

September 28, 2018

Mr. Sheldon Stoilen
British Columbia Ferries Commissioner
BC Ferry Commission
PO Box 9279 Stn Prov Gov
Victoria, BC V8W 9J7

Dear Mr. Stoilen:

Re: Performance Term Five Submission

Enclosed please find British Columbia Ferry Services Inc.'s submission for Performance Term Five (April 1, 2020 – March 31, 2024), comprised of the following five reports:

- Part 1: *Performance Term Four Report*, submitted in accordance with section 40 of the *Coastal Ferry Act* (the "Act");
- Part 2: *Report on Fuel Management Plan Outcomes in Performance Term Four* submitted in accordance with British Columbia Ferry Commission Order 15-03 *Final Decision on Price Caps for the Fourth Performance Term Pursuant to the Coastal Ferry Act*, dated September 16, 2015;
- Part 3: *Capital Plan (fiscal years 2019 through 2030)*, submitted in response to the requirements of section 64.1 of the Act;
- Part 4: *Strategies for Enhancing Efficiency in Performance Term Five and Beyond*, addressing the requirements of section 40(1.1) of the Act; and
- Part 5: *Traffic Demand Forecast (fiscal years 2019 through 2024)*, provided as supplemental information to help inform the price cap determination.

Supplemental documents to the Performance Term Five submission contain information that is confidential and commercially-sensitive and have been submitted under separate cover. We request that the Commission and its advisors maintain confidentiality over the supplemental documents in accordance with section 54 of the Act.

Should you have any questions or require further information please contact us.

Sincerely,

A handwritten signature in dark ink, appearing to read "Cynthia M. Lukaitis". The signature is fluid and cursive, with the first name "Cynthia" being more prominent than the last name "Lukaitis".

Cynthia M. Lukaitis
Vice President and Corporate Secretary

Enclosure

British Columbia Ferry Services Inc.

Performance Term Five Submission



September 28, 2018

 **BCFerries**

Performance Term Five Submission

Executive Summary

British Columbia Ferry Services Inc. (“BC Ferries” or the “Company”) makes this submission to provide information to assist the British Columbia Ferries Commissioner (the “Commissioner”) in establishing the price caps for performance term five (April 1, 2020 – March 31, 2024) (“PT5”).

The fares BC Ferries charges for core ferry services are regulated by the Commissioner in accordance with the *Coastal Ferry Act* (the “Act”). Every four years, the Commissioner establishes a price cap for each route group specified in the Coastal Ferry Services Contract (the “CFSC”) between BC Ferries and the Province of British Columbia (the “Province”) for the ensuing four-year performance term. The price cap is the maximum permitted ceiling of average ferry fares for each route group in that performance term.

This submission is composed of five reports:

Part 1: The *Performance Term Four Report* responds to the information requirements of section 40(1)(a) to (f) of the Act. It provides an overview of the ferry services the Company has provided and expects to provide in performance term four (April 1, 2016 – March 31, 2020) (“PT4”) in relation to each regulated ferry route.

Part 2: The report on *Fuel Management Plan Outcomes in Performance Term Four* describes the progress the Company has made in PT4 in its strategies for fuel procurement, minimizing fuel consumption and transitioning to alternate fuels. This report is submitted in accordance with British Columbia Ferry Commission Order 15-03 *Final Decision on Price Caps for the Fourth Performance Term Pursuant to the Coastal Ferry Act*, dated September 16, 2015.

Part 3: The *Capital Plan (fiscal 2019 through 2030)* responds to the specific information requirements of section 64.1(1) of the Act and provides information on the capital expenditures the Company anticipates incurring over the next 12 years.

Part 4: The Company's strategies for realizing further efficiencies in the upcoming performance term are described in the *Strategies for Enhancing Efficiency in Performance Term Five and Beyond*. This plan addresses the information requirements of section 40(1.1) of the Act.

Part 5: BC Ferries' *Traffic Demand Forecast (fiscal 2019 through 2024)* is provided as supplemental information to help inform the price cap determination.

Overview

Under contract to the Province, BC Ferries provides year-round vehicle and passenger service on 25 routes to 47 terminals, with a fleet of 36 vessels. BC Ferries is an essential transportation link that connects coastal communities and facilitates the movement of people, goods and services.

Provincial funding covers some of the operating costs of the majority of routes

The CFSC, originally signed in 2003, is a binding 60-year agreement that is reviewed and updated at regular intervals – referred to as performance terms. BC Ferries is currently planning for PT5. The CFSC sets the minimum core level of service the Province expects BC Ferries to provide on its 25 regulated ferry routes. The Province contributes funds to BC Ferries to cover costs associated with the majority of these routes. The Province does not directly fund capital costs.

BC Ferries exceeded contracted sailings by almost 3,000 round trips without extra service fees

BC Ferries is one of the largest ferry companies in the world, and in fiscal 2018, carried 22.0 million passengers and 8.7 million vehicles. Passenger numbers were the highest BC Ferries has experienced in 20 years, and vehicle traffic the highest the Company has ever experienced. While BC Ferries cannot go below the core service level identified in its contract with government, it can exceed it. In fiscal 2018, BC Ferries provided more than 174,000 sailings, of which 2,962 were more round trips than required under the CFSC, and 1,190 were more round trips than the year prior.

Given the volume of people and vehicles BC Ferries transports, the Company takes seriously its responsibility as a steward of safe, reliable, efficient and sustainable marine transportation, as well as the role it plays in maintaining the quality of life of people who live, work and visit British Columbia. BC Ferries is a significant contributor to the British Columbia economy, an enabler of commerce for coastal communities, and a vital connection on which coastal communities rely.

All net earnings are used to build ships, improve terminals, and provide ferry services

The Company recognizes that for some customers, BC Ferries is their only transportation available, while many of its other customers have a choice – whether to travel and whether to travel with BC Ferries. The importance of fare affordability, certainty, and reliability for its customers, and ensuring its customers feel they receive value for the money they spend, are key priorities for the Company.

BC Ferries reinvests its earnings back into the ferry service to fund capital replacements and improvements, and enhance customer service. The Company strives to provide a consistent and positive customer experience that is responsive to its customers' needs, regardless of the route they travel on, or the platform they use to book travel. Through the use of the latest available technology,

the Company is modernizing the way customers interact and travel to offer a seamless and enjoyable end-to-end travel experience.

BC Ferries is committed to being a company worthy of the public's trust and valued for the services it provides. The Company is focused on engaging with stakeholders, First Nations, customers and communities on services they want to see. This means giving them a voice in the decisions that affect them most, and continually evaluating the services provided to ensure BC Ferries is offering a reliable, efficient and affordable experience that aligns with the needs of those who travel.

BC Ferries' customers expect the cost of travel to be reasonable for the services they receive. They are concerned about fare affordability and expect BC Ferries to operate efficiently and invest prudently in assets and infrastructure, ensuring that the fares they pay are put to the highest and best use.

BC Ferries' customers also expect the Company to look forward as much as it looks back. The Company is planning for a future in which the growth in passenger numbers outstrips the growth in vehicles, and a future in which people will likely need different services, vessels and schedules than the ones in place today. BC Ferries takes emerging and future trends into account, such as the rise in the adoption and use of electric vehicles, introduction of autonomous vehicles, and a sharing economy where services like Uber, Zipcar and Mobi Bike Share are fundamentally changing the way people travel. BC Ferries strives to remain current with evolving trends related to transportation and marine technology.

BC Ferries is a leader in the transition to a low-carbon future. The Company has focused on increased efficiency and sustainability through environmentally conscious initiatives, including the adoption of liquefied natural gas ("LNG") and hybrid electric propulsion systems and more efficient hull designs, with lower underwater radiated noise. The use of LNG, for example, lowers carbon emissions by about 25 percent, SO_x (sulphur oxides) by almost 100 percent and NO_x (nitrogen oxides) by 85 percent, which translates to significantly-cleaner exhaust emissions than the ultra-low sulphur diesel the Company currently uses.

BC Ferries has
invested more
than
\$350 million
in clean
technology
since 2013

The Company has made significant efforts in recent years to lower costs and increase ancillary revenues, which have improved efficiency and contributed to BC Ferries' financial health and sustainability. The use of LNG reduces fuel expenditures by approximately 50 percent based on current fuel pricing. BC Ferries recognizes that efficiency is a long-term pursuit, and this continues to be an important focus.

System-wide challenges that impact customers' experience

Higher traffic has led to more overloaded sailings and longer wait times at the terminals. These overloads increase the pressure to accommodate as many vehicles as possible on each sailing, which in turn leads to increased vessel in-port times and added pressure on on-time performance. With terminal wait times and on-time performance challenged under normal circumstances, the impact of any delay or cancelled sailing is magnified, and is a key source of customer dissatisfaction.

The current system has little built-in redundancy and as a result, has limited capacity for resiliency in the face of an incident that removes a vessel from service, regardless of how short a period of time. When there are delays in bringing a vessel back into service, the customers' experience falls short of expectations and trust in the Company is eroded.

The largest Capital Plan in BC Ferries' history

BC Ferries understands that decisions made today must consider the way people will travel tomorrow. With vehicle traffic growth of 14 percent over the last four years, BC Ferries needs to plan for a more resilient ferry service that can address pain points its customers experience in the areas of reliability, affordability and choice.

It also needs to continue its focus on efficiency in the areas of fuel, maintenance and labour, as well as information technology and growing and diversifying revenue, as ways to reduce upward pressure on fares.

The Capital Plan outlines the capital expenditures the Company anticipates incurring over the 10-year period beginning April 1, 2020, the start of PT5, in addition to the capital expenditures planned for the two years leading up to the start of PT5, with the result that the Capital Plan covers a 12-year period (April 1, 2018 through March 31, 2030). The goal of the plan is a safe, reliable and affordable ferry service that meets or exceeds the interests of British Columbians as set out in the contract between the Province and BC Ferries.

The PT5 Capital Plan emphasizes capacity, operational efficiency, affordability, resilience and flexibility. In PT5, BC Ferries will focus on providing optimal service to maximize and enhance customers' experience.

BC Ferries
will invest
\$3.9 billion
over 12 years,
three times
more than

Between now and the end of the PT5 Capital Plan, BC Ferries will invest \$3.9 billion in capital assets – the largest capital plan in BC Ferries' history. The PT5 Capital Plan will leverage the Company's current strong financial position and upgrade existing vessels, purchase new vessels, invest heavily in its Fleet Maintenance Unit, and upgrade and build new terminals. The Company will

standardize its assets, improving interoperability and addressing growing demand in a customer-focused, cost-effective and affordable way.

Replacing old with new

By far the largest portion of BC Ferries' capital investment has been directed to acquiring clean technology ships, and modernizing existing ones. During the period covered by the PT5 Capital Plan, BC Ferries will carry out a number of major upgrades to existing vessels at planned intervals, improving environmental performance. It will invest in terminals and berths, as well as significantly upgrade information technology systems. It will build redundancy into the system so BC Ferries can be more resilient in the face of an adverse event.

New ferries
will be
ultra-modern,
clean technology

Capacity to serve coastal travellers and businesses

The growth potential of the major routes¹ is currently limited by the size and number of existing ships.

Ferry system
capacity will
increase,
reducing
overloads

BC Ferries intends to add incremental vessel capacity by way of one additional vessel – BC Ferries will build five new vessels to be placed into service by 2024, which will replace four major route vessels. When not used as a replacement for a vessel out of service to improve resiliency, the additional vessel will allow for supplementary service in the summer months when additional service is needed most to reduce overloads during peak periods.

Capacity and
frequency will
increase on
inter-island
routes

The replacement of vessels will allow an opportunity to add passenger and vehicle capacity to the fleet. The increased capacity will reduce the frequency of overloaded sailings.

On select routes, BC Ferries intends to deploy two smaller ships instead of one larger ship (where suitable), which introduces both increased capacity and resiliency into the system, and ensures continuity of service during an unplanned event with the remaining vessel. This approach provides customers and communities with more frequency and redundancy in the service provided.

Providing customers with travel certainty

Ferry terminal
waits will
largely end at
major
terminals

BC Ferries understands that for many of its customers, not knowing if they will get on a particular sailing is a source of frustration and stress. Completely addressing customer demand for certainty means assuring a customer they will be on a specific sailing before they begin their journey. BC Ferries' PT5 Capital Plan includes significant investments in its reservation systems,

¹ The major routes comprise the routes connecting: Swartz Bay-Tsawwassen, Departure Bay-Horseshoe Bay, Duke Point-Tsawwassen, and Langdale-Horseshoe Bay.

website and e-commerce platform. In addition to investments in transaction processing and on-line booking, these improvements will provide customers on the major routes, the Company's busiest, with the ability to purchase travel in advance at discounted rates on select sailings.

Standardization and interoperability

In PT5, the Company will pursue greater standardization and interoperability of the fleet. With the existing fleet composition, planned and unplanned events result in insufficient capacity provided on one or more routes. With a more standardized fleet, there is less impact during redeployments as the relief vessel is more likely to be identical to the regular vessel. A standardized fleet reduces cost for training, familiarization, and critical spare parts. Greater standardization allows for familiarity for those operating and maintaining the vessels, which leads to safer operations and more cost-effective maintenance. A reduced number of vessel classes also allows for series builds, which helps reduce the overall cost of vessel acquisition.

Pursuing sustainability to drive efficiency and environmental performance

LNG is 50 percent less costly than diesel fuel, based on current pricing. Using LNG reduces the Company's operating costs, decreases upward pressure on fares, and improves environmental performance. BC Ferries conceived and pioneered the new technique of fuelling LNG from trucks on the deck of the ferry, which is a much more cost-effective alternative than shore-based infrastructure associated with traditional LNG-fuelling facilities.

In PT5, the Company will expand the use of LNG to fuel many of its vessels through vessel builds and conversions. It will also introduce a diesel-electric hybrid configuration on other vessels that can later be upgraded to a full battery-operated solution. This shift to electric propulsion is expected to decrease reliance on liquid fuel and have a positive environmental impact.

Fleet Maintenance Unit investment to improve reliability

At the same time BC Ferries is introducing additional, standardized vessels to support resiliency and replacing existing vessels with ones that have more capacity, it needs to maintain internal ship repair capability to minimize reliance on external ship repair facilities. Ship repair and maintenance activities are a significant cost to the Company.

BC Ferries currently handles 45 percent of its ship repairs using internal management or facilities through its Fleet Maintenance Unit. Ship repair and maintenance activities are the Company's third largest cost category, after labour and fuel. Access to timely and quality ship repair services is vital for the stability of BC Ferries' operations.

For the Fleet Maintenance Unit, BC Ferries is planning a major capital investment to renew and improve the facility. It will replace buildings that have exceeded their life expectancy and design new buildings to address seismic and sea level rise risks. This will allow BC Ferries to correct the existing inefficient site layout and modernize the facility, with the goal of realizing productivity efficiencies and improvements.

Terminal improvements to improve performance and customer experience

BC Ferries is planning significant investments in buildings and related infrastructure at three major terminals – Horseshoe Bay, Langdale and Swartz Bay. The investments at these terminals will contribute to better on-time performance and system resiliency by enabling efficient loading and unloading of the vessels.

A prudent plan for ferry users and British Columbia

BC Ferries' PT5 plans reflect a significant program of capital investment that will be undertaken over the next 12 years. With its focus on efficiency, BC Ferries believes it can deliver the PT5 Capital Plan, while improving the customer experience and maintaining affordable fares, provided revenues increase in alignment with the rate of inflation. The Company has demonstrated its ability to deliver complex and comprehensive capital and efficiency programs effectively. BC Ferries is confident that it has the resources and processes in place to ensure the successful implementation of both the PT5 Capital Plan and Efficiency Plan.

Together, the investments outlined are required to ensure BC Ferries continues to provide a safe, reliable and efficient service that is resilient in the face of growth in traffic, changes in the way people travel, and the day-to-day operational issues that impact every transportation provider. BC Ferries believes these investments will help ensure a sustainable ferry system for generations to come.

Part 1

Performance Term Four Report



British Columbia Ferry Services Inc.
September 28, 2018



Caution Regarding Forward-Looking Statements

British Columbia Ferry Services Inc. ("BC Ferries") advises that this report may contain certain forward-looking statements which relate to future events or future performance. These forward-looking statements are based upon management's expectations and assumptions as to a number of factors, and BC Ferries believes that it has a reasonable basis for making such forward-looking statements. If management's expectations and assumptions prove to be incorrect, or factors change, then actual results could differ materially from the forward-looking statements contained in this report. In addition, forward-looking statements, by their nature, involve risks and uncertainties which could cause actual results to differ materially from those contemplated by the forward-looking statements. The risks and uncertainties include those risks and uncertainties described in BC Ferries' Annual Management's Discussion & Analysis, which is available under BC Ferries' company profile at www.sedar.com.

Executive Summary

British Columbia Ferry Services Inc. (“BC Ferries” or the “Company”) provides ferry services to coastal British Columbia under the terms set out in the Coastal Ferry Services Contract (the “CFSC”) between BC Ferries and the Province of British Columbia (the “Province”). The CFSC, originally signed in 2003, is a binding 60-year agreement that is reviewed and updated at regular intervals – referred to as performance terms. The CFSC sets the minimum core level of service the Province expects BC Ferries to provide on 25 designated (‘regulated’) ferry routes. The Province contributes funds to BC Ferries to cover some operating costs associated with the majority of these routes. The Province does not directly fund capital costs.

The major routes – between Metro Vancouver and mid and southern Vancouver Island, and Horseshoe Bay and Langdale – account for about 80 percent of BC Ferries’ fare revenue, with the inter-island (also referred to as ‘minor’) routes the second largest generator of tariff revenue at approximately 15 percent, and the northern routes accounting for approximately 5 percent.

The major routes are profitable, and as such, they do not receive any funding from the Province. For the remaining routes, the Province pays the Company Ferry Transportation Fees for the round trips BC Ferries delivers to meet the core service levels specified in the CFSC. BC Ferries does not receive fees for contracted sailings it does not deliver¹. The Province also recently began to provide funding for a new route that connects Port Hardy, the Mid-Coast and Bella Coola (route 28).

In addition to the Ferry Transportation Fees, BC Ferries receives an annual amount paid by the Government of Canada to fulfill the obligation of providing ferry services to coastal British Columbia. For fiscal 2019 and 2020 only, BC Ferries will also receive annual contributions from the Province for fare reduction initiatives agreed to between the two parties.

The CFSC requires BC Ferries to provide a certain amount of fare discount for passengers travelling on the regulated ferry routes under the Province’s social programs, including students, persons with disabilities, and those travelling under the Medical Travel Assistance Program. The Province reimburses BC Ferries to cover the foregone revenue associated with these discounts.

The CFSC specifies that BC Ferries cannot reduce service on a regulated ferry route below the core service level for that route unless the British Columbia Ferries Commissioner (the “Commissioner”) authorizes this action. Thus far in performance term 4 (“PT4”), the Commissioner has authorized one

¹ Except for reasons specified in the CFSC that are outside BC Ferries’ control, such as bad weather and/or where authorized by the British Columbia Ferries Commissioner.

such temporary service reduction. This was for a service reduction on the routes connecting Swartz Bay with the Outer Gulf Islands (route 5) and Tsawwassen with the Gulf Islands (route 9) for the period April 18, 2018 to May 17, 2018, after the *Queen of Cumberland* was removed from service following an incident involving the davit for the vessel's rescue boat.

While BC Ferries cannot reduce service below the core service levels, it can exceed them. In fiscal 2018, BC Ferries delivered 79,082 round trips, of which 2,962 were above the number of round trips required under the CFSC. BC Ferries is forecasting that it will meet or exceed core service level requirements for the remainder of PT4.

Tariffs for Core Service Levels

BC Ferries is required to keep average fares below the price caps, which are set by the Commissioner. While by Order 15-03², the Commissioner set the PT4 price caps to increase by 1.9 percent per year, the Company implemented average tariff increases that were below those allowed.

In fiscal 2018, BC Ferries did not increase fares for vehicles or passengers on the inter-island routes, the northern routes or the route connecting Horseshoe Bay to Langdale. On major routes connecting Metro Vancouver and Vancouver Island, passenger fares were held flat. At the same time, vehicle fares on these routes were increased by 1.9 percent, reservation fees were reduced, and several vehicle fare promotions were implemented. Together, this resulted in reduced average vehicle fares for the fiscal year.

In fiscal 2019, the Company applied a fare reduction of 15 percent on the northern routes, the inter-island routes and on the major route connecting Horseshoe Bay and Langdale. Fares will remain at these levels through March 2020. BC Ferries and the Province are each contributing \$39 million to cover the cost of these fare reductions. Fares remained unchanged on the major routes connecting Metro Vancouver with Vancouver Island.

Also in fiscal 2019, the British Columbia seniors' passenger discount increased from 50 percent to 100 percent for travel Monday to Thursday on the major and inter-island routes. The Province will contribute an additional \$20 million towards offsetting the value of the enhanced British Columbia seniors' discount through March 2020.

The total value of the fare and seniors discount initiatives over the two years is \$98 million.

² *The Final Decision on Price Caps for the Fourth Performance Term Pursuant to the Coastal Ferry Act* (September 16, 2015)

The Cost of Fuel

Fuel is a significant operating expense and BC Ferries spent \$102 million in fiscal 2018 on diesel and liquefied natural gas (“LNG”) fuel, combined.

At the end of fiscal 2018, the fuel deferral account for the non-northern routes carried a total debit balance of over \$15 million. Typically, in response to a large debit balance, the Company would respond by reducing or eliminating rebates, or applying surcharges. BC Ferries voluntarily eliminated the deferral account balance for the non-northern routes, foregoing \$15.7 million of potential surcharge revenue.

Revenue Sources

Like every company, BC Ferries has revenues to offset expenses. Each year, BC Ferries needs to generate a financial return sufficient to enable the Company to meet its debt obligations and maintain access to reasonable borrowing rates. BC Ferries reinvests its net earnings back into the ferry service and uses the funds to add, replace or upgrade capital assets, such as ferries, terminals and other infrastructure.

In addition to the service fees and other contributions from the Province, BC Ferries earns revenue from ticket sales (including reservation fees and assured loading ticket premiums), and other revenue streams, such as catering and retail sales, both on and off the vessels. This ancillary revenue helps to reduce upward pressure on fares.

Catering and retail sales make up approximately 90 percent of the Company’s non-fare or ancillary revenues. Other revenue-generating activities include parking and vacation package revenue. BC Ferries’ gross ancillary revenue increased by \$7.5 million or 7.5 percent between fiscal 2017 and 2018, primarily due to increased catering and retail sales on the major routes, which grew by \$6.1 million year-over-year.

Over PT4, traffic increased steadily. In fiscal 2017, BC Ferries experienced a 2.9 percent increase in vehicle traffic and a 1.7 percent increase in passenger traffic as compared to the prior year – the highest levels since 2008. In fiscal 2018, traffic levels continued to increase, with vehicle traffic up 5.0 percent and passenger traffic up 4.7 percent compared to the prior year.

These positive traffic trends have continued into the first half of fiscal 2019. BC Ferries is forecasting vehicle traffic demand to increase by 2.6 percent and passenger traffic demand to increase 1.6 percent over the prior year. For fiscal 2020, the Company is forecasting traffic growth of 1.7 percent for passengers and vehicles.

BC Ferries' tariff revenue increased by 5.1 percent, from \$625.6 million in fiscal 2017, to \$657.6 million in fiscal 2018, primarily due to higher traffic, a change in traffic composition, and an increased number of reservations.

For fiscal 2019, BC Ferries forecasts tariff revenue will be down from the prior year by 3.0 percent to \$637.9 million. This decrease reflects the impact of the fare freeze on the major routes connecting Metro Vancouver with Vancouver Island, the 15 percent fare rollback on all other routes, and the restoration of the 100 percent British Columbia seniors' discount on the major and inter-island routes, partly offset by continued growth in traffic and reservations.

For fiscal 2019 and 2020, BC Ferries is forecasting continued growth in ancillary revenues, mainly due to continued increases in catering and retail revenue. Ancillary revenue is forecast to grow by 3.1 percent in 2019 and 3.6 percent in fiscal 2020 as traffic levels continue to increase.

Expenses

The Commissioner set a target for the Company of \$27.6 million in efficiencies, and BC Ferries can achieve this target through expense reduction and/or incremental revenue generation. Although total expenses are higher than forecast at the time the Commissioner set the PT4 price caps, revenues have also increased, which has enabled the Company to exceed its efficiency target and achieve a strong financial position.

Total expenses were \$817.8 million in fiscal 2017 and \$877.3 million in fiscal 2018.

Operating, maintenance and administration expenses increased from \$577.2 million in fiscal 2017 to \$622.8 million in fiscal 2018, for a total year-over-year increase of \$45.6 million or 7.9 percent. In fiscal 2018, wages, benefits and fuel expenses totalled \$474.5 million or 76% of total operations, maintenance and administration costs. These labour and fuel costs are primarily driven by the increase in the level of service to meet traffic demand. BC Ferries continuously reviews all costs for efficiencies that can be realized without compromising safety and the customer experience.

Maintenance costs increased by \$13.4 million compared to the prior year as a result of more vessel refit activity, unplanned vessel maintenance and repairs to the Company's terminals. Administration costs increased by \$2.6 million compared to the prior year, mainly as a result of higher labour costs due to higher wages and benefits.

BC Ferries forecasts that operating, maintenance and administration expenses will increase by approximately \$26 million in fiscal 2019 primarily due to increased labour and fuel costs.

Based on asset renewal plans BC Ferries describes in its 12-Year Capital Plan for performance term five (April 1, 2020 – March 31, 2024) ("PT5"), the remainder of PT4 will have an above average level of capital spending, with \$343 million in capital expenditures planned for fiscal 2019, and another \$439 million planned for fiscal 2020. As a result, BC Ferries forecasts depreciation and amortization expense to increase to \$173.5 million in fiscal 2019, and to \$183.2 million in fiscal 2020.

BC Ferries funds its operational requirements and capital expenditure program through cash flow generated from operations, and bank financing and capital markets. In addition to the long-term debt, the Company has a \$155.0 million, five-year revolving credit facility with a syndicate of Canadian banks.

Summary

To date in PT4, traffic levels have reached record levels. In response to the increase in traffic, BC Ferries has increased the number of sailings it provides. Operating from a stronger financial position, arising from a combination of revenue growth and prudent cost management, BC Ferries has been able to implement fare freezes, roll backs and promotions, which have resulted in greater affordability for ferry users. For the remainder of PT4, BC Ferries is forecasting continued growth in traffic levels. BC Ferries forecasts positive net earnings through PT4, which will be reinvested in the ferry system to fund capital replacements and improvements, and enhance customer service, while advancing the Company's objectives for environmental stewardship.

Table of Contents

Executive Summary	3
Table of Contents	8
Introduction	9
Section 1: Core Ferry Services.....	11
1.1 Coastal Ferry Services Contract	11
1.2 Overview of Core Service Levels	11
1.3 Social Programs.....	13
1.4 Temporary Service Disruptions	13
1.5 Review of Core Service Delivery	13
Section 2: Tariffs for Core Ferry Services	15
2.1 Price Cap Setting	15
2.2 Performance Term Four – Tariff Adjustments.....	16
2.3 Performance Term Four – Price Cap Performance	16
2.4 Extraordinary Price Cap Increases.....	17
2.5 Fuel Surcharges and Rebates	17
Section 3: Provincial Service Fees and Other Contributions.....	22
3.1 Ferry Transportation Fees	24
3.2 Fare Initiatives	25
3.3 Contributions Applied to the Northern Fuel Deferral Account.....	25
3.4 Service Fees for Unregulated Ferry Routes	26
3.5 Social Program Reimbursement	26
3.6 Revenues From Federal Contract	27
3.7 Contribution to Charter Agreement	28
Section 4: Revenues From All Sources.....	29
4.1 Tariff Revenues	29
4.2 Traffic	30
4.3 Regulated Revenues.....	31
4.4 Revenues From Non-Regulated Sources.....	32
4.5 Service Fees	33
4.6 Allocation Methodology - Revenues	33
Section 5: Expenses	35
5.1 Overview of Expenses	35
5.2 Operations, Maintenance and Administrative Expenses (OM&A)	36
5.3 Depreciation and Amortization of Capital Costs.....	38
5.4 Financing Expense	38
5.5 Loss on Disposal and Revaluation of Capital Assets	40
5.6 Allocation Methodology - Expenses	40
5.7 Expenses Allocated to Route Groupings	44
Section 6: Additional or Alternative Service Providers	45
APPENDICES	46
Appendix A: Performance Against Core Service Levels.....	47
Appendix B: Route Statements.....	57

Introduction

This report responds to the specific information requirements of section 40(1)(a) to (f) of the *Coastal Ferry Act* (the “Act”). It contains information on the ferry services BC Ferries has provided and expects to provide in PT4 in relation to each regulated ferry route within the route group for which a price cap is to be set by the Commissioner for PT5. It is structured in six sections as follows:

Section 1: Core Ferry Services

BC Ferries delivers coastal ferry services under terms and conditions specified in the CFSC between BC Ferries and the Province. The CFSC establishes the core (minimum) level of service that BC Ferries is required to provide on the regulated routes. Section 1 contains a description of core service levels and BC Ferries' performance against those service level commitments to date in PT4, as well as its expectations for performance through the remainder of the performance term.

Section 2: Tariffs for Core Ferry Services

The Act defines the process by which the Commissioner establishes the price caps and the process to authorize a price cap increase in response to an extraordinary situation. The Act requires that the weighted average of the tariffs charged by BC Ferries in relation to the core ferry services applicable to a route group be within the price cap established by the Commissioner. Compliance to this requirement is assessed by the Commissioner quarterly on the basis of a rolling four-quarter average. Should the average fare exceed the price cap, BC Ferries has three quarters to adjust its tariffs so that the average fare is at or below the price cap.

Section 2 provides information on BC Ferries' tariff structure, as well as the Company's performance in terms of ensuring that the weighted average of the tariffs is within the established price cap. This section of the report includes information on the price caps and average tariffs BC Ferries is forecasting for the remainder of PT4. It also describes the fuel rebates which have been implemented in accordance with Order 15-03A³.

Section 3: Service Fees and Other Provincial Contributions

Under the CFSC, BC Ferries provides ferry services on 25 regulated routes and seven unregulated routes in return for service fees and other contributions from the Province. Section 3 provides a summary of the fees and contributions BC Ferries has received and expects to receive, from the Province in PT4.

³ *Establishment of Fuel Deferral Accounts Pursuant to Section 41.1 of the Coastal Ferry Act* (September 28, 2015)

Section 4: Revenues From All Sources

In addition to service fees and other provincial contributions, BC Ferries earns revenue from ticket sales (including reservation fees and assured loading ticket premiums), and other revenue streams.

Section 4 provides a summary of all other revenues BC Ferries has earned and is forecasting to earn in PT4, along with a description of how those revenues are, and have been, allocated on a route basis.

Section 5: Expenses

Section 5 of the report provides information on the expenses that BC Ferries has incurred and is forecasting to incur with respect to the provision of service on the regulated ferry routes in PT4. A description as to how those expenses are, and have been, allocated on a route basis is also included.

Section 6: Additional or Alternative Service Providers

BC Ferries is required by section 69 of the Act to seek additional or alternative service providers to provide ferry transportation services on one or more of the regulated ferry routes when so ordered by the Commissioner. The status of the regulatory requirements in PT4 for seeking additional or alternative service providers is described in Section 6.

Section 1: Core Ferry Services

In accordance with section 40(1)(a) of the Act, this section of the report provides information on the core ferry service that BC Ferries has provided and reasonably expects to provide on the regulated ferry routes in PT4.

1.1 Coastal Ferry Services Contract

BC Ferries provides ferry services to coastal British Columbia under the terms set out in the CFSC between BC Ferries and the Province. The CFSC, originally signed in 2003, is a binding 60-year agreement that is reviewed and updated at regular intervals (performance terms).

The CFSC establishes the minimum core level of service that BC Ferries is expected to provide on 25 regulated ferry routes. In PT4, Ferry Transportation Fees have been paid to BC Ferries by the Province for the round trips delivered to meet the core service levels on each of the regulated ferry routes with the exception of the major routes, comprising the three routes connecting Metro Vancouver with mid and southern Vancouver Island, as well as the route connecting Horseshoe Bay and Langdale. Under the CFSC, BC Ferries also receives an annual amount from the Province based on its agreement with the Government of Canada to fulfill the obligation of providing ferry services to coastal British Columbia, as well as annual amounts from the Province to contribute to fare initiatives for fiscal 2019 and 2020⁴. Information on all Ferry Transportation Fees, and provincial and federal government contributions received and forecast to be received by BC Ferries in PT4, are provided in Section 3 of this report.

1.2 Overview of Core Service Levels

As indicated above, the CFSC requires BC Ferries to operate the system in a manner that complies with, or exceeds, the core service levels in relation to the regulated ferry routes.

At the commencement of performance term three (April 1, 2012 – March 31, 2016) (“PT3”), the regulated routes were grouped in the CFSC into three route groups as shown in Table 1.1. Amendments to the CFSC for PT3 effective April 1, 2013 included the consolidation of all regulated routes into a single route group. This revised grouping was extended to the end of PT4 (March 31, 2020) following amendments to the CFSC effective April 1, 2016. In the absence of any further amendment to the CFSC, the route group structure will revert back on April 1, 2020, to the structure in place at the commencement of PT3.

⁴ Fiscal years are April 1 through March 31.

Table 1.1: Listing of Regulated Routes

ROUTE GROUPS ¹	REGULATED ROUTES	
Route Group 1	MAJOR ROUTES 1 2 3 30	Tsawwassen – Swartz Bay Horseshoe Bay – Nanaimo Horseshoe Bay – Langdale Tsawwassen – Nanaimo
Route Group 2	NORTHERN ROUTES ² 10 11 28	Port Hardy – Prince Rupert Prince Rupert – Skidegate Port Hardy – Mid Coast – Bella Coola
Route Group 3	MINOR ROUTES 4 5 6 7 8 9 12 13 17 18 19 20 21 22 23 24 25 26	Swartz Bay – Saltspring Island Swartz Bay – Outer Gulf Islands Crofton – Saltspring Island Saltery Bay – Earls Cove Horseshoe Bay – Bowen Island Tsawwassen – Gulf Islands Brentwood Bay – Mill Bay Langdale – Gambier – Keats Islands Comox – Powell River Powell River – Texada Island Nanaimo Harbour – Gabriola Island Chemainus – Thetis – Penelakut Islands Buckley Bay – Denman Island Denman – Hornby Islands Campbell River – Quadra Island Quadra Island – Cortes Island Port McNeill – Alert Bay – Sointula Islands Skidegate – Alliford Bay

Notes:

1. The three route groups were consolidated into a single route group effective April 1, 2013.
2. Route 28, serving Port Hardy – Mid Coast – Bella Coola, was added by amendment to the CFSC dated March 8, 2017, and to the northern route group by amendment dated March 28, 2018. Service on route 28 commenced on September 16, 2018.

Minimum core service levels on the regulated ferry routes are set out in Schedule A to the CFSC. Core service levels in relation to a regulated ferry route are generally defined as:

- the minimum number of round trips to be delivered in a year (identified as “total number of round trips to be delivered per Contract Year”);

- in relation to routes 1, 2, 3 and 30, the aggregate minimum number of round trips to be provided between those routes;
- in relation to each regulated ferry route having round trips, the minimum hours of operation during which originating port departures occur for the regulated ferry route (identified as “Minimum Hours of Operation”);
- the number of departures per day that are required for the regulated ferry route (identified as “Number of Round Trips Per Day”); and
- capacity provided on the regulated ferry route that will be sufficient to carry the previous year’s traffic.

1.3 Social Programs

The CFSC requires BC Ferries to provide discounts at levels specified by the Province to passengers travelling on the regulated ferry routes under its provincial social programs, including students, persons with disabilities, and those travelling under the Medical Travel Assistance Program. The CFSC provides that BC Ferries be reimbursed for foregone tariff revenue associated with travel under these programs. (Further information on the social program discounts is provided in Section 3.)

1.4 Temporary Service Disruptions

Core service levels in relation to each regulated ferry route include an allowance for short-term temporary service disruptions for specific circumstances as described in the CFSC, such as vessel or dock breakdowns, situations that compromise safety, tasking of vessels for emergency response, and bad weather. Except as permitted by the CFSC, BC Ferries cannot reduce service on a regulated ferry route below the core service level specified in the CFSC for that route, unless authorized by the Commissioner pursuant to sections 42, 43 or 43.1 of the Act. To date in PT4, in accordance with Order 18-02⁵, BC Ferries was authorized by the Commissioner under section 43 of the Act to reduce service temporarily on regulated ferry routes 5 (Swartz Bay to Outer Gulf Islands) and 9 (Tsawwassen to Gulf Islands) from April 18, 2018 to May 17, 2018 after the *Queen of Cumberland* was removed from service following an incident involving the davit for the vessel’s rescue boat.

1.5 Review of Core Service Delivery

Fiscal 2017

In fiscal 2017, BC Ferries delivered a total of 77,892 round trips, 1,768 more than the annual number of round trips required to be delivered under the CFSC. Many of these additional round trips were delivered to meet peak traffic demand on the major routes and on route 21 (Buckley Bay - Denman Island) and route 22 (Denman Island - Hornby Islands). All core service level requirements were met

⁵ *In the Matter of Application to Temporarily Reduce Service on Routes 5 and 9 (May 10, 2018).*

in fiscal 2017, with the exception of route 8 (Horseshoe Bay- Bowen Island), where on five separate days, BC Ferries cancelled one round trip due to the consolidation of end-of-shift sailings because of accumulated delays. All traffic was carried by the end of those days.

Appendices A-1 to A-3 contain detailed information on the core ferry services delivered by BC Ferries in fiscal 2017, including information by regulated route on the round trips delivered and the temporary service disruptions.

Fiscal 2018

In fiscal 2018, BC Ferries delivered a total of 79,082 round trips, 2,962 more than the number of round trips required to be delivered in the year under the CFSC. Many of these additional round trips were delivered on the three major routes connecting Metro Vancouver with mid and southern Vancouver Island, on the route connecting Tsawwassen with the Gulf Islands (route 9), and in the summer on the routes connecting Buckley Bay with Denman Island (route 21) and Denman Island with Hornby Island (route 22). All core service level requirements were met in fiscal 2018.

Appendices A-4 to A-6 contain detailed information on the core ferry services delivered by BC Ferries in fiscal 2018, including information by regulated route on the round trips delivered and the temporary service disruptions.

Fiscal 2019 (First Quarter)

Appendices A-7 to A-9 contain detailed information on the core ferry services delivered by BC Ferries in the first quarter of fiscal 2019 (April 1 – June 30, 2018), including information by regulated route on the round trips delivered and the temporary service disruptions. BC Ferries delivered 19,887 round trips during the quarter and met all core service level requirements, with the exception of service reductions on route 5 (Swartz Bay to Outer Gulf Islands) and route 9 (Tsawwassen to Gulf Islands) from April 18, 2018 to May 17, 2018 that were authorized by the Commissioner pursuant to Order 18-02.

Remainder of Performance Term Four

For the remainder of the performance term, BC Ferries expects to meet or exceed core service level requirements.

Section 2: Tariffs for Core Ferry Services

In accordance with section 40(1)(b) of the Act, this section of the report provides information on the tariffs, including reservations, that BC Ferries has charged and reasonably expects to charge on the regulated ferry routes in PT4.

2.1 Price Cap Setting

BC Ferries' fares for core ferry services on regulated ferry routes are subject to regulation under the Act. In accordance with the Act, the Commissioner does not regulate ancillary services, which are defined in the Act as any services that are not directly related to the transportation of vehicles and passengers. This includes services such as parking, catering and retail.

For the purposes of setting price caps in each performance term, the Commissioner computes a maximum permitted ceiling of weighted average ferry fares by route group called the price cap. BC Ferries then tracks compliance with the price caps using the methodology established by the Commissioner in Order 11-03.⁶

The average level of ferry fares and the price caps are expressed as indices and calculated as a trailing four-quarter average. As stipulated by section 48(2) of the Act, BC Ferries must not allow the average fare index for a route group to remain above the price cap index for more than three consecutive quarters. If the average of fares does exceed the price cap in any particular quarter, BC Ferries has up to three subsequent quarters to reduce its average fare index to be within the allowable price cap index. If BC Ferries fails to do so within the allowable three consecutive quarter "grace period", the Commissioner may apply a penalty.

In September 2015, the Commissioner, by Order 15-03,⁷ established the price caps for the four years of PT4. The Commissioner ordered that the price cap index be recalculated to an index level of 100 as of April 1, 2016, based on the weighted average tariffs that existed as of March 31, 2016. From that re-based level, the Commissioner ordered price caps to grow at 1.9 percent per year for the four years of the performance term.

⁶ *In the Matter of Section 38 (2) of the Coastal Ferry Act, S.B.C. 2003, c. 14 and Revised Methodology for Determining Weighted Average Fares for Comparison with Price Caps* (October 22, 2011).

⁷ *In the Matter of the Final Decision on Price Caps for the Fourth Performance Term Pursuant to the Coastal Ferry Act* (September 16, 2015).

2.2 Performance Term Four – Tariff Adjustments

BC Ferries implements an annual tariff for the delivery of ferry transportation services on each of the regulated routes. Generally, adjustments to tariffs occur on April 1 to align with the annual changes to the price cap as established by the Commissioner.

On April 1, 2017, BC Ferries implemented average tariff increases below those allowed by Order 15-03. Average vehicle fares were increased by 1.9 percent on the major routes connecting Metro Vancouver with Vancouver Island, while passenger fares on these routes remained unchanged. At the same time, no changes were made in vehicle or passenger fares on the minor routes, the northern routes or the major route connecting Horseshoe Bay to Langdale. The Company also reduced reservation fees.

On April 1, 2018, the Company applied a fare reduction of 15 percent on the northern routes, the minor routes and on the major route connecting Horseshoe Bay and Langdale. Fares were held constant on the major routes connecting Metro Vancouver with Vancouver Island. Fares are expected to remain at these levels through March 2020. BC Ferries and the Province will each contribute \$39 million for these fare initiatives.

Also on April 1, 2018, the British Columbia seniors' passenger discount increased from 50 percent to 100 percent for travel Monday to Thursday on the major and minor routes. The Province will contribute an additional \$20 million towards offsetting the value of the enhanced British Columbia seniors' discount through March 2020. The total value of the fare and senior discount initiatives over the two years is \$98 million.

The adult passenger, passenger vehicle, bus and commercial tariffs for each route, by fare category, effective April 1st of 2016, 2017 and 2018, are provided in Table 2.4, Table 2.5 and Table 2.6, respectively. BC Ferries' current tariff schedule by route and by fare category is available on BC Ferries' website at: http://www.bcferrries.com/files/fares/pdf_format/BCF_Fares.pdf

2.3 Performance Term Four – Price Cap Performance

The indices for both the actual weighted average tariffs and the allowable price cap as set by the Commissioner for the regulated ferry route group in PT4 are shown in Table 2.1. The weighted average fare charged by BC Ferries in fiscal 2017 and 2018 remained below the price cap.

Table 2.1: Performance Term Four Price Cap and Actual Average Fare Indices

	All Routes	
	Price Cap	Actual Average Fare
Q1 Fiscal 2017	100.48	99.55
Q2 Fiscal 2017	101.13	100.68
Q3 Fiscal 2017	101.53	101.35
Q4 Fiscal 2017	101.90	101.53
Q1 Fiscal 2018	102.40	101.44
Q2 Fiscal 2018	103.08	101.23
Q3 Fiscal 2018	103.48	101.83
Q4 Fiscal 2018	103.84	102.11
Q1 Fiscal 2019	104.34	100.87

The forecast price cap index as at March 31, 2019 and March 31, 2020, as determined in accordance with Order 15-03, are shown in Table 2.2. The forecast average fare index for each of these years is based on BC Ferries' traffic forecasts.

Table 2.2: Price Cap and Forecast Average Fare Indices

	All Routes	
	Price Cap Index	Forecast Average Fare Index
As at March 31, 2019	105.81	98.18
As at March 31, 2020	107.82	98.14

2.4 Extraordinary Price Cap Increases

Section 42 of the Act allows the Commissioner to authorize a price cap increase during a performance term in response to an application from the Company in the event of an extraordinary circumstance. The Company has made no application for an extraordinary price cap increase to date in PT4.

2.5 Fuel Surcharges and Rebates

Fuel is a significant operating expense of the Company. BC Ferries spent \$102 million in fiscal 2018 on diesel and LNG fuel. Fuel costs are a function of the volume consumed as well as market price. BC Ferries has a minimal degree of influence over the volumes of fuel consumed and no ability to influence or control market prices.

Section 41.1 of the Act provides the Commissioner with the authority to establish fuel deferral accounts and set the terms and conditions for any such account, to allow BC Ferries to add a temporary fuel surcharge, and to require the Company to provide a temporary discount to reflect fluctuations in the fuel deferral account for any period. By Order 15-03A, the Commissioner authorized the continued use of fuel deferral accounts in PT4 and set the terms and conditions for their management.

In PT4, the Company has managed two fuel deferral accounts in accordance with the terms and conditions set by the Commissioner under Order 15-03A. Since the establishment of the PT4 fuel deferral accounts, fluctuations in market fuel prices have enabled the provision of fuel rebates as set out in Table 2.3.

Table 2.3: Fuel Rebates in Performance Term Four (as a percentage of fares)

Date	Non-Northern Routes	Northern Routes
April 2016 – June 2018	2.9%	1.9%
June 2018 to date	0.0%	0.0%

At the end of fiscal 2018, the fuel deferral account for the non-northern routes carried a total debit balance of \$15.7 million. Typically in response to a large debit balance, the Company would respond by reducing or eliminating rebates, or applying surcharges. Instead, BC Ferries voluntarily eliminated the deferral account balance for the non-northern routes, foregoing \$15.7 million of potential surcharge revenue.

