

The Role of Hydrogen Hubs in Strengthening the Affordability and Reliability of Ontario's Electricity System

Hydrogen Innovation Fund Project Details

Proponent: Transition Accelerator

Partner: City of Hamilton, Hamilton Industrial Environmental Association and Canadian Steel Producers Association

Project Type: Research study

Project Total Cost: \$202,409

Year Contracted: 2023

Location: Hamilton

Status: Open

Project Objectives

The objective of this study is to model the potential for a hydrogen hub in the Hamilton region to enable the decarbonization of Ontario's economy and the resulting impact on the electricity system. It will assess the potential to cluster hydrogen production, transportation, storage, and demand to facilitate cost-effective net-zero solutions across multiple sectors in the Hamilton region.

Outcomes

If successful, this study will demonstrate the potential of a hydrogen hub in the Hamilton region to enable cost-effective, net-zero solutions across multiple sectors of the economy. The study aims to provide valuable insights into the role of hydrogen in the energy transition and recommend potential net-zero strategies for the electricity system and the Ontario economy as a whole.

Expected learnings include:

- An assessment on the barriers to unlocking hydrogen pathways to reduce direct electrification in end-uses such as transportation
- An assessment of the market potential for hydrogen use and production in the Hamilton Region under various scenarios
- An evaluation of the net load impacts and other electricity system considerations of hydrogen production and use
- Recommendations on the net-zero strategies for the electricity sector and the economy