

CANAL

ZERO-E POWER & PROPULSION CONVERSION OF THE MARILYN BELL I



The Marilyn Bell I ferry was launched into service in December 2021 as a truly Zero Emission Li-ion ferry, powered by 100% renewable energy.

Cleaner, Greener, Quieter; this conversion contributes to sustainability and environmental protection.

COMING IN FIRST

The Marilyn Bell I is the first ZEROe ferry in Canada and the first Automatic Shore Charging System (ASCS) in North America.

- 400kW Charging System with Active Front End
- Industrial Wireless Communications with Vessel and Pantograph
- Full Integration with Existing Ramp Control System
- Monitors Lake Height Based on Ramp Position for Tower Adjustment

“CANAL is proud to offer our clients customized solutions to help transition their operations from traditional energy consumption to low or zero-emission options. We hope to provide answers and solutions to industry in this direction, and help clients meet their greenhouse gas and cost reduction targets.”

Shawn Balding, CANAL general manager & project manager for the Marilyn Bell I

About The Ferry

LENGTH: 30.48m

BEAM: 11.50m

PASSENGERS: 200

CREW: 3

VEHICLES: 15 AEQ

VOYAGE: Sheltered Waters (MWC II)

G.T.: 270

About its operation

ROPAX ferry is the vital transportation link to the Billy Bishop Toronto City Airport, critical for airport operations and emergency services.

The ferry operates 19 hours a day, with approximately 76 daily crossings. It leaves the mainland terminal every 15 minutes, spending 5 minutes in the slip and only 90 seconds for the crossing.



CANAL | ZEROe
POWER

CLEANER, GREENER, QUIETER

The First Truly Zero Emission Li-ion RO-PAX Ferry in Canada

- This project eliminates ~530 tons of CO2 emissions in downtown Toronto per year, as well as;
- Saves an average of over \$150,000 in energy and operation costs per year (30 year window)
- Eliminates use of ~196,000 liters of diesel per year
- Reduces noise pollution
- No diesel backups!

Zero Emission Vessel Conversions Make Sense

The hull form and operation are proven and known. The scope of work can be minimized to the required power and energy components while the integration can include existing control and communications systems. This takes much less overall time to execute, minimizes training, and ensures the crew is already able to operate the vessel when the conversion is complete.

All the data is there:

- Real power profile
- Fuel consumption history
- Historical failures and effects
- Operating expectations
- Weather and sea conditions
- Crew workflow and knowledge

Canal provides services to government, industrial, commercial and marine clients in Canada from our headquarters in St. Catharines, Ontario and our location in North Vancouver, British Columbia.

Visit www.canal.ca to learn more.

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