NRStor Project Spotlight:

CAES

NRStor is developing the world's first commercial fuel-free compressed air energy storage (CAES) facility

Over the life of the project, the Goderich CAES is expected to reduce carbon emissions by 22,300 tonnes.

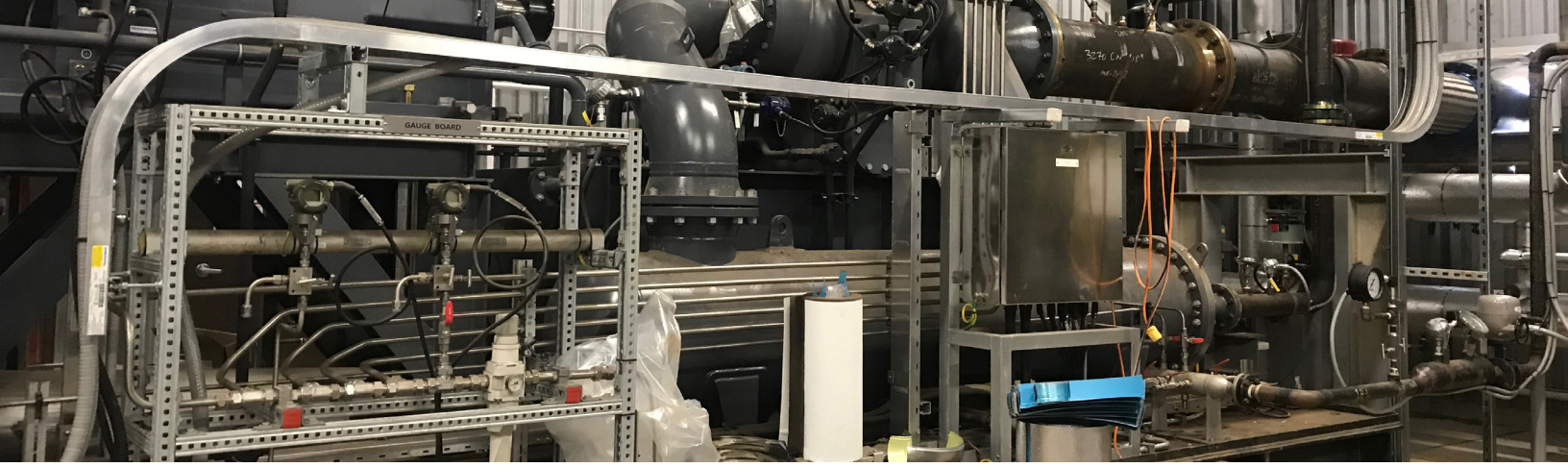
NRStor and Hydrostor Partner on CAES Technology

In November, 2015, Ontario's Independent Electricity System Operator awarded a 1.75 MW, 7 MWh contract to NRStor as a part of an energy storage RFP. NRStor chose to partner with Hydrostor, a leading provider of fuel-free compressed air energy storage (CAES) technology, to build the project on a salt cavern in Goderich, Ontario. Fuel-free CAES technology has no emissions and can eliminate the need for greenhouse gas emitting power plants.

CAES Location and Early Stages

NRStor was able to source an unused cavern in Goderich and secure a lease to transition the space for use wth CAES technology.

NRStor obtained all necessary cavern utilization, building permits, project air permits, and noise permits required by multiple authorities including the local municipal government, Ministry of Natural Resources and Ministry of the Environment.



NRStor conducted a number of studies and assessments to ensure the safety of the project and alignment with all regulations. These included:

Environmental Site Assessment

The environmental site assessment was conducted in order to identify any potential environmental concerns prior to construction. No such concerns were found.

Natural Heritage Review

A County of Huron biologist was consulted in order to complete a species at risk review and put mitigation measures in place.

Air Emissions Assessment

A third-party engineering firm was retained to conduct an Air Emissions Environmental Activity and Sector Registry (EASR). The facility was found to have no air, odour, or fugitive dust emissions, and will continued to be monitored into the future.

Noise Assessment

A third party engineering firm conducted noise assessment. Noise during worst-case operations remained under limit for night time decibels, and was expected to be lower than the dBA inside a library!

Geotechnical Risk Review

A review was conducted to evaluate geotechnical risks and instabilities, and the facility was found to be stable.

Once all tests had been conducted, NRStor and Hydrostor could get to work developing the CAES facility.

Repurposed Cavern Leads to Innovative Benefits

Over the life of the project, the Goderich CAES is expected to reduce carbon emissions by 22,300 tonnes! This is roughly equivalent to removing 4500 cars from the road for up to a year. Initial construction and ongoing maintenance will result in jobs creation for the community, while providing priceless regional economic diversification.

The Goderich site became the first-ever fuel-free CAES facility to achieve commercial operations, drawing global attention to southern Ontario's stature as a global leader in the industry.

About NRStor

NRStor develops, owns, and operates industry-leading energy storage projects in partnership with progressive stakeholders and leading technology providers.

Contact NRStor today to learn more about our CAES solutions.

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