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Ideal Power Signs B-TRAN™ Test and Evaluation Agreement with Top 10 Global Provider of Power Conversion Solutions to the Solar Industry

AUSTIN, Texas, Aug. 03, 2021 (GLOBE NEWSWIRE) -- Ideal Power Inc. (Nasdaq: IPWR), pioneering the development and commercialization of highly efficient and broadly patented B-TRAN™ bi-directional power switches, today announced that it has signed an agreement for the testing and evaluation of B-TRAN™ devices by a leading global provider of power conversion solutions to the solar industry. This provider has historically served the solar space and is currently expanding its portfolio to include a broad array of power conversion application solutions serving multiple sectors. B-TRAN™ will be evaluated for its compelling advantages in bi-directional circuits for various applications, with an initial focus on uninterruptible power supply (UPS) systems for data centers and the potential to expand testing and evaluation to include renewable energy, electric vehicle (EV) and other applications served by this provider.

The power switch market for UPS systems was approximately $512 million in 2020 and is forecasted to grow at an estimated 6% compound annual growth rate (CAGR) through 2026. Electricity consumption is the largest operating cost for a data center and all of the electricity entering a data center passes through a UPS system. Currently, UPS systems and their protection account for approximately 6% of data center total energy losses. Replacing conventional power semiconductors in these systems with B-TRAN™ could result in substantial annual cost savings for data centers through reduced energy consumption and the ability to migrate to lower cost, less complex cooling systems.

“With the secular trend toward cloud computing and storage, there is intense pressure in the data center sector to reduce electricity costs and power losses, and we believe B-TRAN™’s bidirectionality and superior performance metrics can contribute to lower energy costs,” stated Dan Brdar, President and Chief Executive Officer of Ideal Power. “We are excited to collaborate with this power conversion solution provider as they evaluate B-TRAN™ for UPS systems and for their innovative solutions in the two largest segments of the insulated gate bipolar transistor market, EVs and renewable energy.”

Ideal Power’s patented semiconductor power switch, the Bi-directional Bipolar Junction Transistor, or B-TRAN™, reduces power losses by 50% or more over conventional power switches, depending on the application. B-TRAN™’s higher efficiency results in less heat being generated and therefore significantly lower thermal management requirements, requiring significantly smaller surface area to dissipate heat and giving rise to potentially

smaller OEM products. B-TRAN™ offers the industry's only symmetric bi-directional operation, reducing the number of components required for application by 75% as compared to a conventional bi-directional switch utilizing IGBTs and diodes. This highly efficient and unique symmetric operation provides a strong competitive advantage in bi-directional applications, which are growing rapidly as transportation electrifies and power generation shifts to renewable energy coupled with energy storage.

About Ideal Power Inc.
Ideal Power (NASDAQ: IPWR) is pioneering the development of its broadly patented bi-directional power switches, creating highly efficient and ecofriendly energy control solutions for electric vehicle, electric vehicle charging, renewable energy, energy storage, UPS / data center and other industrial and military applications. The Company is focused on its patented Bi-directional, Bi-polar Junction Transistor (B-TRAN™) semiconductor technology. B-TRAN™ is a unique double-sided bi-directional AC switch able to deliver substantial performance improvements over today's conventional power semiconductors. Ideal Power believes B-TRAN™ modules will reduce conduction and switching losses, complexity of thermal management and operating cost in medium voltage AC power switching and control circuitry. For more information, visit www.IdealPower.com.

Forward-Looking Statements

All statements in this release that are not based on historical fact are "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995 and the provisions of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. These statements include, but are not limited to, statements regarding the size and CAGR of the power switch market for UPS systems, that the evaluation of B-TRAN™ with this power conversion solutions provide will expand to include EV and renewable energy applications, the future importance of power switching to IT infrastructure and cloud computing and the expected performance benefits of B-TRAN™ in data centers. While Ideal Power's management has based any forward-looking statements included in this release on its current expectations, the information on which such expectations were based may change. These forward-looking statements rely on a number of assumptions concerning future events and are subject to a number of risks, uncertainties and other factors, many of which are outside of Ideal Power's control that could cause actual results to materially differ from such statements. Such risks, uncertainties, and other factors include, but are not limited to, the risks and uncertainties associated with market conditions as well as risks and uncertainties set forth in Ideal Power's quarterly, annual and other reports filed with the SEC. Furthermore, Ideal Power operates in a highly competitive and rapidly changing environment where new and unanticipated risks may arise. Accordingly, investors should not place any reliance on forward-looking statements as a prediction of actual results. Ideal Power disclaims any intention to, and undertakes no obligation to, update or revise forward-looking statements.

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