The Manufacturing Council

July 22, 2011

Secretary Gary Locke
U.S. Department of Commerce
Washington, DC

Dear Mr. Secretary:

The members of the Manufacturing Council bring a unique perspective on the need to improve U.S. manufacturing competitiveness in both the short and long term. Manufacturers are the largest single consumer of energy in the U.S., applying it both as fuel and feedstock. The energy we consume is then used to produce products which fuel economic growth and job creation. In order to enhance the competitiveness of manufacturing and the overall U.S. economy, a plan to put us on the road to energy independence is critical.

As such, we favor a U.S. energy policy that supports *all* domestic energy sources. To compete for manufacturing investment dollars, the U.S. must be seen to have a reliable, diverse and affordable portfolio of energy sources for the long-term. Recent geopolitical events and natural disasters remind us of the fragility of the global energy infrastructure. U.S. reliance on foreign sources of oil, for example, exposes a real vulnerability to forces beyond our control.

The U.S. has significant energy production opportunities not only through our abundant natural resources but also through our leadership in innovation. As manufacturers, we view energy through a dual lens of both consumption and market creation. The cost of energy is inherently tied to our ability to sustain and grow our investments here. Failure to develop a clear and comprehensive energy plan in the U.S. prevents investments and job growth in manufacturing while also exposing us to competition from countries with more robust and predictable policies.

A bipartisan effort to put our country on the path to a sustainable energy future is critical for manufacturing jobs, the overall economy, the environment and our national security. Therefore, the members of the Manufacturing Council offer a series of recommendations on how to begin this transition. The issues are myriad, so we have chosen three primary impactful areas on which to focus attention for actionable recommendations. We strongly believe these

important areas are crucial for creating jobs in the U.S. and getting the country on track to a more independent, sustainable energy future.

Energy Efficiency: For the foreseeable future, economic growth will not be possible without energy growth. Comprehensive energy policies are necessary on a national level for the U.S. to transition to a sustainable energy future, and energy efficiency should be the cornerstone of such policies. Often referred to as the "low hanging fruit" of energy policy, energy efficiency is many times the most available way for businesses to save money while reducing energy usage and emissions. Policy needs to support and encourage the wide-scale deployment of energy efficiency measures and technologies across all sectors, including manufacturing.

As of the end of 2010, manufacturing employed nearly 11.5 million people – down close to 2 million from before the recession. When manufacturers save money through energy efficiency efforts, they improve their ability to expand business and preserve and add manufacturing jobs, strengthening our economy. In addition to the job creation potential, increased energy efficiency across the economy has significant environmental benefits. Approximately 20 percent of U.S. energy consumption is associated with industrial uses and is almost completely derived from fossil fuels. Energy efficiency is one of the lowest-cost ways to reduce greenhouse gas emissions associated with this energy use. Further, as Energy Secretary Chu has said, "the most direct way to reduce our dependency on foreign oil is simply to use less of it." Just in terms of buildings, if the U.S. made a 30 percent improvement in overall efficiency, the energy saved would be equivalent to 2.8 million barrels per day of crude oil – roughly one-third of the nation's daily imports.

Given these benefits, among others, recommend the following actions in order to encourage deployment of efficiency measures (more detail in Appendix A):

- Provide Protection from Potential Fraud and Abuse of Supply Star Program (Immediate Action);
- Support Funding to Expand the Industrial Research and Assessment Centers (12/31/2011);
- Establish Funding for Energy Monitoring Systems (12/31/2011);
- Establish Voluntary Energy Efficiency Reporting (6/01/2012);
- Incentivize and Provide Information to Support Implementation of Combined Heat and Power (6/01/2012) and;
- Support Investments in Supply-Side Energy Efficiency Improvements to Transmission and Distributions Systems (6/01/2012).

Regulatory Reform: Regulation of energy poses two major challenges for U.S. manufacturers: an investment challenge, and a cost challenge. The investment challenge occurs when government regulatory actions are uncertain within the timeframe critical to manufacturing investment decisions. The cost challenge arises when pending regulatory proposals are more costly than necessary to achieve the underlying regulatory objective.

