STATEMENT OF

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BEFORE THE

COMMITTEE ON ENERGY AND NATURAL RESOURCES

U.S. SENATE

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Chairman Bingaman and members of the committee, thank you for the opportunity to appear today before the Committee to offer my perspective on the U.S. Department of Energy's Loan Guarantee Program. Before I begin, however, Mr. Chairman, please let me acknowledge and thank you for your leadership in bringing federal resources to bear in helping develop solar power in the U.S.

Introduction

I am Jens Meyerhoff, President of the Utilities Systems Business group and CFO of First Solar. First Solar is the world's largest manufacturer of thin film photovoltaic (PV) solar modules. In addition, First Solar is North America's largest developer of utility-scale PV solar power plants. First Solar's mission is to deliver clean, affordable and sustainable energy by continuously improving efficiency and lowering costs.

First Solar welcomes the opportunity to discuss the importance of the Department of Energy (DOE) loan guarantee program in enabling deployment of renewable energy, as it provides:

- Liquidity to an emerging infrastructure asset class, enabling early stage large-scale solar deployment;
- Financing terms commensurate with the long lived nature of a solar PV power plant;
- Cost advantages that allow renewable energy sources to scale faster towards grid parity; and
- An important bridge vehicle to open institutional capital markets not yet available to solar PV generation assets through both the Section 1703 and 1705 Loan Programs.

I'll begin by offering a brief background on First Solar. I will then discuss the pivotal role that loan guarantees can play in financing renewable energy projects, followed by First Solar's experience with the DOE loan guarantee program. Finally, I will offer a few suggestions for further enhancing the programs going forward.

First Solar Background

First Solar is traded on the Nasdaq exchange and is today the only renewable energy company included in the S&P 500 Index. First Solar's net sales grew from $48 million in 2005 to $2.1 billion in 2009. Our company is headquartered in Tempe, Arizona, and manufactures PV modules in Perrysburg Ohio, as well as Germany and Malaysia. With 5,500 employees worldwide, First Solar employs and some1,500 associates in the U.S.

Between 2005 and 2009, First Solar scaled its annual solar module production capacity from 20 to over 1,100 megawatts. First Solar has invested in excess of $1 billion in its proprietary thin-film technology and manufacturing capacity. This has afforded us a highly differentiated market position as the lowest cost producer in the industry. As a result, First Solar is capable of providing solar electricity at a cost between $0.12 and $0.16 per kilowatt-hour.

First Solar recently passed a milestone of 2,500 MW of installed generating capacity worldwide, representing infrastructure investments of over $8 billion. Most of this generating capacity is located in Europe, due in large part, to progressive policies favoring the deployment of renewable energy technologies, including government-backed financing programs and long-term price subsidies. In 2009, over 90 percent of First Solar's modules were sold outside of the United States. However, over the past two years, First Solar has been aggressively turning its attention to U.S. markets for renewable energy. First Solar has invested approximately $750 million in the U.S. to acquire multiple solar project development portfolios. First Solar now has a 2,200 MW pipeline of advanced stage, utility-scale solar projects in North America, driving infrastructure investments in excess of $6 billion.

These are advanced projects, with long-term Power Purchase Agreements (PPAs) with creditworthy investor owned utilities. Most are in the late stages of permitting, or have already received their environmental permits. For example, First Solar's 290 MW Agua Caliente project, located in Yuma County, Arizona, has already started early stages of construction. Most projects in the portfolio will start construction between late 2010 and 2012. A list of First Solar U.S. projects is attached as Appendix A.

These projects are beneficial to the environment, to their utility power purchasers, and to the local economy. To offer an example, once completed, the 230 MW Antelope Valley Solar Ranch One project, located in northern Los Angeles County, will produce enough clean energy to meet the annual consumption needs of approximately 750,000 local homes. A project of this scale will offset approximately 3.5 million metric tons of CO2 over the 25 year term of the PPA with Pacific Gas & Electric Company, the equivalent of taking 75,000 cars off the road over 25 years.

