



HILLCREST
energy technologies™

Suite 1170 1040 W Georgia St
Vancouver BC, V6E 4H1
Tel: 604-609-0006
Toll-free: 1-855-609-0006

CSE: HEAT
OTCQB: HLRTF
FRA: 7HI

Hillcrest's ZVS Traction Inverter Prototype Targets Cost Efficiency and Compact Design for EV Applications

Vancouver, B.C. – November 12, 2024 – Hillcrest Energy Technologies Ltd. (CSE: HEAT | OTCQB: HLRTF | FRA: 7HI) is pleased to announce that its Zero-Voltage Switching (ZVS) traction inverter prototype is expected to provide cost efficiency, offering significant savings for electric vehicle (EV) manufacturers.

According to recent analysis conducted by [IDTechEx](#) analyzing electric vehicles (EVs) from 2013 to 2023, there is a clear trend toward a significant reduction in die area per kilowatt (kW) of power. This trend underscores the industry's focus on producing smaller, more efficient and cost-effective inverters to meet the demands of next-generation EVs.

The IDTechEx analysis reviewed power density advancements across various EV models, including the Toyota Prius, Polestar 2, BMW i3, and Kia EV6. Based on this data, IDTechEx projects that, by 2035, many EV inverters will achieve a die area per kW below 4 mm². Hillcrest's ZVS traction inverter, however, has already surpassed this future benchmark at 3 mm²/kW.

Die area per kilowatt refers to the physical area of the semiconductor dice (or chips) in the inverter that are required to handle a certain amount of power, measured in kilowatts (kW). In simpler terms, it's an indicator of how efficiently the inverter's semiconductors are used.

By achieving lower die area per kilowatt, Hillcrest's ZVS traction inverter is optimizing the physical semiconductor area required for power handling. This innovation reduces material use and costs, while Hillcrest's high-efficiency design can cut energy losses, improve performance and extend the lifespan of EV systems—further lowering operational costs for manufacturers and consumers alike.

“Our ZVS technology not only enhances efficiency but also enables substantial cost savings, underscoring Hillcrest's commitment to high-performance, cost-effective power electronics for EVs,” said Don Currie, CEO of Hillcrest Energy Technologies. “The knowledge gained from demonstrations and discussions with potential customers and development partners is invaluable. In many cases, cost savings and design are just as important as performance—a fact Hillcrest has listened to and delivered on with our ZVS innovation. By significantly reducing electromagnetic interference (EMI) and eliminating switching losses, our inverter offers manufacturers both a cost and design advantage in EV power systems.”

The 350 kVA Silicon Carbide (SiC) inverter prototype, integrated with Hillcrest's proprietary ZVS technology, is expected to offer automakers a competitive edge in cost-effective design. Its efficiency and low EMI design facilitate simpler cooling and lower-cost shielding, contributing to

overall savings and enhancing the value proposition for EV manufacturers striving for more affordable and efficient designs.

The IDTechEx webinar and related research report can be found here: [The Future of EV Powertrains: SiC, GaN, and the Evolution of Power Electronics : IDTechEx Webinar](#)

About Hillcrest Energy Technologies

Hillcrest Energy Technologies is a clean technology company focused on providing advanced power conversion technologies and digital control systems for next-generation powertrains and grid-connected renewable energy systems. From concept to commercialization, Hillcrest invests in energy solutions that 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 on the Frankfurt Exchange as "7HI." For more information, visit: <https://hillcrestenergy.tech>.

CONTACT INFORMATION

Investor Relations

Don Currie

info@hillcrestenergy.tech

O: +1 604-609-0006

Toll-free: 1 855-609-0006

Public Relations

Jamie L. Hogue

jhogue@hillcrestenergy.tech

O: +1 602-793-9481

NEITHER THE CANADIAN SECURITIES EXCHANGE NOR ITS REGULATION SERVICES PROVIDER HAS REVIEWED OR ACCEPTS RESPONSIBILITY FOR THE ADEQUACY OR ACCURACY OF THIS RELEASE.

Cautionary Statement Regarding "Forward-Looking" Information

Some of the statements contained in this news release are forward-looking statements and information within the meaning of applicable securities laws. Forward-looking statements and information can be identified by the use of words such as "expects," "intends," "is expected," "potential," "suggests" or variations of such words or phrases, or statements that certain actions, events or results "may," "could," "should," "would," "might" or "will" be taken, occur or be achieved. This forward-looking information is provided as of the date of this news release. The forward-looking information reflects our current expectations and assumptions and is subject to a number of known and unknown risks, uncertainties and other factors, which may cause actual results, performance or achievements to be materially different from any anticipated future results, performance or expectations expressed or implied by the forward-looking information. No assurance can be given that these assumptions will prove correct. Forward-looking statements and information are not historical facts and are subject to a number of risks and uncertainties beyond the Company's control. Investors are advised to consider the risk factors under the heading "Risks and Uncertainties" in the Company's MD&A for the year ended Dec. 31, 2023, available at <https://www.sedarplus.ca/> for a discussion of the factors that could cause the Company's actual results, performance and achievements to be materially different from any anticipated future

results, performance or achievements expressed or implied by the forward-looking information. Accordingly, readers should not place undue reliance on forward-looking statements. The Company undertakes no obligation to update publicly or otherwise revise any forward-looking statements, except as may be required by law.

###