Table 2.4: Tariffs for All Routes as at April 1, 2016

TARIFF Effective April 01, 2016 ROUTE DESCRIPTION	PASSENGER - ADULT		PASSENGER VEHICLE - up to 20'		BUS - per foot rate	COMMERCIAL - per foot rate
	Regular	Experience Card	Regular	Experience Card	Regular	Regular
Tsawwassen - Swartz Bay	\$17.20		\$56.45		\$4.65	\$6.50
Horseshoe Bay - Departure Bay	\$17.20		\$56.45		\$4.65	\$6.50
Tsawwassen - Duke Point	\$17.20		\$56.45		\$4.65	\$6.50
* Horseshoe Bay - Langdale	\$16.15	\$12.65	\$54.00	\$41.50	\$5.35	\$7.05
* Swartz Bay - Fulford Harbour	\$12.60	\$8.65	\$36.90	\$25.15	\$3.15	\$3.85
* Swartz Bay - Gulf Islands	\$13.45	\$9.00	\$41.90	\$28.20	\$3.60	\$3.20
Inter-Southern Gulf Islands	\$6.75	\$4.50	\$14.40	\$9.70	\$1.85	\$1.65
* Crofton - Vesuvius Bay	\$12.60	\$8.65	\$36.90	\$25.15	\$3.15	\$3.85
* Earl's Cove - Saltery Bay	\$15.85	\$12.35	\$52.60	\$40.40	\$5.15	\$6.85
* Horseshoe Bay - Snug Cove	\$12.35	\$7.50	\$34.85	\$22.55	\$3.00	\$3.70
Gulf Islands to Tsawwassen (Off Peak Season)	\$10.20		\$26.70		\$3.75	\$4.70
Gulf Islands to Tsawwassen (Peak Season)	\$10.20		\$40.50		\$3.75	\$4.70
Tsawwassen to Gulf Islands (Off Peak Season)	\$19.80		\$62.70		\$6.75	\$8.40
Tsawwassen to Gulf Islands (Peak Season)	\$19.80		\$72.80		\$6.75	\$8.40
Mill Bay - Brentwood Bay	\$8.00	\$5.00	\$18.50	\$11.90	\$1.60	\$2.10
Langdale - Keats Island - Gambier Island	\$7.75	\$5.45				
Powell River (Westview) - Little River (Comox)	\$15.90	\$12.90	\$49.70	\$42.95	\$3.60	\$5.15
* Powell River (Westview) - Texada Island	\$11.45	\$7.15	\$26.95	\$18.10	\$2.80	\$3.25
* Nanaimo Harbour - Gabriola Island	\$11.45	\$6.70	\$26.95	\$17.20	\$2.80	\$3.25
* Chemainus - Thetis Island - Kuper Island	\$10.90	\$6.35	\$25.65	\$16.40	\$2.65	\$3.10
* Buckley Bay - Denman Island	\$10.50	\$6.10	\$24.35	\$14.60	\$2.35	\$2.35
* Denman Island - Hornby Island	\$10.50	\$6.10	\$24.35	\$14.60	\$2.35	\$2.35
* Campbell River - Quadra Island	\$10.50	\$6.10	\$24.35	\$15.45	\$2.65	\$3.00
* Quadra Island - Cortes Island	\$12.35	\$8.15	\$28.40	\$20.15	\$3.60	\$4.50
* Port McNeill - Alert Bay - Sointula	\$12.35	\$8.15	\$28.40	\$20.15	\$3.60	\$4.50
* Skidegate - Alliford Bay	\$10.50	\$6.10	\$24.35	\$15.45	\$2.65	\$3.00
Port Hardy - Prince Rupert (Peak Season)	\$206.00		\$469.00		\$29.00	\$40.00
Port Hardy - Prince Rupert (Shoulder Season)	\$148.25		\$342.50		\$27.50	\$40.00
Port Hardy - Prince Rupert (Off Season)	\$121.00		\$263.50		\$27.50	\$40.00
Prince Rupert - Skidegate (Peak Season)	\$47.50		\$168.25		\$14.50	\$19.00
Prince Rupert - Skidegate (Off Peak Season)	\$38.75		\$138.50		\$13.25	\$19.00

*Fare includes return trip

	Fiscal 2017
Assured Loading Tickets (10 trips)	\$1,450.00
Short Notice Reservation	\$22.00
Medium Notice Reservation	\$18.50
Long Notice Reservation	\$15.00

Table 2.5: Tariffs for All Routes as at April 1, 2017

TARIFF Effective April 01, 2017 ROUTE DESCRIPTION	PASSENGER - ADULT		PASSENGER VEHICLE - up to 20'		BUS - per foot rate	COMMERCIAL - per foot rate
	Regular	Experience Card	Regular	Experience Card	Regular	Regular
Tsawwassen - Swartz Bay	\$17.20		\$57.50		\$4.75	\$6.62
Horseshoe Bay - Departure Bay	\$17.20		\$57.50		\$4.75	\$6.62
Tsawwassen - Duke Point	\$17.20		\$57.50		\$4.75	\$6.62
* Horseshoe Bay - Langdale	\$16.15	\$12.65	\$54.00	\$41.50	\$5.35	\$7.05
* Swartz Bay - Fulford Harbour	\$12.60	\$8.65	\$36.90	\$25.15	\$3.15	\$3.85
* Swartz Bay - Gulf Islands	\$13.45	\$9.00	\$41.90	\$28.20	\$3.60	\$3.20
Inter-Southern Gulf Islands	\$6.75	\$4.50	\$14.40	\$9.70	\$1.85	\$1.65
* Crofton - Vesuvius Bay	\$12.60	\$8.65	\$36.90	\$25.15	\$3.15	\$3.85
* Earl's Cove - Saltery Bay	\$15.85	\$12.35	\$52.60	\$40.40	\$5.15	\$6.85
* Horseshoe Bay - Snug Cove	\$12.35	\$7.50	\$34.85	\$22.55	\$3.00	\$3.70
Gulf Islands to Tsawwassen (Off Peak Season)	\$10.20		\$26.70		\$3.75	\$4.70
Gulf Islands to Tsawwassen (Peak Season)	\$10.20		\$40.50		\$3.75	\$4.70
Tsawwassen to Gulf Islands (Off Peak Season)	\$19.80		\$62.70		\$6.75	\$8.40
Tsawwassen to Gulf Islands (Peak Season)	\$19.80		\$72.80		\$6.75	\$8.40
Mill Bay - Brentwood Bay	\$8.00	\$5.00	\$18.50	\$11.90	\$1.60	\$2.10
Langdale - Keats Island - Gambier Island	\$7.75	\$5.45				
Powell River (Westview) - Little River (Comox)	\$15.90	\$12.90	\$49.70	\$42.95	\$3.60	\$5.15
* Powell River (Westview) - Texada Island	\$11.45	\$7.15	\$26.95	\$18.10	\$2.80	\$3.25
* Nanaimo Harbour - Gabriola Island	\$11.45	\$6.70	\$26.95	\$17.20	\$2.80	\$3.25
* Chemainus - Thetis Island - Kuper Island	\$10.90	\$6.35	\$25.65	\$16.40	\$2.65	\$3.10
* Buckley Bay - Denman Island	\$10.50	\$6.10	\$24.35	\$14.60	\$2.35	\$2.35
* Denman Island - Hornby Island	\$10.50	\$6.10	\$24.35	\$14.60	\$2.35	\$2.35
* Campbell River - Quadra Island	\$10.50	\$6.10	\$24.35	\$15.45	\$2.65	\$3.00
* Quadra Island - Cortes Island	\$12.35	\$8.15	\$28.40	\$20.15	\$3.60	\$4.50
* Port McNeill - Alert Bay - Sointula	\$12.35	\$8.15	\$28.40	\$20.15	\$3.60	\$4.50
* Skidegate - Alliford Bay	\$10.50	\$6.10	\$24.35	\$15.45	\$2.65	\$3.00
Port Hardy - Prince Rupert (Peak Season)	\$206.00		\$469.00		\$29.00	\$40.00
Port Hardy - Prince Rupert (Shoulder Season)	\$148.25		\$342.50		\$27.50	\$40.00
Port Hardy - Prince Rupert (Off Season)	\$121.00		\$263.50		\$27.50	\$40.00
Prince Rupert - Skidegate (Peak Season)	\$47.50		\$168.25		\$14.50	\$19.00
Prince Rupert - Skidegate (Off Peak Season)	\$38.75		\$138.50		\$13.25	\$19.00

*Fare includes return trip

	Fiscal 2018
Assured Loading Tickets (10 trips)	\$1,550.00
Short Notice Reservation	\$21.00
Medium Notice Reservation	\$17.00
Long Notice Reservation	\$10.00

Table 2.6: Tariffs for All Routes as at April 1, 2018

TARIFF Effective April 01, 2018 ROUTE DESCRIPTION	PASSENGER - ADULT		PASSENGER VEHICLE - up to 20'		BUS - per foot rate	COMMERCIAL - per foot rate
	Regular	Experience Card	Regular	Experience Card	Regular	Regular
Tsawwassen - Swartz Bay	\$17.20		\$57.50		\$4.75	\$6.62
Horseshoe Bay - Departure Bay	\$17.20		\$57.50		\$4.75	\$6.62
Tsawwassen - Duke Point	\$17.20		\$57.50		\$4.75	\$6.62
* Horseshoe Bay - Langdale	\$13.70	\$10.70	\$45.90	\$35.25	\$4.50	\$5.95
* Swartz Bay - Fulford Harbour	\$10.70	\$7.35	\$31.35	\$21.35	\$2.65	\$3.25
* Swartz Bay - Gulf Islands	\$11.40	\$7.60	\$35.60	\$23.95	\$3.05	\$2.70
Inter-Southern Gulf Islands	\$5.70	\$3.80	\$12.20	\$8.20	\$1.55	\$1.40
* Crofton - Vesuvius Bay	\$10.70	\$7.35	\$31.35	\$21.35	\$2.65	\$3.25
* Earl's Cove - Salter Bay	\$13.45	\$10.45	\$44.70	\$34.35	\$4.35	\$5.80
* Horseshoe Bay - Snug Cove	\$10.45	\$6.35	\$29.60	\$19.15	\$2.55	\$3.10
Gulf Islands to Tsawwassen (Off Peak Season)	\$7.80		\$16.40		\$3.15	\$3.95
Gulf Islands to Tsawwassen (Peak Season)	\$7.80		\$29.25		\$3.15	\$3.95
Tsawwassen to Gulf Islands (Off Peak Season)	\$17.70		\$59.50		\$5.70	\$7.10
Tsawwassen to Gulf Islands (Peak Season)	\$17.70		\$67.00		\$5.70	\$7.10
Mill Bay - Brentwood Bay	\$6.80	\$4.25	\$15.70	\$10.10	\$1.35	\$1.75
Langdale - Keats Island - Gambier Island	\$6.55	\$4.60				
Powell River (Westview) - Little River (Comox)	\$13.50	\$10.95	\$42.20	\$36.45	\$3.05	\$4.35
* Powell River (Westview) - Texada Island	\$9.70	\$6.05	\$22.90	\$15.35	\$2.35	\$2.75
* Nanaimo Harbour - Gabriola Island	\$9.70	\$5.65	\$22.90	\$14.60	\$2.35	\$2.75
* Chemainus - Thetis Island - Kuper Island	\$9.25	\$5.35	\$21.80	\$13.90	\$2.25	\$2.60
* Buckley Bay - Denman Island	\$8.90	\$5.15	\$20.65	\$12.35	\$1.95	\$1.95
* Denman Island - Hornby Island	\$8.90	\$5.15	\$20.65	\$12.35	\$1.95	\$1.95
* Campbell River - Quadra Island	\$8.90	\$5.15	\$20.65	\$13.10	\$2.25	\$2.55
* Quadra Island - Cortes Island	\$10.45	\$6.90	\$24.10	\$17.05	\$3.05	\$3.80
* Port McNeill - Alert Bay - Sointula	\$10.45	\$6.90	\$24.10	\$17.05	\$3.05	\$3.80
* Skidegate - Alliford Bay	\$8.90	\$5.15	\$20.65	\$13.10	\$2.25	\$2.55
Port Hardy - Prince Rupert (Peak Season)	\$175.00		\$398.65		\$24.65	\$34.00
Port Hardy - Prince Rupert (Shoulder Season)	\$126.00		\$291.10		\$23.35	\$34.00
Port Hardy - Prince Rupert (Off Season)	\$102.75		\$223.95		\$23.35	\$34.00
Prince Rupert - Skidegate (Peak Season)	\$40.30		\$143.00		\$12.25	\$16.15
Prince Rupert - Skidegate (Off Peak Season)	\$32.90		\$117.70		\$11.25	\$16.15

*Fare includes return trip

	Fiscal 2019
Assured Loading Tickets (10 trips)	\$1,550.00
Short Notice Reservation	\$21.00
Medium Notice Reservation	\$17.00
Long Notice Reservation	\$10.00

Section 3: Provincial Service Fees and Other Contributions

In accordance with section 40(1)(c) of the Act, this section of the report provides information on the service fees that BC Ferries has received and reasonably expects to receive in PT4.

Under the CFSC, BC Ferries provides ferry services on regulated routes, and in return, BC Ferries receives service fees (Ferry Transportation Fees) from the Province. No service fees are paid in respect of the service provided on the major routes. BC Ferries also receives payment for expenses related to the services provided by independent third party service providers on the unregulated routes.

The funds payable to BC Ferries in PT4 under the CFSC for services provided are comprised of the following components:

- Ferry Transportation Fees - fees for providing ferry transportation services on the non-major regulated routes;
- Fare Initiatives – fees to compensate BC Ferries for a portion of the foregone revenue associated with the reinstatement of the mid-week British Columbia seniors' discounts, the fare freeze on the major routes, and the fare rollback on the minor and northern routes;
- Social Program Reimbursement – an amount representing reimbursement to BC Ferries for foregone revenue in respect of the provincial social program discounts;
- Funding for Unregulated Ferry Routes – payment for expenses related to the services provided by independent third party service providers on the unregulated routes; and
- Contributions Applied to the Northern Fuel Deferral Account – funds paid to or received from the Province and applied to BC Ferries' northern fuel deferral account.

Table 3.1 summarizes the service fees and other provincial contributions.

Table 3.1: Summary of Provincial Ferry Transportation Fees and Other Contributions
(\$ Millions)

Provincial Ferry Transportation Fees and Other Contributions	Fiscal 2017	Fiscal 2018	Fiscal 2019 Forecast	Fiscal 2020 Forecast
PT4 Base Ferry Transportation Fees	155.4	155.4	155.4	155.4
Route 28 Adjustment (Note 1)	-	3.0	6.0	6.0
Route 11 Adjustment (Note 2)	-	0.3	0.3	0.3
Ferry Transportation Fees	155.4	158.7	161.7	161.7
Fare Initiatives (Note 3)	-	-	16.7	22.3
British Columbia Seniors' Discounts (Note 4)	-	-	9.8	10.2
Northern Fuel Deferral Account Contributions (Note 5)	(0.1)	(0.3)	-	-
Unregulated Routes Fees	2.7	2.8	2.8	2.8
Ferry Transportation & Unregulated Route Fees and Contributions	157.9	161.2	191.0	197.0
Social Program Fees	16.9	17.3	15.1	15.2
Federal Contract	29.2	29.8	30.5	31.1
TOTAL PROVINCIAL FERRY TRANSPORTATION FEES & OTHER CONTRIBUTIONS	204.1	208.3	236.6	243.3

Numbers may not add due to rounding.

Notes:

- By letter agreement with the Province, BC Ferries agreed to procure a vessel (now the *Northern Sea Wolf*), and by amendment to the CFSC, to establish a new direct route between Port Hardy and Bella Coola. The Province agreed to fund the associated net operating losses.
- By amendment to the CFSC, BC Ferries agreed to increase off-peak service on route 11. The Province agreed to increase the service fee to compensate for the added cost of the service increase.
- Funding from the Province partially offsets the foregone revenue associated with the fare initiatives.
- The Province provides a fixed fee for the restoration of the 100 percent discount on passenger fares for British Columbian seniors travelling between Mondays and Thursdays.
- The CFSC includes a mechanism, explained later in this part, under which the Province takes some of the risk of fuel price variability for the northern route group. In PT4 this has resulted in payments from BC Ferries to the Province.

3.1 Ferry Transportation Fees

The CFSC prescribes the core ferry services BC Ferries is to provide on each of the regulated routes. In return for providing these services, BC Ferries receives Ferry Transportation Fees calculated on the basis of the number of core round trips the Company delivers.

The maximum Ferry Transportation Fees are set out in Appendix 1 of Schedule B of the CFSC and are paid by the Province for service on all regulated routes with the exception of the major routes.⁸

Without the Ferry Transportation Fees, tariffs on the non-major routes would need to be correspondingly higher in order for BC Ferries to maintain current service levels and remain financially viable. Ferry Transportation Fees are service-based, and vary depending on the route and the actual service BC Ferries provides.

In fiscal 2018, the CFSC was amended to provide for additional Ferry Transportation Fees as compensation to the Company for a service level adjustment on route 11.

Table 3.2 summarizes the Ferry Transportation Fees paid to BC Ferries for core ferry services paid for the first two years of PT4, as well as forecast payment amounts for the last two years of the performance term. Appendix B provides further detail at a route level. The forecast information assumes that BC Ferries will fully meet core service level requirements and, accordingly, will receive full payment of the Ferry Transportation Fees as per the CFSC.

Table 3.2: Ferry Transportation Fees
(\$ Millions)

Routes	Fiscal 2017	Fiscal 2018	<i>Fiscal 2019 Forecast</i>	<i>Fiscal 2020 Forecast</i>
Northern	59.2	62.6	65.6	65.6
Minors	96.2	96.2	96.2	96.2
TOTAL	155.4	158.7	161.7	161.7

Numbers may not add due to rounding.

⁸ In addition, the Province provides funding for service on route 28, which commenced service in September, 2018.

3.2 Fare Initiatives

In fiscal 2018, the CFSC was amended to roll back fares on non-major routes by 15 percent effective April 1, 2018, and freeze fares on major routes at 2018 levels. It is expected these fares will be held at that level through the end of fiscal 2020. The CFSC was also amended to restore the British Columbia seniors' discounts to 100 percent on Mondays through Thursdays.

The Province has agreed to partially compensate BC Ferries for the forecast revenue shortfall. Table 3.3 includes the compensation for the fare initiatives including the British Columbia seniors' discount.

Table 3.3: Provincial Contribution Fare Initiatives including British Columbia Seniors' Discount (\$ Millions)

Routes	<i>Fiscal 2019 Forecast</i>	<i>Fiscal 2020 Forecast</i>
Majors	15.6	18.7
Northern	1.4	1.9
Minors	9.5	12.0
TOTAL	26.5	32.5

Numbers may not add due to rounding.

3.3 Contributions Applied to the Northern Fuel Deferral Account

The CFSC includes a mechanism under which BC Ferries and the Province share some of the risk of fuel price variability for the northern route group only. When the average fuel price exceeds the regulatory fuel set price by more than 5 cents per litre for a given quarter, the Province pays into the deferral account for the amount above the 5 cent variance. When the average fuel price for a quarter is lower than the regulatory set price by more than 5 cents per litre, BC Ferries pays the Province out of the deferral account for the amount below the 5 cent variance.

In the first two years of PT4, the fuel price was more often below the set price than above it, resulting in BC Ferries making payments to the Province early in the first half of the performance term. Starting in late fiscal 2018 and continuing into the first half of 2019, the fuel price has consistently exceeded the set price but not beyond the 5 cent bandwidth.

Table 3.4 summarizes the payments to date and the forecast payments between BC Ferries and the Province, with the net annual payments by BC Ferries to the Province shown as negative numbers.

Table 3.4: Payments to Province for Northern Fuel Deferral Account
(\$ Millions)

<i>Routes</i>	Fiscal 2017	Fiscal 2018	<i>Fiscal 2019 Forecast</i>	<i>Fiscal 2020 Forecast</i>
Majors	-	-	-	-
Northern	(0.1)	(0.3)	-	-
Minors	-	-	-	-
TOTAL	(0.1)	(0.3)	-	-

3.4 Service Fees for Unregulated Ferry Routes

Under the CFSC, BC Ferries receives payment for expenses related to the services provided on the unregulated ferry routes. BC Ferries has contracts with independent third-party service providers to deliver service on these routes. The Commissioner does not regulate the tariffs or service levels on these routes. Table 3.5 summarizes the service fee paid to BC Ferries for the unregulated routes. Actual payments received are presented for the fiscal 2017 and 2018, and forecasts are presented for fiscal 2019 and 2020.

Table 3.5: Unregulated Ferry Routes Service Fees
(\$ Millions)

	Fiscal 2017	Fiscal 2018	<i>Fiscal 2019 Forecast</i>	<i>Fiscal 2020 Forecast</i>
Service Fee	2.7	2.8	2.8	2.8

3.5 Social Program Reimbursement

BC Ferries provides social program discounts on behalf of the Province for students, persons with disabilities and for those travelling under the Medical Travel Assistance Program. In turn, the Province reimburses BC Ferries for the foregone tariff revenue associated with the discounts provided by these programs. As this is tariff revenue, it is included in the calculation of the price cap indices and the average fare indices, and is shown as part of tariff revenue reported in Section 4.

Table 3.6 summarizes the social program reimbursements paid to BC Ferries by the Province for fiscal 2017 and 2018, as well as forecast payments for fiscal 2019 and 2020.

**Table 3.6: Social Program Reimbursements
(\$ Millions)**

Routes	Fiscal 2017	Fiscal 2018	<i>Fiscal 2019 Forecast</i>	<i>Fiscal 2020 Forecast</i>
Majors	8.7	8.7	8.3	8.4
Northern	1.0	1.1	0.9	0.9
Minors	7.2	7.5	5.9	5.9
TOTAL	16.9	17.3	15.1	15.2

3.6 Revenues From Federal Contract

A 1977 federal/provincial subsidy agreement (“Federal Contract”) provides funding from the federal government to BC Ferries via the Province in return for the provision of ferry, coastal freight and passenger services in the waters of British Columbia. The CFSC stipulates that BC Ferries receives the proceeds from the Federal Contract. The Federal Contract is a contract in perpetuity and can only be terminated by joint agreement of the Province and the federal government.

The annual payments under the Federal Contract are subject to growth at a rate equal to the growth of the Vancouver Consumer Price Index. Actual payments through fiscal 2018 and forecast payments through fiscal 2020 are presented in Table 3.7.

**Table 3.7: Summary of Federal Contract Payment
(\$ Millions)**

Routes	Fiscal 2017	Fiscal 2018	Fiscal 2019	<i>Fiscal 2020 Forecast</i>
Majors	0.0	0.0	0.0	0.0
Northern	7.5	7.6	7.8	8.0
Minors	21.7	22.1	22.7	23.1
TOTAL	29.2	29.8	30.5	31.1

The above table assumes a Vancouver Consumer Price Index of 2.0 percent for the calculation of fiscal 2020 payments. Numbers may not add due to rounding.

3.7 Contribution to Charter Agreement

In addition to the above, the Province has supported a charter agreement between BC Ferries and the Lax Kw'alaams Band Ferry Corporation, whereby BC Ferries has leased the use of its vessel, the *Nicola*, for service between Prince Rupert and Tuck Inlet. The Province supports this charter agreement by reimbursing the cost of the quadrennial refit of this vessel.

Section 4: Revenues From All Sources

In accordance with section 40(1)(d) of the Act, this section of the report provides information on the revenues that BC Ferries has earned and reasonably expects to earn in PT4.

BC Ferries earns revenues from various sources that contribute to the overall recovery of its cost of service, including a financial return sufficient to enable the Company to meet its debt obligations and maintain access to reasonable borrowing rates. Net earnings are invested back into the ferry service and to add, replace or upgrade capital assets such as ferries, terminals and other infrastructure.

In addition to service fees and other provincial contributions, BC Ferries earns revenue from ticket sales (including reservation fees and assured loading ticket premiums), and other revenue streams. Table 4.1 provides a comparison of annual revenues for PT4. Specific revenue summaries for each of the regulated routes are included in the route statements attached as Appendix B.

Table 4.1: Annual Revenues From All Sources
(\$ Millions)

Revenues	Fiscal 2017	Fiscal 2018	Fiscal 2019 Forecast	Fiscal 2020 Forecast
Regulated Revenues				
Vehicle and Passenger Tariffs (including social program reimbursements)	625.6	657.6	637.9	648.7
Other Revenues				
Ferry Transportation Fees & Other Contributions (excluding social program reimbursements)	187.1	191.0	221.5	228.2
Ancillary Revenues	100.6	108.1	111.4	115.4
Fuel Rebates	(18.1)	(19.4)	(4.5)	0.0
TOTAL	895.2	937.3	966.4	992.3

Numbers may not add due to rounding.

4.1 Tariff Revenues

BC Ferries charges a fare for each passenger and/or vehicle for ferry service as set out in the Company's tariff schedule that is updated from time to time. Section 2 provides more details on how BC Ferries manages its tariffs.

4.2 Traffic

The price cap applies to the average fare of all tariffs for each unit of traffic carried on a weighted average basis. Therefore, the number of passengers and vehicles carried and the price cap determines the maximum tariff revenue that BC Ferries is allowed to retain in any given year.

Traffic not only determines tariff revenues to the Company, but also influences revenues received from ancillary services. Traffic statistics are recorded based on passenger and vehicle types.

Table 4.2 illustrates actual BC Ferries passenger and vehicle traffic statistics for fiscal 2017 and 2018, with a forecast of passenger and vehicle traffic for fiscal 2019 and 2020.

Table 4.2: Traffic Statistics for All Routes
(000's)

Routes	Fiscal 2017	Fiscal 2018	Fiscal 2019	<i>Fiscal 2020 Forecast</i>
Passengers	21,035	22,030	22,390	22,782
Vehicles	8,306	8,723	8,955	9,111

Fiscal 2017

Traffic has increased steadily over PT4. In fiscal 2017, BC Ferries experienced a 2.9 percent increase in vehicle traffic and a 1.7 percent increase in passenger traffic as compared to the prior year, the highest levels since 2008. Traffic continued to be favourably impacted by a lower Canadian dollar, increases in tourism and general economic activity in British Columbia. Traffic was negatively impacted by more days of unfavourable weather in the last half of fiscal 2017 compared to the same period in the prior year. There were no Easter holiday weekends falling in fiscal 2017, while traffic levels were positively impacted in fiscal 2016 by two Easter holiday weekends.

In addition, BC Ferries offered a variety of pricing promotions throughout the fiscal year. The Company believes these pricing promotions played a part in shifting some discretionary traffic to off-peak sailings, and, to a small degree, an increase in traffic compared to the prior year.

Fiscal 2018

British Columbia's favourable economic conditions and a weak Canadian dollar contributed to further traffic growth in fiscal 2018. The Company believes that its fare freeze, along with vehicle fare pricing promotions, also had a positive impact on both passenger and vehicle traffic. Overall, vehicle traffic increased by 5.0 percent and passenger traffic increased by 4.7 percent compared to the prior year.

Fiscal 2019 and 2020

The positive traffic trends have continued into the first half of fiscal 2019. For the full year, BC Ferries forecasts passenger traffic to increase by 1.6 percent and vehicle traffic to increase by 2.6 percent over fiscal 2018.

For fiscal 2020, the Company is forecasting growth of 1.7 percent for passengers and vehicles, with the increase due to continued positive economic conditions, the ongoing fare initiatives, and the new fare flexibility and digital experience initiative.

4.3 Regulated Revenues

Revenues From Fares

Actual tariff revenues for the first two years of PT4 and forecast tariff revenues for the remaining two years of the current performance term are presented in Table 4.3. Tariff revenues by route are included in the route statements attached as Appendix B.

Table 4.3: Tariff Revenue
(\$ Millions)

Routes	Fiscal 2017	Fiscal 2018	Fiscal 2019 Forecast	Fiscal 2020 Forecast
Majors	515.3	538.1	536.6	544.4
Northern	16.9	18.0	15.9	17.5
Minors	93.4	101.5	85.4	86.8
TOTAL	625.6	657.6	637.9	648.7

Tariff revenue includes social program reimbursements. Numbers may not add due to rounding.

As is shown in Table 4.3, the major routes generate more than 80 percent of tariff revenues. The minor routes are the second largest generator of tariff revenue accounting for approximately 15 percent of tariff revenue, with the northern routes accounting for the remainder.

Overall, BC Ferries' tariff revenue increased by 5.1 percent from \$625.6 million in fiscal 2017 to \$657.6 million in fiscal 2018, primarily due to higher traffic, a change in traffic composition, and increased reservations.

For fiscal 2019, BC Ferries is forecasting tariff revenue to decrease from the prior year by 3.0 percent to \$637.9 million. This decrease reflects the impact of the fare freeze on major routes 1, 2, and 30 (connecting Metro Vancouver with Vancouver Island), the 15 percent fare rollback on all other routes,

and the restoration of the 100 percent British Columbia seniors discount on the major and minor routes, partly offset by continued growth in traffic and reservations.

Fiscal 2020 tariff revenue is forecast to increase 1.7 percent, reflecting higher forecast traffic and similar average tariff yields as compared to fiscal 2019.

Fuel Rebates

Table 2.3 outlines the amounts of the fuel rebates, the date they were implemented and the route groupings to which they are applied. The amounts rebated are applied against the fuel deferral accounts.

Table 4.4 shows the actual and forecast amounts for each year of PT4. For most of the first two years of PT4, fuel prices paid were less than the regulatory set price, which allowed BC Ferries to maintain fuel rebates throughout that time. More recently, fuel prices increased substantially, leading to growing fuel deferral account balances. At the end of fiscal 2018, BC Ferries voluntarily eliminated the deferral account balance for the non-northern routes, foregoing \$15.7 million of potential surcharge revenue. The forecast assumes no further surcharges or rebates, which is a continuation of the status quo. Should actual prices deviate from the set price, a surcharge or rebate may be implemented prior to the end of PT4.

Table 4.4: Fuel Rebates
(\$ Millions)

Routes	Fiscal 2017	Fiscal 2018	Fiscal 2019 Forecast	Fiscal 2020 Forecast
Majors	(14.8)	(15.7)	(3.8)	0.0
Northern	(0.3)	(0.4)	(0.1)	0.0
Minors	(3.0)	(3.3)	(0.6)	0.0
TOTAL	(18.1)	(19.4)	(4.5)	0.0

4.4 Revenues From Non-Regulated Sources

In addition to tariff revenue, BC Ferries earns revenues from non-regulated ancillary services. Catering and retail sales, both on and off the vessels, make up approximately 90 percent of these revenues. Other revenue-generating activities include parking and vacation package revenue. These ancillary revenues help reduce the pressure on fares.

**Table 4.5: Gross Ancillary Revenues
(\$ Millions)**

Routes	Fiscal 2017	Fiscal 2018	<i>Fiscal 2019 Forecast</i>	<i>Fiscal 2020 Forecast</i>
Majors	90.1	96.7	98.1	101.6
Northern	4.4	4.7	5.2	5.4
Minors	6.1	6.7	8.1	8.4
TOTAL	100.6	108.1	111.4	115.4

As shown in Table 4.5, gross ancillary revenue increased by \$7.5 million or 7.5 percent between fiscal 2017 and 2018. This is primarily due to increased catering and retail sales on the major routes, which grew by \$6.1 million year over year. Growth in catering and retail revenue was due to higher traffic levels and average sales per passenger.

For fiscal 2019 and 2020, BC Ferries is forecasting continued growth in ancillary revenues, mainly due to continued increases in catering and retail revenue. Ancillary revenue is forecast to grow by 3.1 percent in fiscal 2019 as traffic levels continue to increase and as the expanded retail space on the *Spirit of British Columbia* performs as anticipated. Ancillary revenue is forecast to grow by 3.6 percent in fiscal 2020 with higher traffic and an expansion of retail space on the *Spirit of Vancouver Island*.

4.5 Service Fees

Ferry Transportation Fees and unregulated route service fees are described in Section 3.

4.6 Allocation Methodology - Revenues

In order to account for all revenues at the route level, BC Ferries must assign direct and indirect revenues to each route. Revenues incurred directly at the route level are easily assignable to that route. For example, direct revenues such as tariffs are easily applied to the route on which the service was provided.

However, indirect revenues generated at multi-route terminals are not readily assignable to any one specific route. Examples of such indirect revenues include parking and terminal catering revenue in multi-route terminals. These services enhance the customer experience when travelling on a route, but the revenues are not specific to one route. Therefore, revenues that are not specific to a particular route must be allocated to a route in a systematic and rational way.

Table 4.7 provides a guide to the types of revenue that are allocated to routes, the allocation factor used and the methodology followed. This methodology has been consistently applied since fiscal 2004.

Table 4.7: Allocation of Actual Revenues

Type of Revenue	Allocation Factor	Allocation Methodology
Federal Contract	Direct	Fees are assigned directly to each route. There are no fees for routes 1, 2, 3, 12 and 30.
Coastal Ferry Services Contract Fees		
<i>Ferry Transportation Fees</i>	Direct	Fees are assigned directly to each route based on the CFSC. There are no fees for routes 1, 2, 3 and 30.
<i>Fare Initiatives</i>	Direct	Assigned to routes based on forecast revenue impact.
<i>Social Program Reimbursements</i>	Direct	Assigned to routes based on forgone revenue not charged to travelers on those routes.
<i>Contracted Routes Fee</i>	Direct	Assigned to contracted routes based on the contracted cost.
Tariff Revenue	Direct	Tariff revenues are assigned directly to each route.
Catering and Retail Revenue		
<i>Vessels</i>	Direct	Vessel catering revenues are assigned directly to each route.
<i>Terminals</i>	Passenger throughput	Terminal catering revenues are allocated based on the percentage of total passengers embarking from the terminal on a route.
<i>Vacations Centre</i>	Vacations Centre tariff revenue	Vacations Centre retail revenue is allocated to routes based on route tariff revenue generated by the Vacations Centre.
Parking Revenue	Foot passenger throughput	Parking revenues are allocated based on the percentage of foot passengers embarking on a route from the terminal where the parking revenues are earned.
Other Revenue (hostling, rent)	Direct	Other revenues directly related to a route are directly assigned to the routes.
Travel Package Revenue	Vacations Centre tariff revenue	Allocated to routes based on route tariff revenue generated by the Vacations Centre.
Other Revenues (marketing rights, advertising revenue)	Total direct revenue	Revenues that are not directly attributable to a route are allocated based on each route's percentage of total direct revenue.

Section 5: Expenses

In accordance with section 40(1)(e) of the Act, this section of the report provides information on the expenses that BC Ferries has incurred and reasonably expects to incur in respect of the provision of service on the regulated ferry routes in PT4. The section begins with an overview of the expenses at a Company level, followed by a description as to how those expenses are, and have been, allocated on a route basis.

In setting the PT4 price caps, the Commissioner set an efficiency target of \$27.6 million to be achieved over the four years of the performance term. An efficiency target can be achieved through expense reduction and/or incremental revenue generation. Since the PT4 price caps were set, BC Ferries has experienced strong traffic growth which has led to increased spending in order to address the added demand and meet customer expectations. Although total expenses are higher than forecast at the time PT4 price caps were set, revenues have also increased which has enabled the Company to exceed its efficiency target and achieve a strong financial position.

5.1 Overview of Expenses

Table 5.1 provides a summary of total expenses incurred by the Company in the first two years of PT4, as well as forecast expenses to the end of the performance term.

Table 5.1: Summary of Total Expenses
(\$ Millions)

	Fiscal 2017	Fiscal 2018	<i>Fiscal 2019 Forecast</i>	<i>Fiscal 2020 Forecast</i>
Operating, Maintenance & Administrative Expenses	577.2	622.8	644.1	669.2
Catering Cost of Goods Sold	35.9	38.2	39.4	40.8
Depreciation and Amortization	149.0	159.9	173.5	183.2
Net Financing Expense	54.1	55.2	58.7	62.3
Loss on Disposal and Revaluation of Capital Assets	1.6	1.2	0.0	0.0
TOTAL	817.8	877.3	915.7	955.5

5.2 Operations, Maintenance and Administrative Expenses (OM&A)

Although expenses are higher than previously forecast, BC Ferries continues to take proactive measures to manage expenses while ensuring that safety remains the top priority.

Fiscal 2018 vs Fiscal 2017

OM&A expenses increased from \$577.2 million in fiscal 2017 to \$622.8 million in fiscal 2018, for a total year-over-year increase of \$45.6 million or 7.9 percent. In fiscal 2018, wages, benefits and fuel expenses totalled \$474.5 million or 76% of total operations, maintenance and administration costs. These labour and fuel costs are primarily driven by the increase of the level of service to meet traffic demand. BC Ferries continuously reviews all costs for efficiencies that can be realized without compromising safety and the customer experience.

- Operations expenses increased by \$29.6 million mainly due to:
 - o \$17.7 million increase in wages and benefits costs, mainly due to staffing for the additional round trips provided, wage rate increases, an increase in overtime, and an increase in hours spent on training activities;
 - o \$2.6 million increase in contracted services, which includes terminal redevelopment planning, security and traffic control costs;
 - o \$2.0 million increase in fuel expense, reflecting increases of \$1.6 million in fuel consumption in response to higher traffic levels and \$0.4 million due to higher fuel prices;
 - o \$1.7 million increase in costs primarily due to an emergency drydocking;
 - o \$1.6 million comprised of increases in parts and supplies, mainly resulting from increased traffic volumes; and
 - o \$4.0 million increase in other costs including crew deployment, credit card fees, promotional advertising, and computer software licences.
- Maintenance costs increased by \$13.4 million compared to the prior year as a result of more vessel refit activity, unplanned vessel maintenance and repairs to the Company's terminals. Refit and maintenance activity is based on long-term asset planning and reflects the cyclical nature of these activities. This can result in costs in some years being higher than others.
- Administration costs increased by \$2.6 million compared to the prior year, mainly as a result of higher labour costs due to higher wages and benefits, and the filling of previously vacant positions.

Fiscal 2019 versus Fiscal 2018

OM&A expenses are projected to increase approximately \$21.3 million in fiscal 2019, reflecting the following:

- Operations expenses are forecast to increase by approximately \$26 million mainly due to:
 - o \$15 million increase in labour costs, including wage rate increases, higher benefit costs mainly resulting from the employer health tax, and staffing service enhancements and additional round trips.
 - o \$7 million increase in fuel expense due to a significantly higher diesel price and higher overall fuel consumption partly resulting from additional round trips, somewhat offset by gains from diesel hedging and a higher proportion of LNG consumption; and
 - o \$4 million increase in miscellaneous items, including contracted expenses, information technology enhancements and project support.
- Maintenance costs are forecast to decrease by approximately \$6 million reflecting variations in vessel refit scheduling and other vessel maintenance requirements, offset by wage rate increases and higher benefit costs.
- Administration costs are forecast to increase by approximately \$2 million, mainly as a result of an increase in labour costs including the employer health tax and other miscellaneous expenses.

Fiscal 2020 versus Fiscal 2019

OM&A expenses are projected to increase approximately \$25.1 million in fiscal 2020, reflecting the following:

- \$9 million increase in labour costs, including wage rate increases, higher benefit costs resulting from the employer health tax, and staffing additional round trips;
- \$1 million reduction in fuel expense, due to an increase in forecast diesel prices, more than offset by an increase in the proportion of LNG consumption following the conversion of the *Spirit of Vancouver Island* to dual-fuel propulsion;
- \$5 million increase in operating costs related to business transformation initiatives enabled by major information technology projects. These initiatives are also forecast to increase revenue;
- \$2 million increase in operating expenses due to annual variability in refit and maintenance activities, the annualization of route 28 service costs, and fleet deployment; and

- \$3 million increase in other expenses, reflecting a general inflationary increase.

The Company's fiscal 2020 forecast includes a general contingency of \$7.0 million against unforeseen fluctuations in traffic levels and corresponding revenues or expenses.

5.3 Depreciation and Amortization of Capital Costs

BC Ferries depreciates/amortizes assets on a straight line basis in accordance with Canadian Generally Accepted Accounting Principles and section 41(2)(a)(iii)(B) of the Act. Depreciation/amortization is based on the cost of the asset, the expected life of the asset and the expected salvage value at the end of the life of the asset. BC Ferries' depreciation/amortization policy sets the average life expectancy of each asset as well as the components of each asset. For example, a ship is made up of several different components each with a different life expectancy: the hull is depreciated over 45 years, hotel and lifesaving appliances are depreciated over 13 years, and certain propulsion components are depreciated over 20 years.

As BC Ferries makes investments in capital assets such as vessels, terminals and information technology and equipment, the cost of the asset base grows, resulting in higher annual depreciation/amortization.

Depreciation and amortization expenses incurred and expected to be incurred in PT4 are set out in Table 5.1. From fiscal 2017 to 2018, depreciation and amortization costs increased a total of \$10.9 million, mainly as a result of additional assets coming into service. BC Ferries' investment in capital assets totalled \$243.7 million in fiscal 2017 and \$252.3 million in fiscal 2018.

Based on asset renewal plans as described in BC Ferries' PT5 12-Year Capital Plan, the remainder of PT4 will have an above average level of capital spending, with \$343 million in capital expenditures planned for fiscal 2019 and another \$439 million planned for fiscal 2020. As a result, depreciation and amortization expense is forecast to increase to \$173.5 million in fiscal 2019 and \$183.2 million in 2020.

5.4 Financing Expense

BC Ferries funds its operational requirements and capital expenditure program through cash flow generated from operations, as well as bank financing and capital markets.

As at the date of this report, BC Ferries has five outstanding senior secured bond offerings. These bonds bear interest payable semi-annually. In addition, BC Ferries has four loan agreements with KfW bank group ("KfW"), with the proceeds applied towards the purchase of new vessels. BC Ferries

currently has \$1.3 billion in long-term debt. Table 5.2 provides a summary of the bonds and loans outstanding as at June 30, 2018.

Table 5.2: Summary of Bonds and Loans Outstanding as at June 30, 2018

Type	Amount (\$ Millions)	Effective Interest Rate
Senior Secured Bonds:		
6.25%, Due October 2034	250	6.41%
5.02%, Due March 2037	250	5.06%
5.58%, Due January 2038	200	5.62%
4.70%, Due October 2043	200	4.75%
4.29%, Due April 2044	200	4.45%
12-Year KfW Loans:		
Tranche A, Due March 2020	13	5.17%
Tranche B, Due March 2020	23	Floating*
Tranche A, Due June 2020	15	5.18%
Tranche B, Due June 2020	23	Floating*
2.95% KfW Loan, Due January 2021	27	3.08%
2.09% KfW Loan, Due October 2028	39	2.70%
2.09% KfW Loan, Due January 2029	41	2.68%
2.09% KfW Loan, Due January 2029	41	2.70%

* Canadian Dealer Offered Rate (CDOR) plus 30 basis points

From the beginning of PT4 to June 30, 2018, BC Ferries has made \$66.8 million in principal repayments on the KfW loans with an additional \$64.0 million of principal payments forecast to be made by the end of the performance term. Over the remainder of PT4, BC Ferries will monitor cash requirements and debt markets to look for financing opportunities. Current cash forecasts indicate a new debt issuance of approximately \$250 million will be needed in fiscal 2020 to finance capital expenditures.

In addition to the long-term debt, the Company has a \$155.0 million, five year revolving credit facility with a syndicate of Canadian banks. The facility matures in April 2023 and, as at June 30, 2018, it was undrawn, with the exception of approximately \$0.1 million in letters of credit.

As shown in Table 5.1, net financing expense increased from \$54.1 million in fiscal 2017 to \$55.2 million in fiscal 2018. The increase of \$1.1 million is primarily due to \$1.1 million in interest expense and \$0.6 million in amortization of debt issue costs; partially offset by \$0.8 million in interest earned.

Net finance expense is forecast to increase by \$3.5 million in fiscal 2019, mainly due to a reduction in interest earnings resulting from a lower cash balance, an increase in interest expense, and a reduction in capitalized interest.

Net finance expense is forecast to increase by \$3.6 million in fiscal 2020 to \$62.3 million, with the year-over-year change mainly due to an increase in interest expense from a forecast \$250 million debt issuance in support of BC Ferries' PT5 12-Year Capital Plan.

5.5 Loss on Disposal and Revaluation of Capital Assets

When BC Ferries disposes of its capital assets, it must recognize a gain or loss on the sale if the disposal value is different from the net book value of that asset. In addition, if the revaluation of assets recorded at fair value is lower than the original cost of the asset, the loss must be recognized in net earnings. The loss on disposal and revaluation of property, plant and equipment and intangible assets was \$1.6 million in fiscal 2017 and \$1.2 million in fiscal 2018. These losses were primarily due to capital asset impairments.

5.6 Allocation Methodology - Expenses

In order to account for all costs at the route level, BC Ferries must assign direct, overhead and indirect costs incurred in the operation of its business to each route. Costs incurred directly at the route level are easily assignable to a route. For example, direct vessel labour and fuel costs are easily applied to the route on which the vessel operates.

However, costs incurred at the terminal and at the administrative level (indirect costs and overheads) are not readily assignable to any one specific route. Examples of such costs include expenses incurred in multi-route terminals, payroll and accounting services, and terminal asset management. These indirect costs all serve to ensure that the ferry on a route continues to operate, but are not specific to one route. Therefore, costs that are not specific to any particular route must be allocated to a route in a systematic and rational way.

BC Ferries carries out an allocation procedure with respect to all of its costs that are not directly assignable to a specific route. In most respects, the allocation of expenses is based on the same principles as the allocation of revenues, with the exception of some expenses requiring a two-step process. For example, maintenance costs are directly attributable to a vessel. However, to allocate costs, including maintenance to each route, total vessel costs are allocated to the route based on the number of vessel sailing hours the vessel operates on the route.

Table 5.3 provides a guide to the types of indirect costs that are allocated to routes, the allocation factor used and the methodology followed. This methodology has been consistently applied since fiscal 2004.

Table 5.3: Allocation of Actual Operating Expenses

Type of Expense	Allocation Factor	Allocation Methodology
Vessel Redeployment	Vessel sailing hours	Redeployment costs are allocated to the routes that the ship worked on based on percentage of sailing hours.
Staffing Pool & Crews Not Onboard	Direct ship wages for region	Allocated based on each route's percentage of total direct ship wages.
Marine Insurance	Vessel sailing hours	Marine insurance is charged directly to vessels. It is allocated to routes based on the percentage of vessel sailing hours per route.
Refit & Maintenance	Vessel sailing hours	Refit & maintenance costs are charged to each vessel; overhead costs associated with this activity are allocated based on directly assigned costs. The total is then allocated to routes based on the percentage of vessel sailings hours that each ship worked on each route.
Terminal Operations	Vehicle through put	Allocated based on percentage of vehicles embarking on a route from the terminal.
Terminal Catering	Passenger through put	Allocated based on each route's percentage of passengers embarking on a route.
Drop Trailers	Drop trailer through put	Allocated based on drop trailer through put on each route.
Terminal Maintenance Overhead	Direct maintenance cost by terminal	Maintenance yard overhead costs are allocated to terminals serviced by each yard based on direct maintenance costs per terminal.
Direct Maintenance Costs and Overhead	Vehicle through put	Direct maintenance costs plus allocated overhead is allocated to routes based on the percentage of vehicles embarking on a route from the terminals.
Operational Administration and Human Resources	Productive labour hours per route	Allocated to routes based on productive labour hours.
Catering – Direct Overhead	Net catering revenue	Allocated across catering routes based on each route's percentage of net catering revenue.
Call Handling - Direct Overhead		
<i>Inquiry</i>	Total tariff revenue	Historically 60 percent of all call handling expenses are inquiry related. Allocated across all routes based on each route's percentage of tariff revenue.
<i>Booking</i>	Quantity of reservations	Historically 40 percent of all call handling expenses are booking related. 50 percent of this is allocated to routes based on quantity of reservations booked to a route and 50 percent is allocated to routes based on total value of reservations redeemed on a route.

Type of Expense	Allocation Factor	Allocation Methodology
Operations & Security Centre	Total passengers	Allocated to routes based on total passengers per route.
Travel Services	Vacations Centre tariff revenue	Allocated to routes based on route tariff revenue generated by the Vacations Centre.
Depreciation and Amortization – Capital Assets		
<i>Vessels</i>	Vessel sailing hours	Depreciation for each vessel is allocated to individual routes based on vessel sailing hours.
<i>Terminals</i>	Vehicle through put	Depreciation for multi-route terminals is allocated to individual routes based on vehicle throughput.
<i>Other</i>	Total revenue	Depreciation and Amortization for overhead assets is allocated to individual routes based on total revenue.
Corporate Human Resources Workforce Development	Productive labour hours per route	Allocated to routes based on productive labour hours.
Purchasing & materials Administration	Productive labour hours per route	Allocated to routes based on productive labour hours.
Corporate Support Services	Total revenue	Allocated across all routes based on total operating revenue per route.
Financing Expense	Net Book Value ("NBV") of Capitalized Assets	Allocated based on the NBV of capital assets employed on each route. The NBV of vessels is allocated to routes based on vessel sailing hours.
BCF Captive Insurance Company Gain (Loss)	Vessel Policies	Allocated across all routes based on allocated marine insurance.
	Terminal Policies	Allocated across all routes based on total operating revenue per route.
	Administrative & Investment Income	Allocated across all routes based on total operating revenue per route.
Loss (Gain) on Disposal of Fixed Assets	Vessel Sailing Hours	Losses (gains) directly attributable to vessels are first assigned to the route group the vessel served and are then allocated to routes based on vessel sailing hours.
	Vehicle through put	Losses (gains) directly attributable to terminals are allocated to routes based on vehicle through put.
	Total Revenue	Losses (gains) on overhead assets are allocated based on total operating revenue.

5.7 Expenses Allocated to Route Groupings

Table 5.4 provides an allocation of expenses for PT4. Expenses allocated by regulated ferry routes are provided in the route statements attached as Appendix B.

Table 5.4: Total Expenses
(\$ Millions)

Routes	Fiscal 2017	Fiscal 2018	<i>Fiscal 2019 Forecast</i>	<i>Fiscal 2020 Forecast</i>
Majors	542.9	574.9	599.5	626.3
Northern	63.9	67.8	78.2	82.6
Minors	208.3	231.8	235.2	243.7
Unregulated	2.7	2.8	2.8	2.8
TOTAL	817.8	877.3	915.7	955.5

Numbers may not add due to rounding.

Section 6: Additional or Alternative Service Providers

BC Ferries is required by section 69 of the Act to seek additional or alternative service providers to provide ferry transportation services on one or more of the regulated ferry routes when so ordered by the Commissioner. To date in PT4, no such orders have been issued by the Commissioner and no actions have been required or taken by the Company in respect to this matter.

APPENDICES

Appendix A: Performance Against Core Service Levels

Appendix A.1**CANCELLED & EXTRA ROUND TRIPS
BY ROUTES**

Fiscal 2017 Year Ended March 31, 2017			
Routes ⁽¹⁾		Terminal 1	Terminal 2
	Route 01	Swartz Bay	Tsawwassen
	Route 02	Horseshoe Bay	Departure Bay
	Route 03	Langdale	Horseshoe Bay
	Route 30	Duke Point	Tsawwassen
Major Routes			
	Route 10	Port Hardy	Prince Rupert
	Route 11	Skidegate	Prince Rupert
Northern Routes			
	Route 04	Fulford Harbour	Swartz Bay
	Route 05	Swartz Bay	Four SGIs
	Route 06	Crofton	Vesuvius Bay
	Route 07	Earls Cove	Saltery Bay
	Route 08	Horseshoe Bay	Bowen Island
	Route 09	Tsawwassen	Long Harbour
	Route 12	Mill Bay	Brentwood Bay
	Route 13 ⁽³⁾	Langdale	Gambier/Keats
	Route 17	Little River	Powell River
	Route 18	Texada	Powell River
	Route 19	Nanaimo Harbour	Gabriola Island
	Route 20	Chemainus	Thetis Island
	Route 21	Buckley Bay	Denman West
	Route 22	Denman East	Hornby Island
	Route 23	Campbell River	Quadra Island
	Route 24	Quadra Island	Cortes Island
	Route 25	Port McNeill	Alert Bay
	Route 26	Skidegate	Alliford Bay
Minor Routes			
TOTAL			

Performance Against CFSC Requirements Annual Core Service Levels Year Ended March 31, 2017				
Actual Round Trips ⁽¹⁾	Round Trips Required ⁽²⁾	Variance - Net Extra / Short Round Trips	Required Round Trips Cancelled	Total Extra / Short Round Trips
3,950.0	12,254.0	1,127.0	8.5	1,135.5
3,074.0				
3,621.5				
2,735.5				
13,381.0	12,254.0	1,127.0	8.5	1,135.5
85.5	85.5	0.0	0.0	0.0
148.0	139.0	9.0	0.0	9.0
233.5	224.5	9.0	0.0	9.0
2,894.0	2,881.0	13.0	1.0	14.0
3,472.0	3,471.0	1.0	0.0	1.0
4,464.0	4,441.0	23.0	1.0	24.0
2,562.5	2,513.0	49.5	0.0	49.5
5,326.0	5,338.5	-12.5	12.5	0.0
825.0	812.0	13.0	5.0	18.0
3,210.0	3,217.0	-7.0	7.0	0.0
4,028.0	4,062.0	-34.0	1.0	-33.0
1,343.0	1,364.0	-21.0	28.0	7.0
2,869.5	2,814.0	55.5	2.0	57.5
4,922.0	4,902.0	20.0	0.0	20.0
3,701.0	3,701.0	0.0	0.0	0.0
5,474.0	5,263.0	211.0	3.0	214.0
4,327.5	4,062.0	265.5	2.0	267.5
5,782.0	5,787.0	-5.0	12.0	7.0
2,089.0	2,138.0	-49.0	49.0	0.0
3,959.0	3,961.0	-2.0	2.0	0.0
3,029.0	2,918.0	111.0	1.0	112.0
64,277.5	63,645.5	632.0	126.5	758.5
77,892.0	76,124.0	1,768.0	135.0	1,903.0

Notes:

⁽¹⁾ In certain circumstances (e.g. vessel or dock breakdown, mechanical failure or maintenance) round trips may be provided by contracted service providers (e.g. water taxi, tug & barge, flights).

⁽²⁾ For the Major Routes, the annual number of round trips required under the Coastal Ferry Services Contract is an aggregate total for the four routes (Routes 1, 2, 3 and 30).

⁽³⁾ Route 13: From January 19 to April 7, 2017 alternative service on Route 13 to Gambier and Keats Island was temporarily provided from Gibson's Harbour due to berth construction at Langdale terminal, resulting in 33 "on demand only" sailing cancellations.

