Hillcrest Energy Technologies Ltd.
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Canada
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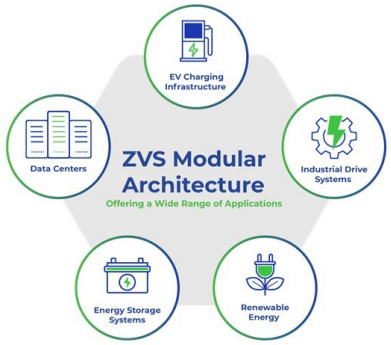
Ticker (Exchange)	HEAT-CSE | HLRTF-OTCQB
Recent Price (08/12/2026)	$0.15
52-week Range	$0.085 – 0.24
Shares Outstanding	209.2 mm
Market Capitalization	$30.1 mm
Average 30-day volume	134.5 K
Insider Ownership +>5%	~21%
Institutional Ownership	~10%
EPS (Qtr. ended 12/31/2025)	($0.02)
Employees	10

One-year Stock Chart

Source: Yahoo!Finance.

HILLCREST ZVS GRID APPLICATIONS



Source: Hillcrest Energy Technologies Ltd.

COMPANY DESCRIPTION

Hillcrest Energy Technologies Ltd. ("Hillcrest" or the "Company") is a clean technology company developing high-performance **power conversion†** technologies and digital control systems for next-generation powertrains and grid-connected energy applications. The Company's core focus is improving the **efficiency**, reliability, and cost structure of electric systems by enhancing power conversion through its proprietary Zero Voltage Switching (ZVS) technology. ZVS is a technology platform that reduces **switching losses** during power conversion, improving efficiency, lowering heat generation, and minimizing **electromagnetic interference (EMI)**, key limitations of conventional **power inverter** designs. ZVS technology has been deployed into two platforms currently at the prototyping stage: (1) ZVS PCS1000, designed for applications such as energy storage/microgrids, **data center** power conversion sidecars, and E-mobility chargers; and (2) ZVS Traction Inverter, targeting the global electric vehicle (EV) market. Following several years of technology validation, particularly in automotive applications, Hillcrest is entering a critical commercialization phase. The Company is prioritizing near-term revenue opportunities through accelerated development of its grid-focused ZVS PCS1000 platform, which offers shorter sales cycles and broader market accessibility, while continuing to pursue licensing and partnerships to monetize its EV technology. Together with new applications being assessed on high-value industrial use cases, these markets represent an addressable opportunity of over $180 billion.

KEY POINTS

- ZVS inverters can achieve peak efficiencies of up to 99.7%, versus roughly 96%-98% for conventional designs. Combined with lower EMI and improved thermal performance, these gains can reduce component requirements and lower system costs.
- CleanPath Distribution Inc., an Indigenous-majority-owned entity formed with Pasqua First Nation #79 and Apeiron Resources Ltd., is expected to support Hillcrest's expansion in Canada while opening access to government grants and other non-dilutive funding opportunities.
- Hillcrest is advancing its ZVS PCS1000 platform toward prototype demonstrations expected in 2H 2026, initially targeting data centers, energy storage systems, and industrial electrification applications.
- The Company has successfully completed Phase 1 of a technology evaluation program with a global Tier 1 automotive supplier, validating the integration of its ZVS inverter technology in demanding automotive environments.
- Hillcrest is led by an experienced management team with expertise spanning power electronics innovation, commercialization, and capital markets.
- As of December 31, 2025, Hillcrest reported cash and cash equivalents of C$87,405. Subsequently, the Company strengthened its balance sheet by closing a private placement that generated gross proceeds of approximately C$4.8 million and settled roughly C$2.8 million of debt.

Table of Contents

Executive Overview

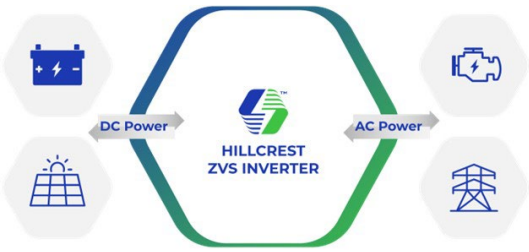
Hillcrest Energy Technologies Ltd. ("Hillcrest" or the "Company") is a clean technology company focused on developing high-performance power conversion solutions designed to address the evolving demands of global electrification. The Company's core objective is to improve the efficiency, reliability, and cost structure of electric systems by enhancing one of their most critical components: the power inverter.

Power inverters are essential to modern electrification because they convert **direct current (DC)** generated by batteries, solar panels, and other energy storage systems into **alternating current (AC)**, the form of electricity used by electric motors, the electrical grid, and most industrial and commercial equipment. As electrification continues to expand across transportation, renewable energy, energy storage, data centers, and industrial infrastructure, inverter performance is becoming increasingly important to overall system efficiency, reliability, and cost. Against this backdrop, the global power inverter market was valued at approximately $61.4 billion in 2025 and is projected to reach $141.4 billion by 2034, according to Fortune Business Insights.

At the core of Hillcrest's technology portfolio is its Zero Voltage Switching (ZVS) inverter architecture, a combination of proprietary software and off-the-shelf hardware components that leverages advanced control algorithms to materially improve power conversion performance. By targeting the power inverter, Hillcrest aims to enable higher efficiency, lower system costs, and improved reliability across a broad range of energy and mobility applications, including electric vehicles (EVs), grid-tied renewable energy systems, data centers, energy storage systems, and selected high-value industrial use cases (illustrated in Figure 1).

Figure 1

HILLCREST ZVS INVERTER



Source: Hillcrest Energy Technologies Ltd.

Zero Voltage Switching (ZVS) Technology

Hillcrest's core innovation is a **high-efficiency inverter (HEI)** platform designed to materially improve the performance of electric **power conversion systems (PCS)**. The Company's proprietary ZVS technology uses advanced control algorithms to precisely time switching events so they occur when voltage approaches zero. By minimizing the voltage present during switching transitions, the platform significantly reduces switching losses, one of the primary limitations of conventional inverter designs. This approach improves system efficiency, reduces heat generation, and minimizes **electromagnetic interference (EMI)**, while maintaining stable performance across a broad range of applications.

The reduction of switching losses also enables higher switching frequencies, which can support cleaner output waveforms, improved power efficiency and density, and reduced reliance on large passive components, such as capacitors and filters. In parallel, since higher switching losses (i.e. more heat generated and electricity lost) require more cooling which in turn requires larger, heavier, more expensive components, lower switching stress can reduce cooling requirements and support lighter, more efficient system architectures, particularly in EV powertrains and high-power industrial applications.

Experimental validation indicates that ZVS can reduce inverter switching losses by up to 70% and achieve peak efficiency levels approaching 99.7% under certain conditions. Testing has also demonstrated meaningful reductions in EMI, a key challenge in inverter development that often requires complex filtering, shielding, and iterative design work. Collectively, these performance improvements may translate into broader system-level advantages, including simplified thermal management, reduced component requirements, enhanced power density, and lower overall system costs.

Hillcrest believes these attributes position its ZVS technology as a potentially meaningful step-change improvement in inverter performance, particularly in applications where efficiency, thermal management, power density, and reliability are critical design constraints. In addition, lower inherent EMI may reduce design complexity and shorten development cycles, helping customers move more efficiently from validation to commercialization.

Development Strategy

Following several years of technology validation, particularly in automotive applications, Hillcrest is entering a critical commercialization phase. The Company is now pursuing a dual-track strategy: accelerating development of its grid-focused ZVS PCS1000 platform to capture more near-term revenue opportunities while continuing to pursue licensing and strategic partnerships intended to monetize its validated EV technology.

This shift reflects management's view that grid-connected and stationary applications may offer broader near-term market access, shorter sales cycles, and clearer commercialization pathways than automotive programs, which typically involve longer design cycles and more extended qualification timelines. At the same time, Hillcrest continues to view the automotive market as an important long-term opportunity, particularly given the role inverter performance plays in EV efficiency, range, thermal management, and overall system cost.

To support this strategy, Hillcrest is applying its ZVS technology across two primary product verticals: (1) Grid and Stationary Power Conversion Systems, led by the ZVS PCS1000 platform, designed for applications such as energy storage systems, data centers, EV charging infrastructure, renewable energy integration, and industrial electrification; and (2) EV Traction Inverters, targeting the global automotive electrification market. Together with additional industrial use cases under evaluation, these markets represent an addressable opportunity estimated to exceed $180 billion.

Grid-Connected Applications

Development of the Company's grid inverter platform is advancing toward **A-Sample prototype** demonstrations of its ZVS-based PCS1000 system, expected in 2H 2026 with the platform designed to support a range of high-growth applications. Management has identified seven core application areas for the PCS1000 platform: data centers, energy storage, industrial electrification, emergency power systems, military forward operating bases (FOBs), remote microgrids, and construction power solutions. Across these categories, the Company is concentrating on segments where its ZVS technology can offer measurable performance and economic advantages and where customer requirements align closely with its technical capabilities and commercialization timeline. Hillcrest is strategically prioritizing customer engagements and partnerships that offer the highest commercial value and the clearest paths to market entry.

Near-term focus is expected to be on progressively advanced test bench demonstrations with potential customers, using the PCS1000 A-sample prototype. Once the Company has secured specifications from a customer, a B-sample prototype would be developed based on that customer information. That B-sample would be the foundation of certification and design for manufacturability (DfM) processes. These processes combined would take approximately 12-18 months.

The Company is also working to expand the platform's commercial relevance beyond its initial target segments. In addition to customer discussions related to grid and stationary applications, Hillcrest has entered into a memorandum of understanding (MOU) with a leading industrial partner to jointly develop customized inverter solutions based on the ZVS PCS1000 platform for advanced materials processing applications. In addition, the Company announced the receipt of a Letter of Intent (LOI) from Lenze SE, a leading European provider of industrial drive and automation solutions. The LOI reflects Lenze's intent to further evaluate Hillcrest's proprietary Zero Voltage Switching (ZVS) technology for integration into its high-power inverter product lines, with the aim of determining commercial feasibility and establishing the basis for a potential partnership.

Automotive Applications

Within the automotive sector, Hillcrest is pursuing a capital-efficient commercialization strategy centered on licensing and strategic partnerships with counterparties demonstrating clear commercial intent and defined pathways to deployment. In EVs, the traction inverter is a critical component that converts DC power from the battery into AC power for the electric motor, directly influencing efficiency, driving range, thermal performance, and system cost.

Hillcrest's ZVS technology is designed to enhance inverter efficiency while reducing thermal stress and EMI. These improvements may allow EV system designers to optimize or downsize certain drivetrain components, including battery packs, DC-link capacitors, and semiconductor devices. The Company has stated that, in certain configurations, total system-level savings could approach approximately $1,400 per vehicle.

The Company has successfully completed the first phase of a technology evaluation program with a global Tier 1 automotive supplier, validating the practical integration of its ZVS inverter technology within demanding automotive environments. Subsequent phases are expected to include additional system integration and validation within the partner's platform, representing a potential pathway toward commercialization. Hillcrest also continues to engage with automotive original equipment manufacturers (OEMs) and component manufacturers as it seeks to expand adoption of its technology through further development, licensing, and commercial discussions.

Strategic Partnerships

Strategic partnerships are central to Hillcrest's commercialization model and capital-efficient growth strategy. As a developer of advanced ZVS power conversion technology, the Company is using targeted collaborations to accelerate product validation, expand market access, secure non-dilutive funding, and support scalable manufacturing capabilities without bearing the full cost and complexity of infrastructure buildout. As part of this strategy, Hillcrest has established dedicated "Centers of Excellence" aligned with its priority markets. The Company's Vancouver laboratory has been designated as its Grid Center of Excellence, focused on renewable energy integration, energy storage systems, and data center power applications. In parallel, Systematec GmbH's facility in Germany serves as Hillcrest's Automotive Center of Excellence, supporting EV inverter development and OEM engagement across Europe.

A cornerstone of Hillcrest's technology advancement and commercialization strategy is its longstanding partnership with Systematec GmbH, a German engineering firm with deep expertise in power electronics design, system integration, and automotive-grade engineering. This collaboration has played an important role in progressing Hillcrest's proprietary ZVS technology toward commercial readiness. In December 2024, the companies expanded their relationship through an MOU that contemplates a distribution framework under which Systematec could bring Hillcrest's ZVS inverter technology to the European automotive market by leveraging its established relationships with OEMs and Tier One suppliers.

In Canada, Hillcrest has also entered into a strategic collaboration with Pasqua First Nation #79 (PFN) and Apeiron Resources Ltd. (Apeiron) to establish CleanPath Distribution Inc., an Indigenous-majority-owned entity (PFN: 51%; Apeiron: 24.5%; Hillcrest: 24.5%) focused on commercializing the Company's ZVS power conversion technology across Canada. Under the terms of the partnership, Pasqua First Nation has made a strategic C$3 million investment in Hillcrest, reflecting confidence in the Company's technology and commercialization strategy.

CleanPath's Indigenous-led structure is intended to provide access to government funding programs and support the development of key relationships with federal, provincial, and industry stakeholders. The partnership is expected to support Hillcrest's expansion into the Canadian market by leveraging Indigenous-led business networks, local manufacturing capabilities, and government-backed funding initiatives. This collaboration may also provide access to non-dilutive funding opportunities, including grants and low-interest financing, which could support up to approximately C$10 million in near-to-mid-term capital for commercialization activities, pilot projects, and the development of domestic manufacturing capacity.

Investment Rationale

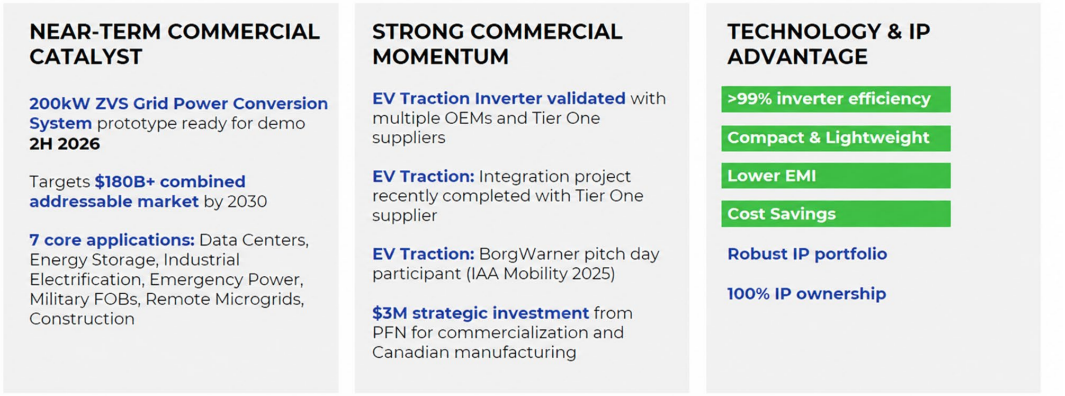
Hillcrest's investment case is supported by three core factors: a differentiated inverter technology platform with validated efficiency and EMI advantages; a commercialization strategy that now targets both nearer-term grid opportunities and longer-term automotive monetization pathways; and a partnership-driven model designed to support product development, market access, and funding flexibility.

In the near term, the Company is advancing its ZVS PCS1000 grid inverter toward a 2H 2026 demonstration, targeting seven initial applications, including data centers and energy storage. In automotive markets, Hillcrest has completed Phase 1 validation work with a global Tier 1 supplier and continues to pursue broader engagement with OEMs and component manufacturers. Underpinning these efforts is a growing technology and intellectual property foundation, together with strategic relationships intended to support European automotive market access and Canadian commercialization initiatives.

As the Company moves toward prototype demonstrations, certification efforts, and further customer validation, management believes Hillcrest is increasingly positioned to convert years of technical development into broader commercial engagement across multiple electrification markets. Figure 2 summarizes the Company's investment rationale highlights.

Figure 2

INVESTMENT HIGHLIGHTS



Source: Hillcrest Energy Technologies Ltd.

Corporate Information

Hillcrest is listed for trading on the Canadian Securities Exchange under the symbol "HEAT," on the OTCQB in the United States under the symbol "HLRTF," and on the Frankfurt Exchange under the symbol "7HI." The Company has 10 employees and is headquartered in Vancouver, B.C., Canada.

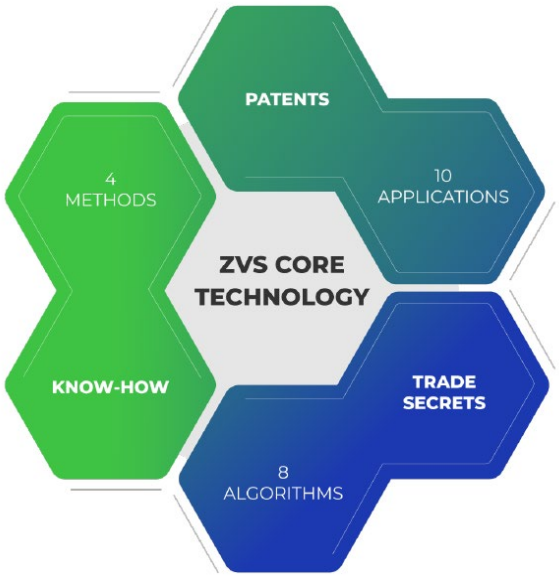
Intellectual Property

Hillcrest has built a multi-layered intellectual property (IP) strategy around its Zero Voltage Switching (ZVS) technology, designed to protect both the core architecture and the practical "how-to" required to turn the concept into commercially deployable power conversion products. The portfolio is described as intentionally broad, with protection intended to apply across multiple inverter and power conversion categories.

At the patent level, Hillcrest has indicated it has 10 patent applications pending, with several progressing through international and jurisdiction-specific filings. From a process standpoint, the Company has intentionally taken the longer route of provisional filings followed by a PCT pathway and then national phase filings, which helps to keep substantial portions of the portfolio out of the public domain for an extended period. As a result, priority dates trace back to 2021-2022, with applications only now beginning to publish. In customer diligence settings, Hillcrest expects to be able to disclose additional detail under confidentiality, which matters because published patent visibility alone may understate the depth of what has been filed.

Hillcrest is not relying on patents alone. As illustrated in Figure 3, the Company characterizes its ZVS protection as a combination of patents, trade secrets, know-how, methods, and algorithms, reflecting the reality that high-performance power electronics are often replicated through practical implementation details rather than a single "headline" invention. The Company's trade secrets cover both firmware and hardware customization, which can include control logic, tuning, and product-specific implementation choices that are difficult to reverse engineer quickly. This layered approach is framed as ZVS core technology supported by "methods" and "algorithms," alongside know-how and trade secrets, in addition to the formal patent filing program.

Figure 3
INTELLECTUAL PROPERTY PORTFOLIO



Source: Hillcrest Energy Technologies Ltd.

Importantly, Hillcrest has indicated that its patent package is intended to cover both present and future product pathways. Beyond near-term inverter and power conversion use cases, management highlighted planned coverage for DC-to-DC conversion and multi-level inverter architectures that the Company has simulated and tested in the lab, with full prototype development for those future applications potentially ahead. The Company's portfolio has been built to travel with the platform as it scales into additional categories, rather than a narrow set of filings tied only to the first commercial product.

Hillcrest's IP posture is intended to do a few things at once: create a defensive barrier that makes direct replication more difficult; support first-mover positioning if ZVS performance advantages translate cleanly into commercial products; and potentially enable monetization pathways, such as licensing, where appropriate. That said, Hillcrest's patent portfolio remains in the application stage, so the ultimate scope and enforceability will depend on prosecution outcomes and jurisdictional approvals.

Company Leadership

Hillcrest is led by a highly experienced management team with proven success in power electronics innovation and commercialization, alongside capital markets execution and public-company leadership. Biographies of its management, technical leadership, strategic advisors, and board of directors are provided in the accompanying section.

Management

Donald J. Currie, Founder, CEO, and Director

Mr. Donald Currie is the founding CEO of Hillcrest Energy Technologies. With over 30 years of experience in the energy sector, he established Hillcrest in February 2010 to create an organization that could blend his extensive financing expertise with entrepreneurial thinking. Known for his success in building trusted relationships and businesses, Mr. Currie brings a wealth of knowledge from his decades-long exposure to North American equity markets and financing of public companies. Under his leadership, Hillcrest pivoted into the clean tech sector, established an expert team with deep-rooted networks in the automotive and energy sectors and transformed an idea into commercially viable products in less than three years. Prior to founding Hillcrest, Mr. Currie contributed his expertise to various private and public ventures across the energy, mining, gaming, and technology sectors.