Additionally, unnecessary regulation makes it difficult to produce more energy in the U.S., both from traditional fossil fuel sources and renewable/alternative sources alike. The permitting process for developing new facilities, gaining access to sources of oil and natural gas, and even siting solar and wind projects is frequently confusing, unpredictable and takes too long to promulgate.

Our overall recommendations address concerns in three areas: 1) existing regulations, 2) pending regulations, and 3) the regulatory process itself. Together, our recommendations would lower cost and provide greater investment certainty for US manufacturers. They are (more detail in Appendix B):

- Streamline the Permitting Process for Energy Projects (Immediate Action);
- Delay and Modify EPA Requirements for Boilers and Ozone (Immediate Action);
- Abandon or Modify GHG Rulemaking (Immediate Action);
- Engage Manufacturers Early in the Rulemaking Process (Immediate Action);
- Ensure Regulations Achieve the Statutory Objective at the Lowest Cost (Immediate Action);
- Provide Sunset Dates for Regulations (Immediate Action);
- Require OMB Review of all Significant Rules (12/31/2011);
- Open All Areas to Responsible and Safe Leasing and Development of Oil and Natural Gas (6/01/2012), and;
- Focus on Practical Guidance for Hydraulic Fracturing (After DOE/EPA conclude studies).

Clean Energy Strategy: As energy consumption and demand grow, the need for energy security, economic growth and environmental sustainability will drive demand for solutions using clean, alternative sources of energy. The U.S. must seek to stimulate an industry capable of establishing a high-technology industrial base and driving high levels of job creation.

In his 2011 State of the Union address, President Obama proposed a Clean Energy Standard (CES) to require that 80 percent of the nation's electricity come from clean energy sources by

2035. There are a number of obstacles associated with the transition to a clean energy economy, and it is our view that the government has a significant role to play in promoting energy innovation and addressing some of the market failures that stand in the way of progressing toward a sustainable energy policy. The need for a comprehensive clean energy strategy is not a political issue, but a U.S. issue.

Currently, manufacturers in the U.S. are missing opportunities for growth for the following reasons: 1) lack of stable energy policy, 2) insufficient methods for accounting for true cost of ownership of clean energy sources, and 3) competition from other countries.

To help overcome these challenges, we offer the following recommendations (more detail in Appendix C):

- Declare Clean Energy Manufacturing a Strategic Energy Security Issue (Immediate Action);
- Create a National Clean Energy Strategy (6/01/2012), and;
- Establish a Standard Cost Comparison Methodology (6/01/2012).

We must not underestimate the importance of a clearly defined national energy strategy. Policy that encourages investments in the U.S. through access to the breadth of domestic sources, aggressively pursues energy efficiency, and sets rules of the road that will signal the market place to develop and deploy clean sources of energy are key factors to getting the economy on the right track, reinvigorating job growth and making the U.S. a more energy independent nation.

The members of the Manufacturing Council look forward to working with the members of your staff at the Department of Commerce and others across the Administration to help develop policies and metrics for success related to these recommendations.

Thank you for this opportunity to present our views.

Sincerely,

Joe Anderson
Council Chairman

Mike Gambrell
Energy Subcommittee Chairman

cc:

House Speaker John Boehner
House Minority Leader Nancy Pelosi
Senate Majority Leader Harry Reid
Senate Minority Leader Mitch McConnell

Appendix A
Energy Efficiency

Job Creation

According to the National Academy of Sciences, accelerating deployment of cost-effective technologies in just buildings could reduce energy use by 25 to 30 percent by 2030. This would generate real savings and create jobs. For example, using methods produced by the Political Economy Research Institute, the National Electrical Contractors Association estimated that the previously proposed Building STAR program, offering rebates and tax incentives for commercial building retrofits could have created anywhere between 200,000 and 300,000 jobs during the short-term program. Many of these would be high-quality, well-paid jobs in engineering, construction and manufacturing. Similar job creation would be seen in other sectors from incentives to pursue greater energy efficiency.