Appendix A.2**CANCELLED ROUND TRIPS BY ROUTES***(For Cancellations of Minimum Required Round Trips for Reasons Specified in Schedule A, Section 2(a) of the Coastal Ferry Services Contract)*

Fiscal 2017 Year Ended March 31, 2017				Performance Against CFSC Requirements Annual Core Service Level	
Routes				Cumulative Days When Round Trips Missed <i>Allowed 30 Days / Route</i>	Highest Consecutive Days when Round Trips Missed <i>Allowed 20 Days / Route</i>
Major Routes	Route 01	Swartz Bay	Tsawwassen	1.0	1.0
	Route 02	Horseshoe Bay	Departure Bay	2.0	1.0
	Route 03	Langdale	Horseshoe Bay		
	Route 30	Duke Point	Tsawwassen	2.0	1.0
Northern Routes	Route 10	Port Hardy	Prince Rupert		
	Route 11	Skidegate	Prince Rupert		
Minor Routes	Route 04	Fulford Harbour	Swartz Bay	1.0	1.0
	Route 05	Swartz Bay	Four SGIs		
	Route 06	Crofton	Vesuvius Bay	1.0	1.0
	Route 07	Earls Cove	Saltery Bay		
	Route 08	Horseshoe Bay	Bowen Island	4.0	1.0
	Route 09	Tsawwassen	Long Harbour	4.0	2.0
	Route 12	Mill Bay	Brentwood Bay	5.0	2.0
	Route 13	Langdale	Gambier/Keats	1.0	1.0
	Route 17	Little River	Powell River	17.0	3.0
	Route 18	Texada	Powell River	2.0	1.0
	Route 19	Nanaimo Harbour	Gabriola Island		
	Route 20	Chemainus	Thetis Island		
	Route 21	Buckley Bay	Denman West	2.0	2.0
	Route 22	Denman East	Hornby Island	1.0	1.0
	Route 23	Campbell River	Quadra Island	5.0	1.0
	Route 24	Quadra Island	Cortes Island	16.0	2.0
	Route 25	Port McNeill	Alert Bay	1.0	1.0
	Route 26	Skidegate	Alliford Bay	1.0	1.0

Appendix A.3**CANCELLED ROUND TRIPS BY ROUTES****Performance Against CFSC Requirements - Annual Core Service Levels**

Fiscal 2017 Year Ended March 31, 2017				Cancellations of Required Round Trips for Reasons Specified in Schedule A, 2(a) of the Coastal Ferry Services Contract												Cancellations of Required Round Trips for Other Reasons				
Routes		Terminal 1	Terminal 2	Major Incident	Weather	Emerg. Response	Medical Emerg.	Regulatory Issue	Terminal / Dock Maint.	Terminal / Dock Mech. Failure	Vessel Maint.	Vessel Mech. Failure	Fire	Labour Dispute	Allowed Cancels	Community Event	Traffic	Other Cancels	Total Cancels	% of Required Round Trips Cancelled
	Route 01	Swartz Bay	Tsawwassen		3										3.0			0.0	3.0	
	Route 02	Horseshoe Bay	Departure Bay	0.5	3										3.5			0.0	3.5	
	Route 03	Langdale	Horseshoe Bay												0.0			0.0	0.0	
	Route 30	Duke Point	Tsawwassen		1							1			2.0			0.0	2.0	0.07%
Major Routes				0.5	7	0	0	0	0	0	0	1	0	0	8.5	0	0	0.0	8.5	0.07%
	Route 10	Port Hardy	Prince Rupert												0.0			0.0	0.0	0.00%
	Route 11	Skidegate	Prince Rupert												0.0			0.0	0.0	0.00%
Northern Routes				0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0.0	0.0	0.00%
	Route 04	Fulford Harbour	Swartz Bay									1			1.0			0.0	1.0	0.03%
	Route 05	Swartz Bay	Four SGIs												0.0			0.0	0.0	0.00%
	Route 06	Crofton	Vesuvius Bay		1										1.0			0.0	1.0	0.02%
	Route 07	Earls Cove	Saltery Bay												0.0			0.0	0.0	0.00%
	Route 08	Horseshoe Bay	Bowen Island		5.5			0.5				1.5			7.5		5	5.0	12.5	0.23%
	Route 09	Tsawwassen	Long Harbour		3							2			5.0			0.0	5.0	0.62%
	Route 12	Mill Bay	Brentwood Bay		3			1				3			7.0			0.0	7.0	0.22%
	Route 13 ⁽¹⁾	Langdale	Gambier/Keats					1							1.0			0.0	1.0	0.02%
	Route 17	Little River	Powell River		27			1							28.0			0.0	28.0	2.05%
	Route 18	Texada	Powell River		2										2.0			0.0	2.0	0.07%
	Route 19	Nanaimo Harbour	Gabriola Island												0.0			0.0	0.0	0.00%
	Route 20	Chemainus	Thetis Island												0.0			0.0	0.0	0.00%
	Route 21	Buckley Bay	Denman West									3			3.0			0.0	3.0	0.06%
	Route 22	Denman East	Hornby Island		2										2.0			0.0	2.0	0.05%
	Route 23	Campbell River	Quadra Island		12										12.0			0.0	12.0	0.21%
	Route 24	Quadra Island	Cortes Island		48			1							49.0			0.0	49.0	2.29%
	Route 25	Port McNeill	Alert Bay		2										2.0			0.0	2.0	0.05%
	Route 26	Skidegate	Alliford Bay		1										1.0			0.0	1.0	0.03%
Minor Routes				0	106.5	0	0	4.5	0	0	0	10.5	0	0	121.5	0	5	5.0	126.5	0.20%
TOTAL				0.5	113.5	0.0	0.0	4.5	0.0	0.0	0.0	11.5	0.0	0.0	130.0	0.0	5.0	5.0	135.0	0.18%

% of Minimum Required Round Trips Cancelled 0.00% 0.15% 0.00% 0.00% 0.01% 0.00% 0.00% 0.00% 0.02% 0.00% 0.00% 0.17% 0.00% 0.01% 0.01% 0.18%

Note:

⁽¹⁾ Route 13 core service levels include some round trips that are deliverable only 'on demand.'

Appendix A.4**CANCELLED & EXTRA ROUND TRIPS BY ROUTES**

Fiscal 2018 Year Ended March 31, 2018			
Routes ⁽¹⁾		Terminal 1	Terminal 2
	Route 01	Swartz Bay	Tsawwassen
	Route 02	Horseshoe Bay	Departure Bay
	Route 03	Langdale	Horseshoe Bay
	Route 30	Duke Point	Tsawwassen
Major Routes			
	Route 10	Port Hardy	Prince Rupert
	Route 11	Skidegate	Prince Rupert
Northern Routes			
	Route 04	Fulford Harbour	Swartz Bay
	Route 05	Swartz Bay	Four SGIs
	Route 06	Crofton	Vesuvius Bay
	Route 07	Earls Cove	Saltery Bay
	Route 08	Horseshoe Bay	Bowen Island
	Route 09	Tsawwassen	Long Harbour
	Route 12	Mill Bay	Brentwood Bay
	Route 13	Langdale	Gambier/Keats
	Route 17	Little River	Powell River
	Route 18	Texada	Powell River
	Route 19	Nanaimo Harbour	Gabriola Island
	Route 20	Chemainus	Thetis Island
	Route 21	Buckley Bay	Denman West
	Route 22	Denman East	Hornby Island
	Route 23	Campbell River	Quadra Island
	Route 24	Quadra Island	Cortes Island
	Route 25	Port McNeill	Alert Bay
	Route 26	Skidegate	Alliford Bay
Minor Routes			
TOTAL			

Performance Against CFSC Requirements Annual Core Service Levels Year Ended March 31, 2018				
Actual Round Trips (1)	Round Trips Required (2)	Variance - Net Extra / Short Round Trips	Required Round Trips Cancelled	Total Extra / Short Round Trips
4,181.5	12,254.0	1,003.5	17.5	1,021.0
3,154.5				
3,192.5				
2,729.0				
13,257.5	12,254.0	1,003.5	17.5	1,021.0
90.5	84.5	6.0	0.0	6.0
162.0	159.0	3.0	1.0	4.0
252.5	243.5	9.0	1.0	10.0
2,883.0	2,879.0	4.0	0.0	4.0
3,546.0	3,467.0	79.0	1.0	80.0
4,475.0	4,440.0	35.0	0.0	35.0
2,659.0	2,511.0	148.0	0.0	148.0
5,419.5	5,334.5	85.0	0.0	85.0
1,020.0	814.0	206.0	4.0	210.0
3,211.0	3,215.0	-4.0	4.0	0.0
4,224.0	4,066.0	158.0	3.0	161.0
1,362.5	1,363.0	-0.5	29.0	28.5
2,902.0	2,813.0	89.0	7.0	96.0
4,929.0	4,899.0	30.0	0.0	30.0
3,699.5	3,700.0	-0.5	1.0	0.5
5,678.0	5,261.0	417.0	0.0	417.0
4,499.0	4,059.0	440.0	7.0	447.0
5,765.5	5,784.0	-18.5	24.0	5.5
2,107.5	2,136.0	-28.5	28.5	0.0
3,938.0	3,961.0	-23.0	23.0	0.0
3,253.5	2,920.0	333.5	29.0	362.5
65,572.0	63,622.5	1,949.5	160.5	2,110.0
79,082.0	76,120.0	2,962.0	179.0	3,141.0

Notes:

⁽¹⁾ In certain circumstances (e.g. vessel or dock breakdown, mechanical failure or maintenance) round trips may be provided by contracted service providers (e.g. water taxi, tug & barge, flights).

⁽²⁾ For the Major Routes, the annual number of round trips required under the Coastal Ferry Services Contract is an aggregate total for the four routes (Routes 1, 2, 3 and 30).

Appendix A.5**CANCELLED ROUND TRIPS BY ROUTES***(For Cancellations of Minimum Required Round Trips for Reasons Specified in Schedule A, Section 2(a) of the Coastal Ferry Services Contract)*

Fiscal 2018 Year Ended March 31, 2018				Performance Against CFSC Requirements Annual Core Service Level	
Routes				Cumulative Days When Round Trips Missed Allowed 30 Days / Route	Highest Consecutive Days when Round Trips Missed Allowed 20 Days / Route
Major Routes	Route 01	Swartz Bay	Tsawwassen	1.0	1.0
	Route 02	Horseshoe Bay	Departure Bay	8.0	2.0
	Route 03	Langdale	Horseshoe Bay	0.0	0.0
	Route 30	Duke Point	Tsawwassen	4.0	1.0
Northern Routes	Route 10	Port Hardy	Prince Rupert	0.0	0.0
	Route 11	Skidegate	Prince Rupert	1.0	1.0
Minor Routes	Route 04	Fulford Harbour	Swartz Bay	0.0	0.0
	Route 05	Swartz Bay	Four SGIs	1.0	1.0
	Route 06	Crofton	Vesuvius Bay	0.0	0.0
	Route 07	Earls Cove	Saltery Bay	0.0	0.0
	Route 08	Horseshoe Bay	Bowen Island	0.0	0.0
	Route 09	Tsawwassen	Long Harbour	4.0	1.0
	Route 12	Mill Bay	Brentwood Bay	4.0	1.0
	Route 13	Langdale	Gambier/Keats	1.0	1.0
	Route 17	Little River	Powell River	20.0	3.0
	Route 18	Texada	Powell River	5.0	2.0
	Route 19	Nanaimo Harbour	Gabriola Island	0.0	0.0
	Route 20	Chemainus	Thetis Island	1.0	1.0
	Route 21	Buckley Bay	Denman West	0.0	0.0
	Route 22	Denman East	Hornby Island	3.0	1.0
	Route 23	Campbell River	Quadra Island	7.0	3.0
	Route 24	Quadra Island	Cortes Island	10.0	4.0
	Route 25	Port McNeill	Alert Bay	7.0	2.0
	Route 26	Skidegate	Alliford Bay	9.0	1.0

Appendix A.6**CANCELLED ROUND TRIPS BY ROUTES****Performance Against CFSC Requirements - Annual Core Service Levels**

Fiscal 2018 Year Ended March 31, 2018				Cancellations of Required Round Trips for Reasons Specified in Schedule A, 2(a) of the Coastal Ferry Services Contract											Cancellations of Required Round Trips for Other Reasons			Total Cancellations	% of Required Round Trips Cancelled
Routes	Terminal 1	Terminal 2	Major Incident	Weather	Emerg. Response	Medical Emerg.	Regulatory Issue	Terminal / Dock Maint.	Terminal / Dock Mech. Failure	Vessel Maint.	Vessel Mech. Failure	Fire	Labour Dispute	Allowed Cancels	Community Event	Traffic	Other Cancels		
Route 01	Swartz Bay	Tsawwassen		1.5										1.5			0.0	1.5	0.14%
Route 02	Horseshoe Bay	Departure Bay		3		1					4.5			8.5			0.0	8.5	
Route 03	Langdale	Horseshoe Bay												0.0			0.0	0.0	
Route 30 ⁽¹⁾	Duke Point	Tsawwassen		5							2.5			7.5			0.0	7.5	
Major Routes			0	9.5	0	1	0	0	0	0	7	0	0	17.5	0	0	0.0	17.5	0.14%
Route 10	Port Hardy	Prince Rupert												0.0			0.0	0.0	0.00%
Route 11	Skidegate	Prince Rupert		1										1.0			0.0	1.0	0.63%
Northern Routes			0	1	0	0	0	0	0	0	0	0	0	1.0	0	0	0.0	1.0	0.41%
Route 04	Fulford Harbour	Swartz Bay												0.0			0.0	0.0	0.00%
Route 05	Swartz Bay	Four SGIs		1										1.0			0.0	1.0	0.03%
Route 06	Crofton	Vesuvius Bay												0.0			0.0	0.0	0.00%
Route 07	Earls Cove	Saltery Bay												0.0			0.0	0.0	0.00%
Route 08	Horseshoe Bay	Bowen Island												0.0			0.0	0.0	0.00%
Route 09	Tsawwassen	Long Harbour		2							2			4.0			0.0	4.0	0.49%
Route 12	Mill Bay	Brentwood Bay					2				2			4.0			0.0	4.0	0.12%
Route 13 ⁽²⁾	Langdale	Gambier/Keats		3										3.0			0.0	3.0	0.07%
Route 17	Little River	Powell River		28							1			29.0			0.0	29.0	2.13%
Route 18	Texada	Powell River		7										7.0			0.0	7.0	0.25%
Route 19	Nanaimo Harbour	Gabriola Island												0.0			0.0	0.0	0.00%
Route 20	Chemainus	Thetis Island									1			1.0			0.0	1.0	0.03%
Route 21	Buckley Bay	Denman West												0.0			0.0	0.0	0.00%
Route 22	Denman East	Hornby Island		7										7.0			0.0	7.0	0.17%
Route 23	Campbell River	Quadra Island		24										24.0			0.0	24.0	0.41%
Route 24	Quadra Island	Cortes Island		28.5										28.5			0.0	28.5	1.33%
Route 25	Port McNeill	Alert Bay		18			5							23.0			0.0	23.0	0.58%
Route 26	Skidegate	Alliford Bay		26			3							29.0			0.0	29.0	0.99%
Minor Routes			0	144.5	0	0	10	0	0	0	6	0	0	160.5	0	0	0.0	160.5	0.25%
TOTAL			0.0	155.0	0.0	1.0	10.0	0.0	0.0	0.0	13.0	0.0	0.0	179.0	0.0	0.0	0.0	179.0	0.24%

% of Minimum Required Round Trips Cancelled 0.00% 0.20% 0.00% 0.00% 0.01% 0.00% 0.00% 0.00% 0.02% 0.00% 0.00% 0.24% 0.00% 0.00% 0.00% 0.24%

Note:

⁽¹⁾ Route 30 - two year-end allowable weather cancellations were previously reported in Q3 as mechanical

⁽²⁾ Route 13 core service levels include some round trips that are deliverable only 'on demand.'

Appendix A.7**CANCELLED & EXTRA ROUND TRIPS BY ROUTES**

Fiscal 2019 Quarter Ended June 30, 2018			
Routes ⁽¹⁾	Terminal 1	Terminal 2	
Route 01	Swartz Bay	Tsawwassen	
Route 02	Horseshoe Bay	Departure Bay	
Route 03	Langdale	Horseshoe Bay	
Route 30	Duke Point	Tsawwassen	
Major Routes			
Route 10	Port Hardy	Prince Rupert	
Route 11	Skidegate	Prince Rupert	
Northern Routes			
Route 04	Fulford Harbour	Swartz Bay	
Route 05 ⁽²⁾	Swartz Bay	Four SGIs	
Route 06	Crofton	Vesuvius Bay	
Route 07	Earls Cove	Saltery Bay	
Route 08	Horseshoe Bay	Bowen Island	
Route 09 ^(2, 3)	Tsawwassen	Long Harbour	
Route 12	Mill Bay	Brentwood Bay	
Route 13	Langdale	Gambier/Keats	
Route 17	Little River	Powell River	
Route 18	Texada	Powell River	
Route 19	Nanaimo Harbour	Gabriola Island	
Route 20	Chemainus	Thetis Island	
Route 21	Buckley Bay	Denman West	
Route 22	Denman East	Hornby Island	
Route 23	Campbell River	Quadra Island	
Route 24	Quadra Island	Cortes Island	
Route 25	Port McNeill	Alert Bay	
Route 26	Skidegate	Alliford Bay	
Minor Routes			
TOTAL			

Performance Against Minimum (Daily) Core Service Levels			
1st Quarter			
Actual Round Trips	Daily Minimum Required Round Trips	Variance (Actual to Minimum)	Cancellations of Minimum Required Round Trips
1,146.5	649.0	497.5	0.0
775.5	645.0	130.5	0.0
780.0	628.0	152.0	0.0
699.0	562.0	137.0	0.0
3,401.0	2,484.0	917.0	0.0
20.0	17.0	3.0	0.0
39.0	37.0	2.0	0.0
59.0	54.0	5.0	0.0
710.5	625.0	85.5	0.0
826.0	865.0	-39.0	53.0
1,114.0	1,028.0	86.0	0.0
669.0	533.0	136.0	0.0
1,357.5	1,241.5	116.0	0.0
203.0	188.0	15.0	32.0
808.0	715.0	93.0	0.0
1,139.0	932.0	207.0	0.0
362.0	339.0	23.0	2.0
707.0	611.0	96.0	0.0
1,238.0	1,131.0	107.0	0.0
922.0	832.0	90.0	1.0
1,414.0	1,182.0	232.0	0.0
1,154.0	903.0	251.0	0.0
1,448.0	1,352.0	96.0	2.0
538.0	442.0	96.0	2.0
986.0	897.0	89.0	1.0
831.0	637.0	194.0	0.0
16,427.0	14,453.5	1,973.5	93.0
19,887.0	16,991.5	2,895.5	93.0

Note:

⁽¹⁾ In certain circumstances (e.g. vessel or dock breakdown, mechanical failure or maintenance) round trips may be provided by contracted service providers (e.g. water taxi, tug & barge, flights).

⁽²⁾ Routes 5 and 9 - the *Queen of Cumberland* was removed from service due to a mechanical problem from April 18, 2018 to May 17, 2018. During this period, BC Ferries was authorized by Order 18-02 of the British Columbia Ferries Commissioner to temporarily reduce service below the core service levels set out in the Coastal Ferry Services Contract for Routes 5 and 9. BC Ferries continued to provide alternative service using other vessels and adjusted schedules.

⁽³⁾ Route 9 - The round trip count for Route 9 includes 16 round trips provided on Route 9A during the off-peak season during the period from May 4 to May 17, 2018.

Appendix A.8**CANCELLED ROUND TRIPS BY ROUTES***(For Cancellations of Minimum Required Round Trips for Reasons Specified in Schedule A, Section 2(a) of the Coastal Ferry Services Contract)*

Fiscal 2019 Quarter Ended June 30, 2018				Performance Against Minimum (Daily) Core Service Levels	
Routes				Cumulative Days When Round Trips Missed <i>Allowed 30 Days / Route</i>	Highest Consecutive Days when Round Trips Missed <i>Allowed 20 Days / Route</i>
Major Routes	Route 01	Swartz Bay	Tsawwassen	0	
	Route 02	Horseshoe Bay	Departure Bay	0	
	Route 03	Langdale	Horseshoe Bay	0	
	Route 30	Duke Point	Tsawwassen	0	
Northern Routes	Route 10	Port Hardy	Prince Rupert	0	
	Route 11	Skidegate	Prince Rupert	0	
Minor Routes	Route 04	Fulford Harbour	Swartz Bay	0	
	Route 05 ⁽¹⁾	Swartz Bay	Four SGIs	27	9
	Route 06	Crofton	Vesuvius Bay	0	
	Route 07	Earls Cove	Saltery Bay	0	
	Route 08	Horseshoe Bay	Bowen Island	0	
	Route 09 ⁽¹⁾	Tsawasse	Long Harbour	17	5
	Route 12	Mill Bay	Brentwood Bay	0	
	Route 13	Langdale	Gambier/Keats	0	
	Route 17	Little River	Powell River	2	1
	Route 18	Texada	Powell River	0	
	Route 19	Nanaimo Harbour	Gabriola Island	0	
	Route 20	Chemainus	Thetis Island	1	1
	Route 21	Buckley Bay	Denman West	0	
	Route 22	Denman East	Hornby Island	0	
	Route 23	Campbell River	Quadra Island	1	1
	Route 24	Quadra Island	Cortes Island	2	1
	Route 25	Port McNeill	Alert Bay	1	1
	Route 26	Skidegate	Alliford Bay	0	

⁽¹⁾ Routes 5 and 9 - cumulative and highest consecutive days missed are associated with the removal of the Queen of Cumberland from service due to a mechanical problem from April 18, 2018 to May 17, 2018. During this period, BC Ferries was authorized by Order 18-02 of the British Columbia Ferries Commissioner to temporarily reduce service below the core service levels set out in the Coastal Ferry Services Contract for Routes 5 and 9. BC Ferries continued to provide alternative service using other vessels and adjusted schedules.

Appendix A.9**CANCELLED ROUND TRIPS BY ROUTES****PERFORMANCE AGAINST MINIMUM (DAILY) CORE SERVICE LEVELS**

Fiscal 2019 Quarter Ended June 30, 2018			Cancellations of Minimum Required Round Trips for Reasons Specified in Schedule A, 2(a) of the Coastal Ferry Services Contract												Cancellations of Minimum Required Round Trips for Other Reasons			Total Cancellations	% of Minimum Required Round Trips Cancelled
Routes	Terminal 1	Terminal 2	Major Incident	Weather	Emerg. Response	Medical Emerg.	Regulatory Issue	Terminal / Dock Maint.	Terminal / Dock Mech. Failure	Vessel Maint.	Vessel Mech. Failure	Fire	Labour Dispute	Allowed Cancellations	Community Event	Traffic	Other Cancellations		
Route 01	Swartz Bay	Tsawwassen												0.0			0.0	0.0	0.00%
Route 02	Horseshoe Bay	Departure Bay												0.0			0.0	0.0	0.00%
Route 03	Langdale	Horseshoe Bay												0.0			0.0	0.0	0.00%
Route 30	Duke Point	Tsawwassen												0.0			0.0	0.0	0.00%
Major Routes			0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0.0	0.0	0.00%
Route 10	Port Hardy	Prince Rupert												0.0			0.0	0.0	0.00%
Route 11	Skidegate	Prince Rupert												0.0			0.0	0.0	0.00%
Northern Routes			0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0.0	0.0	0.00%
Route 04	Fulford Harbour	Swartz Bay												0.0			0.0	0.0	0.00%
Route 05 ⁽²⁾	Swartz Bay	Four SGIs									53			53.0			0.0	53.0	6.13%
Route 06	Crofton	Vesuvius Bay												0.0			0.0	0.0	0.00%
Route 07	Earls Cove	Saltery Bay												0.0			0.0	0.0	0.00%
Route 08	Horseshoe Bay	Bowen Island												0.0			0.0	0.0	0.00%
Route 09 ⁽²⁾	Tsawwassen	Long Harbour									32			32.0			0.0	32.0	17.02%
Route 12	Mill Bay	Brentwood Bay												0.0			0.0	0.0	0.00%
Route 13 ⁽¹⁾	Langdale	Gambier/Keats												0.0			0.0	0.0	0.00%
Route 17	Little River	Powell River		1							1			2.0			0.0	2.0	0.59%
Route 18	Texada	Powell River												0.0			0.0	0.0	0.00%
Route 19	Nanaimo Harbour	Gabriola Island												0.0			0.0	0.0	0.00%
Route 20	Chemainus	Thetis Island									1			1.0			0.0	1.0	0.12%
Route 21	Buckley Bay	Denman West												0.0			0.0	0.0	0.00%
Route 22	Denman East	Hornby Island												0.0			0.0	0.0	0.00%
Route 23	Campbell River	Quadra Island		2										2.0			0.0	2.0	0.15%
Route 24	Quadra Island	Cortes Island		2										2.0			0.0	2.0	0.45%
Route 25	Port McNeill	Alert Bay		1										1.0			0.0	1.0	0.11%
Route 26	Skidegate	Alliford Bay												0.0			0.0	0.0	0.00%
Minor Routes			0	6	0	0	0	0	0	0	87	0	0	93.0	0	0	0.0	93.0	0.64%
TOTAL			0.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0	87.0	0.0	0.0	93.0	0.0	0.0	0.0	93.0	0.55%

% of Minimum Required Round Trips Cancelled

0.00% 0.04% 0.00% 0.00% 0.00% 0.00% 0.00% 0.00% 0.00% 0.52% 0.00% 0.00% 0.55% 0.00% 0.00% 0.00% 0.55%

Note:

⁽¹⁾ Route 13 core service levels include some round trips that are deliverable only 'on demand.'⁽²⁾ Routes 5 and 9 - "vessel mechanical failure" cancellations are associated with the removal of the Queen of Cumberland from service due to a mechanical problem from April 18, 2018 to May 17, 2018. During this period, BC Ferries was authorized by Order 18-02 of the British Columbia Ferries Commissioner to temporarily reduce service below the core service levels set out in the Coastal Ferry Services Contract for Routes 5 and 9. BC Ferries continued to provide alternative service using other vessels and adjusted schedules.

Appendix B: Route Statements

**British Columbia Ferry Services Inc.****Route Statement****For the period Apr. 1 2016 to Mar. 31 2020****(in 000's)**

	Route Group 1 - Majors			
	<u>Actual</u>		<u>Forecast</u>	
	F2017	F2018	F2019	F2020
Revenues				
Tariff and Reservation Revenue (incl. Social Program Fees)	515,330	538,072	536,640	544,440
Ancillary Revenue	59,403	64,101	62,243	64,428
Contracted Routes Fee	-	-	-	-
Total Operating Revenue	574,733	602,173	598,882	608,868
Total Operating Expenses	390,360	419,889	427,138	442,230
Earnings (Loss) from Operations	184,373	182,284	171,744	166,638
Depreciation and Amortization	(92,507)	(96,888)	(104,397)	(112,705)
Financing Expense	(33,438)	(30,927)	(31,962)	(34,232)
Cost of Capital	(125,945)	(127,815)	(136,358)	(146,937)
Gain (Loss) on Disposal and Revaluation of Capital Assets	(1,327)	(666)	-	-
Route Earnings (Loss) Before Ferry Service Fees & Federal Contract	57,101	53,803	35,386	19,701
Ferry Transportation Fees	-	-	15,582	18,657
Federal-Provincial Subsidy Agreement	-	-	-	-
Net Regulatory Earnings (Loss)	57,101	53,803	50,967	38,358
Items Included in Regulatory Earnings (Loss) not Permitted Under IFRS				
Fuel Costs Deferred	5,479	6,216	(143)	-
Fuel Rebates Paid	(14,790)	(15,667)	(3,757)	-
Payments to Province for Northern Fuel Deferral Account	-	-	-	-
Amortization of Deferred Costs	-	-	-	-
Tariffs in Excess of Price Cap	-	-	-	-
Net IFRS Earnings (Loss)	47,790	44,352	47,068	38,358

The increase of ferry transportation fees reflects the provincial contribution to the fare initiatives and restoration of the full discount for BC seniors. As a result of showing these contributions with ferry transportation fees, the major routes include service fees starting in fiscal 2019.

The British Columbia Ferries Commissioner has authorized the use of deferred fuel cost accounts whereby differences between actual fuel costs and approved fuel costs used to develop regulated price caps are deferred for settlement in future tariffs. Also as authorized by the Commissioner, the Company collects fuel surcharges or provides fuel rebates which are applied against deferred fuel cost account balances.



British Columbia Ferry Services Inc.
Route Statement
For the period Apr. 1 2016 to Mar. 31 2020
(in 000's)

	Rte 01			
	<u>Actual</u>		<u>Forecast</u>	
	F2017	F2018	F2019	F2020
Revenues				
Tariff and Reservation Revenue (incl. Social Program Fees)	236,724	248,432	253,457	257,154
Ancillary Revenue	29,137	31,208	30,303	31,367
Contracted Routes Fee	-	-	-	-
Total Operating Revenue	265,861	279,640	283,760	288,521
Total Operating Expenses	157,702	169,344	177,127	182,174
Earnings (Loss) from Operations	108,159	110,296	106,634	106,347
Depreciation and Amortization	(34,717)	(39,140)	(48,560)	(55,968)
Financing Expense	(14,095)	(13,095)	(16,015)	(18,803)
Cost of Capital	(48,812)	(52,235)	(64,575)	(74,771)
Gain (Loss) on Disposal and Revaluation of Capital Assets	(614)	(311)	-	-
Route Earnings (Loss) Before Ferry Service Fees & Federal Contract	58,733	57,750	42,059	31,576
Ferry Transportation Fees	-	-	5,285	6,198
Federal-Provincial Subsidy Agreement	-	-	-	-
Net Regulatory Earnings (Loss)	58,733	57,750	47,344	37,774
Items Included in Regulatory Earnings (Loss) not Permitted Under IFRS				
Fuel Costs Deferred	2,012	2,369	(54)	-
Fuel Rebates Paid	(6,787)	(7,184)	(1,787)	-
Payments to Province for Northern Fuel Deferral Account	-	-	-	-
Amortization of Deferred Costs	-	-	-	-
Tariffs in Excess of Price Cap	-	-	-	-
Net IFRS Earnings (Loss)	53,958	52,935	45,503	37,774

The increase of ferry transportation fees reflects the provincial contribution to the fare initiatives and restoration of the full discount for BC seniors. As a result of showing these contributions with ferry transportation fees, the major routes include service fees starting in fiscal 2019.

The British Columbia Ferries Commissioner has authorized the use of deferred fuel cost accounts whereby differences between actual fuel costs and approved fuel costs used to develop regulated price caps are deferred for settlement in future tariffs. Also as authorized by the Commissioner, the Company collects fuel surcharges or provides fuel rebates which are applied against deferred fuel cost account balances.



British Columbia Ferry Services Inc.
Route Statement
For the period Apr. 1 2016 to Mar. 31 2020
(in 000's)

	Rte 02			
	<u>Actual</u>		<u>Forecast</u>	
	F2017	F2018	F2019	F2020
Revenues				
Tariff and Reservation Revenue (incl. Social Program Fees)	132,840	137,541	136,601	138,533
Ancillary Revenue	14,853	15,935	15,473	16,016
Contracted Routes Fee	-	-	-	-
Total Operating Revenue	147,693	153,476	152,074	154,550
Total Operating Expenses	98,183	107,339	106,678	111,042
Earnings (Loss) from Operations	49,510	46,137	45,396	43,508
Depreciation and Amortization	(24,404)	(23,544)	(23,800)	(23,893)
Financing Expense	(7,953)	(6,509)	(6,626)	(6,432)
Cost of Capital	(32,357)	(30,053)	(30,427)	(30,325)
Gain (Loss) on Disposal and Revaluation of Capital Assets	(341)	(182)	-	-
Route Earnings (Loss) Before Ferry Service Fees & Federal Contract	16,812	15,902	14,969	13,183
Ferry Transportation Fees	-	-	3,436	3,956
Federal-Provincial Subsidy Agreement	-	-	-	-
Net Regulatory Earnings (Loss)	16,812	15,902	18,406	17,140
Items Included in Regulatory Earnings (Loss) not Permitted Under IFRS				
Fuel Costs Deferred	1,421	1,624	(37)	-
Fuel Rebates Paid	(3,789)	(4,003)	(936)	-
Payments to Province for Northern Fuel Deferral Account	-	-	-	-
Amortization of Deferred Costs	-	-	-	-
Tariffs in Excess of Price Cap	-	-	-	-
Net IFRS Earnings (Loss)	14,444	13,523	17,432	17,140

The increase of ferry transportation fees reflects the provincial contribution to the fare initiatives and restoration of the full discount for BC seniors. As a result of showing these contributions with ferry transportation fees, the major routes include service fees starting in fiscal 2019.

The British Columbia Ferries Commissioner has authorized the use of deferred fuel cost accounts whereby differences between actual fuel costs and approved fuel costs used to develop regulated price caps are deferred for settlement in future tariffs. Also as authorized by the Commissioner, the Company collects fuel surcharges or provides fuel rebates which are applied against deferred fuel cost account balances.



British Columbia Ferry Services Inc.
Route Statement
For the period Apr. 1 2016 to Mar. 31 2020
(in 000's)

	Rte 03			
	<u>Actual</u>		<u>Forecast</u>	
	F2017	F2018	F2019	F2020
Revenues				
Tariff and Reservation Revenue (incl. Social Program Fees)	50,807	53,569	44,662	45,306
Ancillary Revenue	6,327	6,940	6,739	6,975
Contracted Routes Fee	-	-	-	-
Total Operating Revenue	57,134	60,509	51,401	52,282
Total Operating Expenses	48,127	51,267	51,438	53,348
Earnings (Loss) from Operations	9,007	9,242	(37)	(1,066)
Depreciation and Amortization	(12,072)	(11,638)	(11,327)	(11,583)
Financing Expense	(3,192)	(3,158)	(3,053)	(3,038)
Cost of Capital	(15,264)	(14,796)	(14,381)	(14,620)
Gain (Loss) on Disposal and Revaluation of Capital Assets	(132)	(68)	-	-
Route Earnings (Loss) Before Ferry Service Fees & Federal Contract	(6,389)	(5,622)	(14,418)	(15,687)
Ferry Transportation Fees	-	-	4,681	5,949
Federal-Provincial Subsidy Agreement	-	-	-	-
Net Regulatory Earnings (Loss)	(6,389)	(5,622)	(9,737)	(9,737)
Items Included in Regulatory Earnings (Loss) not Permitted Under IFRS				
Fuel Costs Deferred	541	616	(14)	-
Fuel Rebates Paid	(1,493)	(1,639)	(310)	-
Payments to Province for Northern Fuel Deferral Account	-	-	-	-
Amortization of Deferred Costs	-	-	-	-
Tariffs in Excess of Price Cap	-	-	-	-
Net IFRS Earnings (Loss)	(7,341)	(6,645)	(10,061)	(9,737)

The increase of ferry transportation fees reflects the provincial contribution to the fare initiatives and restoration of the full discount for BC seniors. As a result of showing these contributions with ferry transportation fees, the major routes include service fees starting in fiscal 2019.

The British Columbia Ferries Commissioner has authorized the use of deferred fuel cost accounts whereby differences between actual fuel costs and approved fuel costs used to develop regulated price caps are deferred for settlement in future tariffs. Also as authorized by the Commissioner, the Company collects fuel surcharges or provides fuel rebates which are applied against deferred fuel cost account balances.



British Columbia Ferry Services Inc.
Route Statement
For the period Apr. 1 2016 to Mar. 31 2020
(in 000's)

	Rte 30			
	<u>Actual</u>		<u>Forecast</u>	
	F2017	F2018	F2019	F2020
Revenues				
Tariff and Reservation Revenue (incl. Social Program Fees)	94,959	98,530	101,920	103,447
Ancillary Revenue	9,086	10,018	9,728	10,069
Contracted Routes Fee	-	-	-	-
Total Operating Revenue	104,045	108,548	111,647	113,516
Total Operating Expenses	86,348	91,939	91,896	95,666
Earnings (Loss) from Operations	17,697	16,609	19,751	17,849
Depreciation and Amortization	(21,314)	(22,566)	(20,709)	(21,261)
Financing Expense	(8,198)	(8,165)	(6,267)	(5,960)
Cost of Capital	(29,512)	(30,731)	(26,976)	(27,221)
Gain (Loss) on Disposal and Revaluation of Capital Assets	(240)	(105)	-	-
Route Earnings (Loss) Before Ferry Service Fees & Federal Contract	(12,055)	(14,227)	(7,225)	(9,372)
Ferry Transportation Fees	-	-	2,179	2,554
Federal-Provincial Subsidy Agreement	-	-	-	-
Net Regulatory Earnings (Loss)	(12,055)	(14,227)	(5,046)	(6,818)
Items Included in Regulatory Earnings (Loss) not Permitted Under IFRS				
Fuel Costs Deferred	1,505	1,607	(38)	-
Fuel Rebates Paid	(2,721)	(2,841)	(724)	-
Payments to Province for Northern Fuel Deferral Account	-	-	-	-
Amortization of Deferred Costs	-	-	-	-
Tariffs in Excess of Price Cap	-	-	-	-
Net IFRS Earnings (Loss)	(13,271)	(15,461)	(5,807)	(6,818)

The increase of ferry transportation fees reflects the provincial contribution to the fare initiatives and restoration of the full discount for BC seniors. As a result of showing these contributions with ferry transportation fees, the major routes include service fees starting in fiscal 2019.

The British Columbia Ferries Commissioner has authorized the use of deferred fuel cost accounts whereby differences between actual fuel costs and approved fuel costs used to develop regulated price caps are deferred for settlement in future tariffs. Also as authorized by the Commissioner, the Company collects fuel surcharges or provides fuel rebates which are applied against deferred fuel cost account balances.



British Columbia Ferry Services Inc.
Route Statement
For the period Apr. 1 2016 to Mar. 31 2020
(in 000's)

	Route Group 2 - Northern			
	<u>Actual</u>		<u>Forecast</u>	
	F2017	F2018	F2019	F2020
Revenues				
Tariff and Reservation Revenue (incl. Social Program Fees)	16,890	17,988	15,866	17,549
Ancillary Revenue	4,196	4,582	4,489	4,647
Contracted Routes Fee	-	-	-	-
Total Operating Revenue	21,086	22,570	20,355	22,196
Total Operating Expenses	39,436	44,651	50,935	53,500
Earnings (Loss) from Operations	(18,350)	(22,081)	(30,581)	(31,304)
Depreciation and Amortization	(16,162)	(15,848)	(18,930)	(20,089)
Financing Expense	(8,616)	(7,899)	(7,576)	(8,260)
Cost of Capital	(24,778)	(23,747)	(26,507)	(28,349)
Gain (Loss) on Disposal and Revaluation of Capital Assets	(47)	(21)	-	-
Route Earnings (Loss) Before Ferry Service Fees & Federal Contract	(43,175)	(45,849)	(57,087)	(59,653)
Ferry Transportation Fees	59,209	62,575	66,966	67,432
Federal-Provincial Subsidy Agreement	7,481	7,642	7,827	7,984
Net Regulatory Earnings (Loss)	23,515	24,368	17,706	15,763
Items Included in Regulatory Earnings (Loss) not Permitted Under IFRS				
Fuel Costs Deferred	506	730	(18)	-
Fuel Rebates Paid	(333)	(373)	(119)	-
Payments to Province for Northern Fuel Deferral Account	(139)	(291)	-	-
Amortization of Deferred Costs	-	-	-	-
Tariffs in Excess of Price Cap	-	-	-	-
Net IFRS Earnings (Loss)	23,549	24,434	17,570	15,763

The increase of ferry transportation fees reflects the provincial contribution to the fare initiatives and restoration of the full discount for BC seniors. As a result of showing these contributions with ferry transportation fees, the major routes include service fees starting in fiscal 2019.

The British Columbia Ferries Commissioner has authorized the use of deferred fuel cost accounts whereby differences between actual fuel costs and approved fuel costs used to develop regulated price caps are deferred for settlement in future tariffs. Also as authorized by the Commissioner, the Company collects fuel surcharges or provides fuel rebates which are applied against deferred fuel cost account balances.



British Columbia Ferry Services Inc.
Route Statement
For the period Apr. 1 2016 to Mar. 31 2020
(in 000's)

	Rte 10			
	<u>Actual</u>		<u>Forecast</u>	
	F2017	F2018	F2019	F2020
Revenues				
Tariff and Reservation Revenue (incl. Social Program Fees)	10,764	11,614	9,877	10,036
Ancillary Revenue	2,628	2,909	2,825	2,924
Contracted Routes Fee	-	-	-	-
Total Operating Revenue	13,392	14,523	12,702	12,960
Total Operating Expenses	23,459	26,266	27,938	29,135
Earnings (Loss) from Operations	(10,067)	(11,743)	(15,237)	(16,175)
Depreciation and Amortization	(9,033)	(8,772)	(9,745)	(9,970)
Financing Expense	(5,058)	(4,500)	(2,523)	(2,811)
Cost of Capital	(14,091)	(13,272)	(12,268)	(12,780)
Gain (Loss) on Disposal and Revaluation of Capital Assets	(30)	(15)	-	-
Route Earnings (Loss) Before Ferry Service Fees & Federal Contract	(24,188)	(25,030)	(27,505)	(28,956)
Ferry Transportation Fees	32,389	35,455	33,261	33,531
Federal-Provincial Subsidy Agreement	1,454	1,485	1,521	1,551
Net Regulatory Earnings (Loss)	9,655	11,910	7,278	6,127
Items Included in Regulatory Earnings (Loss) not Permitted Under IFRS				
Fuel Costs Deferred	338	484	(5)	-
Fuel Rebates Paid	(214)	(239)	(75)	-
Payments to Province for Northern Fuel Deferral Account	(93)	(193)	-	-
Amortization of Deferred Costs	-	-	-	-
Tariffs in Excess of Price Cap	-	-	-	-
Net IFRS Earnings (Loss)	9,686	11,962	7,197	6,127

The increase of ferry transportation fees reflects the provincial contribution to the fare initiatives and restoration of the full discount for BC seniors. As a result of showing these contributions with ferry transportation fees, the major routes include service fees starting in fiscal 2019.

The British Columbia Ferries Commissioner has authorized the use of deferred fuel cost accounts whereby differences between actual fuel costs and approved fuel costs used to develop regulated price caps are deferred for settlement in future tariffs. Also as authorized by the Commissioner, the Company collects fuel surcharges or provides fuel rebates which are applied against deferred fuel cost account balances.



British Columbia Ferry Services Inc.
Route Statement
For the period Apr. 1 2016 to Mar. 31 2020
(in 000's)

	Rte 11			
	<u>Actual</u>		<u>Forecast</u>	
	F2017	F2018	F2019	F2020
Revenues				
Tariff and Reservation Revenue (incl. Social Program Fees)	6,126	6,374	5,823	5,917
Ancillary Revenue	1,568	1,673	1,624	1,682
Contracted Routes Fee	-	-	-	-
Total Operating Revenue	7,694	8,047	7,448	7,598
Total Operating Expenses	15,977	18,385	19,556	20,393
Earnings (Loss) from Operations	(8,283)	(10,338)	(12,108)	(12,795)
Depreciation and Amortization	(7,129)	(7,076)	(7,861)	(8,042)
Financing Expense	(3,558)	(3,399)	(4,552)	(4,425)
Cost of Capital	(10,687)	(10,475)	(12,413)	(12,467)
Gain (Loss) on Disposal and Revaluation of Capital Assets	(17)	(6)	-	-
Route Earnings (Loss) Before Ferry Service Fees & Federal Contract	(18,987)	(20,819)	(24,521)	(25,262)
Ferry Transportation Fees	26,820	27,120	27,580	27,734
Federal-Provincial Subsidy Agreement	6,027	6,157	6,306	6,432
Net Regulatory Earnings (Loss)	13,860	12,458	9,365	8,904
Items Included in Regulatory Earnings (Loss) not Permitted Under IFRS				
Fuel Costs Deferred	168	246	(11)	-
Fuel Rebates Paid	(119)	(134)	(42)	-
Payments to Province for Northern Fuel Deferral Account	(46)	(98)	-	-
Amortization of Deferred Costs	-	-	-	-
Tariffs in Excess of Price Cap	-	-	-	-
Net IFRS Earnings (Loss)	13,863	12,472	9,312	8,904

The increase of ferry transportation fees reflects the provincial contribution to the fare initiatives and restoration of the full discount for BC seniors. As a result of showing these contributions with ferry transportation fees, the major routes include service fees starting in fiscal 2019.

The British Columbia Ferries Commissioner has authorized the use of deferred fuel cost accounts whereby differences between actual fuel costs and approved fuel costs used to develop regulated price caps are deferred for settlement in future tariffs. Also as authorized by the Commissioner, the Company collects fuel surcharges or provides fuel rebates which are applied against deferred fuel cost account balances.



British Columbia Ferry Services Inc.
Route Statement
For the period Apr. 1 2016 to Mar. 31 2020
(in 000's)

	Rte 28			
	<u>Actual</u>		<u>Forecast</u>	
	F2017	F2018	F2019	F2020
Revenues				
Tariff and Reservation Revenue (incl. Social Program Fees)			165	1,597
Ancillary Revenue			40	41
Contracted Routes Fee			-	-
Total Operating Revenue			205	1,638
Total Operating Expenses			3,441	3,973
Earnings (Loss) from Operations				
Depreciation and Amortization			(1,325)	(2,077)
Financing Expense			(501)	(1,024)
Cost of Capital			(1,826)	(3,101)
Gain (Loss) on Disposal and Revaluation of Capital Assets			-	-
Route Earnings (Loss) Before Ferry Service Fees & Federal Contract			(1,826)	(3,101)
Ferry Transportation Fees			6,125	6,167
Federal-Provincial Subsidy Agreement			-	-
Net Regulatory Earnings (Loss)			4,299	3,066
Items Included in Regulatory Earnings (Loss) not Permitted Under IFRS				
Fuel Costs Deferred			(1)	-
Fuel Rebates Paid			(1)	-
Payments to Province for Northern Fuel Deferral Account			-	-
Amortization of Deferred Costs			-	-
Tariffs in Excess of Price Cap			-	-
Net IFRS Earnings (Loss)			4,297	3,066

The increase of ferry transportation fees reflects the provincial contribution to the fare initiatives and restoration of the full discount for BC seniors. As a result of showing these contributions with ferry transportation fees, the major routes include service fees starting in fiscal 2019.

The British Columbia Ferries Commissioner has authorized the use of deferred fuel cost accounts whereby differences between actual fuel costs and approved fuel costs used to develop regulated price caps are deferred for settlement in future tariffs. Also as authorized by the Commissioner, the Company collects fuel surcharges or provides fuel rebates which are applied against deferred fuel cost account balances.



British Columbia Ferry Services Inc.
Route Statement
For the period Apr. 1 2016 to Mar. 31 2020
(in 000's)

	Route Group 3 - Minors			
	<u>Actual</u>		<u>Forecast</u>	
	F2017	F2018	F2019	F2020
Revenues				
Tariff and Reservation Revenue (incl. Social Program Fees)	93,420	101,506	85,391	86,758
Ancillary Revenue	5,429	6,420	6,234	6,453
Contracted Routes Fee	-	-	-	-
Total Operating Revenue	98,849	107,926	91,625	93,211
Total Operating Expenses	152,159	163,862	162,994	170,663
Earnings (Loss) from Operations	(53,310)	(55,936)	(71,370)	(77,453)
Depreciation and Amortization	(40,283)	(47,180)	(50,194)	(50,383)
Financing Expense	(16,705)	(21,852)	(20,075)	(20,735)
Cost of Capital	(56,988)	(69,032)	(70,269)	(71,118)
Gain (Loss) on Disposal and Revaluation of Capital Assets	(214)	(491)	-	-
Route Earnings (Loss) Before Ferry Service Fees & Federal Contract	(110,512)	(125,459)	(141,639)	(148,571)
Ferry Transportation Fees	96,168	96,168	105,696	108,154
Federal-Provincial Subsidy Agreement	21,677	22,140	22,677	23,130
Net Regulatory Earnings (Loss)	7,333	(7,151)	(13,267)	(17,287)
Items Included in Regulatory Earnings (Loss) not Permitted Under IFRS				
Fuel Costs Deferred	1,639	1,684	(39)	-
Fuel Rebates Paid	(2,945)	(3,346)	(625)	-
Payments to Province for Northern Fuel Deferral Account	-	-	-	-
Amortization of Deferred Costs	-	-	-	-
Tariffs in Excess of Price Cap	-	-	-	-
Net IFRS Earnings (Loss)	6,027	(8,813)	(13,931)	(17,287)

The increase of ferry transportation fees reflects the provincial contribution to the fare initiatives and restoration of the full discount for BC seniors. As a result of showing these contributions with ferry transportation fees, the major routes include service fees starting in fiscal 2019.

The British Columbia Ferries Commissioner has authorized the use of deferred fuel cost accounts whereby differences between actual fuel costs and approved fuel costs used to develop regulated price caps are deferred for settlement in future tariffs. Also as authorized by the Commissioner, the Company collects fuel surcharges or provides fuel rebates which are applied against deferred fuel cost account balances.



British Columbia Ferry Services Inc.
Route Statement
For the period Apr. 1 2016 to Mar. 31 2020
(in 000's)

	Rte 04			
	<u>Actual</u>		<u>Forecast</u>	
	F2017	F2018	F2019	F2020
Revenues				
Tariff and Reservation Revenue (incl. Social Program Fees)	7,603	8,126	6,677	6,785
Ancillary Revenue	286	300	291	302
Contracted Routes Fee	-	-	-	-
Total Operating Revenue	7,889	8,426	6,968	7,086
Total Operating Expenses	10,880	10,172	11,362	11,855
Earnings (Loss) from Operations	(2,991)	(1,746)	(4,394)	(4,769)
Depreciation and Amortization	(2,147)	(1,982)	(1,812)	(1,837)
Financing Expense	(914)	(870)	(716)	(680)
Cost of Capital	(3,061)	(2,852)	(2,528)	(2,516)
Gain (Loss) on Disposal and Revaluation of Capital Assets	(19)	15	-	-
Route Earnings (Loss) Before Ferry Service Fees & Federal Contract	(6,071)	(4,583)	(6,922)	(7,285)
Ferry Transportation Fees	2,835	2,835	3,581	3,778
Federal-Provincial Subsidy Agreement	1,285	1,312	1,344	1,371
Net Regulatory Earnings (Loss)	(1,951)	(436)	(1,998)	(2,136)
Items Included in Regulatory Earnings (Loss) not Permitted Under IFRS				
Fuel Costs Deferred	131	130	(3)	-
Fuel Rebates Paid	(244)	(275)	(49)	-
Payments to Province for Northern Fuel Deferral Account	-	-	-	-
Amortization of Deferred Costs	-	-	-	-
Tariffs in Excess of Price Cap	-	-	-	-
Net IFRS Earnings (Loss)	(2,064)	(581)	(2,050)	(2,136)

The increase of ferry transportation fees reflects the provincial contribution to the fare initiatives and restoration of the full discount for BC seniors. As a result of showing these contributions with ferry transportation fees, the major routes include service fees starting in fiscal 2019.

