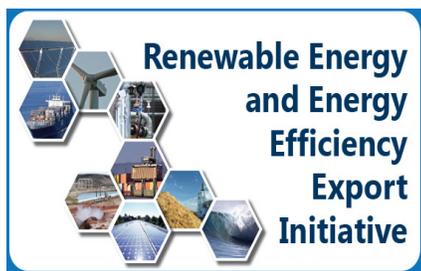




Renewable Energy and Energy Efficiency Export Initiative

Annual Review
2012



Trade Promotion Coordinating Committee

Working Group on Renewable Energy and Energy Efficiency



The world will demand clean energy sources, the world will demand higher efficiency automobiles, higher efficiency buildings...If we are the best in the world at this, why not rise to the challenge and supply the world with the things it will need?

- Secretary of Energy Steven Chu

Upon its launch in 2010, the Renewable Energy and Energy Efficiency Export Initiative (RE4I) demonstrated the U.S. Government's strong commitment to increasing the competitiveness of U.S. clean energy exporters globally. The RE4I has improved the availability of export financing, opened new markets, strategically linked buyers and sellers of U.S. technologies, and enhanced two-way dialogue with the renewable energy and energy efficiency (RE&EE) industry. This report details the initiative's achievements to date and the progress of its ongoing implementation. The report finds that the lasting impact of the RE4I will be the collaborative foundation it created that has supported the implementation of its 23 initial commitments and the National Export Initiative (NEI).

While the circumstances facing U.S. RE&EE exporters have changed since the RE4I's launch, the objective of the initiative and the need for collaborative action across the U.S. Government endures. The tools created by the RE4I have helped U.S. firms gain market share in emerging RE&EE markets around the world; and have created a more strategic and coordinated trade promotion effort to support U.S. competitiveness in the sector.

Importantly, while all of the RE4I's 23 action items have either been achieved or are in the process of implementation, the initiative's long-term legacy is its whole-of-government approach to promoting the competitiveness of RE&EE exporters. Today, the collaboration developed through the RE4I has more closely aligned export financing programs with trade promotion efforts; linked market access work with research and development efforts; and connected industry input to the agenda setting and policy-making of each agency.

A Recap of the RE4I

Former Secretary of Commerce Gary Locke announced the RE4I in December 2010. The Initiative included 23 action items from 8 separate U.S. Government agencies designed to address specific industry needs, including:

- Additional export financing tailored specifically to the needs of RE&EE exporters;
- A redoubled effort to open existing markets and create new markets for U.S. RE&EE exporters;
- Enhanced trade promotion to better link buyers and sellers of U.S.-made products and services; and
- Improved two-way communication on market opportunities and upcoming events.

Each RE4I action item was conceived with no additional budgetary support or new authority. Each action item is by a specific agency and coordinated through the TPCC Working Group on Renewable Energy and Energy Efficiency.



Gamesa Technology won ExIm's 2011 Renewable Energy Exporter of the year award

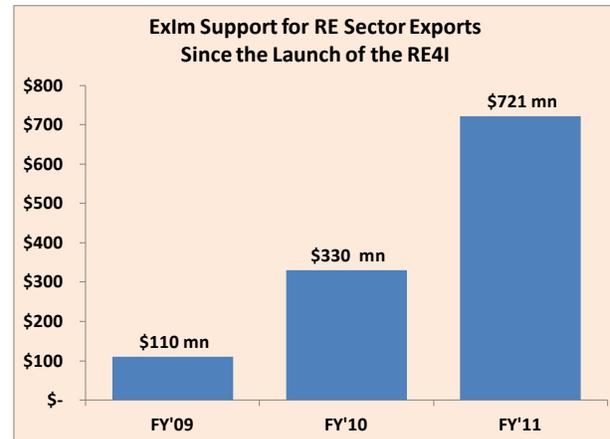
Creating New Financing Options for RE&EE Projects and Technologies

The RE4I's first commitment was to tailor financing to the specific needs of the RE&EE industry, to invest more capital in the sector, and to make accessing U.S. Government financing more convenient. OPIC and ExIm, for example, vowed to develop new investment vehicles to support the export of RE&EE technologies, and both agencies' subsequent announcements of new financing options strongly addressed this commitment. OPIC now offers risk insurance to U.S. investors concerned about feed-in tariff reductions in foreign markets. As many markets either rescind or reduce their feed-in tariffs for renewable energy, OPIC's insurance can provide investors the comfort they need to finalize a deal, often making the difference between whether a project goes forward or is left undeveloped.

