

Zinc8 Energy Solutions Announces Second Quarter Financial Results and Provides Corporate Update

~Company gains further technical insight as it continues to expand its efforts towards commercialization~

VANCOUVER, BC, Aug. 26, 2022 /CNW/ - Zinc8 Energy Solutions Inc. ("**Zinc8**" or the "**Company**") (CSE: ZAIR) (OTCPINK: ZAIRF) (FSE: 0E9) today filed its financial results for the second quarter ending June 30, 2022. For further information on the results, please see Zinc8 Energy Solutions Condensed Interim Consolidated Financial Statements and Management Discussion and Analysis as filed on SEDAR on August 26, 2022.

Second Quarter 2022 Highlights Include:

- Ended the second quarter ended June 30, 2022 with a working capital balance of \$4.5 million.
- On June 7, 2022, the Company announced that it added Storm Boswick to its Board of Directors. Mr. Boswick has considerable experience in the investment sector and capital markets holding senior positions with various firms and operates as a venture capitalist and long/short Portfolio Manager and as an advisor in public and private equity.
- Selected as a "Best-in-Class" solution in the Energy Storage Category for the Real Estate Board of New York's 2022 PropTech Challenge.
- On April 7, 2022, the Company announced that it had named Bernard Pinsky, Q.C. to the Board of Directors. Mr. Pinsky is currently the chair of the board and a founding director of the Ronald S. Roadburg Foundation, one of the largest philanthropic foundations in British Columbia. Additionally, he practiced law for over 34 years at the firm Clark Wilson LLP in Vancouver, BC where he was a senior partner and the co-head of the Corporate Finance and Securities Group up until December 31, 2021. He was lead counsel for the Company at the time of his retirement from public practice, a role that he held since November of 2019.

Subsequent to June 30, 2022:

- On July 8, 2022, the Company announced the support from the U.S. Senate Majority Leader Charles E. Schumer (D-NY) for Zinc8 to establish a manufacturing facility in Ulster, New York's former TechCity site location.

"We're seeing a great deal of interest in our company and related technology and remain focused on building out our future," said Ron McDonald, President and CEO of Zinc8 Energy Solutions. "We've completed some early product tests that have given us takeaways and we continue to work on the geographical expansion news featuring Zinc8 in the press. We have a great and hardworking team focused on delivering the next steps in product development in anticipation of our commercial product launch over the next 12 to 18 months."

Corporate Update

The Company has been in an early-stage development program of an advanced energy storage

system with a major North American cloud service provider. Having completed the testing phase, Zinc8 highlights the following:

- **Steady Recharge and Discharge Demonstration:** the zinc-air energy storage system ("ZESS") was cycled repeatedly and achieved multiple long duration discharges of 6+ hours fundamentally illustrating the long duration technology.
- **Standby and Transition to Discharge:** the ZESS has successfully demonstrated the ability to completely discharge at the 100% internally-targeted rate from a state of transition demonstrating the ZESS's responsiveness and reliability to provide power on demand.
- **Step-up and Step-down Transient Response and Start-up Time to Discharge:** the battery's response time to increasing and decreasing the load on the circuit achieved the desired outcome.
- **Standby Loss Characterization:** Parasitic power loss due to maintaining the ZESS in standby mode was tested and used as a measure of the efficiency of the complete system.
- **Power Electronic Controls:** The ZESS has been successfully integrated with power electronics systems allowing for a greater understanding of pertinent factors that the power electronics may have on the development of a reliable, cost-effective and energy-efficient product.
- **Fluidizer Core System:** The Fluidizer Core System's design which is one of the three key components of the ZESS was validated.
- **Zinc Regeneration System:** The system was built with a high yield to achieve the unique functionality of zinc generation and removal in a fully sealed multicell stack.
- **Cell Stack Characteristics:** Improvements to the design of the cell stacks were implemented to achieve higher output. Furthermore, the Company's proprietary cathode, which is fundamentally critical to the power rating and energy efficiency of the system, achieved the projected performance.