Further, in 2010, the American Council for an Energy-Efficient Economy performed an analysis of enhancing efficiency measures in the American Power Act, as well as the American Clean Energy Leadership Act. These include establishing a 10 percent efficiency resource standard, additional funding for industrial efficiency programs, and increasing energy savings in Highway Trust Funds and Transportation Investment grants. Each of these could realistically be stand alone measures, but as enhancements to those bills they were estimated to increase efficiency-related jobs by 100,000 more than those bills.

As of the end of 2010, manufacturing employed nearly 11.5 million people – down close to 2 million from before the recession. When manufacturers save money through energy efficiency efforts, they improve their ability to expand business and preserve and add manufacturing jobs, strengthening our economy. As businesses save money due to efficiency gains, that capital will be reinvested back into the business. As an example, The Dow Chemical Company's energy efficiency efforts have yielded savings of 1,700 billion Btus of energy. This savings is equivalent to the energy needed to power all the residential buildings in California for one year. The initial investment to reach this level was $1 billion, yet more than $9 billion in savings has been delivered to the bottom line. 3M set a corporate goal to improve global energy efficiency 20 percent by 2010, with 2005 as the base year. Nearly 2,000 projects, of which 1,100 were implemented, providing $68 million in first year savings. Ingersoll Rand set a goal to reduce its global energy intensity 25 percent by 2019. In terms of global operations, Ingersoll Rand has saved more than $4 million in energy costs since the inception of its auditing efforts in 2005.

Environmental Benefits

Approximately 20 percent of U.S. energy consumption is associated with industrial uses and is almost completely derived from fossil fuels. Energy efficiency is one of the lowest-cost ways to reduce greenhouse gas emissions associated with this energy use.

A 2007 study by the Electric Power Research Institute, widely deploying energy efficiency measures could reduce average annual emissions growth rates by 30 percent and could contribute to a 45 percent reduction in power-sector CO2 emissions. A similar study by McKinsey & Company found that energy efficiency technologies could account for emissions reductions of roughly 1 billion metric tons per year, economy-wide, in the 2030 timeframe.

Deployment of energy efficiency measures can help in achieving CO2 emissions reduction goals and put the U.S. on track to a more sustainable energy future without the need for comprehensive climate change legislation or putting a price on carbon.

Reduced Reliance on Foreign Oil

Currently the U.S. uses approximately 19 million barrels and imports approximately 9.7 million barrels of crude oil per day. At $100 per barrel, that is close to $1 billion per day spent on imported oil. Just in terms of buildings, if the U.S. made a 30 percent improvement in overall efficiency, the energy saved would be equivalent to 2.8 million barrels per day of crude oil – roughly one-third of the nation's daily imports.

Further, importing foreign oil is a massive contributor to the U.S. trade deficit, representing nearly 55 percent of the total trade deficit. Wide-scale deployment of energy efficiency measures and incentives could help reduce the overall demand for oil imports by encouraging industrial efficiency including improved equipment and appliance standards from large industrial transformers and motors to heating, ventilation and air conditioning units.

Rather than incentivizing fuel switching to reduce imports of oil, which ultimately could lead to price volatility in oil & gas markets that will negatively impact manufacturers, energy efficiency should be incentivized as the least cost scenario for reducing oil and gas demand.

Energy Infrastructure Security

Improving overall efficiency in the energy-intensive manufacturing sector will ultimately put less stress on the electric grid, increasing the reliability of our current infrastructure, even as we continue to work towards a more intelligent grid system. According to the Department of Energy, there has long been underinvestment in the transmission and distribution of electricity which has greatly limited efficiency. As the grid developed through the 20th century, efficiency was given "marginal consideration at best." If the grid were just 5 percent more efficient, the energy savings would equate to permanently eliminating the fuel and greenhouse gas emissions from 53 million cars. While recommendations regarding the grid and other energy infrastructure are not included in this document, the Manufacturing Council should take up this issue at a later date.

Recommendations

- **Provide Protection from Potential Fraud and Abuse of Supply Star Program:** As detailed in sec. 311 of S. 1000, establish a Supply Star Program that is designed to

provide companies with financing, technical support, training and sector-wide networks to help improve their supply chain efficiency. The program also recognizes products that comply with the Supply Star program for maximizing supply chain efficiency. The Council recommends that any product recognized by the Supply Star program is thoroughly tested and validated as a product that conserves energy, water or other resources.

