

SMA Solar Technology AG Press Release

Research Project HHK: Performance Increase and Cost Reduction in Megawatt-Scale PV Inverters and Medical Technology

November 28, Niestetal 2013 – In collaboration with partners from research and industrial sectors, SMA Solar Technology AG (SMA) has initiated a research project that focuses on the use of fast-switching semiconductor components in megawatt-scale photovoltaic inverters. The project is backed by the German Federal Ministry of Education and Research (BMBF) with over three million euros in funding. The aim of the collaborative project HHK (high-frequency, high-current components for use in medical technology and PV inverters in the megawatt range) is to find ways to harness the benefits of fast-switching semiconductor components in high-current applications in the high-power range. Achieving this aim should lead to increased efficiency and lower inverter costs. In addition to SMA, CONTAG AG, the Fraunhofer IISB, the Fraunhofer IZM, Heraeus, SEMIKRON Elektronik GmbH & Co. KG, Siemens AG, TDK EPCOS AG and the University of Kassel are also participating in this three-year research project. SEMIKRON is responsible for project coordination.

Large-scale PV power plants in the gigawatt range form a central pillar in the global energy supply of tomorrow. Technological innovations can help further reduce the costs for solar power generation in these power plants and also increase the export strength of the German PV industry in this fast-growing sector.

Given this background, the project partners will research the use of new semiconductor components and low-inductance power modules over the next three years and develop special solutions for high-efficiency, cost-effective central inverters in the megawatt range. In addition to cost reduction, the project will also focus on improving the special application requirements of photovoltaics in terms of functionality, efficiency and service life.

A second application area for this new technological approach is medical technology. Here, the focus will be placed on the high-frequency path and the development of ultra compact medical inverters. Particularly with regard to CT scans, optimal solutions can be implemented for use in the high power ranges for X-ray imaging.

#### **About SMA**

The SMA Group generated sales of €1.5 billion in 2012 and is the global market leader for solar inverters, a key component of all PV plants and, as an energy management group, offers innovative key technologies for future power supply structures. It is headquartered in Niestetal, near Kassel, Germany, and is represented internationally in 21



countries. The Group employs more than 5,000 people worldwide. SMA's broad product portfolio includes a compatible inverter for every type of module on the market and for all plant sizes. The product range includes both inverters for photovoltaic plants connected to the grid as well as inverters for off-grid systems. SMA is therefore able to provide ideal technical inverter solutions for all plant sizes and types. Since 2008, the Group's parent company, SMA Solar Technology AG, has been listed on the Prime Standard of the Frankfurt Stock Exchange (S92) and also in the TecDAX index. In recent years, SMA has received numerous awards for excellence as an employer and achieved first place in the nationwide "Great Place to Work®" competition in 2011 and 2012 and fourth place in 2013.

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