Each of First Solar's large advanced stage projects in development will employ between 250 and 450 construction workers over a period of about 2-3 years. That's more than 1,500 jobs over the next four years associated with our advanced stage project pipeline. These projects will also create local tax revenues and substantial secondary economic benefits, providing a much needed boost for the communities in which they are located.

Role of the Loan Guarantee Program in Transitioning to Sustainable Solar Financing

The Department of Energy Loan Guarantee Program can play a key role in supporting industry growth by reducing financing costs, providing liquidity and longer debt terms and fostering the development of robust private capital markets to finance large solar projects, the same way that similar programs have shown effectiveness in Germany and Europe through debt programs guaranteed or directly financed by their development banks.

The DOE Loan Guarantee Program provides some important benefits to allow the solar PV industry to migrate towards institutional capital markets:

- The innovative 1703 program allows the deployment of new technologies with less operating history. Such technologies usually are unable to obtain investment grade ratings and therefore are subject to higher debt cost, limited liquidity and shorter debt tenures. The 1703 program effectively offsets these shortfalls through direct lending by the

Federal Finance Bank. Since the 1703 program still requires a rating, it fosters the early engagement and learning by the rating agencies and independent technical advisors.

- The 1705 program provides the next step in the migration process as it creates a hybrid of government guaranteed debt and a commercially underwritten loans. It requires the applicant to raise capital in the public markets, but in a controlled and supported way. The two tranches of capital allow for broad market access and liquidity, the lower cost of the government guaranteed tranche allows for enhancement of the overall credit through more conservative leverage ratios at the total project level, providing access to the institutional bond market. The program incubates the dialog and marketing of solar PV bonds to the classical infrastructure investor and lender, creating important cycles of learning around a new asset class.

As multiple projects and technologies have passed through this stepped approach, capital markets will be opening up and allowing for liquidity flow to solar PV generation assets similar to the way traditional generation assets are being financed today.

Observations and Opportunities for Improvement

We are pleased to inform you that we are working with the DOE to finance an unprecedented construction volume of utility-scale PV projects. To date, we have submitted applications for four U.S. projects to the DOE's Loan Guarantee Programs for innovative and commercial technologies, amounting to over 1,600 MW. These are very large projects located in the U.S. Southwest. Each one in itself is larger than any other solar PV project that exists in the world today.

Although the projects are economically and environmentally viable, we believe that these DOE programs are a necessary financing bridge until the financial markets in the U.S. are prepared to fund solar projects at this scale without risk-sharing with the DOE. First Solar has financed over $8 billion in projects worldwide, and we have found that markets in Europe have been similarly enabled by government programs.

This is a global industry in which technologies are evolving rapidly. First Solar is trying to utilize the DOE's innovative program to enable combinations of innovative solar technologies to better integrate solar power into the utility grid.

While our experience in working with the DOE Loan Guarantee Program staff has been positive, we are concerned about the following:

- Despite significant efforts of DOE staff and decision makers, the program has been slow to start. The alignment process between the DOE and commercial underwriters was lengthy and created a great deal of confusion.
- The time consuming process required to conduct environmental reviews under NEPA in connection with DOE's loan guarantee commitments has slowed the projects, especially those being developed on private land, and threatens to delay the construction start for many projects beyond the September 30, 2011 qualification deadline.

- Commercial negotiations with the DOE appear lengthy and the DOE takes at times positions that are frankly more conservative than what we are used to seeing from commercial lenders. We recognize that some of this is due to a learning curve and, based on recent trends, we are hopeful of further improvement and an ultimate standardization of terms.
- The roles and responsibilities of all participants in the application process seem to be undefined are not transparent to applicants.
- Industry confidence was shaken a few weeks ago when $1.5 billion was rescinded from the program raising questions about whether there will be adequate funding for existing applications and future solicitations. In fact, in a letter dated August 26, 2010, to Senate Majority Leader Reid and Appropriations Committee Chairman Senator Inouye, Senators Feinstein and Boxer noted that an additional 81 applications are in the pipeline for processing requesting approximately $27 billion in loans. The Senators expressed their concern that DOE's loan authority will likely be exhausted by February 2011. We support legislation introduced by Senator Baucus as part of the so-called "Tax Extenders" effort. The Baucus provision would restore credit subsidy funding of $1.5 billion to the Section 1703 program.
- Under the 1705 program, projects that cannot close loans before September 2011 are not eligible. This time-based approach controls eligibility at the back end of the application process after time and money have been spent rather than at the front end.

