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Nu:ionic Technologies and HybriGenix Futures Execute MOU for Innovative Clean Power Generation Project

FREDERICTON, NEW BRUNSWICK and VANCOUVER, BRITISH COLUMBIA, CANADA, August 27, 2024 – Nu:ionic Technologies (Canada), Inc. ("Nu:ionic") and HybriGenix Futures Inc. ("HybriGenix") are pleased to announce the signing of a Memorandum of Understanding (MOU) to collaborate on an innovative clean power and hydrogen production facility in Alberta, Canada.

Natural gas turbines are widely used in the power sector for generating base load and meeting peak power demands. However, the power industry faces significant challenges in decarbonizing this critical power generation fleet, which has long been a reliable but carbon-intensive method of electricity production. As the world moves towards cleaner energy solutions, there is an urgent need for innovative approaches that can leverage existing infrastructure while dramatically reducing greenhouse gas emissions (GHG).

The demonstration project between Nu:ionic and HybriGenix addresses this challenge by showcasing the integration of Nu:ionic's Teal Hydrogen™ technology featuring the Nu-X Smart ReformerSM with gas turbine power generation solutions. This collaboration aims to demonstrate a feasible and scalable approach for pre-combustion carbon capture, resulting in a significant reduction of greenhouse gas emissions in electricity generation by utilizing hydrogen as a fuel source for gas turbines.

By repurposing existing gas turbines to run on hydrogen blends, the project offers a promising solution to the decarbonization challenge. It allows for the continued use of valuable infrastructure and provides a practical transition path for power producers looking to meet increasingly stringent environmental regulations.

Key Project Facts

- The gas turbine power generation facility will use state-of-the-art, hydrogen ready gas turbine technology with a combined power generation capacity of 100 MW of electricity,

comprised of four power generation units, each with a capacity of 25 MW. The initial installation will deliver 50 MW, with provisions for an additional 50 MW expansion in the future.

- The proposed power plant will be situated on a 146-acre site near Edmonton, AB. The site meets the requirements for the first phase of the development, as well as the anticipated expansion to 100 MW electrical power, and the intended significant expansion in hydrogen production. HybriGenix aims to eventually diversify the power generation at the site to include renewables.
- The hydrogen production demonstration facility will use Nu:ionic's proprietary Nu-X Smart Reforming technology, with a capacity of 1,200 kg/day of high purity hydrogen, and utility integration into the power generation unit.
- The use of the produced hydrogen to blend as fuel for HybriGenix's gas turbine for power generation, with an initial blend rate of up to eight percent, as well as export of fuel-cell grade hydrogen from the facility.

This setup demonstrates how clean hydrogen can be efficiently produced and immediately used in power generation, creating a localized, low-carbon energy ecosystem. The project serves as a proof-of-concept for a new generation of flexible, clean power plants that can help balance electrical grid infrastructure increasingly reliant on intermittent renewable energy sources.

Future Project Expansion

Following the successful implementation of the demonstration project, Nu:ionic and HybriGenix anticipate expanding their collaboration to increase the blend rate of hydrogen to completely decarbonize the power generated on site. The plan is to increase the hydrogen production capacity to up to 96 tonnes/day and capture up to 200,000 tonnes/year of associated carbon dioxide (CO₂). HybriGenix's objective is to completely decarbonize the power generated in the project with 100% hydrogen firing of the gas turbines, while maintaining the overall facility natural gas demand, which is made possible with the Nu-X Smart Reformer. Nu:ionic is expected to supply all hydrogen production and carbon capture equipment for the facility.

HybriGenix is also in active discussions with parties for power purchase agreements (PPAs), gas turbine decarbonization, and hydrogen offtake with different end-users to support future expansion.

Hossein Shokouhi, Energy Transition Manager of HybriGenix, said, "This partnership with Nu:ionic represents a significant step forward in our mission to decarbonize small and medium-sized gas turbines. By leveraging Nu:ionic's advanced Teal Hydrogen™ technology, we're paving



the way for more sustainable power generation solutions. HybriGenix guarantees the performance of its solution by demonstrating the technology at its facility on a fully commercial scale, thus reducing the risk of initial investments for our potential clients and early adopters. This ensures they can confidently leverage groundbreaking innovations without bearing undue uncertainty."

Jan Boshoff, CEO of Nu:ionic Technologies, commented, "We're excited to collaborate with HybriGenix on this groundbreaking project. HybriGenix is offering an innovative solution to decarbonize gas turbine drivers with its unique integration of the Nu-X Smart Reformer in gas turbines. This can revolutionize how we value the vast fleet of gas turbine drivers so essential to the power and midstream energy sectors in a decarbonized energy future."

About Nu:ionic Technologies

Nu:ionic Technologies is a developer of proprietary technology and equipment that enables process industry customers to realize net-zero goals through electrification. The company's electrified methane reforming technology enables low-cost, low-carbon hydrogen production for zero emission transportation, biogas upgrading, natural gas and industrial process decarbonization. The Fredericton, New Brunswick, Canada location is home to Nu:ionic's Canadian headquarters and Research and Innovation Center. Its United States operation in Tulsa, Oklahoma provides sales, marketing, project execution and integrated product development support. www.nuionic.com.

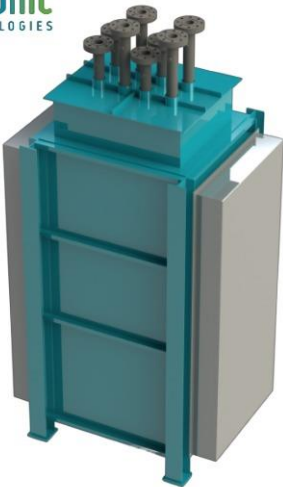
About HybriGenix Futures

HybriGenix is hydrogen technology integrator and end-user dedicated to driving and accelerating innovation in the energy sector by providing modular and scalable decarbonization solutions for natural gas applications using existing pipelines and repurposing gas turbines. This approach results in increased efficiency of hydrogen production and distribution, lower carbon emissions and supports environmental sustainability goals. www.hybrigenix.com.

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Nu-X Smart ReformerSM
1.2 Tonnes Per Day Hydrogen Production