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TESTIMONY BEFORE THE
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"Clean Energy Technology Export Assistance"
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Introduction

Chairman Rush, Ranking Member Whitfield, and members of the Subcommittee, thank you for the opportunity to speak before you today about the important topic of clean energy technology export assistance.

As you are well aware, clean energy is one of the greatest economic opportunities of the 21st century, and promoting the development, production, and deployment of clean energy and energy efficiency technologies and services remains a high priority at the U.S. Department of Commerce. These technologies are important to economic growth in the United States and globally. At the International Trade Administration – otherwise known as ITA – we have identified significant overseas market opportunities for U.S. firms in these technology and services areas.

For the record, I will not be commenting on H.R. 5156, but rather my testimony will provide a perspective on the issues, challenges, and opportunities within the clean energy technologies and services sector today, as well as highlight some of the many programs ITA has put in place to support U.S. enterprises competing for market opportunities associated with the deployment of these technologies and services around the world.

ITA is the lead export promotion agency in the Federal government. The mission of ITA is to create prosperity by strengthening the competitiveness of U.S. industry, promoting trade and investment, and ensuring fair trade and compliance with trade laws and agreements that enhance the ability of U.S. firms and workers to compete in the global marketplace on a level playing field. This mission is critical to enhancing America's global competitiveness and expanding commercial opportunities for American manufacturers, farmers, and service workers throughout the world.

ITA's four units are dedicated to expanding export opportunities through a variety of means: 1) The U.S. and Foreign Commercial Service (US&FCS) designs and executes programs that provide companies with practical advice and assistance for exporting; 2) Market Access and Compliance (MAC) focuses on opening foreign markets, monitoring and working with the

Office of the U.S. Trade Representative to enforce trade agreements, strengthening intellectual property rights enforcement, and further reducing or eliminating barriers to trade and investment overseas; 3) Manufacturing and Services (MAS), the unit where I work, provides industry expertise, research and policy analysis used by policy makers to develop and implement domestic and international policies that enhance the global competitiveness of U.S. firms; and 4) Import Administration (IA) identifies, monitors, and works with the U.S. Trade Representative to address unfair foreign subsidization that impedes U.S. exporters' ability to compete in foreign markets, as well as assisting U.S. exporters involved in foreign antidumping cases that may limit U.S. exports.

Within MAS, we provide coverage of all industrial sectors. In-depth coverage of the clean energy sector is a priority. Our Office of Energy and Environmental Industries provides industry expertise and trade policy support for a variety of clean energy technologies and services, including renewable energy, clean coal, energy efficiency, nuclear power, smart grid, and environmental technologies.

Our work to promote clean energy technologies and services focuses on four areas: first, as the government's industry advocate, we make sure that industry's views are taken into account when policymakers formulate economic and trade policy; second, we help U.S. business represent their views at international meetings affecting the clean energy technologies industry; third, we coordinate with industry to eliminate trade barriers; and fourth, we undertake industry, economic, and trade policy analysis on issues impacting the global competitiveness of the U.S. clean energy technologies and service industries.

The President's National Export Initiative

At his State of the Union Address this year, President Obama announced the National Export Initiative or "NEI" with the goal to help double U.S. exports in 5 years and support 2 million jobs. Since the NEI was announced, the President has signed an Executive Order and formed an Export Promotion Cabinet that consists of top leaders throughout the Administration, including from the Departments of Commerce, Labor, State, and Agriculture, the Export-Import Bank, the Office of the U.S. Trade Representative, and the Small Business Administration. The NEI focuses on expanding trade opportunities for U.S. companies, particularly small- and medium-sized enterprises, increasing access to credit for U.S. businesses, and enforcing existing trade laws and obligations.

In addition, in that same State of the Union Address, the President emphasized that "The Nation that leads the clean energy economy will be the nation that leads the global economy." The President has come out in strong support of clean energy technologies as a way to meet global energy and economic development needs, mitigate climate change, and capture the high-value engineering, innovation, and jobs this sector offers.

Within ITA, we are responding to the NEI and to the President's emphasis on clean energy by hiring trade specialists in emerging growth markets, supporting small- and medium- sized enterprises to broaden their exposure to international markets, and developing outreach and trade mission programs to improve exports in high-growth sectors like clean energy.

