



Hillcrest Inverter Technology Poised for Central Role in the Reimagined Energy Future

- Hillcrest inverter technology holds the potential to unlock efficiency and performance improvements.
- Hillcrest offers a flexible, single inverter architecture that can be applied at nearly every stage of the electrification ecosystem.
- Global power inverter market expected to reach US\$95B by 2028.

VANCOUVER, British Columbia, June 16, 2022 -- Momentum to electrify and decarbonize energy systems is accelerating, transforming the way we think about energy generation, storage, distribution and consumption. In the midst of reimagining our energy future, an unassuming power electronics hero has emerged: the power inverter. While system cohorts such as battery packs, PV panels, and electric motors are often in the spotlight, the inverter holds the key to unlock efficiency and performance improvements.

Hillcrest Energy Technologies (CSE: HEAT) (OTCQB: HLRTF) (FRA: 7HIA.F) is a clean-technology company developing transformative power conversion technologies and control-system solutions for next-generation electrical systems. Hillcrest offers a single high-efficiency inverter architecture that can be applied at nearly every stage of the evolving electrification ecosystem, from renewable energy generation through the charging and operation of an EV to provide full-cycle efficiency and performance improvements.

“Our clean-energy technologies specifically target efficiencies in electric machines and can be deployed to maximize performance across a wide variety of applications within the electric ecosystem, from electric vehicles, energy storage systems to grid-connected power generation,” said Hillcrest CEO Don Currie. “In addition to scaling our in-house development and design capabilities, Hillcrest has initiated targeted discussions with strategic partners with the potential to scale with us.”

Beyond the EV - Potential applications for Hillcrest inverter technology

While Hillcrest’s first application for its inverter technology is focused on the growing EV market, the global power inverter market is [expected to reach US\\$95B by 2028](#), up from an estimated US\$70.5B market in 2021 and representing a compounded annual growth rate of more than 5%. Hillcrest is aiming to capture a share of this future market across nearly every segment and application.

Wind – an inverter is deployed at a wind turbine generator to convert the AC output, with at least one additional inverter used to deliver the power to the grid/battery.

Solar – an inverter is used to convert the DC output from the photovoltaic panels into the AC power that flows to the grid/battery/home.

Energy Storage Systems – an inverter is deployed to convert the DC output from the storage system or batteries to the AC power that flows to the grid/home/EV.

EV DC Fast Chargers – an inverter converts the AC input from the grid/storage system to the DC output needed to charge an EV’s battery.

Across these non-motorized applications for Hillcrest’s inverter technology, the potential value proposition and benefits include significant efficiency gains, better power quality and grid stability, lower stress on mechanical and electrical parts, and improved thermal management.

Within the electric vehicle market specifically, Hillcrest’s SiC high-efficiency traction inverter technology converts the DC output from the batteries into AC input used by the motor. The expected benefits of Hillcrest’s traction inverter have been confirmed via testing and shared in a [technical white paper](#) published in April 2022:

- Significant efficiency gains – 99%+ inverter efficiency
- Increased power density targeting 50kW/L+
- Significantly increased motor efficiency
- Lower stress on mechanical and electrical parts/reliability
- Improved thermal management

In addition to the inverter technology found in the 250 kW|800V Hillcrest SiC high efficiency EV inverter, Hillcrest has also filed a patent for an enhanced powertrain solution that offers the potential to simplify EV charging and redefine how we envision charging infrastructure. "One of the most exciting benefits of the enhanced powertrain solution is the ability to eliminate the onboard charger and booster from an EV, as well as faster, anywhere charging including direct DC, wireless, and bidirectional charging across current and future power levels," Currie said. "This will be a true game-changer."

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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