The completion of this project allowed Zinc8 to validate core systems components, gain knowledge of power electronics integration, develop a pathway to commercialization success, and demonstrate the fundamental performances of the fuel cell and regenerators and the entire energy storage system, for instance, transient responses, long duration discharge, stand-by, and transition to discharge, etc.

Zinc8's engineering team will utilize the learnings from this project as they move to the next phase of development of having a commercialized product ready for manufacturing in a new manufacturing facility. Testing substations are under construction at the new Canadian facility with additional materials and components being sourced as the Company is in the process of evaluating suitable manufacturing and production sites in locations including New York.

"Over the course of 14 months working with our partner, Zinc8 had designed, procured, and built a series of batteries that were integrated with power electronics to form a complete energy storage system," said Dr. Simon Fan, CTO and VP of Product Management of Zinc8 Energy Solutions. "The opportunity to showcase the technology to our partner and internally identify any room for engineering improvement has been instrumental to the success of building both the business relationship and technical core competency. Putting these batteries to the test has allowed Zinc8's engineering team to gain confidence in forming a scalable energy storage system for manufacturing and receive affirmation in eventually providing a unique energy solution to our potential customers in the pipeline worldwide. Zinc8 and the cloud service provider will continue to work together and share developmental information."

"On behalf of the executive team and all other employees of Zinc8, I would like to express our sincerest appreciation for the efforts of our engineering team," said Ron MacDonald, CEO of Zinc8 Energy Solutions. "The development work that was undertaken over the last 14 months is significant and everyone who has been involved in this project should be proud of the accomplishments that have been achieved."

The Market Outlook

On August 16, 2022, US President Joe Biden signed the Inflation Reduction Act (the "Act"), bringing with it tax incentives and other measures widely expected to significantly boost prospects for energy storage deployment. The Act will take the most aggressive action ever by directing the investment of an estimated US\$369 billion towards initiatives that confront climate change and strengthen energy security. The investment in energy security and climate change mitigation targets a 40% reduction in greenhouse gas (GHG) levels by 2030, supporting electric vehicles (EVs), energy efficiency and building electrification, wind, solar PV, green hydrogen, battery storage and other technologies.

Most directly relevant to the downstream energy storage industry is the introduction of an investment tax credit for standalone energy storage. That can lower the capital cost of equipment by about 30%, although under some existing conditions it will be more or less, depending on, for example, the use of local unionized labour. For the upstream battery and energy storage system value chains, there are also tax incentives for siting production within the US, much like the incentives that exist for wind and solar PV manufacturers that source or manufacture their products domestically.

Battery storage growth in the United States remains strong, as the U.S. Energy Information Administration highlighted storage capacity more than tripling in 2021 over 2020 to reach over 4,600 MWh as more than 100 utility-scale projects were brought online last year¹. In market research group Mercom Capital's most recent quarterly report, energy storage companies raised almost as much corporate funding in the first half of 2022 as in all of 2021. US\$15.8 billion in funding was raised through H1/2022 versus the US\$17 billion total for the full year 2021, which continues to highlight the significant role of battery storage in the energy transition².

[Note 1](#)

[Note 2](#)

About Zinc8 Energy Solutions Inc.

Zinc8 Energy Solutions focuses on developing and commercializing its low-cost, long duration ZESS for utilities, microgrid, and Commercial & Industrial markets. By using the patented ZESS as a standalone or an enabling technology, it allows opportunities for peak demand reduction, time-of-use arbitrage, and participation in both the value stacking programs and the distributed long-duration energy storage space, all in conjunction with the opportunity for a significant reduction in carbon footprint. The long duration (8-100+ hours) ZESS has no fire and explosion risk, has no capacity fade over extensive lifetime, and offers complete charge operational flexibility.