James Bolen, Chief Commercialization Officer

Mr. James Bolen brings more than 30 years of executive-level experience leading innovation teams from concept development to commercial success. He is the former president and CEO at Global Power Technologies USA, a global leader in ultra-reliable power systems for remote industrial architecture, where he served for more than 20 years helping to guide the company's growth evolution through various ownership structures. Mr. Bolen holds an M.B.A. from Ivey School of Business at University of Western Ontario and is a graduate of the University of Saskatchewan with degrees in electrical engineering and computer science.

Jamie L. Hogue, Chief Operating Officer

Ms. Jamie Hogue is a dynamic leader with more than two decades of diversified experience in both the private and public sectors. She drives organizational growth and excellence with her expertise in operational optimization and regulatory acumen. Throughout her career, Ms. Hogue has excelled at strategic planning, marketing and communications, financial management, and governance, consistently propelling transformative initiatives forward. She earned a Master's Degree in Public Administration and Bachelor's Degree in Economics from Arizona State University.

Daryn Gordon, Chief Financial Officer

Mr. Daryn Gordon is a Chartered Professional Accountant (CPA, CA) with more than two decades of finance and accounting experience. He started his career at global auditing firms Grant Thornton LLP and PwC Canada. For the last fourteen years, Mr. Gordon has continued to expand his expertise and knowledge by providing CFO services to Canadian companies across a variety of industries. He has a Bachelor of Accounting degree from the University of Lethbridge.

Technical Leadership

Emanuel Serban Ph.D, P.Eng, VP of Engineering

Dr. Emanuel Serban brings over two decades of experience in power electronics, renewable energy, and grid-connected systems, with a proven track record of taking innovative technologies from concept to commercial deployment. His leadership spans both industry and academia, having successfully led teams in the research, development, and commercialization of breakthrough power conversion solutions at EnerSys and Schneider Electric, while also serving as an adjunct professor at the University of British Columbia and an instructor at the British Columbia Institute of Technology.

Ari Berger, Senior Controls Engineer

Mr. Ari Berger is a distinguished expert in electric machine control technologies, systems engineering, and multi-disciplinary product design. He has more than 10 years of commercial experience with a track record of deploying new technologies and go-to-market strategies, specifically in the sector of electrification. In 2015, Mr. Berger founded NIG Systems Ltd. in Israel, which specializes in custom high performance control systems design. Prior to this, he previously worked for Bental Industries, a leading motor manufacturer. Mr. Berger holds a Master's Degree (MSc) in System Control Engineering from the Technion, Israel Institute of Technology and is an expert in real-time embedded software development and dynamics. He has also published several academic papers and won several awards, including one from Intel for his innovative solutions for the wafer industry.

Harald Hengstenberger, Managing Director, Owner & Founder, Systematec GMBH

Mr. Harald Hengstenberger is the leader of Hillcrest's technology development partner, Systematec GmbH, which is a German power electronics engineering and electromechanical component design company servicing the automotive sector. Mr. Hengstenberger is an established electrical engineer with more than 25 years of experience designing, manufacturing, testing and validating hybrid and electric vehicle powertrains.

James Hamond, Senior Technical Consultant

Coming from a background in robotics, Mr. James Hamond has developed, patented, and commercialized intellectual property in areas such lighting, audio, ADCs, DACs and high frequency soft switching. Having worked in the consumer, industrial, and defense sectors, he is a jack-of-all-trades, spanning hardware, embedded software, control and adaptive algorithms, register-transfer level (RTL), thermal management and mechanical design. Mr. Hamond has worked with soft switching systems for over 15 years, most recently as CTO and co-founder of Pre-Switch Inc.

Dr. Jalal Amini, Senior Power Electronics Engineer

Dr. Jalal Amini is a senior power electronics engineer, possessing extensive experience in power, analog, digital and embedded circuit design, schematics and PCB layout design. He also possesses superior knowledge and experience in grid applications, power quality and renewable energies. During his career, he has designed and implemented a variety of power electronic devices, including grid-connected devices such as a wind energy converter, active filters, fast chargers and energy storage systems, as well as induction motor drives and multilevel converters.

Strategic Advisors

Dan Coker, Strategic Advisor

Mr. Dan Coker is an automotive executive and pioneering entrepreneur. He served as president and CEO of Gentherm Inc. from 1996 until his retirement in 2019. During that time, he transformed the company from a small, technology development company into a global supplier of thermal electric climate-control products for the automotive industry with more than $1 billion in revenue and 15,000 employees worldwide. During the nearly 25 years as the leader of Gentherm Inc., Mr. Coker developed a keen understanding of what it takes to transform an idea in the lab into a viable product for a market that does not yet exist. Not only was he able to successfully create the product and the associated market, but his leadership capabilities also enabled Gentherm to maintain its status as an innovative market-leader for over a decade. Since retiring in 2019, Mr. Coker remains connected to the global network he built during his career and advises a select few early-stage companies on their journey through scaling and commercializing their technologies.

David Farrell, Strategic Advisor

Mr. David Farrell is a corporate director with over 25 years of corporate and investment banking experience. He has negotiated, structured, and closed more than $25 billion worth of M&A and structured financing transactions for numerous junior companies. Previously, Mr. Farrell was President of Davisa Consulting, a private consulting firm working with global junior and mid-tier companies. Prior to founding Davisa, he was Managing Director, Mergers & Acquisitions at Endeavour Financial, working in Vancouver and London. Prior to Endeavour Financial, Mr. Farrell was a lawyer at Stikeman Elliott, working in Vancouver, Budapest, and London. Mr. Farrell is a society member and has served for 12 years as a board and finance committee member of Yaletown House, a non-profit, critical-care seniors' residence in downtown Vancouver. Mr. Farrell graduated from the University of British Columbia with a B.Comm. (Honours, Finance) and an LL.B. and has received the ICD.D designation from U of T Rotman School of Management and the Institute of Corporate Directors. He is the Chair of the Compensation, Corporate Governance & Nominating Committee.

Dr. Heinz-Georg Burghoff, Commercialization Consultant

Dr. Heinz-Georg Burghoff is an automotive business and product strategist in vehicle electronics. Schooled and trained as a scientific expert in electric technologies and applied physics, Dr. Burghoff spent over 20 years with DaimlerChrysler AG, holding various management positions in passenger car development, heading up electric/electronic development for all passenger cars as well as directing battery technology and strategy. He currently operates as an independent consultant, with extensive sector expertise in product development and commercialization, financial and technical evaluation, and program implementation.

Nad Karim, VP Business Development

Mr. Nad Karim is a seasoned executive with a proven track record in technology and entrepreneurship. With over two decades of experience, he has successfully launched and managed businesses across diverse sectors, including cloud networking, electric vehicle batteries, semiconductor IP, additive manufacturing, and advanced battery technologies. Mr. Karim's entrepreneurial journey includes founding Tamba Networks, a low-latency Ethernet company acquired by Marvell in 2022, and Sakuu, a pioneering solid-state battery company that has raised over $60 million and was recently recognized by *TIME Magazine* as one of the Best Inventions of 2024. He holds a bachelor's degree in electrical engineering and an MBA.

Otmar Bitsche, European Business Development Consultant

Mr. Otmar Bitsche brings more than 30 years of experience in e-mobility and electrification infrastructure. At DaimlerChrysler, he held senior management roles overseeing battery systems, electrical powertrains, and storage systems. He joined Porsche AG in 2012 as Director of E-Mobility, where he built the company's e-mobility organization and was instrumental in developing the Taycan, 918 Spyder, and the industry's first 800-volt vehicle platform and charging infrastructure. His expertise spans high-voltage powertrains, battery systems, EV fast charging, and energy storage.

Former Chief Matthew T. Peigan, Canadian Commercialization Advisor

Matthew T. Peigan is a business development and Indigenous relations leader with over three decades of experience building economic capacity for Pasqua First Nation #79 (PFN) in Saskatchewan, where he served five terms as Chief. As the former Chair of the Pasqua First Nation Group of Companies, he has overseen the growth of a diversified portfolio spanning defense manufacturing, industrial services, and agriculture, positioning the Nation as an active partner to industry and government. He has also negotiated agreements with major energy developers and represented Indigenous interests before federal regulators, building a track record in stakeholder negotiation and government relations. Mr. Peigan now serves as Chairman of CleanPath Distribution Inc., an Indigenous-led entity leading Hillcrest's commercialization efforts in Canada, where he focuses on supporting commercialization and strengthening Indigenous and government relations.

Board of Directors

Donald J. Currie, Founder, CEO, and Director

Biography on page 8.

Michael Moskowitz, Chairman of the Board

A veteran technology executive, Mr. Michael Moskowitz has more than 25 years of leadership experience in the consumer, communications, and technology industries. He has led various companies through business and growth strategies as a leading provider of integrated technology solutions for businesses, government agencies, and consumers across the region. Before co-founding NorthStar Gaming (Ontario) Inc., Mr. Moskowitz served as CEO and Chairman at Panasonic North America. During his tenure at Panasonic, he also held roles as President of Panasonic Canada, and Panasonic Consumer Electronics Company USA, where he focused on strategic growth, profitability and diversification, including expanding Panasonic's offerings for B2B customers. He also served as President and CEO of satellite radio operator XM Canada, and President, Americas International of Palm Inc., where he managed Canada, Latin America, and the Caribbean region through a period of extensive growth. In 2021, Mr. Moskowitz joined Hillcrest Energy Technologies Ltd. as Strategic Advisor. He was previously named one of Canada's Top 40 Under 40, an award presented to exceptional leaders in their chosen fields who are shaping the country's future. Mr. Moskowitz is a member of the Board of Industry Leaders of the Consumer Technology Association, and a member of the Young Presidents Organization, the premier leadership organization of chief executives in the world. He is a former Board member of Mobilicity, Hussmann Corporation, and Panasonic Avionics Corporation. Mr. Moskowitz is the Chair of the Executive Committee.

Michael Krzus, Director

Mr. Michael Krzus is an engineer with 40 years of international energy industry experience as a director and executive in Australia, the U.S., the Netherlands, and Canada. Prior to joining Hillcrest, Mr. Krzus was the founding CEO and Director of Emerald Oil Inc., an operating oil company listed on the New York Stock Exchange and was CEO and Managing Director of Emerald Oil and Gas NL, an oil and gas company listed on the Australian Stock Exchange. During his previous career, including 22 years with Woodside Petroleum Ltd. and Shell, Mr. Krzus held various executive and management roles involving international oil and gas exploration and development, large scale LNG and gas to power projects, technology development, and geothermal. He has also served as a director of the Australian CO2CRC, a collaboration between the Australian Government, industry and universities/research institutions to further CO2 carbon capture and storage research and applications. Mr. Krzus holds a Bachelor of Science in Petroleum Engineering from Tulsa University, a Diploma in Oil and Gas Technology from the British Columbia Institute of Technology, and is a Member of the Australian Institute of Company Directors.

Robert Lambert, Independent Director

Mr. Robert Lambert is currently Deputy Chairman of Jadestone Energy Plc. Previously, he was CEO of Petra Petroleum Inc. from 2011 to 2015, Senior Independent Director of Eland Oil & Gas PLC from 2012 to 2015, and CEO of GB Petroleum Ltd from 2005 to 2010. Prior to that time, Mr. Lambert held a variety of executive management and senior operational roles with Conoco Inc. over a 25-year international career. He is a Member of the Audit Committee and the Compensation, Corporate Governance & Nominating Committee.

Thomas G. Milne, Independent Director

Mr. Thomas (Tom) Milne is a senior financial management executive with extensive international experience in energy E&P, pipelines, oil sands, and communication technology. His career roles include: chief financial officer, treasurer, investment banker, senior partner (CA firm), and foreign exchange trader. Mr. Milne has been a director of both public and private companies, including chairman of the audit committee for an AMEX-listed oil sands company. He is the interim Chair of the Audit Committee and a member of Corporate Governance & Nominating Committee.

*Raylene Whitford***,** *Independent Director*

Ms. Raylene Whitford is a finance professional with nearly 20 years of international experience in the energy sector. She has advised executive teams on capital allocation, governance and large-scale transformation initiatives, working with both publicly listed and national energy companies in the North Sea, West Africa, Latin America and the Middle East. Ms. Whitford is the founder of Canative Energy, where she advises institutional investors and corporations on Indigenous governance, rights-based risk and investment strategy. Previously, she was an equity Partner at Deloitte. She currently serves as the Chair of the Board of Governors of the First Nations University of Canada, and is the Vice-Chair of a First Nation economic development corporation. Ms. Whitford was an inaugural member of the Canadian Sustainability Standards Board. Ms. Whitford is a Fellow Chartered Accountant (ICAEW), holds an MBA from Aberdeen Business School, and is a PhD candidate at the University of Alberta. Ms. Whitford is the Chair of the Audit Committee.

Milestones

The Company is approaching a key inflection point as it transitions from foundational technology development to early-stage commercialization across multiple high-growth verticals. Over the past 12 months, Hillcrest has advanced its Zero Voltage Switching (ZVS) platform through technical validation, strategic partnerships, organizational buildout, and initial commercial engagement, positioning the Company to participate in large and rapidly expanding end markets.

Collectively, these milestones reflect a shift from proof-of-concept towards commercialization readiness. With validated technology, expanding industry engagement, and a strengthened leadership team, Hillcrest is entering a phase where strategic partnerships, development agreements, and certification processes are expected to drive the next stage of value creation.

Corporate and Strategic Development

- ***Indigenous Partnership.*** Announced a Memorandum of Understanding (MOU) with Pasqua First Nation #79 (PFN) and Apeiron Resources Ltd. to establish CleanPath Distribution Inc., an Indigenous-majority-owned entity (51% PFN) focused on commercializing Hillcrest's ZVS technology in Canada. The structure enhances access to government funding opportunities and supports domestic deployment strategies.

- ***Investor Awareness and Market Outreach.*** Entered into investor relations agreements with Martin City Studios and Empire Market Ventures to expand market visibility, investor engagement, and capital markets presence.

- ***Leadership Expansion.*** Strengthened the leadership team with key commercial and technical hires: Otmar Bitsche (VP, European Business Development), Nad Karim (VP, Business Development), and Dr. Emanuel Serban (Engineering Lead).

Technology and Product Development

- ***EV Traction Inverter Technical Validation.*** Successfully completed Phase 1 of a technology evaluation project with a global Tier 1 automotive supplier, demonstrating the adaptability of Hillcrest's technology within established automotive supply chains.

- ***Grid ZVS PCS1000 Development.*** Continued development of the ZVS PCS1000 inverter platform for applications, including data centers, energy storage, and microgrids, with architecture aligned to emerging 800V DC standards.

- ***Grid ZVS PCS1000 Target Market Expansion.*** Executed a MOU with a leading industrial user to co-develop customized ZVS inverter solutions for advanced materials processing. In addition, the Company announced the receipt of a Letter of Intent (LOI) from Lenze SE, a leading European provider of industrial drive and automation solutions, to further evaluate Hillcrest's ZVS technology for integration into its high-power inverter product lines.

Commercialization Progress

- ***Early-Stage Customer Engagements.*** Initiated discussions with multiple prospective partners across data centers, industrial applications, and energy infrastructure. The Company is targeting development-stage collaborations with customers 2-3 years from deployment, enabling joint validation, certification, and early adoption pathways.

POTENTIAL MILESTONES

Over the next 12 months, Hillcrest is expected to advance from early-stage commercialization into formal customer validation, certification processes, and initial revenue pathways. Key anticipated milestones focus on converting current engagement into structured development agreements, advancing product readiness, and expanding strategic partnerships across target markets.

Corporate and Strategic Development

- ***Expansion of Indigenous and Government-Funded Initiatives.*** Advancement of CleanPath Distribution Inc. through potential government funding awards, pilot project deployments, and expanded partnerships supporting domestic energy infrastructure projects in Canada.

Technology and Product Development

- ***PCS1000 Testing (2H 2026).*** Conduct test bench demonstrations with potential customers, using the PCS1000 A-sample prototype in real-world pilot environments, enabling the development of B-sample prototype based on each customer's requirements and feedback.

- ***PCS1000 Certification.*** Once the Company has secured specifications from a customer, the development of the B-sample would be the foundation of certification and design for manufacturability (DfM) processes. Initial certification efforts are expected to begin, with timelines typically spanning 12-18 months.

- ***EV Inverter Program Advancement (Phase 2+).*** Potential progression to subsequent phases of development with automotive partners following successful Phase 1 validation, including expanded testing, system integration, and potential commercial design-in discussions.

Commercialization Progress

- ***Execution of Development Agreements with Early-Adopter Customers.*** Conversion of current discussions into formal co-development or pilot agreements with customers in data centers, industrial electrification, or energy storage. These agreements are expected to focus on customers with deployment timelines aligned to Hillcrest's commercialization roadmap (2-3 years).

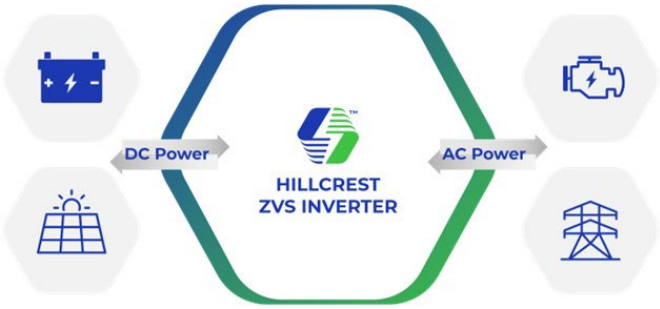
- ***Expansion into European and Global Markets.*** Leveraging new business development leadership to initiate partnerships and customer engagements in Europe and other international markets, particularly in EV infrastructure, energy storage, and grid modernization.

Core Story

Hillcrest Energy Technologies Ltd. ("Hillcrest" or "the Company") is a Canadian clean technology company focused on developing high-value, high-performance power conversion technologies and advanced digital control systems for next-generation powertrains and grid-connected renewable energy applications. The Company's core objective is to improve the efficiency, reliability, and cost structure of electric systems by enhancing one of their most critical components: the power inverter.

Figure 4

HILLCREST ZVS INVERTER



Source: Hillcrest Energy Technologies Ltd.

Power inverters are essential components in modern energy systems, converting direct current (DC) into usable alternating current (AC) and have become mission-critical infrastructure for renewable energy integration, energy storage systems, and energy grid optimization. Leveraging its proprietary technology portfolio, Hillcrest aims to improve electrification efficiency and optimize the performance of integrated electric systems across a broad range of applications, including electric vehicles, grid-tied renewable energy systems, EV charging infrastructure, data centers, energy storage solutions, and high-voltage/high-power utility-scale grid applications, as illustrated in Figure 4.

Hillcrest's proprietary Zero Voltage Switching (ZVS) technology is a combination of proprietary software and off-the shelf hardware components that leverages advanced algorithms to materially reduce switching losses while maintaining stable performance across a broad range of operating conditions. The Company has developed integrated software and hardware supporting a ZVS inverter designed to significantly minimize heat generation during the inversion process.

COMMERCIAL DEVELOPMENT STRATEGY

Hillcrest initially targeted the rapidly expanding electric vehicle (EV) market with its advanced inverter technology. In 2024, the Company conducted extensive customer demonstrations at automotive manufacturer and supplier facilities, with its ZVS traction inverter prototype achieving peak efficiencies of up to 99.7% (versus 96-98% for conventional designs).

Throughout 2025, Hillcrest completed additional comprehensive validation testing with multiple automotive original equipment manufacturers (OEMs) and Tier One suppliers demonstrating measurable performance advantages in real-world automotive environments. These successful validations have progressed into advanced commercial discussions with several global organizations, focused on pathways to monetize Hillcrest's ZVS technology within the automotive sector.

As Hillcrest advances its commercialization efforts, its strategies continue to evolve in response to global market dynamics and customer requirements. Entering 2026, the Company is at a critical inflection point where years of technological development are translating into tangible commercial opportunities across multiple high-growth markets. Hillcrest is concentrating its resources on opportunities with the highest probability of near-term revenue generation and meaningful value creation. To achieve this, the Company increased its efforts on the commercialization of its technology beyond automotive applications, and into high-value grid applications, such as data centers.