- **Support Funding to Expand the Industrial Research and Assessment Centers and Workforce Training:** Expand Industrial Research and Assessment Centers within institutions of higher education to increase the awareness of manufacturing careers, as outlined in sec. 304 of S.1000. The jobs created within these centers will provide the skilled workforce needed to assess, operate and maintain energy efficiency processes within the manufacturing sector. In addition, we support funding of associated internship programs under which the students work with or for industries, manufacturers, and energy services providers to implement the recommendations of the industrial research and assessment centers. This represents a win-win for the students and manufacturers.

- **Establish Funding for Energy Monitoring Systems as Top Priority**: Establish a revolving loan program for manufacturers to invest in more energy efficient processes and equipment, similar to the program outlined in sec. 301 of S.1000, the Energy Savings and Industrial Competitiveness Act. The tools needed to measure and improve energy efficiency are available today. Specifically, the Council recommends as first priority, funding for energy monitoring systems that will measure plant and factory energy usage and efficiency. This initial investment will allow manufacturers to take control of their energy management and install proven products and applications. With an energy monitoring system, manufacturers can determine in real-time if these future investments increase their overall return on investment. In addition, the data will provide information needed to validate new energy efficient technologies within specific industries.

- **Establish a Voluntary Energy Efficiency Reporting Mechanism:** Energy intensive companies and utilities should be encouraged to report energy efficiency performance through the Department of Energy. Information should be readily available to the public in order to highlight companies that are both the best performing and least energy efficient. Open, public reporting would help create an incentive for companies to be better stewards of energy. Mechanisms employed and encouraged by the federal government to implement, certify and verify claims made by manufacturers should be consistent among agencies and not, of themselves, create burdensome and costly impediments to the market introduction of devices and equipment. To support reporting, DOE should develop a national metric by which manufacturers, in working with utilities, can report gains in efficiency.

- **Incentivize** and Provide Information to Support Implementation of **Combined Heat and Power (CHP):** Advancing integrated cogeneration for the industrial sector is another key way to encourage efficiency. According to the EPA, by putting power plants' wasted heat to use, CHP is estimated to offer overall efficiency of anywhere from 60 to 80 percent. That is up from 34 percent – the average efficiency of centralized fossil-fueled plants.

- **Support Investments in Supply-Side Energy Efficiency Improvements to Transmission and Distribution Systems:** Improvements in energy transmission and distribution systems will provide more coordinated and efficient integration among multiple suppliers and consumers of different sizes and needs, including differences in peak load times. Improvements will also provide more secure and reliable protection against power failures and leaks. The Manufacturing Council recognizes the necessity for a robust energy delivery infrastructure and recommends future Manufacturing Councils address this need more thoroughly, in collaboration with utility suppliers and relevant government agencies.

Appendix B
Regulatory Reform

Existing Regulations

Permitting of Energy Projects

The review and approval processes for building and operating permits are frequently confusing, unpredictable, and take too long to promulgate. For example, the 2005 permit application for the Russell Biomass Power Plant in Massachusetts is still under review due to intense local opposition and the state's continued research into the sustainability and carbon neutrality of the project. Permit problems represent a major barrier to new industries and can cause a business or industry to miss a key window of market opportunity. Given our country's current economic environment, we can no longer afford to allow inefficient processes to stifle economic growth.

A 2011 US Chamber study, entitled, *Project No Project* (www.projectnoproject.com) concluded that the total potential economic and employment benefits of the subject projects, if constructed and operated for twenty years, would be approximately $3.4 trillion in GDP, including $1.4 trillion in employment earnings (based on present discounted value), and an additional one million or more jobs per year. In other words, the loss in time leads to a loss in jobs.

This study estimated the potential loss in economic value of 351 proposed solar, wind, wave, bio-fuel, coal, gas, nuclear and energy transmission projects that have been delayed or cancelled due to significant impediments, such as regulatory barriers, including inefficient review processes and the attendant lawsuits and threats of legal action.

