

## **BRIEFING NOTE**

### **Meeting between Premier Horgan and Songhees Nation Chief Robert Sam regarding the Belleville Terminal Redevelopment Project**

**Location: TBC**

#### **What:**

*Chief Robert Sam has requested a meeting with Premier Horgan regarding the Belleville Terminal Redevelopment Project (the Project).*

#### **Who:**

*Premier John Horgan*

*Kaye Krishna, Deputy Minister, Ministry of Transportation and Infrastructure*

*Kevin Volk, ADM, Ministry of Transportation and Infrastructure*

*Lesley Ballman, Executive Project Director, Belleville Redevelopment Project*

#### **Executive Summary:**

*The Ministry of Transportation and Infrastructure (the ministry) meets monthly with the Songhees Nation and Esquimalt First Nation as part of an established Liaison Committee on the redevelopment of the Belleville Terminal, which discusses future opportunities related to the Project, including economic development and cultural recognition opportunities.*

s.13; s.16

## BRIEFING NOTE

### Meeting between Premier Horgan and Songhees Nation Chief Robert Sam regarding the Belleville Terminal Redevelopment Project

Location: TBC

#### Background:

*Since 2016, the ministry and the Songhees Nation have been party to a Benefits Agreement (BA) for the Project and have been meeting regularly.*

s.16; s.17

s.13; s.16

*In addition, ministry staff engaged the Ministry of Indigenous Relations and Reconciliation and*

s.14

s.14

*On October 18<sup>th</sup>, 2022, the ministry responded in writing to Songhees Nation's lawyer and noted a willingness to discuss their client's interests.*

#### Recommendations:

*Acknowledge that:*

- *The province takes its commitments to reconciliation very seriously and commits to working with the Songhees and Esquimalt Nations to reflect these goals on the Belleville project.*
- *Ministry and Songhees Nation staff (and Esquimalt Nation) have been meeting regularly and will continue working collaboratively regarding the Nation's interests,*

s.13; s.16



## **BRIEFING NOTE**

**Meeting between Premier Horgan and Songhees Nation Chief Robert Sam  
regarding the Belleville Terminal Redevelopment Project**

**Location: TBC**

s.13; s.16

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**Robin Phillips**  
She/Her/Hers  
Associate  
E rphillips@jfklaw.ca

September 7, 2022

*Via Email: Lesley.Ballman@gov.bc.ca*

File No. 1054-023

Ministry of Transportation and Infrastructure  
PO Box 9850 Stn Prov Gov't  
Victoria, BC V8W 9T5

**Attention: Lesley Ballman, Executive Director**

Dear Lesley Ballman:

**Re: Belleville Terminal Project – Phase III**

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We are legal counsel for the Songhees Nation ("**Songhees**" or the "**Nation**"). We write regarding the Belleville Terminal Project (the "**Project**"), further to various meetings and correspondence that has been taking place between Songhees and the Ministry of Transportation and Infrastructure ("**MOTI**").

s.13; s.16

The Project is located in the heart of the territory of the lək'wəŋən speaking people, from whom Songhees are descended. The Nation has long been alienated from the lands in its core territory in downtown Victoria, and the opportunities and benefits that come from these lands. The harbour front is an area of great importance to the Nation, and the Steamship Building stands in a location that could provide tangible benefits to Songhees.

s.13; s.16

s.13; s.16

The province has enacted the *Declaration on the Rights of Indigenous Peoples Act* (the “**Declaration Act**”), to implement its commitments to United Nations Declaration on the Rights of Indigenous Peoples and reconciliation more broadly. The province has developed an Action Plan, to serve as a road map to advance its commitments, which included the following themes:

- First Nations exercise their right to determine and develop priorities and strategies for the development, use and/or stewardship of their traditional territories and other resources;
- Indigenous Peoples freely determine their economic development goals, priorities and strategies, and exercise their right to maintain and develop their economic systems and institutions to support self-governance, along with traditional and other economic activities; and
- Government functions in such a way that distinct Indigenous cultures and identities are understood, upheld and respected, including how Indigenous Peoples access and interact with all provincial government services

s.13; s.16

s.13; s.16      We look forward to hearing from you at your earliest convenience.

Yours truly,  
**JFK Law LLP**

Per:  
**Robin Phillips**  
Associate

RCP/cem



CLIFF: 313374

**Sent via email to:** [rphillips@jfkllaw.ca](mailto:rphillips@jfkllaw.ca)

October 18, 2022

JFK Law LLP  
#816-1175 Douglas Street  
Victoria, BC V8W 2E1

Dear Robin Phillips:

**Re: Belleville Terminal Project – Phase III**

I am writing on behalf of Lesley Ballman, Executive Director for the Belleville Terminal Redevelopment Project (the Project) in response to your letter dated September 7, 2022.

s.13; s.16

I have asked Richard Bader, Sr. Advisor Indigenous Relations, to reach out to you to schedule a meeting. Thank you and I look forward to an upcoming meeting.