The Company is now focused on maximizing value in both of its core markets: bringing its ZVS PCS1000 products to market to address the rapidly expanding data center sector and other high-value grid applications while simultaneously monetizing its validated automotive technology through licensing and strategic partnerships with commercially attractive counterparties. By prioritizing engagements based on commercial value potential and strategic alignment, Hillcrest is positioning itself to drive near-term revenue growth, validate its commercial model, and create substantial shareholder value by reducing its commercial reliance on the slow-moving EV market.

Grid-Connected and Stationary Applications

Given longer automotive design cycles and a broader slowdown in EV demand, Hillcrest is placing greater emphasis on grid-connected and stationary applications, where market opportunities are broader and commercialization timelines are shorter. The Company is initially targeting seven core applications: data centers, energy storage, industrial electrification, emergency power, military forward operating bases (FOBs), remote microgrids, and construction. Unlike automotive programs, which are often driven by long-term volume growth projections, stationary applications demand immediate, performance-based differentiation. Customers in these sectors require demonstrably superior efficiency, reliability, and power density to remain competitive and meet evolving performance standards. Hillcrest is concentrating on markets where its ZVS technology delivers measurable economic advantages and where customer requirements align with the Company's technical capabilities and commercialization timeline.

Hillcrest is advancing development of its ZVS PCS1000 (200kW|1000V) platform, while strategically prioritizing customer engagements and partnerships that offer the highest commercial value and the clearest paths to market entry. Development is progressing toward A-sample prototype demonstrations targeted for 2H 2026, supporting applications including data centers, energy storage systems, and EV charging infrastructure.

Automotive Applications

In automotive applications, the Company is prioritizing licensing and partnership discussions with parties demonstrating strong commercial commitment and clear paths to technology deployment.

The Company has successfully completed the first phase of a technology evaluation program with a global Tier 1 automotive supplier, consistently ranked among the top 15 largest by revenue globally. This evaluation phase is focused on assessing the potential benefits of integrating Hillcrest's ZVS technology into the supplier's next-generation electric vehicle inverter applications. Subsequent phases are expected to include further system integration and validation within the partner's platform, representing a potential pathway toward commercialization. The Company believes that completion of this phase with the Tier 1 automotive supplier strengthens its strategic position by demonstrating its technology's practical integration into demanding automotive applications. In addition, Hillcrest continues to engage with multiple automotive industry participants to expand partnership opportunities and advance adoption of its technology.

These strategic developments position Hillcrest to accelerate commercialization across both automotive and stationary energy markets. The Company is actively engaging system integrators and OEMs in both sectors, laying the groundwork for revenue-generating partnerships and broader market adoption.

STRATEGIC PARTNERSHIPS

Strategic partnerships are central to Hillcrest's commercialization model and capital-efficient growth strategy. As a developer of advanced ZVS power conversion technology, Hillcrest leverages targeted collaborations to accelerate product validation, expand market access, secure non-dilutive funding, and scale manufacturing without assuming the full burden of infrastructure buildout. This partnership-driven approach enables the Company to align with organizations that provide complementary strengths, whether in engineering, distribution, government relations, Indigenous economic development, or sector-specific integration expertise, thereby shortening time to revenue while preserving balance sheet flexibility.

Hillcrest's partnership strategy is designed to maximize commercial leverage while retaining ownership of its core intellectual property. The Company prioritizes alliances that provide clear pathways to market entry, sector-focused exclusivity, and access to strategic capital pools aligned with electrification, grid modernization, and AI-driven infrastructure growth. By structuring collaborations that combine technology licensing, co-development, distribution, and manufacturing frameworks, Hillcrest positions itself to monetize its ZVS platform across automotive and stationary energy markets while mitigating execution risk and concentrating internal resources on innovation and high-value technical development.

The pool of potential strategic partners includes financial entities, Tier 1 suppliers, utility operators, and companies positioned as first movers or exclusive adopters of the ZVS technology within particular markets. These strategic initiatives are designed to accelerate the commercial deployment of ZVS technology and maximize market penetration in response to the rapidly changing global electrification landscape.

Centers of Excellence

As Hillcrest transitions from core technology development to commercial deployment, it is streamlining operations by establishing dedicated hubs for the Company's priority markets, named "Centers of Excellence," where it concentrates technical leadership and application-specific expertise. The Company has designated its Vancouver laboratory as the Grid Center of Excellence, focused on renewable energy integration, energy storage systems, and data center power applications. In parallel, Systematec GmbH's facility in Germany serves as Hillcrest's Automotive Center of Excellence, supporting EV inverter development and OEM engagement across Europe

The Vancouver Grid Center of Excellence centralizes engineering efforts related to stationary and grid-connected power conversion solutions. This includes renewable generation integration, battery energy storage systems, and high-density data center applications. The addition of senior engineering talent in grid-focused power electronics is expected to accelerate product refinement, validation, and customer-specific integration. Management views this consolidation as a critical step in advancing scalable, high-efficiency solutions tailored to rapidly expanding electrification and AI-driven infrastructure markets.

In Germany, Systematec's Automotive Center of Excellence continues to advance Hillcrest's ZVS technology for traction inverter applications. The recent addition of an experienced firmware developer with deep expertise in semiconductor-based control systems has expanded Hillcrest's automotive platform capabilities, enabling support for both traditional microcontroller architectures and advanced control solutions. This enhancement strengthens the Company's ability to meet diverse OEM requirements while reinforcing its position in next-generation electric vehicle power electronics.

Systematec GmbH

A cornerstone of Hillcrest's technology development and commercialization strategy has been its longstanding strategic partnership with Systematec GmbH. This collaboration has played a pivotal role in advancing Hillcrest's ZVS technology toward commercial readiness and market entry.

Systematec GmbH is a privately-owned German power electronics engineering and electromechanical component design company servicing the German automotive industry. The company specializes in the development, production, integration and testing of power electronics and electromechanical components for hybrid and electric vehicles. The Systematec team has over 25 years of experience in powertrain component engineering for hybrid and electric vehicles, from discovery and definition phase, through design and manufacturing, to integration, testing and validation.

Hillcrest and Systematec first formalized their relationship in April 2021 through a five-year Technology Collaboration Agreement. Under this structure, technical teams from both companies jointly manage development activities that leverage Hillcrest's proprietary control software and ZVS platform alongside Systematec's power electronics design and prototype capabilities. Importantly, Hillcrest retains ownership of all intellectual property developed through the collaboration, positioning the Company to fully capture future commercial value.

Systematec's engineering resources have been instrumental in advancing key technology milestones. For example, Systematec's facilities and expertise have been used to manufacture ZVS-enabled silicon carbide (SiC) power module prototypes and integrate them into Hillcrest's traction inverter systems, efforts that accelerate product maturation and validate performance in real-world conditions.

In December 2024, the companies signed a MOU to deepen their partnership. This expanded collaboration contemplates a potential distribution agreement under which Systematec could distribute Hillcrest's ZVS inverter technology across the European automotive market, leveraging Systematec's established relationships with automotive OEMs and Tier One suppliers.

The Systematec alliance provides Hillcrest with a credible engineering and market entry partner in Europe, an essential gateway to one of the world's largest automotive markets. By combining world-class engineering, manufacturing support, and regional sales channels, the partnership significantly enhances Hillcrest's ability to commercialize its high-efficiency power conversion solutions, especially in electric vehicle and adjacent electrification markets. Figure 5 provides a summary of Hillcrest's partnership with Systematec.

Figure 5

SYSTEMATEC PARTNERSHIP

Source: Hillcrest Energy Technologies Ltd.

Pasqua First Nation and Apeiron Resources Ltd

In October 2025, Hillcrest announced a strategic collaboration with Pasqua First Nation #79 (PFN) and Apeiron Resources Ltd. (Apeiron) to establish an Indigenous-majority-owned entity focused on commercializing Hillcrest's ZVS power conversion technology across Canada. The initiative targets energy storage systems, AI data centers, remote microgrids, and other critical infrastructure applications. PFN's direct investment of C$3 million into Hillcrest demonstrates confidence in both the technology and business model. The collaboration is actively pursuing additional operating capital through government grants and qualified investment entities to create non-dilutive funding pathways supporting Canadian commercialization activities.

Under the collaboration framework, in March 2026 the parties announced the operationalization of CleanPath Distribution Inc. (CleanPath), an Indigenous-majority-owned Canadian corporation (PFN: 51%; Apeiron: 24.5%; Hillcrest: 24.5%) to pursue funding opportunities and to support the commercialization of Hillcrest's ZVS power conversion technology in Canada. CleanPath's Indigenous-led structure, anchored by PFN's majority ownership, is intended to provide access to government funding programs and facilitate the development of key relationships with federal, provincial, and industry stakeholders.

The partnership is expected to support Hillcrest's expansion into the Canadian market by leveraging Indigenous-led business networks, local manufacturing capabilities, and strategic market relationships across Canadian industrial, military, and renewable energy sectors. This collaboration may also provide access to a range of non-dilutive funding opportunities, including government grants, low-interest financing, and manufacturing incentives, which could support up to approximately C$10 million in near-term capital for commercialization activities, pilot projects, and the development of domestic manufacturing capacity. Hillcrest retains responsibility for the development and deployment of ZVS technology and will be compensated for services provided to CleanPath under negotiated terms.

Pasqua First Nation #79 and Apeiron

Pasqua First Nation #79 is a **Treaty First Nation** in Saskatchewan, Canada. Pasqua First Nation has established a wholly-owned entity, Pasqua First Nation Group of Companies (PFNGC), through which it conducts various business investments and economic development activities. Apeiron Resources Ltd. is a Métis, First Nation, and Native American-owned Certified Indigenous Business focused on strengthening communities through sustainable socio-economic partnerships. The company supports Indigenous economic development by securing government funding, providing fuel and energy solutions, delivering governance and skills training services, and building trusted relationships between non-Indigenous organizations and Indigenous Nations.

Strategic Benefits

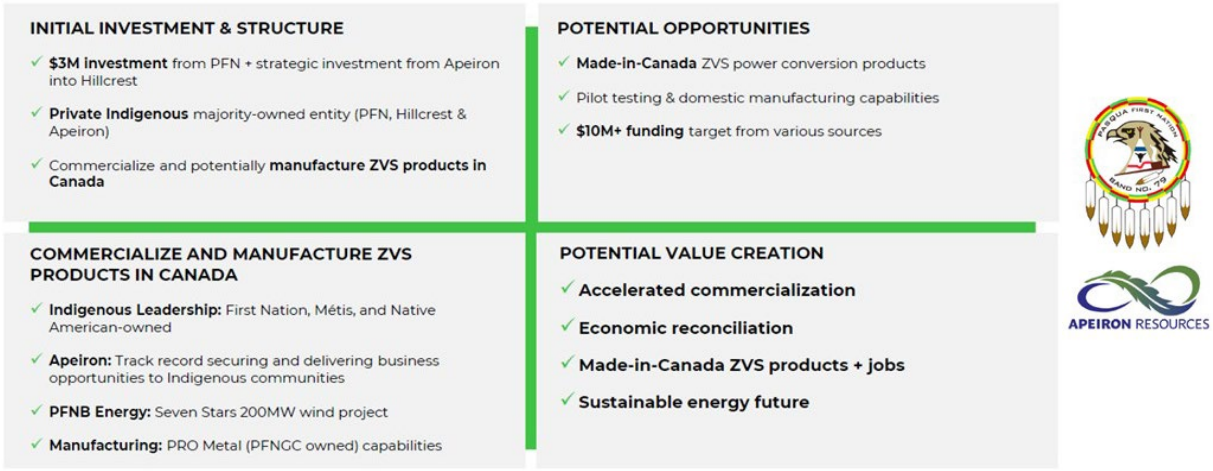
PFN brings established networks in Saskatchewan's industrial, resource, and energy sectors, while Apeiron contributes expertise in Indigenous business development and government program navigation. PFNGC operates PRO Metal, a metal fabrication and manufacturing subsidiary, presenting opportunities for local production of ZVS products. Indigenous-led collaborations are increasingly central to Canada's clean energy infrastructure, with nearly 20% of new clean electricity projects developed in partnership with Indigenous communities (Source: Environment and Climate Change Canada, 2025). Notably, PFN is a partner in the Seven Stars Energy Project, a 200 MW wind initiative with Enbridge, projected to provide emissions-free power to over 100,000 Saskatchewan homes by 2027.

Hillcrest's Indigenous-led partnership provides both financial stability and strategic market access, positioning the Company to pursue multiple Canadian funding programs and advance commercialization of its ZVS technology. This initiative complements Hillcrest's broader global strategy, creating diversified revenue pathways in automotive, stationary energy, data centers, and critical infrastructure applications, while reinforcing the Company's leadership in ultra-efficient, high-power density inverters.

PFN's active involvement in large-scale renewable initiatives, including participation in a proposed 250 MW solar development in Alberta, illustrates the type of infrastructure projects that could provide deployment pathways for Hillcrest's ZVS-enabled power conversion systems (PCS). Additionally, Apeiron's leadership maintains affiliation with the Turtle Mountain Band of Chippewa Indians, a federally recognized tribe in North Dakota with experience in energy, infrastructure, and technology-related initiatives. As a sovereign tribal government, Turtle Mountain participates in federal procurement programs and has a documented contracting presence. A related tribally owned enterprise, Chippewa Sustainable Solutions provides services spanning IT modernization, logistics, environmental and energy solutions, and construction, with potential access to U.S. federal and Department of Defense contracting channels, including 8(a) sole-source pathways. Collectively, these relationships enhance Hillcrest's access to Indigenous-led infrastructure projects, government-supported clean energy initiatives, and strategic procurement ecosystems across North America. Figure 6 (page 21) highlights the key aspects of the Company's partnership with Pasqua First Nation and Apeiron.

Figure 6

PASQUA FIRST NATION AND APEIRON RESOURCES PARTNERSHIP



Source: Hillcrest Energy Technologies Ltd.

Funding and Licensing

The venture with PFN and Apeiron is actively pursuing at least C$10 million in operating capital through grants, loans, and guarantees from the Government of Canada and Government of Saskatchewan, as well as investments from other qualified investment entities. This funding is expected to support CleanPath's commercialization activities, pilot testing, and made-in-Canada manufacturing capabilities. Hillcrest may license its ZVS technology to CleanPath for building, assembling, testing, and manufacturing ZVS products, with terms and fees to be agreed upon. Future expansion to markets outside of Canada may also be considered. The pursuit of additional operating capital through government grants and qualified investment entities creates additional funding pathways to support commercialization activities.

MARKET OPPORTUNITY

Hillcrest is well positioned to execute on near-term commercialization priorities, with three differentiation factors that provide the Company with a positive competitive position: (1) proven technology backed by extensive validation that delivers measurable performance advantages across multiple applications; (2) diverse market access spanning automotive, data centers, renewable energy, and industrial applications, which reduces dependence on any single sector while creating multiple pathways to revenue generation; and (3) strategic collaborations from the Indigenous-led initiative with Pasqua First Nation and Apeiron, which accelerates the path from technology to revenue.

The global power inverter market (Figure 7) represents a large and expanding opportunity for advanced power conversion technologies. The market was valued at approximately $61.4 billion in 2025 and is projected to grow to $141.4 billion by 2034, reflecting a compound annual growth rate (CAGR) of approximately 9.0% (Source: Fortune Business Insights' *Power Inverter Market Size, Share & Industry Analysis, forecast 2026-2034*, 2025).

Figure 7

POWER INVERTER MARKET

Source: Fortune Business Insights.

Growth is being driven by rising global electricity demand, accelerating renewable energy adoption, and expanding electrification across residential, commercial, industrial, and transportation sectors. Simultaneously, technological advancements are improving inverter efficiency, durability, power density, and intelligent monitoring capabilities, raising performance standards across the industry.

The electric vehicle market represents an additional high-growth segment within the broader inverter landscape. In EVs, traction inverters convert stored battery energy into AC power for electric motors, making them central to vehicle performance and efficiency. The rapid global expansion of EV production, charging infrastructure, and innovations such as vehicle-to-grid (V2G) capabilities are driving demand for next-generation inverter technologies with superior efficiency, thermal management, and electromagnetic compatibility (Source: Global Market Vision's *Global Power Inverters Market*, 2024).

More broadly, the global power conversion market is benefiting from converging structural drivers: electrification mandates, AI-driven data center expansion, renewable energy deployment, and industrial decarbonization. These trends are increasing the need for higher efficiency, lower loss, and lower EMI power conversion systems across both automotive and stationary applications. Hillcrest's ZVS technology is positioned at the intersection of these growth vectors, targeting applications where incremental efficiency gains translate directly into measurable economic and performance advantages.

Grid-Connected Market Opportunities

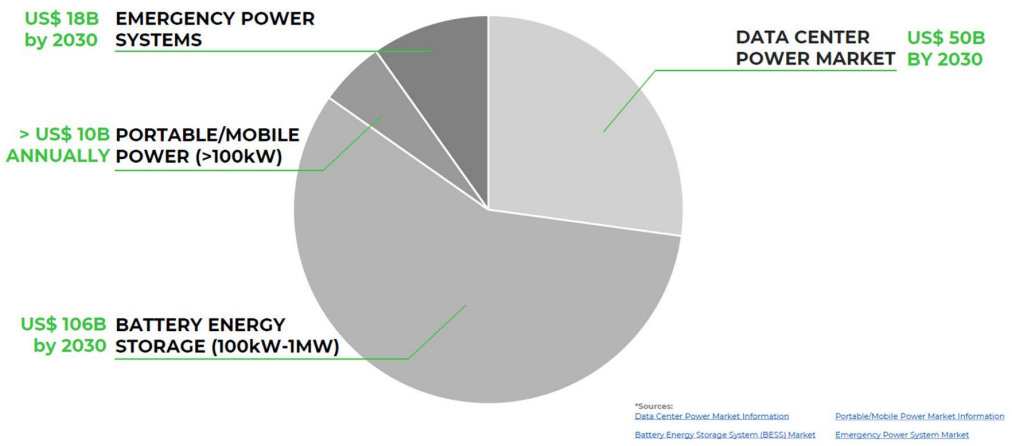
Hillcrest's advancement of its ZVS PCS1000 platform significantly expands the Company's addressable market beyond automotive applications into grid-connected and stationary energy sectors. The PCS1000 enables entry into high-growth verticals, including data centers, battery energy storage systems (BESS), industrial electrification, emergency backup power, military forward operating bases (FOBs), remote microgrids, and construction power systems. This strategic expansion diversifies Hillcrest's revenue pathways while positioning the Company within infrastructure segments experiencing structural, long-term growth.

The data center power market is projected to reach approximately $50 billion by 2030, driven by AI infrastructure expansion requiring up to 200kW per rack with ultra-low EMI and exceptional reliability standards (Source: MarketsandMarkets' *Data Center Power Market*, 2025).

Battery energy storage systems in the 100kW-1MW range represent a market expected to exceed $100 billion by 2030, reflecting growing grid stabilization and renewable integration needs (Source: MarketsandMarkets' *Battery Energy Storage System (BESS) Market Size Share Analysis*, 2025). Emergency power systems are projected to reach approximately $18 billion by 2030, while portable and mobile power applications above 100kW represent more than $10 billion in annual opportunity, spanning remote industrial operations, construction, military deployments, and disaster response. Figure 8 provides an overview of select grid power market opportunities.

Figure 8

GRID POWER OPPORTUNITIES



Source: Hillcrest Energy Technologies Ltd.

Hillcrest's ZVS technology provides differentiated performance advantages across these markets. Efficiency exceeding 99% compares favorably to conventional inverters operating in the 96-98% range, translating directly into reduced thermal losses and lower operating costs. Ultra-low EMI addresses mission-critical requirements in sensitive environments such as data centers, while reducing filtering and shielding complexity across applications. Higher switching frequencies enable improved waveform quality with lower total harmonic distortion, and the elimination of switching losses supports materially higher power density, potentially reducing capacitor size by up to 50% and filter size by up to 60%, allowing for more compact, cost-efficient system designs.