The British Columbia Ferries Commissioner has authorized the use of deferred fuel cost accounts whereby differences between actual fuel costs and approved fuel costs used to develop regulated price caps are deferred for settlement in future tariffs. Also as authorized by the Commissioner, the Company collects fuel surcharges or provides fuel rebates which are applied against deferred fuel cost account balances.



British Columbia Ferry Services Inc.
Route Statement
For the period Apr. 1 2016 to Mar. 31 2020
(in 000's)

	Rte 05			
	<u>Actual</u>		<u>Forecast</u>	
	F2017	F2018	F2019	F2020
Revenues				
Tariff and Reservation Revenue (incl. Social Program Fees)	6,709	6,960	6,727	6,834
Ancillary Revenue	419	460	447	462
Contracted Routes Fee	-	-	-	-
Total Operating Revenue	7,128	7,420	7,173	7,296
Total Operating Expenses	19,562	19,900	21,541	22,428
Earnings (Loss) from Operations	(12,434)	(12,480)	(14,368)	(15,131)
Depreciation and Amortization	(4,486)	(4,450)	(5,791)	(6,029)
Financing Expense	(1,732)	(1,557)	(1,732)	(1,659)
Cost of Capital	(6,218)	(6,007)	(7,523)	(7,688)
Gain (Loss) on Disposal and Revaluation of Capital Assets	(16)	(11)	-	-
Route Earnings (Loss) Before Ferry Service Fees & Federal Contract	(18,668)	(18,498)	(21,891)	(22,819)
Ferry Transportation Fees	17,683	17,683	18,336	18,513
Federal-Provincial Subsidy Agreement	4,045	4,131	4,231	4,316
Net Regulatory Earnings (Loss)	3,060	3,316	677	9
Items Included in Regulatory Earnings (Loss) not Permitted Under IFRS				
Fuel Costs Deferred	326	356	(9)	-
Fuel Rebates Paid	(204)	(237)	(43)	-
Payments to Province for Northern Fuel Deferral Account	-	-	-	-
Amortization of Deferred Costs	-	-	-	-
Tariffs in Excess of Price Cap	-	-	-	-
Net IFRS Earnings (Loss)	3,182	3,435	624	9

The increase of ferry transportation fees reflects the provincial contribution to the fare initiatives and restoration of the full discount for BC seniors. As a result of showing these contributions with ferry transportation fees, the major routes include service fees starting in fiscal 2019.

The British Columbia Ferries Commissioner has authorized the use of deferred fuel cost accounts whereby differences between actual fuel costs and approved fuel costs used to develop regulated price caps are deferred for settlement in future tariffs. Also as authorized by the Commissioner, the Company collects fuel surcharges or provides fuel rebates which are applied against deferred fuel cost account balances.



British Columbia Ferry Services Inc.
Route Statement
For the period Apr. 1 2016 to Mar. 31 2020
(in 000's)

	Rte 06			
	<u>Actual</u>		<u>Forecast</u>	
	F2017	F2018	F2019	F2020
Revenues				
Tariff and Reservation Revenue (incl. Social Program Fees)	5,906	6,346	5,261	5,342
Ancillary Revenue	37	49	48	49
Contracted Routes Fee	-	-	-	-
Total Operating Revenue	5,943	6,395	5,309	5,392
Total Operating Expenses	5,651	6,632	6,410	6,792
Earnings (Loss) from Operations	292	(237)	(1,102)	(1,400)
Depreciation and Amortization	(1,691)	(2,266)	(1,265)	(850)
Financing Expense	(243)	(392)	(142)	(117)
Cost of Capital	(1,934)	(2,658)	(1,407)	(967)
Gain (Loss) on Disposal and Revaluation of Capital Assets	(14)	(7)	-	-
Route Earnings (Loss) Before Ferry Service Fees & Federal Contract	(1,656)	(2,902)	(2,509)	(2,368)
Ferry Transportation Fees	2,835	2,835	3,414	3,560
Federal-Provincial Subsidy Agreement	12	12	12	13
Net Regulatory Earnings (Loss)	1,191	(55)	917	1,205
Items Included in Regulatory Earnings (Loss) not Permitted Under IFRS				
Fuel Costs Deferred	24	28	(1)	-
Fuel Rebates Paid	(193)	(215)	(39)	-
Payments to Province for Northern Fuel Deferral Account	-	-	-	-
Amortization of Deferred Costs	-	-	-	-
Tariffs in Excess of Price Cap	-	-	-	-
Net IFRS Earnings (Loss)	1,022	(242)	877	1,205

The increase of ferry transportation fees reflects the provincial contribution to the fare initiatives and restoration of the full discount for BC seniors. As a result of showing these contributions with ferry transportation fees, the major routes include service fees starting in fiscal 2019.

The British Columbia Ferries Commissioner has authorized the use of deferred fuel cost accounts whereby differences between actual fuel costs and approved fuel costs used to develop regulated price caps are deferred for settlement in future tariffs. Also as authorized by the Commissioner, the Company collects fuel surcharges or provides fuel rebates which are applied against deferred fuel cost account balances.



British Columbia Ferry Services Inc.
Route Statement
For the period Apr. 1 2016 to Mar. 31 2020
(in 000's)

	Rte 07			
	<u>Actual</u>		<u>Forecast</u>	
	F2017	F2018	F2019	F2020
Revenues				
Tariff and Reservation Revenue (incl. Social Program Fees)	7,305	7,782	6,488	6,593
Ancillary Revenue	460	523	508	526
Contracted Routes Fee	-	-	-	-
Total Operating Revenue	7,765	8,305	6,996	7,119
Total Operating Expenses	12,858	14,377	14,046	14,642
Earnings (Loss) from Operations	(5,093)	(6,072)	(7,050)	(7,524)
Depreciation and Amortization	(3,560)	(3,825)	(3,680)	(3,243)
Financing Expense	(1,871)	(1,698)	(1,464)	(1,392)
Cost of Capital	(5,431)	(5,523)	(5,144)	(4,635)
Gain (Loss) on Disposal and Revaluation of Capital Assets	(17)	(9)	-	-
Route Earnings (Loss) Before Ferry Service Fees & Federal Contract	(10,541)	(11,604)	(12,194)	(12,158)
Ferry Transportation Fees	11,731	11,731	12,385	12,573
Federal-Provincial Subsidy Agreement	2,683	2,741	2,807	2,864
Net Regulatory Earnings (Loss)	3,873	2,868	2,998	3,278
Items Included in Regulatory Earnings (Loss) not Permitted Under IFRS				
Fuel Costs Deferred	185	207	(5)	-
Fuel Rebates Paid	(231)	(253)	(49)	-
Payments to Province for Northern Fuel Deferral Account	-	-	-	-
Amortization of Deferred Costs	-	-	-	-
Tariffs in Excess of Price Cap	-	-	-	-
Net IFRS Earnings (Loss)	3,827	2,822	2,944	3,278

The increase of ferry transportation fees reflects the provincial contribution to the fare initiatives and restoration of the full discount for BC seniors. As a result of showing these contributions with ferry transportation fees, the major routes include service fees starting in fiscal 2019.

The British Columbia Ferries Commissioner has authorized the use of deferred fuel cost accounts whereby differences between actual fuel costs and approved fuel costs used to develop regulated price caps are deferred for settlement in future tariffs. Also as authorized by the Commissioner, the Company collects fuel surcharges or provides fuel rebates which are applied against deferred fuel cost account balances.



British Columbia Ferry Services Inc.
Route Statement
For the period Apr. 1 2016 to Mar. 31 2020
(in 000's)

	Rte 08			
	<u>Actual</u>		<u>Forecast</u>	
	F2017	F2018	F2019	F2020
Revenues				
Tariff and Reservation Revenue (incl. Social Program Fees)	11,282	12,151	10,164	10,329
Ancillary Revenue	534	582	565	585
Contracted Routes Fee	-	-	-	-
Total Operating Revenue	11,816	12,733	10,729	10,914
Total Operating Expenses	12,763	15,192	14,323	14,948
Earnings (Loss) from Operations	(947)	(2,459)	(3,593)	(4,035)
Depreciation and Amortization	(3,429)	(3,786)	(4,032)	(4,067)
Financing Expense	(1,571)	(1,410)	(1,263)	(1,204)
Cost of Capital	(5,000)	(5,196)	(5,296)	(5,271)
Gain (Loss) on Disposal and Revaluation of Capital Assets	(14)	(14)	-	-
Route Earnings (Loss) Before Ferry Service Fees & Federal Contract	(5,961)	(7,669)	(8,889)	(9,306)
Ferry Transportation Fees	5,957	5,957	7,038	7,324
Federal-Provincial Subsidy Agreement	1,363	1,392	1,426	1,454
Net Regulatory Earnings (Loss)	1,359	(320)	(425)	(527)
Items Included in Regulatory Earnings (Loss) not Permitted Under IFRS				
Fuel Costs Deferred	181	188	(5)	-
Fuel Rebates Paid	(356)	(393)	(75)	-
Payments to Province for Northern Fuel Deferral Account	-	-	-	-
Amortization of Deferred Costs	-	-	-	-
Tariffs in Excess of Price Cap	-	-	-	-
Net IFRS Earnings (Loss)	1,184	(525)	(505)	(527)

The increase of ferry transportation fees reflects the provincial contribution to the fare initiatives and restoration of the full discount for BC seniors. As a result of showing these contributions with ferry transportation fees, the major routes include service fees starting in fiscal 2019.

The British Columbia Ferries Commissioner has authorized the use of deferred fuel cost accounts whereby differences between actual fuel costs and approved fuel costs used to develop regulated price caps are deferred for settlement in future tariffs. Also as authorized by the Commissioner, the Company collects fuel surcharges or provides fuel rebates which are applied against deferred fuel cost account balances.



British Columbia Ferry Services Inc.
Route Statement
For the period Apr. 1 2016 to Mar. 31 2020
(in 000's)

	Rte 09			
	<u>Actual</u>		<u>Forecast</u>	
	F2017	F2018	F2019	F2020
Revenues				
Tariff and Reservation Revenue (incl. Social Program Fees)	14,377	16,617	14,171	14,397
Ancillary Revenue	1,781	2,220	2,156	2,231
Contracted Routes Fee	-	-	-	-
Total Operating Revenue	16,158	18,837	16,327	16,628
Total Operating Expenses	20,026	24,737	22,280	23,221
Earnings (Loss) from Operations	(3,868)	(5,900)	(5,953)	(6,593)
Depreciation and Amortization	(4,480)	(6,319)	(7,443)	(7,505)
Financing Expense	(472)	(4,143)	(4,310)	(4,187)
Cost of Capital	(4,952)	(10,462)	(11,752)	(11,692)
Gain (Loss) on Disposal and Revaluation of Capital Assets	(37)	(415)	-	-
Route Earnings (Loss) Before Ferry Service Fees & Federal Contract	(8,857)	(16,777)	(17,705)	(18,285)
Ferry Transportation Fees	10,359	10,359	11,934	12,354
Federal-Provincial Subsidy Agreement	2,369	2,420	2,479	2,528
Net Regulatory Earnings (Loss)	3,871	(3,998)	(3,293)	(3,403)
Items Included in Regulatory Earnings (Loss) not Permitted Under IFRS				
Fuel Costs Deferred	248	268	(4)	-
Fuel Rebates Paid	(431)	(509)	(105)	-
Payments to Province for Northern Fuel Deferral Account	-	-	-	-
Amortization of Deferred Costs	-	-	-	-
Tariffs in Excess of Price Cap	-	-	-	-
Net IFRS Earnings (Loss)	3,688	(4,239)	(3,401)	(3,403)

The increase of ferry transportation fees reflects the provincial contribution to the fare initiatives and restoration of the full discount for BC seniors. As a result of showing these contributions with ferry transportation fees, the major routes include service fees starting in fiscal 2019.

The British Columbia Ferries Commissioner has authorized the use of deferred fuel cost accounts whereby differences between actual fuel costs and approved fuel costs used to develop regulated price caps are deferred for settlement in future tariffs. Also as authorized by the Commissioner, the Company collects fuel surcharges or provides fuel rebates which are applied against deferred fuel cost account balances.



British Columbia Ferry Services Inc.
Route Statement
For the period Apr. 1 2016 to Mar. 31 2020
(in 000's)

	Rte 12			
	<u>Actual</u>		<u>Forecast</u>	
	F2017	F2018	F2019	F2020
Revenues				
Tariff and Reservation Revenue (incl. Social Program Fees)	2,209	2,465	2,113	2,148
Ancillary Revenue	16	23	22	23
Contracted Routes Fee	-	-	-	-
Total Operating Revenue	2,225	2,488	2,136	2,171
Total Operating Expenses	2,608	2,712	2,620	2,809
Earnings (Loss) from Operations	(383)	(224)	(484)	(638)
Depreciation and Amortization	(843)	(865)	(869)	(1,174)
Financing Expense	(189)	(149)	(124)	(181)
Cost of Capital	(1,032)	(1,014)	(992)	(1,356)
Gain (Loss) on Disposal and Revaluation of Capital Assets	(5)	(3)	-	-
Route Earnings (Loss) Before Ferry Service Fees & Federal Contract	(1,420)	(1,241)	(1,477)	(1,994)
Ferry Transportation Fees	1,410	1,410	1,698	1,765
Federal-Provincial Subsidy Agreement	-	-	-	-
Net Regulatory Earnings (Loss)	(10)	169	222	(229)
Items Included in Regulatory Earnings (Loss) not Permitted Under IFRS				
Fuel Costs Deferred	14	15	()	-
Fuel Rebates Paid	(85)	(101)	(16)	-
Payments to Province for Northern Fuel Deferral Account	-	-	-	-
Amortization of Deferred Costs	-	-	-	-
Tariffs in Excess of Price Cap	-	-	-	-
Net IFRS Earnings (Loss)	(81)	83	205	(229)

The increase of ferry transportation fees reflects the provincial contribution to the fare initiatives and restoration of the full discount for BC seniors. As a result of showing these contributions with ferry transportation fees, the major routes include service fees starting in fiscal 2019.

The British Columbia Ferries Commissioner has authorized the use of deferred fuel cost accounts whereby differences between actual fuel costs and approved fuel costs used to develop regulated price caps are deferred for settlement in future tariffs. Also as authorized by the Commissioner, the Company collects fuel surcharges or provides fuel rebates which are applied against deferred fuel cost account balances.



British Columbia Ferry Services Inc.
Route Statement
For the period Apr. 1 2016 to Mar. 31 2020
(in 000's)

	Rte 13			
	<u>Actual</u>		<u>Forecast</u>	
	F2017	F2018	F2019	F2020
Revenues				
Tariff and Reservation Revenue (incl. Social Program Fees)	195	208	153	155
Ancillary Revenue	19	19	18	19
Contracted Routes Fee	-	-	-	-
Total Operating Revenue	214	227	171	174
Total Operating Expenses	611	614	624	638
Earnings (Loss) from Operations	(397)	(387)	(452)	(463)
Depreciation and Amortization	(6)	(8)	(7)	(8)
Financing Expense	-	-	(2)	(2)
Cost of Capital	(6)	(8)	(9)	(10)
Gain (Loss) on Disposal and Revaluation of Capital Assets	-	-	-	-
Route Earnings (Loss) Before Ferry Service Fees & Federal Contract	(403)	(395)	(462)	(474)
Ferry Transportation Fees	322	322	361	367
Federal-Provincial Subsidy Agreement	72	75	77	78
Net Regulatory Earnings (Loss)	(9)	2	(24)	(28)
Items Included in Regulatory Earnings (Loss) not Permitted Under IFRS				
Fuel Costs Deferred	(8)	(12)	-	-
Fuel Rebates Paid	(7)	(7)	(1)	-
Payments to Province for Northern Fuel Deferral Account	-	-	-	-
Amortization of Deferred Costs	-	-	-	-
Tariffs in Excess of Price Cap	-	-	-	-
Net IFRS Earnings (Loss)	(24)	(17)	(25)	(28)

The increase of ferry transportation fees reflects the provincial contribution to the fare initiatives and restoration of the full discount for BC seniors. As a result of showing these contributions with ferry transportation fees, the major routes include service fees starting in fiscal 2019.

The British Columbia Ferries Commissioner has authorized the use of deferred fuel cost accounts whereby differences between actual fuel costs and approved fuel costs used to develop regulated price caps are deferred for settlement in future tariffs. Also as authorized by the Commissioner, the Company collects fuel surcharges or provides fuel rebates which are applied against deferred fuel cost account balances.



British Columbia Ferry Services Inc.
Route Statement
For the period Apr. 1 2016 to Mar. 31 2020
(in 000's)

	Rte 17			
	<u>Actual</u>		<u>Forecast</u>	
	F2017	F2018	F2019	F2020
Revenues				
Tariff and Reservation Revenue (incl. Social Program Fees)	12,453	13,497	11,585	11,767
Ancillary Revenue	928	1,319	1,281	1,326
Contracted Routes Fee	-	-	-	-
Total Operating Revenue	13,381	14,816	12,866	13,093
Total Operating Expenses	17,607	17,235	16,339	17,056
Earnings (Loss) from Operations	(4,226)	(2,419)	(3,474)	(3,963)
Depreciation and Amortization	(1,458)	(5,273)	(5,633)	(5,725)
Financing Expense	(1,184)	(4,000)	(3,551)	(3,507)
Cost of Capital	(2,642)	(9,273)	(9,184)	(9,232)
Gain (Loss) on Disposal and Revaluation of Capital Assets	(31)	(16)	-	-
Route Earnings (Loss) Before Ferry Service Fees & Federal Contract	(6,899)	(11,708)	(12,658)	(13,195)
Ferry Transportation Fees	8,121	8,121	9,275	9,593
Federal-Provincial Subsidy Agreement	1,858	1,898	1,944	1,983
Net Regulatory Earnings (Loss)	3,080	(1,689)	(1,439)	(1,620)
Items Included in Regulatory Earnings (Loss) not Permitted Under IFRS				
Fuel Costs Deferred	194	136	(3)	-
Fuel Rebates Paid	(385)	(452)	(84)	-
Payments to Province for Northern Fuel Deferral Account	-	-	-	-
Amortization of Deferred Costs	-	-	-	-
Tariffs in Excess of Price Cap	-	-	-	-
Net IFRS Earnings (Loss)	2,889	(2,005)	(1,526)	(1,620)

The increase of ferry transportation fees reflects the provincial contribution to the fare initiatives and restoration of the full discount for BC seniors. As a result of showing these contributions with ferry transportation fees, the major routes include service fees starting in fiscal 2019.

The British Columbia Ferries Commissioner has authorized the use of deferred fuel cost accounts whereby differences between actual fuel costs and approved fuel costs used to develop regulated price caps are deferred for settlement in future tariffs. Also as authorized by the Commissioner, the Company collects fuel surcharges or provides fuel rebates which are applied against deferred fuel cost account balances.



British Columbia Ferry Services Inc.
Route Statement
For the period Apr. 1 2016 to Mar. 31 2020
(in 000's)

	Rte 18			
	<u>Actual</u>		<u>Forecast</u>	
	F2017	F2018	F2019	F2020
Revenues				
Tariff and Reservation Revenue (incl. Social Program Fees)	1,463	1,607	1,334	1,356
Ancillary Revenue	101	114	111	115
Contracted Routes Fee	-	-	-	-
Total Operating Revenue	1,564	1,721	1,445	1,471
Total Operating Expenses	5,079	5,961	5,443	5,757
Earnings (Loss) from Operations	(3,515)	(4,240)	(3,998)	(4,286)
Depreciation and Amortization	(1,452)	(2,015)	(1,760)	(1,287)
Financing Expense	(457)	(600)	(421)	(1,505)
Cost of Capital	(1,909)	(2,615)	(2,182)	(2,792)
Gain (Loss) on Disposal and Revaluation of Capital Assets	(4)	(2)	-	-
Route Earnings (Loss) Before Ferry Service Fees & Federal Contract	(5,428)	(6,857)	(6,179)	(7,078)
Ferry Transportation Fees	4,531	4,531	4,703	4,741
Federal-Provincial Subsidy Agreement	1,036	1,058	1,084	1,105
Net Regulatory Earnings (Loss)	139	(1,268)	(393)	(1,232)
Items Included in Regulatory Earnings (Loss) not Permitted Under IFRS				
Fuel Costs Deferred	36	39	(1)	-
Fuel Rebates Paid	(49)	(59)	(10)	-
Payments to Province for Northern Fuel Deferral Account	-	-	-	-
Amortization of Deferred Costs	-	-	-	-
Tariffs in Excess of Price Cap	-	-	-	-
Net IFRS Earnings (Loss)	126	(1,288)	(404)	(1,232)

The increase of ferry transportation fees reflects the provincial contribution to the fare initiatives and restoration of the full discount for BC seniors. As a result of showing these contributions with ferry transportation fees, the major routes include service fees starting in fiscal 2019.

The British Columbia Ferries Commissioner has authorized the use of deferred fuel cost accounts whereby differences between actual fuel costs and approved fuel costs used to develop regulated price caps are deferred for settlement in future tariffs. Also as authorized by the Commissioner, the Company collects fuel surcharges or provides fuel rebates which are applied against deferred fuel cost account balances.



British Columbia Ferry Services Inc.
Route Statement
For the period Apr. 1 2016 to Mar. 31 2020
(in 000's)

	Rte 19			
	<u>Actual</u>		<u>Forecast</u>	
	F2017	F2018	F2019	F2020
Revenues				
Tariff and Reservation Revenue (incl. Social Program Fees)	6,317	6,790	5,481	5,570
Ancillary Revenue	83	89	86	89
Contracted Routes Fee	-	-	-	-
Total Operating Revenue	6,400	6,879	5,568	5,659
Total Operating Expenses	7,144	8,267	7,893	8,330
Earnings (Loss) from Operations	(744)	(1,388)	(2,325)	(2,671)
Depreciation and Amortization	(2,143)	(2,977)	(2,433)	(2,465)
Financing Expense	(712)	(649)	(587)	(523)
Cost of Capital	(2,855)	(3,626)	(3,020)	(2,988)
Gain (Loss) on Disposal and Revaluation of Capital Assets	(15)	(8)	-	-
Route Earnings (Loss) Before Ferry Service Fees & Federal Contract	(3,614)	(5,022)	(5,345)	(5,659)
Ferry Transportation Fees	3,003	3,003	3,766	3,934
Federal-Provincial Subsidy Agreement	687	701	718	732
Net Regulatory Earnings (Loss)	76	(1,318)	(861)	(993)
Items Included in Regulatory Earnings (Loss) not Permitted Under IFRS				
Fuel Costs Deferred	62	69	(2)	-
Fuel Rebates Paid	(193)	(217)	(40)	-
Payments to Province for Northern Fuel Deferral Account	-	-	-	-
Amortization of Deferred Costs	-	-	-	-
Tariffs in Excess of Price Cap	-	-	-	-
Net IFRS Earnings (Loss)	(55)	(1,466)	(903)	(993)

The increase of ferry transportation fees reflects the provincial contribution to the fare initiatives and restoration of the full discount for BC seniors. As a result of showing these contributions with ferry transportation fees, the major routes include service fees starting in fiscal 2019.

The British Columbia Ferries Commissioner has authorized the use of deferred fuel cost accounts whereby differences between actual fuel costs and approved fuel costs used to develop regulated price caps are deferred for settlement in future tariffs. Also as authorized by the Commissioner, the Company collects fuel surcharges or provides fuel rebates which are applied against deferred fuel cost account balances.



British Columbia Ferry Services Inc.
Route Statement
For the period Apr. 1 2016 to Mar. 31 2020
(in 000's)

	Rte 20			
	<u>Actual</u>		<u>Forecast</u>	
	F2017	F2018	F2019	F2020
Revenues				
Tariff and Reservation Revenue (incl. Social Program Fees)	1,640	1,716	1,402	1,424
Ancillary Revenue	35	34	33	34
Contracted Routes Fee	-	-	-	-
Total Operating Revenue	1,675	1,750	1,435	1,458
Total Operating Expenses	4,130	4,343	5,039	5,321
Earnings (Loss) from Operations	(2,455)	(2,593)	(3,604)	(3,863)
Depreciation and Amortization	(973)	(984)	(1,483)	(1,957)
Financing Expense	(402)	(367)	(468)	(625)
Cost of Capital	(1,375)	(1,351)	(1,951)	(2,582)
Gain (Loss) on Disposal and Revaluation of Capital Assets	(4)	(2)	-	-
Route Earnings (Loss) Before Ferry Service Fees & Federal Contract	(3,834)	(3,946)	(5,555)	(6,445)
Ferry Transportation Fees	4,458	4,458	4,628	4,668
Federal-Provincial Subsidy Agreement	1,020	1,042	1,067	1,089
Net Regulatory Earnings (Loss)	1,644	1,554	140	(689)
Items Included in Regulatory Earnings (Loss) not Permitted Under IFRS				
Fuel Costs Deferred	28	32	(1)	-
Fuel Rebates Paid	(53)	(56)	(10)	-
Payments to Province for Northern Fuel Deferral Account	-	-	-	-
Amortization of Deferred Costs	-	-	-	-
Tariffs in Excess of Price Cap	-	-	-	-
Net IFRS Earnings (Loss)	1,619	1,530	129	(689)

The increase of ferry transportation fees reflects the provincial contribution to the fare initiatives and restoration of the full discount for BC seniors. As a result of showing these contributions with ferry transportation fees, the major routes include service fees starting in fiscal 2019.

The British Columbia Ferries Commissioner has authorized the use of deferred fuel cost accounts whereby differences between actual fuel costs and approved fuel costs used to develop regulated price caps are deferred for settlement in future tariffs. Also as authorized by the Commissioner, the Company collects fuel surcharges or provides fuel rebates which are applied against deferred fuel cost account balances.



British Columbia Ferry Services Inc.
Route Statement
For the period Apr. 1 2016 to Mar. 31 2020
(in 000's)

	Rte 21			
	<u>Actual</u>		<u>Forecast</u>	
	F2017	F2018	F2019	F2020
Revenues				
Tariff and Reservation Revenue (incl. Social Program Fees)	3,793	4,107	3,344	3,398
Ancillary Revenue	176	175	170	176
Contracted Routes Fee	-	-	-	-
Total Operating Revenue	3,969	4,282	3,514	3,574
Total Operating Expenses	5,789	5,553	5,334	5,620
Earnings (Loss) from Operations	(1,820)	(1,271)	(1,820)	(2,046)
Depreciation and Amortization	(2,898)	(2,767)	(2,387)	(2,359)
Financing Expense	(2,010)	(1,858)	(1,432)	(1,388)
Cost of Capital	(4,908)	(4,625)	(3,819)	(3,747)
Gain (Loss) on Disposal and Revaluation of Capital Assets	(9)	(4)	-	-
Route Earnings (Loss) Before Ferry Service Fees & Federal Contract	(6,737)	(5,900)	(5,640)	(5,793)
Ferry Transportation Fees	4,282	4,282	4,726	4,827
Federal-Provincial Subsidy Agreement	980	1,001	1,025	1,046
Net Regulatory Earnings (Loss)	(1,475)	(617)	111	80
Items Included in Regulatory Earnings (Loss) not Permitted Under IFRS				
Fuel Costs Deferred	12	13	()	-
Fuel Rebates Paid	(123)	(138)	(25)	-
Payments to Province for Northern Fuel Deferral Account	-	-	-	-
Amortization of Deferred Costs	-	-	-	-
Tariffs in Excess of Price Cap	-	-	-	-
Net IFRS Earnings (Loss)	(1,586)	(742)	86	80

The increase of ferry transportation fees reflects the provincial contribution to the fare initiatives and restoration of the full discount for BC seniors. As a result of showing these contributions with ferry transportation fees, the major routes include service fees starting in fiscal 2019.

The British Columbia Ferries Commissioner has authorized the use of deferred fuel cost accounts whereby differences between actual fuel costs and approved fuel costs used to develop regulated price caps are deferred for settlement in future tariffs. Also as authorized by the Commissioner, the Company collects fuel surcharges or provides fuel rebates which are applied against deferred fuel cost account balances.



British Columbia Ferry Services Inc.
Route Statement
For the period Apr. 1 2016 to Mar. 31 2020
(in 000's)

	Rte 22			
	<u>Actual</u>		<u>Forecast</u>	
	F2017	F2018	F2019	F2020
Revenues				
Tariff and Reservation Revenue (incl. Social Program Fees)	1,688	1,774	1,414	1,437
Ancillary Revenue	105	120	117	121
Contracted Routes Fee	-	-	-	-
Total Operating Revenue	1,793	1,894	1,531	1,558
Total Operating Expenses	3,980	3,407	3,875	4,118
Earnings (Loss) from Operations	(2,187)	(1,513)	(2,344)	(2,560)
Depreciation and Amortization	(1,963)	(1,397)	(2,622)	(2,631)
Financing Expense	(1,028)	(842)	(908)	(883)
Cost of Capital	(2,991)	(2,239)	(3,530)	(3,514)
Gain (Loss) on Disposal and Revaluation of Capital Assets	(4)	(2)	-	-
Route Earnings (Loss) Before Ferry Service Fees & Federal Contract	(5,182)	(3,754)	(5,874)	(6,075)
Ferry Transportation Fees	3,582	3,582	3,746	3,790
Federal-Provincial Subsidy Agreement	820	837	857	874
Net Regulatory Earnings (Loss)	(780)	665	(1,271)	(1,410)
Items Included in Regulatory Earnings (Loss) not Permitted Under IFRS				
Fuel Costs Deferred	14	11	()	-
Fuel Rebates Paid	(55)	(57)	(11)	-
Payments to Province for Northern Fuel Deferral Account	-	-	-	-
Amortization of Deferred Costs	-	-	-	-
Tariffs in Excess of Price Cap	-	-	-	-
Net IFRS Earnings (Loss)	(821)	619	(1,282)	(1,410)

The increase of ferry transportation fees reflects the provincial contribution to the fare initiatives and restoration of the full discount for BC seniors. As a result of showing these contributions with ferry transportation fees, the major routes include service fees starting in fiscal 2019.

The British Columbia Ferries Commissioner has authorized the use of deferred fuel cost accounts whereby differences between actual fuel costs and approved fuel costs used to develop regulated price caps are deferred for settlement in future tariffs. Also as authorized by the Commissioner, the Company collects fuel surcharges or provides fuel rebates which are applied against deferred fuel cost account balances.



British Columbia Ferry Services Inc.
Route Statement
For the period Apr. 1 2016 to Mar. 31 2020
(in 000's)

	Rte 23			
	<u>Actual</u>		<u>Forecast</u>	
	F2017	F2018	F2019	F2020
Revenues				
Tariff and Reservation Revenue (incl. Social Program Fees)	6,238	6,792	5,417	5,505
Ancillary Revenue	129	86	84	86
Contracted Routes Fee	-	-	-	-
Total Operating Revenue	6,367	6,878	5,500	5,591
Total Operating Expenses	9,533	9,321	9,869	10,341
Earnings (Loss) from Operations	(3,166)	(2,443)	(4,368)	(4,750)
Depreciation and Amortization	(2,362)	(2,115)	(1,559)	(2,480)
Financing Expense	(500)	(398)	(420)	(436)
Cost of Capital	(2,862)	(2,513)	(1,979)	(2,916)
Gain (Loss) on Disposal and Revaluation of Capital Assets	(15)	(7)	-	-
Route Earnings (Loss) Before Ferry Service Fees & Federal Contract	(6,043)	(4,963)	(6,347)	(7,665)
Ferry Transportation Fees	3,191	3,191	3,847	4,004
Federal-Provincial Subsidy Agreement	730	746	764	779
Net Regulatory Earnings (Loss)	(2,122)	(1,026)	(1,737)	(2,882)
Items Included in Regulatory Earnings (Loss) not Permitted Under IFRS				
Fuel Costs Deferred	65	68	(2)	-
Fuel Rebates Paid	(202)	(226)	(40)	-
Payments to Province for Northern Fuel Deferral Account	-	-	-	-
Amortization of Deferred Costs	-	-	-	-
Tariffs in Excess of Price Cap	-	-	-	-
Net IFRS Earnings (Loss)	(2,259)	(1,184)	(1,778)	(2,882)

The increase of ferry transportation fees reflects the provincial contribution to the fare initiatives and restoration of the full discount for BC seniors. As a result of showing these contributions with ferry transportation fees, the major routes include service fees starting in fiscal 2019.

The British Columbia Ferries Commissioner has authorized the use of deferred fuel cost accounts whereby differences between actual fuel costs and approved fuel costs used to develop regulated price caps are deferred for settlement in future tariffs. Also as authorized by the Commissioner, the Company collects fuel surcharges or provides fuel rebates which are applied against deferred fuel cost account balances.



British Columbia Ferry Services Inc.
Route Statement
For the period Apr. 1 2016 to Mar. 31 2020
(in 000's)

	Rte 24			
	<u>Actual</u>		<u>Forecast</u>	
	F2017	F2018	F2019	F2020
Revenues				
Tariff and Reservation Revenue (incl. Social Program Fees)	1,249	1,372	1,063	1,080
Ancillary Revenue	79	65	63	65
Contracted Routes Fee	-	-	-	-
Total Operating Revenue	1,328	1,437	1,126	1,145
Total Operating Expenses	4,178	3,807	4,436	4,656
Earnings (Loss) from Operations	(2,850)	(2,370)	(3,310)	(3,511)
Depreciation and Amortization	(2,037)	(1,686)	(2,243)	(2,303)
Financing Expense	(893)	(652)	(658)	(630)
Cost of Capital	(2,930)	(2,338)	(2,901)	(2,933)
Gain (Loss) on Disposal and Revaluation of Capital Assets	(3)	(2)	-	-
Route Earnings (Loss) Before Ferry Service Fees & Federal Contract	(5,783)	(4,710)	(6,211)	(6,444)
Ferry Transportation Fees	2,822	2,822	2,929	2,959
Federal-Provincial Subsidy Agreement	646	660	676	690
Net Regulatory Earnings (Loss)	(2,315)	(1,228)	(2,606)	(2,795)
Items Included in Regulatory Earnings (Loss) not Permitted Under IFRS				
Fuel Costs Deferred	38	42	(1)	-
Fuel Rebates Paid	(37)	(46)	(8)	-
Payments to Province for Northern Fuel Deferral Account	-	-	-	-
Amortization of Deferred Costs	-	-	-	-
Tariffs in Excess of Price Cap	-	-	-	-
Net IFRS Earnings (Loss)	(2,314)	(1,232)	(2,615)	(2,795)

The increase of ferry transportation fees reflects the provincial contribution to the fare initiatives and restoration of the full discount for BC seniors. As a result of showing these contributions with ferry transportation fees, the major routes include service fees starting in fiscal 2019.

The British Columbia Ferries Commissioner has authorized the use of deferred fuel cost accounts whereby differences between actual fuel costs and approved fuel costs used to develop regulated price caps are deferred for settlement in future tariffs. Also as authorized by the Commissioner, the Company collects fuel surcharges or provides fuel rebates which are applied against deferred fuel cost account balances.



British Columbia Ferry Services Inc.
Route Statement
For the period Apr. 1 2016 to Mar. 31 2020
(in 000's)

	Rte 25			
	<u>Actual</u>		<u>Forecast</u>	
	F2017	F2018	F2019	F2020
Revenues				
Tariff and Reservation Revenue (incl. Social Program Fees)	2,139	2,300	1,848	1,878
Ancillary Revenue	159	160	155	161
Contracted Routes Fee	-	-	-	-
Total Operating Revenue	2,298	2,460	2,003	2,038
Total Operating Expenses	6,250	6,362	7,303	7,665
Earnings (Loss) from Operations	(3,952)	(3,902)	(5,300)	(5,627)
Depreciation and Amortization	(2,714)	(2,827)	(3,550)	(2,837)
Financing Expense	(1,864)	(1,664)	(1,357)	(1,329)
Cost of Capital	(4,578)	(4,491)	(4,907)	(4,166)
Gain (Loss) on Disposal and Revaluation of Capital Assets	(5)	(3)	-	-
Route Earnings (Loss) Before Ferry Service Fees & Federal Contract	(8,535)	(8,396)	(10,207)	(9,793)
Ferry Transportation Fees	4,586	4,586	4,794	4,847
Federal-Provincial Subsidy Agreement	1,049	1,072	1,098	1,120
Net Regulatory Earnings (Loss)	(2,900)	(2,738)	(4,315)	(3,826)
Items Included in Regulatory Earnings (Loss) not Permitted Under IFRS				
Fuel Costs Deferred	73	76	(2)	-
Fuel Rebates Paid	(69)	(76)	(14)	-
Payments to Province for Northern Fuel Deferral Account	-	-	-	-
Amortization of Deferred Costs	-	-	-	-
Tariffs in Excess of Price Cap	-	-	-	-
Net IFRS Earnings (Loss)	(2,896)	(2,738)	(4,330)	(3,826)

The increase of ferry transportation fees reflects the provincial contribution to the fare initiatives and restoration of the full discount for BC seniors. As a result of showing these contributions with ferry transportation fees, the major routes include service fees starting in fiscal 2019.

The British Columbia Ferries Commissioner has authorized the use of deferred fuel cost accounts whereby differences between actual fuel costs and approved fuel costs used to develop regulated price caps are deferred for settlement in future tariffs. Also as authorized by the Commissioner, the Company collects fuel surcharges or provides fuel rebates which are applied against deferred fuel cost account balances.



British Columbia Ferry Services Inc.
Route Statement
For the period Apr. 1 2016 to Mar. 31 2020
(in 000's)

	Rte 26			
	<u>Actual</u>		<u>Forecast</u>	
	F2017	F2018	F2019	F2020
Revenues				
Tariff and Reservation Revenue (incl. Social Program Fees)	854	896	749	761
Ancillary Revenue	82	82	80	82
Contracted Routes Fee	-	-	-	-
Total Operating Revenue	936	978	828	843
Total Operating Expenses	3,510	5,270	4,257	4,468
Earnings (Loss) from Operations	(2,574)	(4,292)	(3,429)	(3,624)
Depreciation and Amortization	(1,641)	(1,638)	(1,625)	(1,626)
Financing Expense	(663)	(603)	(520)	(487)
Cost of Capital	(2,304)	(2,241)	(2,145)	(2,112)
Gain (Loss) on Disposal and Revaluation of Capital Assets	(2)	(1)	-	-
Route Earnings (Loss) Before Ferry Service Fees & Federal Contract	(4,880)	(6,534)	(5,574)	(5,737)
Ferry Transportation Fees	4,460	4,460	4,535	4,557
Federal-Provincial Subsidy Agreement	1,022	1,042	1,067	1,089
Net Regulatory Earnings (Loss)	602	(1,032)	29	(91)
Items Included in Regulatory Earnings (Loss) not Permitted Under IFRS				
Fuel Costs Deferred	16	18	(1)	-
Fuel Rebates Paid	(28)	(29)	(6)	-
Payments to Province for Northern Fuel Deferral Account	-	-	-	-
Amortization of Deferred Costs	-	-	-	-
Tariffs in Excess of Price Cap	-	-	-	-
Net IFRS Earnings (Loss)	590	(1,043)	23	(91)

The increase of ferry transportation fees reflects the provincial contribution to the fare initiatives and restoration of the full discount for BC seniors. As a result of showing these contributions with ferry transportation fees, the major routes include service fees starting in fiscal 2019.

The British Columbia Ferries Commissioner has authorized the use of deferred fuel cost accounts whereby differences between actual fuel costs and approved fuel costs used to develop regulated price caps are deferred for settlement in future tariffs. Also as authorized by the Commissioner, the Company collects fuel surcharges or provides fuel rebates which are applied against deferred fuel cost account balances.



British Columbia Ferry Services Inc.
Route Statement
For the period Apr. 1 2016 to Mar. 31 2020
(in 000's)

	Unregulated			
	<u>Actual</u>		<u>Forecast</u>	
	F2017	F2018	F2019	F2020
Revenues				
Tariff and Reservation Revenue (incl. Social Program Fees)	-	-	-	-
Ancillary Revenue	-	-	-	-
Contracted Routes Fee	2,707	2,756	2,791	2,847
Total Operating Revenue	2,707	2,756	2,791	2,847
Total Operating Expenses	2,707	2,756	2,791	2,847
Earnings (Loss) from Operations	-	-	-	-
Depreciation and Amortization	-	-	-	-
Financing Expense	-	-	-	-
Cost of Capital	-	-	-	-
Gain (Loss) on Disposal and Revaluation of Capital Assets	-	-	-	-
Route Earnings (Loss) Before Ferry Service Fees & Federal Contract	-	-	-	-
Ferry Transportation Fees	-	-	-	-
Federal-Provincial Subsidy Agreement	-	-	-	-
Net Regulatory Earnings (Loss)	-	-	-	-
Items Included in Regulatory Earnings (Loss) not Permitted Under IFRS				
Fuel Costs Deferred	-	-	-	-
Fuel Rebates Paid	-	-	-	-
Payments to Province for Northern Fuel Deferral Account	-	-	-	-
Amortization of Deferred Costs	-	-	-	-
Tariffs in Excess of Price Cap	-	-	-	-
Net IFRS Earnings (Loss)	-	-	-	-

The increase of ferry transportation fees reflects the provincial contribution to the fare initiatives and restoration of the full discount for BC seniors. As a result of showing these contributions with ferry transportation fees, the major routes include service fees starting in fiscal 2019.

The British Columbia Ferries Commissioner has authorized the use of deferred fuel cost accounts whereby differences between actual fuel costs and approved fuel costs used to develop regulated price caps are deferred for settlement in future tariffs. Also as authorized by the Commissioner, the Company collects fuel surcharges or provides fuel rebates which are applied against deferred fuel cost account balances.

Part 2
Fuel Management Plan
Outcomes in Performance Term Four



British Columbia Ferry Services Inc.
September 28, 2018



Caution Regarding Forward-Looking Statements

British Columbia Ferry Services Inc. ("BC Ferries") advises that this report may contain certain forward-looking statements which relate to future events or future performance. These forward-looking statements are based upon management's expectations and assumptions as to a number of factors, and BC Ferries believes that it has a reasonable basis for making such forward-looking statements. If management's expectations and assumptions prove to be incorrect, or factors change, then actual results could differ materially from the forward-looking statements contained in this report. In addition, forward-looking statements, by their nature, involve risks and uncertainties which could cause actual results to differ materially from those contemplated by the forward-looking statements. The risks and uncertainties include those risks and uncertainties described in BC Ferries' Annual Management's Discussion & Analysis, which is available under BC Ferries' company profile at www.sedar.com.

Executive Summary

With a vision of being trusted and valued, the mission of British Columbia Ferry Services Inc. (“BC Ferries” or the “Company”) is to connect communities and customers to the people and places important in their lives. BC Ferries strives to be a leader in the transition to a lower carbon future and to build a resilient ferry system to provide reliable and affordable service for its customers and the communities it serves.

As is the case for other transportation providers, fuel represents one of the largest inputs to the Company’s business, in terms of both cost and environmental impact. The Company is working hard to develop and implement innovative and cost-effective ways to migrate its operations to low-carbon energy sources, while optimizing fuel consumption and procurement, and enhancing environmental stewardship.

Since BC Ferries submitted its Performance Term Four Fuel Management Plan (“PT4 Fuel Management Plan”) in fiscal 2016,¹ traffic levels have grown significantly and are now at all-time highs. The Company’s response has been multi-faceted, and has included increasing the number of sailings, increasing vessel speeds to partially mitigate the negative impact higher traffic has had on on-time performance, and where possible adding more capacity by deploying larger vessels. While the Company has continued to realize fuel efficiencies in the performance term, these measures to address traffic demand and meet the expectations of customers have resulted in overall increases in fuel consumption. Despite the higher levels of fuel consumption, the Company’s overall fuel expense has declined. This is due, in part, to a reduction in fuel prices, but also to the significant progress the Company has made in implementing its strategy to move to cleaner and lower-cost alternative fuels.

Reducing the Company’s environmental footprint through continued investment in leading-edge practices related to environmental stewardship is a top priority for BC Ferries and a key element of the Company’s Clean Technology Adoption Plan. BC Ferries has become a leader in the marine industry in North America when it comes to lowering emissions and adopting clean marine technology. In fiscal 2018, BC Ferries became the first passenger ferry operator in North America to adopt liquefied natural gas (“LNG”), pioneering “made in British Columbia” technologies in the process. Notable are the four, soon to be five, LNG-fueled vessels in the Company’s fleet (Salish class and Spirit class). LNG-fueled vessels substantially outperform diesel-fueled vessels in reduced emissions and costs.

¹ Fiscal years run April 1 through March 31.

BC Ferries also has two Island class vessels under construction. These battery-hybrid vessels will use advanced clean marine technology, and when delivered, the Company believes they will be the most efficient and quietest electric-hybrid ferries of their size in the world.

Looking ahead, BC Ferries is planning for the next major vessel program. The Company is exploring options for the propulsion systems for these vessels, with a view to adopting a lower carbon technology to reduce emissions and increase fuel efficiency. These vessels may also feature very large energy storage systems, which could allow departure and arrival in port, as well as in-port operations, to be performed on battery power. The goal is ultra-clean emissions with ultra-low fuel consumption. This leads to both a lessening of the operational impact on the environment and lower fuel costs, which helps to keep fares affordable.

The adoption of new clean energy technology as part of the Company's fleet renewal program is just one way the Company focuses on enhancing its fuel efficiency and environmental stewardship. The Company also carefully manages its complex ship deployment plans to optimize fuel efficiency, and continually hones its operational policies and practices to promote a greater emphasis Company-wide on energy efficiency and conservation.

With fuel costs being a significant component of overall cost, BC Ferries places a considerable emphasis on ensuring its strategies and practices for procuring fuel and managing fuel price risk are effective. BC Ferries cannot control commodity prices; however, the Company's fuel procurement processes have, over time, generated significant fuel price savings, while the Company's fuel hedging program and its management of the fuel deferral accounts have helped reduce fare volatility. These are positive outcomes for ferry users.

BC Ferries manages its fuel choices, consumption and cost within an overarching objective of ensuring the ferry system remains financially and environmentally sustainable. This report provides an update on the significant progress the Company has made to date in the performance term on the initiatives and strategies set out in the PT4 Fuel Management Plan to optimize fuel consumption, evolve the fuel mix toward lower carbon and more cost-effective sources, and procure fuel and manage fuel price risk effectively. The actions the Company has taken in these areas represent important accomplishments in its journey towards sustainability.

Table of Contents

Executive Summary	3
Introduction	6
Fuel Consumption Overview	6
Section 1: Fuel Consumption	9
1.1 Fuel Consumption Management	9
1.2 Service Level Increases.....	10
1.3 Vessel Speed/Rate of Fuel Consumption.....	11
1.4 Fuel Efficiency	13
1.5 Vessel Deployment.....	13
1.6 Fuel Consumption Forecast.....	13
Section 2: Fuel Consumption Reduction Strategies.....	15
2.1 Responsible Energy Management	15
2.2 Transition to Alternative Fuels	16
2.3 Additional Fuel Consumption Savings Initiatives.....	19
Section 3: Strategies for Cost-Effective Fuel Procurement.....	21
3.1 Overview	21
3.2 Commodity Prices	21
3.3 Procurement.....	21
3.4 Fuel Hedging	23
3.5 Fuel Cost Deferral Accounts.....	23
3.6 Historical Fuel Price and Rebate Activity	24
Conclusion	26

Introduction

On March 30, 2016, BC Ferries submitted a fuel management plan for the four years of performance term four (“PT4”), April 1, 2016 to March 31, 2020 in accordance with the requirements of Order 15-03 *Final Decision on Price Caps for the Fourth Performance Term Pursuant to the Coastal Ferry Act*, dated September 16, 2015. The Order states:

BC Ferries is required to submit a fuel management plan prior to the start of PT4 setting out strategies for fuel procurement, minimizing fuel consumption and the transition to alternate fuels during PT4. BC Ferries must provide a report on the outcomes of their fuel management plan as part of their submission for performance term five.

This report fulfills the requirement of Order 15-03 to report on the outcomes of the PT4 Fuel Management Plan. Section 1 focuses on fuel consumption management at BC Ferries and explains the key drivers of fuel consumption and the impact that increased traffic has had on fuel consumption since March, 2016. Section 2 provides an update on the significant progress the Company has made, and continues to make, in its planned transition to alternative fuels. Updates are also provided on other ongoing strategies and initiatives positively impacting fuel efficiency and consumption. Section 3 focuses on the Company’s continued actions to manage the price it pays for fuel as effectively as possible, including strategies for cost-effective fuel procurement and addressing fuel price volatility.

Fuel Consumption Overview

Fuel is BC Ferries’ second-largest operating expense. In fiscal 2018, the Company spent \$102.5 million on ultra-low sulphur diesel (“ULSD” or “diesel”) and LNG combined, which represented approximately 12 percent of operating expenses.

Since the submission of the PT4 Fuel Management Plan, BC Ferries’ traffic has grown to record levels. While fuel efficiency has continued to be at the forefront of the Company’s focus in PT4, with traffic levels having reached all-time highs, overall fuel consumption has increased.

To meet customer expectations within this environment of strong traffic demand, the Company has responded in a variety of ways, including adding more sailings, increasing vessel speeds to partially mitigate the negative impact higher traffic has on on-time performance and, where possible, adding capacity by deploying larger vessels which burn more fuel. These actions have put pressure on fuel consumption.

Fuel consumption and total annual fuel expense by fiscal year since the start of performance term three (April 1, 2012 to March 31, 2016) ("PT3") is shown in Figure A, while the corresponding average annual price of fuel by fiscal year is shown in Table 1.