When it takes much longer for businesses to receive the approvals necessary to build, modify and operate facilities in the U.S. than it does in other parts of the world, competitiveness is severely and negatively impacted. Delay invariably adds to the cost of a project and multiple permits add uncertainty to investment decisions. Additional permitting costs and investment uncertainty negatively impact job creation and retention.

OCS Oil and Gas Exploration and Production

The loss of economic activity described in *Project No Project* is large, but this study only provided a narrow view of the problem. The study excluded certain types of energy projects, such as offshore oil and gas exploration and production (E&P). Unfortunately, E&P activity in the Outer Continental Shelf (OCS) is on the decline, due in large part to actions taken by the federal government in the aftermath of the *Deepwater Horizon* accident. One year later, on April 20, 2011, *The Wall Street Journal* reported that offshore oil production has dropped 13%. Wood Mackenzie estimates that the drilling suspension, along with a slower permitting process, will result in a loss of 375,000 barrels of oil per day. The Manufacturing Council supports resumption of exploration and production (E&P) activity in the shallow and deepwater of the Gulf of Mexico.

Since the *Deepwater Horizon* accident, new deepwater offshore oil and natural gas development in the Gulf of Mexico and offshore Alaska have been under a moratorium, either explicitly or implicitly. We understand the need to ensure exploration and production is done in a safe and environmentally sensitive manner. However, now that the DOI has issued new regulations, existing permits meeting the new regulations should be approved expeditiously, as current law requires. Uncertainty surrounding regulatory requirements must be eliminated. The Manufacturing Council supports revisions to the Department of Interior's (DOI) 2007-2012 five-year plan and the draft 2012-2017 plan for leasing federal land for oil and gas exploration and production (E&P).

The DOI 5-year program consists of a schedule of oil and gas lease sales (auctions) indicating the size, timing, and location of proposed leasing activity the Secretary determines will best meet national energy needs for the 5-year period following its approval. An area must be included in the current 5-year program in order to be offered for leasing.

In response to the *Deepwater Horizon* accident, DOI withdrew from studying significant resources in the eastern Gulf of Mexico and Atlantic Ocean (i.e., DOI announced in December that no lease sales will be held in the Mid and South Atlantic in the 2007-2012 program or in the 2012-2017 program). In addition, in December 2010, DOI announced that there will be no further lease sales in the Arctic under the 2007-2012 program. The decision on whether to permit sales under the 2012-2017 program is still under development. Accordingly, these announcements portend significant delays in developing additional oil and natural gas resources.

Pending Regulations

Existing regulations and regulatory programs are not the only concern. There are several pending regulations and regulatory issues that impact energy production and will negatively affect US manufacturers. These include (1) selected EPA regulations and (2) pending regulation of hydraulic fracturing, a technique used to develop natural gas.

Selected EPA Regulations
Several pending EPA regulatory proposals are very costly and already negatively impact on investment in energy projects. These proposed regulations include limits on hazardous air pollutants for industrial and utility boilers, the ozone standard, and regulation of GHG emissions.

EPA issued final rules on February 23rd to reduce hazardous air pollutants (HAPs) from industrial boilers and process heaters. EPA estimates the cost of the rules, which apply to tens of thousands of boilers, to be $1.8 billion per year. Although the final rules have been significantly improved since the proposed rule, considerable concern remains about the cost of the requirements, especially on solid and liquid fuel boilers.

On March 16th, EPA issued proposed rules to control hazardous air pollutants (HAPs) for coal and oil fired power plants. EPA estimates 1,350 units will be affected, at an estimated cost of $11 billion by 2016. It is unclear whether current technology can economically meet the proposed standards.

On January 6, 2010, EPA proposed to lower its ozone standard and intends to finalize this standard in 2011. Compliance is expected to be very expensive, as much as $90 billion by 2020. Under the most stringent proposal, the new standard would put 90% of the country in nonattainment. The designation of "nonattainment" is important: permitting new sources of ozone pollution is extremely challenging unless offsets or other reductions can be found and the facility achieves the lowest achievable emission rate.