Last, I would advise you that Stephen Conarroe, Ministry of Attorney General, represents the Ministry of Transportation and Infrastructure in this matter. He may be contacted at the following e-mail: [stephen.conarroe@gov.bc.ca](mailto:stephen.conarroe@gov.bc.ca).

Sincerely,

Kipp Fennell  
Director Indigenous Relations  
Major Projects and Alternate Procurement  
Ministry of Transportation and Infrastructure

cc:

Cheryl Meredith,  
[cmeredith@jfkllaw.ca](mailto:cmeredith@jfkllaw.ca)

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Ministry of Transportation  
and Infrastructure

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## INFORMATION BRIEFING NOTE

**DATE:** October 17, 2022

**PREPARED FOR:** Kaye Krishna, Deputy Minister

**ISSUE:** Report and Recommendations of the National Supply Chain Task Force

**PURPOSE:** To provide an overview of the National Supply Chain Task Force's recommendations and their relevance to B.C. initiatives, including the provincial Goods Movement Strategy.

### SUMMARY:

- The federal government established the National Supply Chain Task Force (NSCTF) in February 2022 to provide expert advice on actions that all levels of government and industry could take to improve Canada's supply chains.
- The NSCTF delivered its final report on October 6, 2022, which recommends 13 short-term and 8 long-term actions.
- The ministry welcomes federal initiatives to strengthen supply chains and will continue to collaborate with Transport Canada on issues affecting B.C.'s trade networks.
- The ministry is currently developing a provincial Goods Movement Strategy, which will be informed by the NSCTF recommendations.

### BACKGROUND:

On January 31, 2022, Transport Canada hosted a National Supply Chain Summit bringing together federal ministers, business leaders and associations to discuss the challenges facing Canada's supply chains. This forum occurred in the wake of major disruptions to Canadian trade networks, including congestion caused by a surge in demand for consumer goods along with transportation and labour shortages during the COVID-19 pandemic; protests disrupting rail service in January 2020; and forest fires and floods in 2021. During the summit, Transport Canada announced the creation of a National Supply Chain Task Force (NSCTF).

The NSCTF was made up of eight former or current business, government and transportation professionals. The task force consulted a range of stakeholders to examine the key pressures on Canada's supply chains and propose actions to strengthen their reliability, efficiency, fluidity and resiliency. While the NSCTF was active, Canada's supply chains experienced further strain resulting from the realignment of global trade caused by Russia's invasion of Ukraine beginning in February 2022 as well as a container congestion crisis due to insufficient warehouse capacity and truck driver availability in Montreal and Toronto in summer 2022.

On October 6, 2022, the NSCTF released its final report and recommendations. The task force recommended 13 short-term or immediate actions and eight long-term strategic actions. These recommendations focused on the themes of action, collaboration and transformation, along with the principles of national public interest, long-term competitiveness and prosperity of Canada, collective action, and climate change response and adaptation.

The federal Minister of Transportation, Hon. Omar Alghabra, welcomed the NSCTF's recommendations and stated that they will be considered in development of a proposed National Supply Chain Strategy.



Highlights of the NSCTF's recommendations for short-term and immediate actions include:

- Reduce port container congestion by moving containers inland for customs clearance, with subsidies provided for transportation costs and penalties for importers leaving containers at ports.
- Expand rail interswitch distance to 30km across Canada to provide shippers with more rail options.
- Address transportation supply chain labour shortages by expediting immigration and refugee acceptance for workers with relevant skills, expanding the Temporary Foreign Worker program if necessary and recruiting Indigenous and other under-represented workers.
- Collaborate with provincial governments to increase recruitment and retention of truck drivers.
- Provide a temporary 50% rent reduction to airports to support investments by airport authorities in capital projects that will increase supply chain reliability and resilience.
- Reopen Free and Secure Trade (FAST) enrolment centres to increase efficiency in Canada-U.S. trade.
- Increase efficiency of customs inspections through automation and 24/7 services where needed.
- Develop a national supply chain labour strategy.

The NSCTF also recommends eight long-term strategic actions:

1. Establish a federal Supply Chain Office to coordinate national supply chain policy, regulation and funding across government; monitor and report on key performance indicators; and implement the National Transportation Supply Chain Strategy.
2. Develop and implement a 30- to 50-year National Transportation Supply Chain Strategy including short and medium-term plans and key performance indicators, to be reviewed every five years.
3. Provide digital visibility across Canada's supply chains by requiring importers and exporters to share their demand forecasting data; creating standards for data exchange; identifying external providers to develop and manage a digital data-sharing platform; and establishing a governance body of key stakeholders to ensure data collection and distribution.
4. Address Canada's transportation labour shortage through targeted immigration, increasing relevant education and training programs, recruiting Indigenous and other under-represented workers and promoting automation.
5. Enhance the Canadian Transportation Agency's powers to initiate investigations into systemic issues in Canada's trade transportation systems and to resolve disputes and monitor compliance.
6. Engage Indigenous peoples in development of the National Transportation Supply Chain Strategy and ensure versatile and reliable transportation infrastructure serving Indigenous communities.
7. Protect corridors, border crossings and trade gateways from disruption by climate change events, protests, blockades and labour disputes.
8. Work with provinces, territories and the U.S. toward mutual recognition of regulations and standards, including consistent commercial trucking standards across Canada.