Canada's Clean Energy Market

The Company's partnership with Pasqua First Nation and Apeiron materially expands its access to Canada's rapidly growing clean energy and infrastructure markets. Canada's clean energy capacity is projected to increase from approximately 115 GW to 149 GW by 2030, with energy storage capacity expected to expand from roughly 1 GW currently to 12-16 GW by 2035, representing more than C$143 billion in cumulative investment opportunities (Source: Renewables Association of Canada's *Canadian Renewable Energy Market Outlook,* 2025). In parallel, the Canadian Federal government has committed approximately C$93 billion in Clean Economy Investment Tax Credits through 2034, including refundable credits of up to 30% for qualifying clean technology investments (Source: Canada Revenue Agency). Wind, solar, and storage are expected to account for more than 70% of new electricity capacity additions through 2050. Indigenous-led partnerships are playing an increasingly central role in this expansion, with Indigenous communities participating in nearly 20% of Canada's clean electricity infrastructure development (Source: *Environment and Climate Change Canada*, 2025).

TECHNOLOGY

INVERTER OVERVIEW

Hillcrest has developed a proprietary high-efficiency inverter (HEI) platform designed to materially reduce switching losses in power conversion systems. An inverter is an electronic device that converts direct current (DC) into alternating current (AC). DC electricity flows in one direction and is typically generated by batteries, solar panels (photovoltaic modules), or other energy storage systems. AC electricity, by contrast, periodically reverses direction and is the standard form of power supplied by electrical grids and used by most household and industrial equipment. In practical terms, inverters "invert" electrical polarity, transforming low-voltage DC power into grid-compatible AC power (commonly 120V or 240V), enabling renewable energy systems, battery storage, and electric vehicles to interface with conventional electrical infrastructure.

Technically, inverters perform this conversion using high-speed electronic switching devices, such as transistors, combined with control algorithms, modulation techniques, magnetics, and filtering components. These switching circuits rapidly turn DC input on and off to synthesize an AC waveform. Advanced inverters incorporate digital control systems to regulate voltage, frequency, waveform quality, and protection features. As power electronics have evolved, inverters have become more compact, higher performing, and increasingly software-defined, enabling intelligent grid interaction and system optimization.

Efficiency and Performance Considerations

Efficiency is one of the most critical performance metrics for inverter systems. It represents the percentage of input DC energy that is successfully converted into usable AC power. Conventional high-quality inverters typically achieve peak efficiencies in the 90%-98% range, with losses occurring primarily during switching and conduction processes. Even small improvements in efficiency can translate into significant energy savings, particularly in high-power or continuous-duty applications such as data centers, grid-scale storage, and industrial electrification.

Beyond raw efficiency, performance factors, such as electromagnetic interference (EMI) and thermal management, are equally important. Cleaner waveforms reduce stress on downstream equipment, while lower EMI is critical in sensitive environments such as data centers, medical systems, and defense applications. Advances in semiconductor materials, switching architectures, and control algorithms continue to push inverter performance toward higher efficiencies, smaller form factors, and improved reliability.

Applications Across Electrification Markets

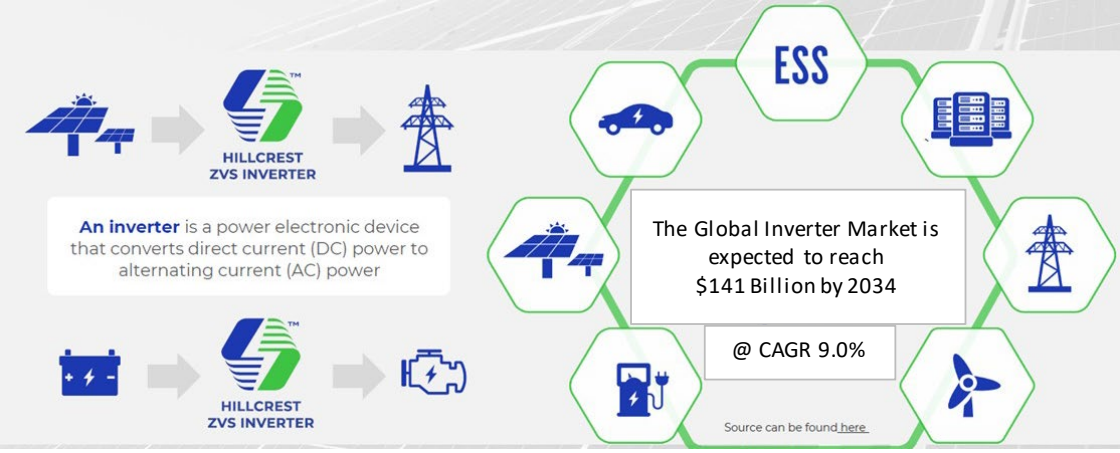
Inverters are foundational components across the modern electrification landscape, enabling the efficient conversion and management of electrical power across a wide range of applications. In residential and commercial solar systems, inverters convert the DC generated by photovoltaic panels into AC suitable for household use and grid integration. In battery energy storage systems, inverters manage bidirectional power flows, converting stored DC energy into AC electricity for consumption and, in many configurations, converting AC back into DC for storage. These capabilities make inverters essential to the effective operation of distributed energy systems and modern power infrastructure.

In the transportation sector, electric vehicles rely on inverters to convert DC energy stored in batteries into AC power to drive electric motors. Industrial applications similarly depend on inverters for motor drives, automation systems, and electrified manufacturing processes. In mission-critical environments, including data centers, hospitals, telecommunications networks, military installations, and remote microgrids, inverters are integral components of uninterruptible power supply (UPS) systems and distributed power architectures. They are also central to renewable energy technologies, such as wind and solar power, where electricity generated by renewable sources must be converted and conditioned before it can be delivered to the grid.

As global electrification accelerates, driven by renewable energy deployment, grid modernization, the rapid expansion of AI-driven data infrastructure, and the electrification of transportation, the inverter has emerged as a core enabling technology. Positioned at the intersection of energy generation, storage, distribution, and end-use consumption, advanced power conversion systems are increasingly critical to the performance and efficiency of the broader energy ecosystem. Figure 9 provides an overview of inverter technology and key application areas.

Figure 9

POWER INVERTER



Source: Fortune Business Insights.

Within this landscape, Hillcrest is developing an inverter platform designed to address multiple high-growth electrification markets. In transportation, high-efficiency traction inverters are essential for electric vehicles, where improved conversion efficiency can translate into longer driving range, better battery utilization, and reduced thermal management requirements.

Beyond transportation, the Company is targeting stationary and grid-connected applications where power conversion efficiency and reliability are increasingly important. These include renewable energy systems, battery energy storage installations, electric vehicle charging infrastructure, and industrial electrification. In such applications, incremental improvements in efficiency can translate into significant operating cost reductions over the lifetime of the system.

Additional potential deployment opportunities include data center power systems, microgrids, military and remote power installations, and utility-scale grid infrastructure. These sectors place increasing emphasis on high-efficiency power conversion, low electromagnetic interference, and compact system design areas where Hillcrest's ZVS architecture can deliver performance advantages. As electrification expands across transportation, energy, and industrial sectors, advanced inverter technologies that enhance efficiency and reduce system complexity are expected to play an increasingly important role in next-generation power systems.

HILLCREST'S HIGH-EFFICIENCY INVERTER (HEI) PLATFORM

Hillcrest is focused on creating shareholder value through the development and ownership of proprietary power-electronics intellectual property that supports the accelerating global shift toward electrification. The Company's core innovation is a high-efficiency inverter (HEI) platform designed to materially improve the performance of electric power conversion systems used in electric vehicles, renewable energy infrastructure, charging systems, energy storage platforms, and high-voltage grid applications. By targeting one of the most fundamental components of electrified systems—the power inverter—Hillcrest seeks to enable higher efficiency, lower system costs, and improved reliability across a wide range of energy and mobility applications.

Power inverters are central to modern electrification. Despite decades of development, most commercial inverters still rely on “hard-switching” architectures that generate switching losses during the rapid on/off transitions. These losses produce heat, constrain switching frequency, increase cooling requirements, and contribute to electromagnetic interference (EMI), insulation stress, and reduced efficiency, particularly at partial loads common in real-world operating conditions. As electrification requirements increase globally, improving inverter efficiency and power density has become a critical system-level challenge.

Zero Voltage Switching (ZVS) Technology

Hillcrest has developed a proprietary inverter architecture based on a combination of proprietary software and off-the-shelf hardware components that leverages advanced algorithms to precisely time switching events so that semiconductor devices transition when voltage across the switch approaches zero. By eliminating the voltage present during switching transitions, the system significantly reduces switching losses that traditionally occur in conventional inverter designs.

The Company’s technology platform is able to maintain stable operation across wide load conditions while preserving safe operating margins. Laboratory testing conducted in collaboration with Systematec GmbH has demonstrated meaningful improvements at both the inverter level and full drive-system level. Experimental results indicate that the technology can reduce inverter switching losses by as much as 70%, enabling peak efficiencies approaching or exceeding 99% under certain conditions.

The elimination of switching losses allows the inverter to operate at higher switching frequencies, which produces cleaner output waveforms with lower **total harmonic distortion (THD)**. Higher switching frequencies also reduce the size requirements for passive components, such as capacitors and filters, enabling more compact system designs and improved power density. In addition, lower switching stress reduces heat generation and can significantly decrease cooling requirements, an important factor in electric vehicle powertrains and high-power industrial systems.

ZVS and Electromagnetic Interference (EMI)

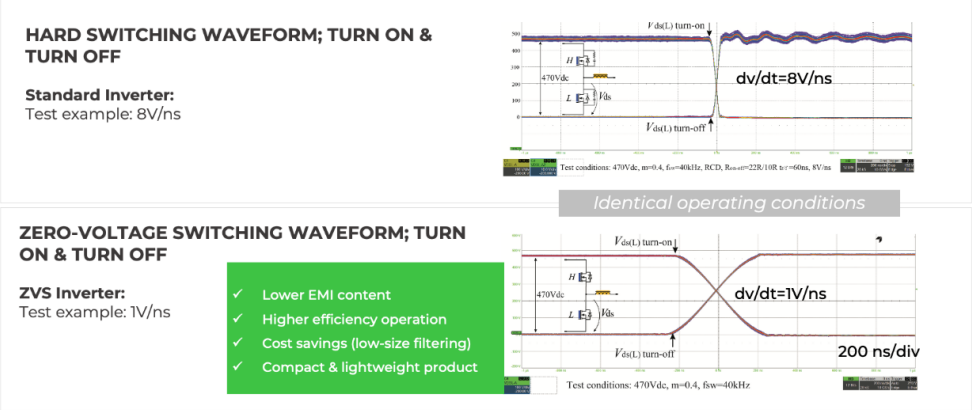
As power electronics continue to evolve with the adoption of wide-bandgap semiconductors, engineers face a growing challenge: achieving higher performance while meeting increasingly stringent EMI standards and maintaining cost-effective system designs. EMI remains one of the most persistent obstacles in inverter development. Conventional switching approaches generate significant electromagnetic noise, requiring complex filtering, shielding, and design iterations to meet electromagnetic compatibility (EMC) certification requirements. These mitigation measures add cost, increase system complexity, and extend development timelines. Excessive electromagnetic emissions can also degrade signal integrity and interfere with nearby electronic systems, making EMI management a critical aspect of modern power electronics design.

Comparative testing under identical operating conditions demonstrates the potential advantages of Hillcrest’s ZVS technology (Figure 10, page 27). Results show meaningful reductions in EMI generation, allowing systems to achieve compliance with reduced filtering requirements while maintaining high performance.

Beyond improved EMC performance, the results point to broader system-level benefits. Reduced filtering and shielding requirements simplify overall system architecture and can materially lower component costs. At the same time, lower inherent EMI reduces the number of design iterations typically required to achieve compliance, which can shorten development cycles and accelerate time-to-market.

Figure 10

ZVS COMPARISON



Source: Hillcrest Energy Technologies Ltd.

The reduction in filter size also supports higher power density, enabling more compact inverter designs, an important advantage in applications where space and thermal constraints are critical. In addition, the underlying technology can be deployed across multiple power electronics applications, providing a scalable approach to managing EMI while improving overall system efficiency. Taken together, these findings reinforce the industry's shift toward solutions that address performance and compliance challenges simultaneously. Zero-Voltage Switching (ZVS) offers a pathway to improve inverter performance while simplifying one of the most complex aspects of power electronics design.

Competitive Advantages

Hillcrest's ZVS inverter technology offers several potential performance advantages relative to conventional hard-switching architectures:

- *Higher efficiency.* By eliminating switching losses, the platform can achieve efficiencies above 99%, compared with typical inverter efficiencies of approximately 96-98%. Even small efficiency improvements can generate significant system-level energy savings in high-power applications.

- *Lower electromagnetic interference (EMI).* Reduced voltage stress and smoother switching transitions substantially decrease EMI, a major challenge in modern high-frequency power electronics. Lower EMI can reduce filtering and shielding requirements and improve system reliability.

- *Improved thermal performance.* Reduced switching losses generate less heat, which can lower cooling requirements and extend component life.

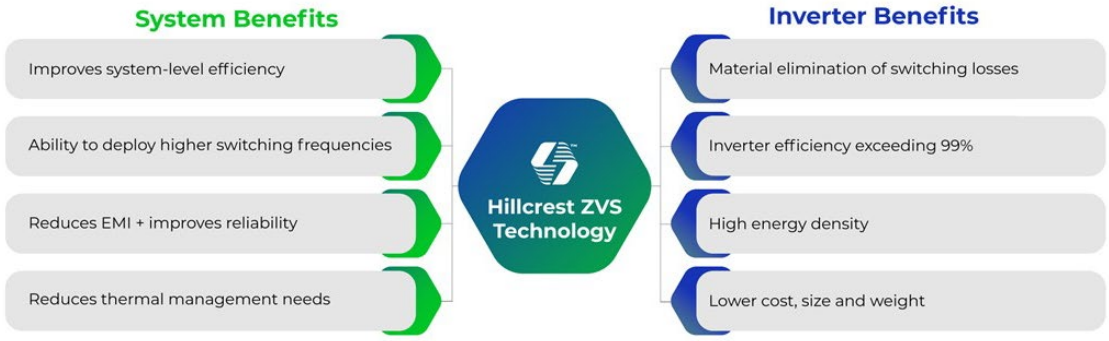
- *Higher power density.* Operation at higher switching frequencies enables smaller passive components and more compact inverter designs, improving overall system power density and potentially reducing cost.

- *Compatibility with advanced semiconductors.* The technology is designed to complement modern wide-bandgap semiconductors such as silicon carbide (SiC), which enable higher switching speeds but can introduce EMI and thermal challenges when used in traditional architectures. Hillcrest's system-level optimization addresses many of these issues.

Together, these attributes position the Company's ZVS technology as a potential step-change improvement in inverter performance, particularly in applications where efficiency, thermal management, and power density are critical design constraints. Figure 11 (page 28) provides an overview of the benefits of Hillcrest's ZVS technology.

Figure 11

ZVS TECHNOLOGY BENEFITS



Source: Hillcrest Energy Technologies Ltd.

ZVS THIRD PARTY EVALUATION AND TESTING

Independent validation is a critical component of Hillcrest commercialization strategy. As the Company advances its proprietary inverter platform from development toward commercial deployment, demonstrating measurable performance improvements through third-party testing helps validate the technical advantages of its ZVS architecture and build credibility with potential customers, partners, and system integrators. Because power conversion systems are central components in electric vehicles, renewable energy infrastructure, and grid-connected applications, OEMs and engineering teams typically require extensive independent validation before integrating new power electronics technologies into production systems.

Hillcrest's testing program has therefore focused on quantifying the system-level benefits of its inverter technology, particularly in areas that represent key challenges for modern power electronics. Conventional inverter architectures experience switching losses that generate heat, limit switching frequency, and increase cooling requirements. These losses reduce overall system efficiency and contribute to EMI, which can affect system stability, require additional filtering, and increase overall hardware complexity. Hillcrest's ZVS technology is designed to address these limitations by eliminating switching losses, enabling higher switching frequencies, improving power quality, and reducing EMI, potentially leading to smaller filters, lower cooling requirements, and improved overall system performance.

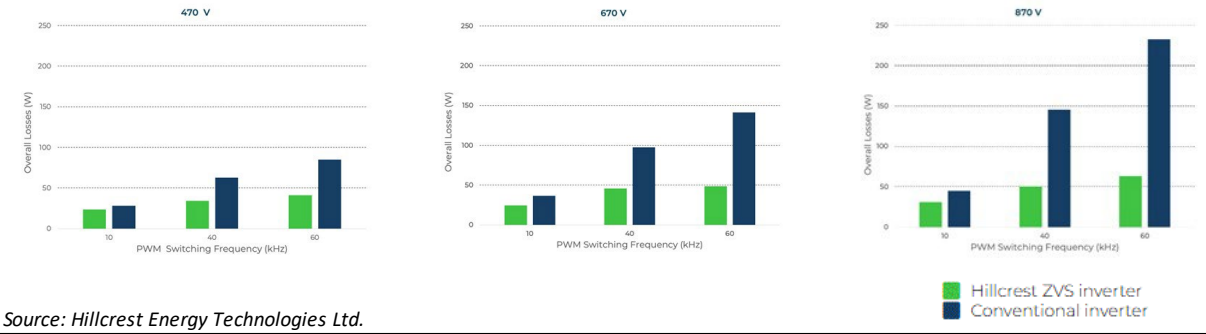
To support these claims, the Company has published four detailed white papers evaluating the performance and system implications of its inverter technology, including "Evaluation of the Hillcrest High Efficiency Inverter and Implications of its Use in a Drive System" (originally released in 2022, revised in May 2025), which examines the performance of Hillcrest's inverter in electric drive applications, including impacts on system efficiency and powertrain operation; and "Impact of ZVS on AC Filters Performance in Grid-Connected Inverters" (July 2025), which evaluates how the technology influences AC filter performance in grid-connected systems, highlighting potential reductions in filter size and improvements in electromagnetic compatibility. Together, these publications provide technical validation of the Company's approach and help illustrate the broader system-level benefits that high-efficiency, low-EMI inverter architectures may deliver across transportation, renewable energy, and grid infrastructure applications. A summary of both white papers, with key results, is provided in the accompanying section.

Evaluation of the Hillcrest High Efficiency Inverter and Implications of its Use in a Drive System

This paper examines the performance of Hillcrest's proprietary inverter technology. The study evaluates the Company's high-efficiency inverter (HEI), a new class of ZVS inverter designed to materially reduce switching losses and improve system-level performance in electric power conversion applications. Experimental testing shows that in a three-phase, two-level inverter configuration, Hillcrest's architecture can reduce total inverter losses by as much as 70%, with losses in the Hillcrest inverter remaining relatively flat as switching frequency increases, unlike conventional designs where losses scale steeply with frequency (Figure 12).

Figure 12

INVERTER LOSSES



Source: Hillcrest Energy Technologies Ltd.

By eliminating switching losses, the technology enables operation at significantly higher switching frequencies without the thermal penalties that typically constrain traditional inverters. Higher switching frequencies improve output power quality, reduce total harmonic distortion (THD), and allow the use of smaller DC-link capacitors, contributing to increased power density. Testing also demonstrated lower oscillating current on the DC-link, further reducing capacitance requirements. In addition, the inverter significantly lowers **dV/dt** across the main power switches without increasing losses, helping protect motor windings and cabling from insulation stress while reducing EMI.

Beyond component-level improvements, the white paper highlights meaningful system-level benefits. Testing performed on an 80 kW electric-vehicle-type motor in a traction drive test bench showed that higher switching frequencies enabled by the Hillcrest inverter can improve overall drive system efficiency by up to approximately 13%-14% at partial load conditions representative of typical urban driving. Higher frequency operation also reduced AC and DC current ripple, lowered torque ripple for smoother motor operation, and decreased motor iron losses. These improvements may enable smaller cooling systems, reduced DC-link capacitor banks, higher power density, and improved component lifetime, ultimately lowering both capital and operating costs in electrified systems.

Experimental testing demonstrated that conventional inverters were unable to operate at higher switching frequencies such as 60 kHz due to excessive thermal losses, whereas the Hillcrest architecture maintained comparatively stable losses as switching frequency increased. At a test condition of 870 V DC-link and 5 A load, inverter losses were reduced from 232 W in a conventional design to 65 W, illustrating the potential for substantial efficiency improvements.

Overall, the white paper concludes that Hillcrest's software-controlled ZVS architecture represents a meaningful advancement in inverter design. By reducing switching losses and enabling efficient high-frequency operation, the technology addresses key constraints in modern power conversion systems. These characteristics create potential advantages in applications including electric vehicles, renewable energy systems, battery energy storage, industrial electrification, and high-power grid infrastructure, where improvements in efficiency, thermal performance, and system size can deliver significant economic and operational benefits.

