
The Importance of Policy in Fostering the Market for Renewable Energy Technologies

Presentation

[Panel discussion](#)

Date

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Location

Berlin, Germany

Panel discussion

David Wortmann
Loni Gardner JD

At an Ecoscholars event hosted by First Solar, GmbH, David Wortmann, the company's Vice President of Policy and Public Affairs provided an overview of the company and discussed the key role of policy in the continued promotion and expansion of the renewable energy industry and fostering the market for renewable energy technologies. The dialogue was initiated by Loni Gardner of Ecologic Institute, who coordinates Ecoscholars. Ecoscholars is a discussion and networking group for Berlin-based international scholars and experts who are involved in climate change, energy, sustainability, and other environmental topics.

The primary purpose of the event was to provide the opportunity for attendees to learn more about the history and future for the successful American company that manufactures thin film solar modules and employs more than 800 people in Germany and 7,000 people globally. The event also provided attendees a platform for asking questions directly to Mr. Wortmann in an informal roundtable setting. The discussion quickly focused on the role good policy plays in developing markets for new technologies.

First Solar is currently the world's leading producer of thin-film PV and uses cadmium telluride (CdTe) as the semiconductor material. The company's roots began in 1999 in Ohio as a technology company. Its initial success was heavily dependent upon generous investment in the company by venture capitalists. By 2003-2004, the PV market developed, with the German market particularly attractive due to the German Feed-in-Tariff law (i.e. the Erneuerbare-Energien-Gesetz, the EEG). The law guarantees a fixed rate which is sufficiently high for the given technology for 20 years for each kilowatt hour of energy generated.

According to Mr. Wortmann, despite the company's significant R&D spending, without policies like the EEG, continued reductions in First Solar's production costs would not have been possible. He

explained that renewable technologies need markets.Â This particular policy successfully enabled the growth of the renewables industry, including PV, by providing security for investment which, in turn, creates robust and reliable markets.^[1]Â Indeed, Germany is still today the largest PV market in the world.

With industry growth, production costs have fallen over the past 5 years, making the PV increasingly competitive.Â First Solar's own growth in terms of production capacity is exemplary: In 2005, First Solar's four-line manufacturing plant in Frankfurt (Oder), Germany had a production capacity of 25 MW each.Â Today, each line has an annual 60 MW capacity.Â By next year, the plant will expand to 8 lines with an approximate 500 MW production capacity.Â During the same period, First Solar's production costs have fallen from \$1.59/W in 2005 to \$0.75/W by the end of 2010.Â First Solar has a cost plan that aims to further push down costs to \$0.52/W by 2014.

What is next for the PV industry?Â The future challenge, as Mr. Wortmann sees it, is that the markets are not developing as they should be. There is oversupply. The task will be to grow new markets, maintain effective policies, such as the EEG, and avoid program capacity caps.Â Mr. Wortmann believes that policy is still very important in growing the market and further driving down costs.Â These investments will have future net benefits which would likely be realized by 2020, including further reduction of CO₂ emissions and increased energy independence.

Where are the growth markets?Â First Solar is focusing on the United States and Asia.Â Mr. Wortmann believes further improvement of the existing policy platforms in the U.S. will further grow the market for renewables, such as more aggressive state renewable portfolio standards (RPS) and other reliable policy initiatives. By way of comparison, electricity from renewable sources amounted to 10.6% of total generation in 2009 in the U.S. compared to 16.1% in Germany.Â Currently, the total installed solar (PV) capacity in the U.S. as of 2010 was approximately 1.5 GW compared to 17 GW in Germany.

Further Links:

- [David Wortmann discusses the German Feed-in-Tariff on You Tube](#) (in German)
- Ecologic Institute Ecoscholar's event: [The State of International Climate Negotiations After Cancun: Prospects for Progress and Potential Challenges](#)

^[1]First Solar CEO, Mr. Robert Gillette, made a similar statement before the U.S. Senate Committee on Environment & Public Works on January 28, 2010. Â Available at: http://www.firstsolar.com/en/news/news_SenateCommitteeEPW012009.php.

Organizer

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