In 2011, OPIC supported \$1.1 billion worth of renewable energy projects globally. It also approved approximately \$500 million of financing for private equity funds geared to investing in renewable projects, fulfilling its commitment to do so under the RE4I. This enabled the development of hundreds of megawatts of renewable energy globally, furthering the competitiveness of U.S. investors and, in many cases, creating export opportunities for U.S. firms. OPIC financed or insured transactions in every renewable energy sub-sector and in every major region of the world. Each project was evaluated for both commercial viability and the positive impact it would have on the U.S. economy and local development.

For example, OPIC committed \$310 million in financing to OrPower 4, a subsidiary of U.S. firm Ormat Technologies Inc., for its geothermal project in Kenya. OPIC also supported Millennium Energy Industries by providing \$3 million in debt financing

for the expansion of the company's solar design, installation, and financing business, allowing it to offer a lease option to customers in Jordan and other regional markets to alleviate the high upfront costs associated with solar energy technology.



In addition to the financing options offered by OPIC, ExIm Bank continued to expand its support for renewable energy exports in 2012. In FY 2011, ExIm doubled its portfolio dedicated to the sector, reaching \$721 million – a total that exceeded the last three years of authorizations for the RE&EE sector combined. In total, ExIm's financing helped support more than \$1.3 billion of U.S. exports in 2011, making the agency a critical asset to U.S. RE&EE export competitiveness in the sector.

Many of ExIm's renewable energy investments helped to establish a strong presence for U.S. exporters in fast-growing markets around the world. In India, for example, ExIm is one of the largest financiers of solar energy projects and was the first international financing institution to approve a solar power project under India's National Solar Mission. Since FY'11, ExIm has financed seven Indian solar power projects totaling \$256.7 million. One of the projects, approved in April 2012, provided an \$80 million loan to finance the purchase of Areva Solar's

Northern Power wins U.S. Export-Import Bank's Renewable Energy Exporter of the Year Award

Northern Power Systems (NPS), a Vermont-based manufacturer of small wind turbines, received the Renewable Energy Exporter of the Year Award from ExIm in April 2012. NPS used ExIm financing to export 55 small wind turbines to Italy. The transaction helped to create 15 jobs at the company's facility in Vermont and approximately 45 new jobs across NPS' growing supply chain.

The sale is the largest U.S. export of community-scale wind turbines to any country, and it is the first time that ExIm assisted in financing a small-scale wind-power project using project finance instead of a direct loan. ExIm guaranteed a total of \$22.2 million in euro-denominated loans from RB International (USA) LLC of New York. The financing helped NPS compete against foreign suppliers backed by their own governments' export-credit agencies; and is an example of the Renewable Express program working for U.S. exporters. The expansion of Renewables Express was an important RE4I commitment by ExIm.

concentrated solar technology by Reliance Power in Rajasthan, India. The project will utilize a concentrated solar power technology known as compact linear Fresnel reflector (CLFR) manufactured in Mountain View, California.

Getting Financing to Buyers & Sellers Faster

In addition to more financing, ExIm and OPIC also committed in the RE4I to streamline the processing of RE&EE applications. The resulting Renewables Express program provided exporters a timely review of loan applications and facilitated deals, as buyers are able to move forward with purchasing decisions in an expedited manner, often providing U.S. exporters with an important advantage over their competitors.

ExIm, for instance, used the Renewables Express program to provide a \$6.4 million 10-year loan guarantee to PNC Bank to finance the export of solar modules from SolarWorld's Camarillo, California facility to Williams Industries, in Barbados, facilitating one of the largest roof-top solar projects ever developed in the Caribbean.

