

# Hillcrest Begins Testing Grid-Tied Inverter

- Hillcrest ZVS grid inverter is suitable for deployment into various grid-tied applications, including solar and wind generation, storage, vehicle-to-everything (V2X) and electric vehicle (EV) charging infrastructure.
- Completion of the ZVS grid inverter proof-of-concept will pave the way for the rapid development of the Company's planned grid-connected products.
- Hillcrest anticipates multiple, future revenue streams from these grid-connected products.

Vancouver, British Columbia--(Newsfile Corp. - December 4, 2023) - Hillcrest Energy Technologies (CSE: HEAT) (OTCQB: HLRTF) (FSE: 7HI) ("Hillcrest" or the "Company"), an innovative clean technology company redefining power conversion technologies, is pleased to announce that proof-of-concept testing is underway for its first ZVS grid-tied inverter.

Hillcrest's proof of concept, an 800-volt (V), 10-kilowatt (kW) component, incorporates the Company's ZVS technology and is suitable for deployment into various grid-tied applications, including solar and wind generation, storage, vehicle-to-everything (V2X) and electric vehicle (EV) charging infrastructure. The Company anticipates that these opportunities will generate multiple, future revenue streams.

The evolution of grid-tied energy systems demands high-frequency power electronics to enhance the smart, grid-forming capabilities of a more distributed, bidirectional system with diverse intermittent sources. Hillcrest's ZVS technology is designed to provide new benefits to grid-connected energy systems by providing a more efficient and reliable method of deploying higher switching frequencies. The Company's technology will also deliver improved output power quality and control benefits not presently available in most electric power systems.

Chief Technology Officer Ari Berger emphasized the groundbreaking impact of Hillcrest Energy Technologies' latest announcement, stating, "The initiation of proof-of-concept testing for our first ZVS grid-tied inverter marks a pivotal moment in our pursuit of redefining power conversion technologies. This 800 V, 10 kW system, equipped with our innovative ZVS technology, is not merely a component; it's a testament to our commitment to advancing clean technology solutions. The adaptability of this proof of concept for various grid-tied applications, from renewable energy generation to EV charging infrastructure, positions us at the forefront of transformative opportunities, anticipated to generate multiple revenue streams in the future."

Berger further highlighted the strategic direction of Hillcrest, stating, "Our ZVS technology is a game-changer in the evolution of grid-tied energy systems, offering a more efficient and reliable deployment of higher switching frequencies. Beyond present industry standards, our technology brings forth improved output power quality and control benefits, setting a new benchmark in electric power systems."

## Multiple Future Products and Revenue Streams

The successful completion of the ZVS grid inverter proof of concept will mark a significant milestone, paving the way for the rapid development of the Company's planned grid-connected products. These include the ZVS-enabled Enhanced Powertrain Solution and a ZVS multi-level inverter, integral components of Hillcrest's modular approach to deploying its ZVS platform technology. The completion and subsequent commercialization of these Hillcrest grid-connected products are poised to create multiple revenue streams for the Company.

The Enhanced Powertrain Solution is a universal, bidirectional charging architecture that leverages the efficiency and high switching frequency capabilities of the Company's ZVS inverter technology to simplify the overall powertrain and charging system. Hillcrest expects this technology to enhance an EV's efficiency, performance and capabilities beyond what is currently available through truly universal, bidirectional V2X charging.

The Enhanced Powertrain Solution is designed so that EVs would no longer require an onboard charger, which is expected to reduce the cost, complexity and weight of an EV powertrain. Onboard chargers are also responsible for charging losses of up to 14% and their removal from the system could result in immediate gains in charging efficiency, offering reduced charging times and costs to the end user.

Additionally, the Enhanced Powertrain Solution is intended to enable DC fast charging of 800V traction systems on existing 400V chargers without the need for an additional onboard DC/DC booster unit. Booster units are typically of a similar size and cost to the EVs traction inverter so eliminating the need for this unit as well as the onboard charger goes a long way in simplifying an EV and providing meaningful reductions in weight and cost.

Chief Executive Officer Don Currie concluded by highlighting the broader impact of Hillcrest's innovations, stating, "As we navigate an increasingly electrified future, Hillcrest Energy Technologies is not just redefining power conversion; we are reshaping how energy is managed on the grid, utilized for vehicle charging, and redeployed to stabilize systems. Through our cutting-edge inverter and EV powertrain technology, we are paving the way for a more sustainable and efficient energy landscape, presenting compelling opportunities for investors in this transformative journey."

### **Additional Corporate Update**

The Company also announces that it has granted restricted stock units ("**RSUs**") to a consultant of the Company for up to 180,000 common shares of the Company, at a grant price of \$0.37 per Share, pursuant to the Company's RSU Plan dated July 28, 2021. All of the RSUs carry a three-year term. 90,000 of the RSU's vest on July 1, 2024, with the remaining RSU's vesting based on specific performance criteria.

### **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 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 on the Frankfurt Exchange as "7HI". For more information, please visit: <https://hillcrestenergy.tech/>.

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