



Julian Boyle, an engineer with Halifax Regional Municipality, displays the structure housing a geothermal system that will heat and cool Alderney Landing in Dartmouth. (CHRISTIAN LAFORCE / Staff)

Geothermal system could soon cool city buildings

Seawater-driven air conditioning on the way

The cold outside is already working toward beating the summer heat in Dartmouth.

The Alderney 5 Energy Project's geothermal, cold-energy storage system is charging up to help cool down municipal buildings on the Dartmouth waterfront this spring, Halifax Regional Municipality announced in a news release Wednesday.

The underground thermal energy storage system, which the municipality says will reduce greenhouse gas emissions by over 900 tonnes a year, was constructed by drilling 80 holes, each 150 metres deep, and coupling them with a seawater cooling system. Cold energy is then harvested during the winter months and stored underground.

"With the pending phase-out of CFC-based air conditioning and increasing demand for air conditioning, this technology

'is a prime example of how sustainable, integrated energy solutions can be used to reduce carbon cost effectively.'

JULIAN BOYLE
HRM engineer

is a prime example of how sustainable, integrated energy solutions can be used to reduce carbon cost effectively," Julian Boyle, project manager, said in a news release.

The project broke ground in November 2007 and was originally expected to be up and running last summer.

However, work by High Performance Energy Systems Inc. stopped last February when the \$3-million system was about 90 per cent complete.

The city cancelled its contract with the Halifax company in May due to the company's financial troubles. City council agreed in July to spend the \$600,000 needed to complete the project and HRM took over as general contractor. At that time, the city expected the cooling system to be working at the end of last summer.

The first phase of the project was completed at the end of 2008 and "already the project has resulted in savings of \$350,000 in energy costs and is contributing to council's commitment to meet a 20 per cent greenhouse gas reduction target by 2012," Mayor Peter Kelly said in the release.

The municipality says it has more geothermal systems than anywhere else in Atlantic Canada.

(newsroom@herald.ca)