlotte Pipe since the melt temperature is much higher for this metal.

Unfortunately, over the last two years, there are numerous specific examples of regulations and proposed rules by EPA that have a particularly burdensome impact on our industry, with little regard for their impact on job creation and the manufacturing supply chain. There also seems to be no recognition of the cumulative impact of these regulations.

Of particular concern are EPA's new Mercury and Air Toxics Standards for coal-fueled power plants, known as Utility MACT. The rule requires major overhauls at power plants around the country. It is forecasted to result in double digit electricity prices in about 30 states and threaten electric reliability.

On the heels of the Utility MACT, EPA proposed in March the first-ever greenhouse gas standards for power plants—a rule that will effectively ban any new coal-fired power plants in this country and could threaten existing coal-fired generation. The other major EPA regulations that will impact electric reliability include: Cross State Air Pollution Rule (CSAPR); the National Ambient Air Quality Standards (NAAQS) for ozone, sulfur oxides, nitrogen dioxide, and particulate matter; the Coal Combustion Residuals Rule; and the Cooling Water Intake Structure regulations.

According to a study conducted by NERA[1], the combined estimated costs of the 2012 EPA regulations (Utility MACT, Cross State Air Pollution Rule, Cooling Water Intake Rule, & Coal Ash Rule) is a staggering – $127 billion. Since state law allows the electric providers to pass all energy and environmental compliance costs through to the consumer, we expect our energy prices to increase substantially. Even a $0.01/kWh increase in the cost of electricity imposes additional costs of nearly $9 billion per year on domestic manufacturing facilities.

[1] National Economic Research Associates (NERA) Study, October 2011.

In addition, EPA has failed to consider the cumulative impact of its power sector regulations on grid reliability. In fact, no comprehensive study has been done to assess the effect on the price of electricity, jobs, reliability of electricity supply, and the overall economy. The Federal Energy Regulatory Commission (FERC) has questioned whether the compliance deadlines set forth in EPA's regulations are too expeditious to allow sufficient lead-time to replace retiring resources. So far, over 140 coal-fired electricity generating units in 19 states have announced they will retire by 2015. These retirements will create volatility within the electric grid if steps are not taken to balance the retirements with new capacity.

Charlotte Pipe and the U.S. foundry industry is committed to working with Congress to establish reasonable climate and energy policies that will protect the environment, while at the same time ensuring reliable and affordable sources of energy.

EPA's New Proposed Rule on Particulate Matter (PM 2.5)

On June 15, 2012, the EPA announced a proposed rule that would increase the stringency of the National Ambient Air Quality Standard (NAAQS) for fine particulate matter (PM 2.5) from its current level of 15 micrograms per cubic meter (annual average basis) to between 12 and 13 micrograms per cubic meter.[2] These new proposed levels approach naturally occurring background levels in many parts of the nation, including portions in my home state of North Carolina.

Air quality progress under the current standards, control programs, and industrial initiatives has been substantial. According to EPA, between 2000 and 2010, concentrations of PM 2.5 fell by 27%. As a result, more than three fourths of Americans today live in areas where air quality meets today's standards.

We believe that the proposed more stringent PM 2.5 standards will bring additional costs not only foundries, but U.S. manufacturers, utilities, and states. Specifically, these new proposed standards

[2] According to EPA, the official "issue" date of the proposal is June 14, 2012. However, the proposal was not announced until June 15, 2012. The proposal has not yet been published in the Federal Register. A pre-publication version of the proposal can be accessed at: http://www.epa.gov/airquality/particlepollution/2012/proposal.pdf.

will create challenging requirements for existing foundries and create huge hurdles to permitting expansions and the building of new plants or in the worst case scenario – prevent new plants from being built at all. Unfortunately, this is the situation where our foundry finds itself.

A few years ago, Charlotte Pipe and Foundry bought a significant amount of land in Staly County, in rural North Carolina, with the hopes of building a new, state-of-the-art, high efficiency green foundry and closing our current foundry located in downtown Charlotte.

After we drew up plans for the new facility, we submitted our air permit to the North Carolina Department of Environment and Natural Resources and even paid an extra fee to have it fast-tracked in 9 months. A year and a half later, the permit sat unapproved. Our state regulators eventually told us that while previous air dispersion models only had to account for filterable particulate, new air permits now require condensables to be included in the total PM 2.5 emissions, making the standard that much more difficult to meet. Condensables are fine particulate matter that coverts into a gas under the heat of emissions – there are significant technical questions as to when and to what extent condensable emissions actually form and impact ambient monitors.

Rather than model for this new requirement, changed in mid-stream of the permitting process, we pulled our air permit application and suspended the project. We could not pass the model – the foundry was not even close when adding in condensables. The state also came back to us and said since we would be relocating our plant to a poor area - we would have to consider environmental justice. Additional regulatory requirements could have included new requirements on our air and water permits, as well as other hurdles to site the facility. A new plant would have impacted the local community by bringing new jobs to their area. Not to mention the ripple effect of other businesses that would have surrounded us.