## PAST INTERACTIONS:

- Kevin Volk, as A/Deputy Minister of Transportation and Infrastructure, met with Louise Yako, Co-Chair of the National Supply Chain Task Force, on August 2, 2022, to discuss B.C.'s supply chain priorities and development of the B.C. Goods Movement Strategy.

## DISCUSSION:

The ministry is currently developing a provincial Goods Movement Strategy (GMS) based on three strategic pillars: strengthening the competitiveness of B.C.'s transportation and logistics sector; supporting B.C. exporters; and accelerating adoption of B.C. innovation and enhancing climate objectives. Each of the NSCTF's strategic recommendations align with one or more of the GMS pillars. In addition, several NSCTF recommendations are relevant to other provincial initiatives. (See Attachment 1)

s.13

Recommendation 4 regarding the transportation labour shortage aligns with work underway on the <sup>s.12</sup> led by the Ministry of Advanced Education and Skills Training.

Recommendation 6 on Indigenous communities' supply chain challenges addresses a key goal of the B.C. government, implementation of the *Declaration on the Rights of Indigenous Peoples Act*, including empowering Indigenous people to pursue economic development. The StrongerBC Economic Plan also proposes the establishment of a B.C. Indigenous economic development agency. These initiatives would benefit from trade transportation infrastructure and services providing access for Indigenous communities.

Recommendation 7 regarding protection of trade corridors and gateways from disruptions is relevant to B.C.'s climate preparedness and adaptation strategy as well as ongoing work to rebuild highway infrastructure in southern B.C. to withstand future extreme weather and climate events.

Recommendation 8 on alignment of transportation related regulations singles out the need for consistent trucking standards across Canada. As part of the modernize trucking mandate, harmonizing regulations and other initiatives to improve efficiencies and safety (re: MELT) are being incrementally employed.

Where recommendations align with areas of provincial interest and intersect with provincial jurisdiction, the Ministry will continue to coordinate and collaborate with Transport Canada to support efforts to strengthen supply chains.

## GBA+ OR DIVERSITY AND INCLUSION IMPLICATIONS:

The NSCTF recommendations address the needs of northern, remote and Indigenous communities. In addition, the Government of Canada applies a GBA+ lens in development of national strategies, such as the proposed National Transportation Supply Chain Strategy.

## FINANCIAL IMPLICATIONS:

- None.

## Attachments:

1. Relevance of National Supply Chain Task Force Recommendations to GMS Pillars and B.C. Projects



Ministry of  
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CLIFF #313228

PREPARED BY:	REVIEWED BY:	DATE:
David Foster, Program and Policy Analyst Integrated Transportation Planning Branch	Kevin Volk, Assistant Deputy Minister Integrated Transportation and Infrastructure Services Division Heather Hill, Assistant Deputy Minister & EFO Finance and Risk Management Division	22-Oct-17 <hr/> N/A

### ATTACHMENT 1: Relevance of National Supply Chain Task Force Recommendations to GMS Pillars and B.C. Projects

NSCTF Recommendation	GMS Pillars	MOTI Projects	Other B.C. Projects
1. Federal Supply Chain Office	<ul style="list-style-type: none"> <li>Strengthen T&amp;L sector competitiveness</li> </ul>	<ul style="list-style-type: none"> <li>MOTI has existing staff within the Integrated Transportation Planning Branch who are focused on supporting the competitiveness of BC's trade networks.</li> </ul>	<ul style="list-style-type: none"> <li>JERI is leading work on supply chain resiliency for key sectors.</li> </ul>
2. National Supply Chain Transportation Strategy	<ul style="list-style-type: none"> <li>Strengthen T&amp;L sector competitiveness</li> </ul>	<ul style="list-style-type: none"> <li>MOTI is advancing BC's GMS and has contributed to ongoing F/P/T work on the competitiveness of national supply chains.</li> </ul>	<ul style="list-style-type: none"> <li>GTCF</li> </ul>
3. Digitalization and Supply Chain Visibility	<ul style="list-style-type: none"> <li>Accelerate adoption of B.C. innovation and enhance climate objectives</li> </ul>	<ul style="list-style-type: none"> <li>s.13</li> <li>B.C. Truck Data Survey Program</li> </ul>	<ul style="list-style-type: none"> <li>West Coast Supply Chain Visibility System (VFPA/ PRPA/ TC)</li> </ul>
4. Address Transportation Supply Chain Labour Shortage	<ul style="list-style-type: none"> <li>Strengthen T&amp;L sector competitiveness</li> </ul>	<ul style="list-style-type: none"> <li>MOTI has supported work by WESTAC as part of AEST's Sector Labour Market Partnership (SLMP) program</li> </ul>	<ul style="list-style-type: none"> <li>s.12</li> </ul>
5. Enhance CTA's Mandate	<ul style="list-style-type: none"> <li>Strengthen T&amp;L sector competitiveness</li> <li>Support B.C. exporters</li> </ul>		
6. Address Indigenous Communities' Supply Chain Challenges	<ul style="list-style-type: none"> <li>Support B.C. exporters</li> </ul>	<ul style="list-style-type: none"> <li>s.13; s.16</li> </ul>	<ul style="list-style-type: none"> <li>Implementation of DRIPA (MIRR)</li> <li>StrongerBC Economic Plan: Indigenous Economic Development Agency (JERI)</li> </ul>
7. Protect Border Crossings, Gateways and Corridors from Disruptions	<ul style="list-style-type: none"> <li>Strengthen T&amp;L sector competitiveness</li> </ul>	<ul style="list-style-type: none"> <li>B.C. highway flood recovery projects</li> </ul>	<ul style="list-style-type: none"> <li>Climate Preparedness and Adaptation Strategy (MECCS)</li> <li>Trade Diversification Strategy (JERI)</li> </ul>
8. Interprovincial and Canada-U.S. Reciprocal Recognition of Regulations, Policies and Processes	<ul style="list-style-type: none"> <li>Strengthen T&amp;L sector competitiveness</li> </ul>	<ul style="list-style-type: none"> <li>Commercial Trucking Modernization Action Plan</li> </ul>	