EPA has promulgated regulations under the Clean Air Act requiring certain new or modified major sources of greenhouse gas emissions (GHGs) to obtain Prevention of Significant Deterioration (PSD) and operating permits. These regulations require affected sources to install the best available control technology (BACT), as determined on a case-by-case basis. In addition, on December 23rd, 2010, EPA announced it would promulgate New Source Performance Standards for electric generating units and petroleum refineries. When promulgated, these New Source Performance Standards would establish a "floor" on BACT determinations. EPA has also indicated that it intends to conduct another rulemaking, to conclude by July 1, 2012, that will determine whether certain smaller sources can be permanently excluded from GHG permitting requirements. EPA has indicated that it will not require permits for smaller sources until at least April 30, 2016.

EPA's current regulations require potentially lengthy case-by-case BACT reviews for new facilities or major modifications of existing facilities, thus requiring costly retrofits or other actions at existing power plants and factories and further complicating and delaying investment in new or upgraded facilities. This discourages investment in the U.S and hampers job creation. In addition, EPA's announced future rulemakings on this issue create additional uncertainty surrounding future regulatory requirements.

Hydraulic Fracturing

EPA is undertaking a study on the relationship between hydraulic fracturing (HF) and drinking water resources. As proposed, the study will examine the full life-cycle of water used in HF operations, including water acquisition, use and fate of additives, injection (fracturing) operations, management of flowback and produced water, and treatment and disposal of flowback and produced water. Importantly, the study does not appear to assess the risks relative to state and local regulatory requirements and common industry practices. EPA plans to issue an interim report in late 2012 and a follow-up report in 2014.

The Department of the Interior (DOI) may also develop new regulatory requirements. At a Nov. 30, 2010 DOI Forum, Secretary Salazar and other DOI officials discussed new DOI regulations on hydraulic fracturing. Secretary Salazar focused on the issue of fracturing fluid disclosure, but

other officials spoke in much broader terms. To date, no proposed regulations have been released as a result of these announcements, and the breadth of the DOI effort is unknown.

Manufacturers are responsible for one-fourth of U.S. natural gas consumption. In some sectors (fertilizer, chemicals, forest and paper), low-cost natural gas is critical to providing competitive advantage. U.S. manufacturers lost six million jobs since 1997, and volatile natural gas prices were a major factor.

Overly broad or misdirected regulations will threaten the development of the Nation's abundant unconventional natural gas resources on Federal lands. Natural gas offers significant environmental and other benefits relative to competing energy sources, and the industry has been an engine of economic growth and job creation despite the recent economic downturn. Natural gas – along with renewables – is a key part of America's clean energy future.

Improving the Regulatory Process

Aside from existing and pending regulations, the regulatory process itself must be improved to enhance competitiveness and create new US jobs. The Council believes there are a number of areas where improvements are an integral part of the "quality control" system for federal regulation, and should play an important role in improving the regulatory process.

Agencies have an array of tools (e.g., via an Advanced Notice of Proposed Rulemaking) to engage the manufacturing sector, and the greater the degree of early engagement, the better the resulting regulation. For example, EPA officials have expressed regret regarding portions of their proposed rule for industrial boilers (e.g., boiler MACT) because many of the proposed standards were based on insufficient and unrepresentative data, forcing the agency to work with industry to gather additional data, which altered the standard to one less costly and more achievable.

Regarding analysis of benefits and costs, methods are available to improve the objectivity of these tools. For example, the use of external peer review (for Agency-generated analysis) and third-party analyses is encouraged to avoid biased assessments. Weight-of-evidence analyses (especially for environmental, health, and safety risks) should also be institutionalized to avoid overly conservative or stringent regulation.

Finally, legislators bear responsibility for the impact of regulations, which are developed based on statutory authority written by Congress. Therefore, Congress can have a significant impact on the quality of regulations by first requiring, in the authorizing statute, use of best available information and science.

