Hydrostor Terra™ offers bulk energy storage at half the cost of competing battery technologies, on par with new natural gas plants

TORONTO, April 12, 2017 – Hydrostor Inc., a global leader in Compressed Air Energy Storage (CAES), today introduced Hydrostor Terra™, a long-duration bulk energy storage system that competes head-to-head with new natural gas plants.

Using Terra™, utilities and electricity system operators can cost-effectively and reliably address the issues of reserve capacity, peak shaving, transmission congestion and renewables integration, enabling the transition away from fossil-fuel generation at half the cost of competing battery technologies.

"Hydrostor Terra™ is an industry-changing breakthrough in cost-competitive bulk energy storage," said Curtis VanWalleghem, President & CEO of Hydrostor. "We are engaged with several utilities around the world to deploy systems rated at hundreds of megawatts, delivering gigawatt-hours of storage at durations ranging from four hours up to multiple days."

VanWalleghem described the market response to Terra™ as tremendously positive. "Battery technologies can't compete with new natural gas plants, but Terra™ does. The value proposition for utilities is compelling, and for us that's translating into projects."

The proprietary design of Terra™ gives it advantages over traditional CAES systems, which have been held back by two key limitations: they require suitable underground geological formations for siting, and rely on natural gas to generate heat that is needed during operation. The Terra™ system, by contrast, can be deployed at any site within proximity to a body of water, including inner-city and urban areas. Because of its advanced adiabatic design, it efficiently recycles the heat it generates during one process for use in another, making it truly emission-free.

The system works by converting off-peak electricity to compressed air, which is stored in a proprietary isobaric purpose-built underground cavern. Terra™ operates at low and constant pressure, enabling the use of bankable, utility-grade equipment to maximize efficiencies. During the "charge" cycle, heat generated from the compressors is stored in a patented adiabatic thermal management system. This heat is later used to increase the air temperature prior to expansion, boosting overall round-trip efficiency. At "discharge", compressed air is converted back to electricity, on demand, at peak times. Learn more about how Hydrostor Terra™ works: www.hydrostor.ca/terra

AECOM, the world's No. 1-ranked engineering design firm and Hydrostor's EPC partner in the deployment of its Adiabatic CAES systems globally, recently completed a comprehensive technical review of the Hydrostor Terra™ technology.

"AECOM is uniquely positioned to evaluate storage technologies for the utility sector, given the company's expertise and extensive experience in developing and integrating new technologies within the power industry. Following our due diligence, we are excited to work together with Hydrostor in offering a complete turnkey solution within the growing energy storage market." said Travis Starns, Business Development Manager - Energy Storage, AECOM.

About Hydrostor Inc.

Hydrostor Inc., a global leader in Compressed Air Energy Storage (CAES), offers long-duration bulk energy storage systems that enable utilities and electricity system operators to cost-effectively and reliably address the issues of reserve capacity, peak shaving, transmission congestion and renewables integration. Hydrostor Terra™ is a low-cost utility-scale storage solution that is emission-free, can be deployed at any site in proximity to a body of water, and has an unlimited cycle life over 30+ years. Hydrostor owns and operates the world's first adiabatic, underwater-CAES plant with utility host Toronto Hydro, located on Toronto Island. An additional facility, in partnership with NRStor, is under construction for Ontario's Independent Electricity System Operator in Goderich, Ontario. Learn more: www.hydrostor.ca.

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