#### Acronyms Used

AEST = Ministry of Advanced Education, Skills and Training  
CTA = Canadian Transportation Agency



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DRIPA = *Declaration on the Rights of Indigenous Peoples Act*, SBC 2019, c 44

JERI = Ministry of Jobs, Economic Development and Innovation

MECCS = Ministry of Environment and Climate Change Strategy

MIRR = Ministry of Indigenous Relations and Reconciliation

NSCTF = National Supply Chain Task Force

T&L = Transportation and Logistics

VFPA = Vancouver Fraser Port Authority



## DECISION BRIEFING NOTE

**DATE:** October 20, 2022  
**PREPARED FOR:** Kaye Krishna, Deputy Minister, Ministry of Transportation and Infrastructure  
**ISSUE:** Confirmation of Crown Land Selections Status  
**PURPOSE:** Confirmation of Crown Land Selections status s.16  
 s.16

### RECOMMENDATION

s.13; s.16

### KEY FACTS

- s.16

- 
- 
- 

### PAST INTERACTIONS:

s.16

- 
- 
- 

### BACKGROUND / DISCUSSION

s.16

s.13; s.16



s.13; s.16

**OPTIONS:**

s.13; s.16



Kaye Krishna, Deputy Minister

October 20, 2022

Date

**Attachments:**

1. s.13
- 2.
- 3.
- 4.



Ministry of  
Transportation  
and Infrastructure

**PREPARED BY:**

Rhiana Hamilton, Senior Advisor  
Indigenous Relations

**REVIEWED BY:**

Kevin Richter, Associate DM  
Highways & Regional Services Division  
Heather Hill, ADM & EFO  
Finance and Risk Management Division

**DATE:**

22-Oct-19

N/A





## MEETING BRIEFING NOTE

**DATE:** October 21, 2022  
**PREPARED FOR:** Kaye Krishna, Deputy Minister  
**ISSUE:** Resilient Critical Infrastructure  
**MEETING:** Tara Richards, Deputy Minister, Emergency Management BC  
Rick Manwaring, Deputy Minister, Ministry of Forests (Optional)  
October 24<sup>th</sup>, 2022 10:30 to 11:15am

### PROPOSED KEY MESSAGES:

- MoTI is and will continue to support and assist with the development of <sup>s.12</sup>  
s.12
- MoTI staff is seeking strategic direction on their future involvement and role in advancing provincial  
s.12

### PAST INTERACTIONS:

- October 11<sup>th</sup> Meeting between DM Krishna and DM Richards

### BACKGROUND:

s.12

### DISCUSSION:

MoTI is participating in the development of <sup>s.12</sup>  
s.12

EMBC staff will present the draft <sup>s.12</sup>

MoTI staff is seeking strategic direction on future involvement and role in advancing the <sup>s.12</sup>

MoTI is collaborating with Infrastructure Canada (INFC) and our consultant, IBI Group, on Phase 2 of the Systems-Based Approaches for Climate Resilient Infrastructure (SBA). Phase 2 will build upon that that work through the development of a guidance document and case studies on how to incorporate systems-based approaches into current processes to promote climate resilient infrastructure, with a focus on transportation.



MoTI staff will provide a brief update on SBA Phase 2.

#### GBA+ OR DIVERSITY AND INCLUSION IMPLICATIONS:

The federal and BC government have both adopted the GBA+ framework. The Phase 2 SBA report will incorporate a GBA+ lens to ensure consideration of diversity and equity are included into the application of systems-based approaches within government. s.12 is also informed and influenced by GBA+ principles.