Recommendations

- **Streamline the Permitting Process for Energy Projects:** The permitting process needs to be streamlined and transformed to be fast, efficient, clear, affordable and predictable. The government needs to rewrite regulations in a way that will accelerate the

permitting decision process and encourage investment in the U.S. Each government agency issuing permits should be examined for opportunities to improve consistent with global best practices. The agency can also reduce the amount of delay by reducing the number of times a business must apply and reapply for a permit. Extending the duration of permits is, obviously, the easiest and quickest way to accomplish that.

- **Delay and Modify EPA Requirements for Boilers and Ozone:** The EPA should modify its requirements for solid and liquid fuel boilers to adopt flexible, cost-effective work practice standards for emission limits for pollutants emitted in trace, and difficult to measure amounts. EPA should also use its waiver authority to give affected units more time for compliance. EPA should further tailor (or sub-categorize) its regulations depending on the type of plant, coal, and boiler, as the law allows, to lower the cost of the rule. EPA should also exercise its waiver authority to grant additional time for compliance with the new standards. Finally, EPA should delay finalizing the proposed ozone rule until 2013, when it is statutorily required to do so. At that time, EPA should use the best available scientific information to set the standard at the appropriate level.

- **Abandon or Modify GHG Rulemaking:** EPA should either abandon its second round of rulemakings on the GHG issue regarding the potential extension of GHG regulations to smaller sources or make it clear that it does not intend to extend GHG controls to additional sources. In addition, EPA should clarify that it intends to take a "light handed" approach to reviewing state BACT determinations and will defer to state decisions in this area. The Clean Air Act is not well-designed for regulating stationary sources of GHGs. Congressional legislation and international cooperation is essential in order to address adequately the issue of climate change.

- **Engage Manufacturers Early in the Rulemaking Process:** Collaboration between regulators and the U.S. manufacturing industry can drive significant improvements in the quality of final rules. Robust dialogue between regulatory agencies and the manufacturing sector, recognizing fully the distinctions within its segments, should occur well before issuance of a proposed rule and continue throughout the rulemaking process. The Manufacturing Council is well positioned to serve as a starting point for collaboration between industry and agencies in the regulatory development phase.

- **Ensure Regulations Achieve the Statutory Objective at the Lowest Cost:** Regulators should use tools such as cost-benefit analysis and risk assessment. These tools help to evaluate the consequences of a regulatory proposal. Such tools, however, are useful only if the underlying analysis is objective and unbiased. Further, Congress should not preclude the use of cost-benefit analysis and should rather require it to inform regulatory proposals.

- **Provide Sunset Dates for Regulations:** Congress should also take care to provide regulatory sunset dates in the authorizing legislation. At the end of the regulatory process, a Congressional approval/disapproval mechanism is prudent for major rules.

For example, under the 1998 Food Quality Protection Act, Congress mandated EPA to review pesticides that had been grandfathered in but never evaluated against modern safety standards. EPA was given a set time period to review and take appropriate regulatory action. This should serve as a model for further regulations.

- **Require OMB Review of all Significant Rules:** Although significant federal regulations from most federal agencies are currently reviewed by the Office of Management and Budget (OMB), we believe OMB should review all significant rules (even from the so-called "independent agencies", which account for 40% of all major rules). Furthermore, Congress should create an expertise center within the legislative branch, staffed with technical experts in economics and policy analysis to ensure appropriate oversight of the executive branch.

- **Open All Areas to Responsible and Safe Leasing and Development of Oil and Natural Gas:** DOI should carefully consider the significant safety improvements implemented over the last several months in response to the Gulf accident and should not arbitrarily remove areas from consideration.

- **Focus on Practical Guidance for Hydraulic Fracturing:** The EPA study must focus on understanding areas of potential risk relative to existing industry practices and state regulatory frameworks in their proper context, so as to give practical guidance to policy makers and state regulators. DOI should also consider existing initiatives like the Groundwater Protection Council Disclosure Registry.

Appendix C
Clean Energy Strategy

The Need for Stable Policy

The U.S. has the technical capacity and manufacturing know-how to accelerate the development of sustainable energy sources such as solar, wind, nuclear and clean coal. These areas have been continuing to grow in states where policy has helped develop the market demand. Take the wind industry – according to the American Wind Energy Association (AWEA), in 2010, as markets responded to demand created by various incentives, 14 new manufacturing facilities were brought online here in the U.S. These new investments helped bring the total number of manufacturing jobs directly attributed to wind up to 20,000 across 42 states.