Figure A: Fuel Consumption and Fuel Cost^{2,3}

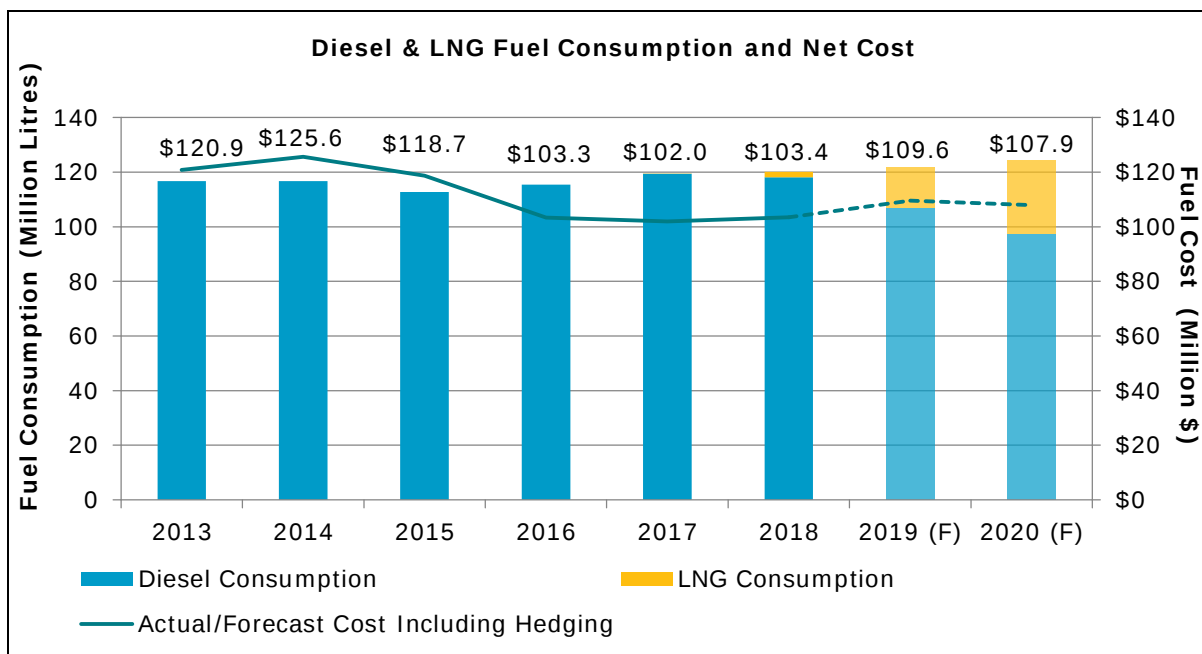


Table 1: Average Fuel Procurement Price after Hedging³

Average Fuel Price	PT3				PT4			
	2013	2014	2015	2016	2017	2018	2019 (F)	2020 (F)
Diesel (Litres)	\$1.04	\$1.08	\$1.05	\$0.89	\$0.85	\$0.86	\$0.96	\$0.97
LNG (DLEs)						\$0.45	\$0.48	\$0.49

As shown above, to date in PT4, fuel consumption on a year-over-year basis increased by 4.0 million litres in fiscal 2017 and 0.8 million litres in fiscal 2018. During the same period, the net cost per litre of diesel on a year-over-year basis decreased to 85 cents per litre in fiscal 2017 and 86 cents per litre in fiscal 2018. In addition, in fiscal 2018, the Company began its transition to lower-cost LNG with the introduction of three new LNG-fueled Salish class vessels. As a result, while total fuel consumption increased in the first two years of PT4, the overall net cost of fuel on a year-over-year basis declined in fiscal 2017 and rose modestly in fiscal 2018.

² BC Ferries converts LNG to diesel litre equivalents ("DLE"), an energy equivalency measure that allows LNG consumption to be compared directly to diesel consumption in litres.

³ Fuel price for fiscal 2020 is based on the regulatory set price. Actual price performance will vary. If the actual price is above/below the regulatory set price, then a fuel surcharge/rebate may be implemented.

The Company is anticipating further benefits with the conversion of its Spirit class vessels to dual-fuel LNG and diesel propulsion. In the summer of 2018, the *Spirit of British Columbia* re-entered service after its successful conversion, and the *Spirit of Vancouver Island* was removed from service in September, 2018 to undergo an equivalent upgrade and return to service in 2019.

BC Ferries has made significant strides towards the use of alternate fuels, principally the use of LNG by its three new Salish class vessels and the first of two Spirit class vessels. Use of ULSD is expected to decline in fiscal 2019, and again in fiscal 2020 as all three Salish class vessels are transitioned to operate primarily on LNG, and the Spirit class vessels are reintroduced into service after their conversions to dual-fuel propulsion, enabling them to operate on LNG. The transition to LNG is expected to continue to contribute positively to reducing fuel cost, which helps reduce upward pressure on fares.

Section 1: Fuel Consumption

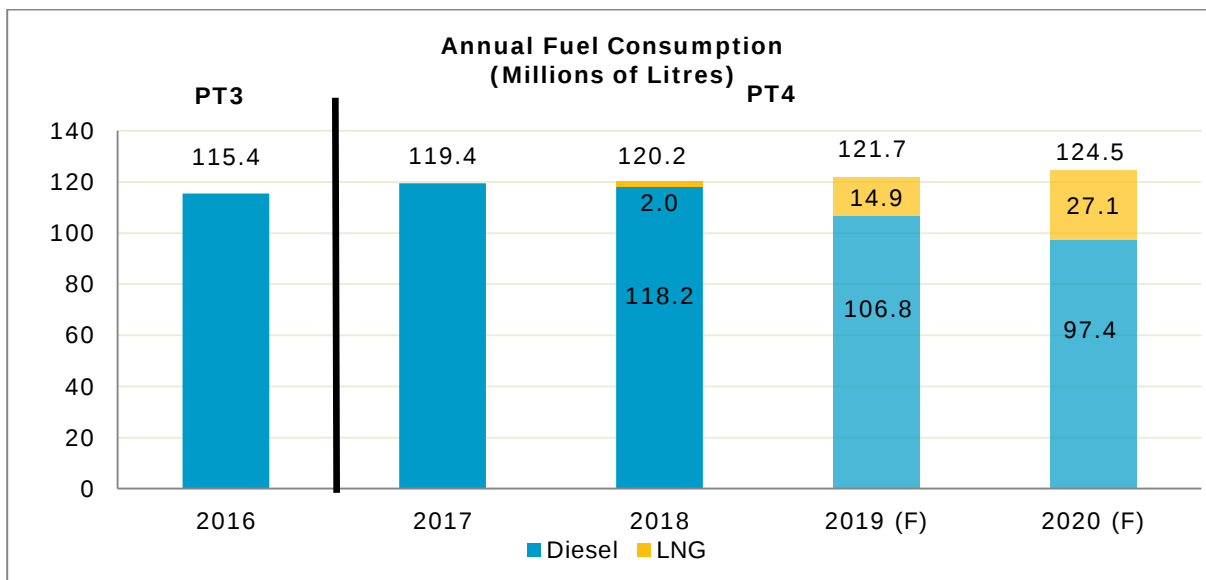
1.1 Fuel Consumption Management

At BC Ferries, fuel consumption is a closely managed expense: it is budgeted annually, forecasted quarterly, tracked/reported monthly and managed daily by those in vessel operations. As described above, fuel costs currently represent 12 percent of the Company's operating expense. With fuel representing such a significant component of BC Ferries' cost base, and ultimately its impact on fares, it is important to the Company and ferry users alike that fuel consumption is managed effectively.

In fiscal 2015, BC Ferries' fuel management policies and practices were independently reviewed by PricewaterhouseCoopers LLP ("PwC") for the Commissioner. In its report, *Performance Review of BC Ferries' Fuel Management*, March, 2015 PwC concluded that: "BC Ferries' efforts to manage and minimize consumption of fuel have been effective" and "BC Ferries have [sic] defined procedures in place to manage consumption and costs and are [sic] compliant with these policies and procedures." In PT4, BC Ferries has continued to ensure its fuel consumption management policies and procedures are robust.

Figure B depicts actual fuel consumption for fiscal 2016 through 2018 and forecast consumption for fiscal 2019 and 2020.

Figure B: Fuel Consumption



BC Ferries' fuel consumption is primarily influenced by three factors:

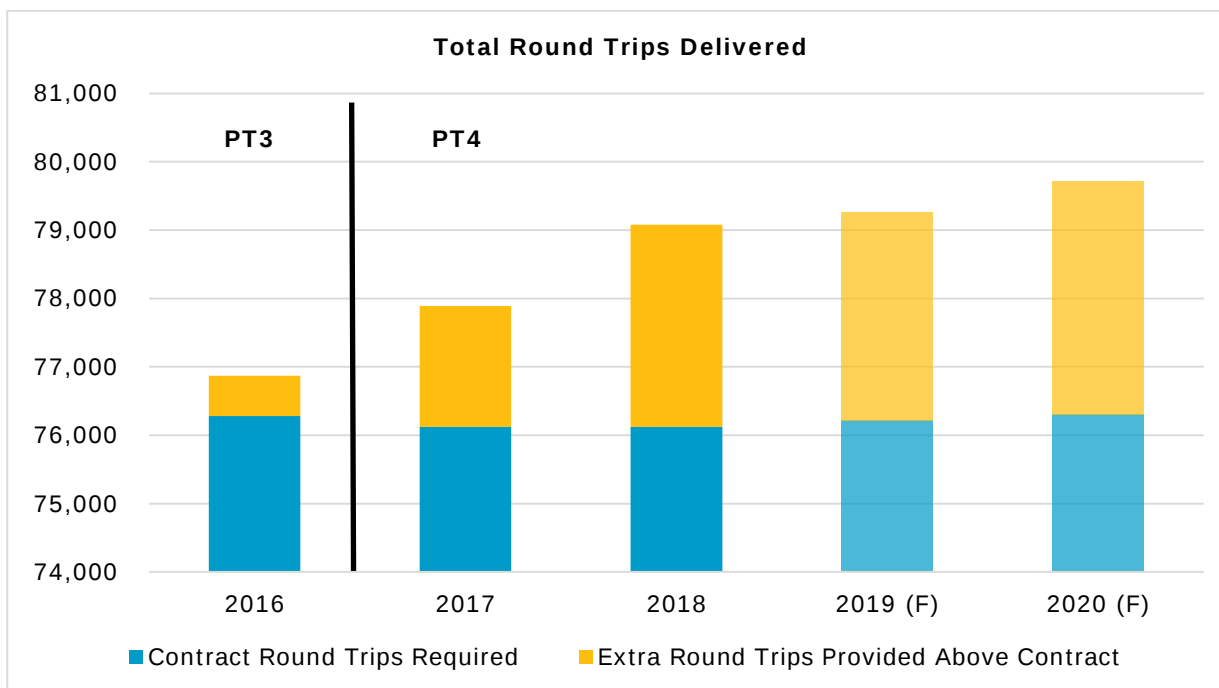
- **Service (or round trips) provided**, which reflects the round trips the Company is required to provide under the Coastal Ferry Services Contract between the Company and the Province of British Columbia, as well as the additional round trips the Company provides to meet traffic demand;
- **Vessel speed**, as it impacts fuel efficiency; and
- **Vessel deployment**, consisting of the cost-effective system-wide deployment of the Company's fleet of vessels to meet its service plan and provide for substitutions associated with vessel refits.

Each of these three factors can have a significant impact on fuel consumption performance, and not all are controllable. The largest contributing factor to fuel consumption is the round trip requirements under the Coastal Ferry Services Contract.

Traffic levels can have an impact on all three of these factors. In response to higher traffic levels, the Company often provides more sailings than is required under the Coastal Ferry Services Contract and, in order to maintain on-time performance, vessels may be operated at higher speeds. As well, larger vessels that typically burn more fuel may be deployed. Other factors such as hull coatings/cleanliness, the availability of shore power, and onboard services (heating, lighting, etc.), can also have an impact on fuel efficiency and consumption, but typically to a lesser degree.

1.2 Service Level Increases

The Coastal Ferry Services Contract stipulates the minimum service level the Company must provide for every regulated route. Adjusting the number of round trips to minimize fuel expense is a viable option only to the extent that the Company is able to continue to meet minimum contract requirements. As shown in Figure C, during PT4, BC Ferries has been adding round trips to accommodate growing traffic demand.

Figure C: Round Trips Delivered

Fuel consumption has increased in each year of PT4 primarily due to the need to respond to higher levels of traffic. Traffic levels began a recovery towards the end of PT3 and between fiscal 2016 and 2018, the Company increased service by over 2,200 round trips, with over 570 of those round trips being on the major routes⁴. These round trips added capacity in response to high traffic demand. Even with the additional round trips, total capacity utilization increased from less than 63 percent in fiscal 2016 to over 65 percent in fiscal 2018.

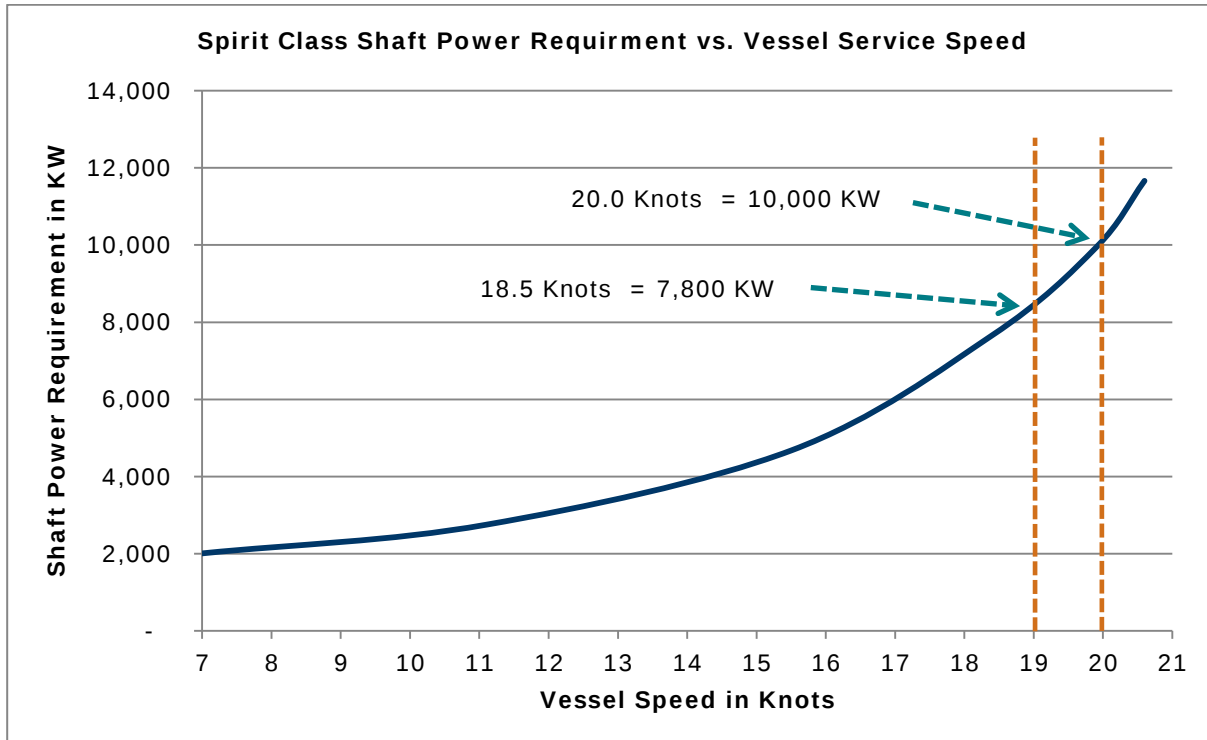
1.3 Vessel Speed / Rate of Fuel Consumption

At higher traffic levels, it takes longer to safely load as many vehicles as possible on each sailing, leading to more time spent in port and less time to complete the crossing on schedule.

Fuel consumption typically rises as vessel speed is increased to meet the sailing schedule, and rises dramatically when engines are operating near peak power output. BC Ferries' crews manage speed to conserve fuel whenever possible; however, delays and heavy traffic loads can at times make it challenging to optimize fuel efficiency.

⁴ The major routes comprise the routes connecting Swartz Bay - Tsawwassen, Departure Bay - Horseshoe Bay, Duke Point-Tsawwassen, and Langdale-Horseshoe Bay.

Figure D: Spirit Class Fuel Consumption Vessel Speed Curve



BC Ferries understands the importance to customers of sailing on time. When vessels are operated at higher speed to maintain or improve schedule performance, the cost of the increased fuel consumption for those sailings can potentially be offset by avoided overtime labour cost.

As shown in Table 2, despite increased service speeds and higher associated fuel consumption, on-time performance has remained a challenge with the record traffic levels the Company has been experiencing in PT4.⁵

Table 2: Fleet-Wide On-Time Performance

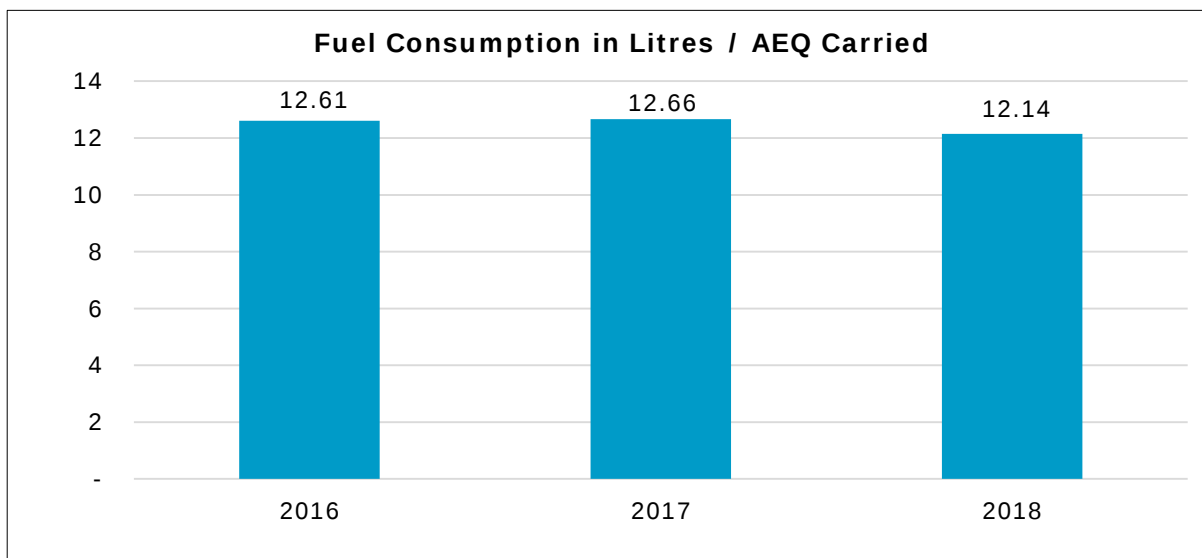
On-time Performance	PT3	PT4		
	2016	2017	2018	2019
Actual	90.8%	89.5%	89.0%	TBD
Target	91.0%	91.0%	91.0%	91.0%

⁵ On-time performance indicates the percentage of sailings departing within 10 minutes of scheduled departure for the major and inter-island routes, and arriving within 10 minutes of scheduled arrival for the northern routes.

1.4 Fuel Efficiency

As shown in Figure E, while fuel consumption has increased to date in PT4, the Company has become more fuel efficient on an automobile equivalent (“AEQ”)⁶ per-unit carried basis.

Figure E: Fuel Consumption per AEQ Carried



1.5 Vessel Deployment

BC Ferries continually evaluates the use of vessels to ensure the most cost-effective deployment while meeting customer needs. The deployment of new and/or upgraded vessels to maximum benefit is a key focus for the Company, with recent examples being the introduction of the three Salish class vessels and the return of the *Spirit of British Columbia* from its mid-life upgrade in fiscal 2019. The planned refit schedule will also impact the vessel deployment plan and thereby annual fuel consumption. Specific examples of how the Company optimizes vessel deployments are provided in Section 2.3.

1.6 Fuel Consumption Forecast

Looking forward, the service plan, which sets out the sailings BC Ferries will need to provide to meet traffic demand and the requirements of the Coastal Ferry Services Contract, vessel speed and the deployment of the fleet, including the new and upgraded vessels operating on alternative fuels, will continue to be the factors that contribute most strongly to overall fuel consumption. Table 3 sets out actual and forecast fuel consumption for PT4 (see also Figure B).

⁶ AEQ or automobile equivalent is BC Ferries' standard unit of measure for an approximation of one car length.

Table 3: PT4 Fuel Consumption

Fuel Consumption	PT4			
	2017	2018	2019 (F)	2020 (F)
Diesel (Litres)	119.4	118.2	106.8	97.4
LNG (DLEs)	-	2.0	14.9	27.1
Total Litres	119.4	120.2	121.7	124.5

For fiscal years 2019 and 2020, consumption of diesel is forecast to decrease significantly as the Company transitions to operating the three Salish class vessels and two Spirit class vessels primarily on LNG. By fiscal 2020, the last year of PT4, LNG is forecast to represent approximately 22 percent of overall fuel consumption, with diesel consumption dropping below 100 million litres per year.

Overall consumption of diesel and LNG combined is forecast to increase in fiscal 2019 and 2020. Increased service is a key factor, as additional round trips are included in the service plans to respond to continued strong traffic and provide for the new service on the route connecting Bella Coola with Port Hardy. Another driver is the return of both of the Spirit class vessels to year-round service in fiscal 2020, following two years when only one of the vessels was in service for the majority of the year, while the other was undergoing its mid-life upgrade and conversion to dual-fuel propulsion. While BC Ferries expects that both of these vessels will be primarily operating on lower-cost LNG in fiscal 2020, they remain the largest vessels in the fleet and have the highest rate of fuel consumption on a DLE basis.

Section 2: Fuel Consumption Reduction Strategies

2.1 Responsible Energy Management

BC Ferries' focus on finding ways to enhance the overall fuel efficiency of its operations reflects its commitment to progressive and responsible energy management. The intent is to ensure the highest practicable energy efficiencies in the Company's overall operations and the sustainable growth of its business. As described in the PT4 Fuel Management Plan, this commitment is enshrined in the Company's Energy Management Policy, which has as its objectives:

- Delivering an energy awareness program, through the existing internal energy management team, to all employees;
- Providing continual education for employees on how to conserve energy and how to recognize and minimize unnecessary consumption in their work area;
- Setting targets to reduce energy consumption and, at a minimum, not exceeding baseline levels;
- Establishing regular reporting of energy use to key operating area personnel;
- Reducing expenditures on energy by understanding rate structures and managing consumption accordingly;
- Identifying savings opportunities by conducting energy studies or audits at appropriate facilities;
- Implementing cost-effective facility and equipment upgrades that will achieve energy savings;
- Participating in incentive programs for energy conservation and/or greenhouse gas deferral projects;
- Establishing energy-efficiency targets as design specifications in major retrofits of facilities or vessels and in purchasing guidelines; and
- Providing guidance for best practices in energy management, including equipment selection, operation and maintenance, as well as monitoring, targeting, and reporting energy usage.

These objectives also underpin the Company's Clean Energy Adoption Plan, which has as its goals: *carbon reduction* through migrating operations to low-carbon energy sources while maximizing energy-consumption efficiencies; and *environmental stewardship* through striving to eliminate avoidable environmental contaminants and improve at every step of operational activity.

In support of these goals, the Company is an active member of Green Marine, an environmental certification program dedicated to sustainable marine operations. BC Ferries is only one of three Green Marine members certified in marine, terminal and shipyard operations. Emission reduction is

one of the focus areas of Green Marine. In addition to practices to reduce fuel consumption, Green Marine encourages the use of higher-quality fuel and technologies to achieve emission reductions.

BC Ferries' SeaForward program showcases the Company's commitment to environmental stewardship. This program combines existing environmental conservation projects and community investment activities with new and innovative endeavours to reduce BC Ferries' environmental footprint, improve the sustainability of its operations and support coastal communities. BC Ferries' energy and fuel management programs are important elements of this program, as are its strategies to transition to alternative fuels.

2.2 Transition to Alternative Fuels

Strategies to transition BC Ferries to lower carbon and more efficient fuel sources were central to BC Ferries' PT4 Fuel Management Plan. BC Ferries actively monitors and pursues innovation and emerging technologies respecting the use of alternatives to conventional fuels, and has made significant progress in moving towards this objective.

Diesel

Since 2007, BC Ferries' vessels have been burning diesel with ultra-low sulphur content (15 ppm). Additionally, across the fleet, the Company's diesel-powered vessels burn 5 percent, or B5, biodiesel. BC Ferries is, in fact, one of the largest consumers of biodiesel in British Columbia. B5 fuel blend is a mix of 5 percent canola-based biodiesel with 95 percent low sulphur petroleum diesel. Biodiesel burns cleaner with significantly less unburned hydrocarbon, carbon monoxide and particulate matter in emissions.

Transition to Lower Carbon Fuel Sources

BC Ferries is the first passenger ferry system in North America to adopt LNG. To date in PT4, the Company has introduced four dual-fuel vessels (capable of running on LNG or diesel) into service, with a fifth expected to be operating on LNG by the end of the performance term:

- **Salish Class**

The *Salish Orca*, *Salish Eagle*, and *Salish Raven* were brought into service in fiscal 2018. The three vessels have the capability to run primarily on LNG or entirely on diesel, and have replaced the diesel-powered *Queen of Burnaby* and *Queen of Nanaimo* on the Comox to Powell River and Tsawwassen to Southern Gulf Islands routes. The Salish class vessels are smaller in size than the vessels they replaced, and have a unique hull form and new modern engine technology, all of which will contribute positively to optimizing fuel consumption and reducing greenhouse gas emissions. These were the first vessels in the fleet to operate on LNG and the transition to this fuel source has been gradual. The *Salish Orca* and *Salish Raven* are now operating primarily on LNG. The *Salish Eagle* is

currently operating approximately half of the time on LNG due to scheduling challenges with bunkering LNG in Tsawwassen while the vessel is home ported at Long Harbour on Salt Spring Island. The Company is working to address these scheduling challenges, and expects that they will be resolved and the vessel will be operating primarily on LNG by the end of fiscal 2019.

- **Spirit Class**

A mid-life upgrade of the *Spirit of British Columbia* was completed in PT4. The vessel returned to service on the Swartz Bay to Tsawwassen route for the summer of 2018 following a comprehensive upgrade that involved conversion to dual-fuel propulsion. The Company was able to return the vessel to service with the immediate use of LNG as its primary fuel source. The *Spirit of Vancouver Island* was removed from service in September, 2018 to undergo the equivalent upgrade and is expected to return to service in the spring of 2019.

Significant diesel consumption will be displaced when the three Salish class and two Spirit class vessels all operate primarily on LNG. The two Spirit class vessels together have historically consumed an average of approximately 20 million litres of diesel per year. The recently-retired *Queen of Burnaby* and *Queen of Nanaimo* together consumed an average of over 6 million litres of diesel per year. These four vessels previously accounted for approximately 23 percent of total annual diesel consumption. The diesel will not be completely displaced, as the dual-fuel ships consume some diesel as a pilot fuel and as part of normal operations, but diesel is expected to represent less than 10 percent of the total energy consumed by each of these vessels.

As part of the two initiatives above, BC Ferries pioneered two “world firsts” in clean technology: the Salish class are the first in the world to fuel LNG by tanker truck on the vehicle deck of a passenger ship; and the Spirit class are the first in the world to fuel LNG by tanker truck on a totally-enclosed vehicle deck. Both of these innovations were conceived by BC Ferries and designed, engineered and built by BC Ferries and its partners. These innovations saved ferry users infrastructure costs and have unlocked significant environmental performance gains. The expertise the Company has gained in this area is now being sought by other ferry operators.

The Company has actively pursued LNG conversion grants made available by the industry and has entered into two agreements with FortisBC Energy Inc. as part of the Natural Gas for Transportation incentive funding initiative. The first agreement is for up to \$6 million in funding, which partly offsets the incremental capital cost of choosing LNG as the primary fuel source for the Salish class vessels. Under the second agreement, BC Ferries will receive up to \$10 million to partially offset the capital cost of converting the two Spirit class vessels to dual-fuel capability. Payments to BC Ferries are made upfront, and earned over time as the Company procures LNG from FortisBC. The agreements do not obligate BC Ferries to purchase LNG from FortisBC, but to

earn the full amount of the funding contributions, BC Ferries is expected to purchase at least 3 million gigajoules of LNG from FortisBC over 10 years for the Salish class and 7 million gigajoules over 10 years for the Spirit class. While LNG is financially attractive as a result of its price being significantly lower than diesel, these funding contributions help further improve the economics of its adoption.

The Company believes that adopting LNG is a significant step towards sustainable transportation for coastal British Columbia. LNG is not only a less expensive fuel source, but it is greener and a much cleaner fuel source with very favourable environmental impacts compared to diesel. Compared to diesel, LNG consumption lowers carbon emissions by about 25 percent, SO_x (sulphur oxides) by almost 100 percent and NO_x (nitrogen oxides) by 85 percent, which translates to significantly cleaner exhaust emissions than the ULSD fuel the Company currently uses.

Looking forward, the Company envisages the replacement of 19 aged vessels over the next 14 years with newer, more fuel-efficient vessels. With each retiring vessel, the Company has an opportunity to put in place a new, technologically-advanced and fuel efficient replacement.

Innovation and emerging technologies for electric power grid management have the potential to make use of energy sources that are alternatives to LNG and diesel. BC Ferries currently has the first two of potentially 13 new Island class ferries under construction. These vessels will have hybrid-diesel propulsion and utilize some of the most advanced and efficient clean marine technology in the world. BC Ferries expects these vessels to be the most efficient and quietest electric-hybrid ships of their size in the world. They will be built capable of conversion to all-electric propulsion as the technology permits and the necessary electrical infrastructure is in place to support it. BC Ferries is in discussions with BC Hydro to further this conversion prospect.

The most significant opportunity on the horizon to realize fuel efficiencies and lessen the Company's environmental footprint is the next major vessel program, which involves the replacement of six large ships. Planning has commenced in PT4 toward the replacement of the first four vessels: *Queen of Alberni*, *Queen of Coquitlam*, *Queen of Cowichan*, and *Queen of New Westminster* in the mid 2020's. These four vessels combined represent approximately 22 percent of total fleet-wide fuel consumption. The *Queen of Oak Bay* and *Queen of Surrey*, which are scheduled to be replaced several years later, consume another 12 percent of the total. Various propulsion options are being considered for these vessels, including dual-fuel, which would enable the vessels to operate on LNG. The Company is also considering fitting the vessels with very large stored energy systems, which could, as technology permits, allow departure and arrival in port, as well as in-port operations, to be performed on battery power. Overall, this major vessel program is expected to offer a further significant reduction in diesel consumption. Added to measures taken to date, the Company has the potential with this program to displace nearly 50 percent of historical

fleet diesel consumption with cleaner and more affordable fuel sources by the mid-2020s and nearly 60 percent by the early 2030s.

The adoption of alternative propulsion systems for its fleet makes BC Ferries a leader in clean technology in the North American marine sector. Reliability of service is important to BC Ferries' customers, and there are engineering, technical and other issues that must be resolved as the Company progresses further in its journey towards a lower carbon operation. The Company is committed to pursuing new fuel sources and clean technologies in a methodical and prudent manner, with the ultimate goal to bring sustainable and cleaner operations to the coastal ferry system.

2.3 Additional Fuel Consumption Savings Initiatives

Beyond fleet renewal and the transition to alternative fuels, the PT4 Fuel Management Plan set out a number of other initiatives the Company proposed to undertake in PT4 in an effort to achieve further fuel savings. These reflected a continuation of focus by the Company on optimizing fleet deployment and enhancing scheduling and operational efficiencies. As noted in Section 1, with the need for the Company to respond to traffic levels that have reached all-time highs, overall fuel consumption has increased in PT4. Nevertheless, actions taken to optimize fleet deployment and pursue scheduling and operational efficiencies continued and have helped to keep fuel consumption at a level lower than what it would have otherwise been.

Fleet Deployment Optimization

As described in Section 1, BC Ferries is required by the Coastal Ferry Services Contract to provide a minimum level of service on each of the regulated routes. Within these constraints, BC Ferries endeavours to optimize the deployment of its fleet, where possible, by substituting a vessel with a smaller, more fuel-efficient one in order to tailor its service to traffic demand. BC Ferries is limited in these opportunities as it must sometimes use less fuel-efficient vessels when traffic demand is greater than expected or when repairs and maintenance require vessel substitution.

The two Spirit class vessels are the largest ships in BC Ferries' fleet and, as such, they have the highest rate of fuel consumption, as well as the highest crew costs. Historically, in periods of lower traffic demand, the Company often substituted a Spirit class vessel with a smaller Coastal class vessel to save fuel and labour costs. A Coastal class vessel uses approximately 1,500 fewer litres per round trip than a diesel-powered Spirit class vessel. In PT4, the Company continued to make these substitutions, although at a reduced rate due to high traffic demands. To date in PT4, the Company made the following substitutions of a Coastal class vessel for a Spirit class vessel:

- Fiscal 2017:
 - o Mid-October to mid-December out of Swartz Bay;
 - o January to mid-March out of both Swartz Bay and Tsawwassen.

- Fiscal 2018
 - o January to February out of Swartz Bay;
 - o September to May out of Tsawwassen, during the *Spirit of British Columbia* mid-life upgrade.

For fiscal 2019, the *Spirit of Vancouver Island* will be out of service from September until the following spring to undergo a mid-life upgrade and conversion to dual-fuel propulsion. During this time, it will be replaced with a Coastal class vessel. The *Spirit of British Columbia*, now operating primarily on LNG, will be deployed year-round on the route connecting Swartz Bay with Tsawwassen as it is now more economical and environmentally preferable compared to a Coastal class vessel. When the *Spirit of Vancouver Island* returns from its mid-life upgrade, it will also operate year round on that route. With the fleet expected to continue to operate at full capacity due to high traffic demand, no other substitutions that would significantly affect fuel savings are currently contemplated in fiscal 2019.

Beyond fiscal 2019, the Company will continue to seek efficiencies from fleet redeployment opportunities when practicable. Should the current traffic trend reverse, BC Ferries would consider scaling back the extra round trips it has put in place above the minimums required by the Coastal Ferry Services Contract, and the potential to substitute smaller vessels to save fuel and other operating expenses, as appropriate.

Revised Schedules for Routes Serving Horseshoe Bay

In the last quarter of fiscal 2018, and after significant consultation with customers, communities and other stakeholders, the Company revised the year-round sailing schedules for the three routes operating out of Horseshoe Bay⁷ with the intention of significantly improving the on-time performance of those routes. While there is an incremental labour cost resulting from a longer operating day under the revised schedules, it is partially offset by fuel savings as the revised schedules enable the vessels to reduce speed and operate more fuel-efficiently during less busy times. In total, the revised schedules are expected to result in fuel savings of more than one million litres per year when compared to providing the same level of service under the old schedules.

Operational Efficiencies

The PT4 Fuel Management Plan identified operational and engineering policies and practices, as well as other tactics that the Company has developed over a number of years to enhance energy efficiency. The majority of these initiatives have been incorporated into the fabric of BC Ferries' operations and the Company has continued to refine and pursue them in PT4.

⁷ Departure Bay – Horseshoe Bay; Langdale – Horseshoe Bay; and Bowen Island – Horseshoe Bay

Section 3: Strategies for Cost-Effective Fuel Procurement

3.1 Overview

BC Ferries has been able to achieve significant savings in fuel costs through the implementation of its fuel procurement strategies. The Company has also reduced the impact of volatile fuel prices on its customers through the combined use of fuel deferral accounts and its fuel hedging program.

3.2 Commodity Prices

Diesel

The price BC Ferries pays to procure ULSD is subject to global supply and demand market dynamics which drive the price of crude oil and the refined products derived from crude, including diesel. Over the past 10 years, the price of crude oil has been quite volatile, largely due to macro events causing dramatic shifts in supply and demand.

Diesel price is composed of crude oil, refiner margins, delivery, and taxes. The price volatility is largely driven by the commodity portion and refiner margins, which make up approximately 80 percent of the current overall price. Over the past five years, the price of crude oil has ranged from a low of US\$26 per barrel to a high of US\$111 per barrel and is currently at about US\$70 per barrel. Global supply and demand will continue to drive crude prices, and local supply and demand will also continue to influence wholesale pricing in the Vancouver market. BC Ferries does not have influence over either the commodity component or the refiner margin which makes up the Vancouver wholesale price for ULSD.

Liquefied Natural Gas

LNG price is composed of natural gas, liquefaction costs, delivery, and taxes. The price volatility is largely driven by the natural gas component, which makes up approximately 25 percent of the current overall price. Over the past five years, the price of natural gas has ranged from a low of US\$1.64 MMBTU to a high of US\$6.15 MMBTU, and is currently at about US\$2.84 per MMBTU. BC Ferries does not have influence over the price of natural gas, the commodity component of LNG.

3.3 Procurement

Diesel

BC Ferries currently purchases more than 100 million litres of ULSD annually. As described in the PT4 Fuel Management Plan, to obtain best overall value, BC Ferries consolidates the procurement of both its diesel and marine lubricant requirements with a single major supplier, selected through a competitive procurement process. Combining all procurement with a single major supplier,

selected through a competitive procurement process, has enabled the Company to obtain discounts; the result of which has been significant annual fuel cost savings. Complex delivery schedules and associated bridging fees have been managed efficiently and effectively through the supplier distribution networks.

Formal competitive procurement processes for the supply of fuel and marine lubricants are, and will continue to be, conducted by BC Ferries in order to achieve best overall value for the Company. BC Ferries' fuel and marine lubricant contracts are set over a fixed initial term with options to extend. In the PT4 Fuel Management Plan, the Company indicated that a competitive tender process for procurement of ULSD was underway. The result of that process was a new contract with the incumbent fuel supplier extending from April, 2016 to March, 2019. BC Ferries holds two 1-year extension options which could extend the term as far as March, 2021.

Liquefied Natural Gas

Although there are many options for procuring the natural gas commodity, there is only one supplier currently capable of economically managing the liquefaction, delivery, and bunkering logistics to the locations where BC Ferries needs it.

FortisBC is able to supply BC Ferries with LNG in Metro Vancouver and on Vancouver Island. As described in Section 2.2, since the start of PT4, BC Ferries has entered into two 10-year agreements to procure LNG from FortisBC. FortisBC is regulated by the British Columbia Utilities Commission, as are the pricing mechanisms for LNG. The regulated price is based on the Sumas Monthly Index Price, which is a variable cost that fluctuates along with the price of natural gas, plus fixed charges such as liquefaction and delivery.

The all-inclusive price of LNG has been on average less than half the price of ULSD per unit of energy in PT4. As noted previously, to track the relative prices, BC Ferries converts the cost of LNG into a price per DLE. Since BC Ferries has been procuring LNG, the delivered price has averaged approximately 42 cents per DLE. Over the same period, delivered diesel prices have averaged approximately 92 cents per litre.

Should the supply infrastructure grow as anticipated on the west coast of British Columbia, and as the Company's fleet of LNG-powered vessels continues to grow, more supply options and, therefore more competition for the supply of LNG, is expected to occur in the marketplace. This should benefit LNG consumers in British Columbia, including BC Ferries.

Going forward, the Company will continue to use competitive procurement processes to ensure BC Ferries' operational and commercial requirements for the supply and delivery of LNG are met in a cost-effective manner.

3.4 Fuel Hedging

The use of fuel surcharges and rebates can have an effect on traffic and, thereby, the revenue and earnings of the Company. Surcharges increase the cost of ferry service to BC Ferries' customers, which can negatively impact traffic levels due to price elasticity. Changes in surcharges and rebates create an environment of price uncertainty that can also negatively impact traffic levels. Fuel hedging complements the use of fuel deferral accounts, increasing price certainty and thereby mitigating the potential negative impacts of fuel price volatility on customers, traffic levels and revenue. As described in the PT4 Fuel Management Plan, the Company's current hedging strategy is to undertake hedge transactions when those transactions are reasonably expected to reduce the potential for fuel surcharges.

Market prices in fiscal 2017 allowed BC Ferries to selectively layer in ULSD hedges. Specifically, during fiscal 2017, BC Ferries entered into ULSD hedges primarily covering the 12-month period extending from January 2018 to December 2018 at prices below the indicative regulatory set price. Against the backdrop of an improving commodity outlook, the Company entered into additional ULSD hedges in early fiscal 2018 for consumption periods extending as far out as December 2019. By March 31, 2018, the Company had locked in fixed-price swaps for approximately 64 percent of forecast fiscal 2019 diesel consumption, as well as an additional 31 percent of projected fiscal 2020 consumption at prices below the indicative regulatory set price.

As BC Ferries moves forward with using LNG, it will evaluate the economics of hedging LNG commodity pricing and the effectiveness of a hedging program for LNG.

3.5 Fuel Cost Deferral Accounts

As described in Section 1.1, fuel represents approximately 12 percent of BC Ferries' operating expenses; therefore, it is a key input into the price cap determination. As the cost of fuel is highly dependent on market conditions, the Commissioner establishes a fuel set price for each year of a performance term which seeks to represent the expected price of fuel over that performance term.

The fuel cost deferral account mechanism is the primary means by which BC Ferries mitigates fuel price risk. It allows BC Ferries to recover from its customers fuel costs that are higher than the set price established by the Commissioner through the implementation of fuel surcharges, or to return to customers lower fuel costs through fuel rebates. Order 15-03A *Establishment of Fuel Deferral Accounts Pursuant to Section 41.1 of the Coastal Ferry Act*, dated September 28, 2014, authorizes BC Ferries to use deferral accounts in PT4, one for the northern routes and one for the non-northern routes, and sets out the terms and conditions for their management. BC Ferries closely monitors fuel prices and forecast deferral account balances. With a goal of minimizing fare changes, the Company proactively manages the deferral account balances in accordance with the terms of Order 15-03A.

By Order 15-03A, the Commissioner established the set price for diesel at 91.5 cents per litre and for LNG at 46.4 cents per litre effective the first year of PT4, with both values to be inflated by 2 percent per year for the balance of the performance term. The set prices are shown in Figure 3-1.

Table 4: PT4 Regulatory Set Prices

Set Price	PT4			
	2017	2018	2019	2020
Diesel (per Litre)	\$0.915	\$0.933	\$0.952	\$0.971
LNG (per DLE)	\$0.464	\$0.473	\$0.483	\$0.492

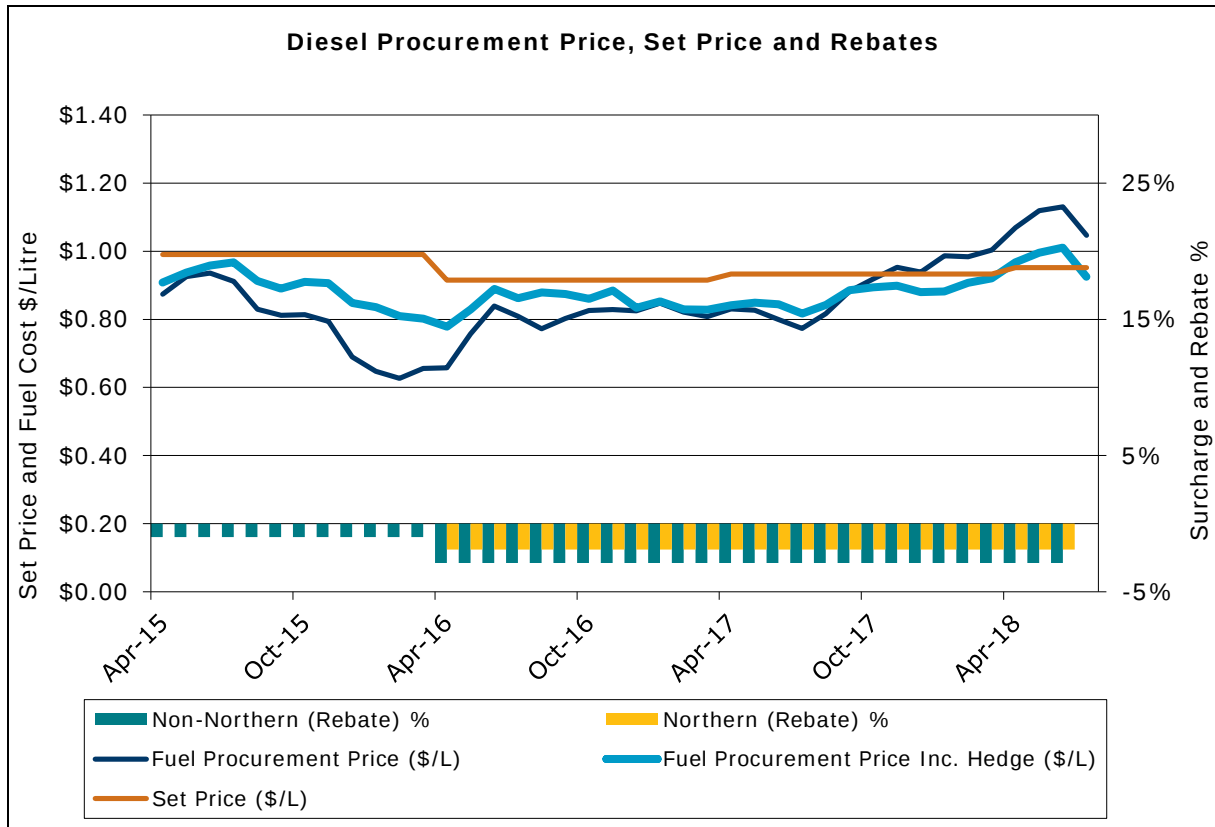
3.6 Historical Fuel Price and Rebate Activity

With LNG not being a fuel source for the Company before PT4, the price of ULSD has accounted for nearly all costs that have historically affected the fuel cost deferral accounts and associated surcharge and rebate activity.

Figure F shows how procurement prices have deviated from the set price for diesel and resulting fuel rebates.

BC Ferries experienced net diesel procurement prices below the set price from the beginning of PT4 until May 2018. At the beginning of PT4, there was a fuel rebate of 1.9 percent on the northern routes and 2.9 percent on all other routes. In October 2017, the oil market shifted and prices increased to current levels. At the end of fiscal 2018, the fuel deferral account for the non-northern routes carried a total debit balance to be recovered from customers of \$15.7 million. Typically in response to a large debit balance, the Company would reduce or eliminate rebates, or apply surcharges. Instead, to the benefit of its customers, BC Ferries voluntarily eliminated the deferral account balance for the non-northern routes, foregoing \$15.7 million of potential surcharge revenue. As a result of high diesel prices, all rebates were discontinued in June, 2018.

Figure F: Diesel Procurement Price, Set Price and Rebates



Conclusion

BC Ferries manages its fuel choices, consumption and cost within an overarching objective of ensuring the ferry system remains financially and environmentally sustainable while meeting the needs of its customers. The Company has made significant progress to date in PT4 on the initiatives and strategies set out in the PT4 Fuel Management Plan to optimize fuel consumption, evolve the fuel mix to toward lower carbon and more cost-effective sources, and procure fuel and manage fuel price risk effectively. The actions the Company has taken in these areas represent important accomplishments in its journey towards sustainability. In the process, BC Ferries has become a leader in the marine industry in North America when it comes to lowering emissions and adopting clean marine technology.

Part 3
Capital Plan
Fiscal 2019 Through 2030



British Columbia Ferry Services Inc.
September 28, 2018



Caution Regarding Forward-Looking Statements

British Columbia Ferry Services Inc. ("BC Ferries") advises that this report may contain certain forward-looking statements which relate to future events or future performance. These forward-looking statements are based upon management's expectations and assumptions as to a number of factors, and BC Ferries believes that it has a reasonable basis for making such forward-looking statements. If management's expectations and assumptions prove to be incorrect, or factors change, then actual results could differ materially from the forward-looking statements contained in this report. In addition, forward-looking statements, by their nature, involve risks and uncertainties which could cause actual results to differ materially from those contemplated by the forward-looking statements. The risks and uncertainties include those risks and uncertainties described in BC Ferries' Annual Management's Discussion & Analysis, which is available under BC Ferries' company profile at www.sedar.com.

Executive Summary

British Columbia Ferry Services Inc. (“BC Ferries” or the “Company”) is an essential marine transportation link that connects coastal communities and facilitates the movement of people, goods and services. BC Ferries understands the importance of ensuring that the ferry system is responsive to the needs of its customers and the communities it serves. Through its capital planning process, the Company looks to ensure that the ships, terminals and other physical resources necessary for ongoing safe, efficient, reliable and sustainable operations will be in place to meet the needs of customers and communities now and into the future.

BC Ferries aligns its capital plan with its corporate strategy and customers’ expectations. The planning process involves community engagement and strategic planning, evaluating existing assets, setting investment priorities, and identifying necessary investments. The Company also monitors and considers emerging trends and their potential impact on the capital planning process.

The capital plan BC Ferries is submitting addresses system-wide challenges related to the ability to respond to changes in traffic and demand for service. It emphasizes system capacity, operational efficiency and resiliency, and environmental awareness and stewardship, within a framework of affordability to ensure the ferry system remains sustainable.

Submitting a capital plan is required by the *Coastal Ferry Act*. Over the 12-year period covered by this Capital Plan (April 1, 2018 – March 31, 2030), BC Ferries anticipates investing \$3.9 billion in capital assets – the largest capital plan in the Company’s history. BC Ferries recognizes the responsibility that accompanies this size of investment, and has sought to ensure the plan the Company has developed will further build and maintain a robust, healthy, and safe ferry service for all British Columbians.

Table of Contents

Executive Summary	3
Introduction.....	5
Historic Overview of Capital Investments	6
The Way Forward	10
Section 1: Responding to Communities and Customers.....	12
Section 2: Planning Processes.....	17
2.1 Overview	17
2.2 Strategic and Master Planning	18
2.3 Capital Plan Priorities	20
2.4 Strategies that Support the Capital Plan	20
2.5 Components of the Capital Plan	22
2.6 Managing the Capital Plan.....	27
Section 3: Planned Capital Expenditures.....	28
3.1 Major Capital Expenditures	29
3.2 Significant Capital Expenditures	34
3.3 Other Capital Expenditures	36
SCHEDULE 1 - Schedule of Projects.....	38
APPENDIX 1 - Project Governance Framework and Guidelines	40

Introduction

BC Ferries submits this Capital Plan to the British Columbia Ferries Commissioner (the “Commissioner”) for approval pursuant to section 64.1 of the *Coastal Ferry Act* (the “Act”). Section 64.1(1) states:

“At least 18 months before the beginning of a performance term, a ferry operator must prepare a capital plan, in accordance with subsections (2) and (3), respecting the major capital expenditures, including, without limitation, all expenditures relating to improvements to or purchases of vessels or terminals, that the ferry operator anticipates incurring over the 10 year period beginning at the start of the upcoming performance term.”

The Capital Plan outlines the capital expenditures the Company anticipates incurring over the 10-year period beginning April 1, 2020, the start of performance term five (“PT5”), in addition to the capital expenditures planned for the two years leading up to the start of PT5 (April 1, 2018 through March 31, 2020), with the result that the Capital Plan covers a 12-year period (April 1, 2018 through March 31, 2030).

The Company considers the capital expenditures included in the Capital Plan to be reasonable, prudent and required to ensure ongoing safe, reliable and efficient ferry service over the next 12 years. The Capital Plan will enable BC Ferries to meet or exceed the service level requirements as set out in the current Coastal Ferry Services Contract between the Province of British Columbia (the “Province”) and BC Ferries (the “CFSC”), while supporting delivery of the Company’s strategic plan.

