

Message from the CEO

At BC Ferries, we have the privilege to operate in one of the most pristine environments in the world and it is our responsibility to protect the beauty that surrounds us. Reducing our environmental footprint through continued investment in leading-edge environmental stewardship is a top priority as we build a ferry system for the future.

BC Ferries already leads in North America when it comes to lowering emissions and adoption of clean marine technology. We were the first passenger ferry system in North America to adopt liquefied natural gas (LNG), pioneering "made in BC" technologies in the process. Notable are the four, soon to be five, LNG-fuelled vessels in our fleet (Salish Class and Spirit Class) that substantially outperform diesel vessels for emissions and costs.

We also have two Island Class 47-vehicle ferries under construction for our inter-island routes. These battery hybrid-electric vessels will utilize some of the most advanced clean marine technology in the world. When delivered in 2019, we believe these vessels will be the most efficient and quietest electric-hybrid ferries world-wide. They are just the latest in a series of milestones we have achieved as part of our Clean Technology Adoption Plan, our strategy to progressively lower emissions across the fleet and be a leader in the energy transition to a lower carbon future.

We know LNG is a fossil fuel and understand British Columbian's desire to eventually eliminate this type of fuel altogether. However, adopting natural gas is important progress. It is far cleaner than diesel, domestically sourced and it supports Canadian jobs. Its use reduces fuel costs and foreign exchange risk significantly, contributing to more affordable ferry fares. It does not pollute water or marine life if spilled into water as it evaporates, and is not persistent in the marine environment as are oils. It can be reliably delivered by BC companies without significant new infrastructure or transport risk. LNG is a significant step toward sustainable transportation for coastal British Columbia.

In the past year or so, our vessels pioneered two "world firsts" in clean technology: the Salish Class were the first in the world to fuel LNG on the deck of a passenger ship, and the Spirit Class was first in the world to fuel LNG on a totally-enclosed deck. Both of these innovations were conceived by BC Ferries and designed, engineered and built by BC Ferries and its partners. These innovations saved BC Ferries users more than \$100 million in infrastructure costs and have unlocked significant environmental performance gains. We can be proud of the expertise we've developed and now share with other ferry operators.

Our Clean Technology Adoption Plan is leading us toward our next major vessel program. Four to six new large ships will featuring very large Energy Storage Systems (ESS), which will allow departure and arrival in port, as well as in-port operations, to be done electrically. Our goal is ultra-clean emissions with ultra-low fuel consumption.

Ferry users expect reliability, so we must also be realistic as we move along this path. There are real engineering and reliability issues that must be solved. There is also the significant matter of affordability. Without significant external funding, as is the case in parts of Europe, BC Ferries and our customers carry the cost of funding clean tech. That's why we are taking methodical and prudent steps as technology matures and costs stabilize.

At BC Ferries, we are ahead of the curve on clean technology adoption. Every day we study, engineer, invest and act. We are moving along a carefully structured path designed to protect coastal communities from unreasonable costs and unreliable technologies, while still bringing sustainability and cleaner operations to our coastal ferry system.

Mark Collins BC Ferries' President & CEO



Clean Technology Adoption Plan

With a vision of being trusted and valued, the mission of BC Ferries is to connect communities and customers to the people and places important in their lives. We strive to be sustainable; our environmental, social and economic impacts are central to our business decisions.

Since 2004, we have been on a path to greater sustainability by being continuously active in developing and implementing innovative and cost-effective ways to minimize our impact on the coastal environment in which we operate.

Clean technology offers significant opportunities for advancing our sustainability objectives.

Our clean technology adoption plan focuses on two goals:



Carbon Reduction

BC Ferries is migrating operations to low-carbon energy sources while maximizing energy-consumption efficiencies.



