

STATEMENT OF
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FIRST SOLAR
BEFORE THE
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THE CHALLENGE OF CHINA'S GREEN TECHNOLOGY POLICY
AND OHIO'S RESPONSE

Vice Chairman Bartholomew, Commissioner Brookes, and members of the commission, thank you for the opportunity to discuss expanding the use of clean, affordable solar energy and related policy challenges both here in Ohio and in China.

First Solar Background

I am Kathleen Weiss, Vice President-Government Affairs of First Solar. First Solar is the world's largest photovoltaic (PV) solar module manufacturer. Our firm is North America's largest PV solar power plant developer, and the low cost PV manufacturer. Our mission to enable clean, affordable solar electricity is supported by a sustainable business strategy that leverages advanced technology and economies of scale to lower costs.

First Solar welcomes the opportunity to address the topic of today's hearing – The Challenge of China's Green Technology Policy and Ohio's Response. Our advanced technology thin film modules are the cornerstone for the rapid manufacturing scale-up, progress toward grid parity, and job creation that we have experienced. However, stable, long-term government policies accelerated our journey. In 2009, First Solar had revenues totaling \$2.1 billion, an increase of \$900 over 2008, and we were added to the S&P 500 Index.

Between 2005 and 2009, we scaled our annual solar module production from 20 megawatts to over 1,100 megawatts -- an increase of more than 50 times. During the same period, we increased employment to more than 4,500 people and invested over \$1 billion in equipment and research. The ability to scale the business enabled a 70 percent cost reduction in our modules. For high irradiance solar projects, the installed cost is on a pathway toward grid parity with a U.S. installed cost between \$0.12 and \$0.15 per kilowatt-hour, including federal incentives.

Our associates take great pride in their work and the knowledge that based on 2009 capacity, First Solar's modules can generate enough electricity to power 160,000 houses and simultaneously avoids emissions of 30 million tons of CO2 over the 25-year life of the modules.

Plans to increase our global solar module manufacturing capacity from 1,100 megawatts to 2,000 megawatts by 2011 were announced earlier this year.

Market Growth Enables Jobs and Cost Reduction

The critical component of First Solar's success has been our game-changing thin-film technology, developed in the United States. Today, our growing Ohio operations directly employ over 1,000 associates and remain a nucleus for research and technology innovation. In a state with over 10 percent unemployment, our operations continue to expand and offer high-tech jobs. Our cutting edge research has attracted dozens of PhDs and engineers with advanced degrees who live and work in the greater Toledo area. Equally important is that our Perrysburg facility employs many former auto workers who possess manufacturing skills that are both specialized and transferable to solar manufacturing.

The decision to expand our Perrysburg campus was enabled by a package of incentives provided by the state and local government. The Strickland Administration has demonstrated its commitment to an energy agenda that will leverage the state's innovative spirit and world-class manufacturing infrastructure and prepare Ohio's economy to thrive in a low carbon economy. The Governor's initiatives include an Advanced Energy Portfolio Standard which requires that 25 percent of Ohio's electricity be produced from advanced energy technologies by 2025, along with investments in jobs and economic development. Earlier this month, Northwest Ohio was designated an official hub of solar energy research and innovation by the Governor.

The cornerstone of our technology adoption and cost reduction success has been due to growing and reliable solar markets overseas. In 2009, over 90% of our global production was sold outside of the United States. These markets have provided us the opportunity to scale and reduce costs, thus enabling an accelerated cycle of improvement that benefits the environment, local economies and the cost competitiveness of solar electricity.

It should come as no surprise that, although we expanded our Ohio plant last year, most of our plants are built outside of the United States. As a growing number of countries combine carbon

emission reduction goals with renewable energy policy, the proximity to markets and low cost manufacturing will drive investments and manufacturing overseas unless policies here help drive market growth.

Germany remains an excellent example of how forward looking policy increased renewable energy use and created green jobs. Renewable energy consumption in Germany increased from 4% to 15% as a result of a renewable energy feed-in tariff that created growing, transparent, and predictable renewable markets. The German government reports that over 280,000 renewable energy jobs have been created since the feed-in-tariff was adopted and 53 billion tons of CO₂ emissions have been avoided.

On June 8, 2010, First Solar announced our intent to expand our German manufacturing plant in Frankfurt an der Oder, increasing local production capacity and creating several hundred new jobs. The expansion would double the annual capacity of the Frankfurt (Oder) manufacturing plant to around 446 megawatts (MW) by the fourth quarter of 2011 from 223 MW today to serve a strong European customer base.

Germany's success has driven the adoption of similar support programs across most European countries and ongoing consideration of such programs in China and India. U.S. solar resources are significantly higher than those in Germany or other solar markets of significance. However without a growing and predictable domestic market and competitive incentive policies, the United States risks losing the global race for solar technology and associated green jobs and could be relegated to an importer of products developed and manufactured in other countries.

U.S. Policy Initiatives

The good news is that it is early in the industry's development path, and the outcome can still be influenced. Recent project financing, market development and manufacturing policies, alongside export promotion policies and activities, are an important first step for the United States to reenter the global race for solar technology and associated green jobs.