However, many of these policies, including tax incentives, short-term grant programs, and other incentives reliant on the annual appropriations process, lack stability and are underfunded and therefore do not create clear rules of the road to encourage large-scale investment over the long term. This can also be seen in clean energy manufacturing as irregular policy has led to well publicized cases of solar manufacturers closing up shop here in the U.S. to move to more stable clean tech environments such as Germany, India and China. Having once been the leader in this space, the U.S. needs a clear market pull for these products and to refocus on growing clean energy manufacturing jobs.

Further, as we discuss in greater detail in our additional recommendations, energy efficiency is often the simplest and most affordable way to lower energy costs and reduce GHG emissions. The technologies exist today and have been proven to be extremely cost effective, yet it was noticeably absent from the President's remarks on a clean energy. Efficiency must be part of any policy geared towards increased use of low-carbon technologies in both the supply and demand sides of the equation and must be measured against a business-as-usual scenario.

Addressing Competition from Abroad

Despite early leadership in clean energy manufacturing, the U.S. has fallen behind. Beyond the inertia that has prevented the U.S. from creating policies to properly incentivize and develop vast clean energy markets here at home, the U.S. is also facing tough competition from other countries that have set clear priorities regarding clean energy manufacturing and deployment. This is a risk in terms of U.S. competitive advantage, balance of trade, and energy security.

For example, Germany has been at the forefront of incentivizing markets for clean energy technologies, particularly traditional renewables like wind and solar. Along with a commitment for significantly reducing greenhouse gas emissions by 2020, Germany has instituted a national renewable electricity standard of 20 percent in the same timeframe. Germany also provides manufacturers with grants and low-cost loans in order to develop the workforce needed for clean tech manufacturing. As a result, according to Roland Berger, Germany's renewable

energy sector currently employs around 500,000 workers and is poised to become the country's leading industry by 2020.

China, another example, has taken strong actions to develop a strong clean energy manufacturing sector and to deploy clean energy technologies widely. In addition to setting emissions targets, the government has increased its investments in renewable energy by 17x in just a matter of a 5 years. This has made China a world leader in the clean energy market. As the Pew Charitable Trusts point out, in 2009 China moved ahead of the U.S. in investments in renewable energy.

Lastly, as discussed in our recommendations on reforming the regulatory process, the burdens of permitting for solar, wind, bio-fuel and other clean energy projects have led to significant economic loss as projects are canceled and, in many cases, moved to other countries. When it takes significantly more time to receive the necessary approvals to begin a project in the U.S. than it does abroad, U.S. competitiveness is negatively impacted.

Recommendations

- **Declare Clean Energy Manufacturing a Strategic Energy Security Issue:** Conduct a review of the permitting process in order to determine how to better streamline the process and extend the duration of permits in order to reduce the number of times a business must reapply. Further, establish a mechanism to provide low cost loans for U.S. based production facilities that manufacture clean energy technologies. While we need to ensure these technologies are economically viable in normal market conditions, initial incentives are necessary for early adoption to minimize risk and encourage investment in the U.S.

- **Create a National Clean Energy Strategy:** As a first step, develop a comprehensive strategy for the nation to have an increasing percentage of its energy production come from clean sources such as solar, wind, clean coal, natural gas, nuclear and other technologies that meet a pre-defined emissions threshold. Energy efficiency is critical to enabling a low-carbon economy and should also be given appropriate treatment in such a strategy. A national strategy that focuses on relative emissions performance could incentivize innovation and investment and create manufacturing jobs in the U.S. while further helping the country transition to a low-carbon economy.

- **Establish a Standard Cost Comparison Methodology:** Charge the appropriate agency (EIA, OMB, GAO etc) with determining a standard methodology to compare clean energy sources, based on emissions performance, with alternatives such as traditional fossil fuels. This methodology should include, but not be limited to, a life cycle analysis (LCA) accounting for externalities such as pollution in order to better account for the total cost of ownership (TCO).