Environmental Stewardship

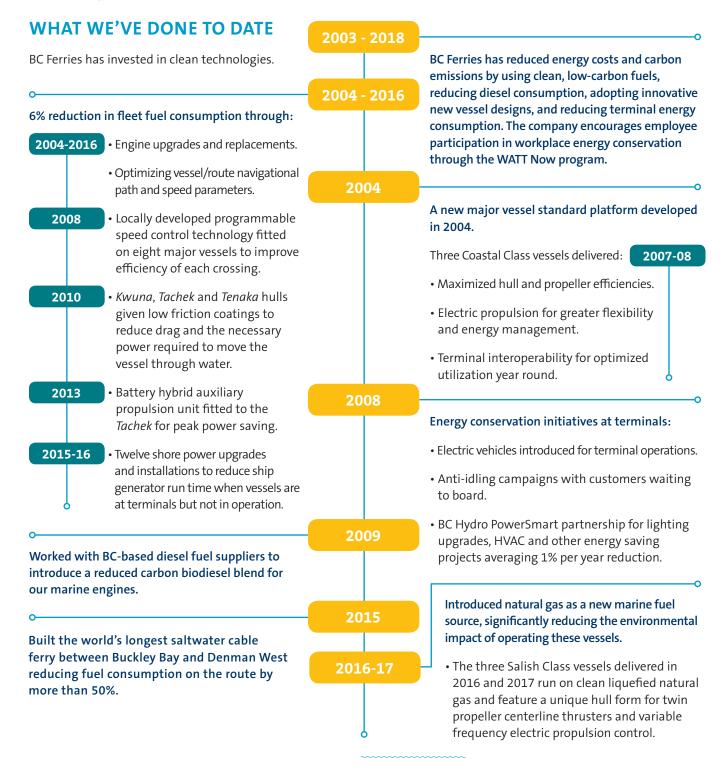
BC Ferries strives to eliminate avoidable environmental contaminants and impacts at every step of operational activity.





Carbon Reduction

Since 2003, BC Ferries has intensified efforts to reduce the carbon footprint of the ferry system. The Clean Technology Adoption Plan looks to every aspect of our vessel and terminal operations, now and into the future, and is a road map that is built with the interests of protecting the environment and the communities that we serve.



The introduction of the Baynes Sound Connector in 2015 reduced diesel consumption and associated air emissions on a single ferry route by more than 50%.

WHAT'S ON THE HORIZON?

Clean technology is at the core of our vessel and terminal renewal planning and is shown through our commitment to adopt:

Vessel design features for:

- Hull and propulsion systems that maximize energy efficiency.
- Shipboard power generation that can use alternative and renewable fuels.
- Hybrid arrangements with expanding battery capacity to displace diesel fuel and natural gas consumption.

An electrification strategy that factors for:

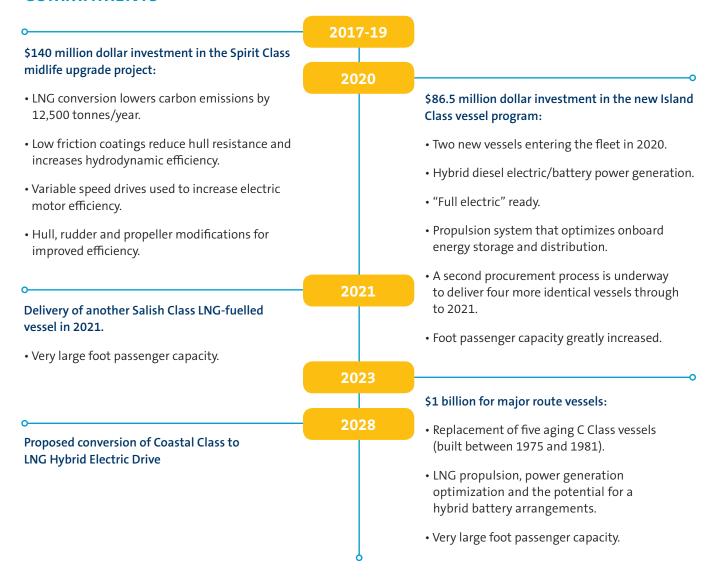
- Access to low carbon energy sources through the power utility network.
- Vessel homeporting near urban areas for access to mature utility networks.
- Enhanced electrification features in terminal development plans.
- Fully electric ferries when technologies permit.

A fleetwide vessel class strategy that:

- Reduces the number of vessel variants from 17 to 5 classes.
- Enables clean technology adoption through standardization and system redundancy principles.
- Includes continuous engagement with internal and external stakeholders that covers the costs of implementing clean technologies and their impact on fare affordability.



COMMITMENTS





Innovation in BC

Over the past 12 months, BC Ferries has pioneered two "made in BC" world firsts.

- 1. The new Salish Class vessels were the first in the world to fuel LNG on the deck of a passenger ship.
- 2. The *Spirit of British Columbia* was first passenger vessel in the world to fuel LNG on a totally-enclosed deck.

These innovations saved BC Ferries users more than \$100 million in infrastructure costs and have unlocked significant environmental performance gains.

Environmental Stewardship

Environmental stewardship speaks to our responsibility to eliminate avoidable contaminants. It informs every aspect of our operations.