With the lower PM 2.5 standards being proposed by EPA, it will certainly be more difficult for foundries to expand and/or build new operations in some areas of the country. In our example, naturally occurring levels in rural North Carolina, where we were considering building our new foundry, we are at 12.8 ppb. It is clear, we will not be able to locate a plant on the area of real estate

that Charlotte Pipe owns and meet these naturally-occurring background levels.

Instead of 450 acres, Charlotte Pipe would need 4,500 acres to comply with EPA's proposed PM 2.5 regulation. There isn't that much land to purchase in the county and the cost would be prohibitive. In addition, all of the city streets would have to be abandoned for the property lines to be considered contiguous for modeling.

In addition, Charlotte Pipe & Foundry hired an outside firm to conduct an economic impact study on the new foundry project. It was estimated that the project would have created 1,802 new jobs – including 987 new permanent jobs – contributing $388.3 million in employee compensation over the initial four year period. This new North Carolina foundry project would have required at least a couple hundred new construction jobs – consultants, architects, mechanical engineers, environmental engineers, facility engineers, machinists, metal casters, welders, steam fitters, and countless other high-paying construction jobs. These would have been good paying jobs, with benefits. The tax benefit alone of constructing and opening a new foundry in Stanly County was estimated to be $68.9 million over the four year period, with $17.1 million each year thereafter.

In setting the NAAQS, the EPA does not have to consider the costs of implementing the standards[3]. As has traditionally been done in NAAQS rulemaking, the EPA has conducted a Regulatory Impact Analysis (RIA) to provide the public with information on the potential costs and benefits of attaining several alternative PM2.5 standards. The summary of the RIA estimates costs ranging from $2.9 million (for 13.0 μg/m3) to $69 million (for 12.0 μg/m3) per year. We are hard pressed to believe that EPA in its cost estimate seriously estimated and/or considered all the facilities that will not be built in the U.S., as well as plans to expand are shelved.

If finalized, the proposed annual primary NAAQS would add an unknown number of additional areas to the 55 areas already designated as nonattainment for $PM_{2.5}$ and make attainment more difficult for existing areas. The American Foundry Society is very concerned because it could seriously limit

[3] This was confirmed by the Supreme Court in *Whitman v. American Trucking Associations*, 531 U.S. 457, 465-472, 475-76 (2001).

economic development in certain parts of the country. The lower limit won't be good news for places trying to attract new manufacturing jobs or expanding their facilities such as Illinois, Ohio, Pennsylvania, Wisconsin and other states.

Proposed new and modified major stationary sources of PM 2.5 in these areas will be subject to the more stringent Nonattainment New Source Review (NNSR) requirements instead of Prevention of Significant Deterioration (PSD) requirements.

Impacts would also be felt in attainment areas. First, existing regulations and statutes in many states would require most New Source Review (NSR) permit applicants to demonstrate compliance with the new NAAQS, even though nonattainment designations will not be finalized until late 2014. Second, demonstrations will become more difficult as EPA continues to drive the NAAQS closer to background concentrations.

Conclusion

EPA has been embarked on a decades-long process to implement the Clean Air Act and its amendments. There is no doubt that important benefits have been brought to our nation from efforts to improve air quality. But the continued ratcheting down of emission limits produces diminishing returns at far higher marginal costs. This means that each new air rule will have a greater impact on job creation than those in the past. We believe that EPA's new stringent PM 2.5 standards will put many regions out of attainment, and manufacturers considering a place to build a plant and/or expand production will not be able to obtain the permits in non-attainment areas. The proposed new rule will come at a significant economic cost and lost investments in some areas of the country. EPA should have retained the current standards as part of the new proposal.

Charlotte Pipe understands and supports the need for reasonable regulations to protect the environment, worker safety and health, and a host of other workplace issues. But we also recognize that our industry and the entire manufacturing sector are facing unprecedented pressures in their efforts to remain competitive in the global economy. To regain manufacturing momentum and encourage hiring, the United States needs not just improved economic conditions, but also government policies more attuned to the realities of global competition.

The key is to find the balance between ensuring a safe and healthy workplace and allowing that workplace to compete in order to be able to continue to provide employment. That is where the current U.S. regulatory process is lacking. I believe that our current government looks upon manufacturers not as partners that would alleviate unemployment and generate tax revenues, but as targets to regulate, intimidate and punish to justify the expanding government regulatory work force.

The cumulative burden of this new proposed standard and other costly EPA regulations is nearing a tipping point. More than ever, it is critically important that we regulate only that which requires regulation, and only after a thorough vetting of potential benefits, impacts and costs of that regulation on businesses and the manufacturing supply chain.

In this current economy, it is clear that cost-ineffective EPA regulations dampen economic growth and will continue to hold down job creation. For some foundries, it will be the final straw that destroys their whole business.

Thank you again for the opportunity to appear before you today. I would be happy to respond to any questions.