MGX Minerals Announces 300% Increase in Power Capacity of Next Generation Zinc-Air Fuel Cell Battery

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VANCOUVER, British Columbia, May 14, 2018 (GLOBE NEWSWIRE) -- MGX Minerals Inc. (“MGX” or the “Company”) (CSE:XMG) (FKT:1MG) (OTCQB:MGXMF) is pleased to report that its 100% wholly-owned subsidiary ZincNyx Energy Solutions, Inc. (“ZincNyx”) has quadrupled the capacity of its fuel cell modules (stacks).

Principle of Operation

Typical 5kW Modular System

System Architecture
The ZincNyx zinc-air flow battery is comprised of three main modules- a regenerator module that uses electricity to charge particles of zinc, a fuel tank where the zinc particles are stored until needed, and a fuel cell module that uses zinc particles to generate electricity (see Figure 1).

A photo accompanying this announcement is available at
http://resource.globenewswire.com/Resource/Download/32fea394-9e31-4e54-9f68-f1dcbadad3fa

Fuel Cell Module
The fuel cell module is comprised of a stack of identical cells. In the original implementation of the stack, each cell was capable of generating 100 Amps at approximately 1 Volt. A stack of 12 cells connected in series was thus able to generate 100 Amps at 12 volts, or approximately 1.25 kW.

The latest development of this technology doubles the area of each cell and enables up to 24 cells to be connected in series, thereby quadrupling the output capacity of a stack to 5 kW (200 Amps at 24 Volts nominal). An additional improvement incorporated in this iteration of the design is a streamlined electrolyte path that reduces load on the fuel pump. The new stack is designed for injection molding and die-casting from the outset, thereby reducing the cost to manufacture the unit.

“This development is a further illustration of the flexibility of the ZincNyx system,” said ZincNyx President and CEO Suresh Singh. “Advances can be made to each component of the system without requiring simultaneous changes to the other components. In this case, the power generation capacity is increased without requiring simultaneous changes to the power regeneration capacity or the energy storage capacity.”

Background
ZincNyx has developed a patented regenerative zinc-air flow battery that efficiently stores energy in the form of zinc particles and contains none of the traditional high cost battery commodities such as lithium, vanadium, or cobalt. The technology allows for low-cost mass storage of energy and can be deployed into a wide range of applications.

Unlike conventional batteries, which have a fixed energy/power ratio, ZincNyx’s technology uses a fuel tank system that offers flexible energy/power ratios and scalability. The storage capacity is directly tied

to the size of the fuel tank and the quantity of recharged zinc fuel, making scalability a major advantage of the flow battery system. In addition, a further major advantage of the zinc-air flow battery is the ability to charge and discharge simultaneously and at different maximum charge or discharge rates since each of the charge and discharge circuits is separate and independent. Other types of standard and flow batteries are limited to a maximum charge and discharge by the total number of cells as there is no separation of the charge, discharge and storage components.

A photo accompanying this announcement is available at
http://resource.globenewswire.com/Resource/Download/c1d63937-0902-4741-b3a7-ef39cfb8782d

To watch a short video outlining this operation, please visit:
http://www.zincnyx.com/technology/

About ZincNyx Energy Solutions
ZincNyx Energy Solutions, a wholly owned subsidiary of MGX, has assembled an experienced team to execute the development and commercialization of a dependable renewable energy source. With both environmental and efficiency factors in mind, ZincNyx’s mission is to provide the lowest cost, longest duration and most reliable energy storage system for markets involving renewables firming, peak shaving, diesel generator replacement, telecom facility back-up, electrification of ferries and tug boats, and electric vehicle charging support. MGX intends to publicly list ZincNyx and pay a partial share dividend to MGX shareholders of record (see press release dated April 3, 2018).

About MGX Minerals
MGX Minerals is a diversified Canadian resource company with interests in advanced material and energy assets throughout North America. Learn more at www.mgxminerals.com.

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Forward-Looking Statements

This press release contains forward-looking information or forward-looking statements (collectively "forward-looking information") within the meaning of applicable securities laws. Forward-looking information is typically identified by words such as: "believe", "expect", "anticipate", "intend", "estimate", "potentially" and similar expressions, or are those, which, by their nature, refer to future events. The Company cautions investors that any forward-looking information provided by the Company is not a guarantee of future results or performance, and that actual results may differ materially from those in forward-looking information as a result of various factors. The reader is referred to the Company's public filings for a more complete discussion of such risk factors and their potential effects which may be accessed through the Company's profile on SEDAR at www.sedar.com.

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