As one of the world's most complex ferry systems, BC Ferries is a consumption and production intensive company with many inputs (e.g. assets) from purchasing, and outputs (e.g. byproducts, wastes and releases) from our operations. We are aware of the impact our choices have on the environment and we strive to continuously reduce the footprint of our operations.

WHAT WE'VE DONE TO DATE

Reducing air contaminants

2004

Since 2004, Sulphur Oxides (SOx) emission has been progressively reduced to a negligible amount. Since 2012 the Sulphur in our diesel fuel is less than 10 ppm.

2011

With FortisBC as a partner, BC Ferries developed technology and methodologies to use natural gas as a marine fuel. This includes the world's first on-board LNG bunkering system.

Natural gas significantly reduces air emissions like SOx, Nitrogen Oxide (NOx) and particulate matter (PM). Overnight and during lay over periods, electrical shore power eliminates diesel generator exhaust emissions.

Converting to biocide-free foul release coating

2011

Biocide free paint product used on eight vessels, with more on the way.

- The coating is made of high volume solids for less waste and lower volatile organic compound.
- Only a single full coat is required every five years.
- Anti-fouling paints prevent algae and mollusks accumulations that slow the vessel and increase fuel consumption.

2007 Ending sewage discharge: 2015-2017 • In 2007, BC Ferries ceased sewage Reducing garbage and increasing waste diversion: discharge overboard. • Thirty-five of 37 of BC Ferries' vessels pump Garbage being sent to the landfill on major routes and terminals serving Metro Vancouver, sewage to a shore-based treatment facility. The the Capital Regional District and the Regional final two will follow when shore facilities exist. District of Nanaimo decreased 9.5%. Ending of discharge risk: • Phasing out regular disposables such as In 2007, BC Ferries eliminated onboard single use plastics or finding environmentally processing of oily water. Contaminants are preferred alternatives continues to be a priority. removed and treated at a shore-based facility. Dry-bilge vessel design was adopted for all • The majority of vessels have segregated waste chutes for different waste streams. new vessels to prevent contaminated water build up onboard. 2015-2018 Organic recycling: 2016 BC Ferries reduces garbage by isolating food BC Ferries implemented a waste waste where possible. diversion program. Food waste is sent to composting facilities • Customers use composting and recycling bins which turn the organic materials into clean that were installed on the Spirit Class vessels, energy and compost-based soil. the Coastal Celebration, the Coastal Inspiration and at Tsawwassen and Swartz Bay terminals. 2018 Approximately 55,000L/yr of used cooking oil Roll-out of the program to the rest of the fleet is underway. is recycled for agricultural feed rations and biodiesel production. 2015-18 Reducing impacts to aquatic life by choosing Contributing to research. environmentally preferred products. • BC Ferries partners with Ocean Networks Canada, Detergents and cleaning products are assessed an initiative of the University of Victoria, to place for environmental impact prior to purchase. instruments on the Queen of Alberni, Spirit of Vancouver Island and Queen of Oak Bay. • Environmentally preferable lubricants are used where there is risk of large volume release to • These instruments continue to collect the sea. information on meteorological and sea-surface properties and contribute to local efforts to monitor the health of the Strait of Georgia. 2018 · BC Ferries, the National Research Center and Transport Canada are collecting data on the use of solar photovoltaic application as a supplemental power source for greener marine transport. · A solar photovoltaic powered refrigerator unit will be utilized by BC Ferries on the central-coast where data does not currently exist.

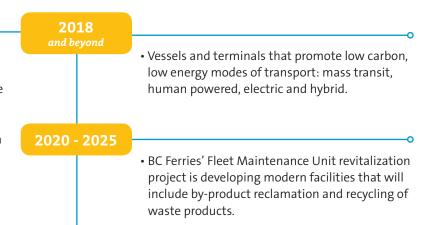
WHAT'S ON THE HORIZON?

BC Ferries' 2018 Strategic Plan initiates leading-edge practices for environmental stewardship:

- Enabling every employee to perform their duties without generating or passing on uncontrolled contaminants.
- · Quiet, low noise ships.
- Tracking and monitoring contaminant threats to air, water, and land-based ecosystems from procurement through use to disposal.
- Terminals developed and managed to be sustainable and efficient.
- Designing vessels, terminal and shore facilities to eliminate or control all uncontrolled contaminant sources.
- Zero emission electric ferries.

COMMITMENTS

• Each new class of ship we build is generally quieter than the ships before it, through improvements in hull design, using alternative propeller styles, and by placing ship's equipment on resilient mounts. We will strive for a 3dB underwater radiated noise reduction consistent with global targets.







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