#### FINANCIAL IMPLICATIONS:

- Phase 2 SBA - \$200,000 to \$225,000. \$150,000 to be provided by Canada with remaining \$50-75k covered by MoTI through existing budget.

#### Attachments:

1. Meeting Agenda
2. s.12
3. SBA Phase 2 Scope & Objectives

#### PREPARED BY:

Bryan Crosby, Executive Director Infrastructure Resiliency  
Integrated Transportation & Infrastructure Services  
(250) 261-9828

#### REVIEWED BY:

Kevin Volk, ADM  
Integrated Infrastructure Services Division  
Heather Hill, ADM & EFO  
Finance and Risk Management Division

#### DATE:

22-Oct-20

22-Oct-20

## Deputy Minister's Meeting – Resilient Infrastructure Follow-up

### **AGENDA** **October 24<sup>th</sup>, 2022 – 10:30 to 11:15am**

**EMBC:** DM Tara Richards, Paul Squires, Sarah Cunningham, Perry Grilz

**TRAN:** DM Kaye Krishna, ADM Kevin Volk, Ian Pilkington, Kenedee Ludwar, Bryan Crosby

**FOR:** DM Rick Manwaring (optional), Jillian Rousselle

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Time	Item	Lead
5 min.	<b>Opening</b> <ul style="list-style-type: none"><li>• Roll Call / Introductions</li><li>• Review of Agenda</li></ul>	TRAN
10 min.	<b>DM Strategic Direction &amp; Objectives for Resilient Infrastructure</b>	EMBC – DM Richards TRAN – DM Krishna FOR – DM Manwaring (optional)
5 min.	<b>Systems Based Approaches – Phase 2 Status Update</b>	TRAN – Bryan Crosby
20 min.	<sup>s.12</sup>	EMBC – Sarah Cunningham
5 min	<b>Critical Infrastructure &amp; FTP Ministers of Infrastructure Meeting (Nov. 7, 2022)</b>	TRAN – DM Krishna



# Systems Based Approaches to Resilient Infrastructure

Phase 2: Best Practices & Guidance Document



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## Phase 1: Literature Review

- Research best practices regarding climate change preparedness, response and rebuilding

## Phase 2: A Guide to Implementing Systems Based Approaches to Resilient Infrastructure

- Generic based guidance document to be applicable to all infrastructure types
- Build using the existing BC MoTI approach to climate resiliency as a starting point and supplemented by lessons learned from **Phase 1**
- Guidance will educate users and describe specific processes on how to incorporate SBA into project investment and prioritization frameworks
- Completion: March 2023



## INFORMATION BRIEFING NOTE

**DATE:** October 31, 2022  
**PREPARED FOR:** Kaye Krishna, Deputy Minister  
**ISSUE:** Electrification of BC Ferries Routes  
**PURPOSE:** Provide an update on BC Ferries Island Class Electrification Program

### SUMMARY:

- BC Ferries plans to electrify Island Class ferries to support the ministry's Clean Transportation Action Plan.

### BACKGROUND:

BC Ferries has received approval from its regulator, the BC Ferry Commission to electrify four ferry routes (six vessels and nine terminals) subject to the company securing third party funding. To-date, BC Ferries has not been able to secure sufficient third-party funding to proceed with the full project. The company has reduced the scope of the project and continues to seek third party funding to proceed.

### PAST INTERACTIONS:

- BC Ferries interim President and CEO Jill Sharland discussed the revised Island Class electrification with Deputy Minister Krishna during a recent meeting.

### DISCUSSION:

The original project depended on securing s.17 in federal funding to support the \$150M project. Provincial funding was to be provided through a s.17 agreement with s.17 with the remaining s.17 to be covered by BC Ferries. As BC Ferries has not secured any federal funding, the company proposes to reduce the project scope (Appendix 1) to only electrify the Campbell River to Quadra Island and Nanaimo to Gabriola Island routes (four ferries and four terminals). Table 1 outlines the financial details of the project.

**Table 1: Proposed Electrification Project for Two Routes**

Project Costs	\$ million
Vessels	s.17
Terminals	
<b>Total</b>	
Project Funding	
Provincial Contribution s.17	
BC Ferries	
Federal Request	
<b>Total</b>	



BC Ferries was approved for \$17M in funding under the New Building Canada Fund in 2017. With the onset of the pandemic, the project did not proceed as planned. BC Ferries has requested that the federal government reallocate the \$17M approved for the Langdale Terminal project to fund the electrification of the Quadra and Gabriola routes (Appendix 2).

BC Ferries may be looking for MOTI to convey to the federal government its support for transferring the federal funding to the scaled-down electrification project. While MOTI is a partner in the New Building Canada Fund, there is no provincial government funding for this project. Any decision to transfer funding to the new project would rest with the federal government. The Langdale terminal project is not included in BC Ferries 12-year capital plan recently submitted to the BC Ferry Commission. As such, the project is unlikely to proceed and the benefits of injecting the federal dollars into the economy of British Columbia may be lost.