Specifically, the Department of Commerce and the Department of Energy are co-leading an interagency effort to draft a National Renewable Energy and Energy Efficiency Export Strategy with the goal of doubling exports in these two sectors by 2015. The Strategy will coordinate U.S. government programs to better support U.S. clean energy companies wishing to compete abroad. The Strategy will focus on increasing exports in electricity generation and demand response, including goods and services related to renewable energy, large-scale storage, and energy efficiency. A Federal Register Notice has been issued requesting input from private businesses, trade associations, academia, labor organizations, non-governmental organizations, and other stakeholders.

Global Challenges and Opportunities

President Obama has set a goal of the United States becoming the leading exporter of clean energy technologies. Specifically, he has called for new policies to "advance a cleaner environment, a stronger response to the challenge of climate change and more sustainable natural resources and energy supplies." Reaching this goal requires effort by both industry and government. It is a priority of the Obama Administration and of the Department of Commerce to continue strengthening U.S. competitiveness in this sector and enhance the ability of U.S. firms to export clean energy technologies. However, we have a lot of work to do to meet that goal.

For example, the United States is, overall, the world's largest producer of electricity from wind. Solar installations are increasing as well. However, we currently import roughly three times the renewable energy equipment, such as wind and solar, as we export. GE installed the largest percentage of wind turbine capacity in the United States in 2009, but faces increasing competition from European and Asian companies.

There is a lot we don't know. These statistics do not chart our trade in services. This is a crucial blind spot that needs remedy. While manufacturing clearly needs to be part of the discussion, the United States is a leader in highly skilled services which make up a greater proportion of renewable energy jobs than manufacturing.

With great challenges come great opportunities. Global demand for clean energy technologies is growing rapidly, as are export opportunities for U.S. companies. And exports of clean energy technologies, like any export, will also benefit the U.S. economy by creating and sustaining jobs here at home and by increasing revenues. For instance, global investment in renewable energy and energy efficiency was $145 billion in 2009, having increased every year since 2002. Governments have allocated an additional $180 billion to renewable energy and energy efficiency in the stimulus bills that were passed by many countries last year.

Looking forward, the potential global market for civil nuclear goods and services is valued at $400 billion over next 15 years. The projected demand for U.S. clean coal technology equipment in key global markets which utilize coal for power generation is estimated at $36 billion through 2030. And, according to some reports, the projected global smart grid market is expected to increase from $90 billion in 2010 to $171 billion in 2014. The Department of Energy estimates that $40 billion per year in increased exports of clean energy technologies

would generate up to 750,000 green jobs by 2020. Our ability to realize this potential depends on achieving U.S. leadership in the field.

The U.S. Clean Energy Industry and Factors Affecting their Competitiveness

U.S. clean energy technologies companies face fierce competition in international markets.

Beyond macroeconomic issues of labor prices, currency valuation, health expenses, etc., three other factors have a strong effect on international competitiveness: (1) the strength of the domestic industry, (2) the availability of international markets that offer U.S. companies a fair opportunity to compete, and (3) the ability of U.S. companies to access the resources and master the skills required of exporting.

I will discuss each in turn.

1. Creating a Strong Domestic Industry

A strong domestic industry is a prerequisite for exports. The United States is in fierce competition for new markets in developed countries as well as in developing countries, such as China and India, which have set ambitious national targets for ramping up clean energy. Enforced national targets or renewable portfolio standards give companies certainty in the long-term presence of demand.

The United States has a relatively small share of worldwide manufacturing capacity for clean energy-related industries such as wind and solar. In 2008, the United States had 16% of global wind manufacturing capacity and 6% of global solar manufacturing capacity. Nevertheless, there is a clear opportunity for the United States to lead the world in high-technology, clean energy manufacturing. The R&D and innovations being pursued by companies, universities, and the Department of Energy's national labs will be key to that leadership role.

The American Recovery and Reinvestment Act (ARRA) provides significant support for advancing clean energy technologies within the United States - a total of $36.7 billion of federal funds. These investments, most of which are matched by the award recipients, serve to stimulate our economy, develop new jobs in our manufacturing, service, and R&D sectors, and foster further clean energy investments by the private sector.

Approximately seventy percent of our nation's Clean Energy Stimulus Program is allocated to energy efficiency, renewable energy, and smart grid development and deployment. Specifically, $16.8 billion of stimulus funds have gone towards energy efficiency and renewable energy programs, $4 billion is allocated for renewable energy loan guarantees, $4.5 billion is directed to developing and deploying a fully-integrated smart grid system throughout the United States, and $3.4 billion has been allocated to advance the commercial deployment of carbon capture and storage (CCS) technologies. In addition, the $2.3 billion manufacturing tax credit included in the American Recovery and Reinvestment Act (ARRA) was an important step for the U.S. federal government to provide national incentives that compete with foreign competitors.