Addressing Trade Barriers in Foreign Markets

As the RE4I made clear, once U.S. exporters have access to competitive financing tools, they need open and growing renewable energy markets in which to sell their products and services. Unfortunately, since the launch of the RE4I, several markets have linked their promotion of renewable energy development with protections for local suppliers, increasing the importance of the RE4I's commitment to removing trade barriers. As such, the United States continues to actively engage its trading partners in an effort to liberalize trade in environmental goods, including renewable energy.

In 2012, for example, APEC Leaders agreed on a list of environmental goods on which they will cut tariffs



Areva Solar provided solar technology to an ExIm project in India

to 5 percent or less by 2015. The list was developed following a pledge that was advocated by the U.S. Trade Representative (USTR) and approved by APEC Leaders in 2011. The U.S. Government was also able to convince other APEC economies to (1) implement policies that will set a model for market-driven and non-discriminatory innovation; and (2) take steps by 2013 to strengthen regulatory practices that are better aligned and utilize international standards. Pushed by USTR, APEC also agreed to launch new work to break down barriers like local content requirements that have a significant distortive effect on trade and investment.

OPIC Helps Create Solar Market in Latin America

In June 2012, OPIC announced its support for the construction of three solar power plants in Peru. The investment guaranty of up to \$185 million for the development, construction, and operation of the Tacna Solar and Panamericana Solar projects will support the production of 40 MW of solar energy and is expected to seed the market for future projects.

Conduit Capital Partners, a limited liability company incorporated in Delaware, is the U.S.-based sponsor of the projects, which will provide electricity to Peru's national grid, helping to diversify Peru's energy sources. The deal leveraged the expertise gained in OPIC's first Peru solar deal, which was approved in June 2011 and named the "2011 Latin American Renewables Deal of the Year" by Euromoney Institutional Investor.

ExIm Supports over \$80 million worth of U.S. wind and biomass exports to Brazil

In 2012, ExIm supported two key RE&EE export deals to Brazil totaling more than \$80 million. In August 2012, ExIm approved \$32.1 million in financing to support the export of wind turbine blades to Brazil. The loan guarantee to Wind Power Energia S.A. of Sao Paulo supported the purchase of blades manufactured by LM Wind Power Blades of Little Rock, Arkansas. The loan guarantee supported approximately 250 jobs at the company's facilities in Arkansas and North Dakota. The wind blades will be used to complete a 180 MW wind farm in the Brazilian state of Bahia and another 211 MW farm in Ceara, Brazil.

Earlier in 2012, ExIm approved a \$48.6 million loan to Gas Verde S.A. of Brazil to support a biogas project near Rio de Janeiro. FirmGreen Inc., a small renewable-energy company based in Newport Beach, California, will provide the technology to develop the plant, generating a total of 165 jobs at facilities in Indiana, Wisconsin, Ohio, California, Michigan, Missouri and Texas.

Creating New Export Markets through Policy Advocacy and Technical Assistance

In any emerging sector, focusing trade promotion solely on developed markets forestalls efforts to create future market opportunities, which may be larger than the current opportunities enjoyed by U.S. exporters. As such, the RE4I included a strong emphasis on helping to create future markets through policy development and capacity building.

Several agencies made commitments to advance this objective. The Department of Commerce, for example, debuted the concept of bringing RE&EE companies to potential export markets to discuss policy development directly with foreign government leaders with a Renewable Energy Policy Roundtable in September 2011. The concept soon evolved into new trade policy missions scheduled for Japan (December 2012) and Chile (April 2013).



ExIm supported a \$48 million biogas project in Brazil

The messages to foreign governments delivered during these Commerce-led trade policy events were echoed by the Department of Energy during several energy policy dialogues with countries around the world. The U.S.-Brazil Strategic Energy Dialogue, for example, now includes an industry component that will be supported by the U.S.-Brazil Commercial Dialogue. An August 2012, small wind workshop in Brazil organized by DOE demonstrated this type of collaboration, bringing together Brazilian policy-makers with potential U.S. exporters. The U.S. Government also used technical capacity building in foreign markets to help create opportunities for U.S. exporters through the use

The RE4I included a strong emphasis on helping to create future markets through policy development and capacity building.

of feasibility studies offered by the U.S. Trade and Development Agency (USTDA).