The Capital Plan responds to the specific information requirements of section 64.1 of the Act and includes information on the amount, proposed timing and type of proposed capital acquisition or expenditure for each of the planned major capital expenditures. As well, the options considered and the rationale for the planned major capital expenditures are addressed.

The Capital Plan is structured as follows. This introduction includes an overview of historic capital investments by the Company and the approach BC Ferries intends to take going forward to ensure its investments enable it to continue to deliver safe, reliable and efficient service that minimizes pressure on fares and provincial service fees. Section 1 outlines the priorities of the Company in planning to fulfill its vision of being trusted and valued, and its mission to connect communities and customers to the people and places important in their lives. Section 2 describes the Company’s internal processes, from strategic and master planning to capital planning, while outlining how these processes relate to the development of this Capital Plan. Section 3 describes the capital expenditures the Company anticipates making over the next 12 years, with a focus on the major capital expenditures, by category, including the options considered and the rationale for the planned expenditures.

Historic Overview of Capital Investments

BC Ferries is one of the largest ferry operators in the world. Under contract to the Province, the Company provides year-round vehicle and passenger service on 25 routes to 47 terminals, with a fleet of 36 vessels. In fiscal 2018¹, the Company carried 22.0 million passengers and 8.7 million vehicles throughout coastal British Columbia. The passenger traffic levels in fiscal 2018 were the highest BC Ferries has experienced in 20 years, while vehicle traffic levels reached an all-time high. In response to this demand, BC Ferries provided more than 174,000 sailings, 2,962 more round trips than required under the CFSC, and 1,190 more round trips than the year prior.

BC Ferries is a significant contributor to the British Columbia economy, an enabler of commerce for coastal communities, and a vital connection on which coastal communities rely. On average, BC Ferries spends more than \$200 million in British Columbia each year on ships, terminals and information technology infrastructure. Since fiscal 2004, BC Ferries has injected over \$2 billion into the British Columbia economy, almost all in high value, technically-advanced projects. Over the same 15-year period, the Company paid over \$4.4 billion to its employees, many of whom reside in rural and remote communities up and down the coast, and \$1.4 billion in fuel procurement during the same period.

BC Ferries reinvests its earnings back into the ferry service. Cash flow from operations and debt are used to fund capital improvements to the ferry service. As shown in Table 1.1, in the 15 years since fiscal 2004, when BC Ferries was restructured to its present form as an independent commercial company, the Company has invested over \$2.9 billion in infrastructure supporting the coastal ferry system. This represents more than double its investment compared to the 15 years prior as a Crown Corporation. The Capital Plan for PT5 reflects a continued program of capital investment to ensure a safe, reliable and efficient ferry service that is resilient in the face of growth in traffic, changes in the way people travel, and the day-to-day operational issues that impact every transportation provider.

¹ Fiscal years are from April 1 through March 31.

Table 1.1: Historical Capital Investment

Capital Investment (\$ Millions)	Fiscal 1989-2003	Fiscal 2004-2018
Time Span	15 years	15 years
Terminal		\$624
Vessel		\$1,111
Upgrades		\$881
Information Technology		\$269
Other		\$30
Total	\$1,388	\$2,915

Investing in the Fleet

By far, the largest portion of BC Ferries' capital investment since fiscal 2004 has been directed to acquiring new vessels and upgrading and overhauling existing ones. During this time, BC Ferries has spent over \$1.1 billion to acquire new vessels and nearly \$900 million to upgrade existing ones.

Vessel Acquisitions

In the first three performance terms,² eight new vessels were brought into service - the *Northern Adventure*, the *Northern Expedition*, three Coastal Class vessels, the *Island Sky*, the *Kuper* and the *Baynes Sound Connector*. To date in performance term four (April 1, 2016 – March 31, 2020) ("PT4"), an additional three vessels have been introduced into service, a fourth vessel is planned for entry into service in 2019 (fiscal 2020), and two new vessels are under construction for planned entry into service in 2020 (fiscal 2020):

- Three new Salish Class vessels entered service on the Comox to Powell River route and in the Southern Gulf Islands in fiscal 2018. The dual-fuel vessels are the Company's first to run primarily on liquefied natural gas ("LNG"). These vessels showcase the leadership role BC Ferries plays in North America when it comes to clean and innovative technology that lowers emissions. The Salish Class vessels are the first passenger vessels in the world to fuel LNG on an open vehicle deck via delivery truck. This innovation was conceived by BC Ferries and designed, engineered and built by BC Ferries and its partners. It saved millions of dollars in infrastructure costs and has proven to generate significant environmental benefits and lower operating costs. The vessels are also the quietest ships in the fleet and were designed with a view to mitigating the effects of underwater radiated noise on whales in general and southern

² Performance term one (April 1, 2003 – March 31, 2008); performance term two (April 1, 2008 – March 31, 2012); performance term three (April 1, 2012 – March 31, 2016).

resident killer whales in particular. This is an important component of the Company's overall plan to reduce underwater radiated noise while maintaining safe, reliable and sustainable operations. With the introduction of these vessels into service, BC Ferries retired the 52-year old *Queen of Burnaby* and the 53-year old *Queen of Nanaimo*.

- BC Ferries purchased a used vessel, the *Northern Sea Wolf*, in Europe in fiscal 2018 to serve a new direct route between Port Hardy and Bella Coola. The vessel is currently undergoing extensive upgrades at a shipyard in British Columbia to bring it up to BC Ferries' and Transport Canada's standards of safety and reliability, in preparation for its entry into service, planned for the spring of 2019.
- In fiscal 2018, the Company contracted the building of two new Island Class vessels. These vessels will initially operate on ultra-low sulphur marine diesel with stored energy capability (battery) installed to provide the vessels' service power. The stored energy capability is expandable, so that it is possible that batteries could supply the vessels' full power requirement in the future. These two vessels are expected to go into service in the Northern Gulf Islands in 2020 (fiscal 2020). BC Ferries intends to deploy the first new vessel to provide service between Powell River and Texada Island, and the second new vessel to provide service between Port McNeill, Alert Bay and Sointula. The acquisition of these vessels will enable the retirement of the 60-year old *North Island Princess* and the 54-year old *Howe Sound Queen*.

In addition to the above, the Capital Plan envisages the acquisition of a further 14 ships in the period through fiscal 2030, with spending towards an additional six vessels that will go into service by the end of fiscal 2032. This will bring the total number of vessels that will have been acquired by BC Ferries since fiscal 2004 to 34.

Vessel Upgrades

BC Ferries also makes significant investments in maintaining and upgrading its existing fleet. Each vessel has a long-range maintenance plan, which outlines plans for routine maintenance, major overhauls, and significant upgrades at approximately the quarter, mid, and three-quarter lives of the vessels. This helps ensure that all vessels in the fleet meet regulatory requirements and continue to provide safe and reliable service.

BC Ferries is one of the largest purchasers of marine products and services in British Columbia and Canada. Over the past 10 years, BC Ferries has spent approximately \$1 billion at local shipyards on refits, repairs, mid-life upgrades and life-extension projects. BC Ferries also operates its own certified ship repair yard - Fleet Maintenance Unit - locally in Richmond, British Columbia, with more than 150 employees. This is one of the largest ship repair teams in the province.

Since fiscal 2004, BC Ferries has spent \$881 million on capital refits and upgrades to vessels. In PT4 to date, the Company has undertaken more than 50 existing vessel projects, including:

- The mid-life upgrade of the *Spirit of British Columbia*, which started in the fall of 2017, was completed in the spring of 2018. The upgrade included converting the vessel to dual-fuel propulsion, enabling it to operate on LNG, which significantly reduces emissions and operating costs. The *Spirit of British Columbia* is the first passenger vessel in the world to refuel LNG via delivery on a fully-enclosed vehicle deck. Through this innovation, the Company saved millions of dollars in LNG infrastructure costs. The upgrade also involved a renewal of the vessel's safety equipment, machinery, and passenger amenities, including an expanded gift shop and a new coffee bar. The upgrade prepares the vessel for 28 more years of planned service. In September 2018, the *Spirit of Vancouver Island* was removed from service for an equivalent upgrade and conversion to dual-fuel propulsion. The upgrade is expected to be complete and the vessel returned to service for the summer of 2019.
- In fiscal 2017, BC Ferries completed upgrades of the *Queen of Alberni* and the *Queen of Cowichan* which included updates to mechanical, electrical, and safety systems, as well as standardization of bridge equipment.

Investing in Terminals

On the shore side, BC Ferries has invested \$624 million in capital projects since 2004 at its terminals in support of a safe, reliable, and customer-focused travel experience. In addition, BC Ferries' investments have focused on enhancing efficiencies through standardization of berth and terminal infrastructure, and on reducing the Company's environmental footprint.

A number of projects have been undertaken in PT4 to either upgrade or replace aged marine structures, including completion of:

- An upgrade of Berth 1 at Langdale Terminal to replace aged components and prepare for elements of an upcoming terminal development project. The upgrade project was completed in early fiscal 2018.
- A replacement of Berth 1 at the Tsawwassen Terminal, which primarily serves the route connecting Tsawwassen with the Southern Gulf Islands. The project used the Company's standardized berth design guidelines to ensure maximum interoperability, and was completed in fiscal 2017.

- A significant upgrade to the Prince Rupert Terminal, which included marine structure work, a new, wider trestle for loading vehicles, as well as a wider, covered walkway and a covered waiting area for foot passengers to provide a safer and more comfortable journey. The project was completed in late fiscal 2018.

Investing in Information Technology

Since fiscal 2004, BC Ferries has invested \$269 million to evolve its aged information technology assets. This has included replacing legacy systems and investments to modernize the way BC Ferries interacts with its customers. Key projects undertaken in PT4 include:

- Continuing to replace BC Ferries' website, reservation system and e-commerce platform, and upgrade the point-of-sale system. In the coming years, these technology improvements will provide customers an opportunity to purchase travel in advance at discounted rates on select sailings on reservable routes. These improvements enable BC Ferries to provide more effective service by responding in a more timely way to changing customer demands. As part of this, BC Ferries will introduce improved transaction processing and online booking with more choices in fares. Customers will be able to seamlessly book travel on any device of their choosing – desktop, laptop, tablet or mobile. During fiscal 2018, BC Ferries implemented the first elements of this system, including a new reservation system and enhancements to its customer relationship management system.
- A replacement of the Company's payroll system was completed in fiscal 2017. The new system replaced aged legacy payroll systems and provides processing efficiencies and flexibility.
- The installation of digital information signs at 42 inter-island (also known as 'minor') and northern routes terminals commenced in fiscal 2018. The signs provide real-time information about the ferry schedule, location of the vessel, the time of the next sailing, and the reasons for any delays or cancellations. These signs give the Company one more way of communicating this valuable information to customers.

The Way Forward

The Capital Plan for PT5 emphasizes system capacity and resiliency to ensure safe, reliable and efficient operations, while delivering an exceptional and affordable customer-focused travel experience. The Company plans to invest over \$3.9 billion over the next 12 years – the largest capital plan in BC Ferries' history. The ability to deliver the Capital Plan is enabled by the Company's strong financial position which is driven by positive net earnings.

In developing its Capital Plan for PT5, BC Ferries has kept in mind that decisions made today need to take into consideration the way people will travel tomorrow. With close to 5 percent growth in traffic year-over-year for the past few years, BC Ferries recognizes it needs to plan for a more resilient ferry service that can address pain points in its customers' experience in the areas of reliability, affordability and choice. The Capital Plan responds to these priorities.

Section 1: Responding to Communities and Customers

BC Ferries is deeply connected to the communities and the customers it serves. The Company's vision is to be "*trusted and valued*." Towards this vision, BC Ferries is working hard in all areas to earn the public's trust and provide a service that its customers and coastal communities value.

BC Ferries understands that the investments it makes in its fleet, terminals and other infrastructure must meet the needs of the customers and communities it serves for decades to come. Through listening to customers and communities, BC Ferries has learned much about what is expected by those who depend on coastal ferry services, and the Capital Plan for PT5 has been developed to respond to those expectations.

Safe

BC Ferries' customers look to the Company to provide a safe travel experience. BC Ferries has established and maintained its reputation as a safe operator with a culture that learns from previous experience. Its leadership in this area is recognized internationally, most recently in 2017 with the prestigious DuPont International Safety Award, a first for any Canadian company in any industry. As the Company renews its fleet, terminals and other infrastructure under this Capital Plan, new, more modern assets will replace older ones, and investments will be made in new safety equipment and technologies to help ensure BC Ferries continues to provide both a safe work and travel environment.

Reliable and Resilient

BC Ferries' customers expect reliable service and sailings to depart on time. In fiscal 2018, 99.83 percent of the more than 174,000 trips provided by BC Ferries sailed as scheduled, and on-time performance³ was 89 percent fleet wide. BC Ferries spent \$122 million in the year on vessel overhauls and maintenance to ensure it operates reliable assets.

While BC Ferries' system reliability compares favourably to ferry systems in developed nations around the world, the age of many of its vessels and other assets, and the lack of options for vessel redeployments in peak periods, in particular, makes it challenging to meet the expectations of customers and communities for reliable and on-time service. The current system has little built-in redundancy and as a result, has limited capacity for resiliency in the face of an incident that removes a vessel from service, regardless of how short a period of time. When there are delays in bringing a vessel back into service, the customers' experience falls short of expectations, and trust in the Company is eroded.

³ On-time performance indicates the percentage of sailings departing within 10 minutes of scheduled departure for the major and inter-island routes, and arriving within 10 minutes of scheduled arrival for the northern routes.

To improve fleet resilience while at the same time addressing capacity constraints, the Capital Plan focuses on replacing a number of aged vessels, and increasing the overall number of vessels in the fleet. This, together with planned investments in terminals to make them operate more efficiently, major upgrades to existing vessels at planned intervals, and a significant redevelopment of BC Ferries' ship repair facility to optimize its use, will provide for greater resiliency of the ferry system overall, and enhance the reliability of service for customers.

Efficient and Affordable

BC Ferries' customers expect the cost of travel to be reasonable for the services they receive. They are concerned about fare affordability and expect BC Ferries to operate efficiently and invest prudently in assets and infrastructure, ensuring that the fares they pay are put to the highest and best use.

A central component of the Capital Plan is the strategy to move towards greater standardization and interoperability of the fleet. This strategy underpins the Company's plans for acquiring new vessels and can result in lower capital costs and greater operational efficiency. With the existing fleet composition, planned and unplanned outages tend to result in a misalignment of capacity provided on one or more routes. With a more standardized fleet and fewer classes of vessels, there will be less impact to the customer experience during these redeployments as the relief vessel is much more likely to be consistent with the regular vessel on the run. A standardized fleet provides other benefits, such as reduced costs for crew training and familiarization and a reduced number of critical spare parts. Greater standardization allows for a broader familiarity of the vessels for those operating and maintaining them, which should lead to safer operations and more cost-effective maintenance. A reduced number of classes also allows for greater implementation of series-builds, which is expected to reduce the cost of vessel acquisitions.

The Capital Plan also includes investments to optimize the terminal network, including new technology to speed vessel turnaround times, and a move towards greater commonality in terms of the layout, design, equipment and maintenance of the terminals. This will lead to more cost-effective operations and maintenance, and lower design and capital costs, thereby enhancing the efficiency of the terminal network. In concert with the plans to renew and improve the efficiency of the Fleet Maintenance Unit and to modernize the Company's customer-facing information systems, these investments will improve the overall efficiency of the ferry system.

While the Capital Plan for PT5 represents the largest program of capital investment in the Company's history, it has been developed with the recognition that it is ferry users that fund the investment through the fares they pay and that fares must continue to be affordable. Recent positive traffic trends have provided both the need for, and the means to afford, an expanded rate of capital spending without impacting fare affordability. Should these trends reverse, there are a number of ways the Company can respond in order to maintain the financial sustainability of the service and the

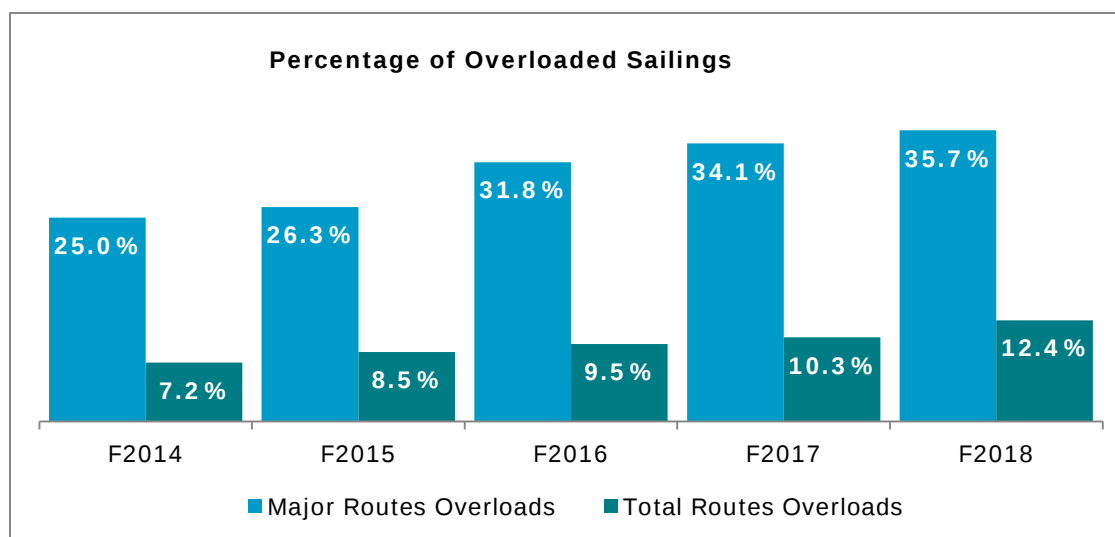
affordability of fares. These could include schedule and vessel deployment changes and phasing capital investments over a longer time horizon

Sufficient Capacity

BC Ferries' customers and the communities it serves seek timely access to travel, which means the system must have sufficient capacity to handle the traffic. However, ferry users understand that capacity (ships, terminals and staff) is expensive and do not expect access to be unlimited.

BC Ferries engages in detailed long-range planning aimed at prudent investment in new capacity. Determining the level of service that is satisfactory is a continuous challenge. Figure 1.1 shows the percentage of overloaded sailings over the last five years for both the major routes,⁴ which are the Company's busiest routes, and fleet wide. The Capital Plan has multiple initiatives to address this challenge, including more vessel capacity, terminal improvements, and new information technology systems. These initiatives will improve the Company's ability to respond to changes in demand to enable more customers to travel on the sailing of their choice.

Figure 1.1: Sailing Overloads



Certainty of Travel

BC Ferries understands that for many of its customers, not knowing if they will get on a particular sailing is a source of frustration and stress. Many travelers want to know their plans are firm before leaving their homes and businesses. Uncertainty of travel is dissatisfying and fuels the impression that BC Ferries does not care about the customer's experience.

⁴ The major routes comprise the routes connecting: Swartz Bay-Tsawwassen, Departure Bay-Horseshoe Bay, Duke Point-Tsawwassen, and Langdale-Horseshoe Bay.

BC Ferries has heard these concerns and is addressing them. Better information is flowing to customers on social media and via live vessel tracking on the Internet and video screens displaying the latest sailing information at certain terminals. More vessel capacity has been added to address overloads up and down the coast, and more is envisaged to be added under the Capital Plan.

Completely addressing customer demand for certainty, however, means assuring a customer they will be on a specific sailing before they begin their journey. BC Ferries' Capital Plan includes significant investments in replacing the Company's aged reservation system, website and e-commerce platform. In addition to improvements in transaction processing and on-line booking, these initiatives will provide customers on the major routes with the opportunity to purchase travel in advance at discounted rates on select sailings.

Sustainable and Robust

Ferry users and non-users alike expect BC Ferries to be a good steward of the environment, and to plan for the longevity and sustainability of the ferry system for decades to come. The Capital Plan responds to both of these pillars of sustainability:

- **Environmental sustainability** means moving through the environment without consuming it. BC Ferries takes seriously its role as a leader in the transportation sector in the transition to a lower carbon future. As BC Ferries has developed its Capital Plan, it has focused on continuing to increase efficiency and sustainability through environmentally-conscious initiatives, including the adoption of new marine technologies such as LNG, hybrid electric propulsion, efficient hull design and low noise design for the fleet, as well as energy efficiency initiatives shore side, including lighting retrofits and heating and ventilation improvements.
- **Financial sustainability** means BC Ferries is able to build and maintain a modern ferry system and avoid volatile fare changes while enduring cyclical changes in the economy that affect traffic demand. BC Ferries believes that the Capital Plan represents a reasonable and prudent plan of investment. Because planning for investments that will last for decades to come is challenging, the Company reviews and updates the Capital Plan annually. Should economic conditions arise which significantly affect traffic, BC Ferries is able to respond through adjustments in operational service and the rate of investment in capital spend.

Customer and Community Input

BC Ferries recognizes that to earn the public's trust and provide a service that its customers value, it needs to engage in meaningful ways with its customers and the communities it serves.

BC Ferries believes in actively engaging the community and its customers in the decisions that affect

them most. When adding, changing or developing services and significant projects in the communities it serves, BC Ferries follows a formal process of community consultation and engagement, known as its *Stakeholder and Community Engagement Framework*.

BC Ferries regularly meets with communities, First Nations, business and specific interest groups all along coastal British Columbia to hear concerns, suggestions and requests. The majority of coastal communities are represented by one of 13 ferry advisory committees, which are comprised of local community representatives. These committees serve as liaisons with communities and customers, and are viewed by the Company as important contributors to a well-functioning coastal ferry service.

BC Ferries also engages with community members on significant terminal upgrades and other major projects the Company plans to undertake. This engagement takes many forms, including community information meetings, open houses, online surveys, and meetings with community leaders and other key stakeholders. The goal is to involve communities, First Nations and customers in the decisions that may impact them and incorporate their input and feedback. This engagement process is an important component of the process BC Ferries will follow to ensure projects in the Capital Plan respond to the needs and expectations of those who rely on the ferry system.

Section 2: Planning Processes

2.1 Overview

BC Ferries' Capital Plan is designed to help ensure a sustainable, future-ready, efficient marine transportation system for coastal British Columbia.

The coastal ferry service that BC Ferries provides is a vital part of British Columbia's transportation infrastructure, and is complex to operate. Ships and terminals are costly, long-lived, custom-designed assets that take a significant amount of time to procure. An interconnected set of information technology systems and other types of infrastructure that support the operation must be upgraded and invested in to ensure a continued well-functioning service. Thorough analysis must support all investment decisions.

BC Ferries has a detailed and comprehensive long-range planning process that underpins the Capital Plan. It starts with a strategic plan based on the Company's vision of being trusted and valued, and its mission to connect communities and customers to people and places important in their lives.

Asset master plans flow from the strategic plan and turn strategy into practical policies and directions that guide the Company in its decisions. The fleet master plan, for example, details how the fleet will be standardized, where ships will be deployed, when ships will be replaced, and with what type of vessel.

Extensive external input informs the strategic and master planning processes. BC Ferries consults with communities, ferry advisory committees, regulators, various levels of government, First Nations and commercial users. As discussed previously, BC Ferries follows a formal community consultation and engagement process that specifies when and how the Company will engage with the public.

The Company's Capital Plan flows from the master plans. This plan sets out what ship, terminal, information technology and other infrastructure investments the Company will make in the upcoming 12-year horizon. The plan reflects the service requirements under the Company's contract with the Province and is used by the Commissioner as input into the price cap determinations rendered every four years.

This detailed and inclusive planning process is key to BC Ferries making prudent decisions that will ensure the coastal ferry service operates and evolves in the interests of ferry users and British Columbians.

2.2 Strategic and Master Planning

The strategic planning process at BC Ferries begins with talking to key stakeholders, including employees, customers, municipalities, the provincial government, ferry advisory committees, First Nations and other groups to understand the wants and needs of those who rely on the services the Company provides. The Company uses this feedback to help shape its strategic plan, which sets the direction the Company will follow in the ensuing decade to connect communities and customers to people and places important in their lives. The strategic plan guides the Company's operations and its capital investment priorities. The current strategic plan outlines six strategic goals that are identified as important to fulfilling the Company's vision and mission:

1. Ensure Safe, Reliable and Efficient Operations

Safety, reliability and efficiency are cornerstones of what is done at BC Ferries. BC Ferries will continue to leverage innovative processes and technology, while empowering employees with the necessary training, tools and support to deliver a safe and consistently excellent customer experience.

2. Deliver a Customer-Focused Travel Experience

BC Ferries will continue to build a customer-focused culture across all levels of the organization. The Company is committed to making proactive and innovative business decisions that are informed by the changing needs and realities of those who travel with it. BC Ferries will also focus on making necessary investments in technology, internal processes and employee training to ensure a truly consistent, seamless and personalized customer experience.

3. Foster a Productive, Motivated and Engaged Workforce

BC Ferries' employees are its greatest asset. The Company will continue to review and improve policy and practices to reflect the ever-changing workplace and will invest in developing and supporting the people that make the Company a global leader in marine transportation.

4. Be a Leader in Environmental and Social Governance

BC Ferries will continue to work collaboratively with the communities it serves to ensure they have input into the decisions that impact them the most. Reducing the Company's environmental footprint through continued investment in leading-edge practices related to environmental stewardship is also a top priority to ensure BC Ferries continues to meet – and exceed – regulatory compliance.

5. Grow and Profitably Diversify Our Revenue Base

Pursuing opportunities to grow revenue that will support its financial sustainability and fare affordability for customers, BC Ferries will focus on optimizing existing assets and services, while exploring new opportunities through ancillary services and partnerships, as well as new business areas.

6. Drive Prudent Investment in Our Capital Assets

BC Ferries' Capital Plan prioritizes safe, reliable, efficient service, while continuously improving the customer experience. The Company's customer experience, information technology, fleet and terminal network master plans will help guide the Company's capital spend while contributing to fare affordability.

To fulfill these goals, BC Ferries needs the right tools for the job. That involves, among other things:

- A fleet with sufficient capacity to enable the delivery of service that is safe, reliable, efficient, and resilient;
- Technologies and processes onboard the vessels and shore-side that are respectful of the natural environment within which the Company operates, and serve to lessen its environmental footprint;
- Reliable access to a modern and efficient ship repair facility;
- A terminal network that safely and efficiently interfaces with the vessels;
- Ancillary services onboard and at the terminals that meet customer needs and generate revenue for the Company;
- Information technology that enables the Company to efficiently run the business.

BC Ferries' asset master plans translate the broad direction of the strategic plan into specific strategies, policies, design directives and tactics that will help the Company achieve its strategic goals. The principles and policies in the master plans are combined with information about asset age and condition to inform a 25-year investment schedule which, in turn, informs the Capital Plan. Thus, for major asset acquisitions and upgrades, the master plans are foundational to the Capital Plan.

The principles and policies established as part of the Company's master plans which have been the key contributors in shaping the Capital Plan are outlined in Section 2.4 below.

The strategic and master plans are living documents that are updated and improved upon as the needs of BC Ferries' customers and other stakeholders evolve, as the Company continues to receive stakeholder feedback, complete projects, and meet objectives.

2.3 Capital Plan Priorities

The Capital Plan is an integral component of delivering the Company's strategic goals. The plan reflects prudent investments in capital assets, with a particular emphasis placed on delivering an affordable and customer-focused travel experience and ensuring continued safe, reliable and efficient operations that are financially and environmentally sustainable.

As previously described, traffic has grown significantly in recent years, with customer levels reaching all-time highs. BC Ferries' current asset profile and operations are challenged to meet this level of demand, and the service the Company provides to its customers is impacted. Higher traffic leads to overloaded sailings and increased wait times at the terminals. Overloads increase the pressure to accommodate as many vehicles as possible on each sailing, leading to increased vessel in-port times and added pressure on on-time performance. With terminal wait times and on-time performance challenged under normal circumstances, the impact of any delayed or cancelled sailing is magnified. BC Ferries understands that long wait times and ferries that run behind schedule are key sources of customer dissatisfaction. As a result, the Capital Plan addresses system capacity, operational efficiency, and resiliency.

In addition, BC Ferries is committed to being a leader in the transition to a lower carbon future and is determined to conduct its operations in a manner that is environmentally responsible and incorporates environmental factors into its decision-making. The Capital Plan reflects these objectives through initiatives that enhance the energy efficiency of the Company's terminals and other facilities, and reduce the overall fuel consumption and emissions of its vessels, as well as their underwater noise.

2.4 Strategies that Support the Capital Plan

Key strategies reflected in the Company's master plans underpin the Capital Plan. These are aspirational. They will take time to achieve and represent the future state the Company is striving to realize.

Customer Focused

A customer-centric organization starts with engaging customers, communities and businesses on the type, scale and frequency of the service they want to see. Customer service planning will focus on ways to enhance and improve the customer's experience.

Vessel and terminal design will support BC Ferries' commitment to coastal communities and improving the customer experience. Vessel and terminal design will include the implementation of improved customer-facing systems to enhance the customer experience and eliminate barriers for accessibility. Consultation with customers will be important in ensuring design changes are responsive to their needs.

Consistent Customer Experience

Customers will be provided with a consistent experience, regardless of which route they travel on. The goal is that all customer touch points exhibit the highest practicable level of commonality in terms of design and layout, available equipment and services, application of BC Ferries' brand to wayfinding and livery, and where possible, use of west coast sourced, sustainable materials.

Technology Enhanced

BC Ferries will use technology to streamline and modernize the customer booking and travel experience. New technologies will have sustained advantages, be easy to use, forward-looking and accessible and have broad industry acceptance.

Commonality

High commonality ensures safety, inter-operability, reliability, efficiency and customer satisfaction. All vessels and terminals will exhibit the highest practicable level of commonality, in terms of design, layout, equipment, operating characteristics, documentation, and maintenance. Commonality refers to the degree to which assets are the same. Commonality is a spectrum from identical to completely dissimilar; it is not a singular state or condition.

Interoperability

An interoperable vessel can be redeployed without the need to adjust or modify the vessel or berths, and does not require additional crew training beyond route familiarization. Interoperability supports reliable operations and reduced operating costs. The goal is to have models of vessels within a vessel class that will be inter-operable with each other.

Standardization

Standardization refers to the use of standardized components, systems, procedures, design features and equipment that is intended to remain the same across a wide variety of applications. Standardization is a primary means to achieve organizational efficiency and sustainability through commonality of design, system and process. All vessels and terminals will use standardized designs, components, procedures and equipment to the maximum extent possible with the intent to enhance safe operation and provide consistent customer experience and organizational efficiencies.

Fleet Identity

There are benefits associated with constructing identical vessels within a class. Identity means exactly the same in all respects. Identity maximizes efficiency, reliability, inter-operability and customer satisfaction. Identity will be applied to design, layout, equipment, operating characteristics, documentation, operating procedures, and maintenance regimes.

Environmentally Sustainable

All vessels will be designed for low energy consumption and clean environmental performance. Vessel design and modifications will appropriately incorporate new proven technologies to address key environmental considerations, such as alternate fuel sources, and including but not limited to noise, light pollution, waste management, emissions, and on-board water consumption. Projects to upgrade and redevelop terminals and other facilities will also be undertaken with a view to lessening their environmental footprint.

2.5 Components of the Capital Plan

The Capital Plan reflects investments in the following core areas over the next 12 years:

Fleet Renewal

The timing of the replacement of a vessel is typically dictated by age and condition. The fleet master plan calls for the replacement of 19 vessels over the next 14 years, representing more than half of the Company's 36-vessel fleet. The Capital Plan for PT5 includes investments to support all of these vessel replacements. The large number of upcoming replacements presents an opportunity to reshape the fleet to better suit the needs of ferry-dependent communities in British Columbia. BC Ferries will build modern, clean-technology vessels designed for the 21st century.

The 19 vessels next to retire belong to 10 different classes. The left side of Table 2.1 shows the large number of classes to be replaced, and the right side shows the class of vessel that will be used to replace them.

Table 2.1: Planned Vessel Replacements

Retiring Vessels	Replacement Vessel Class
5 C-Class (280-316 AEQ) 1 V-Class (254 AEQ)	7 New Major Class (~360 AEQ)
3 Bowen Class (59-61 AEQ) 2 Q-Class (44-63 AEQ) 2 K-Class (19-21 AEQ) 2 T-Class (26 AEQ) <i>Howe Sound Queen</i> (52 AEQ) <i>North Island Princess</i> (38 AEQ)	13 Island Class (47 AEQ) 1 Salish Class (138 AEQ)
<i>Nimpkish</i> (12 AEQ) <i>Kwuna</i> (16 AEQ)	<i>Northern Sea Wolf</i> (~35 AEQ) 1 Unique (AEQ TBD)

Note: AEQ or automobile equivalent is BC Ferries' standard unit of measure for an approximation of one car length.

The replacement of these vessels will significantly reduce the number of classes in the fleet. As discussed previously, this move toward greater standardization of the fleet is expected to result in lower capital costs and greater operational efficiency.

Over the last few years, several routes have been challenged to meet the passenger and vehicle demand. The vessel replacement program presents an opportunity to add vehicle and passenger capacity to the fleet. Almost all of the 19 vessels that will be retiring over the next 14 years will be replaced with a vessel or combination of vessels that have a higher capacity. The increased capacity is expected to reduce the frequency of overloaded sailings on all of the affected routes.

With all new vessel builds, BC Ferries puts great emphasis on providing a ship that is safe and efficient, minimizes the impact on the environment, and provides an excellent customer experience. The ongoing and upcoming vessel replacement programs will replace ships built in the 1950s through the 1980s with technologically-advanced ships with modern amenities. While the older vessels will continue to be well-maintained and safe to operate until their retirements, the new vessels will be more efficient. They will be designed to improve schedule resilience with double ended hulls, deck layouts designed for efficient loading and unloading, and service speeds sufficient for all routes on which a vessel might be deployed. They will also be more environmentally friendly. The Company plans to continue its strategies, such as reducing underwater radiated noise, and adopting alternative fuel or hybrid options for new vessels, which is expected to reduce emissions as well as operating costs. Future vessel builds will also have improved customer amenities, including greater wheelchair accessibility and increased passenger seating.

While replacing older ships with new modern ships should help with reliability, no ship, no matter how new or how well maintained, is immune to unplanned outages. As BC Ferries renews its vessels to address growing demand, it is also incorporating the need to prepare for vessel outages to minimize service disruption to customers.

To improve fleet resilience while at the same time dealing with capacity challenges, BC Ferries is planning to increase the number of vessels in the fleet. With the upcoming Bowen Class replacement, there is a clear need for increased capacity over the existing 60 AEQ ferries. Although deploying a single 100 AEQ vessel could meet the need for increased capacity, BC Ferries believes that deploying two 47 AEQ vessels will provide a better customer experience with more frequent sailings on the affected routes. The two-ship scenario will also provide the resiliency to ensure continuity of service during an unplanned outage with the remaining vessel. Additionally, on routes where one vessel service will remain, it will be possible to redeploy the second vessel of a nearby two-vessel route to enable faster resumption of service. As the Company prepares for the introduction for a new class of ships on those routes, there are related terminal and marine works requirements. Although these

expenditures are captured separately in the terminal projects within this Capital Plan, all project-driven expenditures are included as part of any project approval processes.

Similarly, the growth potential of the major routes is currently limited by the size and number of existing ships. BC Ferries plans to replace the retiring C-Class vessels with larger vessels and add an incremental major vessel. The incremental vessel will improve service resiliency and allow for supplementary service in the summer months when additional service is needed most. Adding an extra major vessel will also open the possibility of providing more frequent service on the route connecting Horseshoe Bay to Langdale beyond the summer months, which is not feasible with the existing fleet.

The planned replacement of more than half the fleet over the next 14 years will result in significant capital expenditures over the near term and the Company must consider changes in the way people will travel over the 45-year expected life of the assets. Designs for new vessels will be flexible to accommodate changes in the mix of vehicle and passenger traffic that could result from the rise of autonomous vehicles, ride sharing, changing demographics, and other factors.

Overall, the Capital Plan ensures that needed vessel investments can be made while maintaining fare affordability. The investments provide an opportunity to improve the customer experience while enhancing system efficiency, reliability and resiliency, at the same time furthering the Company's environmental objectives.

Vessel Upgrades

Maintaining a fleet of 36 vessels in top operating condition takes significant planning and resources. BC Ferries uses a long-range maintenance plan to ensure that all vessels in the fleet meet regulatory requirements, as well as the Company's high standards for operational reliability and safety. In addition to daily maintenance performed by engineering staff, each vessel is taken out of service, inspected, and overhauled on either one-in-four or two-in-five year cycles. These refit projects ensure continued integrity of key vessel components, including hull and coatings, propulsion, navigation, and safety equipment.

At approximately the quarter, mid, and three-quarter marks of each vessel's useful life, the long-range maintenance plan includes a significant upgrade project to be completed in conjunction with a regular scheduled refit. These upgrade projects go beyond routine refurbishments. Some examples of scope items included in recent upgrades are:

- Upgraded passenger amenities to improve the customer experience and increase ancillary revenue (for example, the new Arbutus Café and expanded gift shop on the *Spirit of British Columbia* and soon to be on the *Spirit of Vancouver Island*);

- Upgraded safety systems such as water-mist fire suppression or new evacuation equipment;
- Standardization of navigation and bridge equipment;
- Piping and electrical system upgrades;
- Efficiency upgrades such as low-friction coatings, heating, ventilation and air conditioning system replacements and conversion to low energy (LED) lighting;
- Replacement of propulsion systems to enhance reliability and reduce fuel consumption (for example, the diesel-electric hybrid system on the *Tachek*, and new LNG/diesel dual-fuel propulsion on the *Spirit of British Columbia* and soon to be on the *Spirit of Vancouver Island*).

The Company will continue to upgrade the fleet to improve resiliency, safety, comfort, and energy efficiency, while also considering conversion to alternate fuel sources where feasible.

The Capital Plan includes several vessel upgrade projects, the most significant of which are the completion of the *Spirit of Vancouver Island* mid-life upgrade (fiscal 2019), the *Queen of Surrey* three-quarter life upgrade (fiscal 2019), the *Skeena Queen* mid-life upgrade (fiscal 2020), and the *Northern Adventure* and *Northern Expedition* quarter-life upgrades (fiscal 2024 and 2027, respectively).

Ship Repair

While the fleet profile changes are expected to help, they are not the only initiative BC Ferries is pursuing to improve resilience and reliability. BC Ferries needs reliable and timely access to ship repair facilities to minimize the impact to customers during unplanned outages. The ship repair landscape in British Columbia is very concentrated, with a few larger shipyards dominating the market.

The Company has been taking steps to ensure continued and cost-effective access to ship repair services. In June 2017, the Company announced a five-year agreement with Point Hope Maritime Ltd. in British Columbia to provide planned maintenance and emergency repairs for eight of BC Ferries' minor vessels.

In addition to seeking strategic partnerships such as this, BC Ferries is planning a major capital investment to renew and improve its own ship repair facility in Richmond, British Columbia, the Fleet Maintenance Unit. This facility has been in operation for more than 40 years, but its productivity is limited by an inefficient layout, aged infrastructure and undersized buildings. The upcoming site development project provides an opportunity to improve efficiency and throughput at the site. This investment is expected to improve system resilience by providing reliable and timely access to a modern internal ship repair facility.

Terminals

As with vessels, age and condition play a key role in determining when terminal projects are delivered. BC Ferries will continue to ensure the Company's terminals are maintained to a high standard for the

safety and comfort of its customers and employees. Many of the assets at BC Ferries' 47 terminals are approaching the end of life. Each time an asset comes due for a replacement, there is an opportunity to rebuild it in a way that better meets the needs of BC Ferries' customers, employees, and the communities it serves. Generally, with the rebuild, they will be greener, more efficient and have modern customer services. They will also reflect plans for improving terminal capacities to allow for future growth of foot passengers, as transit and ride-hailing services expand.

BC Ferries continues to work towards the standardization of terminal marine infrastructure to enable greater vessel interoperability. The rollout of standardized terminal infrastructure is gradual, and the timing of many projects is aligned with planned changes in vessel deployment. Several terminal improvement projects, such as those planned for Campbell River, Nanaimo Harbour, Gabriola Island, and Swartz Bay, have been scheduled to prepare for the introduction of new ships which will replace the Bowen Class vessels on those routes.

In addition to basic safety and operability, effective terminal design can improve the customer experience, promote system efficiency and resilience, and reduce the site's environmental footprint. An obvious link between the customer experience and terminal design is in the comfort, convenience, and amenities provided. Also important is the ability to safely and efficiently marshal traffic, load and unload passengers and vehicles, process customer payments, and accept reservations. These processes, being dependent on the terminal infrastructure, are taken into account when determining the terminal design through the terminal development planning process. Through the planning process, opportunities also are pursued to enhance the environmental performance of the terminals through such things as better waste water run-off or containment, and light and noise abatement features.

BC Ferries is planning significant investments in buildings and related infrastructure at three major terminals over the next 12 years: Langdale, Horseshoe Bay, and Swartz Bay. The investments at these major terminals will contribute to better on-time performance and system resiliency by enabling efficient loading and unloading of the vessels. These investments are described in more detail in Section 3.1.

Information Technology

BC Ferries has heard from its customers that they want more flexibility in how they book travel, more certainty they will be able to travel on the sailing they want, and more options for discounted fares. BC Ferries is investing in technology to provide this service and improve the customer experience as it continues to invest in information technology to support the entire operation.

Customers will benefit once the technology is implemented, as BC Ferries will be able to provide valued fare products, offer greater departure certainty on select routes and apply a multi-level pricing structure. Additionally, the customers' online experience will be enhanced through greater online functionality and the ability to access BC Ferries through their mobile, tablet and desktop devices. Along with these benefits, BC Ferries expects that the successful implementation of this initiative will lead to increased ferry traffic and increased revenue, helping to reduce pressure on fares and improve fare affordability.

2.6 Managing the Capital Plan

BC Ferries' Capital Plan reflects a significant program of capital investment to be undertaken over the next 12 years. Through its management of the capital plans of previous performance terms, the Company has demonstrated its ability to successfully deliver complex and comprehensive capital programs efficiently and effectively. BC Ferries is confident that it has the processes in place to ensure the successful implementation of the PT5 Capital Plan.

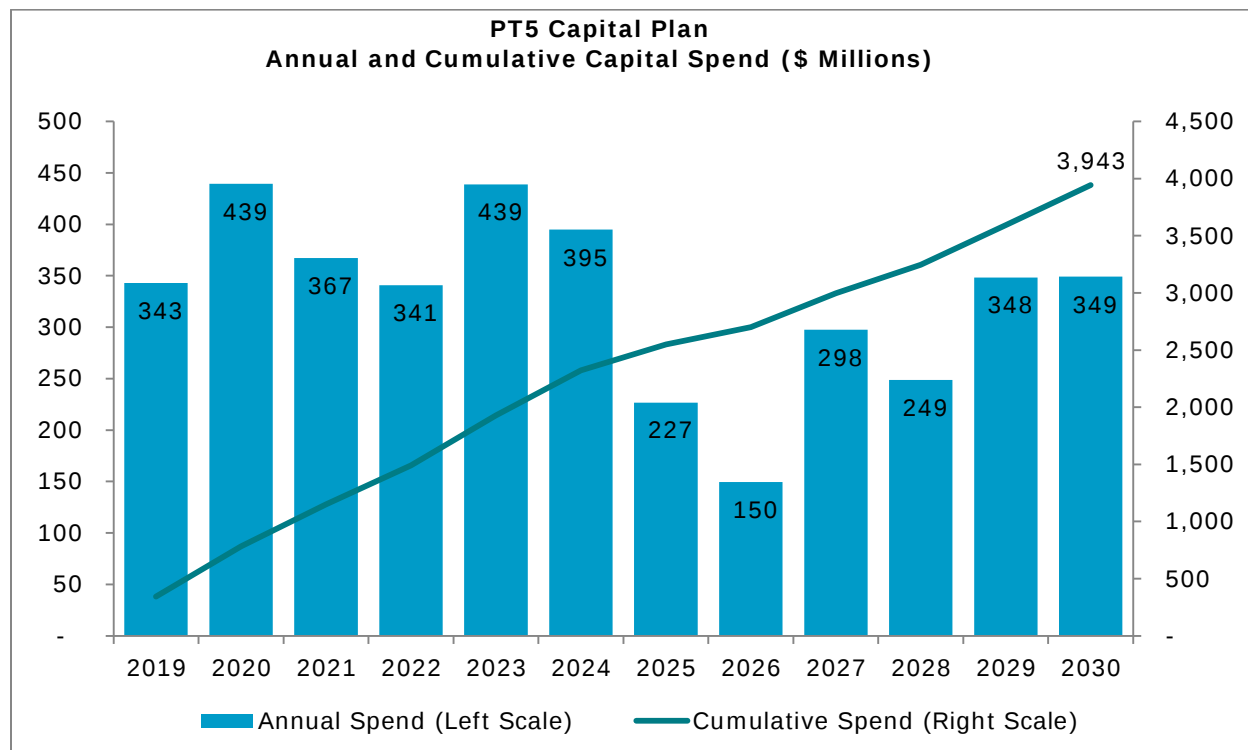
To manage its capital program, BC Ferries has a robust planning, approval and reporting process that reflects best practices. BC Ferries has established a formal project governance framework and guidelines (attached as Appendix 1) which mandates a 12-year capital asset plan that is updated by management and approved by the board of directors; formal business cases for all capital projects; use of best practice project management principles; clear assignment of accountabilities to project managers, project owners, and project sponsors; and monthly reporting and monitoring of all active projects. A senior management committee, chaired by the Chief Financial Officer, meets at least monthly to review the status of the capital program and any capital-related requests.

The Company has formal risk management systems in place for identifying, mitigating and monitoring risks corporate wide, and specifically those related to the capital program and individual capital projects. Risk registers with mitigation strategies are routinely reviewed and reported up to the executive and board level as appropriate. Rigorous procurement policies are also in place to ensure that capital projects are delivered in a cost-effective manner.

Section 3: Planned Capital Expenditures

The Capital Plan reflects investments totalling \$3.9 billion over the next 12 years in the fleet, terminals, information technology systems and other infrastructure to ensure the Company is able to deliver a safe, efficient, environmentally-responsible and customer-centric service. The forecast breakdown of annual spending by fiscal year is shown in Figure 3.1.

Figure 3.1: PT5 Planned Capital Expenditures



The Capital Plan includes several projects that meet the criteria for a ‘major capital expenditure’ as defined by the Commissioner in Order 17-02, *Section 55(5) and Section 67 of the Coastal Ferry Act, and Establishment of the Criteria for a Major Capital Expenditure*, dated March 2, 2017, for which pre-approval of the Commissioner under section 55(2) of the Act will be required. In accordance with section 64.1 of the Act, Section 3.1 provides information on the anticipated amount, proposed timing and type of capital asset for each of the planned major capital expenditures, together with an overview of the options considered and the rationale for these expenditures. Section 3.2 includes a description of those planned projects that may not be major capital expenditures, as defined by Order 17-02, but represent expenditures of a significant nature. Section 3.3 includes all other planned expenditures that are included in the Capital Plan. The associated project listing is attached as Schedule 1.

3.1 Major Capital Expenditures

Major Capital Expenditure Definition

Section 55(2) of the Act requires that BC Ferries obtain approval from the Commissioner prior to incurring a major capital expenditure.

By Order 17-02, the Commissioner has defined a “major capital expenditure” as follows:

1. *Any capital expenditure for any new vessel or mid-life upgrade to a vessel is a major capital expenditure if the expenditure exceeds \$50 million inclusive of component programs and interest during construction;*
2. *Any capital expenditure for new terminals, terminal upgrades, information technology systems or other non-vessel capital expenditures is a major capital expenditure if the expenditure exceeds \$25 million, inclusive of component programs and interest during construction...”*

Planned Major Capital Expenditures

As described in Section 2.5, the Capital Plan reflects investments to support the plans of BC Ferries to replace 19 vessels which are approaching retirement age, and to carry out a number of major upgrades of existing vessels at planned intervals over their remaining lives. The plan also supports investments in the Company’s terminals and berths, information technology systems and ship repair facilities.

Of the \$3.9 billion BC Ferries is planning to spend within the 12 years of the Capital Plan, approximately \$2.3 billion (or 58 percent of the plan) is for yet-to-be-approved projects that meet the threshold for a major capital expenditure as set by Order 17-02, and each will require the pre-approval of the Commissioner under section 55(2) of the Act. An additional 7 percent of the Capital Plan is for major capital expenditures that were previously approved by the Commissioner.

As previously described, BC Ferries has in place a rigorous capital planning process. Before reaching a decision on the nature of a specific major capital expenditure, BC Ferries will consider a range of alternatives and options to ensure the optimal investment for ongoing effective and efficient service. These will include, as appropriate to the type of investment:

- Retirement of the asset without replacement;
- Life extension or upgrade of the asset;
- Replacement with a new or used asset of different size or type;
- Replacement with a new or used asset of similar size and type;
- Adoption of new technologies or innovations;

- Alternative service delivery or other commercial arrangements.

The analysis of options is undertaken on a life cycle (total cost of ownership) basis. For these analyses to be conducted effectively, they cannot be done too far in advance of the notional retirement date of the assets, as key determinants will not be known with precision until closer to that date, such as the condition of the asset; costs to replace, upgrade or life-extend; technological solutions; identification of alternative service providers or other commercial arrangements; and service level requirements. Hence, the capital expenditure ultimately required for each asset may differ from that included in the Capital Plan. The Company believes the assumptions it uses to estimate project costs are reasonable for the purposes of a long-range capital plan with the understanding the assumptions will be updated annually and each project will be subject to further analysis and a detailed business case.

Applications to the Commissioner for approval under section 55(2) of the Act for each of the planned major capital expenditures will address the specific guidelines established by the Commissioner for such applications, and will include details regarding the amount, proposed timing, type of expenditure, options considered and the rationale for the proposed capital expenditures.

Vessel Replacements

Plans for vessel replacements are documented in the Company's fleet master plan. The fleet master plan reflects the Company's best available knowledge, including traffic trends and customer needs. The master plan, in many cases, prescribes replacement plans several years in advance. As described above, as the notional replacement date for each of these vessels approaches, additional analysis of the alternatives and options will be considered and reported to the Commissioner as part of the Company's application for approval of each of the planned major capital expenditures. The additional analysis may include an alternative approach to service delivery and/or alternative service schedule.