To ensure that the United States continues to foster the emergence of smart grid technologies, the Administration has established a Subcommittee of the National Science and Technology Council's Committee on Technology to coordinate agency involvement in this issue and develop a comprehensive policy framework.

2. Opening Overseas Markets

Despite the flood of news about fast-growing clean energy technology opportunities in foreign markets, U.S. clean energy technology exports cannot increase if protectionist rules and policies prevent open competition.

The connection between clean energy technologies and green jobs has led many countries, developing and developed alike, to adopt policies that make it more difficult for foreign firms to compete in their markets. Many countries – either implicitly or explicitly – favor their domestic industry through preferential tendering criteria (China) and burdensome certification requirements (Korea, Japan). In addition, concerns regarding adequate protection of intellectual property rights also hamper some firms from entering foreign markets. This is an area particularly critical to new, small- and medium-sized clean energy companies whose survival might depend on a small number of critical patents.

Intense foreign competition from state-owned enterprises poses another challenge for U.S. companies, primarily in the civil nuclear sector. Foreign firms have enjoyed significant government support, ranging from direct government ownership and management, to concessionary financing, industrial coordination, support for manufacturers and nuclear liability protection. Also, for the civil nuclear industry, a lack of an effective global nuclear liability regime poses significant concerns.

3. Firm-Level Export Challenges

The final challenge to increasing clean energy technology exports that must be addressed is the willingness of U.S. clean energy firms to export. The Economist recently reported that only 4% of all U.S. companies export.

In the clean energy sector in particular, companies face challenges to exporting that are not market or policy-based, but are internal to that particular company's knowledge and comfort with the export process. Many companies face a shortage of available capital or financing, which hampers their ability to increase their manufacturing capacity to meet global market demands. Complex domestic and foreign regulatory requirements also pose issues for companies. Local financial institutions that traditionally facilitate deals involving U.S. exports lack the knowledge and comfort to finance innovative clean energy products. Many U.S. companies, particularly small and medium-sized companies, struggle to understand the local customs and business culture in foreign markets. Likewise, many companies find it difficult to find a local partner or distributor without a keen understanding of local companies' ability. Finally, small companies frequently lack a basic understanding of the export process. Often these companies do not understand foreign tariff systems, currency conversion, or patenting

requirements. Fear of intellectual property rights violations in particular can hinder U.S. clean energy companies from seeking opportunities overseas.

ITA's Role in Supporting U.S. Competitiveness through Exports and Various Clean Energy Initiatives

1. Clean Energy Initiatives

ITA has multiple clean energy initiatives in place and has organized industry promotional events and released a number of publications or educational materials to support exporters. We also engage in bilateral, regional and multilateral negotiations. Recent examples of programs administered by ITA that support the clean energy industry, either directly or indirectly, include the following:

- Last year, ITA launched an **Energy Efficiency Initiative** (EEI) to assist U.S. manufacturers to improve the energy efficiency of their operations as well as to promote the development and deployment of energy efficient technologies. The EEI is focused on the industrial energy efficiency and comprises three pillars— 1) market development, 2) trade policy and promotion, and 3) outreach and resource development. The EEI targets America's eight high-energy consuming industries—Aluminum, Metal Casting, Forestry Products, Mining, Chemicals, Petroleum Refining, Glass, and Steel.

- Activities to date include an *Energy Efficiency in Manufacturing Road Show* to Toledo, Ohio and a Forum on Energy Efficiency in Manufacturing in Washington, DC both of which I hosted last fall; a *Checklist for Corporate Efficiency*; a Department paper on the global competitiveness of the industrial energy efficiency technologies sector (being developed), a primer on financing options, a smart grid webinar series; and a recent Smart Grid Manufacturers Forum in St. Paul on June 9th organized in partnership with DOE, the State of Minnesota and the University of Minnesota.

- We administer a **Civil Nuclear Trade Initiative** the goal of which is to strengthen the competitiveness of the U.S. nuclear industry as it endeavors to rebuild its manufacturing base by capturing opportunities abroad. The Initiative, developed and administered by MAS, identifies the industry's most pressing trade challenges and opportunities and coordinates public and private sector efforts to address them. As part of this initiative, ITA Under Secretary Francisco Sanchez will be leading approximately ten U.S. civil nuclear companies on a trade policy mission to Poland, Czech Republic and Slovakia in mid July (11-17).

- ITA recently held a **Green Financing Roundtable** (May 21st) which brought together stakeholders and relevant government agencies to improve awareness of existing green finance market space, trends, opportunities, and obstacles facing U.S. financial services firms investing in wind, solar, biofuel, biomass and waste, energy-efficient technologies and other emerging energy options.