Conclusion and Potential Impact

The white paper supports the view that Hillcrest's inverter architecture represents a potential step-change improvement rather than an incremental optimization of existing designs. By reducing switching losses and enabling efficient operation at higher switching frequencies, the technology addresses a key bottleneck in modern electrification system design. These improvements support higher power density, reduced cooling requirements, improved reliability, and lower total system cost.

From an investment perspective, the findings are supported by quantified laboratory testing that demonstrates measurable performance improvements under controlled conditions. The Company's technology differentiation is driven largely by software-controlled switching algorithms that can operate on standard microcontrollers, avoiding reliance on specialized or exotic hardware. Additionally, the results highlight system-level benefits beyond component-level gains, including drive efficiency improvements of up to approximately 14%, as well as reductions in cooling requirements, system costs, and mechanical stress on components. ZVS also offers a thermal advantage, allowing operation at switching frequencies where conventional inverters become impractical due to excessive heat generation. An overview of key results of this study is presented in Figure 13.

Figure 13

RESULTS SUMMARY

- >90% reduction in switching losses vs. conventional hard-switching inverters, allowing higher switching frequencies
- Reduces inverter losses by up to 70% at higher switching frequencies
- Enables high switching frequencies (up to 60kHz tested) without thermal penalties and efficiency loss
- ~90% reduction in dV/dt, resulting in significantly lowering electromagnetic interference (EMI)
- Achieves system efficiency improvements up to 13%, with potential for smaller cooling and higher power density.

Source: Hillcrest Energy Technologies Ltd.

Impact of ZVS on AC Filters Performance in Grid connected Inverters

In grid-connected power conversion systems, AC filter inductors serve as the interface between high frequency inverter switching and electrical grid requirements. These components must control power flow while attenuating switching harmonics that can cause electromagnetic interference and power quality degradation. Traditional designs face trade-offs between harmonic filtering effectiveness and system penalties including power losses, voltage drop, and physical size.

Hillcrest's ZVS technology addresses these limitations by eliminating switching losses through zero voltage transitions, reducing electromagnetic interference through lower dv/dt switching characteristics, and improving thermal management through reduced heat generation. The technology enables smaller AC filter inductors by allowing higher switching frequencies without typical performance penalties.

The July 2025 white paper evaluates how Hillcrest ZVS inverter architecture affects the design and performance of AC filters used in grid-connected power systems. The study focuses on how ZVS performs at higher switching frequencies and how that impacts overall system efficiency, component sizing, and power quality. The comparative analysis evaluated cost, performance, and physical parameters across multiple design configurations.

The study found that ZVS-optimized inductors demonstrated cost reductions of 75% compared to conventional designs, with weight reductions of 4x and volume reductions of 3.3x. Performance measurements indicated 45% lower total inductor losses, driven by reductions in both copper losses (40%) and magnetic core losses. Inductor resistance can be reduced by roughly 40%, while core losses may decline by as much as 2.5 times compared with designs optimized for lower switching frequencies.

The analysis shows that Hillcrest's ZVS inverter enables operation at significantly higher switching frequencies, around 40 kHz compared with the ~10 kHz typical of conventional hard-switching inverters, without the thermal and efficiency penalties normally associated with higher frequencies. Because switching losses are largely eliminated, the inverter can maintain high efficiency while improving waveform quality and reducing stress on surrounding components.

This results in the possible reduction in the size and losses of AC filters, a key finding since AC filter inductors typically represent 15-25% of total system cost and volume in industrial applications. The ability to operate at higher switching frequencies enables smaller passive components, reduced filter size, and higher overall power density, which can translate into lighter, more compact inverter systems. This translates into a 75% reduction in both weight and costs of AC inductors. Figure 14 provides a summary of key findings.

Figure 14

ZVS ON AC FILTER PERFORMANCE

Parameter	Conventional Inductor	Hillcrest Inductor	Hillcrest design advantages
Switching frequency	10 KHz	40 kHz	4x higher switching frequency
Resistance	2.1 mΩ	1.2 mΩ	40% lower resistance
Copper Power loss	189 W	108 W	40% lower copper losses
Core loss	40 W	15 W	2.5x lower core losses
Weight	100%	25%	4x less weight
Inductor price	100%	25%	4x cost savings

Source: Hillcrest Energy Technologies Ltd.

Overall, the paper concludes that Hillcrest's ZVS inverter technology can provide meaningful system-level advantages for grid-connected power conversion, including improved efficiency, reduced filter losses, smaller components, and better power quality. These results suggest potential benefits across applications such as renewable energy inverters, energy storage systems, and other high-power grid-connected electrification infrastructure.

APPLICATIONS AND PRODUCTS

The Company's product development efforts are centered around two primary platforms: its EV traction inverter, targeting the automotive electrification market, and the PCS1000 grid inverter, designed for grid-connected power conversion applications. Hillcrest is pursuing multiple parallel pathways to revenue generation across automotive, industrial, and grid-connected markets. These efforts include ongoing commercialization initiatives as well as strategic development partnerships intended to accelerate market adoption. Recent industrial development agreements complement these initiatives and highlight the versatility of the Company's ZVS platform technology across a broad range of power electronics applications.

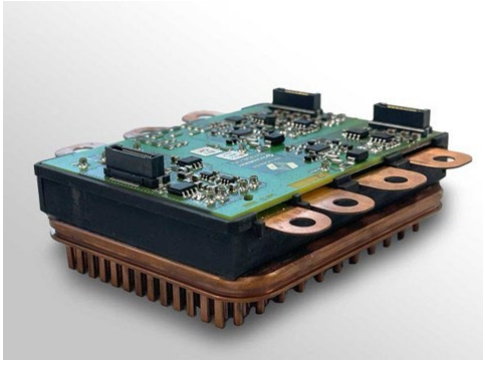
The Company's commercialization strategy focuses on engaging customers and partners that offer the highest commercial value and the most direct path to revenue generation. This approach prioritizes opportunities in both automotive powertrains and grid-connected systems, where improvements in inverter efficiency, power density, and electromagnetic performance can provide meaningful system-level advantages.

ZVS technology was engineered with practical design constraints in mind, allowing original equipment manufacturers (OEMs) and system developers to integrate the architecture without requiring fundamental changes to existing inverter platforms. The design supports compatibility with existing control strategies, enabling potential retrofits as well as integration into new designs. This flexible, application-agnostic approach allows developers to pursue performance improvements while minimizing additional engineering complexity.

Together, the EV traction inverter and the PCS1000 platform reflect Hillcrest's broader strategy of applying its core ZVS technology across both the mobility and grid-scale power electronics markets. These sectors represent two of the fastest-growing segments within the global electrification and energy transition landscape, where incremental improvements in inverter efficiency and system architecture can translate into meaningful performance and cost benefits.

ZVS POWER MODULE

Figure 15
ZVS POWER MODULE



Source: Hillcrest Energy Technologies Ltd.

Power modules play an essential role in driving an inverter's power-switching functions. Packaging the silicon carbide (SiC) dies into a module greatly improves manufacturability, provides better thermal control, power density and reliability and results in significant cost savings when compared to the use of individual (discrete) components.

The Hillcrest ZVS power module enables power applications to operate at higher power levels and higher switching frequencies without compromising efficiency. The Hillcrest EV traction inverter features these ZVS power modules, delivering a substantial boost in power level and power density while being designed to facilitate high-volume manufacturing. Figure 15 shows the Company's 1000V | 350 kVA ZVS Power Module Prototype.

GRID ZVS PCS1000 INVERTER

Hillcrest is advancing development of its ZVS PCS1000 (200kW/1000V) inverter platform while strategically prioritizing customer engagements and partnerships that offer the greatest commercial value and the clearest paths to market entry. PCS1000 represents Hillcrest's effort to extend its proprietary ZVS technology into stationary **power conversion systems (PCS)**, applying the Company's validated technology to a wide range of grid-connected applications and addressing growing demand across grid-connected energy infrastructure.

PCS's are critical components in modern electrical networks, managing the flow of energy between generation sources, storage systems, and the electrical grid. These systems play a central role in applications such as grid-scale battery energy storage, renewable energy integration, EV charging infrastructure, and industrial power management. Hillcrest's ZVS PCS1000 platform is being developed to improve efficiency, reduce electromagnetic interference, and enhance power density in these high-power applications.

ZVS PCS1000 Development

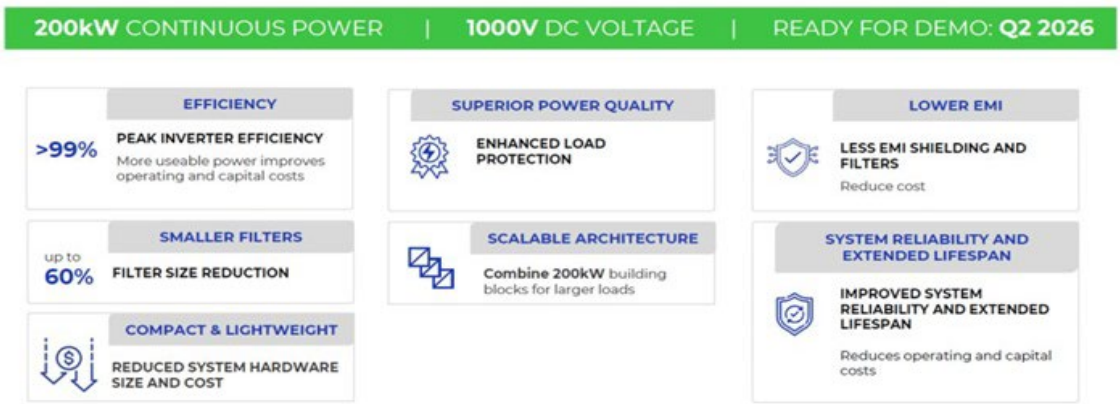
Development of the PCS1000 platform is progressing toward A-sample prototype demonstrations targeted for 2H 2026. The Company is actively engaging with potential customers and partners across several of the core application areas, with initial focus on data centers, energy storage systems, and EV charging infrastructure. Beyond these segments, the platform is designed to address broader grid-connected opportunities, including renewable energy systems, industrial electrification, and remote microgrids.

PCS1000 is designed to deliver improved efficiency and reduced EMI compared with conventional grid-tied inverter systems. Like the Company's EV traction inverter, PCS1000 incorporates Hillcrest's ZVS architecture to reduce switching losses and limit EMI at the source. Lower EMI can reduce the need for large filtering components, enabling smaller system footprints, higher power density, and simplified integration in large-scale energy infrastructure installations.

Development of the PCS1000 platform has focused on validating performance in 800V stationary applications and demonstrating the scalability of Hillcrest's ZVS technology beyond automotive powertrains. The Company has been working to refine system architecture, control strategies, and hardware integration required for grid-connected power electronics systems. Hillcrest believes that demonstrating reliable operation under demanding grid conditions is an important step toward potential commercialization. Figure 16 provides an overview of ZVS PCS1000 inverter prototype performance and potential competitive advantages.

Figure 16

ZVS GRID POWER CONVERSION PROTOTYPE PERFORMANCE



Source: Hillcrest Energy Technologies Ltd.

To support commercialization, Hillcrest is pursuing strategic partnerships intended to accelerate market entry in grid-connected applications. This includes ongoing discussions with Pasqua First Nation and Apeiron regarding the potential Canadian manufacturing and commercialization of ZVS-based grid inverter products. The partnerships are expected to emphasize deployment opportunities across energy storage systems, AI data centers, industrial infrastructure, and remote microgrid environments.

Hillcrest's first Grid PCS1000 inverter prototype is a 200kW system currently under development, designed to support a wide range of applications from renewable energy to mission-critical infrastructure. This system is being built to meet rigorous grid code compliance and power quality requirements. The A-sample prototype is expected to be ready for customer and partner demonstrations at the Company's facility in Vancouver, British Columbia and at Systematec GmbH's facility in Germany in 2H 2026. This marks a significant step toward the deployment of next-generation grid-tied power conversion.

Key Benefits for Grid Applications

Hillcrest's PCS1000 addresses key challenges in grid-tied power conversion, including stringent power quality requirements, evolving grid code compliance, and the need for rapid response to grid disturbances. The platform is designed to meet the growing demands of a more dynamic electrical grid, supporting applications such as energy storage systems, data center power infrastructure, renewable energy integration, and high-power industrial power conversion.

As electrical grids evolve to accommodate higher levels of renewable generation and distributed energy resources, advanced power electronics are becoming increasingly critical. Hillcrest's ZVS technology is designed to enhance system stability and performance by addressing core operational challenges while delivering measurable efficiency and thermal advantages, positioning the platform as a potential contributor to the modernization of grid-connected power systems. Key advantages that the Company's ZVS technology provides to grid application include:

1. *Power Quality.* Higher switching frequencies enable cleaner AC waveforms with lower total harmonic distortion (THD), reducing grid interference and decreasing the need for additional filtering equipment.

2. *Consistent Efficiency.* ZVS inverters maintain superior efficiency across broader operating ranges compared to conventional designs, delivering consistent energy savings across the entire load spectrum.

3. *Enhanced Response.* Higher switching frequencies enable faster control loops and more precise voltage and frequency regulation, providing rapid responses to grid disturbances such as voltage sags and frequency deviations.

4. *Compact Design*. Reduced switching losses enable smaller form factors with less weight, providing more design flexibility for system integrators and potentially lower installation costs in space-constrained environments.

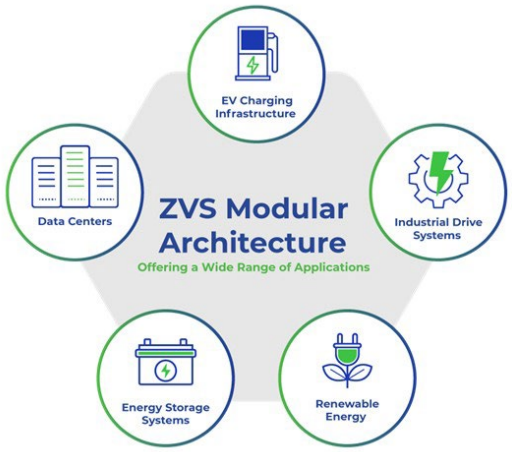
5. *Extended Lifespan.* Lower thermal stress allows inverters to operate closer to rated capacity for extended periods, contributing to longer component lifespans and reduced maintenance requirements.

PCS1000-Industrial Applications

The PCS1000 inverter platform is designed to address a broad and expanding range of grid-connected power applications, including grid-scale energy storage systems, renewable energy installations such as solar and wind, microgrids, and industrial power management systems (Figure 17). As electrical grids incorporate increasing levels of intermittent renewable generation and distributed energy resources, demand for advanced power conversion technologies capable of improving efficiency, simplifying system architecture, and enabling reliable grid integration continues to increase.

Figure 17

HILLCREST ZVS APPLICATIONS



Source: Hillcrest Energy Technologies Ltd.

Hillcrest's ZVS technology is engineered to support the evolving requirements of modern grid infrastructure. By substantially reducing switching losses and thermal stress, ZVS-based PCS's can deliver high efficiency, improved power density, and enhanced reliability. These characteristics support advanced grid services, including voltage regulation, frequency response, and reactive power support, which are becoming increasingly critical as grid complexity grows.

Beyond traditional utility-scale infrastructure, the PCS1000 platform is applicable to several high-growth electrification markets. Energy storage and renewable generation systems benefit from consistent high efficiency and fast dynamic response. Data centers, particularly those supporting AI and high-performance computing workloads, require highly reliable, low-loss power delivery, making the reduced heat generation and improved power quality of ZVS technology particularly valuable. EV charging infrastructure also represents a strong opportunity, where high power levels, continuous operation, and thermal constraints make efficiency and reliability key design priorities.

Industrial power conversion and motor drive systems represent an additional opportunity, as ZVS technology can maintain high efficiency across varying load conditions while reducing electromagnetic interference, potentially improving system performance and lowering operating costs. Figure 18 lists the key applications the Company is targeting within the grid-connected market.

Figure 18

CORE APPLICATIONS

1. Data Centers

Power distribution and backup | 200kW modules ideal for MW-scale installations with N+1 redundancy | 24/7 reliability critical

2. Commercial & Industrial Load Shaving

Office buildings, manufacturing, retail centers, distribution centers | Faster ROI vs. conventional systems

3. Remote Community & Microgrids

Remote communities, mining camps, island microgrids | Displaces diesel generation

4. Construction & Infrastructure

5. Emergency Response & Field Operations

Command centers, field hospitals, shelters, research stations | Fast-growing segment

6. Military Forward Operating Bases

FOBs, mobile command, air defense | Reduces fuel convoys & IED risk | Near-zero acoustic signature

7. Commercial Facility Backup Power

Healthcare, emergency services, financial institutions, government | Reduced footprint & cooling

Source: Hillcrest Energy Technologies Ltd.

- *Data Centers:* The rapid expansion of AI-driven infrastructure is creating unprecedented demand for efficient, high-density power conversion. Modern AI data centers can require up to 200kW per rack, driving the need for modular, scalable architectures. Hillcrest's 200kW PCS1000 building blocks are well-suited for megawatt-scale deployments, supporting N+1 redundancy, hot-swappable operation for zero-downtime maintenance, and parallel scalability without system redesign. These features align with the projected growth of the global data center power market to approximately $50 billion by 2030.

- *Battery Energy Storage Systems (BESS).* Battery energy storage represents one of the fastest-growing segments in grid infrastructure, with the 100kW-1MW market projected to reach $106 billion by 2030. PCS1000's expected inverter efficiency of greater than 99% can significantly reduce energy losses during charge and discharge cycles, directly improving system economics. Its high-power density may also reduce installation footprint and balance-of-system costs, enhancing overall project returns.

- *Industrial Electrification.* Industrial and commercial facilities present broad opportunities for high-performance power conversion across motor drives, automation systems, precision manufacturing, and facility infrastructure. Hillcrest's ZVS-based PCS1000 offers ultra-low electromagnetic interference and high-power quality, helping protect sensitive equipment and improve operational reliability. Additionally, integration with energy storage enables peak shaving and demand charge reduction, allowing facilities to better manage energy costs while maintaining performance.

- *Emergency Power Systems.* Increasing frequency of extreme weather events and grid disruptions is driving demand for reliable emergency power solutions, with the market projected to reach $18 billion by 2030. PCS1000 is designed to support rapid deployment in applications such as field hospitals, emergency shelters, and mobile command centers. Its reliability, efficiency, and ability to operate in harsh conditions position it as a compelling alternative to traditional diesel-based backup systems.

- *Military Forward Operating Bases (FOBs).* Military applications require resilient, efficient, and low-signature power systems. The PCS1000 can reduce dependence on fuel logistics, lowering both operational costs and security risks associated with fuel transport. Its near-zero acoustic signature, improved reliability, and reduced maintenance requirements enhance mission readiness for forward operating bases, mobile command centers, and defense infrastructure.

- *Remote Microgrids and Islanded Systems.* Remote communities, mining operations, and island microgrids often rely on costly and logistically challenging diesel generation. PCS1000 enables integration of renewable energy and battery storage to reduce or eliminate diesel consumption. Its high efficiency and superior power quality support reliable operation in environments where grid connection is impractical, while also improving resilience against outages and natural disasters.

- *Construction and Infrastructure Projects*. The growing demand for mobile and portable power solutions, estimated at over $10 billion annually for systems above 100kW, is driving adoption of alternatives to diesel generators. PCS1000 offers zero-emission, silent operation with reduced fuel logistics and operating costs. Its compact and lightweight design supports easy transport and rapid deployment across construction sites and infrastructure projects, aligning with increasing environmental and operational requirements.

To support commercialization of these opportunities, Hillcrest is pursuing strategic partnerships to expand manufacturing and deployment of its ZVS-based grid inverter products. The Company is currently engaged in discussions with Pasqua First Nation and Apeiron regarding potential Canadian manufacturing and commercialization initiatives targeting applications including energy storage systems, AI data centers, industrial facilities, and remote microgrids, with a partnership structure intended to emphasize economic participation, energy sovereignty, and community ownership.

Non-Grid Industrial Application Example

On February 2026, Hillcrest entered into a MOU with a leading industrial partner to jointly develop customized inverter solutions based on its proprietary ZVS PCS1000 technology for advanced materials processing applications. This agreement represents an important step in validating the versatility of Hillcrest's technology platform beyond its initial focus on automotive and grid-scale applications, extending into high-value industrial use cases.