In addition to the previously-approved project to acquire two new 47 AEQ Island Class ferries, the following vessel replacement projects meet the major capital expenditure threshold set by Order 17-02:

- **Three Bowen Class Vessel Replacements**

The three Bowen Class vessels, *Powell River Queen*, *Bowen Queen*, and *Mayne Queen*, are nearing end of life, and the Company plans to retire them in fiscal 2021. BC Ferries has considered several options for the replacement of these ships. The Capital Plan assumes the acquisition of one Salish Class vessel and four Island Class vessels with capital expenditures occurring from fiscal 2019 through fiscal 2021.

- **Six Major Vessel Replacements**

Four major vessels, including the *Queen of Coquitlam*, *Queen of Alberni*, *Queen of Cowichan* and *Queen of New Westminster* are scheduled to retire in PT5. The Capital Plan reflects the

assumption that these vessels will be replaced with five new major vessels in a series-build, advancing towards further fleet standardization and resiliency, while providing an opportunity to take advantage of expected favourable multi-vessel purchase pricing. Two more major vessels, the *Queen of Surrey* and *Queen of Oak Bay* are scheduled to retire several years later in fiscal 2031, and are assumed to be replaced with two vessels of the same design.

- **Six “K,” “T” and “Q” Class Vessel Replacements**

The *Quinsam*, *Kahloke*, *Klitsa*, *Tachek*, *Quadra Queen II*, and *Quinitsa* are currently expected to be replaced between fiscal 2028 and fiscal 2031 with Island Class ferries as a series-build, with the *Quinsam* being replaced with two ferries instead of one. The reduction of classes in the replacement ships further allows BC Ferries to realize the benefits of fleet standardization as described above. The Capital Plan reflects capital expenditures for these vessel replacements during the period fiscal 2026 through fiscal 2030, with additional expenditures planned for fiscal 2031.

Vessel Upgrades

To ensure the Company's vessels continue to operate in a safe, reliable and efficient manner, BC Ferries carries out major upgrades at planned intervals. By enabling more extensive scope than typical regular refit projects, these upgrades provide important opportunities to modernize systems, improve the customer experience and enhance environmental performance. Several quarter, mid, and three-quarter life upgrade projects are included in the Capital Plan; however, with the exception of the previously-approved Spirit Class mid-life upgrades, none are anticipated to meet the threshold for a major capital expenditure set by Order 17-02.

Terminals

As described in Section 2, BC Ferries' terminal investments are guided by the principles set forth in the terminal network master plan. Specific investments are laid out in individual terminal development plans, which consider the broad long-term plan for each site. These plans recognize the benefits of long-term phasing for economically-sustainable major developments, and identify short-term opportunities consistent with the long-term phasing. The development plans incorporate vessel procurement and deployment plans, including operational requirements for the safe and efficient berthing, loading and unloading of passengers and vehicles, and reflect BC Ferries' standards for commercial and retail spaces.

Like vessel replacements, condition assessments of the terminal and berth assets are regularly conducted to help identify and determine the viability of options such as possible life extension or replacement, and the benefits and costs of each. Part of this analysis may include an exploration of various terminal layouts or structural innovations available. This type of analysis has resulted in investments in terminals and berths which have generated significant cost savings, efficiencies and

operational improvements, such as the use of floating berths, active lift ramps, and overhead passenger walkways. As new concepts are developed and are shown to improve efficiency, while ensuring service is safe and reliable, they are incorporated into the terminal network master plan and terminal development plans.

The following terminal projects meet the threshold for a major capital expenditure set by Order 17-02:

- **Langdale Terminal Development**

The Langdale terminal is the only terminal to serve a major route (Horseshoe Bay to Langdale) without ticketing capabilities and without clear separation of foot passengers from vehicles. In March 2017, BC Ferries was able to secure up to \$17 million in federal infrastructure funding under the New Building Canada Fund to redevelop the Langdale terminal. With input from the communities and stakeholders, the Company envisages the construction of an overhead passenger walkway that will enable passengers to connect with the vessel from a new terminal building, civil works to restructure the flow of pick-up/drop-off traffic, and ticketing capabilities for passengers and vehicles. This multi-year project is planned to begin in fiscal 2019.

- **Swartz Bay Terminal Development**

The requirements of the main buildings at Swartz Bay terminal have grown beyond the capabilities of the existing structures. The foot passenger building and the adjacent warehouse, built in 1992 and 1959 respectively, are undersized for their purpose. The administration building, which was built in 1959 and also contains the Land's End Café, is also undersized and lacks the choices and amenities customers have come to expect. The Company is currently assessing options for the redesign of the terminal to enhance the customer experience and provide for a more efficient operation. More clarity around the scope of the project will come as the community and stakeholder engagement process proceeds and the terminal development plan is completed. This multi-year project is planned to begin in fiscal 2021.

- **Swartz Bay Berth 3 Replacement**

Berth 3 at Swartz Bay currently serves as an operational minor and intermediate ferry berth, and as a tie-up berth for major vessels. Under the major routes initiative, as described in BC Ferries' *Strategies for Enhancing Efficiency in Performance Term Five and Beyond*, the Company is contemplating the addition of a fifth vessel to serve during the peak season on the Tsawwassen to Swartz Bay route. The Capital Plan assumes Berth 3 will be replaced in fiscal 2025 with a standardized major berth to accommodate major vessels.

- **Horseshoe Bay Terminal Development**

Horseshoe Bay terminal is challenged with capacity constraints due to its inherent landscape. Many of the terminal assets are nearing end of life, and significant investment is needed to continue safe and efficient operations at the site. As part of the major routes initiative, the Company is examining options for the major routes terminal network. The Capital Plan assumes a significant investment at Horseshoe Bay, including the replacement of marine structures and redesign of the holding compound. More clarity around the scope of the project will come as the community and stakeholder engagement process proceeds and the terminal development plan is completed. This is a major multi-year project that is expected to be phased over several years, with construction beginning in fiscal 2023.

- **Langdale Berth 1 Rebuild and Shore Stabilization**

In fiscal 2017, Berth 1 at the Langdale terminal underwent a capital upgrade to extend the life of the berth for another 10 years. The Company contemplates a rebuild of the berth and shore stabilization towards the end of the 12-year Capital Plan. As with all BC Ferries assets, the condition will be monitored and reassessed regularly to determine the timing of the project, which is currently planned to begin in fiscal 2027.

Information Technology Projects

BC Ferries is heavily reliant upon information technology to support its complex operations. The Company needs to ensure that critical applications, including those supporting its operations, sales and key financial functions, are appropriately supported and meet evolving business requirements. An annual evaluation is conducted to assess whether the information technology assets are achieving strategic objectives and supporting business objectives. This includes a review of emerging technology and its implications for these business objectives. As systems are no longer supported or compatible with technological advancements, BC Ferries will make investments to ensure appropriate systems are in place to support its complex operations. In making its investment decisions, the Company considers a range of options, which may include updating the existing system, adopting new system functionality or implementing a whole new system. A number of information technology projects are included in the Capital Plan; however, none are anticipated to meet the threshold for a major capital expenditure set by Order 17-02.

Other Projects

Projects falling outside the categories of vessel, terminal, and information technology include investments in corporate assets including the Fleet Maintenance Unit, maintenance yards, and support vehicles. Only one such project meets the threshold for a major capital expenditure set by Order 17-02:

- **Fleet Maintenance Unit Site Development**

BC Ferries has a dedicated ship repair facility, the Fleet Maintenance Unit, to provide ship repair, modification and maintenance services in a safe, efficient and cost-effective manner. The site began operations in 1962 as the Ministry of Highways Dock District maintenance headquarters, and has had limited investment through the years. As a result, it has many aged and undersized buildings, and is inefficiently laid out. The Capital Plan includes investments beginning in fiscal 2020 to significantly improve the site.

3.2 Significant Capital Expenditures

The following projects included in the Capital Plan are not anticipated to meet the threshold for a major capital expenditure as set by Commission Order 17-02, but represent significant capital expenditures.

- **Kwuna Replacement**

The *Kwuna*, a 16-AEQ vessel built in 1975, serves route 26 connecting Skidegate and Alliford Bay. It is fitted with a ramp to enable landing on a concrete ramp instead of a standard berth. The Capital Plan includes a like-for-like replacement, with construction starting in fiscal 2025.

- **Skeena Queen Mid-Life Upgrade**

Constructed in 1996, the *Skeena Queen* is scheduled to undergo a mid-life upgrade in fiscal 2020. The project will modernize customer amenities, replace aged equipment, and install advanced safety, engineering, and navigation systems.

- **Nanaimo Harbour Terminal Development**

The marine structures and timber trestle at Nanaimo Harbour are nearing their end of life and will soon need replacement. The terminal connects Vancouver Island with Gabriola Island on a route which is expected to move from a one-vessel operation to a two-vessel operation with the acquisition of new Island Class vessels to improve service. The Capital Plan includes the replacement of the marine structures, a site reconfiguration and construction of a tie-up berth, commencing in fiscal 2020.

- **Gabriola Island Terminal Development**

The marine structures at Gabriola Island terminal are nearing their end of life and are due for replacement. The Capital Plan includes replacement of these assets, along with a site reconfiguration, commencing in fiscal 2020.

- **Vesuvius Bay Terminal Development**

Vesuvius Bay terminal, situated on Salt Spring Island, is due for a replacement of its marine structures and timber trestle. The Capital Plan includes the replacement of those end-of-life marine structures, as well as an upgrade of the uplands components, commencing in fiscal 2022.

- **Crofton Terminal Development**

Crofton terminal connects Vancouver Island with Salt Spring Island via Vesuvius Bay. The marine structure and timber trestle are nearing their end of life and are expected to undergo a replacement and upgrade commencing in fiscal 2022, similar in scope to that which is planned for the Vesuvius Bay terminal.

- **Fulford Harbour Terminal Development**

The Fulford Harbour terminal has insufficient holding compound capacity to handle traffic on the route connecting Swartz Bay with Salt Spring Island. The Capital Plan includes a project beginning in fiscal 2023 to expand the holding compound and generally improve the terminal.

- **Tsawwassen Berth 3 – Vehicle and Foot Passenger Ramps and Towers Replacement**

Recent condition surveys indicate that the vehicle and foot passenger ramps, aprons, towers, and associated hydraulics at Tsawwassen Berth 3 are nearing their end of life. The Capital Plan includes a project in 2027 to replace the aged infrastructure.

- **Tsawwassen South Breakwater – Dolphin Replacement**

Recent condition surveys indicate that the south breakwater at Tsawwassen terminal will require replacement of its dolphins in the late 2020s and the Capital Plan includes new assets to replace them.

- **Booking, Ticketing and Check-in Replacement**

A core component of the Company's automated customer experience program is the streamlining of booking, ticketing, and check-in services. The Capital Plan includes an application replacement in the late 2020's. With the fast pace of change in technology, the scope of these projects will be further defined closer to implementation.

- **Data Centre Modernization**

A project beginning in fiscal 2019 is included in the Capital Plan to replace aged data centre assets with new scalable assets that will enable future technologies, improve data security, and improve network connectivity and redundancy. Implementation options are currently being assessed.

3.3 Other Capital Expenditures

In addition to the projects detailed in Sections 3.1 and 3.2 above, the Capital Plan includes over 600 other projects that, while important, are of a lesser magnitude and do not meet the threshold for a major capital expenditure as set by Order 17-02. These projects are necessary for the continued delivery of safe, efficient, and reliable service and will be managed within the capital planning process and parameters as described in this document.

Conclusion

BC Ferries' Capital Plan outlines the planned capital expenditures for the 12-year period from April 1, 2018 through March 31, 2030. It is an ambitious plan that takes into account the need to replace 19 vessels, significantly upgrade terminal infrastructure and the Fleet Maintenance Unit, and undertake strategic investments in technology to ensure BC Ferries remains a company prepared for the future. This plan supports the continued safe, reliable, efficient and sustainable ferry service to coastal British Columbia.

BC Ferries has given much time and attention to ensuring its Capital Plan aligns with its strategic plan, recognizing that decisions BC Ferries makes today impact ferry users for decades to come. The Capital Plan has been constructed to accommodate changes in demand, provide needed resiliency and provide a more consistent service offering across all routes in an environmentally-responsible and financially-sustainable manner.

Effective engagement with the customers and coastal communities the Company serves will be a key factor in the Company's ability to successfully deliver its Capital Plan. Understanding what communities and stakeholders envisage a trusted and valued Company to be, and the services required to provide an exceptional customer experience, will help to ensure the Capital Plan BC Ferries is submitting will meet the needs of generations to come.

SCHEDULE 1

Schedule of Projects

12-Year PT5 Capital Plan (Fiscal 2019 to 2030)

Major and Significant Projects (Figures in \$ Millions)

	Fiscal Year	Total	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Part 3.1. Major Capital Expenditures														
NEW VESSEL PROJECTS														
Prior Approval - Route 28 - Purchase/Modify Northern Sea Wolf	2017													
Prior Approval - North Island Princess & Howe Sound Queen Replacements	2018													
New Vessel - Mayne Queen - Replacement	2019													
New Vessel - Powell River Queen - Replacement	2019													
New Vessel - Bowen Queen - Replacement	2019													
New Vessel - Queen of Alberni - Replacement	2020													
New Vessel - Queen of New Westminster - Replacement	2020													
New Vessel - Queen of Coquitlam - Replacement	2021													
New Vessel - Queen of Cowichan - Replacement	2021													
New Vessel - Incremental Major Vessel #1	2022													
New Vessel - Quinitsa - Replacement	2027													
New Vessel - Quinsam - Replacement	2027													
New Vessel - Queen of Oak Bay - Replacement	2028													
New Vessel - Queen of Surrey - Replacement	2028													
New Vessel - Kahlake - Replacement	2028													
New Vessel - Klitsa - Replacement	2028													
New Vessel - Tachek - Replacement	2029													
New Vessel - Quadra Queen II - Replacement	2029													
TERMINAL PROJECTS														
Langdale Terminal Development	2019													
Swartz Bay Terminal Development	2022													
Horseshoe Bay Terminal Development	2023													
Swartz Bay Berth 3 Replacement	2024													
Langdale Berth 1 Rebuild and Shore Stabilization	2027													
INFORMATION TECHNOLOGY PROJECTS														
Prior Approval - Fare Flexibility and Digital Experience	2015													
OTHER PROJECTS														
Fleet Maintenance Unit Site Development	2020													
12 YEAR MAJOR CAPITAL EXPENDITURES (2019 to 2030)														
Part 3.2. Significant Capital Expenditures														
NEW VESSEL PROJECTS														
New Vessel - Kwuna - Replacement	2025													
EXISTING VESSEL PROJECTS														
Skeena Queen Mid-Life Upgrade	2020													
TERMINAL PROJECTS														
Nanaimo Harbour Terminal Development	2020													
Gabriola Island Terminal Development	2020													
Vesuvius Bay Terminal Development	2022													
Crofton Terminal Development	2022													
Fulford Harbour Terminal Development	2023													
Tsawwassen Berth 3 - Vehicle and Foot Passenger Ramps and Towers Replacemen	2027													
Tsawwassen South Breakwater - Dolphin Replacement	2030													
INFORMATION TECHNOLOGY PROJECTS														
Data Centre Modernization	2019													
Booking, Ticketing, and Check-in Replacement	2028													
12 YEAR SIGNIFICANT CAPITAL EXPENDITURES (2019 to 2030)														
Part 3.3. Other Capital Expenditures														
VESSELS														
TERMINALS														
INFORMATION TECHNOLOGY														
OTHER														
12 YEAR SIGNIFICANT CAPITAL EXPENDITURES (2019 to 2030)														
CAPITAL EXPENDITURES (2019 to 2030)		3,943	343	439	367	341	439	395	227	150	298	249	348	349

APPENDIX 1

Project Governance Framework and Guidelines



PROJECT GOVERNANCE FRAMEWORK & GUIDELINES

November 2017

Table of Contents

IMPORTANT LINKS	6
FRAMEWORK OVERVIEW and QUICK REFERENCE	7
ACRONYMS	9
PROJECT ADMINISTRATIVE FORMS	10
REGULAR PROJECT REPORTING	11
PART A: GENERAL ROLES AND RESPONSIBILITIES	12
1 British Columbia Ferry Commission	13
1.1 Coastal Ferry Act: Sections 41(2) and 64.1	13
1.2 Coastal Ferry Act: Section 55	14
2 Executive Management	15
2.1 Board of Directors ("Board")	16
2.2 President and Chief Executive Officer ("CEO")	16
2.3 The Capital Program and Budget Committee ("CPBC")	16
General CPBC Submission Guidelines	18
2.4 Applicable Vice Presidents	18
3 Delegated Management	19
3.1 Project Executive: Project Manager, Owner, and Sponsor	19
3.2 Project Steering Stream	19
Project Sponsor (Project Executive Member)	19
Project Owner (Project Executive Member)	20
3.3 Project Execution Stream	21
Project Manager (Project Executive Member)	21
Project Management Offices	21
3.4 Finance Support	22
Project Analyst	22
Manager, Financial Planning & Analysis	22
PART B: PRE-IMPLEMENTATION PHASE	25
4 Needs Identification and Project Inception	25
4.1 Project Executive Formation	26

4.2	Project Analyst Assignment	26
4.3	Assignment of an IT Representative to Non-IT Projects	27
4.4	Capital versus Operating Expenditures	27
4.5	Major Operating Projects	28
5	Project Charter Preparation	28
5.1	Pre-Implementation Funding Request	29
5.2	Work Breakdown Structure / Project Code Activation	29
6	Annual Capital Plan and Budget Review	30
6.1	Annual Capital Plan Preparations	30
6.2	CPBC Annual Capital Plan and Budget Review	32
6.3	EMC Review of the 12-Year Capital Plan	32
6.4	Board Submission, Approval and Conditions	33
7	Business Case	33
7.1	Business Case Objectives	33
7.2	Project Executive Review	34
7.3	Project Manager and Project Analyst Roles	34
7.4	Role of the Project Owner	36
7.5	Role of the Project Sponsor	37
7.6	Board or BCFC Approval Timelines	37
7.7	Emergent Projects / Contingency Business Cases	37
7.8	Capital Programs	38
	PART C: IMPLEMENTATION PHASE	39
8	Decision Notification and Activation	39
8.1	Project Decision	39
8.2	Start-Up Meeting	39
8.3	Establishment of a Project Steering Committee	40
8.4	Work Breakdown Structure / Project Code Activation	40
9	MANAGEMENT AND DELIVERY	41
9.1	Range of Project Types / Implementation Procurement Strategies	41
9.2	Managing within the Project Approval Thresholds	41

9.3	Managing Equipment Selection and Technical Decisions.....	42
9.4	Managing within Relevant BC Ferries Policies outside the Framework.....	43
9.5	CEO Approval of Consulting Contracts/Services Policy	43
9.6	Supply Chain Management Policies.....	43
9.7	Contract Award Policy.....	44
9.8	Privacy Impact Assessment Policy	44
9.9	Project Management Offices	44
9.10	Deferral or Cancellation of Approved Projects.....	44
9.11	Change of Project Manager or Project Owner	45
9.12	Change to Project Manager	45
9.13	Change to Project Owner	45
10	Project Amendments.....	46
10.1	Budget PAFs and Thresholds.....	46
10.2	Scope PAFs and Thresholds	47
10.3	Schedule PAFs and Thresholds.....	48
10.4	PAF Preparation.....	48
10.5	Board or Commissioner Approval Timelines	48
10.6	PAF Approval Notification	48
11	Regular Project Reporting	49
11.1	Corporate Progress Reports.....	49
11.2	Class A/B Reports	50
11.3	Capital and Major Operating Projects Report	50
	PART D: POST-IMPLEMENTATION PHASE	52
12	Available for Use Forms and Project Closeout Forms	52
12.1	Available for Use Form.....	52
12.2	Partial Available for Use Form	53
12.3	Project Closeout Form	54
12.4	Project Closeout Meeting	54
13	Project Benefits Realization (“PBR”) Review.....	54
14	Post-Implementation Review (“PIR”)	55

APPENDIX 1: CAPITAL PROJECT APPROVAL HIERARCHY	57
APPENDIX 2: CPBC MEMBERSHIP AND MEETINGS	59
APPENDIX 3: CAPITAL PROJECT DRIVERS	60
APPENDIX 4: MINOR FIXED ASSETS GUIDELINES	61
Criteria	61
Determining the Annual MFA Budget.....	61
Management of the portfolio budget	62
Management of Projects/Programs within an MFA Portfolio.....	62

IMPORTANT LINKS

Beyond this Framework, several other policies, templates, and resources are needed to ensure the successful management of projects. This section has links to several important resources.

Link	Key Contents
SharePoint: Capital Planning Home	• Document Workflow Tasks • CPBC Calendar (CPBC meetings and reporting deadlines)
SharePoint: Templates	• Project Administrative Forms (for reference only – documents should begin through a Workflow) • WBS Templates • Class A / B Report Templates
SharePoint: Training Material	• CPR Instructions for Project Managers • SharePoint Workflow Processes • EPPM Documentation
BCF Intranet: Finance Policies	• This Framework • Accounting Policies (most importantly, Property, Plant and Equipment and related capitalization thresholds contained within an appendix) • Supply Chain Policy • Financial Risk Management policy (foreign exchange hedging policy)
BCF Intranet: FOIPP Office	• Freedom of Information and Protection of Privacy Office Policies, Training, and Forms • Privacy Impact Assessment (“PIA”) Form
SharePoint: IT PMO Fleet PMO	• Asset-group-specific project management policies and guidelines

FRAMEWORK OVERVIEW and QUICK REFERENCE

This document outlines the Project Governance Framework & Guidelines (“Framework”) applicable to capital and major operating projects at BC Ferries. Capital projects are planned betterments or additions to the existing asset base and are funded through the company’s capital budget.

This Framework is intended to promote a disciplined approach to the identification, management, reporting, and delivery of projects and provides principles, techniques and tools for managing and monitoring projects through the stages of the project lifecycle.

While this document outlines a single framework for all capital projects, it must be recognized that each project or project type is different and these differences must be considered, respected and understood when employing this Framework. Accordingly, the document has been designed to cover the wide range of capital projects undertaken by BC Ferries.

The goal of this Framework is to ensure that a capital project meets the functional and business needs of BC Ferries and is identified, managed, monitored and delivered as effectively and efficiently as possible.

To this end, the Framework has been separated into four parts as follows:

- Part A: General Roles and Responsibilities;
- Part B: Pre-Implementation Phase;
- Part C: Implementation Phase; and
- Part D: Post-Implementation Phase.

Part A defines the general roles and responsibilities of individuals and groups involved in this Framework. This includes the British Columbia Ferries Commissioner, the Board of Directors (“Board”), the CEO, the Capital Program and Budgeting Committee, the Project Executive (Project Manager, Project Owner and Project Sponsor), the Project Analyst, the Project Management Offices, and the Manager, Financial Planning & Analysis. Where necessary, these roles are further defined in Parts B through D as they relate to different stages of the project lifecycle.

The overall accountability for the success of a capital project and adherence to this Framework is based on a joint responsibility involving the three parties forming the Project Executive.

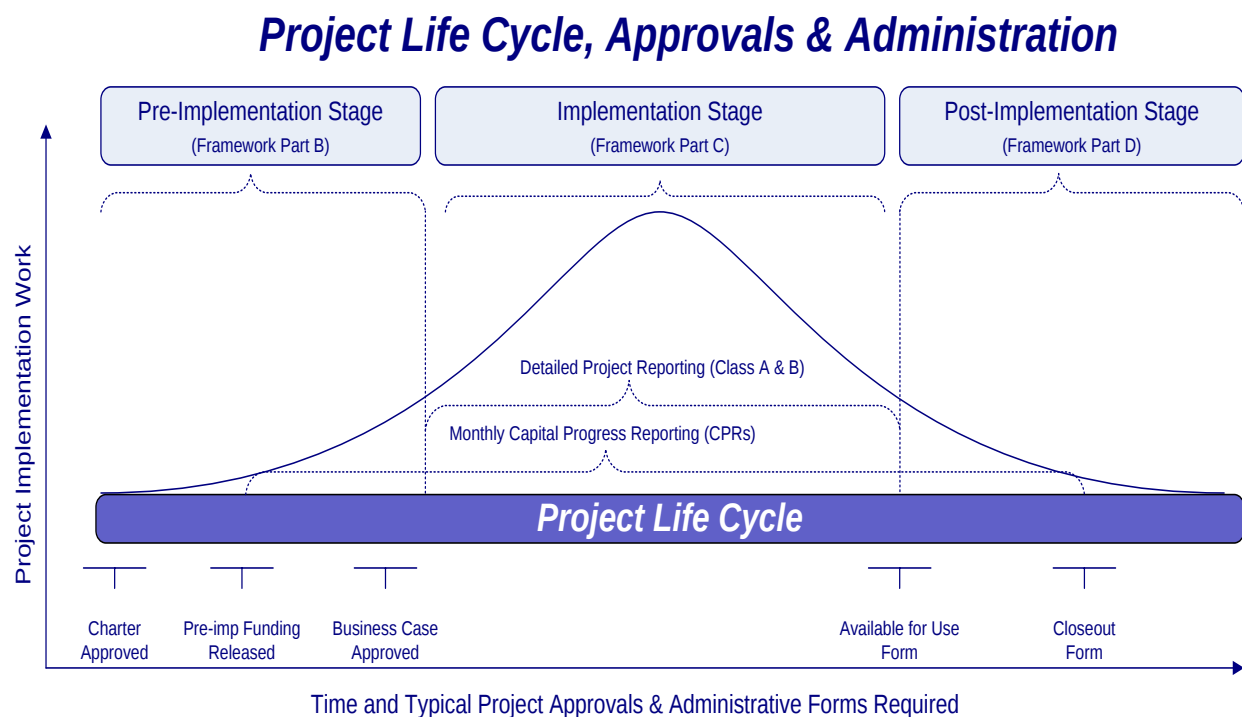
Note: Roles in this Framework should not be confused with individual job titles within the company. For example, someone identified as a “Project Analyst” within this Framework can have varying titles in the company including Senior Business Analyst, Business Planner, etc.

Part B the Pre-Implementation Phase, involves the identification of a project, the pre-planning and planning activities to support the project, the justification and the review and approval of a Business Case.

Part C the Implementation Phase, is comprised of the stages and requirements through which approved projects are constructed, acquired, managed, monitored, controlled and delivered.

Part D the Post-Implementation Phase, measures the performance of the project management process by evaluating the actual project outcome against the originally-intended outcome as outlined in the approved Business Case. Lessons learned by members of the Project Executive are also identified for the benefit of ongoing or future projects of a similar nature.

The following chart provides a visual summary of the typical project approvals and administrative forms required throughout the project lifecycle:



ACRONYMS

AFU	Available for Use
BCFC	British Columbia Ferry Commission
CFA	<i>Coastal Ferry Act</i>
CMOP	Capital and Major Operating Project
CPBC	Capital Program and Budget Committee
CPR	Corporate Progress Reports
EMC	Executive Management Committee
FP&A	Financial Planning & Analysis
FLEET PMO	Fleet Project Management Office
FMU	Fleet Maintenance Unit
FOIPP	Freedom of Information and Protection of Privacy Office
IDC	Interest During Construction
IFRS	International Financial Reporting Standards
IT PMO	Information Technology Project Management Office
LRMP	Long Range Maintenance Plan
MFA	Minor Fixed Assets
MPSC	Master Planning Steering Committee
NPV	Net Present Value
OPA	Oracle Project Accounting
PAF	Project Amendment Form
PBR	Project Benefits Realization
PGFG	Project Governance Framework & Guidelines
PIA	Privacy Impact Assessment
PIR	Post-Implementation Review
PMOs	Project Management Offices
RFEOI	Request for Expressions of Interest
RFP	Request for Proposals
SOR	Statement of Operational Requirements
SPC	Strategic Projects Committee
TDP	Terminal Development Plan
TMNP	Terminal Network Master Plan
VRP	Vessel Replacement Program
WBS	Work Breakdown Structure

PROJECT ADMINISTRATIVE FORMS

Several project administrative forms facilitate capital project approvals, project activation, project reporting, and project closeout consistent with this Framework and International Financial Reporting Standards (IFRS). The following is a summary of the key administrative forms:

Project Charter	For the purposes of this Framework, the Project Charter (“Charter”) is a brief document that establishes a placeholder for a project within the Capital Plan. Charters are reviewed annually as part of the annual capital budgeting process, and when appropriate, can be used to request the release of pre-implementation funding to support the preparation of a Business Case. See Section 5 for more detail.
Business Case	The Business Case is a decision document that examines capital investment alternatives and recommends the Scope, Budget and Schedule for capital projects. The Business Case identifies key project risks and associated mitigation strategies, and identifies resources required to deliver the project. All capital projects must have an approved Business Case before full funding is released. See Section 7 for more detail.
Project Amendment Form	The Project Amendment Form (“PAF”) is a decision document that requests amendments to the approved Scope, Schedule, or Budget of an active project. See Section 10 for more detail.
Available for Use Form	The Available for Use (“AFU”) form is an information document that recognizes the new asset as available for use. If only part of the project is available for use, a variation called a Partial AFU form is submitted. BC Ferries’ Accounting department uses these reports as a flag to stop Interest During Construction (“IDC”) and begin depreciating the capital asset(s) according to IFRS and corporate policy. See Section 12 for more detail.
Project Closeout Form	A Project Closeout form (“Closeout”) is an information document that closes down a capital project, bringing an end to project accounting and regular project reporting. Before a Closeout can be submitted, all invoices must be paid and all outstanding issues must be addressed to the satisfaction of the Project Executive. See Section 12 for more detail.

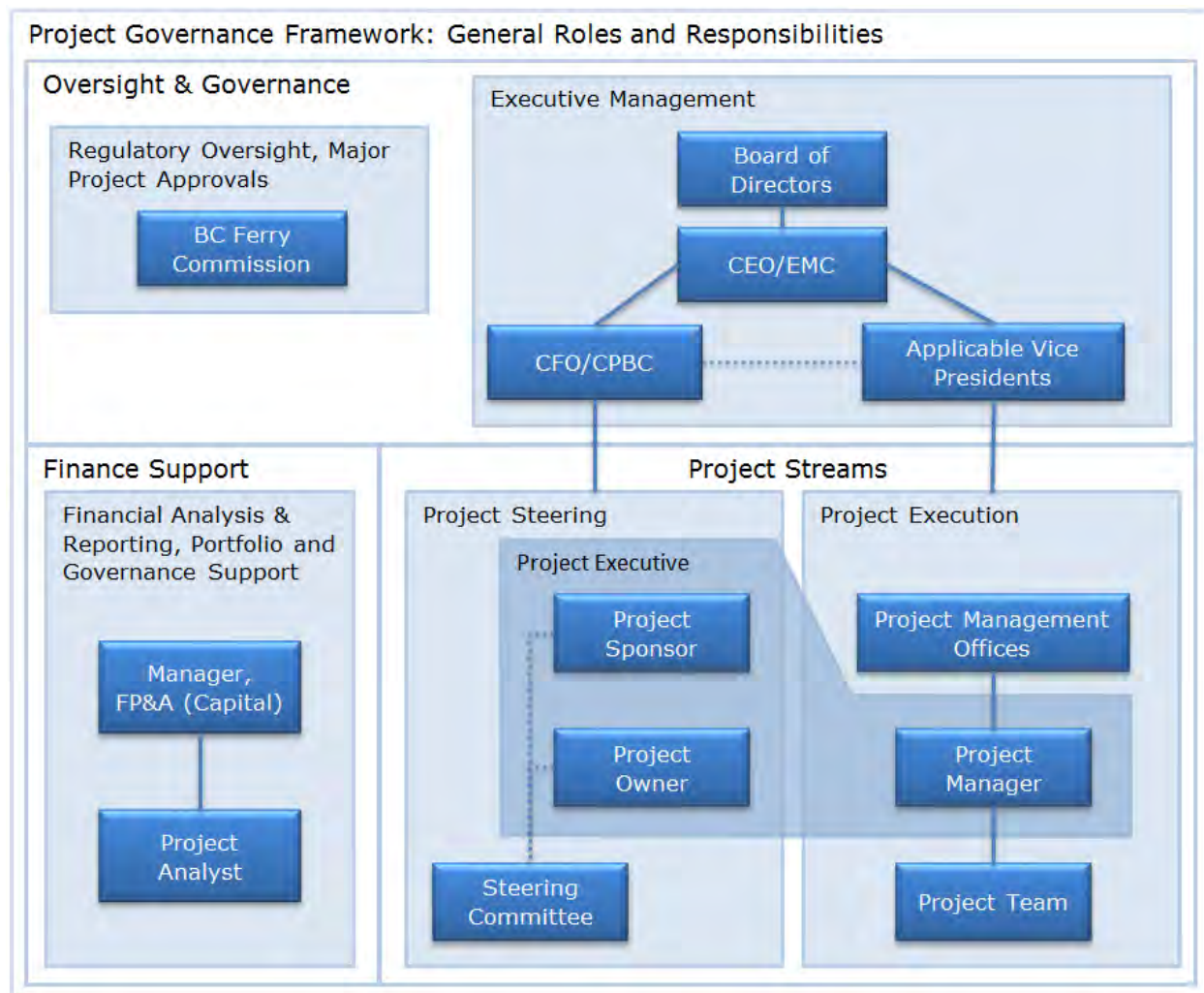
REGULAR PROJECT REPORTING

CPBC requires regular project reporting on all capital projects. Regular forecasting and reporting begins when the project is activated (typically when project funding is first released).

Corporate Progress Report (“CPR”)	CPRs forecast the project's cash flows and explain the variance of a project's scope, schedule, and budget to reflect actual spending to date and evolving forecast assumptions. CPRs for every active capital project are completed by the Project Manager and reviewed by the Project Owner. See Section 11 for more detail.
Class A and B Reports	Class A and B reports give CPBC greater context into the health of a capital project than is offered by the CPR, but not all projects require them. They report on project activities and track key milestones and risks. The need to complete a Class A or B depends on the project's risk classification. See section 11 for more detail on Extra Project Reporting requirements.

PART A: GENERAL ROLES AND RESPONSIBILITIES

This section defines the general roles and responsibilities of individuals and groups that are involved in this Framework. The primary governance functions and relationships among the key parties under this Framework are outlined in the following chart.



The Executive Management Committee and Board of Directors have ultimate accountability for the success of the organization, including successful project portfolio management and project delivery. Responsibility for project portfolio management and primary approvals of project scope, schedule, and budget has been delegated to the Capital Program and Budget Committee (“CPBC”), chaired by the Chief Financial Officer (“CFO”). Responsibility for successful delivery of each project’s

scope, schedule, and budget has been delegated to the Vice Presidents to which the four Project Management Offices (“PMOs”) report. The BC Ferry Commission (“BCFC”), led by the BC Ferries Commissioner (“Commissioner”), is responsible for regulatory oversight including price cap setting and approval of major capital projects as outlined in the *Coastal Ferry Act* (“CFA”) and BCFC orders.

Individual projects are managed through two distinct streams, one for project steering, and one for project execution. The project steering stream is led by the Project Owner and Project Sponsor. Where needed, the Project Owner and Sponsor are assisted in their duties by a project steering committee. The project execution stream consists of the Project Management Offices, the Project Manager, and the Project Team. Finance plays a supporting role to the CPBC and to the project steering and execution streams.

The roles are explained in this section, and then further developed in Parts B through D as they relate to different stages of the project lifecycle.

1 British Columbia Ferry Commission

The CFA establishes the parameters by which the BCFC oversees BC Ferries' capital program.

1.1 *Coastal Ferry Act: Sections 41(2) and 64.1*

Section 41(2) of the CFA establishes the principles by which price caps are established for each four-year performance term. The price caps must allow for a return sufficient to enable BC Ferries to recover operating, administrative and capital costs; and meet its debt obligations and maintain access to reasonable borrowing rates (as deemed by the BCFC).

Section 64.1 of the CFA requires that BC Ferries prepare and submit a 10-year capital plan beginning from the first year of the upcoming performance term to assist in setting price caps. The submission is due 18 months prior to the start of the performance term, so BC Ferries plans on a 12-year horizon and submits a 12-year capital plan.

Once the BCFC has set price caps for the performance term, the 12-year capital plan on which those price caps were based becomes a planning target for the annual 12-year capital portfolio. For purposes of measuring the portfolio against the price cap target, the years under measurement remain static until the next price caps are set. For example from F2015 to F2018, the 12-year portfolio will cover F2015 to F2026.

When the next performance term submission is made in F2019, the portfolio will cover F2019 to F2030.

1.2 *Coastal Ferry Act: Section 55*

Section 55 of the CFA *allows* BC Ferries to apply to the BCFC for a determination of whether a capital expenditure or capital deployment is reasonably required. It also *requires* BCFC approval before BC Ferries can proceed with any “major capital expenditure”, which the BCFC defines in Order 17-02 as:

1. *Any capital expenditure for any new vessel or mid-life upgrade to a vessel is a major capital expenditure if the expenditure exceeds \$50 million inclusive of component programs and interest during construction; or,*
2. *Any capital expenditure for new terminals, terminal upgrades, information technology systems or other non-vessel capital expenditures is a major capital expenditure if the expenditure exceeds \$25 million, inclusive of component programs and interest during construction.*

Section 55 provides that BCFC will approve a major capital expenditure that is:

- a) *Reasonable*
- b) *Prudent*
- c) *Consistent with the Coastal Ferry Services Contract, and any long term capital plan established by BC Ferries.*

In addition, under Order 17-02, the BCFC evaluates major capital expenditures and approves them if they are deemed to be:

- a) *reasonable, affordable and prudent,*
- b) *consistent with the 12-year capital plan submitted to the commissioners under section 64.1 for the current performance term;*
- c) *consistent with the current Coastal Ferry Services Contract; and*
- d) *consistent with any government long term vision for the future evolution of coastal ferry services.*

The Project Executive has primary responsibility for developing the Section 55 application, which must include information specified by BCFC in the Commissioner’s *Guidelines for Applications under Section 55 of the Coastal Ferry Act*. The Financial Planning and Analysis group plays a supporting role, providing financial analysis support and advising on submission requirements. The Corporate Affairs Division reviews and submits all required documents to the BCFC, and plays a coordinating and quality assurance role.

After the filing, the BCFC may hire consultants to review the application and return with clarification questions. The Corporate Affairs Division coordinates the responses, allocating responsibility for preparing responses to the Project Executive, the Project Management Offices, and other areas including Finance as necessary.

Projects requiring Section 55 applications are submitted to the Commissioner for approval after approval by the CPBC, the Executive Management Committee, and the Board.

Similarly, Order 17-02 requires BC Ferries to report to the BCFC within 15 days following Board approval of any capital expenditure in excess of \$25 million, except for those expenditures which were subject to an application under section 55. Such reports must provide answers to the relevant questions in the Commissioner's *Guidelines for Applications under Section 55 of the Coastal Ferry Act*. The Project Executive has responsibility for developing this report. The Financial Planning and Analysis group plays a supporting role, providing financial analysis and advising on report requirements. The Corporate Affairs Division reviews and submits all required documents to the BCFC and plays a coordinating and quality assurance role.

2 Executive Management

BC Ferries is responsible for overseeing and managing the delivery of coastal ferry services in British Columbia, as described in the CFA and the Coastal Ferry Services Contract. To fulfill its legal obligations and achieve the vision and objectives outlined in BC Ferries' Strategic Plan, the company must maintain its capital assets and acquire or plan for new assets. Specific capital asset management responsibilities include:

- Maintaining and operating capital assets;
- Identifying capital asset needs and preparing and implementing plans to address the needs;
- Acquiring capital assets;
- Managing expenditures on capital assets; and
- Developing, maintaining and implementing a financial framework (including but not limited to procurement policy, project management policy, accounting policy, risk management, budget and planning process and policy).

2.1 Board of Directors (“Board”)

The Board is responsible for the strategic direction of the company. Due to the long term strategic nature of capital investments, the Board is a major party in the approval of capital projects and the overall capital budget for the company.

Annually, the Board reviews and approves an updated 12-Year Capital Plan. Individual projects with capital budgets exceeding \$15 million are approved by the Board when they are ready for implementation. The Board can set conditions on project approval. One such condition is the “Strategic Project” designation which then places that project under the purview of the Strategic Projects Committee (SPC) of the Board. Strategic Projects have certain reporting requirements including the requirement to confirm quarterly with the SPC the approved access to contingency funds. The specific guidelines for Strategic Projects can be provided by the Corporate Secretary's office upon request.

Quarterly, the Board reviews and monitors progress against the Capital Expenditure Envelope as well as variances to approved project budgets as they are summarized in the Capital and Major Operating Projects (“CMOP”) report.

Appendix 1 (Project Approval Hierarchy) outlines the capital project thresholds where management must receive Board approval prior to making spending commitments.

2.2 President and Chief Executive Officer (“CEO”)

The CEO annually requests the Board's approval of the 12-Year Capital Plan. The CEO is also critical to reviewing and monitoring approved projects and has responsibility for approving any emergent capital projects (projects not currently included in the 12-Year Capital Plan) and significant amendments to ongoing projects. Appendix 1 (Project Approval Hierarchy) identifies the specific project thresholds where CEO approval is required. The CEO also provides final resolution for decisions vetoed by the CPBC Chair.

2.3 The Capital Program and Budget Committee (“CPBC”)

Financial oversight of capital and major operating projects as well as general capital planning activities has been delegated to the CPBC, an executive committee chaired by the CFO.

The CPBC oversees BC Ferries' capital and major operating projects. As such, all capital and major operating project requests, excluding Minor Fixed Assets, are reviewed by the CPBC. Consistent with the Project Approval Hierarchy, the CPBC is both a decision-making and recommendation-making body. The CPBC makes

decisions and recommendations related to strategic fit and capital funding prioritization with consideration to financial implications and constraints.

The Chair has the authority to veto decisions made at the CPBC level. Per the Project Approval Hierarchy, excluding Minor Fixed Assets, all capital project requests are first reviewed by the CPBC and are either approved, or recommended to the CEO (if required). Minor Fixed Asset (“MFA”) requests are reviewed and approved by the Project Sponsor (see Appendix 4 for more information on MFA).

The CPBC’s responsibilities include:

- Coordinating the budget process for capital expenditures, including the development of the 12-Year Capital Plan;
- Reviewing, filtering, ranking and providing recommendations to the CEO and the Board on capital projects that are presented;
- Monitoring capital expenditures on approved projects;
- Reviewing regular project reporting;
- Reviewing and approving (or supporting) project administrative forms including Business Cases, Pre-Implementation Requests, Project Amendments, Available for Use Forms, and Project Closeout Forms;
- Preparing quarterly reports on capital and any project operating expenditures for the CEO and the Board; and
- Reviewing and approving changes to the Framework and the associated policies and procedures.

The CPBC is supported in all of the above responsibilities by the Manager, Financial Planning & Analysis and members of the Financial Planning and Analysis group as described in Section 3.4.

Meetings of the CPBC are held once per month. A schedule is available on the Corporate Planning SharePoint site ([Important Links](#)).

Despite the role of the CPBC in approving, reviewing and monitoring projects, ultimate project accountability and responsibility resides with the members of the Project Executive (see Section 3.1).

The CPBC’s Role during Project Implementation:

During the progress of capital projects, the CPBC is focused on project oversight and governance with a focus on material deviations from scope, schedule and budget, as well as with project risk management. The monthly CPBC meetings are focused on:

- Reviewing and adjudicating project Business Cases (of projects included in the approved Capital Portfolio and of emergent projects);
- Reviewing and adjudicating Project Amendments (Scope, Budget or Schedule); and,
- Monitoring of regular project reporting (Class A/B Project Reports).

General CPBC Submission Guidelines

CPBC meeting agendas are finalized four business days prior to the meeting date. Documents sent to the Committee for approval must be approved by all members of the Project Executive and delivered to the Capital Planning Coordinator before the agenda is finalized. The Project Manager approves documents first, followed by the Project Owner and then the Project Sponsor. The Project Executive and the Project Analyst are responsible for the organization and preparation of a request and the associated reviews so these deadlines can be met. If a document is not received in time (supported by Project Manager, Project Owner and Project Sponsor), the agenda item may be removed and placed on the following month's CPBC agenda.

- In rare occurrences (typically driven by a significant, unforeseeable event), CPBC agenda items may be e-mailed for a "Walk Around" vote that takes place in between regularly scheduled CPBC meetings.
- In a similar manner, it is possible to request a special meeting of the CPBC to be held in between regularly scheduled CPBC meetings.

2.4 Applicable Vice Presidents

Project delivery is the responsibility of the Project Manager, who is part of the project execution stream. The Vice Presidents to whom the four Project Management Offices ("PMOs") report, are accountable for the successful delivery of individual projects within the plan. While the project steering stream is responsible for defining the functional scope and business needs, the project execution stream is responsible for delivering on that scope and providing an asset capable of meeting the business needs.

On large and complex projects, the applicable VP will likely take a more active role in the project management function. On smaller and less complex projects, project management oversight will more likely be delegated to the PMOs.

3 Delegated Management

3.1 Project Executive: Project Manager, Owner, and Sponsor

While the Project Manager (and the project execution stream) is responsible for delivering an asset that meets the needs of the company, the Project Owner and Sponsor are responsible for defining those needs and ensuring the project is consistent with the strategic direction of the company. The focus of the Project Executive as a group is on scope, schedule, budget, and project risk management. Where practical, individuals in Project Executive roles should not report to each other in a line-management fashion.

To provide effective project stewardship as projects progress, members of the Project Executive should meet on a regular basis. It is the Project Executive's responsibility to review regular project reporting and reduce/filter out detailed project related information that is inconsistent with the CPBC's primary governance and oversight responsibilities related to project scope, schedule, budget, and risk management. Project reporting and documentation should be concise.

Issues brought to the CPBC by the Project Executive should include proposed solutions to the extent practicable. This allows the CPBC to focus discussion on its primary role of providing project oversight and governance.

Note: The existence of a Project Steering Committee does not relieve any members of the Project Executive from their accountability for successful project delivery as identified in this Framework. For this reason, the Chair of a Project Steering Committee is typically either the Project Owner or the Project Sponsor. See section 8.3 for details regarding the establishment of a Project Steering Committee.

3.2 Project Steering Stream

Project Sponsor (Project Executive Member)

Each capital project must have the support of a member of the EMC (the Project Sponsor). The role of the Project Sponsor is to ensure a Capital Project is consistent with the strategic direction of the company and is appropriately prioritized within the context of other requests and the known financial constraints of the company.

The Project Sponsor can act as a liaison between the other members of the Project Executive and the EMC or to the top level of the project execution stream.

The Project Sponsor can also act as a mediator on disputes between a Project Owner and a Project Manager and may provide direction to the Project Owner and Project Manager on the need for a Project Steering Committee and on its composition.

As the size, risk and/or complexity of a project increases, so does the need for a Project Sponsor to be actively engaged and provide a visible leadership presence on the project.

Project Owner (Project Executive Member)

The Project Owner has the most direct responsibility for steering the project. In the pre-implementation phase, that means:

- Defining the business need and driver;
- Participating in the creation of a Statement of Operational Requirements (“SOR”) and ensuring the SOR aligns with the strategic goals and needs of the company;
- Ensuring implementation options have been thoroughly explored and recommending one of those options; and
- Presenting the project documents to CPBC for approval.

The Project Owner must be actively engaged and in regular contact with the Project Manager throughout the project lifecycle to keep informed of key issues affecting scope, schedule, budget, and project risk management. The Project Owner must review the monthly Corporate Progress Reports (“CPRs”). The CPR review facilitates the requirement to keep up-to-date with these issues, but it does not replace the need for direct communication and project site visits (where applicable).

At project completion, the Project Owner is accountable for the achievement of the business objectives as stated in the Business Case, and typically has primary responsibility for the ongoing operation, general management, or maintenance of the asset(s). To facilitate the effective transfer of an asset from the Project Manager to the Project Owner at project completion, it is strongly recommended that a sign-off process (including a written checklist) be developed and agreed to between the members of the Project Executive.

Note: Under extraordinary circumstances, the CPBC may authorize an employee below the Director level to be a Project Owner.

Note: Assets that are cross functional in nature may involve multiple individuals with ownership responsibilities during the project lifecycle and after project completion.

3.3 Project Execution Stream

Project Manager (Project Executive Member)

The Project Manager is responsible for successfully managing and delivering a project according to the approved scope, schedule and budget, while managing controllable project risks. Within these parameters, the Project Manager's duties include:

- Assisting the Project Owner with completion of a Project Charter;
- Assisting the Project Executive and Project Analyst in the preparation of a Business Case (see section 7.3);
- Establishing the selection criteria for consultants, contractors and suppliers;
- Hiring and managing outside consultants;
- Coordinating with Supply Chain Management to order materials;
- Managing all project contracts;
- Completing all project reporting and other required documentation;
- Monitoring and controlling the project through to completion;
- Ensuring compliance within the Framework policies and other corporate policies (e.g., Contract Management, Approval of Consultants, Purchase Order Approval, etc.);
- Identifying and appropriately managing project risks;
- Reporting any potential deviations or variance from the originally approved Scope, Budget or Schedule, and ensuring that the Framework is followed in establishing any revised project approvals;
- Facilitating transfer of the asset to the Project Owner upon project completion;
- Addressing any project related deficiencies upon completion; and
- Identifying any material lessons learned for the benefit of future Capital Projects.

All projects identified within the 12-Year Capital Plan must have an assigned Project Manager. The process for Project Manager assignment is explained in Section 4.1.

Project Management Offices

The company's PMOs include the IT PMO, Terminal Construction, the Fleet PMO, and the Vessel Replacement Program ("VRP"). The PMOs coordinate project management resources, assign Project Managers, and set project management standards. In addition to these administrative roles, PMOs may play an active role in project planning, the development of options, detailed scope development, and/or stakeholder consultation. During implementation, they provide support, guidance, and resources to Project Managers to help fulfill their responsibilities.

3.4 Finance Support

Project Analyst

The Project Analysts support the development of the 12-Year Capital Plan and the compliance with this Framework throughout the project lifecycle.

Every Capital Project in the 12-Year Capital Plan has an assigned Project Analyst. Section 4.2 describes the process for Project Analyst assignment.

Project Analysts are accountable for:

- Assisting the Project Executive in understanding and following this Framework;
- Assisting the Project Executive in preparing Business Cases. Specific responsibilities relating to the preparation of a Business Case are outlined in Section 7.3;
- Tracking Capital Project progress against approved Scope, Budget and Schedule and assisting the Project Executive in identifying the need for any subsequent approvals consistent with the Framework and project approval thresholds;
- Assisting the Project Executive in preparing, coordinating, reviewing and collecting all project lifecycle forms and requests including Project Charters, Pre-Implementation Funding Requests, Project Amendment Forms, Available for Use Forms and Project Closeout Forms; and
- Assisting the Project Executive in preparing, coordinating, reviewing and collecting all project reporting documentation, including Corporate Progress Reports and/or Class A/B project reports.

