

# Island Class Electrification Program

## ATTACHMENT A

The electrification of BC Ferries terminals and its Island Class vessels will transition the fleet away from fossil fuels and reduce GHG emissions.

Enabling plug-in recharging of battery-hybrid vessels and the operation of these vessels will:

- Decarbonize the marine sector
- Reduced noise impacts for marine wildlife
- Accelerate economic recovery in British Columbia and Canada
- Improve public transportation



MV Island Aurora

## Program Benefits

Electrification of the Island Class and associated terminals will result in broad-reaching benefits to coastal communities, the economy, the environment, and the transportation sector. These benefits include:

### Environmental

#### GHG reduction

- Removing 18,000 tonnes of CO<sub>2</sub>e (the equivalent of 3,800 vehicles on the road), when the full Island Class program of 6 vessels is built out.
- Helping the Government of Canada meet GHG targets and to support the Pan-Canadian Framework on Clean Growth and Climate Change.
- Enabling market transformation for wide-scale adoption of clean electricity as a transportation energy source.

#### Environmental protection

- Reducing reliance on hydrocarbons and contributing towards quieter ship operations, which will help reduce noise impacts on local communities and marine life, such as endangered Southern Resident Killer Whales, Pacific Salmon, and cetaceans.
- Eliminating Criteria Air Contaminants (CAC) and contributing to clearer air, helping to improve community health and wellbeing.

### Economic

#### Economic recovery

- Creating jobs and boosting employment and training opportunities for local communities and Indigenous Peoples. The program will generate a significant number of jobs in the following Canadian industries:

Heavy and civil construction  
Manufacturing and fabrication  
High-voltage electrical work

Leading-edge technical consulting  
Marine construction  
Ship repair and conversion

Project administration





## Community resilience

- Benefitting many local communities through upgrades to the utility distribution system, providing supply to municipalities which could be utilized to prevent outages.
- Supporting future economic and local business growth through the extension of three-phase electric powers into local communities.

## Innovation

### Providing international leadership in marine technology

- Supporting an industry-wide transition to low carbon intensive energy sources through the implementation of a leading-edge electrification technology in the marine sector.
- Demonstrating Canada's commitment to GHG emissions reduction and sustainable operations.

## Program Scope

The program scope includes conversion to up to 18 terminals associated with 8 service routes and 6 Island Class vessels. The program includes three primary components:

1. BC Hydro distribution and interconnection to supply terminals with necessary electricity to power the electrified vessels.
2. Terminal electrical upgrades to accommodate a rapid charging system.
3. Vessel upgrades, including installation of additional batteries and upgrades to the vessel's electrical system to enable recharging from ashore.

The program has a total cost estimate of approximately \$282 million.

## Program Schedule

Should additional funding be secured, BC Ferries would proceed with the Island Class Electrification Program. Some work has already been done and planning is underway:

Terminal and BC Hydro preliminary designs for first 7 terminals	Complete
Detailed vessel design ( <i>underway</i> )	June 2021
Detailed design, project consultation and regulatory approval ( <i>underway</i> )	December 2021
Vessel conversions begin	Early 2022
Terminal electrification - begins 2022 spanning 3 years*	2022 - 2025

\*The bulk of the work to take place in 2022-2023.

*The Island Class Electrification Program is an opportunity for Government and BC Ferries to take definitive climate action while creating economic opportunity in British Columbia and Canada.*