PRESS RELEASE

New Photovoltaic Production Factories in Europe Are Possible

In a panel discussion at the Intersolar Europe in Munich, experts from industry, research and associations addressed the exciting question "Would a PV factory in Germany/ Europe be realistic?" The chances and possibilities of re-establishing a photovoltaic production in Germany and Europe were discussed. The panel discussion was based on the first results of a study carried out by the Fraunhofer Institute for Solar Energy Systems ISE commissioned by the German Mechanical Engineering Industry Association (VDMA).

In the past three years, solar module prices have decreased by half. Throughout the world, solar electricity is one of the least expensive ways to provide energy – also in Europe. Solar cells and modules are manufactured primarily in Asia, however. At the Intersolar Europe, Fraunhofer ISE presented its first results from a study, commissioned by the VDMA, to investigate whether it would be realistic to establish mass production of photovoltaics in Germany and Europe, and if so, under what conditions.

"The production of PV materials and components like silicon wafers, solar cells and PV modules at locations in Germany and Europe is of particular importance for the further development of the German mechanical engineering industry in this sector," says Dr. Jutta Trube, Division Manager Photovoltaic Equipment at VDMA. "In this context, we commissioned the Fraunhofer ISE to analyze the possibilities and prerequisites of mass production in a study, which is presently being carried out." In this study, the currently relevant technology based on surface- passivated monocrystalline silicon solar cells (mono-PERC) is considered along its entire value chain from the wafer to the module. The total production costs of a site located in Germany/Europe are compared to a production site located in China.

"Our first results show that a PV factory in Europe with a vertical production chain (ingot, wafer, cell, module) can be competitive to a production factory in China, despite the import of key materials," says Dr. Andreas Bett, institute director of Fraunhofer ISE. "Decisive for the European market in this analysis is that the transport costs for modules from China are considered in addition to the sustainability criteria in production."

From the standpoint of both a sustainable market perspective as well as the establishment of a multi-gigawatt (GW) factory in Europe, suppliers that are important for PV module manufacturing should also produce locally. Local manufactures of expensive consumer materials such as glass and aluminum frames shall especially be won over. In this way, it is possible to further reduce the manufacturing costs in

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Europe, thus improving the cost benefits of a European production as compared to imported Chinese modules.

The complete study shall be finalized by the end of June. The final version will provide a detailed analysis of the cost drivers as well as the saving and development potentials.

A European PV production, like the one shown here at Fraunhofer ISE, can be market competitive. © Fraunhofer ISE

Dr. Jutta Trube (VDMA), Dr. Winfried Hoffmann (ASE), René Battistutti (Energetica Industries), Dr. Andreas Bett (Fraunhofer ISE), Michael Schmela (SolarPower), Dr. Jochen Rentsch (Fraunhofer ISE) and Dr. Peter Fath (RCT Solutions) discussed the perspectives of a European solar industry at the Intersolar Europe in Munich. © Fraunhofer ISE