About Zinc8 Energy Solutions Inc. Zinc8 has assembled an experienced team to execute the development and commercialization of a dependable low-cost zinc-air battery. This mass storage system offers both environmental and efficiency benefits. Zinc8 strives to meet the growing need for secure and reliable power. To learn more about Zinc8's technology, please visit:

<https://zinc8energy.com>



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More about the Zinc8 Energy Storage System (ESS)

The *Zinc8* ESS is a modular Energy Storage System designed to deliver power in the range 20kW - 50MW with capacity of 8 hours of storage duration or higher. With the advantage of rechargeable zinc-air flow battery technology, the system can be configured to support a wide range of long-duration applications for microgrids and utilities. Since the energy storage capacity of the system is determined only by the size of the zinc storage tank, a very cost-effective and scalable solution now exists as an alternative to the fixed power/energy ratio of the lithium-ion battery.

Technology

The *Zinc8* ESS is based upon unique patented zinc-air battery technology. Energy is stored in the form of zinc particles, similar in size to grains of sand. When the system is delivering power, the zinc particles are combined with oxygen drawn from the surrounding air. When the system is recharging, zinc particles are regenerated, and oxygen is returned to the surrounding air.

Applications

The flexibility of the *Zinc8* ESS enables it to service a wide range of applications. Typical examples include:

- Smoothing energy derived from renewable sources such as wind and solar
- Commercial/Industrial backup replacing diesel generators
- Industrial and grid scale, on-demand power for peak shaving and standby reserves
- Grid-scale services such as alleviating grid congestion, deferring transmission/distribution upgrades, energy trading and arbitrage, and increasing renewable energy penetration.

Architecture

The *Zinc8* ESS is designed according to a modular architecture that enables a wide variety of system configurations to be created from a small number of common subsystems. Each subsystem implements a single element of the technology:

- The Zinc Regeneration Subsystem (ZRS) provides the recharging function
- The Fuel Storage Subsystem (FSS) provides the energy storage function
- The Power Generation Subsystem (PGS) provides the discharging function

Notice Regarding Forward Looking Statements


All statements and disclosures, other than those of historical fact, which address activities, events, outcomes, results or developments that Zinc8 anticipates or expects may or will occur in the future (in whole or in part) should be considered forward-looking statements.

Forward looking statements in this press release include that we can execute the development and commercialization of a dependable low-cost zinc-air battery; that our mass storage system offers both environmental and efficiency benefits; that we can help meet the needs for secure and reliable power; and that we will be able to complete the construction of the testing substations currently being built at the new Canadian facility. Zinc8 Energy Solutions believes the material factors, expectations and assumptions reflected in the forward-looking statements are reasonable at this time, but no assurance can be given that these factors, expectations and assumptions will prove to be correct. The forward-looking statements included in this news release are not guarantees of future performance. Such forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause actual results or events to differ materially from those anticipated in such forward-looking statements including, without limitation: that we are not able to raise funds as expected; that our technology fails to work as expected or at all; that our technology proves to be too expensive to implement broadly; that customers do not adapt our products for being too complex, costly, or not fitting with their current products or plans; our competitors may offer better or cheaper solutions for battery storage; general economic, market and business conditions; increased costs and expenses; inability to retain qualified employees; our patents may not provide protection as expected and we may infringe on the patents of others; and certain other risks detailed from time to time in Zinc8's public disclosure documents, copies of which are available on the Company's SEDAR profile at www.sedar.com. The ongoing military conflict between the sovereign state of Ukraine and Russia also poses new risks that are currently indescribable and immeasurable. Readers are cautioned that the foregoing list of factors is not exhaustive and are cautioned not to place undue reliance on these forward-looking statements.

The forward-looking statements contained in this news release are made as of the date hereof and the Company undertakes no obligations to update publicly or revise any forward-looking statements, whether as a result of new information, future events or otherwise, unless so required by applicable securities laws.

Neither the CSE nor any Market Regulator (as that term is defined in the policies of the CSE) accepts responsibility for the adequacy or accuracy of this release.

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CNW 17:14e 26-AUG-22