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CSE: HEAT
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HILLCREST PUBLISHES TECHNICAL WHITE PAPER DETAILING INVERTER TECHNOLOGY AND ITS PERFORMANCE

- Hillcrest confirms the capabilities of its high-efficiency silicon carbide traction inverter less than 12 months into technology development process
- Test results confirm ability of Hillcrest's proprietary inverter technology to improve electric motor efficiency using higher switching frequencies
- White paper available for download at the Hillcrest website

VANCOUVER, BC, April 21, 2022 – Hillcrest Energy Technologies (CSE: HEAT) (OTCQB: HLRTF) (FRA: 7HIA.F), a clean technology company developing transformative power conversion technologies and control system solutions for next-generation electrical systems, announces the publication of [its first technical white paper](#). The paper discusses and evaluates Hillcrest's innovative silicon carbide inverter technology and confirms inverter efficiency exceeding 99% and significantly improved drivetrain system efficiency at switching frequencies up to 60 kHz.

Hillcrest's high-efficiency inverter technology development began in earnest in April 2021 with the Company's strategic partnership with Systematec GmbH, the acquisition of digital motor control IP, and the addition of Ari Berger as Chief Technology Officer.

"The combination of Ari's proven ability to develop revolutionary digital motor control solutions and our strategic partnership with Systematec has allowed us to achieve proof of concept for our inverter in just seven months – considerably ahead of traditional start-up development timelines," said Hillcrest CEO Don Currie.

The Hillcrest inverter technology was evaluated through a proof-of-concept (POC) setup. Testing was conducted to validate the hypothesis that Hillcrest's traction inverter would materially eliminate inverter switching losses and improve motor efficiency in an electric vehicle powertrain, thereby enabling reduced motor size and cooling requirements and increased power density. In an electric vehicle, this would result in more power, more payload capability and increased range.

"As the world transitions to the use of electric systems powered by clean power, the efficiency and performance of these systems is becoming more important," said CTO Ari Berger. "Being able to increase switching frequencies without materially increasing losses allows us to improve overall system-level performance. With the Hillcrest inverter, a system with high power density, lower cost and weight, and better power quality and performance can be realized."

With the growth of clean energy and electrification in a variety of sectors, Hillcrest has identified similar potential for its inverter technology across other target applications, such as grid-tied renewables, charging and storage systems, and high voltage/high power applications such as utility-scale grid. The Company has already commenced development on these additional markets, in tandem with the traction inverter designed for EVs and mobility applications.

The successful test results detailed in the white paper demonstrate Hillcrest's efficiency targets in an EV powertrain application and are the first steps in the commercialization testing protocol. Based on the early findings, a 250kW, 800V commercial prototype is on-track to be available for internal testing in the third quarter with delivery to customers in the fourth quarter of this year.

To download the Hillcrest white paper evaluating its high-efficiency inverter technology, please visit <https://hillcrestenergy.tech/technology/>.

About Hillcrest Energy Technologies

Hillcrest Energy Technologies is a clean technology company developing high value, high performance power conversion technologies and digital control systems for next-generation powertrains and grid-connected renewable energy systems. From concept to commercialization, Hillcrest is investing in the development of energy solutions that will power a more sustainable and electrified future. Hillcrest is publicly traded on the CSE under the symbol "HEAT", on the OTCQB Venture Market as "HLRTF" and the Frankfurt Stock Exchange as "7HIA.F". For more information, please visit <https://hillcrestenergy.tech/>.

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