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First Solar Achieves Efficiency, Durability Milestones

- **Record 21.5 percent conversion efficiency research cell validates technology roadmap**
- **Production modules pass industry-leading Atlas 25+® durability tests**

TEMPE, Ariz.--(BUSINESS WIRE)-- First Solar, Inc. (Nasdaq: FSLR) today announced it has set yet another world record for cadmium-telluride (CdTe) photovoltaic (PV) research cell conversion efficiency, achieving 21.5 percent efficiency certified at the Newport Corporation's Technology and Applications Center (TAC) PV Lab. The achievement places First Solar ahead of its established research cell roadmap, and validates CdTe's continuing competitive advantage over traditional crystalline silicon technology.

Demonstrating that production-scale performance is keeping pace with record R&D advancements, First Solar has also announced its commercial modules have passed Atlas 25+® certification following a rigorous series of long-term combined-stress environmental exposure tests.

Record Cell Documented by NREL

The record-setting research cell was constructed at the company's Perrysburg, Ohio manufacturing factory and Research & Development Center using processes and materials suitable for commercial-scale manufacturing. The record has been documented in the U.S. Department of Energy's National Renewable Energy Laboratory (NREL) "Best Research Cell Efficiencies" reference chart. It is the eighth substantial update to CdTe record efficiency since 2011, firmly establishing a sustained trend of rapid performance improvements.

"Our latest research cell efficiency record is a result of continued learning in the material science and device physics of CdTe solar cells," said Raffi Garabedian, First Solar's Chief Technology Officer. "Our work is not done in isolation, but is in part a result of the many fruitful collaborations we have with academia, national labs, and our industrial partners, most notably GE Global Research. The learning has enabled us to further optimize our fabrication processes and thereby boost the performance of practical devices further towards the theoretical limit."

The true value of improved cell efficiency, Garabedian noted, comes from the translation of the science into commercially viable product with improved power output and energy density. "By virtue of our adaptable thin film manufacturing process and our dedication to science-based design-for-reliability, First Solar is unique in its ability to rapidly scale such new developments into cost-effective and reliable product," he said.

Garabedian emphasized that First Solar's significant sustained investment in development of CdTe technology has enabled the company to meet or exceed its aggressive projections for improvements in research cells and modules, as well as commercialized technology. In March of 2014, First Solar presented a technology roadmap anticipating a 22 percent research cell efficiency milestone in 2015. "Given the slope of our research cell improvements and the fact that it's still February, we remain confident that we'll meet or exceed our roadmap expectations," said Garabedian.

Atlas 25+ Certification Raises the Bar for Durability

First Solar's focus on module durability continues to yield results for commercially available products. In late January, First Solar's production PV modules achieved Atlas 25+ certification status following a rigorous series of long-term combined-stress environmental exposure tests.

The Atlas 25+ certification stresses durability and degradation against accelerated environmental conditions experienced in long-term service. According to Azmat Siddiqi, Senior Vice President for Quality and Reliability, First Solar modules passed the Atlas 25+ stress tests for all parameters, including power output, insulation resistance and visual damage in the hot/arid, subtropical, temperate and "global composite" climate simulations.

"The modules were tested against the most stringent standards available," said Siddiqi. "We are proud to note that

performance of our production modules is evolving hand in hand with other technology advances." Siddiqi said testing was conducted by Atlas Material Testing Technology, and that formal certification documentation will be issued by SGS, a leading inspection, verification, testing and certification organization recognized for providing global benchmarks for quality and integrity.

The Atlas 25+ results and recent 1500V PID Free certification add to First Solar's growing list of extended module reliability accolades, which include market-leading results in Thresher, Long Term Sequential and IEC 60068 Desert Sand Resistance tests that independently confirm suitability for sustained operation in the world's harshest climates.

About First Solar, Inc.

First Solar is a leading global provider of comprehensive photovoltaic (PV) solar systems which use its advanced module and system technology. The company's integrated power plant solutions deliver an economically attractive alternative to fossil-fuel electricity generation today. From raw material sourcing through end-of-life module recycling, First Solar's renewable energy systems 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 safe harbor provisions of the Private Securities Litigation Reform Act of 1995. These forward-looking statements include statements, among other things, concerning: our business strategy, including anticipated trends and developments in and management plans for our business and the markets in which we operate; future financial results, operating results, revenues, gross margin, operating expenses, products, projected costs, warranties, solar module efficiency and balance of systems ("BoS") cost reduction roadmaps, restructuring, product reliability and capital expenditures; our ability to continue to reduce the cost per watt of our solar modules; our ability to reduce the costs to construct photovoltaic ("PV") solar power systems; research and development programs and our ability to improve the conversion efficiency of our solar modules; sales and marketing initiatives; and competition. These forward-looking statements are often characterized by the use of words such as "estimate," "expect," "anticipate," "project," "plan," "intend," "believe," "forecast," "foresee," "likely," "may," "should," "goal," "target," "might," "will," "could," "predict," "continue" and the negative or plural of these words and other comparable terminology. Forward-looking statements are only predictions based on our current expectations and our projections about future events. You should not place undue reliance on these forward-looking statements. We undertake no obligation to update any of these forward-looking statements for any reason. These forward-looking statements involve known and unknown risks, uncertainties, and other factors that may cause our actual results, levels of activity, performance, or achievements to differ materially from those expressed or implied by these statements. These factors include, but are not limited to, the matters discussed in Item 1A: "Risk Factors," of our Annual Report on Form 10-K for the year ended December 31, 2013, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and other reports filed with the SEC.

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