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CERENERGY® TYPE BATTERY DEMONSTRATES 28-YEAR SHELF-LIFE PERFORMANCE

Highlights

- CERENERGY® has been designed on well-established sodium-nickel-chloride chemistry
- Origins to the first-generation Zebra batteries
- 28-year-old Zebra battery, left unused in storage, provided to Altech
- Upon testing, battery performed as if it were new
- No degradation in function or capacity despite nearly three decades of dormancy
- Ideal for long-term military storage

Altech Batteries Limited (ASX: ATC, FRA: A3Y) is pleased to announce the exceptional long-term shelf life of its CERENERGY® sodium-nickel-chloride (Na Ni-Cl) battery technology.

CERENERGY® batteries have been designed on well-established sodium-nickel-chloride chemistry, which traces its origins to the first-generation Zebra batteries. These earlier Zebra cells had a smaller energy capacity (approximately 100Wh) compared to the current CERENERGY® cells (250Wh). CERENERGY® cells were developed to improve energy capacity and reduce battery costs, but share the same fundamental Na Ni-Cl electrochemical design.

In a compelling demonstration of the technology's durability, a 28-year-old Zebra battery—originally manufactured by AEG ZEBRA in Berlin and left unused in storage—was recently provided to Altech for evaluation. Upon testing, the battery was successfully activated and performed as if it were new, exhibiting no degradation in function or capacity despite nearly three decades of dormancy.

The underlying reason for this remarkable longevity lies in the battery's unique chemistry and solid-state design. In its inactive state, the battery's electrolyte exists as solid sodium aluminium chloride salt crystals and nickel powder. All components are contained within a hermetically sealed, pressure-tight cell, preventing any moisture ingress or chemical degradation. Unlike conventional lithium-ion batteries—which rely on volatile liquid electrolytes that degrade over time—the CERENERGY® system remains completely inert and stable at ambient conditions.

When activated by heating to approximately 270 °C, the 28-year-old Zebra battery transitions into its operational state and can immediately begin charging and discharging with no observable loss in



performance. This "on-demand activation" feature makes it particularly appealing for defense and strategic reserve applications, where batteries may need to be stored for extended periods and rapidly deployed when needed. In fact, such systems could be buried underground or warehoused for decades and reactivated without any compromise in performance.

To validate this capability further, Altech's joint venture partner, Fraunhofer IKTS, has conducted a rigorous individual cell stress-testing program. The 28-year-old cell is currently undergoing daily charge and discharge cycling at 300 °C across a 20–80% state of charge (SoC) range. The tests confirm not only the battery's safe operation but also its consistent performance across the full capacity spectrum.

This breakthrough reaffirms the robustness, safety, and strategic advantage of CERENERGY® sodium-nickel-chloride battery technology, setting it apart from conventional storage solutions in terms of reliability and long-term stability.

End

Authorised by: Iggy Tan (Managing Director)

Altech Batteries Interactive Investor Hub

Altech's interactive Investor Hub is a dedicated channel where management interacts regularly with shareholders and investors who wish to stay up-to-date and to connect with the Altech Batteries leadership team. Sign on at our Investor Hub <https://investorhub.altechgroup.com> or alternatively, scan the QR code below.



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About Altech Batteries Ltd (ASX:ATC) (FRA:A3Y)

CERENERGY® Batteries Project

Altech Batteries Ltd is a specialty battery technology company that has a joint venture agreement with world leading German government battery institute Fraunhofer IKTS ("Fraunhofer") to commercialise the revolutionary CERENERGY® Sodium Chloride Solid State (SCSS) Battery. CERENERGY® batteries are the game-changing alternative to lithium-ion batteries. CERENERGY® batteries are fire and explosion-proof; have a life span of more than 15 years and operate in extreme cold and desert climates. The battery technology uses table salt and is lithium-free; cobalt-free; graphite-free; and copper-free, eliminating exposure to critical metal price rises and supply chain concerns.

The joint venture is commercialising its CERENERGY® battery, with plans to construct a 120 MWh production facility on Altech's land in Saxony, Germany. The facility intends to produce CERENERGY® battery modules to provide grid storage solutions to the market.



Silumina Anodes™ Battery Materials Project

Altech Batteries has licenced its proprietary high purity alumina coating technology to 75% owned subsidiary Altech Industries Germany GmbH (AIG), which has finalised a Definitive Feasibility Study to commercialise an 8,000tpa silicon alumina coating plant in the state of Saxony, Germany to supply its Silumina Anodes™ product to the burgeoning European electric vehicle market.

This Company's game changing technology incorporates high-capacity silicon into lithium-ion batteries. Through in house R&D, the Company has cracked the "silicon code" and successfully achieved a 30% higher energy battery with improved cyclability or battery life. Higher density batteries result in smaller, lighter batteries and substantially less greenhouse gases, and is the future for the EV market. The Company's proprietary silicon product is registered as Silumina Anodes™.

The Company is in the race to get its patented technology to market, and recently announced the results of a Definitive Feasibility Study for the construction of a 8,000tpa Silumina Anodes™ material plant at AIG's 14-hectare industrial site within the Schwarze Pumpe Industrial Park in Saxony, Germany. The European silicon feedstock supply partner for this plant will be Ferroglobe. The project has also received green accreditation from the independent Norwegian Centre of International Climate and Environmental Research (CICERO). To support the development, AIG has commenced construction of a pilot plant adjacent to the proposed project site to allow the qualification process for its Silumina Anodes™ product. AIG has executed NDAs with German and North American automakers and battery material supply chain companies.

Silumina Anodes™