- We have organized several events aimed at both informing industry of the latest developments in the international climate change negotiations and eliciting their feedback (i.e., recent **national climate change webinar** hosted by Secretary Locke).

- We also have established an **interagency Working Group on Renewable Energy and Energy Efficiency under the TPCC**, as noted earlier, to focus on coordinating export promotion activities of the U.S. Government within these sectors. In April, this working group agreed to draft a national strategy to help double U.S. exports in those two key sectors. In addition to an in-depth look at the global competitiveness of these sectors, the ensuing report will contain commitments by USG agencies relating to these sectors. We have published a Federal Register Notice requesting public comments.

- Secretary Locke recently established a **Renewable Energy and Energy Efficiency Industry Advisory Committee** in order for industry to advise the Department directly on pressing trade promotion and policy issues.

- **ExporTech** was developed and is delivered in partnership with Manufacturing Extension Program (NIST-MEP.) It is designed to assist new-to-export companies, primarily in manufacturing, with developing an international growth plan customized to the businesses specific exporting objectives. Since its inception, the initiative has seen a 600 percent increase from three programs in 2007 to 21 in 2010. To date over 200 companies in 18 states have participated in ExporTech programs. The ExporTech program enables small and medium-sized companies, including clean energy firms, to accelerate or expand their growth in to new markets and to create and refine an international growth strategy.

- **Sustainable Manufacturing Initiative** – ITA's Sustainable Manufacturing Initiative addresses green technology implementation as a component of business competitiveness. The Initiative encourages U.S. companies to use sustainable practices that improve their bottom line. This can make them more competitive in the global marketplace, and therefore, potentially more interested in exporting. A component of this Initiative is SMART – Sustainable Manufacturing American Regional Tours. ITA has held 7 "SMART" TOURS (Seattle, Rochester, Grand Rapids, St. Louis, Seattle, Atlanta, and Beltsville) – The next SMART tour, which will focus on energy efficiency in the forest products sector, will be held in September in Richmond, VA. NIST-MEP centers have between an integral partner on this front.

- **Manufacture America** - This summer, Nicole Lamb-Hale, Assistant Secretary for Manufacturing and Services, will lead a series of road shows to help demonstrate U.S. Government resources to help manufacturers retool their facilities to engage the growth industries of the 21st century, creating and preserving jobs in some of the hardest hit communities around the country. The road shows will help link manufacturers to global demands that provide export opportunities, such as clean energy, and meet President Obama's goal of doubling exports in five years. NIST-MEP centers will also provide a supporting role here.

2. Industry Promotional Events

ITA is actively promoting U.S. clean energy solutions in overseas markets. We have held trade events and foreign buyer programs at major renewable energy trade shows and brought delegations from all over the world to these events. ITA's aggressive clean energy technology promotion program includes over 90 trade events held worldwide last year and many more planned for the rest of 2010. These are in addition to the day-to-day services we offer U.S. companies, such as tailored matchmaking and consulting services, international company profiles, and international partnership searches. We now have a new Green Tech website that aggregates all of our export promotion programs in a single place, providing easy industry access (www.buyusa.gov/green)

In the past year, ITA has held International Buyer Program (IBP) events at two major energy trade shows. The IBP hosted nearly 1100 delegates at the 2010 Offshore Technology Conference in Houston, Texas and 13 delegates at the 2010 Electric Power Show. In December, an IBP will be held at Power Gen International in Orlando, Florida, the largest power generation trade show in the world. In May 2011, ITA will hold an IBP event at the American Wind Energy Association Windpower Conference & Expo in Anaheim, California.

ITA has also organized trade missions focused on clean energy: Solar Energy Trade Missions to India (March 2009 and February 2010) with 14 companies participating; Energy Efficiency Trade Mission to India (November 2009), led by Deputy Chief of Staff Rick Wade, with 16 companies participating; and most recently, the Secretary-led Clean Energy Business Development Mission to Hong Kong, and other cities in China and Indonesia (May 2010), focusing on solar, wind, power generation and distribution/smart grid, green building, and energy information services, with 24 companies participating.

Last year, ITA also led a Clean Energy Policy Mission to Indonesia focusing on geothermal and other forms of renewable energy. We also organized a five-city Green Build Road Show -- to Pittsburgh, Denver, San Francisco, San Jose, and Phoenix -- to help U.S. companies take advantage of the $975 billion construction market in Europe.