Specifically, the combination of maturing state Renewable Portfolio Standards and federal policies established under the 2009 American Recovery and Reinvestment Act (ARRA) mark an important inflection point in the development of the U.S. market. Several ARRA programs, in particular, are making a difference – The Treasury Grant Program, the DOE Loan Guarantee Program, the Section 48 C manufacturing investment tax credit, and the Interior Department’s Fast Track initiative. These policies represent an important step toward helping to reestablish U.S. leadership in clean energy technology. Equally important will be ensuring access for these products and services to global markets.

1. Extend Expiring Treasury Grant Program

One of the solar industry’s most significant constraints is efficient access to capital. The 2009 American Recovery and Reinvestment Act included a grant in lieu of the investment tax credit for solar generation, which could have a very positive impact on the U.S. solar market and related U.S. job creation.

The Section 1603 Treasury Grant Program provides direct payments to energy producers in place of tax credits. This was done to help compensate for the dwindling tax equity market and to provide a cash incentive at a time when the solar industry as a whole was not profitable.

A defining feature of the Treasury Grant Program is that it vastly expands the pool of investors who are attracted to the stable, long-term return on investment that a utility-scale solar power plant generates. The Grant Program also benefits the debt-side of solar financing by lowering the cost of debt at a time when financing continues to be tight.

First Solar joins others in our industry, small and large, to extend our thanks to Congress for establishing this program. However, the grant program will expire at the end of this year, just as it is critically needed to bring projects on line and attract investors for new development projects. It is vital that the grant program be extended though December 31, 2012 and that Congress act swiftly to do so. First Solar is also supportive of Senator Feinstein’s legislation, the Renewable Energy Incentive Act, to extend and expand the Section 1603 grant program.

2. Extend and Streamline the Department of Energy Loan Guarantee Program

Approximately 85 percent of the power price received from a large-scale solar power plant goes to repay the capital invested to build the project. First Solar is the leading solar power plant developer in the U.S., with over 2,000 megawatts of projects under development with power purchase agreements in place. Due to the 2011 sunset date, permitting redundancy, and complexity of the program, the ultimate value of this program is extremely limited. The result is more expensive financing and higher-cost solar electricity.

The Department of Energy loan guarantee program can play a key role in supporting industry growth by reducing financing costs and fostering the development of robust private capital markets to finance large solar projects.

It is critical that:

- the program's lifespan be extended to 2016, making it coterminous with the investment tax credit, and synchronized to the long development timelines of the projects it is intended to support, and
- environmental permitting requirements and timelines are harmonized between state and federal oversight agencies.

3. Manufacturing Investment Tax Credit

The 2009 American Recovery and Reinvestment Act included a competitive tax credit capped at \$2.3 billion in total tax expenditures for advanced energy manufacturing projects (new code Section 48C).

The 48C credit was oversubscribed, and like other ARRA programs, is due to sunset. President Obama has called on Congress to direct an additional \$5 billion to the 48C program to support more domestic manufacturing of renewable energy equipment.

A decade ago, the U.S. made more than 40 percent of all solar panels. Since then other countries have supported clean tech manufacturing with various incentive policies. The result is that today our nation manufactures less than 10 percent and China has leap frogged us as the world's largest producer.

4. Address Issues of Land Use and Grid Transmission for Solar Inclusion

I want to recognize improvements in the regulatory processes to deploy solar on federal lands with greater speed, certainty and transparency without compromising the stewardship of our nation's precious resources. Based on First Solar's experience, we believe the MOU between the Department of the Interior and the State of California has fostered a sense of collaboration and commitment around advancing large-scale projects. However, the recently issued rental schedule for solar energy right-of-way authorizations on the public lands should be revisited. Charging royalties is typically done to recover for the taxpayer the value of the commodity being extracted and depleted. There is no energy resource or commodity being extracted or depleted by a solar power plant. At this stage in the development of the solar industry, policies should focus on reducing the cost of delivered energy.

As renewable energy grows, transmission becomes a serious constraint that must be addressed. The rules governing transmission siting and interconnection were designed decades ago and urgently need updating to accommodate the inclusion of renewable generation.

An Open and Transparent Market is Core Building Block

First Solar is committed to supporting the development of a healthy and sustainable solar industry in China and promoting positive U.S.-China energy relations. First Solar and the Ordos City Government of Inner Mongolia have been actively developing a 30 MW “Demonstration Project” (Phase 1 of the 2GW project) since signing a Memorandum of Understanding (MOU) in September 2009 and Cooperation Framework Agreement in November 2009. Showing progress on this project will demonstrate tangible results from U.S.-China cooperation on renewable energy and that the China market is open for U.S. companies.

Government efforts can best advance U.S. solar energy industry opportunities in China by advocating for an open and transparent market that rewards high quality projects and continued support for the commercial progress of projects, including First Solar’s Ordos project. Our experience in U.S. and international energy markets demonstrates that an open and transparent market is the core building block of a healthy and sustainable solar industry. As China develops its solar market structure, the formation of an open and transparent market that rewards high quality products and reliable systems is critical.

Conclusion

First Solar believes that a strong U.S. solar industry is fundamental to our energy security and economic recovery. In fact, we know that solar energy creates more jobs per megawatt of energy than any other form of energy: renewable or fossil. The Federal government should provide a regulatory framework and transitional incentives of sufficient duration and impact to ensure that those jobs are created in the United States and that our nation remains at the forefront of technology leadership.

We thank the Commission for holding this hearing and offer our support to the Commission and Congress in crafting solutions to create jobs and reestablish America’s leadership in solar manufacturing and deployment.