Based on our experience the predictability, efficiency and value of these programs could be further improved by:

- Considering an extension of the 1705 program, so it has time to fulfill its potential for opening long-term scalable capital markets of large scale solar PV. The current expiration date of September 2011, when combined with the lengthy implementation period creates significant realization risk to projects.
- The cost of a DOE application under both 1703 and 1705 programs range between $2.0 and $5.0 million. These are significant commitments, especially for smaller emerging companies. Revise the concept of a funding deadline to an application deadline, so projects in the application process are grandfathered and the application cost are not at risk due to timing, but only subject to project substance.
- Continue to strive for commercially acceptable terms as they relate to credit risk and cash flow usage.
- Establish clear accountability through the application process for all participants in terms of execution timelines during the process and measure compliance. Senator Bingaman has introduced legislation (S. 3759) to limit OMB's time to comment on any application the Secretary of Energy submits for review to 30 days. Such firm timelines throughout the entire process would greatly enhance predictability of the program.
- Restore the full funding of the program.
- Integration of the treasury grant program and the DOE loan programs in terms of availability and economics.

To summarize, based on our experience: (1) the predictability, efficiency and value of these programs could be significantly improved by grandfathering projects in the application queue

and/or extending the program so that it has time to fulfill its potential; (2) continue to strive for commercially acceptable terms; establish clear accountability throughout the application process; (3) restore full program funding; and (4) align the Treasury Grant Program and the DOE Loan Program in terms of availability and economics.

Extend Expiring Treasury Grant Program

While it is not part of the DOE Loan Guarantee Program, we want to take this opportunity to highlight our industry's need for extension of the Treasury's important 1603 Cash Grant program.

The Section 1603 Treasury Grant Program represents the equity side of our industry's liquidity challenge. The current tax code makes it impossible for certain investors to participate, and the securitization of equity is impossible. The Treasury Grant Program reduces these constraints enough to significantly broaden the capital base for large scale solar PV programs. However, enabling large scale financial investors such as mutual funds, insurance companies and pension funds to participate requires a certain lead time. In our mind the DOE Loan Guarantee Program and the Treasury Grant Program are synergistic and rely to a certain degree on each other.

The importance of the Treasury Grant Program can be summarized in three key points:

- Liquidity in the equity markets is increased, which makes projects like ours viable.
- The cost of capital is reduced and--therefore cost of renewable energy--by creating competing capital classes with differing return requirements.
- The program provides the equity component of project finance on a cash return basis.

A recently published white paper produced by US PREF analyzed the state of the tax equity markets and determined that tax equity remains severely constrained. A copy of the white paper is attached as Appendix B.

First Solar joins others in our industry, small and large, to extend our thanks to Congress for establishing this program. However, the Treasury 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 this important program be extended though December 31, 2012.

Conclusion

The benefits of the DOE loan program can be summarized as follows:

- Significant increase in debt liquidity.
- Important financing bridge, until the U.S. financing markets fully develop for utility-scale solar projects.
- Encourages development of innovative renewable technologies, including those which help utilities to integrate solar power projects into their grids.
- Reduces the cost of capital, which indirectly reduces the cost of renewable power.

A strong US solar industry is critical to our energy security and economic recovery. The Federal government should provide transitional incentives of sufficient duration and impact to ensure that those jobs are created in the United States.

We encourage Congress to act now to extend vital programs scheduled to expire and to remain committed to longer-term programs necessary to attract the global capital and investment required to sustain a growing renewable energy sector.

We look forward to working with Congress to craft solutions to create jobs and reestablish America's leadership in solar manufacturing and deployment.