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Fraunhofer ISE Successful in Patent Infringement Process for Inverter Technology

The Fraunhofer Institute for Solar Energy Systems ISE has reached out-of-court settlements with leading inverter manufacturers in seven patent infringement cases to date. The sued companies from China, Taiwan and Germany had infringed the patent on the HERIC® topology invented at the Institute in 2002.

The HERIC® (Highly Efficient and Reliable Inverter Concept) circuit and the associated process are used in single-phase inverters, especially in the lower power range (e.g. rooftop photovoltaic systems). With little extra effort, the topology developed by Dr. Heribert Schmidt and colleagues from Fraunhofer ISE enables very high efficiencies of up to 99 percent. At the same time emitted interferences are kept low. Besides the advantage of a higher energy yield, the topology reduces the thermal stress of the components, allows for smaller heat sinks and a longer service life.

It is estimated that over 80 percent of all single-phase inverters worldwide are based on the HERIC® topology. A large number of manufacturers have used the circuitry or the process in its original form or in modified versions that nevertheless infringe the patent without the consent of the Fraunhofer-Gesellschaft. The latter was confirmed by the Munich I Regional Court.

"The infringement of IP rights of the Fraunhofer-Gesellschaft is therefore not worthwhile for infringers. IP from Germany is in many products of the photovoltaic industry, and not infrequently the patents on them are infringed. We are prepared to take action against patent infringements," explains Prof. Andreas Bett, Institute Director of Fraunhofer ISE.

The companies sued used the HERIC® topology, which is protected by patents in Europe and the USA, without the consent of the Fraunhofer-Gesellschaft. Out-of-court settlements were reached with all of the companies, which included a royalty-bearing licensing of the HERIC® topology. The settlements enabled the sued companies to avert a threatened ban on the sale of their products.

The Fraunhofer-Gesellschaft attaches great importance to the observance of its IP rights and is also prepared to enforce them in court. The Fraunhofer-Gesellschaft also considers itself obligated to do so vis-à-vis its bona fide licensees. As the infringement proceedings have shown, it would also have been economically worthwhile for the companies concerned to seek a license at an early stage.

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Dr.-Ing. Heribert Schmidt of Fraunhofer ISE is the inventor of the patented HERIC[®] topology for high-efficiency inverters. © Fraunhofer ISE

Further information

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The Fraunhofer-Gesellschaft based in Germany is the world's leading applied research organization. Prioritizing key future-relevant technologies and commercializing its findings in business and industry, it plays a major role in the innovation process. A trailblazer and trendsetter in innovative developments and research excellence, it is helping shape our society and our future. Founded in 1949, the Fraunhofer-Gesellschaft currently operates 76 institutes and research units throughout Germany. Over 30,000 employees, predominantly scientists and engineers, work with an annual research budget of €2.9 billion. Fraunhofer generates €2.5 billion of this from contract research.