

Ideal Power Converters Awarded Significant Department of Energy ARPA-E Grant

IPC teams with Rensselaer Polytechnic Institute and Virginia Tech to create new bi-directional silicon power electronic module

AUSTIN, Texas – October 11, 2011 – Ideal Power Converters (IPC) is leading a team with Rensselaer Polytechnic Institute and Virginia Tech to create a dual bi-directional silicon IGBT module with a \$2.5 million grant from the U.S. Department of Energy, Advanced Research Projects Agency – Energy (ARPA-E). This entirely new type of power semiconductor device will be manufactured using standard processing equipment and materials, but optimized for IPC's breakthrough current-modulation power converter topology.

Ideal Power Converters is currently developing light-weight, low cost inverters for the U.S. commercial PV market. The project goal of the ARPA-E grant is to reduce the weight of these systems by 98 percent, lowering the cost of materials, manufacturing, shipping and installation. Due to the rapid decline in PV modules, the inverter and installation costs are becoming the bottleneck to further PV system cost reductions. This project will accelerate these reductions by supporting the Department of Energy SunShot program, and driving down the cost of solar energy systems by 75 percent enabling widespread, large-scale adoption, ultimately restoring U.S. leadership in the global clean energy race.

"Support from ARPA-E will enable Ideal Power Converters and our university partners, to develop and commercialize an innovative silicon bi-directional IGBT switch that will dramatically improve performance and reduce costs of commercial rooftop photovoltaic systems," commented Bill Alexander, CEO of Ideal Power Converters. "IPC will also apply this breakthrough technology to wind generation, battery inverters and high power electric vehicle charging applications. Over the next several years, IPC and its US suppliers will create thousands of new jobs and enable the US to regain technical and manufacturing leadership in this critical clean tech industry."

Ideal Power Converter's initial product, a 30kW PV inverter, weighs only 94lbs compared to 1200lbs from conventional solutions, delivering over a 90 percent reduction in weight and size. This allows simple shipment and wall-mount installation savings of about 90 percent in inverter shipping and installation costs. The IPC inverter is also more efficient at 97 percent CEC-weighted efficiency and is more reliable due to eliminating all electrolytic capacitors and other design improvements.

The company is currently completing industry certifications. IPC already hasseveral earlyinstallations of its inverters in Austin, Texas and San Antonio, Texas. The IPC inverter will be on display at Solar Power International (Booth #118) in Dallas, Texas, from October 17-20.

About Ideal Power Converters

Electronic power converters provide the infrastructure for the clean energy revolution improving electrical energy efficiency, renewable energy production, smart power grids, and economic electric vehicles. Ideal Power Converters has patented and is further developing a revolutionary new power-converter technology, and its products will improve both energy and cost efficiency for applications including solar inverters, wind converters, AC motor drives, and hybrid-electric vehicles. IPC has received funding from the State of Texas Emerging Technology Fund and Battery Ventures. IPC won the "Top Utility Technology" Award at Clean Tech 2011 in June. http://www.ldealPowerConverters.com

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