As an example, USTDA provided a grant to SVIT-M, a Ukrainian private municipal waste recycling company, to support clean energy development from waste-derived fuels. This project planning grant will position U.S. exporters of waste-to-energy technologies for success when the project moves to implementation. Similar grants were provided to El Salvador, Mexico, Morocco, and Indonesia for capacity building and feasibility assessments, seeding those markets for future U.S. exports.

The Year Ahead – Predicting Unpredictability

Since the last RE4I Annual Review in October 2011, the global renewable energy industry has experienced significant upheaval, impacting the competitiveness of U.S. industry – both positively and negatively. On the positive side, the renewable energy industry benefited from a commitment to deploy renewable energy from several important national and provincial-level governments. Investment in the sector reached \$257 billion in 2011 – up 17% from the previous year. And each dollar of investment yielded more deployment than in previous years, as a result of falling equipment costs, particularly in the wind and solar sectors.

On the negative side, falling equipment costs caused significant strain on manufacturers. And financial pressure from equipment overcapacity, policy uncertainty in established markets, and a shortage of available financing exacerbated the fiscal challenges facing these suppliers. Nowhere is this predicament demonstrated more clearly than in the solar sector, which is now facing a wave of mergers and bankruptcies, both in the United States and around the world.

Importantly, industry consolidation, while a challenge to government officials, investors, and entrepreneurs, is a natural process experienced by many maturing industries. Just as competition between nearly a hundred car companies in the United States gradually consolidated into the “Big Three” during the course of the last century, consolidation of renewable energy companies will likely enable the best business models, cost structures, and economies of scale to flourish, benefiting consumers of renewable energy and driving the industry forward.

In 2013, new markets promise to ease industry oversupply and shape the industry’s growth more positively. Japan has announced new incentives to catalyze up to 52 GW of new solar energy capacity by 2030. Saudi Arabia will describe its plan to facilitate its \$109 billion investment to install up to 71 GW by 2032. And China, the leading manufacturer of solar PV cells and modules, is likely to continue to reverse its historic trend of exporting its solar technologies, and will start to become one of the world’s largest consumers of solar energy.

While new markets offer great hope for the renewable energy industry generally, the opportunity for U.S. exports will likely be tempered by a number of official and unofficial protectionist and market distorting policies globally. Across the world, policies like local content requirements, bonus payments for the use of locally-sourced equipment, and high import tariffs have become increasingly common.

The expanded use of these types of market distorting policies will continue to spark an increase in trade tensions, raising market uncertainty and adding costs to the sector. Since October 2011, several countries in East Asia, North America, and Europe have launched investigations into alleged dumping practices and illegal subsidies in the wind and solar sectors. In addition, the World Trade Organization is expected to rule on a dispute submitted by the European Union and Japan regarding local content provisions in Ontario, Canada’s wind sector development support policies.

As these cases are adjudicated, some certainty may come back to the market. If this increased certainty is buoyed by the extension of tax credits for the sector in the United States, then 2013 may be a strong year for U.S. RE&EE exporters. If, however, uncertainty remains, further downward pressure will continue to undermine the RE&EE industry, leading to more negative headlines and the diminished competitiveness of U.S. exporters globally.

USTDA Supports Solar Exports to Morocco through Feasibility Studies

Over the last two years, USTDA has funded four grants and two reverse trade missions to support the Moroccan government's ambitious goal to install 6GW of renewable energy sources by 2020. USTDA's activities support a spectrum of initiatives from supplying renewable energy in remote fishing villages to supporting the installation of a large scale Concentrated Solar Power project that will begin construction near Ouarzazate by 2015. In addition to supporting Morocco's power development priorities, USTDA's programs also open doors for U.S. exporters to play a leading role in the country's burgeoning renewable energy sector.

In FY 2012, USTDA funded a feasibility study to support the development of a 1.5 MW solar photovoltaic rooftop pilot project in Mohammedia, Morocco. The feasibility study grant to the Moroccan National Company for Transportation and Logistics (SNTL) will develop a methodology to replicate the pilot project's success at other planned facilities throughout Morocco. SNTL previously participated in a USTDA-hosted reverse trade mission to the United States to observe the design, manufacture, and operation of U.S. solar energy technologies, further demonstrating the value of USTDA's reverse trade missions in this critical sector.

