ALBERTA INNOVATES

CLEAN RESOURCES

CLEAN TECHNOLOGY

HYDROGEN CENTRE OF EXCELLENCE

FUNDING DETAILS

Hydrogen Fueling and Pilot Fleet Feasibility Study

The proposed initiative focuses on The City of Calgary and its residents who rely on public transportation provided by Calgary Transit. In the transition to net zero by 2050, Calgary Transit is taking steps to learn more about all zero emission technologies on the market. This initiative focuses on hydrogen fuel technology. This feasibility study will comprehensively assess the hydrogen delivery options, technical requirements, infrastructure modifications, safety protocols, and economic considerations associated with the introduction of hydrogen fueling and a pilot fleet at Stoney Transit Facility. This study will serve as a foundation for future decision-making and investments in sustainable transportation infrastructure.

Calgary Transit

RECIPIENT:
The City of Calgary

PARTNERS:
N/A

TOTAL BUDGET:
$275,000

AI FUNDING:
$137,500

PROJECT DATES:
JAN 2024 – OCT 2025

PROJECT TRL:
Start: 2
End: 4

APPLICATION

Calgary Transit faces the challenge of transitioning its vehicle technology to meet service frequency requirements while reducing emissions. Current battery electric bus (BEB) technology, while environmentally friendly, presents limitations in terms of range and utility, potentially affecting service reliability and efficiency. Hydrogen fuel cell electric buses (FCEBs) represent a promising solution to address the identified problem.

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PROJECT GOALS

The primary goal of the feasibility study is to assess the viability of integrating hydrogen fuel technology into Calgary Transit's bus fleet. This involves evaluating market options for hydrogen supply, conducting a facility gap analysis, and performing qualitative risk assessments. The study aims to develop a deployment strategy and hydrogen bus workplan for future phases, including a pilot project and transitioning the bus fleet to zero emission technologies. Ultimately, the project seeks to understand the feasibility of transitioning Calgary Transit to a sustainable, hydrogen-powered transportation system.

BENEFITS TO ALBERTA

In addition to transforming Calgary Transit's operations, the integration of hydrogen fuel technology would present significant benefits to Alberta by:

- Stimulating growth in the hydrogen economy, fostering the development of local hydrogen production and distribution infrastructure.
- Creating new job opportunities and fostering economic growth in Alberta's clean energy sector.
- Contributing to the province's greenhouse gas emission reduction targets and environmental sustainability goals.
- Attracting investment and expertise in hydrogen related industries

1 Publication

2 Project Jobs

1 New Product/Service

676 to 1,425 tCO2e/yr Future

CURRENT STATUS

APR 2024

The project has commenced and is focused on issuing a request for proposal (RFP) to solicit bids and select a qualified proponent to support Calgary Transit in conducting the feasibility study.