

# RESOURCEWORLD

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## Zinc-Air battery storage system headed for New York State

by Jane Foutz

ZINC8 ENERGY SOLUTIONS INC. [ZAI-CSE; 0E9-FSE], formerly known as MGX Renewables Inc., recently announced a cooperation agreement with the New York Power Authority (NYPA) to install a Zinc-Air Battery Energy Storage System in New York State. The New York Power Authority, the largest state public power organization in the US, will collaborate with Zinc8 Energy Solutions in a joint development project to achieve the aggressive energy storage goal of 3 gigawatts by 2030 and by supporting a nation-leading commitment of 100% electricity from emission-free sources by 2040. Under the Cooperative Agreement between NYPA and Zinc8, the NYPA will contribute a total of US \$2.55 million to the project over a three-year period.

The project, selected as a winner through the NYPA Innovation Challenge, will provide back-up power and help to level grid demand and move the state further toward a carbon-free electric grid supported by renewable energy resources.

**“THE PROJECT, SELECTED AS A WINNER THROUGH THE NYPA INNOVATION CHALLENGE, WILL PROVIDE BACK-UP POWER AND HELP TO LEVEL GRID DEMAND AND MOVE THE STATE FURTHER TOWARD A CARBON-FREE ELECTRIC GRID SUPPORTED BY RENEWABLE ENERGY RESOURCES.”**

In addition, NYPA selected Zinc8's Zinc-Air Battery technology to help demonstrate energy storage and demand management, that can help build longer duration flexibility (8 hours plus) into the grid and optimize the role these resources play.

Zinc8's modular energy storage system (Zinc8 ESS) is designed to deliver power in the range 20 kilowatts - 50 megawatts 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.

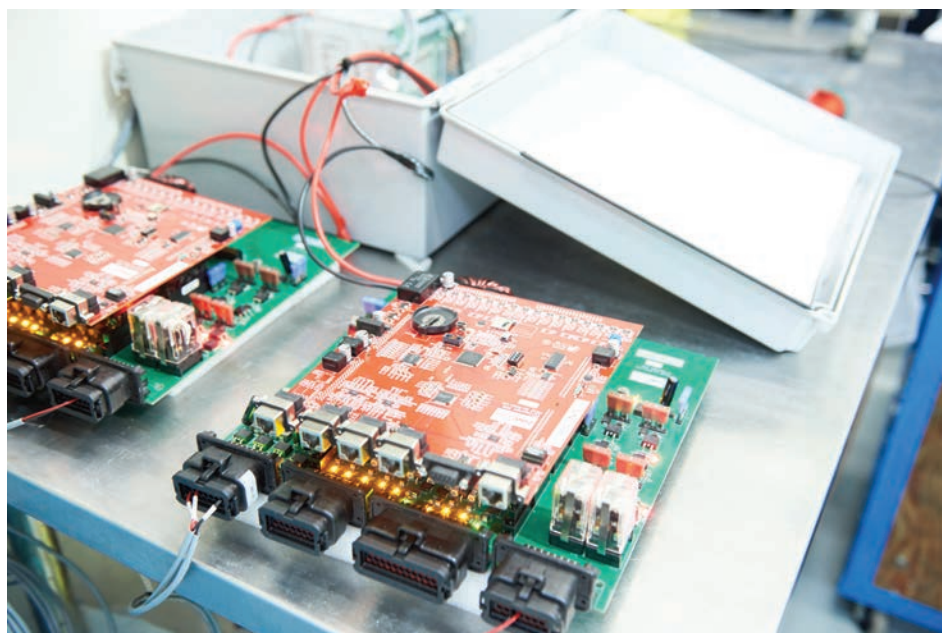
The system's energy storage capacity is determined only by the size of the storage tank, this means that a cost-effective and

scalable solution now exists as an alternative to the fixed power and energy ratio of the lithium-ion battery.

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.

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, and the Power Generation Subsystem (PGS) provides the discharging function.

NYPA and Zinc8 are considering several sites in New York State to demonstrate the Zinc8 Energy Storage System and to help benefit New York State's efforts to achieve carbon neutrality, as well as advance the state's move to a clean energy future. Zinc8 and NYPA see this initial collaboration and installation as a reference site for future potential installations. ■



Testing Zinc8's battery system at their Ash Street facility in Vancouver. Photo courtesy Zinc8 Energy Solutions Inc.