The collaboration establishes a structured development pathway encompassing application analysis, prototype design and testing, certification, and eventual commercial production. The partners will work jointly to design and optimize ZVS-based inverters tailored to the specific performance requirements of advanced materials processing systems, where precise power control, high efficiency, and ultra-low electromagnetic interference are critical. The industrial partner is expected to provide real-world demonstration and field trial environments, supporting validation under operational conditions.

From a commercialization perspective, this agreement reflects Hillcrest's strategy of engaging early with development partners to accelerate product validation and certification. Both parties will contribute technical expertise, resources, and funding, with intellectual property rights structured to protect existing technologies while enabling shared ownership of jointly developed innovations.

In addition, on June 22, 2026, the Company announced a Letter of Intent (LOI) from Lenze SE, a leading European manufacturer of industrial drive and automation solutions. The LOI formalizes Lenze's intent to continue evaluating Hillcrest's proprietary ZVS technology for integration into its high-power inverter product lines, with the goal of assessing commercial viability and defining potential terms for partnership.

Hillcrest and Lenze have been jointly assessing Hillcrest's ZVS technology for potential integration into Lenze's high-power inverter platforms. The LOI establishes a framework for two parallel activities: (1) continuing technical evaluation to validate ZVS integration into Lenze's existing product architecture, verify performance against Lenze's technical specifications, and assess manufacturing feasibility; and (2) conducting a commercial study to evaluate market applications, define potential licensing or development fees, and outline commercial terms should both parties wish to proceed. The evaluation timeline contemplates completion of these workstreams over the coming months.

This development partnerships highlights the broader applicability of Hillcrest's ZVS platform across multiple industrial segments and reinforces its potential as a scalable, high-performance power conversion solution. The Company's ZVS PCS1000 technology platform serves as a foundational platform for these efforts, offering key advantages including efficiency exceeding 99%, reduced electromagnetic interference, improved power quality, and a modular architecture that supports scalable deployment across diverse applications.

Commercialization Plan

The primary value inflection point for the Company is expected to occur when customer interest in the technology translates into formal development partnerships. Near-term commercialization is unlikely to take the form of large-scale purchase orders, particularly given that many end markets, such as data centers, operate on multi-year deployment timelines and require fully certified products. With PCS1000's full certification expected to take approximately 12-18 months, initial customer engagement is anticipated to center on collaborative development and product specifications rather than immediate volume procurement.

Broadly, the market can be segmented into two customer groups. A majority are expected to defer adoption until the technology is fully certified, indicating willingness to purchase at scale once validation is complete. In contrast, a smaller but strategically important segment consists of forward-looking partners who are aligned with similar multi-year timelines and may be willing to engage earlier in the development cycle. These customers may participate in joint testing, validation, and certification processes, often in exchange for preferred commercial positioning upon product launch.

Current discussions with prospective partners across sectors, including data center developers, energy infrastructure groups, and industrial operators, reflect early-stage but meaningful engagement. These development relationships are expected to play a critical role in accelerating product validation, de-risking commercialization, and establishing initial market footholds. As such, growing expressions of interest and converting them into structured development agreements represent a key catalyst for advancing the Company's commercialization strategy.

The near-term focus is expected to be on progressively advanced test bench demonstrations with potential customers, using the PCS1000 A-sample prototype. Once the Company has secured specifications from a customer, a B-sample prototype would be developed based on that customer information. That B-sample would be the foundation of certification and design for manufacturability (DfM) processes. These processes combined could likely take 12-18 months.

PCS1000-Data Centers

The rapid expansion of AI-driven computing is transforming data center power infrastructure, driving demand for higher-efficiency power conversion solutions. Industry initiatives such as the **Open Compute Project**, backed by leading technology companies including Meta, Microsoft, Intel, and NVIDIA, are accelerating the transition toward next-generation 800V DC distribution architectures designed to support increasing power-intensive AI workloads. These architectures aim to simplify power delivery, reduce conversion losses, and enhance overall system efficiency.

Traditional data center power systems face growing limitations as AI-driven demand increases. Conventional architectures rely on multiple AC/DC and DC/DC conversion stages, each introducing inefficiencies, generating excess heat, and consuming valuable physical space. This issue was detailed in the Company's White Paper: *Simplified 800V Power Supply Architecture for 99%+ Efficient Data Centers*, which presents a comparative analysis of 800V power supply unit (PSU) architectures for MW-scale data centers, and positions Hillcrest's ZVS PCS1000 as a concise challenge to the existing datacenter **sidecar** industry approach. The paper argues that these trends are driving demand for more efficient grid-interface technologies capable of supporting higher power densities while simplifying power distribution

Hillcrest's PCS1000 has been purpose-engineered to serve as an optimal solution for these next-generation data centers, directly addressing critical infrastructure challenges as the sector undergoes fundamental transformation. Hillcrest's ZVS PCS1000 enables a streamlined 800V DC architecture that removes intermediate conversion steps. In this configuration, power flows directly from the medium-voltage grid to 800V DC through the PCS1000, and then through isolated DC/DC converters to computing loads, improving efficiency, reducing thermal burden, and supporting higher power density deployments.

By enabling a simplified power flow from the medium-voltage grid directly to 800V DC, the PCS1000 can eliminate intermediate conversion stages that traditionally introduce inefficiencies, heat generation, and additional system complexity. This streamlined architecture aligns with emerging "sidecar" power models that consolidate AC/DC conversion into dedicated power racks, improving both performance and scalability.

Efficiency represents a critical economic driver in large-scale data center deployments. According to the white paper, the PCS1000 is expected to deliver greater than 99% peak inverter efficiency, providing a meaningful improvement over conventional systems. At hyperscale levels, even marginal gains have substantial impact: an incremental 0.5% efficiency improvement in a 100MW facility can reduce conversion losses by approximately 500kW, translating into significant energy savings and reduced cooling infrastructure requirements. These benefits compound over the lifecycle of the facility, improving total cost of ownership and supporting increasingly important sustainability objectives.

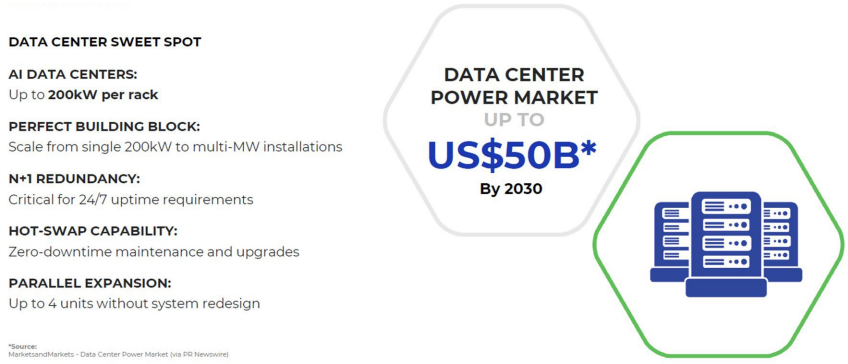
The PCS1000's modular 200kW architecture is well suited for data center applications, providing both scalability and operational flexibility. Systems can be deployed as single units or scaled to multi-megawatt installations exceeding 1.2MW through parallel operation, while supporting N+1 redundancy and hot-swappable capability for zero-downtime maintenance. This approach enables operators to align power infrastructure closely with evolving computing demand, supporting phased expansion without requiring major system redesign.

The modular design of the ZVS PCS1000 also delivers critical architectural flexibility, allowing capacity to grow in step with increasing AI workload requirements. By enabling precise rightsizing power systems and seamless scalability, the platform supports efficient capital deployment while maintaining high reliability and uptime in mission-critical data center environments.

In addition, the system's ultra-low EMI characteristics address the stringent requirements of sensitive computing environments, while also simplifying grid compliance and reducing the need for extensive filtering. Combined with potential reductions in component size, weight, and cost enabled by ZVS technology, these attributes support more efficient use of space, an increasingly valuable consideration in high-density data center environments. Figure 19 (page 40) provides an overview of the use of the Company's ZVS PCS1000 inverter in the data center market.

Figure 19

DATA CENTER MARKET



Source: Hillcrest Energy Technologies Ltd.

With the global data center power market projected to reach approximately $50 billion by 2030, and with AI workloads continuing to drive exponential growth in power demand, Hillcrest's PCS1000 is positioned to address a rapidly expanding and high-value market segment.

ZVS PCS1000-Data Centers: Prototype

The Company's engineering progress has since advanced beyond the concepts presented in the white paper. On April 23, 2026, Hillcrest announced that it finalized the A-Sample design of its ZVS PCS1000 module developed for next-generation AI data center infrastructure. The A-Sample design finalization is a key engineering milestone, confirming the product's performance specifications ahead of the prototype demonstration program. The Company is currently in active discussions with several parties across the data center, energy storage, and grid-connected applications markets regarding demonstration opportunities.

ZVS PCS1000 Advantages

Hillcrest's True Zero Voltage Switching (ZVS) technology represents a differentiated approach to power conversion, addressing one of the core inefficiencies of conventional inverter systems: switching losses. Unlike traditional soft-switching techniques that are effective only within limited operating ranges, Hillcrest's implementation is designed to maintain ZVS operation across a wide range of voltages, loads, and switching conditions, supporting consistently high efficiency in real-world applications. The Company released a white paper quantifying component-level advantages of the ZVS technology as it applies to the data center market (Source: Hillcrest True-ZVS PCS1000: Engineering the Optimal Grid Interface for 800V OCP Data Center Architectures, November 2025: https://hillcrestenergy.tech/wp-content/uploads/2025/11/Hillcrest-True-ZVS-Article-Nov-24-2025.pdf).

In addition to a peak conversion rated efficiency of 98.5% across typical load profiles, the paper lists these additional PCS1000 benefits:

- *EMI and Power Quality.* Zero voltage switching inherently reduces electromagnetic interference and simplifies filter requirements. This translates to smaller, lighter input filters; better power quality upstream; and simplified compliance with grid codes and EMC standards.

- *Thermal Stress Reduction.* Lower switching losses reduce junction temperatures and thermal cycling in power semiconductors, improving reliability and extending operational lifetime, critical factors in 24/7 data center operations where maintenance windows are limited.

- *Scalability and Redundancy Architecture.* The modular nature of the ZVS PCS1000 enables flexible redundancy configurations where the base load is distributed across N units with one additional unit for redundancy (N+1). This provides single-fault tolerance with minimal overhead.

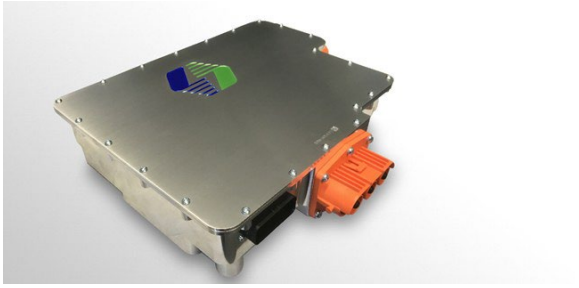
ZVS EV TRACTION INVERTER

In electric vehicles, the traction inverter converts DC power from the battery into AC power that drives the electric motor. This component plays a central role in determining vehicle efficiency, driving performance, thermal management requirements, and overall system cost. As automakers increasingly adopt wide bandgap semiconductors such as silicon carbide (SiC), inverter switching speeds have increased, improving efficiency but also intensifying challenges related to EMI and filtering requirements.

Hillcrest's 1000V | 350 kVA SiC traction inverter prototype (Figure 20) integrates the Company's proprietary ZVS technology, which is designed to operate at both higher power levels and higher switching frequencies while minimizing switching losses and significantly reducing EMI generation. By enabling switching transitions to occur when voltage across the device is near zero, the architecture aims to reduce electrical noise at the source rather than relying on extensive downstream filtering. This approach has the potential to simplify inverter design, reduce filter size and cost, and support higher switching frequencies that can improve system efficiency and power density.

Figure 20

HILLCREST ZVS EV TRACTION INVERTER PROTOTYPE (350 KW)



Source: Hillcrest Energy Technologies Ltd.

Conventional inverters typically face tradeoffs among power density, efficiency, and thermal performance. Improving switching efficiency often increases EMI or thermal complexity, while efforts to reduce heat and EMI can require larger components that limit power density. Hillcrest's ZVS inverter architecture is designed to address these competing constraints by reducing switching losses at the source. The technology enables inverter efficiencies of up to 99.7%, significantly lowering switching losses and reducing heat generation during operation. As a result, systems can operate at lower temperatures and may require simpler thermal management solutions. Lower heat and reduced filtering requirements can also support more compact and lightweight inverter designs, offering greater flexibility for original equipment manufacturers and system integrators. In addition, the inherently low EMI characteristics of ZVS can simplify compliance with electromagnetic compatibility standards and reduce the need for extensive shielding or filtering components. Figure 21 provides an overview of Hillcrest's ZVS EV Traction Inverter technical capabilities.

Figure 21

EV TRACTION INVERTER KEY FEATURES

Operating Input Voltage Range 400-940 VDC	**Maximum Electrical Efficiency** Up to 99.7%	**Efficient Semiconductor Utilization** 2.5mm^2/kW
Nominal Voltage 800 VDC	**Continuous RMS AC Output Current** 350 A	**Power Devices** 3 SiC modules
Peak RMS AC Output Current 400 A	**HV Bus Capacitance** 135 uF	**Control Input Supply Voltage Range** 9 -16 VDC
Ambient Temperature -40°C-100°C	**Coolant Temperature (liquid cooling)** -40°C-70°C	**Nominal PWM Switching Frequency** 50 kHz

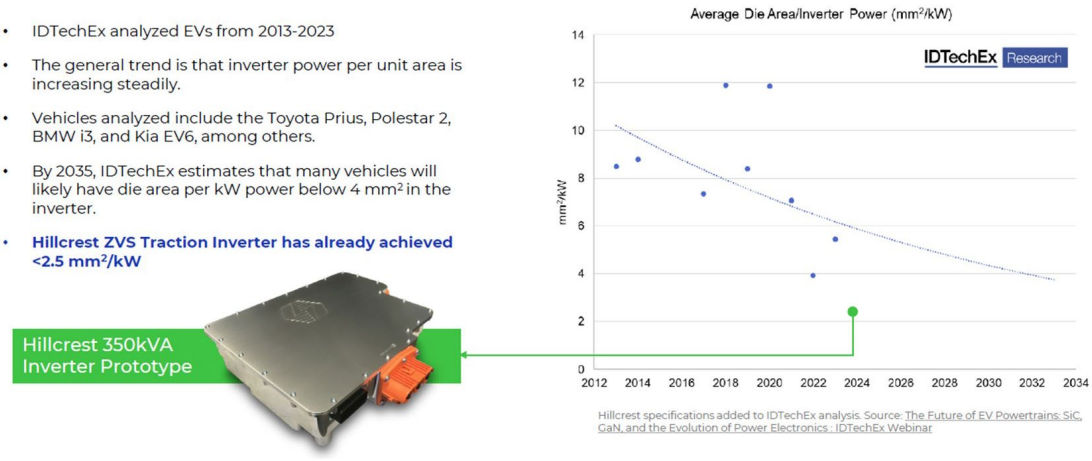
Source: Hillcrest Energy Technologies Ltd.

These advantages are particularly relevant as the electric vehicle industry continues to push for higher inverter power density. Research by IDTechEx analyzing EV designs from 2013 to 2023 show a steady trend toward delivering more power from smaller semiconductor footprints. The study indicates that the amount of **semiconductor die** area required per kilowatt in EV inverters has been steadily declining, reflecting industry efforts to improve efficiency, reduce weight, and shrink system size. While industry designs currently average roughly 6 mm² of semiconductor die area per kilowatt, IDTechEx estimates that many vehicles could reach die area densities below 4 mm² per kilowatt by 2035.

As Figure 22 illustrates, Hillcrest's ZVS traction inverter has already demonstrated performance below 2.5 mm² per kilowatt, suggesting the potential to exceed projected industry benchmarks. Although the difference appears modest at first glance, it can translate into meaningful cost savings at the system level. Depending on inverter design and component pricing, the reduction in semiconductor usage alone could represent several hundred dollars in savings per traction inverter. Delivering higher power output from a smaller semiconductor footprint can reduce system size, lower material costs, and improve overall inverter efficiency, positioning the technology to align with the automotive industry's continued push toward compact, high-performance powertrain components (Source: IDTechEx's *The Future of EV Powertrains: SiC, GaN, and the Evolution of Power Electronics).*

Figure 22

SEMICONDUCTOR UTILIZATION



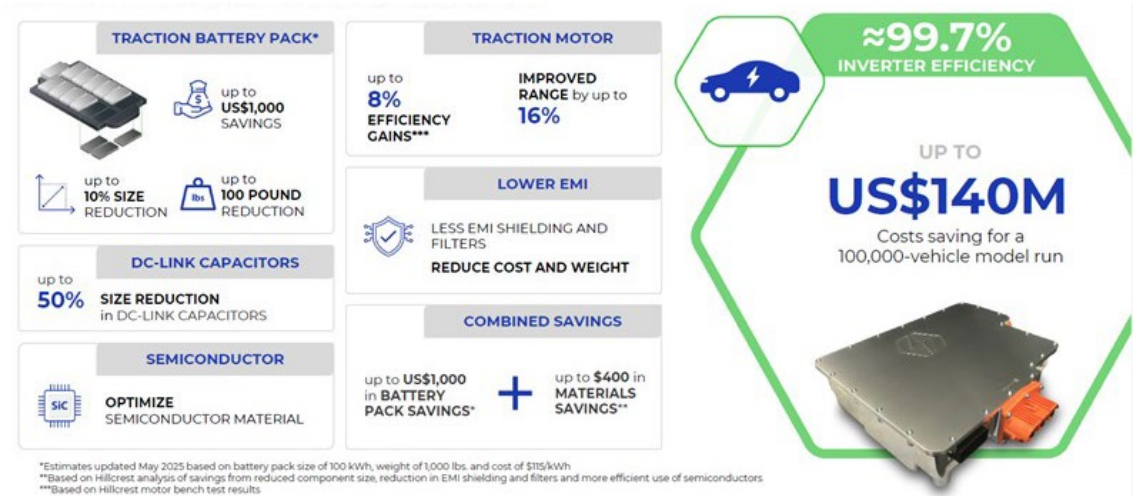
Source: Hillcrest Energy Technologies Ltd.

The value of Hillcrest's inverter technology extends beyond improving the efficiency of the power conversion stage alone. Because the ZVS architecture produces a cleaner electrical signal and significantly reduces switching losses, it can deliver system-wide benefits across the broader powertrain. Conventional hard-switching inverters introduce tradeoffs such as higher EMI, lower efficiency, and increased thermal stress. To compensate for these limitations, manufacturers typically add additional components, such as larger filters, shielding, capacitors, and thermal management systems, which increase overall system cost and complexity.

Hillcrest's ZVS-based inverter is designed to reduce or eliminate many of these tradeoffs at the source. As a result, system designers may be able to reduce the size of supporting components across the drivetrain, including the battery pack, DC-link capacitors, and semiconductor devices. The Company has also demonstrated that its inverter architecture can significantly reduce the amount of SiC required within the inverter itself. Combined with additional benefits such as improved efficiency, extended vehicle range potential, and reduced EMI mitigation requirements, the Company estimates that total system savings could approach approximately $1,400 per vehicle in certain configurations (Figure 23, page 43).

Figure 23

HILLCREST ZVS TRACTION INVERTER BENEFITS



Source: Hillcrest Energy Technologies Ltd.

Development Strategy

Hillcrest's development efforts have focused on validating its ZVS architecture under real-world operating conditions Independent third-party testing has been conducted to quantify these performance benefits and assess system behavior under identical operating conditions. At the same time, the Company continues to refine its inverter control algorithms, optimize system architecture for automotive environments, and advance the platform toward integration with modern EV powertrain systems. These efforts are supported by the Company's Automotive Center of Excellence in Germany, operated through its collaboration with Systematec GmbH.

Hillcrest's automotive business development strategy is focused on engagements with automotive original equipment manufacturers (OEMs), Tier 1 suppliers, and strategic partners that offer the greatest potential for near-term value creation. These opportunities may include technology licensing arrangements, joint development programs, or broader strategic partnerships. The Company's intellectual property portfolio, supported by multiple rounds of independent third-party validation, provides a strong foundation for potential commercial agreements. Hillcrest is prioritizing discussions with partners capable of offering sector-focused exclusivity, meaningful licensing revenues, or collaborations that accelerate commercial deployment while potentially providing non-dilutive capital to support the continued development of its grid-connected product portfolio.