During the December 2009 Copenhagen negotiations on climate change, we hosted "Bright Green," an exhibition of U.S. technology that can help fight climate change, and are likely to host a similar event at the next UNFCCC meeting in Cancun. We hosted a U.S. industry promotional event at the IAEA General Conference in Vienna last fall with the U.S. civil nuclear power industry. We expect to host this program again this September.

3. Publications and Educational Materials

As I mentioned earlier, in support of the President's National Export Initiative, we are working with our interagency partners to develop a National Renewable Energy and Energy Efficiency Export Strategy. We are also working on a competitiveness report on small modular nuclear reactors. We have ramped up our efforts to promote the commercialization and export of clean energy technologies through increased outreach to industry on best practices and markets, technical assistance and capacity-building events, and helping develop trade policies that promote cleaner technologies.

In 2009, ITA released a number of reports and helpful resources including a *Checklist for Corporate Energy Efficiency* and a *Trade Finance Guide*, which serves as a useful resource for small- and medium-sized enterprises (SMEs) in the green technology industry. We also have published clean energy exporters' guides for China and India, providing valuable planning information to companies interested in exporting green technologies to these growing markets. The guides contain market overviews, analyses of the clean energy markets in these countries, market opportunities for trade and investment through 2020, and resources available to U.S. businesses to help enter these markets. We recently released a smaller renewable energy market assessment report on Indonesia and have continued to hold informational webinars on topics as diverse as smart grid and biomass funding opportunities.

4. Domestic Regulatory Program

The role of MAS's Regulatory Affairs Program is to represent the competitiveness interests of U.S. companies and industries in the Federal regulatory review process. MAS conducts economic analyses to support regulatory reform and reviews cost-benefit analyses prepared by other Federal agencies. MAS's primary value added arises from its unique industry and international trade expertise.

The MAS Regulatory Affairs Program has participated in interagency discussions for almost three dozen rules since the program started in 2006, including rules from the Occupational Safety and Health Administration (OSHA), the Environmental Protection Agency (EPA), and the Department of Homeland Security (DHS). Through this program, we continue to review key rulemakings that could potentially affect the export competitiveness of the U.S. clean energy and other industries.

5. Bilateral, Regional & Multilateral Dialogues

ITA has also been active in organizing events to spur the exchange of best practices with foreign governments and foreign industry. Such programs have ranged in focus from helping trading partners reduce greenhouse gas emissions in cement manufacturing to explaining what investment framework has been developed to attract investment to the renewable energy and energy efficiency sectors.

ITA has worked on clean energy issues under the U.S.-EU Framework for Advancing Transatlantic Economic Integration and the U.S.-Brazil Commercial Dialogue, and assesses the impact of foreign regulations, such as the European directive on energy-using products, on U.S. interests. We have many similar commercial dialogues with other countries including China, India and others.

Along with the Department of State and other agencies, ITA works within the G-8, G-20 and the Asia-Pacific Economic Cooperation forum, where climate change is becoming a priority issue, to represent the interests of the United States, with a focus on economic and industrial concerns. ITA monitors foreign government climate- and energy-related programs and proposals for potential countervailable or WTO-inconsistent subsidies.

6. Market Development Cooperator Program

Lastly, I wanted to highlight the Market Development Cooperator Program, which MAS manages. The program allows non-profit groups or universities to propose projects to open up foreign markets to U.S. exports. In 2009, we awarded three MDCP awards in the clean energy sector. This year, the Department has received numerous applications for MDCP awards and is currently reviewing them.

The MDCP has been an effective means to promote U.S. exports abroad, especially in the clean energy sector. One particular example I'd like to highlight is the International District Energy Association (IDEA), which has partnered with the Department as a cooperator in the MDCP since 2005. Our MDCP awards to IDEA during this time have contributed to the export of $263 million of U.S. clean energy technologies, principally to Middle East markets.

Conclusion

In closing, I would like to thank you Chairman Rush, ranking Member Whitfield, and Members of the Subcommittee for the opportunity to highlight what ITA is doing to help U.S. companies compete in markets for clean energy technologies and for all kinds of U.S. goods and services around the world. I would like to make one final point, however, before answering any questions you might have:

Expanding opportunities to export clean energy technologies will not only maintain the competitiveness of U.S. companies, but will create jobs and generate economic growth. In addition, it will increase the reliability of our energy supply. American businesses have the technology, the expertise and the experience to help countries around the world reach their climate and energy goals. It is an extraordinary opportunity and a win-win for everyone.

Thank you for your time today. I welcome any questions you may have.