Zinc8 Energy Solutions Announces Funding Support to Advance the Zinc-Air Stack Technology

VANCOUVER, BC, Jan. 11, 2023 /CNW/ - Zinc8 Energy Solutions Inc. ("**Zinc8**" or the "**Company**") **(**CSE: ZAIR) (OTC: ZAIRF) (FSE: 0E9) is pleased to announce that it is receiving advisory services and up to $500,000 in funding from the National Research Council of Canada Industrial Research Assistance Program (NRC IRAP).

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The funding is to support a research and development (R&D) project titled, "Improvement of sub-component efficiencies of the Zinc-air battery system". Under this agreement, NRC IRAP will provide advisory and funding support to Zinc8's R&D division on this 2-year project aiming to improve individual sub-component efficiencies by material and process variations for its patented 'Zinc-air Energy Storage System (ESS)'. The system efficiency will be improved by reducing the overpotential of the electrochemical reactions, whereas the operational efficiency will be improved by reducing potential parasitic losses. NRC IRAP's support will allow Zinc8's R&D division to deploy resources to optimize critical components of the system, aiming to improve Zinc8's ESS round-trip efficiency. It is intended that the project will increase Zinc8's product visibility in the market.

This support comes in addition to an ongoing 6-month project on techno-economic assessment and competitive landscape analysis of the flow-battery technology, where NRC IRAP is providing Zinc8 with up to $75,000 in R&D funding.

"The support from NRC IRAP will help us accelerate Zinc8 Energy Solutions' committed efforts to deliver a low-cost, long-duration energy storage system by establishing solid technical foundations for our next-generation zinc-air fuel cell and zinc generator," said Dr. Simon Fan, CTO and VP of Product Management of Zinc8 Energy Solutions. "Integrating these new stacks into future energy storage systems will unlock the full potential of Zinc8's proprietary Zinc-air technology by maintaining its cost and performance competitiveness in both the commercial and industrial (C&I) and utilities

markets."

With respect to employee support and engagement activities, the Company granted an aggregate of 800,000 restricted share units (RSUs) to certain key executive and non-executive employees in accordance with the Company's Long Term Incentive Plan (LTIP). The RSUs vest in stages as follows: 400,000 RSUs vest in stages with 25% vesting on the date of January 5, 2023, 25% vesting on April 5, 2023, 25% vesting on July 5, 2023, and 25% vesting on October 5, 2023; 400,000 RSUs vest as to 86,250 on June 5, 2023, and the balance of 313,750 vesting on or before June 4, 2025, based upon the achievement of certain performance-based milestones. All the RSUs are subject to a deferral right whereby the holder can defer any vesting date at their option, on five days prior written notice to the Company and in accordance with the terms of the RSU grant notice, to the earlier of the date of a change of control of the Company and the date the holder ceases to provide services to the Company and to be an eligible participant. The RSUs and underlying common shares are subject to a hold period of four months and one day from the date of grant in accordance with the policies of the Canadian Securities Exchange. A copy of the LTIP is available under the Company's profile on SEDAR.

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

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

This news release contains certain statements or disclosures relating to Zinc8 Energy Solutions that are based on the expectations of its management as well as assumptions made by and information currently available to Zinc8 Energy Solutions which may constitute forward-looking statements or information ("forward-looking statements") under applicable securities laws. All such statements and disclosures, other than those of historical fact, which address activities, events, outcomes, results or developments that Zinc8 Storage 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 Zinc8's involvement with energy storage projects; that we can execute the development and commercialization of a dependable low cost zinc-air battery; the proposed benefits of the funding and the proposed use of the funding and the risk that the benefits may not prove to be as stated in the news release and that the funds may be used for other purposes; that our mass storage system offers both environmental and efficiency benefits; and that we can help meet the needs for secure and reliable power. 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 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 Energy Solution's public disclosure documents, copies of which are available on the Company's SEDAR profile at www.sedar.com. 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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