Targeting those Markets Most Likely to Result in RE&EE Exports for Trade Promotion

In addition to the market-seeding work done by the U.S. Government, the RE4I noted the importance of targeting U.S. Government trade promotion efforts on those markets most likely to result in U.S. exports in the near-term. To facilitate this approach, the Department of Commerce committed to develop a renewable energy market prioritization study for use by the International Trade Administration and the rest of the U.S. Government.

In March 2012, ITA completed its first study, which included a new methodology developed by ITA for the specific purpose of ranking markets in terms of U.S. export potential over the NEI time frame (2011-2015). The study will be used to develop future interagency actions supporting the sector's export competitiveness. ITA will update the study in 2013 and hopes to provide quarterly updates going forward.

While the results of the study are not publicly available, new information gleaned from the study is available to industry in a series of *Market Intelligence Briefs* on specific market opportunities. Detailed reports on the renewable energy markets in Saudi Arabia and Turkey are now available, with similar reports planned for additional markets.

Increasing the Exposure of Foreign Buyers to U.S. RE&EE Companies and Technologies

Once trade events are properly targeted, introducing foreign buyers and distributors to U.S. suppliers through trade missions and reverse trade missions continues to be a key aspect of U.S. Government trade

promotion. The RE4I committed the Department of Commerce to lead additional RE&EE trade missions. In 2012, the Department led 6 RE&EE trade missions and several other cross-sectoral missions that included companies in the RE&EE sector. Under Secretary of Commerce Francisco Sanchez, for example, led an energy efficiency trade mission to Russia in June 2012. The mission involved 13 U.S. companies and was timed to coincide with Russia's subsequent accession to the World Trade Organization.

In an April 2012 mission, Assistant Secretary of Commerce and co-chair of the TPCC Working Group on RE&EE, Nicole Y. Lamb-Hale, led a clean energy and energy efficiency trade mission to Saudi Arabia. The mission was timed to coincide with Saudi Arabia's announcement that it would seek to deploy 41 GW of solar power by 2030, which could turn the Saudi market into one of the world's largest in the coming decades. Mission participants met with senior Saudi government officials and private-sector representatives in Riyadh and Dhahran.



Assistant Secretary of Commerce, Nicole Y. Lamb-Hale speaks at a clean energy and energy efficiency trade mission to Saudi Arabia in April of 2012

State Department Launches U.S.-Africa Clean Energy Finance Initiative

In 2012, the Department of State made clear that the advancement of global clean energy development is a key foreign policy objective of the U.S. Government. In June 2012, Secretary of State Hillary Clinton announced the launch of the new U.S.-Africa Clean Energy Finance Initiative, which will provide \$20 million in transaction support to catalyze private sector investment in energy projects across the continent. The funds will be deployed to meaningful projects through OPIC and the U.S. Trade and Development Agency.

The availability of this funding reflects the U.S. Government's commitment to the United Nation's Sustainable Energy for All Initiative, which seeks to ensure that people everywhere have access to clean energy. The innovative partnership between the State Department, OPIC, and the U.S. Trade and Development Agency will spur an even greater level of OPIC project financing, alongside private sector lending.

The U.S. Trade and Development Agency also organized 22 RE&EE reverse trade missions (RTMs) and workshops since the beginning of FY 2011 – including seven in FY 2012. The RTMs brought potential foreign buyers to key trade shows in the RE&EE sector, and allowed foreign buyers to tour U.S. manufacturing facilities and meet with financiers able to provide capital to fund projects in their home countries.

On one such RTM, USTDA hosted senior officials from Vietnam on a visit to meet with members of the U.S. Government and potential smart grid technology providers in the United States. As a result of the RTM, the Vietnam National Power Transmission Company is working with ExIm to purchase approximately \$50 million of U.S.-sourced transmission and distribution equipment that will improve the energy efficiency of its electricity delivery systems.