The electrification of the two routes appears to be included in the capital plan for BC Ferries Performance Term 6 submission to the BC Ferry Commission. However, it is unclear whether the project will proceed without the requested federal funding.<sup>s.13</sup>

s.13

Regardless of whether the reallocation of the federal funding is necessary for the electrification project to proceed, MOTI may want to support the reallocation to ensure that British Columbia still gets the benefits of the federal funding.

#### GBA+ OR DIVERSITY AND INCLUSION IMPLICATIONS:

There has been no GBA+ analysis conducted on this proposed project.

#### FINANCIAL IMPLICATIONS:

- None – for information only

#### Appendices:

1. Fact Sheet – Island Class Electrification Program
2. Request to Re-allocate Use of Approved Funding Letter
3. Briefing Note – Lifecycle Financial Analysis of Electrification vs. Renewable Diesel (Routes 19 & 23)

#### PREPARED BY:

Kirk Handrahan, Executive Director  
Marine Branch

#### REVIEWED BY:

Reg Bawa, ADM  
Policy Programs & Partnerships Division  
Heather Hill, ADM & EFO  
Finance and Risk Management Division

#### DATE:

22-Oct-28

N/A



## APPENDIX 1: BC Ferries' Fact Sheet – Island Class Electrification Program



### Island Class Electrification Program

#### 1. Overview

BC Ferries intends to electrify Island Class vessels and terminals as a significant step to transition the fleet away from fossil fuels and reduce GHG emissions. Enabling plug-in recharging and operation of battery-hybrid vessels will have a positive impact on:

- The environment and coastal life through decarbonization and reduced noise;
- The economy, through accelerated economic recovery in British Columbia and Canada;
- Public transportation through improvements in sustainability, efficiency, and lower emissions; and
- Accessibility through additional capacity for coastal communities, aiding the economy and jobs.

#### 2. Program Scope

BC Ferries seeks federal funding to enable the electrification of two routes serving communities on Canada's west coast. This electrification program includes modifications to four Island Class vessels, upgrading them from hybrid diesel-electric to enable full battery-electric operation. Additionally, the program includes shore charging infrastructure upgrades to provide the required energy to the vessels at the four terminals on these routes. These ships will offer service between Campbell River and Quadra Island and from Nanaimo Harbour to Gabriola Island.

BC Ferries expects that the total Program cost will be approximately <sup>s.17</sup> and can be completed within three years of funding being made available.

With a program launch in September 2022, BC Ferries anticipates that the infrastructure upgrades at the four terminals will be complete in 2025 and all four vessels will be modified by late 2024. These estimates assume material, equipment, and batteries will be available when needed and that there will be no significant delays during approvals processes or First Nations consultations.

#### 3. Program Cost

Capital Costs	
Total cost for vessel modifications	s.17
Total cost for terminal modifications	
<b>Total Capital Cost</b>	
<b>Confirmed Funding</b>	
BC Ferries funding	
Provincial funding	
<b>Subtotal</b>	
<b>Additional Funding Sources</b>	
Federal funding (assumed)	
<b>Total from all Funding Sources</b>	





#### 4. Program Benefits

##### *Environmental:*

In their current form, the Island Class ferries are among the most efficient and quietest hybrid diesel-electric ferries world-wide. The Island Class vessels have many environmentally beneficial features, including:

- Extremely low internal, external and underwater noise and vibration which has a positive impact on communities and marine life in general
- No overboard discharge of black/grey water; all disposed of ashore in accordance with environmental policies
- Use of shore power during layovers and after operational day instead of diesel generators
- A non-ablative low friction hull coating to reduce fuel consumption and avoid leaching biocides
- Back-up generators that operate with ultra-low sulphur content diesel fuel
- An exhaust treatment system to reduce nitrogen oxides (NOX)

Once operating in battery-electric mode, these four vessels will reduce BC Ferries' annual greenhouse gas emissions by approximately 8,700 tonnes and reduce harmful criteria air contaminants by over 30 tonnes per year.

##### *Economic:*

This program will bring post-pandemic economic stimulus to coastal communities, creating jobs and training opportunities for local communities and First Nations. The economic benefits to Canada are numerous, including:

- The creation of meaningful and highly skilled jobs in terminal construction, electrification technology and the marine sector
- Partnership opportunities with local industry, First Nations, BC Hydro and suppliers
- Training and education in the marine and high technology electrification sectors, creating potential opportunities for First Nations, youth, women and other typically under-represented groups
- Improved ferry service on the West Coast

BC Ferries is committed to ensuring the highest possible percentage of Canadian content goes into the program throughout its entire life-cycle. The overall strategy for ensuring Canadian content in the program is:

- Using local contractors experienced in terminal construction
- Partnering with BC Hydro for electrical infrastructure upgrades
- Using skilled British Columbian electrical workers to upgrade the existing utility corridors and terminal charging capabilities
- Contracting with local shipyards for vessel modifications
- Procurement of supplies from local companies

#### 5. Community Support and Partnerships

Stakeholder response to the proposed program has been overwhelmingly positive and BC Ferries has already obtained numerous letters of support from across British Columbia, including from local First Nations, Governments, industry and businesses associations, training institutions, environmental non-government organizations, and partners.



