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Ideal Power Signs B-TRAN™ Sampling Agreement for Electric Vehicle Charging Application

AUSTIN, Texas, July 27, 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 an electric vehicle (EV) charger provider will be sampling B-TRAN™ devices for its innovative portable and modular EV charging system currently under development. This represents Ideal Power's second sampling agreement in the EV space and its first in the 2.1 million unit global EV charging station market. This market is projected to grow at a compound annual growth rate (CAGR) of approximately 47% to 30.8 million units by the end of 2027 as governments phase out fossil fuel vehicles from the market and make infrastructure investments to meet the growing demand for EV charging stations to support the adoption of EVs.

The EV charging provider's offering will combine a DC fast charger with a swappable battery system and a modular design to allow for scaling of the solution, and targets both on-demand fast charging and roadside assistance to eliminate charging anxiety. EV charging applications can benefit from the advantages that B-TRAN™ has to offer over conventional IGBT switches; greater efficiency, bi-directionality, smaller size and reduced thermal management. However, these features are critically important to mobile EV charging systems with battery storage.

"We are seeing a variety of innovative products and business models to support the buildout of the EV charging infrastructure and their need for smaller, lower operating cost solutions," stated Dan Brdar, President and Chief Executive Officer of Ideal Power. "We look forward to collaborating with several EV charging companies that want to take advantage of the benefits of B-TRAN™, including its inherent bi-directionality, for their mobile, stationary, vehicle-to-grid enabled and buffer storage and/or solar paired EV charging solutions."

B-TRAN™'s key benefit of improved efficiency is expected to result in in faster EV charging, smaller thermal management systems and OEM solutions, lower costs to consumers and higher margins for fast charger owners. Additionally, if EV charging systems are paired with buffer storage, the round-trip charge efficiency improvement is even more significant, potentially further reducing charging cost as time of use and/or peak damage charges from the local utility company, which may represent up to 50% of the electricity bill for a commercial installation, can be mitigated.

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. 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, the size and CAGR of the global EV charging station market, our expectation that we will collaborate with several EV charging companies to take advantage of the benefits of B-TRAN™ and the expected performance benefits of B-TRAN™ in EV charging applications, 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.

Ideal Power Investor Relations Contact:
LHA Investor Relations
Carolyn Capaccio, CFA
T: 212-838-3777
IdealPowerIR@lhai.com

Source: Ideal Power Inc.