SKYRE Developing Critical Hydrogen Fueling Infrastructure On The Moon

Bringing the promise of green hydrogen down to Earth

EAST HARTFORD, CONNECTICUT, UNITED STATES, August 6, 2020 /EINPresswire.com/ -- SKYRE, a leader in the development of electrochemical systems for government and commercial customers, is working with Eta Space – an expert for in-space cryogenic fluid management technologies – to develop the first hydrogen fueling plant on the Moon. With imperatives of sustainability and efficiency, it will produce "green" hydrogen (a near zero-emissions process), paving the way for the infrastructure needed here on Earth for emerging hydrogen economies.

The H2RENEW was recently delivered to Meta Vista USA (an Eta Space-affiliated company) to demonstrate the lunar technology for Earth applications.

"Sustainability is partially enabled by the ability to generate hydrogen fuel right on the moon's surface with almost non-existent resources, as opposed to having it delivered from Earth." Says SKYRE CEO, Dr. Trent Molter. "One resource available for use is ice in the permanently-shadowed craters of the Polar regions. Based on a proprietary electrochemical platform, SKYRE will electrolyze the ice water into its hydrogen and oxygen components and our H2RENEW™ will then compress and liquefy the hydrogen for use as fuel."

Critical to this process is having a robust refrigeration system to liquefy the hydrogen, which in turn, requires a compressor to pressurize it for use as a fuel. "Typically, it's very hard to compress a small molecule like hydrogen, making traditional mechanical compressors very inefficient and unreliable for the task and ultimately, not able to produce green hydrogen." Says Eta Space CTO, Dr. William Notardonato. "The H2RENEW is a solid-state system that requires little or no dependency on logistics to operate efficiently and has no moving parts which results in greater reliability and increased cost-efficiencies. It hits on all marks, making it the ideal fit for the demands of lunar liquefaction.

Here on Earth, a new era of hydrogen is on the rise including a resurgence in plans for hydrogen-powered transportation. Industrial gas companies have already announced plans to build (4) new hydrogen liquefaction plants in the USA over the next (2) years to supply the hydrogen economy. “It’s an incredibly exciting time for SKYRE as hydrogen is truly a growing, global game-changer. Our mission has always been to catalyze a paradigm shift in the way the world uses energy – by designing and building products for hydrogen and carbon dioxide transformation markets. The hydrogen fueling infrastructure we are building in space today will be brought down here to Earth, helping to finally make the promise of hydrogen a reality.”

About SKYRE: Founded in 2007 as Sustainable Innovations and rebranded in 2018, SKYRE uses a proven, patented electrochemical technology to build innovative clean energy products that deliver breakthrough efficiency and are socially responsible. SKYRE’s products create economic opportunity for companies and contribute to global environmental sustainability by solving some of the world’s most challenging and pressing resource and energy problems.

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