Ministry of  
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and Infrastructure

## APPENDIX 2: Request to Reallocate Use of Approved Funding Letter



British Columbia Ferry Services Inc.  
Suite 500 – 1321 Blanshard Street  
Victoria, BC V8W 0B7  
Tel (250) 978-1100  
www.bcferries.com

June 17, 2022

Robin Strong  
Manager, West  
Infrastructure Canada | Government Canada  
(343) 549-77728

### **RE: Request to Re-allocate Use of Approved Funding**

Dear Ms. Strong;

Under the New Building Canada Fund, and specific to the current Contribution Agreement and Amendment for the Langdale Terminal Development Plan Project, please receive this letter as a request to reallocate the use of current approved funds.

Due in part to the challenges from Covid-19 and its impact on traffic, capital infrastructure planning, and project deferrals, as well as being sensitive to the priorities of government initiatives on reducing greenhouse gas emissions, the Langdale Terminal Development Plan Project is currently being reassessed.

In support of the governments and societal priorities on reducing GHG's, we also have reprioritised our investments to meet these objectives to improve climate change. We are now favouring projects in support of reducing emissions through electrification that enhance climate change, and are therefore seeking support to have the funds originally allocated to Langdale be re-allocated to our electrification program proposal.

As part of the Passenger Ferries Services Infrastructure Eligible Category that this project was approved under, it is BC Ferries' request (hope) that the approved amount of up to \$17.1 million in eligible expenditures can be reallocated to manage these new GHG emission reduction initiatives as we transition to zero emission energy adoption in the marine sector. Please advise how we can explore this opportunity and who would be the appropriate contact.

Cognizant of the umbrella agreement to extend the deadline for use of funds to March 31, 2028, it is BC Ferries' expectation that these approved funds will be utilized as part of its overall strategic direction on reducing greenhouse emissions, as evidenced by the attached cash flow update.





Ministry of  
Transportation  
and Infrastructure

Page 2

At BC Ferries, it is our objective to be a leader in environmental and social governance. We look forward to supporting the government's GHG reduction initiatives and in doing so, determining how best we can enable these funds in support

Regards,

A handwritten signature in black ink, appearing to read "J. Sharland".

Jill Sharland  
Vice President & CFO





## APPENDIX 3: Briefing Note: Lifecycle Financial Analysis of Electrification vs. Renewable Diesel (Rts 19 & 23)



## Briefing Note

**Date** September 23, 2022  
**To** Island Class Electrification Program Manager  
**From** Capital Planning  
**Subject** Lifecycle Financial Analysis of Electrification vs. Renewable Diesel (Routes 19 & 23)

### Question

Is it more expensive to invest in and operate Island Class vessels using electric energy, or renewable diesel?

### Analysis

A lifecycle financial analysis was conducted for electric and renewable diesel operations on Routes 19 and 23. Based on the assumptions modeled, electrification is favourable for both routes before accounting for any potential Federal funding. Assumptions are summarized in the Appendix, and consist of various future cash flows which have inherent uncertainty and will impact the analysis (i.e. commodity prices, carbon credits, system performance).

The following table summarizes the up front cost, annual operating impact of electrification vs. renewable diesel in both 2025 and 2035 (to demonstrate changes in fuel rate, carbon credits, and battery renewal) and the resulting NPV. Note that this table reflects a new build assumption. If a vessel modification option were selected, the up front cost would increase by \$13 for each route and there would be an equal reduction to the NPV.

	Route 19	Route 23
<b>Up Front Cost of Electrification</b>		
Terminal investment	\$17	
Part 3 and s.17 Funding		
Net up front cost		
<b>Annual Operating Impact of Electrification vs. Renewable Diesel (2026)</b>		
Fuel savings (including urea)		
Carbon credits		
<b>Annual Operating Impact of Electrification vs. Renewable Diesel (2035)</b>		
Fuel savings (including urea)		
Carbon credits		
Average battery renewal		
<b>20 Year NPV of Electrification vs. Renewable Diesel</b>		
<b>Discounted Payback of Electrification (years)</b>		

BC Ferries Environmental Sustainability Group evaluated potential for greenhouse gas emission reduction for both renewable diesel and electricity, with results summarized in the following table:

Approx. annual lifecycle emissions reduction compared to base case of Diesel Fuel (B5)		
Route	Renewable Diesel (R100)	Electricity
19	4,200 tonnes CO <sub>2</sub> e	5,675 tonnes CO <sub>2</sub> e
23	5,305 tonnes CO <sub>2</sub> e	7,155 tonnes CO <sub>2</sub> e

**Recommendation**

Based on the above analyses, it is recommended that the business pursue electrification of Routes 19 and 23.