Soliciting Industry Advice to Improve Implementation of the Initiative, Address New Barriers, and Identify New Market Opportunities

As the RE4I is implemented, several companies have underscored the importance of regular industry input directly to policy-makers on competitiveness issues facing U.S. exporters abroad. The RE4I's final commitment, to create an avenue for the U.S. Government to solicit industry advice, has helped to meet this demand for real-time communication. The RE&EE Advisory Committee was established as part of the RE4I to provide consensus industry advice directly to the Secretary of Commerce on ways to improve the export competitiveness of the RE&EE sector.

The Committee, which began its charter in December 2010, met nine times until its charter expired in June



USTDA Maghreb (Northwest Africa) Solar RTM Delegate at Skyfuel's concentrated solar power facility

2012. The Committee developed 22 recommendations on issues as divergent as access to foreign direct investment to the Manufacturing Extension Partnership, to the need to improve data on renewable energy exports. In September 2011, the Committee made its first 11 recommendations to Acting Secretary of Commerce Blank; the Committee made 11 additional recommendations in June 2012.

Throughout 2012, Commerce worked with its interagency partners to implement the RE&EE Advisory Committee's initial recommendations. As an example, DOE is now collaborating with Commerce to improve data on the global renewable energy market to focus both R&D and export promotion programs on technologies where U.S. industry can build and maintain a competitive advantage, based on one RE&EE Advisory Committee recommendation.

In June 2012, the RE&EE Advisory Committee was re-chartered for an additional two-year term. The first meeting of the re-assembled committee will be in the Spring of 2013. Commerce expects the re-chartered committee to focus more closely on specific government trade programs that could benefit from reforms or improvements.

Providing Better Information on Existing U.S. Government Export Programs

While the TPCC Working Group is committed to gathering industry input, the RE4I also created several new methods for communicating with U.S. exporters. A web portal – export.gov/reee – created a practical, one-stop-shop for exporters to find information on upcoming trade events, news, and market research from across the U.S. Government. By October 2012, more than 33,000 visitors accessed the website, which continues to be supported by a monthly e-newsletter, providing information to approximately 1,500 constituents. Towards the end of 2011, a “trade leads” section was added to the portal to highlight global procurement announcements for the RE&EE sector.

By more seamlessly linking the comparative advantages of the many TPCC agencies, the RE4I has created a more coherent trade promotion process, bridging programs from across the U.S. Government to support the U.S. RE&EE industry.

As the RE4I noted, information must be delivered in a manner that is most convenient for industry. Several U.S. Government agencies therefore met with U.S. exporters at industry-specific domestic trade shows – one of which was an International Buyers Program event (Wind Power 2012 in Atlanta, Georgia). At many of these shows, U.S. Government agencies shared booth space, gave panel presentations together, and demonstrated the type of cross-government support that exporters asked for in the development of the RE4I.



An NREL industry partner speaks to Congressional staff

2013 and Beyond

As the RE4I enters its third year, actions associated with the initiative will move beyond the NEI time frame. Near-term export competitiveness will continue to be a priority, but additional focus will be placed on creating new markets for exporters beyond 2015.

Going forward, the TPCC Working Group on RE&EE will seek to entrench the link between domestic renewable energy capacity and export competitiveness. The Department of Energy, for example, has already changed the co-chair of the TPCC Working Group on RE&EE to its Assistant Secretary for Energy Efficiency and Renewable Energy, David Danielson, based on Assistant Secretary Danielson’s Clean Energy Manufacturing Competitiveness Initiative.

In 2013, DOE will fund the National Renewable Energy Laboratory (NREL) to conduct targeted outreach to U.S. RE&EE companies to share information about pertinent U.S. Government export assistance programs, and assist trade promotion agencies in the identification of new projects. NREL will also prepare training modules on selected RE&EE technologies to deepen the understanding and improve the effectiveness of staff across trade promotion agencies.

By more seamlessly linking the comparative advantages of the many TPCC agencies, the RE4I has created a more coherent trade promotion process, bridging programs from across the U.S. Government to support the U.S. RE&EE industry. This platform of cooperation will continue to be the legacy of the RE4I well beyond the NEI time frame.