

Background: Grid Innovation Fund Conservation Projects

The Region of Waterloo's Wastewater Treatment Plant Facility Upgrades – The upgrades will substitute traditional energy-intensive equipment with an energy-efficient biological membrane technology, which is expected to result in 30 per cent lower energy demand. Partners include the Region of Waterloo, University of Waterloo, Ontario Clean Water Agency, and the Federation of Canadian Municipalities.

The University of Western Ontario's Research on Hydrogen Peroxide Dosing in Wastewater Treatment Plants – The potential of using hydrogen peroxide to reduce aeration energy needs in wastewater facilities will be tested. The amount of energy savings that hydrogen peroxide dosing can provide will be quantified and, if successful, this approach could be used by wastewater facilities across the province to reduce their energy consumption. Located in London, this project is a partnership between Western University, USP Technologies, Mitacs, and the Municipality of Middlesex Centre.

Toronto 2030 District's Building Sector Decarbonization Pathways – This project will identify viable pathways to a GHG-emissions-free building sector by 2050. It combines technical research with input from over sixty workshop participants representing Toronto's real estate industry and community organizations. The insights from this work will form a vision document to inform decision-making by real estate owners, the marketing of energy management programs, as well as help the electricity sector plan for the decarbonization of the economy. Located in Toronto, this project is being undertaken by the Toronto 2030 District, in partnership with Coolearth Architecture, Purpose Building and The Transition Accelerator.

CanmetENERGY's RETScreen Clean Energy Management Software – Existing software used by energy managers in residential, commercial and industrial buildings will be upgraded to allow them to analyse demand response and load reduction capabilities of their systems. The upgrade will also include new deep retrofits archetypes that could result in up to 80 per cent electricity cost savings. Headquartered in Ottawa, CanmetENERGY, a branch of Natural Resources Canada, leads this project with partners Oxford Properties, 3M Canada, District School Board of Niagara, Mohawk College, Town of Caledon, and City Housing Hamilton.

Pollution Probe and QUEST's Community Energy Planning in Burlington – Helps communities to meet their energy goals by developing an implementation approach that integrates stakeholder and utility engagement, identifies best practices, and provides a draft work plan. This project has the City of Burlington as its pilot community, and is a partnership with Pollution Probe, QUEST, Enbridge Gas, Burlington Electricity Services Inc., Canadian Renewable Energy Association, Waterloo Region Community Energy, Clean Air Council and Clean Air Partnership.

Thorn Associate's Industrial Energy Management Information System – This project will demonstrate the use of an industrial Energy Management System using artificial intelligence at an Ontario mining facility to better understand, and more efficiently manage, all facets of their electricity consumption and peak demand. This project is by led Thorn Associates.