- Proceed with terminal design work under the Island Class Electrification Program (ICEP)
- Continue development of a detailed business case to contract four new electric Island Class vessels to forego existing vessel modification costs if possible

Electric vs. renewable diesel analysis of the four additional routes with existing or planned Island Class operation (18, 25, 6, and 24) will be completed for a future decision.



## Appendix: Key Assumptions

### Up front investment

Up front investment is required for terminal infrastructure to support the electric operation. Vessel electrification can be achieved through the Island Class Phase 3 new build program (assumes negligible incremental cost for electric) or modification of existing Island Class vessels (\$17 /ship). Known funding – Part 3 Agreement and \$17 contribution and incentive – offset the electric assumption. Federal funding is not included in the analysis.

Renewable diesel may require investment for storage on Vancouver Island. Due to estimate uncertainty, these costs have not been included in the analysis.

For simplicity, all up front costs are included as a year zero expenditure (not discounted) in the NPV. As a result, the investment is not discounted and yields a more conservative analysis.

### Fuel consumption and useful energy factor

Fiscal 2023 budgeted diesel consumption was used as a baseline and validated for reasonableness by early actual fuel consumption reporting on Route 19, consistent with the ICEP amendment form supported by CPBC in June 2022. The diesel consumption was converted to MJ and kWh for an apples to apples analysis across energy types.

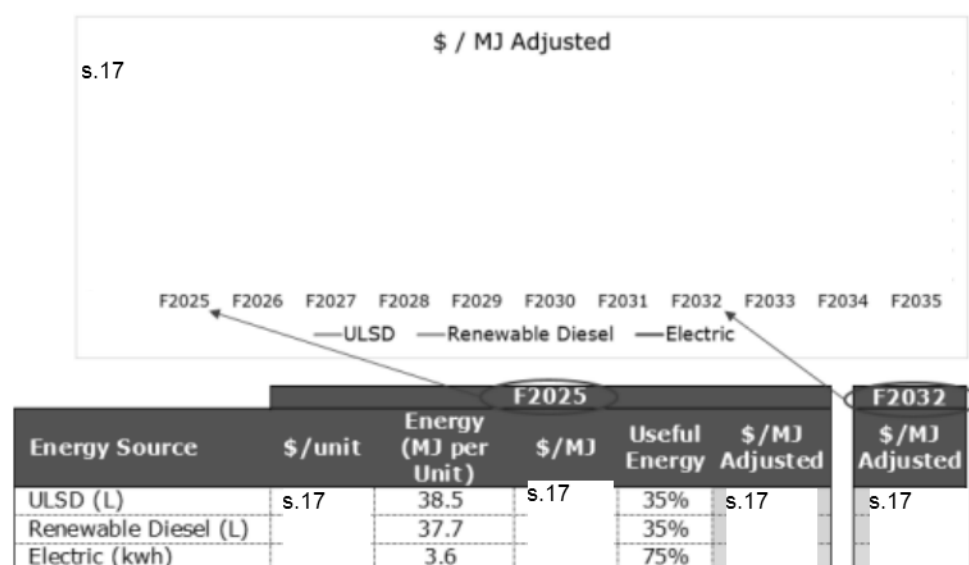
The analysis assumes useful energy of 35% for diesel hybrid engines and 75% for electric. Engineering believes that the electric assumption is conservative and could in fact be higher.

### Commodity price

Future price per unit of ultra low sulphur diesel (ULSD), renewable diesel, and electricity were provided by Treasury. In the case of electricity, pricing is based on uninterrupted service under the BC Hydro demand transition rate tariff structure which increases gradually to align with the large general service (LGS) rate by fiscal 2032.

Prices for all commodities fluctuate until the early 2030's and stabilize with a consistent annual increase of ~1% for ULSD and renewable diesel and ~2% for electricity.

The following graph shows the price per MJ of the three commodities. The electric price is adjusted to account for the higher energy usage (75%) compared to diesel hybrid (35%).



Note: diesel prices exclude cost of urea

Carbon credits

Under the electric option, it is assumed Provincial carbon credits are monetized through 2030 when the program ends, at a rate of \$ 17 . It is possible carbon credits could extend beyond 2030 but not confirmed.

Battery renewal

Battery replacement costs are estimated to be \$ 17 ship higher under an electric power plant due to the increased kWh requirements. Replacement frequency is estimated to be roughly every seven years.

Other factors not reflected in model

- Carbon intensity assumed for electric is under review and may reduce, which would negatively impact carbon credit values assumed
- Generator overhaul costs may be lower under electric but has not been quantified
- Potential hull form changes of the new build design may reduce energy consumption due to efficiency, which would narrow the energy savings for electric.
- Incremental up front cost for electric configuration in new build, and for renewable diesel storage infrastructure (as described in "up front investment" section on page 2)