Technology Evaluation Project

On December 30, 2025, Hillcrest announced the successful completion of Phase 1 of a technology evaluation program with a global Tier 1 automotive supplier ranked among the 15 largest in the industry by revenue. The objective of the initial phase was to assess the potential performance and efficiency benefits of integrating Hillcrest's ZVS technology into the supplier's next-generation electric vehicle inverter platforms.

Phase 1 focused on enabling ZVS operation within the supplier's existing inverter architecture by converting its half-bridge power modules. Hillcrest completed all requirements for this phase, which included baseline performance measurements, hardware design, prototype production and assembly, and delivery of the completed hardware for evaluation. As a key supplier to major automotive manufacturers worldwide, the participating Tier 1 supplier provided a rigorous real-world automotive environment for validating the integration of Hillcrest's ZVS technology within established automotive inverter architectures. Completion of this evaluation phase confirms that Hillcrest's ZVS technology can be successfully integrated into existing Tier 1 supplier platforms while delivering measurable performance benefits. Subsequent phases of the program would involve further integration and validation of ZVS technology within the supplier's inverter platform.

The results represent an important technical milestone and provide a foundation for potential future phases involving deeper integration and validation within the supplier's inverter systems. Hillcrest views the successful Phase 1 completion as a key step in advancing Hillcrest's commercialization strategy. If successfully commercialized, Hillcrest's traction inverter technology could be applied across a wide range of electric mobility platforms. These include passenger electric vehicles, commercial vehicles such as delivery trucks and buses, and other electrified transportation segments that rely on high-efficiency motor drive systems. Because the traction inverter is one of the most critical and highest-value components within an EV powertrain, improvements in efficiency, EMI management, and system complexity could provide meaningful value to original equipment manufacturers seeking to optimize vehicle performance and reduce overall system costs.

Hillcrest continues to advance its electric vehicle technology development through ongoing engagement with potential automotive partners and component manufacturers. The Company is currently working with several prospective customers to evaluate the integration of its ZVS technology into onboard chargers (OBCs), a critical subsystem in EV power management. Hillcrest is actively engaging with several potential customers exploring this application. In parallel, the Company is pursuing multiple joint development and technology licensing opportunities with industry participants, several of which are reported to be in advanced stages of negotiation. These initiatives reflect Hillcrest's broader strategy to expand the application of its ZVS technology within the EV ecosystem while building commercial partnerships that could accelerate market adoption. Figure 24 provides an overview of the Company's commercial efforts within the EV ecosystem.

Figure 24

CURRENT EV COMMERCIAL EFFORTS

Source: Hillcrest Energy Technologies Ltd.

Investment Highlights

- ***Differentiated Power Conversion Technology Platform.*** Hillcrest's proprietary Zero Voltage Switching (ZVS) inverter technology represents a potential step-change improvement in power electronics, materially reducing switching losses while improving efficiency, thermal performance, and electromagnetic compatibility relative to conventional designs.

- ***High Efficiency with System-Level Cost Advantages.*** ZVS-based inverters can achieve peak efficiencies of up to 99.7% (versus 96-98% for conventional systems). Combined with lower EMI and reduced heat generation, these benefits may enable smaller system designs, fewer components, and lower overall system costs.

- ***Large and Expanding Addressable Market Opportunity.*** The Company is targeting multiple high-growth sectors—including electric vehicles, energy storage, data centers, EV charging infrastructure, and industrial electrification—representing a combined addressable market estimated to exceed $180 billion.

- ***Dual Commercialization Pathways (Grid and Automotive).*** Hillcrest is pursuing parallel go-to-market strategies across grid-connected systems (ZVS PCS1000) and EV traction inverters, providing diversified revenue opportunities and multiple pathways to adoption.

- ***Entering a critical commercialization phase.*** Following several years of technology validation, particularly within automotive applications, Hillcrest is prioritizing its grid-connected power conversion systems platform, which offers shorter sales cycles and broader market accessibility relative to the automotive sector.

- ***Near-Term Grid Commercialization Catalyst.*** The PCS1000 platform is advancing toward A-sample prototype demonstrations expected in 2026, targeting applications with shorter sales cycles and clearer near-term revenue potential, including data centers and energy storage systems.

- ***Validated Automotive Technology with Licensing Potential.*** Hillcrest has completed initial validation of its EV traction inverter with a global Tier 1 supplier and is pursuing licensing and joint development agreements, offering a capital-efficient pathway to monetize its automotive technology.

- ***Strategic Partnership Model Supports Capital Efficiency.*** The Company's collaboration-driven approach enables accelerated validation, market access, and scaling without significant infrastructure investment. Key partnerships include Systematec GmbH and its Canadian initiative with Pasqua First Nation and Apeiron Resources Ltd.

- ***Access to Non-Dilutive Funding and Canadian Market Entry.*** Through CleanPath Distribution Inc., an Indigenous-majority-owned entity formed in partnership with Pasqua First Nation #79 and Apeiron Resources Ltd., Hillcrest may gain access to government grants, low-interest financing, and other non-dilutive funding pathways while advancing commercialization and potential manufacturing opportunities in Canada.

- ***Strong Intellectual Property and Software-Driven Advantage.*** Hillcrest's ZVS platform is a combination of proprietary software and off-the-shelf hardware components, offering scalability, flexibility, and potential advantages over hardware-dependent alternatives.

- ***Experienced Management and Technical Team.*** The Company is led by an experienced team with expertise in power electronics innovation, commercialization, and capital markets, supporting execution across development and market entry phases.

- ***As of December 31, 2025, Hillcrest reported cash and cash equivalents of C$87,405.*** Subsequently, the Company strengthened its balance sheet by closing a private placement that generated gross proceeds of approximately C$4.8 million and settled roughly C$2.8 million of debt.

Competition

Hillcrest operates in the highly competitive and rapidly evolving power electronics and inverter market. Its competitive landscape includes several categories of companies: large automotive and industrial suppliers with established customer relationships and manufacturing scale; semiconductor companies advancing power conversion performance through silicon carbide (SiC), gallium nitride (GaN), and related control solutions; and diversified energy and electrical equipment providers serving grid, industrial, and infrastructure markets. In addition, automotive original equipment manufacturers (OEMs), Tier 1 suppliers, and other technology developers may pursue in-house inverter innovation or vertically integrated solutions. Across these groups, competition is driven by efficiency, thermal management, electromagnetic interference (EMI), reliability, cost, manufacturability, and the ability to achieve commercial adoption through customer validation and system-level integration. The companies below are representative examples of the types of competitors Hillcrest may encounter as it advances its ZVS technology toward commercialization.

Automotive and Electrification Suppliers

Continental AG (Xetra: CON)

Continental is a global automotive supplier with extensive OEM relationships and broad capabilities across vehicle electronics and electrification systems. In areas where its offerings overlap with inverter and power conversion content, Continental competes through scale, manufacturing depth, and deep systems integration experience.

Robert Bosch GmbH (Private)

Bosch is one of the world's largest automotive technology suppliers, with substantial engineering resources and long-standing OEM relationships. In electrified powertrain and power electronics applications, Bosch competes through vertically integrated development, manufacturing depth, and a validated high-volume delivery model.

DENSO Corporation (TSE: 6902)

DENSO is a leading global automotive supplier with deep engineering and manufacturing capabilities. In electrification-related systems, it competes through proven program execution, quality, and the ability to deliver OEM-ready electronics and control solutions at scale.

Magna International Inc. (NYSE: MGA; TSX: MG)

Magna is a large global automotive supplier with broad integration across vehicle systems. In electrification programs, Magna can compete by packaging technologies into production-ready subsystems and leveraging its position across vehicle platforms to influence architecture and supplier decisions.

ZF Friedrichshafen AG (Private)

ZF is a major automotive technology supplier with broad product coverage and deep customer relationships. In electrified powertrain systems, ZF can compete through systems-engineering expertise, validation infrastructure, and incumbency across global OEM platforms.

Industrial and Grid Power Competitors

ABB Ltd. (SWX: ABBN, NYSE:ABB)

ABB is one of the world's largest providers of electrification, automation, and power conversion technologies, serving industrial, utility, transportation, and renewable energy markets. The company offers a broad portfolio of power electronics products, including inverters, converters, drives, and grid integration solutions for applications such as energy storage, EV charging infrastructure, renewable energy, and data centers. ABB competes through its global scale, extensive installed base, advanced engineering capabilities, and comprehensive service network, providing integrated solutions for customers across the electrical infrastructure value chain.

Schneider Electric SE (PA:SU)

Schneider Electric is a global leader in energy management and industrial automation, offering a broad range of electrical distribution, power conversion, and energy management solutions. Its portfolio includes PCS's for renewable energy, battery energy storage, microgrids, data centers, and industrial applications. Schneider competes through its integrated hardware and software platforms, digital energy management capabilities, and global customer relationships, enabling comprehensive solutions that optimize energy efficiency, reliability, and power system performance across commercial, industrial, and utility markets.

Mitsubishi Electric Corporation (TSE: 6503)

Mitsubishi Electric operates across industrial automation, energy, and electronic components, with strong relevance to industrial power electronics and conversion systems. It competes through long-standing industrial product expertise, global service infrastructure, and a broad portfolio spanning multiple end markets.

Eaton Corporation plc (NYSE: ETN)

Eaton is a global power management company with broad exposure to electrical systems across industrial, commercial, and transportation markets. In power conversion-related categories, Eaton competes through systems-level electrical expertise, channel reach, and the ability to integrate power conversion into broader power management and distribution solutions.

Hitachi, Ltd. (TSE: 6501)

Hitachi is a diversified industrial and technology company with relevant exposure to energy, industrial systems, and power conversion applications. It can compete through scale, lifecycle support, and the ability to integrate power conversion into broader industrial and infrastructure solutions.

Historical Financial Results

Figures 25, 26, and 27 (pages 48-50) provide a summary of Hillcrest's most recent key financial statements for the Fiscal Year ended December 31, 2025. The full CSE filing is available at: https://hillcrestenergy.tech/wp-content/uploads/2026/05/Hillcrest-FS-December-31-2025-FINAL.pdf

Figure 25

CONSOLIDATED STATEMENTS OF LOSS AND COMPREHENSIVE LOSS

For the Years Ended December 31, 2025 and 2024

(Expressed in Canadian Dollars)

	Notes	Year Ended December 31, 2025	2024
General and administrative expenses			
Management and consulting	7	$ 566,174	$ 941,801
Research and development		2,288,480	2,041,425
Office and general	12	2,863,202	4,751,194
Share-based compensation	7, 10	690,707	2,980,662
		$ 6,408,563	$ 10,715,082
Loss from operations		(6,408,563)	(10,715,082)
Financing expenses	20	(890,413)	(164,121)
Foreign exchange loss		(81,672)	(45,120)
Other income		135,078	157,897
Gain on settlement of debt	9, 10	10,977	-
Net loss for the period from continuing operations		**$ (7,234,593)**	**$ (10,766,426)**
Net loss from discontinued operations	19	(30,636)	(190,729)
Net loss and comprehensive loss for the year		**$ (7,265,229)**	**$ (10,957,155)**
Basic and diluted loss per share from continuing operations		**$ (0.07)**	**$ (0.12)**
Basic and diluted loss per share from discontinued operations		**$ (0.00)**	**$ (0.00)**
Weighted average common shares outstanding:			
Basic		105,850,221	90,659,616
Diluted		105,850,221	90,659,616

Source: Canadian Security Exchange (CSE) Filings.

Figure 26

CONSOLIDATED STATEMENTS OF FINANCIAL POSITION

(Expressed in Canadian Dollars)

	Notes	December 31, 2025	December 31, 2024
ASSETS			
Current assets			
Cash		$ 58,655	$ 15,582
Receivables		113,555	26,284
Due from related parties	7	14,447	906
Prepaid expenses		51,074	801,084
Right-of-use asset	18	105,485	105,485
Assets of discontinued operations	19	780	10,687
Total current assets		**343,996**	**960,028**
Non-current assets			
Restricted cash equivalents		28,750	28,750
Right-of-use asset	18	80,338	185,823
Intangible assets	4	1,550,000	1,550,000
Property and equipment	5	35,918	208,955
Deposits		28,137	28,137
TOTAL ASSETS		**$ 2,067,139**	**$ 2,961,693**
LIABILITIES AND SHAREHOLDERS' DEFICIENCY			
Current liabilities			
Accounts payable and accrued liabilities	6, 7	$ 3,430,409	$ 1,406,840
Lease liability	18	118,791	92,683
Convertible debentures	9	2,050,452	-
Promissory notes	8	242,000	1,898,964
Liabilities of discontinued operations	19	462,817	440,209
Total current liabilities		**6,304,469**	**3,838,696**
Lease liability	18	111,549	230,340
TOTAL LIABILITIES		**6,416,018**	**4,069,036**
SHAREHOLDERS' DEFICIENCY			
Share capital	10	47,939,754	43,980,719
Share subscriptions receivable	7	(8,000)	(8,000)
Convertible debentures - equity component	9	363,142	-
Securities subscribed		174,200	-
Contributed surplus		8,109,092	8,581,776
Reserves		310,228	310,228
Deficit		(61,237,295)	(53,972,066)
TOTAL SHAREHOLDERS' DEFICIENCY		**(4,348,879)**	**(1,107,343)**
TOTAL LIABILITIES & SHAREHOLDERS' DEFICIENCY		**$ 2,067,139**	**$ 2,961,693**

Source: Canadian Security Exchange (CSE) Filings.

Figure 27

CONSOLIDATED STATEMENTS OF CASH FLOWS

For the Years Ended December 31, 2025 and 2024

(Expressed in Canadian Dollars)

	Notes	Year Ended December 31, 2025	2024
OPERATING ACTIVITIES			
Net loss from continuing operations		$ (7,234,593)	$ (10,766,426)
Adjusted for items not involving cash:			
Financing expenses		831,735	164,121
Depreciation		278,522	316,025
Share-based compensation		690,707	2,980,662
Gain on settlement of debt		(10,977)	-
Changes in non-cash working capital items:			
Receivables		(87,271)	37,684
Prepaid expenses		750,010	(577,900)
Due from related party		(13,541)	85,065
Accounts payable and accrued liabilities		2,667,702	254,215
Cash used in operating activities for continuing operations		**(2,127,706)**	**(7,506,554)**
Cash used in operating activities for discontinued operations		**(88)**	**(12,985)**
Cash used in operating activities		**(2,127,794)**	**(7,519,539)**
FINANCING ACTIVITIES			
Securities subscribed		174,200	-
Exercise of options	10	-	100,050
Exercise of warrants	10	-	760,991
Proceeds received for promissory notes	8	1,270,263	1,788,985
Proceeds received for convertible debentures	9	401,400	-
Proceeds received for private placements	10	764,650	4,944,674
Repayment of promissory notes	8	(290,457)	-
Share issuance costs	10	-	(630)
Long-term deposit		-	25,526
Repayment of lease liability	18	(149,189)	(130,081)
Cash from financing activities for continuing operations		**2,170,867**	**7,489,515**
Cash from financing activities		**2,170,867**	**7,489,515**
Net increase (decrease) in cash		**43,073**	**(30,024)**
Cash and cash equivalents, beginning of the year		**44,332**	**74,356**
Cash and cash equivalents, end of the year		**$ 87,405**	**$ 44,332**
Cash and cash equivalents consist of the following:			
Cash and cash equivalents		**58,655**	**15,582**
Restricted cash equivalents		**28,750**	**28,750**
		87,405	**44,332**

Source: Canadian Security Exchange (CSE) Filings.

Recent Events

07/22/2026—Hillcrest Energy Technologies Ltd. ("Hillcrest" or the "Company") announced a non-binding agreement in principle with the AI Hub of Innovation ("AHI"), a project of Agritech Haven Limited Partnership. The agreement dated July 20, 2026, advances Hillcrest's PCS1000 on two fronts: an operational BESS pilot at AHI's Alberta campus, and access to AHI's network of datacenter tenants, operators, and technology vendors to evaluate the PCS1000 for 800V DC sidecar power conversion. The BESS pilot provides a real operational environment to validate PCS1000 round-trip efficiency and BMS integration, a key step toward product certification. The datacenter network access puts the PCS1000 in front of the operators and integrators building Canada's AI infrastructure, opening a commercial pathway that would otherwise take much longer to develop independently. AHI's participation, including facility access and the allocation of engineering and campus resources, is subject to execution of a definitive joint development agreement and confirmation of program funding.

07/20/2026—Announced the release of a Company-authored technical paper, "Simplified 800V Power Supply Architecture for 99%+ Efficient Data Centers." Hillcrest's paper compares two ways to build the power supply for an 800V data center: a more complex two-stage design, and a simpler single-stage design built on the Company's proprietary zero-voltage-switching (ZVS) technology. The main industry concern with moving to a single-stage design is safety; removing a conversion stage also removes a layer of isolation that has traditionally helped contain electrical faults. The paper addresses this directly. Its single-stage design keeps both galvanic isolation barriers a data center requires (one at the medium-voltage transformer, one at the IT rack) and adds dedicated fault-management functions to take over the protective role the removed stage used to serve. In simulation, this design also converted power more efficiently than the two-stage alternative.

07/14/2026—Announced changes to its Board of Directors and advisory team, following the conclusion of the Company's Annual General Meeting held on July 13, 2026. Michael Moskowitz has been appointed Chair of the Board. David Farrell, who chaired the Board through Hillcrest's formative years, is transitioning into a strategic advisory role. The Company has also appointed Raylene Whitford as a new Independent Director and Chair of the Audit Committee, and Matthew T. Peigan as a new Advisor.

07/09/2026—Announced that it has entered into a Letter of Intent ("LOI") with Equipmake plc, a UK-based developer and manufacturer of high-performance electric motors and inverters for e-mobility applications. The LOI establishes a framework for a joint development program under which the parties would work together to integrate Hillcrest's proprietary Zero Voltage Switching ("ZVS") inverter technology into a defined Equipmake powertrain product line.

07/02/2026—Announced the engagement of Market One Media Group Inc., pursuant to which the media group is expected to conduct a comprehensive 12-month campaign to position the Company for sustained media awareness through a strategic mix of premium content and targeted outreach.

06/23/2026—Announced that it has received a signed LOI, dated June 22, 2026, from Lenze SE, a major European manufacturer of industrial drive and automation solutions. The LOI confirms Lenze's intention to continue evaluating Hillcrest's proprietary ZVS technology for integration into its high-power inverter product lines, with the goal of assessing commercial viability and defining potential terms for partnership.

06/16/2026—Announce that it has closed its previously announced non-brokered private placement of 7,968,319 units of the Company for gross proceeds of $1,195,247.85 at a price of $0.15 per Unit.

05/05/2026—Announced that it has elected to rely on Coordinated Blanket Order 51-933, and move to semi-annual financial reporting. Hillcrest's fiscal year ends on December 31. Under the SAR pilot program, the Company will be exempt from filing interim financial reports and related Management's Discussion & Analysis (MD&A) for its first and third quarters.

04/23/2026—Announced that it has finalized the A-Sample design of its ZVS PCS1000 Grid Power Conversion System, a purpose-built 250 kW, 800V DC sidecar rectifier module developed for next-generation AI data center infrastructure. The A-Sample design finalization is a key engineering milestone, confirming the product architecture, form factor, and performance specifications ahead of the prototype demonstration program planned to begin in June 2026.

04/06/2026—Announced that, further to its news release dated March 31, 2026, the Company has closed the Shares for Debt Offering originally announced on March 23, 2026. The Offering of units of the Company was completed with 2,912,731 Unit being issued at $0.18 per Unit for the aggregate amount of $524,299.17 in previously accrued debt being settled.

03/31/2026—Provided an update on the Shares for Debt Offering originally announced on March 23, 2026. The offering of units of the Company at a price of $0.18 per Unit is expected to increase from the $500,000 originally announced to $550,000. Up to $140,000 is anticipated to be settled in connection with previously accrued fees owing to directors for acting as directors of the Company.

