

# Hydrogen Blending – Goreway Power Station, East Windsor Cogeneration Centre and York Energy Centre

## Hydrogen Innovation Fund Project Details

**Proponent:** Capital Power

**Partner:** General Electric and Siemens

**Project Type:** Feasibility study

**Project Total Cost:** \$525,700

**Year Contracted:** 2023

**Location:** Brampton, Windsor, and Newmarket

**Status:** Open

## Project Objectives

The objective of this study is to assess the financial and technical viability of blending and co-firing hydrogen and natural gas at three of Capital Power's natural gas generation facilities (East Windsor, Goreway and York Energy Center) using various levels of hydrogen (5% to 15%). The study will provide insights into the effort and costs required at each plant to enable hydrogen blending and inform potential future hydrogen projects at these facilities.

## Outcomes

The study will provide engineering studies evaluating the impacts of hydrogen blending on the gas turbine performance, maintenance, operability, emissions and safety, as well insights into the following research questions:

- 1) How much hydrogen can each facility burn with minimal capital improvements.
- 2) How much hydrogen can the facilities blend without significant capital expenditures (Retrofit)?
- 3) How will the hydrogen be procured, transported and stored?

- 4) How would hydrogen blending affect the generator energy offer curves and interaction with the IESO-administered energy market?