

Powering Greenhouse Sector Expansion with Distributed Energy Resource Solutions

Grid Innovation Fund Project Details

Lead Proponent: University of Windsor

Partners: Ontario Greenhouse Vegetable Growers, Under Sun and Rising Sun Acres, 360 Energy, Hydro One

Strategic Area(s):	Enhancing Forecasting and Planning
Project Total Cost:	\$154,000
Year Contracted:	2019
Location:	Leamington/Kingsville, Ontario
Economic Development:	N/A



Powering of the greenhouse sector with DER solutions

Project Objectives

This project involves a techno-economic evaluation of innovative, build-ready, behind-the-meter, and other distribution-level solutions to increase the energy flexibility, efficiency, and resilience of the sector. The overarching objective of this project is to further enable the planned rapid economic expansion of Ontario's greenhouse sector through the delivery of innovative distributed energy resource (DER) project options for improved energy flexibility, efficiency and resilience.

Expected Outcomes

Successful outcomes from this program will reduce reliance on grid supplied electricity and enable the deferral of costly transmission infrastructure construction, mitigating additional costs that could be shouldered by the ratepayer.

Expected outcomes include:

- Building a DER asset inventory leveraging all of the Under and Rising Sun Acres growers network.
- Constructing a DER Relative Spatial Distribution Figure that assesses how many acres of crops surround a particular CHP, solar and/or battery asset.
- Detailed current and projected energy profiles, production aspirations and energy market interests applicable to a network of five growers.
- Brief that outlines the requirements for the physical interconnection with participants.
- Stakeholder value map that will enumerate high-level costs and benefits for networked participants.