

Metal Technologies

Statement Before the House American Energy Solutions Group

Cap-and-Trade and the Metalcasting Industry

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Chairman Pence and other members, I am honored by the invitation to speak to you today about the Foundry industry and the Cap-and-Trade legislation under consideration in Congress.

My name is Adam Wylie and I am an Environmental Engineer with Metal Technologies, Inc., a foundry company headquartered in Auburn, Indiana, with five locations in the Midwest. Prior to Metal Technologies, I worked for General Motors at eight different manufacturing facilities that spanned the range of automobile manufacturing. I am a member of three technical environmental committees and the Greenhouse Gas Workgroup of the American Foundry Society, and am chair of the Greenhouse Gas Subcommittee of the Indiana Cast Metals Association.

The foundry industry is integral to the U.S. economy. Major industries supplied by metalcasting include energy, automotive, agriculture, construction, mining, railroad, aerospace, communications, health care, defense, and national security. Metal castings are especially critical to our national defense and the capability of our military. Our troops rely on high quality metal castings within weapons systems that will be able to withstand the harsh climates and terrain in which they operate. Metal castings are also key components in most renewable energy efforts including:

- Wind energy: wind hubs, bedplates and gearbox housings
- Bio Power: industrial fans, pumping equipment, piping and turbines,
- Geothermal Power: propellers, pumps and pumping equipment. (Geothermal energy generates 40% more energy than wind technologies and 25 times as much as solar energy)
- Solar energy: generators, turbines, pumps and condensers.
- Nuclear energy: heat exchangers, turbine generators, and containment structures
- Gas turbine generated power: vanes, vane segments, and blades.

In fact, 90 percent of all manufactured goods depend on castings, from artificial heart valves to wind turbines, from the vehicle brakes that helped you get here safely to the seats at Lucas Oil Stadium.

The American metalcasting industry provides employment for more than 200,000 men and women directly and supports thousands of other jobs indirectly. Nearly 80% of the approximately 2,100 foundries are small businesses with fewer than 100 employees. The industry supports a payroll of more than \$8 billion and sales of more than \$34 billion.

Indiana (along with Michigan and Ohio) ranks in the top few foundry states in the country with approximately 75 foundries located in about half the counties, and employing nearly 15,000 Hoosiers. The average Hoosier foundry has been doing business in the same location for 66 years, with many being over 100 years old. This demonstrates the business's commitment to their employees and communities.

Melting and casting metal has served society's needs for more than 5,000 years. Today, the metalcasting industry is one of the largest recyclers in North America: approximately 85% of all materials used in foundries are recycled materials.

Approximately 15-20 million tons of scrap metal that otherwise would be landfilled are being remade into useful castings. In addition, foundries that utilize sand molds recycle sand internally multiple times before it is discarded, thus adding to energy savings by eliminating the need to mine additional virgin sand. Sand that can no longer be used in the casting process is often beneficially used in applications such as highway construction, structural fill, or soil amendments.

The most energy-intensive process in the foundry is the melting of metal, where scrap metal at room temperature is heated to 2,700° Fahrenheit for iron, which is about 600° hotter than lava from Mt. Kilauea. Metal Technologies' foundry in Auburn demands approximately 21 megawatts of electricity, and one in Representative Upton's district demands approximately 18 megawatts. The energy required to melt a metal is a natural constant; it cannot be reduced or improved beyond the minimum determined by physics.

That is what brings us into the Cap-and-Trade legislation debate. With the minimal profit margins common in an internationally competitive market, the increases in our energy costs by the proposed legislation will undoubtedly affect our businesses. The dependability of coal in this part of the country currently helps to keep our energy prices reasonable, but unfortunately, may soon work against us. When measuring greenhouse gas emissions from power generation, many other parts of the country have the benefit of an infrastructure of less carbon-intensive energy sources. Simply based on geography and shortage of dependable sunlight and/or wind, most Midwestern states are at a greenhouse gas disadvantage. The average emission rates of CO₂ per megawatt-hour, which is related to fuel type, for some pertinent states are listed below.

CO ₂ Output [EPA eGRID2007 1.1 (2005 Data)]		
State	% Coal	Lbs CO ₂ /MWh
Indiana	94	2088
Ohio	87	1772
Michigan	58	1348
Massachusetts	25	1263
California	1	540

As in any successful industry, foundries strive for continual improvement in every area, not the least being energy efficiency. But no matter how efficient we become or what innovative technology is introduced, physics dictates that we cannot reduce that electricity demand enough to meet the targets specified in the American Clean Energy and Security Act. Therefore, that energy required to melt metal should be exempted from the cap and it is not.

We truly strive to protect the environment. The Indiana Cast Metals Association, American Foundry Society, and many foundry companies are dedicated to greater environmental sustainability, including energy efficiency and conservation. Many of us are committed to working with Congress to establish federal policies that reduce greenhouse gas emissions while maintaining a competitive playing field for U.S.

companies in the global marketplace. I believe in the adage that “If you’re not at the table, you’re on the menu,” so we intend to communicate our views about how to make these policies sensible and appropriate for the worldwide scale of the issue.

As an environmental engineer, my primary concern with this regulation is carbon leakage. In the past couple of decades, we have seen much of our foundry work sent overseas, and we have toured those facilities and witnessed the lack of environmental controls and the outdated and inefficient equipment. Because of those conditions, the carbon dioxide savings in the U.S. by off-shoring the work will be less than the emissions created elsewhere, not to mention the emissions from shipping the products back here to the U.S. Carbon leakage is not only important to foundries for business reasons, but to all of us because air emissions have no political or geographic boundaries.

On the issue of scale, China already emits more greenhouse gases than the United States, and the gap widens daily. China’s emissions alone will be increasing more quickly than we can reduce them. Other countries such as India, Brazil, and others are also growing their carbon output while destroying many of their valuable carbon sinks. If the goal of this legislation is to create a more sustainable condition and protect human health and the environment, then we must include realistic provisions to ensure improvement in other parts of the globe. China and India admit that they plan no parallel action.

A few final concerns about the current and recent attempts at cap-and-trade legislation include:

- the ability for any person or group to purchase allowances and effectively lower the cap more quickly than innovation or capital funding can support;
- the reliance on existing cap-and-trade templates that, unlike for carbon dioxide, have proven technologies available to control the pollutants; and
- the dramatic increase in the government staffing and bureaucracy that will be necessary to administer the programs.

Certainly a primary issue for all Americans is the unknown increase in energy costs that we will face – without knowing if we are making a difference.

The foundry industry began 367 years ago in this country, and seven signers of the Declaration of Independence were metalcasters. Our industry has adapted to many difficult challenges, but we now face a challenge in the form of a draft legislation that will weight the equation much more heavily against us, and one where the opportunities for failure seem to outnumber the opportunities for success. The metalcasting industry is dependable and necessary for our economy and society, and we believe our value should be considered during these most critical economic and environmental discussions. Thank you again for the opportunity to speak with you today.