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First Solar Sets Another World Record for CdTe Solar PV Efficiency

14.4 Percent Total Area Efficiency Module Confirmed by NREL

ABU DHABI, United Arab Emirates & TEMPE, Ariz.--(BUSINESS WIRE)-- First Solar, Inc. (NASDAQ: FSLR) today announced it set a new world record for cadmium-telluride (CdTe) photovoltaic (PV) solar module efficiency, achieving 14.4 percent total area efficiency. The U.S. Department of Energy's National Renewable Energy Lab (NREL) confirmed the record, which eclipsed the prior record of 13.4 percent, which also was set by First Solar.



The record performance, announced today at the World Future Energy Summit in Abu Dhabi by First Solar Chief Technology Officer Dave Eaglesham, comes just six months after First Solar leapfrogged the world record for CdTe solar cell efficiency with a mark of 17.3 percent. Both the cell and module record-setters were constructed using commercial-scale manufacturing equipment and materials at the Company's Perrysburg, Ohio factory. Cell efficiency measures the proportion of light converted to energy in a single solar cell, whereas total area module efficiency measures light conversion across a production-size, multi-cell solar module, providing a more realistic assessment of real-world performance than cell or aperture-area efficiency.

First Solar associates hold the company's record breaking 14.4 percent efficient module, manufactured in Perrysburg, Ohio. (Photo: Business Wire)

"This considerable achievement supports our module efficiency roadmap and demonstrates our ability to convert our record-cell technology into ongoing module-level improvements," said Dave Eaglesham, First Solar's Chief Technology Officer. "These records also underscore the tremendous ongoing potential of CdTe compared to silicon-based technologies."

First Solar updated its module efficiency roadmap in December 2011 to the increased goal of 14.5-15 percent average efficiency for its production modules by the end of 2015, and the process improvements developed for the record-setting cell and module continue to be implemented as part of that roadmap. The average efficiency of First Solar modules increased from 11.4 percent in 2010 to 11.7 percent in 2011 and is expected to reach 12.7 percent in the fourth quarter of 2012.

"Our continuous investment in R&D has enabled the steady progress of our technology, punctuated by landmark achievements such as this," said Mike Ahearn, Chairman and interim CEO of First Solar. "Our consistent progress gives us confidence in our ability to achieve our roadmap goals, drive down costs and develop sustainable markets."

First Solar, which has manufactured more than 5 GW of its advanced thin-film modules, utilizes a continuous manufacturing process which transforms a sheet of glass into a complete solar module in less than 2.5 hours, which contributes to the company's industry-leading energy payback time and the low carbon footprint of systems using First Solar PV modules. First Solar also implemented the industry's first comprehensive, prefunded solar module collection and recycling program. Anyone wishing to dispose of First Solar modules can request collection at any time, at no additional cost, and First Solar will pick up the modules and recycle up to 90% (by mass) of the material for use in new products, including new solar modules and new glass products.

About First Solar, Inc.

First Solar manufactures solar modules with an advanced semiconductor technology, and is a premier provider of comprehensive photovoltaic (PV) system solutions. The company is delivering an economically viable alternative to fossil-fuel generation today. From raw material sourcing through end-of-life collection and recycling, First Solar is focused on creating

value-driven renewable energy solutions that protect and enhance the environment. For more information about First Solar, please visit www.firstsolar.com.

For First Solar Investors

This release contains forward-looking statements which are made pursuant to the safe harbor provisions of Section 21E of the Securities Exchange Act of 1934. The forward-looking statements in this release do not constitute guarantees of future performance. Those statements involve a number of factors that could cause actual results to differ materially, including risks associated with the company's business involving the company's products, their development and distribution, economic and competitive factors and the company's key strategic relationships and other risks detailed in the company's filings with the Securities and Exchange Commission. First Solar assumes no obligation to update any forward-looking information contained in this press release or with respect to the announcements described herein.

Photos/Multimedia Gallery Available: <http://www.businesswire.com/cgi-bin/mmg.cgi?eid=50133833&lang=en>

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