03/23/2026—Announced its intent to complete a Shares for Debt Offering of units of the Company at a price of $0.18 per Unit for up to $500,000 in debt. Each unit will consist of one common share in the capital of the Company and one Share purchase warrant. Each warrant will entitle the holder to purchase an additional share at a price of $0.20 per warrant share for a period of 12 months following the date of issuance. All securities issued in connection with the Private Placement are subject to a statutory hold period of four months and one day following the date of issuance in accordance with applicable Canadian securities laws.

03/23/2026—Announced it is being represented at the 2026 IEEE Applied Power Electronics Conference and Exposition (APEC 2026), held March 22-26, 2026 in San Antonio, Texas, one of the world's leading forums for advancing power electronics innovation. Hillcrest VP of Engineering Dr. Emanuel Serban, Ph.D., P.Eng., will participate as a Technical Lecture Presenter for Session T15.2: “Seamless Power Transfer of Bidirectional Converters in Microgrids Applications” on Wednesday, March 25, 2026.

03/19/2026—Released a new investor interview featuring Founder and Chief Executive Officer Don Currie in conversation with Stocks To Watch host Ashleigh Barry. The full interview can be viewed at: https://www.youtube.com/watch?v=Pf-4QHZmOL4. In the interview, Mr. Currie discusses Hillcrest's proprietary Zero Voltage Switching (ZVS) technology platform and its potential to improve power conversion efficiency across electric vehicles, data center infrastructure, and renewable energy systems. The discussion covers the Company's technology differentiation, near-term commercialization milestones, and demand trends across each of these sectors.

03/17/2026—Provided a development update confirming that its ZVS PCS1000 Grid Power Conversion System prototype remains on schedule, with the system expected to be ready for customer and partner demonstrations at the Company's facility in Vancouver, British Columbia and at Systematec GmbH's facility in Germany in June 2026.

03/11/2026—Announced the operationalization of CleanPath Distribution Inc., an Indigenous-led Canadian corporation operationalized pursuant to the Memorandum of Understanding between Hillcrest, Pasqua First Nation (PFN), and Apeiron Resources Ltd. announced on October 14, 2025. CleanPath Distribution Inc. is an Indigenous-led Canadian corporation created to pursue funding opportunities, including government funding, and to support the commercialization of Hillcrest's ZVS power conversion technology in Canada. CleanPath is owned as follows: Pasqua First Nation #79: 51%; Apeiron Resources Ltd.: 24.5%; and Hillcrest Energy Technologies Operating Ltd.: 24.5%.

03/03/2026—Announced the engagement of Empire Market Ventures LLC as an investor relations consultant, pursuant to which the Empire Market and its affiliates will provide the Company with investor relations services, including market awareness campaigns, investor outreach, and promotional services. In addition, it announced that CEO, Don Currie, is scheduled to present live at the Clean Energy & Renewables Virtual Investor Conference, hosted by VirtualInvestorConferences.com.

02/19/2026—Announced the appointment of Otmar Bitsche as Vice President of European Business Development. Mr. Bitsche most recently served as Director of E-Mobility at Porsche AG, where he built the company's e-mobility organization from the ground up and led it from 2012 until his retirement in December 2025. His experience across electric vehicles, high-voltage powertrains, battery systems, EV fast charging, and energy storage directly supports Hillcrest's commercialization efforts across each of these sectors.

02/05/2026—Announced the execution of a Memorandum of Understanding (MOU) with a leading industrial user to jointly develop customized ZVS inverter solutions for advanced materials processing applications. This industrial development agreement demonstrates the broad applicability of Hillcrest's ZVS technology platform across the Company's target market segments, which collectively represent a combined addressable market exceeding $180 billion by 2030.

01/29/2026—Announced it has entered into an investor relations agreement with Martin City Studios, LLC, pursuant to which Martin City Studios and its affiliates will provide the Company with various advertising and promotional services, including professionally produced interviews, distribution across investor networks, and syndication through financial platforms.

01/15/2026—Provided shareholders with an update on recent strategic developments and key commercialization milestones expected in 2026.

01/09/2026—Announced it has closed the final tranche of its previously announced offering of units of the Company for gross proceeds of $4,593,118.86 at a price of $0.09 per unit, comprised of: $3,642,879.96 in aggregate gross proceeds raised through the issuance of 40,476,444 Units on a private placement basis and $950,238.90 in proceeds raised through the issuance of 10,558,210 Units in consideration for the settlement of $950,238.90 in debt owing to an arm's length creditor of the Company. Each unit consists of one common share in the capital of the Company and one Common Share purchase warrant.

12/31/2025—Provided updates with respect to its previously announced offering of units of the Company. The Company expects that it will close the second tranche of the offering in early January 2026, which will include the strategic investment from Pasqua First Nation in the amount of $3,000,000. Additionally, the Company originally announced that the Offering would be for an aggregate amount of up to $7,200,000 comprised of: (i) up to $3,900,000 in proceeds to the Company to be raised via the issuance of Units at a price of $0.09 per unit on a private placement basis (the “Cash Offering”) and (ii) up to $3,300,000 in debt to be settled through the issuance of units on the same terms as in respect of the Cash Offering (the “Debt Offering”). The Company now anticipates increasing the amount of the Cash Offering to be an aggregate of $4,400,000 and that the Debt Offering will be limited to $2,850,000. This updated total includes an anticipated increase of the total offering amount from $7,200,000 to $7,250,000 due to oversubscriptions in respect of the Cash Offering.

12/30/2025—Announced the successful completion of Phase 1 of its technology evaluation project with a global Tier 1 automotive supplier. The project successfully demonstrates the technical feasibility of converting the supplier's half-bridge power modules to enable ZVS operation for next-generation electric vehicle inverter applications.

10/28/2025—Announced it has closed the first tranche of its previously announced offering of units of the Company for gross proceeds of $2,656,758 at a price of $0.09 per unit, comprised of: (i) $764,650 in aggregate gross proceeds raised through the issuance of 8,496,112 units on a private placement basis and (ii) $1,892,108 in proceeds raised through the issuance of 21,023,424 units in consideration for the settlement of $1,892,108 in debt owing to arm's length creditors of the Company.

10/14/2025—Announced it has entered into a MOU with Pasqua First Nation #79 and a Letter Agreement with Apeiron Resources Ltd. to establish an Indigenous-majority-owned entity focused on commercializing Hillcrest's ZVS power conversion technology in Canada.

09/26/2025—Announced that the Company proposes to amend 4,350,000 warrants exercisable at $0.50 per common share in the capital of the Company until October 4, 2025, originally issued at closing of a non-brokered private placement of 4,350,000 units of the Company on October 4, 2023. The Company proposes to extend the term of the warrants to October 4, 2027. No other changes are contemplated with respect to the terms of the warrants. None of the warrants have been exercised as of the date of this news release.

07/17/2025—Announced the publication of a technical white paper analyzing the performance characteristics of AC filter inductors in power conversion systems utilizing the Company's ZVS technology. The study is available on the Hillcrest website (https://hillcrestenergy.tech/reports/).

04/14/2025—Announced that Emanuel Serban, Ph.D., PEng, has joined the Company's engineering team. Dr. Serban brings over two decades of experience in power electronics, renewable energy, and grid connected systems. As part of his role at Hillcrest, Dr. Serban will lead the engineering team at the Vancouver Center of Excellence, focused on advancing power conversion technologies for grid applications, such as renewable energy integration, energy storage, and data centers.

03/31/2025—Announced the commencement of a technology evaluation project with a global Tier 1 automotive supplier. The initial phase will focus on assessing the potential benefits of Hillcrest's innovative ZVS technology in the supplier's next generation inverter applications for electric vehicles (EVs).

Risks and Disclosures

This Executive Informational Overview® ("EIO") has been prepared by Crystal Research Associates, LLC ("CRA") with the assistance of Hillcrest Energy Technologies Ltd. ("Hillcrest" or the "Company") based upon information provided by the Company. CRA has not independently verified such information. Certain information in this EIO relates to future events or anticipated business and financial performance. Such statements constitute forward-looking information within the meaning of applicable securities laws. These statements are based on assumptions, expectations, and estimates that, while considered reasonable by management at the time made, are inherently subject to significant business, economic, competitive, regulatory, and other risks and uncertainties. Actual results may differ materially from those discussed herein due to a variety of factors, including the risks described in Hillcrest's public filings available on SEDAR+ and elsewhere.

The content of this report concerning Hillcrest has been compiled primarily from information publicly released by the Company through news releases, investor materials, and regulatory filings. Hillcrest is solely responsible for the accuracy of such information. Information regarding other companies has been prepared from publicly available sources and has not been independently verified by Hillcrest or CRA. Certain summaries of activities and outcomes have been condensed to aid the reader in gaining a general understanding of the Company and its business. CRA assumes no obligation to update the information contained in this report. In addition, during the first year of its agreement, CRA has been compensated by the Company in cash in the amount of sixty thousand dollars for its services in creating this report and related quarterly updates.

Investors should carefully consider the risks associated with Hillcrest's business, as summarized below and as more fully described in the Company's recent public filings. The risks described in this report are not the only risks the Company faces. Additional risks and uncertainties not presently known to Hillcrest, or that it currently considers immaterial, could also adversely affect the Company's business, financial condition, results of operations, and future prospects. The order in which these risks are presented should not be taken as an indication of their relative importance.

This report is published solely for informational purposes and should not be construed as an offer to sell, or a solicitation of an offer to buy, any security. Past performance does not guarantee future results. For more complete information regarding the risks of investing in the Company, investors should review Hillcrest's public filings or contact the Company directly at (604) 609-0006.

RISKS AND UNCERTAINTIES

An investment in the securities of the Company is speculative and subject to numerous risks, many of which are beyond Hillcrest's control. If any of the following risks, or other currently unknown risks, materialize, the Company's business, financial condition, operating results, and prospects could be materially adversely affected, and investors could lose all or part of their investment.

Financing Risk and Dilution

Hillcrest has limited financial resources and has not yet established a sustained history of revenue generation or profitability. The Company's ability to continue operations, execute its development plans, advance commercialization initiatives, and meet its obligations will depend in part on its ability to generate revenue and/or obtain additional financing. There can be no assurance that such financing will be available on acceptable terms, or at all. Future financings may be completed through the issuance of equity, convertible securities, or debt, any of which could dilute existing shareholders or increase the Company's financial obligations.

Negative Cash Flow and Operating Losses

The Company has incurred losses and negative cash flow from operations and may continue to do so for the foreseeable future as it advances product development, commercialization, certification, and strategic partnerships. Hillcrest may need to use existing cash balances and proceeds from financings to fund such losses. There can be no assurance that the Company will achieve positive cash flow in the near term.

Execution Risk and Commercialization Timing

Hillcrest's success depends on its ability to advance its technology from development and validation into commercial deployment. The timing of customer evaluations, pilot projects, certification processes, development agreements, licensing arrangements, and commercial launch milestones may differ materially from management's expectations. Delays in achieving technical, regulatory, commercial, or strategic objectives could adversely affect the Company's business, financial condition, and the market price of its securities.

Product Development Risk

The development of advanced power conversion products involves significant technical and execution risk. These risks include delays in development, unexpected costs, failure to achieve desired performance metrics, failure to meet customer specifications, dependence on third parties for engineering or manufacturing support, and the possibility that competing technologies may prove superior or gain faster market acceptance. There can be no assurance that Hillcrest's development efforts will result in commercially viable products or meaningful revenue generation.

Technology Adoption Risk

Even if Hillcrest's products demonstrate compelling technical performance, widespread customer adoption is not assured. Potential customers may be slow to adopt new power electronics technologies due to internal qualification requirements, incumbent supplier relationships, long procurement cycles, budget constraints, or perceived integration risk. In addition, customers may require extended testing, pilot deployment, or certification before committing to broader commercial adoption.

Intellectual Property Risk

Hillcrest's competitive position depends in part on the strength of its intellectual property portfolio, including patents, trade secrets, proprietary algorithms, know-how, and contractual protections. There can be no assurance that patent applications will issue, that issued patents will provide meaningful protection, or that the Company will be able to prevent third parties from developing similar, competing, or superior technologies. The Company may also face claims from third parties alleging infringement of intellectual property rights, which could require Hillcrest to defend its position, obtain licenses, modify its products, or incur significant expense.

Competition

Hillcrest operates in highly competitive and rapidly evolving markets, including power electronics, electrification, energy storage, electric vehicles, grid infrastructure, and industrial power conversion. The Company competes with established participants and emerging technology developers, many of which have substantially greater financial, technical, manufacturing, commercial, and marketing resources. Competitors may have stronger customer relationships, longer operating histories, broader product portfolios, and greater ability to fund product development and commercialization. Competition could adversely affect Hillcrest's ability to gain market share, secure commercial agreements, or achieve attractive margins.

Strategic Partnership and Contract Risk

Hillcrest's commercialization strategy relies in part on strategic relationships, including engineering collaborations, licensing discussions, pilot programs, and potential manufacturing or distribution arrangements. There can be no assurance that existing or future counterparties will perform their obligations, proceed to commercial agreements, or continue relationships on favorable terms. The loss of a key partner, or failure to convert development relationships into commercial contracts, could adversely affect the Company's growth strategy and revenue prospects.

Global Operations and Supply Chain Risk

Hillcrest operates in Canada and works with international service providers and potential customers in Europe and other markets. The Company's operations and timelines may be affected by global economic conditions, geopolitical developments, inflation, interest rates, foreign exchange fluctuations, transportation constraints, supply chain disruptions, and shortages or price increases in components, equipment, and raw materials. Such factors may increase development costs, delay product delivery, or impair commercialization efforts.

Operating internationally also exposes the Company to additional risks, including political and economic instability, tariffs and customs issues, currency controls, sanctions, evolving tax regimes, differing legal systems, data protection requirements, labor issues, and challenges in protecting intellectual property rights.

Trade and Tariff Risk

Changes in trade policy, including tariffs, export controls, sanctions, and related restrictions affecting North America, Europe, or other key markets, could disrupt the Company's supply chain, increase input costs, reduce customer demand, or slow market adoption. Because Hillcrest's target end markets include automotive, industrial, infrastructure, and grid-related applications, changing trade conditions could adversely affect both commercial opportunities and operating economics.

Certification, Regulatory, and Compliance Risk

Commercial deployment of Hillcrest's products may require product certification, regulatory approvals, customer qualification, or compliance with applicable electrical, industrial, environmental, or safety standards. Certification and approval processes can be lengthy, costly, and uncertain. Delays or failures in achieving required certifications or compliance milestones could postpone commercialization or limit the markets in which the Company can operate.

Macroeconomic and Market Risk

Hillcrest's business may be adversely affected by broader market conditions, including inflation, higher interest rates, credit tightening, recessionary pressures, stock market volatility, reduced capital availability, geopolitical conflict, public health events, and other macroeconomic disruptions. Because the Company is at an early stage of commercialization and may require additional capital, adverse market conditions could negatively affect its financing options, customer spending decisions, and overall business momentum.

Key Personnel Risk

The Company's success depends significantly on the continued service of its directors, officers, technical personnel, and key advisors. The loss of one or more members of management or engineering leadership, or the inability to attract and retain qualified personnel in a competitive labor market, could adversely affect the Company's ability to execute its strategy.

Litigation Risk

From time to time, Hillcrest may become involved in claims, disputes, or litigation in the ordinary course of business, including matters relating to contracts, intellectual property, employment, or commercial relationships. Any such proceedings could be costly, time-consuming, divert management attention, and have a material adverse effect on the Company's business, financial condition, results of operations, or reputation, regardless of outcome.

Conflicts of Interest

Certain directors and officers of the Company may be involved in other business activities and may devote time to matters unrelated to Hillcrest. Situations may arise in which such persons have interests that differ from those of the Company. To the extent that conflicts of interest arise, they are expected to be addressed in accordance with applicable corporate law and the Company's governance policies. However, there can be no assurance that such conflicts will always be resolved in the Company's favor.

Inflation and Cost Escalation Risk

The Company's operating and development costs may increase due to inflation, component price increases, supply chain disruptions, higher labor costs, or other external factors. If Hillcrest is unable to manage cost escalation effectively, its development plans, product economics, and financial performance may be adversely affected.

Environmental, Health, and Safety Risk

Although Hillcrest is not engaged in legacy oil and gas operations, its business remains subject to environmental, health, safety, and related regulatory requirements applicable to product development, testing, electronics handling, manufacturing activities, and workplace operations. Failure to comply with these requirements could result in fines, penalties, delays, reputational harm, or additional costs.

Insurance and Uninsured Loss Risk

The Company maintains insurance coverage it believes is appropriate for its stage and activities; however, not all risks are insurable, and insurance may not be available on reasonable terms or in sufficient amounts to cover all potential losses. Any significant uninsured or underinsured loss could have a material adverse effect on the Company's financial condition and operations.

Dependence on Components, Materials, and Third-Party Suppliers

Hillcrest's development and future commercialization activities depend on access to components, materials, manufacturing inputs, and third-party engineering or supply partners. Shortages, delays, cost increases, quality issues, or supplier concentration could disrupt development timelines, increase costs, or limit the Company's ability to fulfill customer or partner requirements.

Glossary

A-Sample prototype—An early-stage functional prototype used to demonstrate core technology performance and validate design concepts with customers and partners prior to further refinement and commercialization.

Alternating current (AC)—An electric current that periodically reverses direction, commonly used in power grids and most industrial and household applications.

Data Centers—Facilities that house computing infrastructure, such as servers and storage systems, requiring large amounts of reliable and efficient electrical power for operation and cooling

Direct Current (DC)—An electric current that flows in a single direction, typically produced by batteries, solar panels, and energy storage systems.

dV/dt—The rate of change of voltage over time; high dV/dt can contribute to switching losses, electromagnetic interference, and stress on electrical components

Efficiency—A measure of how effectively a system converts input power into useful output power, typically expressed as a percentage. For inverters, it represents the percentage of input DC energy that is successfully converted into usable AC power.

Electromagnetic Interference (EMI)—Unwanted electrical noise generated by electronic devices that can disrupt the performance of nearby systems and require mitigation through filtering and shielding.

High-Efficiency Inverter (HEI)—Hillcrest's proprietary inverter platform based on Zero Voltage Switching (ZVS), designed to significantly reduce switching losses and improve overall system efficiency and performance.

Open Compute Project—An industry initiative focused on developing and sharing open standards for data center hardware to improve efficiency, scalability, and cost-effectiveness.

Power Conversion—The process of transforming electrical energy from one form to another, such as converting DC to AC or adjusting voltage and frequency levels.

Power Conversion Systems (PCS)—Integrated systems that manage the conversion and control of electrical power, commonly used in applications such as energy storage, renewable integration, and grid infrastructure.

Power Inverter—An electronic device that converts direct current (DC) into alternating current (AC), enabling energy from batteries or renewable sources to be used in standard electrical systems

Semiconductor Die—The small piece of semiconductor material that contains an integrated circuit, forming the core functional component of electronic devices. The physical size of the semiconductor die influences cost, performance, heat dissipation, and power handling capability.

Sidecar—In physical datacenter facilities, a "sidecar" refers to a separate, auxiliary hardware cabinet positioned directly next to modern IT server racks. These are increasingly necessary for extreme high-density hardware, such as servers dedicated to AI workloads.

Switching losses—Energy losses that occur when semiconductor devices switch on and off during power conversion, typically resulting in heat generation and reduced efficiency.

Total Harmonic Distortion (THD)—A measure of distortion in an electrical waveform caused by harmonics, indicating the deviation from a pure sinusoidal signal.

Treaty First Nation—An Indigenous community in Canada that is a signatory to a formal treaty agreement with the Crown, often with specific rights related to land, governance, and economic participation.

About Our Firm: For more than two decades, Crystal Research Associates, LLC has provided clear, factual, investor-focused research on small- and mid-cap companies to the Wall Street community. Our work is designed for both institutional and retail audiences and is distributed through a broad range of targeted channels, including leading financial data and information platforms. We also extend the visibility of our research through prominent social media channels and select national broadcast and print media opportunities.

Crystal Research Associates is led by Wall Street veterans Jeffrey Kraws and Karen Goldfarb. Drawing on decades of experience as an award-winning sell-side analyst team, they have built a distinctive research platform that delivers institutional-quality industry and market analysis in a format that is clear, accessible, and useful to investors. Over the years, our work has appeared on Bloomberg, Thomson Reuters/First Call, Capital IQ, FactSet, Yahoo! Finance, and many other widely followed forums.

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