Manager, Financial Planning & Analysis

The CPBC has delegated several responsibilities in supporting this Framework and the effective functioning of the CPBC to the Manager, Financial Planning & Analysis (Capital) including:

- Maintaining this Framework and ensuring it is current;
- Ensuring the Framework's policies are effectively communicated and applied;
- Reviewing all submissions to the CPBC for completeness, with a focus on financial aspects;
- Determining whether a contemplated scope change is material enough to require a scope PAF (see section 10.2);

- Managing the Capital Projects Database, including the issuance of Monthly CPRs and associated data management;
- Preparing the monthly and quarterly CMOP reports;
- Preparing the CPBC meeting agendas and minutes;
- Co-ordinating project activation consistent with required documentation and associated approvals;
- Filing and safekeeping of project documentation;
- Co-ordinating the ongoing Capital Plan and Budget Review; and
- Preparing the 12-Year Capital Plan for annual approval by the Board.

Maintaining the Framework

Responsibility for maintaining the Framework lies with the Manager, Financial Planning & Analysis who must co-ordinate the approval of any updates or changes to the Framework with the CPBC, the CEO and the Board as required.

Suggestions for continuous improvement are encouraged as the Framework must continue to evolve and mature with BC Ferries. The Framework is to be reviewed and updated annually. The review is typically initiated with a call for proposed revisions (February-March). The Manager, Financial Planning & Analysis incorporates feedback, and submits the document for review and acceptance by the CPBC.

PART B: PRE-IMPLEMENTATION PHASE

The pre-implementation phase is made up of two distinct but interrelated processes. One process relates to activities in the typical project life cycle, from needs identification and Charter creation, to Business Case development and approval. The other process is the Annual Capital Plan and Budget Review, where placeholders in the capital plan are reviewed, reforecast, and reprioritized to create a new 12-year capital portfolio. If a project is identified several years before implementation, it will be subject to the annual review process several times before a Business Case is approved and the implementation phase begins.

Part B addresses both the typical pre-implementation activities of the project life cycle and the annual capital plan review process.

The Pre-Implementation Phase may or may not include research and/or feasibility costs. International Financial Reporting Standards require that research and feasibility costs be treated as operating expenses. These costs form part of the project's budget despite their classification as an operating expense.

Within the Framework, the Pre-Implementation Phase is divided into the following sub-sections:

- Needs identification and Project Inception
- Project Charter Preparation;
- Annual Capital Plan and Budget Review; and
- Business Case Preparation.

4 Needs Identification and Project Inception

It is difficult to predict what needs or opportunities will arise years into the future, making it challenging to develop a comprehensive long-term capital plan. Although challenging, long-term planning helps BC Ferries management prioritize spending and ensure the most important projects can be funded. BC Ferries has routinized several processes to ensure thorough long-term planning.

Most capital projects are initially identified through:

- Master plan development (overseen by the Company's Master Planning Steering Committee), which produces the Company's Vessel Master Plan and the Terminal Network Master Plan;

- Terminal Development Plans (created by the Company's Terminal Development group);
- The vessel Long Range Maintenance Plan ("LRMP") (overseen by Fleet Engineering);
- Routine condition assessments of vessels and terminals;
- The IT Master Plan; and/or
- Asset group reviews of the capital plan in preparation for the annual capital plan and budget review process.

Projects may also be identified through the unforeseen or accidental failure of a capital asset, new requests from management, regulatory changes, or previously unidentified business opportunities.

To enter the capital planning system, each project needs a fully-formed Project Executive, an assigned Project Analyst, and a unique project number.

4.1 Project Executive Formation

Where practical, and especially on major projects, the members of the Project Executive should not directly report to one another in a straight line. That is, a Project Manager should not report directly to an Owner, and an Owner should not report directly to a Sponsor. (Note that this guidance does not apply to MFA projects, where the MFA budget structure favours a straight-line Owner-Sponsor relationship.)

Project Owner	At inception, and if activation is years away, the Owner is typically the person who identified the need for the project. If the project is nearing activation, the Owner(s) should be the person(s) responsible for the ongoing operations of the finished capital asset.
Project Manager	Project Manager assignments are made by the respective Project Management Offices. If the Project Owner or Sponsor want a specific Project Manager, or would like a new Project Manager assigned to the project, they can make a request to the PMO.
Project Sponsor	The Project Sponsor is a member of the Executive Management Committee who is supportive of the project. On new projects, or where a project Sponsor has left a vacancy without a succession plan in place, it is the responsibility of the Owner to secure the support of a new Project Sponsor.

4.2 Project Analyst Assignment

Project Analysts are assigned by the Manager, Financial Planning & Analysis. The Project Analyst assists the Project Executive through the project budget process

(including the development of Project Charters and Business Cases) and through the remainder of the project lifecycle.

4.3 Assignment of an IT Representative to Non-IT Projects

Increasingly, non-IT projects (including vessel projects, terminal projects and other corporate projects) have technological components to them. Consideration must be given to the technology requirements of all capital projects to ensure that the IT architectures and IT resources are sufficiently recognized, planned and available to support business priorities.

All non-IT projects with a technological component (or potential technological impact) must have an IT representative appointed by the PMO who will liaise with the Project Manager throughout the project development stage and the remainder of the project lifecycle. Consultation with IT should begin during the Pre-Implementation Phase so that IT infrastructure requirements are known in advance of Business Case development.

4.4 Capital versus Operating Expenditures

BC Ferries identifies capital assets in accordance with IFRS and BC Ferries corporate policy. Capital assets include both tangible (property, plant & equipment) and intangible (computer software and licenses) assets. Capital assets include those that:

- Are held for use in the production or supply of goods and services, for rental to others, for administrative purposes or for the development, construction, maintenance or repair of other Capital Assets;
- Have been acquired, constructed or developed with the intention of being used on a continuing basis for more than one year; and
- Are not intended for sale in the ordinary course of business.

Property, plant & equipment generally does not include inventory, but major spare parts and standby equipment are included.

The cost of a capital asset includes the purchase price and related taxes, and installation costs. Betterments to assets which enhance the service potential of the asset are also capitalized.

Capital projects may include expenditures that are considered operating expenses. Under IFRS, project costs that cannot be capitalized include research, feasibility, transition costs, and end user training.

To assist in the determination of whether an expense can be capitalized, Project Owners, Project Managers and Project Analysts are asked to review the List of Tangible Capital Assets / Thresholds for Capitalization ([Important Links](#)).

If the Project Owner and Project Manager are unsure whether an expense can be capitalized, the Corporate Controller's staff should be contacted. In all circumstances, the Corporate Controller is the final arbitrator as to whether an expense is categorized as capital or operating.

4.5 Major Operating Projects

Major Operating Projects are defined as projects that are:

- Greater than \$250,000;
- Directly related to Capital Assets (e.g., vessel refits and terminal maintenance);
- Not betterments to the existing asset base; and
- Funded through the company's Operating Budget.

Vessel Refits are Major Operating Projects that are governed by corporate policy separate from this Framework. Major Operating Projects unrelated to Vessel Refits are rare. For these rare Major Operating Projects, the principles and reporting requirements of this Framework are applicable unless otherwise agreed to by the CFO.

5 Project Charter Preparation

The development of Project Charters supports the creation of individual project budget requests and associated place-markers within the 12-Year Capital Plan.

A Project Charter:

- Establishes the business need or opportunity;
- Includes a proposed high level preliminary capital and operating budget and a projected annual cash flow;
- Identifies a capital project driver (more detail on project drivers in Appendix 3);
- Identifies the required resources; and
- Includes a request for Pre-Implementation funding, if required.

To ensure an appropriate solution is applied to address the need or take advantage of the opportunity, a Project Owner must clearly identify the objectives, purpose, scope and the expected deliverable. The Project Owner then works with the assigned

Project Manager to prepare a high-level budget and cash flow place marker. This process allows the Project Owner and the Project Sponsor to assess the priority of these needs and opportunities with a high level understanding of cost and to ensure that the need is valid or is, in fact, necessary.

In turn, the Project Charters allow the members of the CPBC and EMC to better understand and prioritize all of the company's capital project requests as part of the Annual Capital Plan and Budget Review process.

An example Project Charter template is available to view on the Corporate Planning SharePoint site ([Important Links](#)). To initiate any project document, begin by contacting a Project Analyst or the Manager of Financial Planning & Analysis.

5.1 Pre-Implementation Funding Request

Pre-implementation funding is used by the Project Executive and Project Analyst to examine viable options and prepare a robust Business Case. The analysis will lead to a recommendation for the project's approved Scope, Budget and Schedule.

In preparing the Project Charter, the Project Executive and the Project Analyst will achieve a greater understanding of the potential project Scope, Budget and Schedule for the project. This stage will identify any pre-implementation work or studies that are required to further establish detailed Scope, Budget and Schedule to be used in the eventual preparation of a Business Case.

Pre-Implementation funding can be requested a year or more prior to the submission of a Business Case.

Pre-implementation funding is generally limited to 4% of a project's identified budget, although exceptions can be accepted in certain cases:

- Projects with smaller proposed budgets (i.e., less than \$200,000); and/or,
- Projects where a greater degree of design work or advancement to a Request for Expressions of Interest ("RFEI") or Request for Proposals ("RFP") is required before a Business Case can realistically be prepared.

5.2 Work Breakdown Structure / Project Code Activation

Once approval for pre-implementation funding is received, a Work Breakdown Structure ("WBS") must be completed by the Project Manager and submitted to their respective Project Analyst. The Project Manager should ensure that the level of detail in the WBS is at an appropriate level to provide adequate information for analysis and identification of assets. Although the line items may vary, the total budget

identified within the WBS must align with the amount of pre-implementation funding requested in the Project Charter.

Example WBS templates are available to view on the Corporate Planning SharePoint site ([Important Links](#)). To initiate any project document, begin by contacting a Project Analyst or the Manager of Financial Planning & Analysis.

Once a WBS is submitted, it is used to set up the project budget within Oracle Project Accounting (“OPA”) and the project is then activated in OPA, allowing the Project Manager to access the approved funds to commence the pre-implementation phase of the project.

6 Annual Capital Plan and Budget Review

The capital budgeting process occurs on an ongoing basis throughout the fiscal year, with project requests (Business Cases, Charters, Pre-implementation Requests, and PAFs) submitted to monthly CPBC meetings throughout the year. The timing of submissions is based on each project’s milestones so that approval and funding release for each stage of the project will enable the project to meet the project schedule. Although planning and approval activities occur year-round, management must submit a capital plan to the Audit & Finance Committee annually.

To prepare the Capital Plan for Audit & Finance Committee submission (typically late January for a February Board meeting), CPBC meets for the Annual Capital Plan and Budget Review (typically early December) to discuss competing capital spending priorities, screen new projects, and decide on placeholders that will form the 12-year portfolio.

6.1 Annual Capital Plan Preparations

To appropriately allocate spending during the annual review, CPBC needs a realistic and up-to-date view of the project portfolio. For active projects, financial requirements are updated on an ongoing basis through monthly forecasts; however, many more projects within the portfolio have yet to be activated and are not subject to monthly forecasts. The annual review presents an opportunity to refresh the scope, schedule, and budget of projects that have not yet been activated.

Due to the high volume of projects in the 12-Year Capital Plan, it is impractical to perform a full, bottom-up review and update of every project charter. Each year, the Financial Planning and Analysis group, the PMOs, and other key management personnel collaborate for a top-down portfolio review to prioritize efforts leading up to the annual meeting. The review includes decisions on the depth of project reviews

and on the achievability of the portfolio. Greater effort is made on the most impactful, high-budget projects in the plan, as well as the near-term projects on which the scope and budget can be more readily foreseen.

The review also includes a categorization and prioritization process. BC Ferries management sorts projects into mandatory and discretionary categories.

Mandatory projects are necessary on the proposed or similar timeline to fulfil the Company's legal and regulatory obligations (including, but not limited to, the CFA, the Coastal Ferry Services Contract, marine safety regulations, labour laws, privacy laws, and financial reporting regulations). Although mandatory projects are given priority over discretionary projects in the annual capital plan and budget review process, the means by which mandatory projects are implemented may vary and are still subject to debate. For example, if a ferry is nearing retirement, a project of some kind is necessary to continue meeting the contracted sailings (making the project mandatory); however, the need could be met with a new ship, a used ship, or a life extension.

Discretionary projects are the remaining projects that do not meet the criteria to be called mandatory. Note that being categorized as discretionary through this process does not mean the project is not important and will not be completed. However, discretionary projects do have greater flexibility around when and how they may be implemented. A delay in implementation of a discretionary project will not prevent the Company from meeting its obligations.

Discretionary projects are then ranked by management from the three main asset groups (Vessels, IT, and Terminals) in order of priority. The rankings assist the CPBC in establishing placeholders in the 12-year capital portfolio. This framework does not prescribe the method by which the rankings are made; however, in the past a strategic fit questionnaire with a numerical score has been used to set up preliminary rankings, and then projects have been moved up or down in the rankings based on other factors. Other considerations in prioritizing the list include urgency, resource availability, lifecycle costs, payback opportunity, operational and customer impact, and price cap impact.

The top-down portfolio review identifies Charters that will be subject to further review by the Project Executive. The existing Charters are reviewed and the assumptions are checked against current knowledge of business needs (informing scope, schedule, and budget) and market conditions (further informing budget).

Where necessary, the Charters are updated and then approved by all levels of the Project Executive. The Charter updates modify the placeholders in the capital planning system in advance of the annual review meeting.

6.2 CPBC Annual Capital Plan and Budget Review

The purpose of the CPBC Annual Capital Plan and Budget Review (“Annual Review”) meeting is to prepare the capital plan for submission to EMC and the Board. The outcome of the meeting should be a total portfolio forecast that is within the spending parameters on which the price caps for the current performance term were established, including project operating expenses such as research, feasibility, and end-user training.

An Annual Review package is sent in advance of the meeting so committee members can flag projects and prepare questions for discussion at the meeting. Subject matter experts (Project Owners and other management personnel as needed) are invited to the meeting to answer questions about forecast assumptions and the needs behind their projects.

The meeting agenda can change from year to year, but some common elements include:

- A top-down review of the portfolio, focused primarily on changes from past forecasts and the most impactful projects in the portfolio;
- Agreement on (or direction to change) forecast assumptions of the most impactful projects in the portfolio;
- A review of the portfolio target and agreement on whether the target should change;
- A high-level review of the mandatory and discretionary categorizations;
- Targeted discussions about which discretionary projects can be granted placeholders in the portfolio, which can be deferred or cancelled, and which can be placed on a reserve list for future consideration;
- A review and possible adjustment of the annual MFA portfolio budgets.

If the Committee is unable to fit the projects within the portfolio target, the meeting should end with clear direction on how the portfolio will be brought within the target before submission for EMC and Board approval.

6.3 EMC Review of the 12-Year Capital Plan

CPBC recommendations regarding the 12-Year Capital Plan are forwarded to EMC for decision at a meeting that typically takes place in early January of each year. Those

projects approved by EMC form BC Ferries' 12-Year Capital Plan, encompassing the Capital Expenditure Envelope for the upcoming fiscal year.

6.4 Board Submission, Approval and Conditions

In early February of each year, the CEO forwards the 12-Year Capital Plan to the Board for approval. The Board reviews and establishes the approved 12-Year Capital Plan and Capital Expenditure Envelope for the upcoming fiscal year. The Board may identify conditions of that approval associated with the plan as a whole or with individual projects identified within the plan.

7 Business Case

Approval for capital expenditures is contingent upon the preparation and approval of a Business Case. The Project Analyst is responsible for drafting many aspects of the Business Case based largely on information that is provided by the members of the Project Executive. As it is the Project Executive that must ultimately sign off on the Business Case, both the Project Analyst and members of the Project Executive are responsible for ensuring the Business Case document is as comprehensive and accurate as possible. The Business Case is not considered complete or final, and cannot be submitted, until the three parties forming the Project Executive have approved the document.

The Scope, Budget and Schedule must be clearly defined in a Business Case, including any downstream financial implications as these parameters will be reviewed and approved by the CEO and the Board.

Downstream financial implications can include (but are not limited to):

- Ongoing or one time revenue implications;
- Ongoing or one time operating budget increases or decreases (including labour costs, fuel costs, maintenance, utilities, insurance, property taxes, rental costs, etc.);
- The need for write-offs or accelerated depreciation on existing assets; and
- Capital spares, purchasing, and other inventory implications.

7.1 Business Case Objectives

- To standardize the decision-making process;
- To analyze the viable alternatives and make a recommendation based on the operational requirements and a favourable life cycle cost outcome;
- To identify the project Scope, Budget and Schedule that must be delivered by the Project Executive;

- To identify and allocate appropriate resources to meet the project's stated scope, schedule and budget;
- To establish the financial implications of the project;
- To identify and reduce the risk, uncertainty, and complexity of the proposed project; and
- To identify the reporting requirements of the project.

The Business Case template and the associated Business Case Financials Template are updated with improvements as lessons learned from past cases are applied.

Example Business Case templates are available to view on the Corporate Planning SharePoint site ([Important Links](#)). To initiate any project document, begin by contacting a Project Analyst or the Manager of Financial Planning & Analysis.

Suggestions for enhancements or changes to the above templates should be forwarded to the Manager, Financial Planning & Analysis.

7.2 Project Executive Review

Once a Business Case has been drafted, it is the responsibility of the Project Owner and Project Manager to review the document to ensure it is accurate and comprehensive. In addition, the Project Owner and Project Sponsor will assess the Business Case to determine whether they will support the project and/or its timeline (i.e., should the project still proceed, be deferred, be moved forward, or be cancelled).

A Business Case outlines both the optimal financial option and the Project Owner's recommendation. If the Project Owner's recommendation differs from the optimal financial option, a clear justification is required.

The Project Sponsor, the Project Owner and the Project Manager must approve the final Business Case before it is submitted for CPBC review.

7.3 Project Manager and Project Analyst Roles

The objective is to produce a robust Business Case which thoroughly examines available options while making a clear recommendation that establishes project scope, budget, schedule, financial implications and project risk / risk mitigation strategies. The Project Manager and Project Analyst assist one another in this process but also must challenge one another on the options to be examined and the associated assumptions within the Business Case analysis.

Aspects of the Business Case that are typically led by either the Project Manager or the Project Analyst are identified below.

Activities Led by Project Manager:

- Detailed Scope Description, as approved by the Project Owner;
- Detailed Budget Breakdown;
- Project Schedule;
- Detailed Cash Flow Forecast;
- Options Development & Costing;
- Consulting Stakeholders;
- Identifying Inventory Implications;
- Project Risks / Risk Mitigation Strategies;
- Identifying Environmental Considerations;
- Establishment and Spending of Pre-Implementation Budget to support the above activities;
- Liaising with the Project Owner and Project Sponsor; and
- Liaising with Supply Chain and the Legal Department to ensure the appropriate form of contract is used.

Activities Led by Project Analyst:

- NPV Analysis;
- Options Analysis;
- Writing and Editing for Clarity / Consistency;
- Preparation of an Interest During Construction (“IDC”) forecast to be included in the Project Budget;
- Ensuring all Budgets, Cash flows and Financial Analysis are consistent;
- Working with Accounting to identify any write-offs and to review the scope to confirm all scope items can be capitalized;
- Completion of the Financial Implications table;
- Completing the Strategic Objectives section;
- Identifying the requirements / timelines for submission and approval;
- Completing the Service Fee / Tariff Structure section;
- Assisting the Project Manager with understanding the Business Case template, approval process and with any aspect of the Business Case template or this Framework;
- Providing a non-biased viewpoint with appropriate pushback on the options being analysed, project Scope, Budget, Schedule, Risks, etc.;
- Research of past Capital Project files for similar projects which may have applicable “lessons learned”.
- Shepherding the Business Case for reviews and sign-offs by all members of the Project Executive; and

- Ensuring the Project Manager and Project Owner are invited to attend the review of the Business Case by the CPBC.

Note: The Project Manager and Project Analyst must support each other in each of these activities. Involvement can depend somewhat on Business Case familiarity, education and experience.

7.4 Role of the Project Owner

While it is typically a Project Owner's needs or opportunity that has led to the identification of a potential Capital Project, the Project Owner may or may not be able to take a significant role in the development of a Business Case.

Implementation options could come a number of sources (the Project Manager and PMOs often take the lead on options development), but the Project Owner is responsible for ensuring that options have been sufficiently explored. Ultimately, the Project Owner must be comfortable with the options and assumptions presented in the Business Case. The Project Owner must identify an "owner's recommended option" with an associated scope, schedule, and budget, or may decide to cancel the Business Case prior to request for approval.

As such, the Project Owner must be kept informed during Business Case development and may play a lead role in developing the options or in challenging assumptions, risks, etc. The Project Manager must keep the Project Owner informed of the status of pre-implementation funding such that the spending is consistent with options that the Project Owner wants investigated and will support.

The Project Owner is ultimately responsible for any downstream operating budget implications as a result of a Capital Project (fuel/labour/materials savings or costs, asset maintenance, etc.). For this reason, it is important that a Project Owner review and have input on the financial implications of the options analysis (and NPV) and the financial implications identified with the preferred option.

If a Project Owner (and members of their division/department) has previous ownership experience with similar Capital Projects (or Capital Assets), lessons learned from this experience are important to discuss with the Project Manager and Project Analyst for consideration and inclusion in the Business Case.

In consultation with the other members of the Project Executive, the Project Owner will determine if the project requires the establishment of a steering committee (see section 8.3).

7.5 Role of the Project Sponsor

The Project Sponsor ensures that the request is valid, that the appropriate strategic alternatives have been examined, and that the project is appropriately prioritized with respect to other requests coming from the Division and the known financial constraints of the company.

Once the Project Sponsor is comfortable with the information and request as presented in the Business Case, he or she must support the document prior to CPBC, CEO and/or Board review and approval.

As a member of the Project Executive, the Project Sponsor will liaise with the Project Owner to determine if the project requires the establishment of a steering committee (see section 8.3).

7.6 Board or BCFC Approval Timelines

Depending on the magnitude of the Business Case, approval by the CEO, Board or BCFC may be required, as identified in Appendix 1.

The Project Executive and Project Analyst must pay particular attention to the required timelines for Business Cases requiring Board or BCFC approval. Board meetings are held quarterly and have a date of three weeks prior to the meeting for submission of material to the Corporate Secretary's office. Submission of a Business Case to the CPBC with subsequent approval by the CEO is required prior to submission to the Corporate Secretary's office.

For example, submission of a Business Case for decision to a Board meeting held in late June requires submission to the Corporate Secretary's office in late May to early June (3 weeks prior). This would, at the latest, require submission of the PAF to the CPBC in early May for review at the scheduled CPBC meeting.

7.7 Emergent Projects / Contingency Business Cases

During the fiscal year, unexpected events such as mechanical failures may occur or unique opportunities for Capital Projects may present themselves. To address these emergent needs, the Project Executive may request access to capital funding through the preparation of a Business Case.

The preparation of an emergent project request follows the same template and basic process as a standard Business Case, including the assignment of a Project Manager and Project Analyst. Once prepared and signed off by the Project Executive, a Business Case must be submitted to the CPBC for review and recommendation to the CEO for approval.

Note: Consistent with the Project Approval Hierarchy (Appendix 1), an Emergent Project with a proposed budget greater than \$5 million requires the approval of the Board. Emergent projects also have lower thresholds for approval of budget amendments.

Note: Once an Emergent Project greater than \$5 million is specifically approved by the Board, it is no longer considered an Emergent Project under the Project Approval Hierarchy.

7.8 Capital Programs

Capital Programs involve the acquisition of multiple related assets over multiple fiscal years and are initially established through the development and approval of a Business Case. Most Capital Programs involve the recurring replacement of minor assets and are classified as Minor Fixed Assets. In the case of Minor Fixed Assets, the Business Case requires approval by the Project Sponsor and not the CPBC. For more detail on Minor Fixed Assets, see Appendix 4.

The establishment of a Capital Program can be useful when there is a need to replace a relatively large number of smaller assets on an annual basis where the preparation of individual Business Cases would be unreasonable. Capital Programs are also established for groupings of large, related and complex expenditures that need to be examined and justified from a holistic point of view (e.g., the Vessel Sewage Treatment Program).

Detailed scope and budgets are approved and released for Capital Programs one fiscal year at a time. In the initial year of a Capital Program, the detailed scope and budget for Year 1 is identified in the Business Case while the preliminary scope and budget for future years of the program are also identified. Once a Capital Program has been established, a Program Request must be submitted to the relevant VP in each of the subsequent years of the Program to seek approval of that year's detailed scope and budget.

Note: Once a Capital Program has been established through the submission and approval of a Business Case, Program Request Forms for subsequent years can be brief as long as the requests are within the budgets previously established.

PART C: IMPLEMENTATION PHASE

A project enters the Implementation Phase following the approval of a Business Case. The Implementation Phase is comprised of the stages and requirements through which approved projects are constructed, acquired, managed, monitored, controlled and delivered.

This section covers:

- Decision Notification and Activation;
- Project Management / Delivery;
- Project Amendments;
- Project Reporting / Monitoring; and
- Project Deferral / Cancellation.

8 Decision Notification and Activation

8.1 Project Decision

Some projects, like those needing CEO, Board, or BCFC approval, may have a time-lag between CPBC approval and project activation. In all cases, Project Managers are notified of their project approvals, including any approval conditions, by email from the Capital Planning Coordinator. The email includes the Work Breakdown Structure (discussed below), which must be completed prior to project activation.

8.2 Start-Up Meeting

At the discretion of the Project Executive, a start-up meeting can be held between the members of the Project Executive and the Project Analyst upon approval of the Business Case. Depending on the project, a representative from the company's IT Department, Public Affairs Department or other departments not represented within the Project Executive may be invited. Start-up meetings can be particularly helpful in the following areas:

- Introductions between the different members of the Project Executive, Project Analyst, IT Representative, etc.;
- Review of the Business Case; and
- Discussion of the need for the establishment of a Project Steering Committee and/or Working Committee and associated membership.

The value of a meeting increases if:

- A project is higher risk, complex and/or cross-functional in nature;
- There have been any changes to the project roles since the preparation of the Business Case; and/or
- Significant time has passed since the preparation of the Business Case.

8.3 Establishment of a Project Steering Committee

It is the responsibility of the Project Executive to identify the need for the establishment of a project Steering Committee (or any associated working committee) and the terms of reference for any such committees.

In general, the need for a project Steering Committee increases with the complexity and cross-functional nature of a project. A project Steering Committee may be particularly necessary if the successful implementation of a complex project involves input from divisions or departments not represented by the members of the Project Executive.

Note: The existence of a Steering Committee does not relieve any members of the Project Executive from their accountability for successful project delivery as identified in this Framework. For this reason, the Chair of a project Steering Committee is typically the Project Owner or the Project Sponsor.

8.4 Work Breakdown Structure / Project Code Activation

Once the Business Case is approved, a Work Breakdown Structure (“WBS”) must be completed by the Project Manager and submitted to the Project Analyst. In the case of a project with pre-implementation funding previously released, a revised WBS must be completed. Although the line items may vary, the total budget identified within the WBS must align with the project budget from the approved Business Case. Ideally, the project Budget from the approved Business Case is simply a summary of a WBS which was first prepared by the Project Manager.

Example WBS templates are available to view on the Corporate Planning SharePoint site ([Important Links](#)). To initiate any project document, begin by contacting the Project Analyst.

Once a WBS is submitted, it is used to set up the project budget within Oracle Project Accounting (“OPA”).

9 MANAGEMENT AND DELIVERY

9.1 Range of Project Types / Implementation Procurement Strategies

The nature of Capital Projects varies widely at BC Ferries. The following are some examples of typical Capital Projects:

- Simple vehicle purchases and modifications;
- Marine structure replacement / refurbishment;
- Upland terminal asset replacement / redevelopment / expansion;
- Building construction;
- Vessel component replacement;
- Vessel quarter / mid-life upgrade or life extension;
- New vessel construction;
- IT systems procurement / development; and
- Marketing initiatives with capital components.

Project implementation / procurement strategies associated with the management and delivery of the above project types can also vary widely and may involve:

- Simple quote / purchase;
- Direct award;
- Request for proposal / formal tender;
- Internal design / tender construction;
- Design / build; or
- Construction management approach.

Capital Projects at BC Ferries are delivered utilizing any combination of internal and external resources.

Due to the wide range of Capital Projects and implementation / procurement strategies employed at BC Ferries, this Framework cannot be (and is not meant to be) prescriptive in how the Project Manager manages the delivery of a project during the implementation stage. The Project Manager and other members of the Project Executive must use their experience, skills and project management best practices to deliver on the approved project Scope, Budget and Schedule while appropriately identifying and mitigating project risks.

9.2 Managing within the Project Approval Thresholds

In managing the implementation stage of a project, the Project Manager and Project Executive are only authorized to make commitments within the Project Approval Thresholds.

If it becomes apparent that the approved scope, budget and/or schedule need to change, the Project Executive must prepare and submit a PAF to the CPBC. In the case of Minor Fixed Asset projects, the PAF is to be submitted to the Project Sponsor. Details on the requirement and preparation of a PAF are outlined in Section 10. If there are concerns regarding the necessity of a PAF, the Project Executive should consult with the Project Analyst or the Manager, Financial Planning & Analysis. Once a PAF is approved by the CPBC, CEO and/or Board (consistent with the Project Approval Hierarchy as identified in Appendix 1), the Project Manager/Executive is authorized to proceed.

9.3 Managing Equipment Selection and Technical Decisions

There is often a debate between Project Managers and other parties about where the authority rests for making equipment selection and technical decisions within an approved project. A Project Manager must understand that they have “project management authority”; that is, the authority over all aspects of the management of the project. However, Project Managers do not have “technical authority”; line managers (within IT, Fleet Operations, Catering, Terminal Operations, Fleet and Terminal Engineering, etc.) have the authority for technical decisions within BC Ferries.

As such, the Project Manager (and other members of the Project Executive), must ensure that equipment selection and technical decisions made during a project meet the following two tests:

1. That project decisions on technical matters meet the approval of the relevant technical authorities inside the company; and
2. That project decisions meet the Project Owner's scope requirements.

At BC Ferries, line managers are the technical authorities. This could be Fleet Operations for selection of life saving equipment, Catering for selection of fabrics or galley equipment, or Fleet Engineering for selection of engines, pumps, alarm systems, etc. Therefore, the Project Manager must ensure their selections have appropriate line management approval.

It is important to understand that the project scope encompasses more than just quantity. It also encompasses quality, fitness for purpose, and adequacy. While the Project Owner does not have a “technical” approval role, they must be satisfied that the equipment or solution being proposed by the Project Manager meets their scope requirements in terms of function, fitness for purpose, quantity and quality.

Therefore, the Project Manager must ensure the Project Owner has endorsed the decision being made.

Note: Securing both of the above approvals is made easier when the Project Manager has an inclusive and consultative selection process built into their project plan.

9.4 Managing within Relevant BC Ferries Policies outside the Framework

The Project Manager and other members of the Project Executive must follow all relevant corporate policies that reside outside of this Framework. At the time of writing, the most significant of these policies included:

- CEO Approval of Consulting Contracts/Services Policy;
- Supply Chain Management Policies;
- Contract Award;
- Privacy Impact Assessment Policy; and
- IT Policies.

Links to these documents are available in the [Important Links](#) section.

Note: The forms and approvals associated with the above policies are outside this Framework and are therefore not managed through the CPBC. The sections below provide a highlight of these policies and associated links that were current at the time of writing. For this reason, Project Managers should always review the up to date policy and template links as they are located on the Corporate Intranet.

9.5 CEO Approval of Consulting Contracts/Services Policy

The Project Manager is responsible for hiring all project consultants (i.e., architects, engineers, interior designers, etc.) which includes establishing the evaluation criteria for their hire.

The CEO has issued a standing policy that all consulting services are to be specifically approved by the CEO prior to assignment.

9.6 Supply Chain Management Policies

Supply Chain Management maintains several corporate policies directly related to the procurement of goods and services for capital projects including:

- Asset Disposal Program;
- Shipboard Inventory;
- Contract Management;
- Supplier Records and Management;
- Procurement of Goods and Services;

- Purchase Initiation and Approval;
- Warehouse;
- Web Enabled Procurement;
- Receipt of Purchased Goods & Services; and
- Segregation of Duties Procurement Process.

Project Managers must familiarize themselves with and follow these Supply Chain Management Policies.

9.7 Contract Award Policy

Consistent with the relevant Supply Chain Management policies, before awarding a contract, the Project Manager must seek and receive approval to award the contract from an Executive or other BC Ferries employee with the appropriate spending authority. Depending upon the magnitude of the contract, approval of the CEO and/or the Board may be required.

9.8 Privacy Impact Assessment Policy

The development of new services or applications or modifications to existing ones that collect, use or disclose customer and/or employee personal information must comply with the *Freedom of Information and Protection of Privacy Act* and BC Ferries' privacy policies and practices.

A Privacy Impact Assessment ("PIA") must be completed for all projects, whether or not those projects involve personal information. This requirement is identified in the Business Case template. Once completed, the PIA is either attached as an appendix to the project's Business Case or otherwise sent to the Capital Planning Coordinator for inclusion in the Project File.

9.9 Project Management Offices

BC Ferries PMOs have their own documentation and policies with greater depth on project management execution. The SharePoint sites containing these documents can be accessed from the [Important Links](#) section.

9.10 Deferral or Cancellation of Approved Projects

If at any point in the Implementation Phase the Project Executive feels a project should be deferred or cancelled, a Deferral or Cancellation Form must be prepared and signed off. This form is to be forwarded for review and support by the CPBC, or approval by the Project Sponsor in the case of MFA projects.

Cancellation or deferral of any non-MFA projects must be circulated for CEO approval subsequent to being supported by CPBC. For projects with budgets greater than \$15 million, Board approval is required.

An approved project with minimal spending to date can be deferred for a maximum of one year. A deferral of more than one year requires project cancellation and subsequent resubmission of a Business Case for project approval.

Note: Project cancellations may result in the need for Accounting to write-off all (or a portion) of the project expenditures to date. Project Cancellation forms must accurately document any requirement for write-offs.

9.11 Change of Project Manager or Project Owner

Where possible, changes to Project Managers and Project Owners should be avoided; this is particularly true during Project Implementation. However, turnover and evolving business needs sometimes necessitate a change in these key members of the Project Executive.

9.12 Change to Project Manager

As per the original assignment of a Project Manager, a change in Project Managers must be approved according to the table in section 4.1.

The new Project Manager is required to review and accept the parameters and conditions outlined in the Business Case or PAF.

If the new Project Manager does not agree with any of the approved parameters and conditions of a project in the Business Case or most recent PAF, a new PAF is required to amend the parameters.

Note: There is no template for a change to Project Manager. As such, it is the responsibility of the new Project Manager to ensure that the Project Owner, Project Analyst and Capital Planning Coordinator are appropriately notified of the change.

9.13 Change to Project Owner

A change to the Project Owner, at any point during the lifecycle of a project, must be approved by the Project Sponsor.

If the new Project Owner does not agree with any of the approved parameters and conditions of a project in the Business Case or most recent PAF, a new PAF is required to amend the parameters.

Note: There is no template for a change to Project Owner. As such, it is the responsibility of the new Project Owner to ensure that the Project Manager, Project Analyst and Capital Planning Coordinator are appropriately notified of the change.

10 Project Amendments

Project Amendments are the mechanism by which the approved parameters of a project (primarily scope, schedule, and budget), as identified in the Business Case, can be formally amended. Project Amendments can also be prepared to request a change to the conditions placed upon a project or in recognition of a change to the downstream benefits or costs associated with the project's implementation.

The Project Executive can only make project-related commitments within the approved parameters of a project and within the approval thresholds for the Project Executive as identified in Appendix 1.

Note: PAFs must be prepared, submitted to the CPBC (or the Project Sponsor in the case of MFA projects), and approved at the appropriate level prior to a Project Manager committing to any changes that are outside the approval thresholds of the Project Executive.

An example PAF template is available to view on the Corporate Planning SharePoint site ([Important Links](#)). To initiate any project document, begin by contacting the Project Analyst.

10.1 Budget PAFs and Thresholds

Budget PAFs formally amend the approved budget for a project and may also be paired with a requested scope and/or schedule change.

The requirement for preparation of a Budget PAF and the required approval level depends on whether a project required Commissioner approval, has a budget greater than or less than \$15 million and whether the project was approved on an emergent basis.

Details on approval thresholds are outlined in Appendix 1.

A PAF must be prepared if commitments are expected to bring the forecast cost above \$15 million as these PAFs must be specifically approved by the Board of Directors.

Approved budget up to \$15M	A PAF is not required if: • The negative budget variance is less than \$50,000; or • The negative budget variance is less than 5% of the approved project budget and under \$250,000. Despite the above, a PAF must be prepared if commitments are expected to bring the forecast cost of the project above the \$15 million mark as these PAFs must be specifically approved by the Board of Directors.
Approved budget \$15M or higher	A PAF is not required if: The negative budget variance is less than 5% of the approved project budget to a maximum of \$500,000.
Emergent projects	A PAF is not required if: • The negative budget variance is less than \$50,000; or • The negative budget variance is less than 5% of the approved project budget and under \$250,000. Despite the above, a PAF must be prepared if commitments are expected to bring the forecast cost above the \$5 million mark as these PAFs must be specifically approved by the Board.

10.2 Scope PAFs and Thresholds

- Scope PAFs are required for all projects if the Project Executive requests a material change to the approved scope as identified in the Business Case. A material change to approved scope can involve a scope increase or decrease involving a change to the functional requirements of the capital project. Scope PAFs may or may not be paired with a requested budget and/or schedule change.
- Scope PAFs may or may not involve an options analysis similar to that in the Business Case template.
- Scope creep and scope management is a significant concern with all projects. Scope PAFs are required even if a material change to the project scope can be accommodated within the project budget.

Scope PAFs for all non-MFA projects must be circulated for CEO approval subsequent to being supported by CPBC. For projects with budgets greater than \$15 million, the CFO and CEO must determine whether a scope change is sufficient to require Board approval.

Note: If the Project Executive are uncertain whether a contemplated change to scope is material or not (requiring a Scope PAF or not), the question should be brought to

the attention of the Project Analyst for decision by the Manager, Financial Planning & Analysis.

10.3 Schedule PAFs and Thresholds

Schedule PAFs are required for a material change to the project's schedule. The significance of a schedule PAF can vary widely depending on inter-dependencies with the approved project schedule. In some cases, a two week delay in a project's Available for Use date can have significant and costly impacts on other projects or operations. In general, schedule PAFs are prepared if a project's Available for Use date is expected to vary one month or more past the approved timeframe.

Schedule PAFs for all non-MFA projects must be circulated to the CEO for information subsequent to being approved by CPBC. For projects with budgets greater than \$15 million, the CFO and CEO must determine whether a schedule change is sufficient to require Board approval.

Note: Schedule PAFs with no Capital Budget, Operating Budget and/or Scope implications can generally be abbreviated to one page.

10.4 PAF Preparation

The Project Manager generally completes the PAF with the assistance of the Project Analyst and Project Owner. Prior to submission, the PAF must be independently reviewed for completeness by the Manager, Financial Planning & Analysis and reviewed/signed by each member of the Project Executive.

10.5 Board or Commissioner Approval Timelines

Depending on the magnitude of the PAF, approval by the CEO, Board or BC Ferries Commissioner may also be required, as identified in Appendix 1. The timeline guidance provided for Business Cases in Section 1.1 also applies for significant PAFs.

10.6 PAF Approval Notification

If the PAF is approved, the CPBC (through the Capital Planning Coordinator) will inform the Project Executive via e-mail.

In the case of an approved budget amendment, the Project Manager must submit a revised WBS to their respective Project Analyst to allow for the revised budget to be updated and reflected within OPA.

If the PAF is not approved, the Project Executive is informed by the Capital Planning Coordinator and will have to decide whether to:

1. Submit a revised PAF;

2. Comply with the original Business Case; or
3. Cancel or defer the project.

There exists the potential for a project to be delayed as a PAF is cycled within the CPBC/Project Executive loop. This cycle will continue until all the parties are in agreement.

11 Regular Project Reporting

Regular project reporting begins as soon as a capital project number is activated; this is typically when pre-implementation funding for a project is released. There are two types of regular project reporting associated with this Framework:

1. Corporate Progress Reports; and
2. Class A and B Project Reports.

Regular project reporting is essential to monitoring Scope, Schedule, Budget and Project Risks at an individual project level. Regular project reporting is also used collectively to establish and report against the overall capital expenditure budget. Regular project reporting is used in the preparation of the Capital and Major Operating Projects (“CMOP”) report which is prepared for the CPBC on a monthly basis and is prepared for the Board on a quarterly basis.

11.1 Corporate Progress Reports

The Corporate Progress Report (“CPR”) is a financial reporting tool that Project Managers complete on a monthly basis for all active capital projects. The CPR forecasts are essential for the creation of an accurate CMOP report, and give Project Owners a consistent way to track the financial health of their projects. To help produce an accurate CMOP report, each CPR forecast must be comprehensive; it needs to include actual spending to date and all anticipated future spending (committed or not). The requirement to complete CPRs begins as soon as a project number is activated (either in the Pre-Implementation Stage or the Implementation Stage) and is required until the project is closed out (or cancelled).

The CPR reports are completed by Project Managers each month in the Contributor system and provide details of actual/accrued expenditures to date. Each CPR highlights the project budget, whether the budget is approved or preliminary, and the released amount of the project budget.

- Project Managers provide forecasts to completion and comment on any material issues relating to Scope, Schedule, Budget, risk, or risk mitigation.

- Project Owners are required to review CPRs for their projects on a monthly basis and either “accept” or “not accept” the report. Acceptance is managed on an exception basis, and any CPRs that are not accepted by the Owner are included in the Issues List provided to the CPBC at its monthly meeting.

A training presentation explaining the monthly CPR process is available in the [Important Links](#) section.

CPRs are typically required to be completed by Project Managers within three business days after access is provided to CPRs in Contributor. It is the Project Manager's responsibility to ensure the continuity of the CPR reporting process in the event of travel, vacation, sickness, etc.

11.2 Class A/B Reports

During the Implementation Phase, additional reporting is required for projects with a “Class A” risk classification or “Class B” risk classification. Class A reports are required monthly and Class B reports are required quarterly. The reports are completed by Project Managers and reviewed by Project Owners. Per the standardized template, these reports are focused on recent and upcoming activity, risks, risk mitigation, and performance on Scope, Budget, and Schedule.

- Project risk classifications are typically determined within the Business Case by a system that considers a combination of both risk and cost. Project risk classifications can also be assigned by the CPBC, the CEO or the Board.
- The requirement to complete a Class A or B report begins when a project enters the “Implementation” phase or as otherwise requested by the CPBC. Unless otherwise requested, Class A and B reports are required until the new asset is available for use (see Section 12).

An example Class A/B report template is available to view on the Corporate Planning SharePoint site ([Important Links](#)). To initiate any project document, begin by contacting the Project Analyst.

11.3 Capital and Major Operating Projects Report

Project reporting is an important input in the preparation of the Capital and Major Operating Projects (CMOP) report which is prepared for the CPBC on a monthly basis and the Board of Directors on a quarterly basis. The CMOP report identifies the status of capital spending against the overall Capital Expenditure Budget for the fiscal year and identifies and explains significant individual project budget and forecast variances. Also, any operating expenses incurred by the project will be included in

this report. Accurate, timely information, as provided in the monthly CPRs and Class A/B Reports, is essential to the preparation of the CMOP report.

PART D: POST-IMPLEMENTATION PHASE

The Post-Implementation Phase measures the performance of the project management process by evaluating the actual project outcome against the originally-intended outcome as outlined in the approved Business Case. Lessons learned by members of the Project Executive are also identified for the benefit of ongoing or future projects of a similar nature.

The Post-Implementation Phase evaluates the actual project outcome against the originally approved/intended outcome. There are three sub-sections within the Post-Implementation Phase:

- Available for Use Reports and Project Closeout Requests;
- Post Project Benefits Realization Review; and
- Post Implementation Reviews.

12 Available for Use Forms and Project Closeout Forms

12.1 Available for Use Form

At the time the asset(s) associated with a capital project is/are recognized as available for use, the Project Manager, with the assistance of the Project Analyst and Project Owner, must prepare an Available for Use (“AFU”) form. The AFU form must be signed off by all members of the Project Executive and forwarded to the CPBC for information.

The AFU form marks the point at which the responsibility for the asset is transferred from the Project Manager to the Project Owner(s). It is the Project Owner who is then accountable for the ongoing asset operation, maintenance and benefits realization. However, the Project Manager remains responsible for resolving any outstanding deficiencies and financial commitments to the satisfaction of all members of the Project Executive.

Note: To facilitate the asset transfer process referred to above, it is strongly recommended that a sign-off process (including a written checklist) be developed and agreed to between the members of the Project Executive.

The AFU form compares the approved Scope, Budget, Schedule and expected outcomes of the project with the final outcome and determines the success of the project. The AFU form is also a key flag for BC Ferries’ Accounting Department to

begin depreciating the asset according to IFRS and for IDC charges to the project to cease.

Additionally, the AFU form:

- Identifies any outstanding issues, deficiencies, or work required to be completed prior to Project Closeout;
- Can revise the approved Closeout date for a project;
- Identifies all outstanding project invoices and when they will be paid;
- Identifies any further requirement for a Project Benefits Realization (“PBR”) review (see Section 13); and
- Documents any material lessons learned by the Project Executive and Project Analyst over the course of the project. The lessons learned, as documented within Available for Use reports, can be referenced by Project Managers, Project Owners and Project Analysts when contemplating future capital projects, developing Business Cases, preparing project plans, etc.

An example AFU template is available to view on the Corporate Planning SharePoint site ([Important Links](#)). To initiate any project document, begin by contacting the Project Analyst.

Note: If all outstanding invoices have been paid and deficiencies addressed, an AFU form can be combined with the Project Closeout Request (see section 12.3).

12.2 Partial Available for Use Form

If a capital project involves more than one capital asset being brought into service at different times, Partial AFU forms must be prepared during the Implementation phase of the project. This supports the requirement of the Accounting department to recognize these capital assets as available for use and to begin depreciating their respective costs.

Preparation of a Partial AFU form is a combined effort between the Project Manager, the Project Owner, the Project Analyst and the Accounting Department. These forms are submitted to the Accounting Department and to the CPBC for information.

An example Partial AFU template is available to view on the Corporate Planning SharePoint site ([Important Links](#)). To initiate any project document, begin by contacting the Project Analyst.

Note: The need for Partial AFU forms is common when a project involves multiple assets across various terminals, vessels and/or other geographic locations.

12.3 Project Closeout Form

When all outstanding invoices have been paid, commitments and Purchase Orders closed, and deficiencies addressed to the satisfaction of the members of the Project Executive, the Project Manager must complete a Project Closeout Form ("Closeout"). This form is signed off by all members of the Project Executive and forwarded to the CPBC for information. When the Closeout is accepted by the CPBC for information, the project code number and file will be closed and all Regular Project Reporting ceases.

Before the submission of a Closeout, the Project Manager and Project Analyst must ensure that all commitments are closed in OPA.

An example Closeout template is available to view on the Corporate Planning SharePoint site ([Important Links](#)). To initiate any project document, begin by contacting the Project Analyst.

12.4 Project Closeout Meeting

At the discretion of the Project Executive, a Project Closeout Meeting is recommended for all projects which involved a Steering Committee or had risk classifications of "A" or "B". The focus of the Project Closeout Meeting is on lessons learned that can be applied by each member of the Project Executive (or their colleagues) in identifying, planning and implementing projects of a similar nature in the future.

Other issues for discussion could include:

- The organization for a future review of project benefits (fuel savings, labour savings, etc.) which could not be fully ascertained at the time of the Available for Use Report / Project Closeout (see Section 13 below); and/or
- The potential for future involvement of the Project Manager in the event that warranty issues arise (or are ongoing) that cannot be realistically handed off to the asset operators / line managers reporting to the Project Owner.

13 Project Benefits Realization ("PBR") Review

A PBR is a review of one-time or ongoing project benefits or costs that could not be fully ascertained at the time of the Capital Asset being brought into service. This situation can be relatively common amongst internal payback projects or any project that had operating budget implications identified as part of the approved Business Case or subsequent approved PAFs.

Besides quantitative financial implications, there could be quantitative or qualitative customer service, environmental or other implications from the Business Case or subsequent PAF(s) that need to be confirmed for the project to ultimately be considered a success.

Besides holding the Project Owner and Project Sponsor accountable for the realization of Business Case / PAF benefits, the PBR is of direct benefit to the development or identification of future projects of a similar nature.

The need for and expected timing of a PBR is identified within the Available for Use Report. The PBR report is jointly prepared by the Project Analyst and Project Owner, must be signed off by the Project Sponsor and is submitted or presented to the CPBC for information.

Note: A specific template for PBR reports has yet to be developed.

14 Post-Implementation Review (“PIR”)

Objective

A PIR is a formalized review of a project after completion to determine:

- Whether the intended corporate and project objectives were met;
- What went right, what went wrong; and
- Any lessons learned so that mistakes are not repeated and processes and procedures are improved.

Requirement

Any project may be subject to a PIR with the emphasis being on projects greater than \$5 million and large internal payback projects. Additionally, a PIR may be specifically requested by the CPBC, the CFO, the CEO, the Audit & Finance Committee or the Strategic Projects Committee of the Board.

The PIR should be conducted within 15 to 24 months after the project is completed and handed over to the Project Owner(s).

Internal Audit’s Role

PIRs are carried out under the direction of the Internal Audit department. Internal Audit ensures the PIR is undertaken by a qualified individual or entity (internal or external) that is independent of the project to ensure there is no bias.

PIR Review

All PIRs are forwarded to the CPBC for review.

PIRs conducted for projects greater than \$5 million and with a risk classification of moderate or high must be forwarded to the Audit and Finance Committee of the Board. In addition, the CPBC may recommend that other PIRs be forwarded to the Audit and Finance Committee.

APPENDIX 1: CAPITAL PROJECT APPROVAL HIERARCHY

Project Establishment						
Form	Project Manager	Project Owner	Project Sponsor	CPBC (Chair)	President & CEO	Board
Pre-Implementation Funding Request and Project Charter*	Y	Y	Y	Y	N	N
Minor Fixed Asset Request	Y	Y	Y	N	N	N
Detailed Business Case Under \$5 M	Y	Y	Y	Y	Y	N
Detailed Business Case Under \$15 M & Over \$5 M	Y	Y	Y	Y	Y	N
Detailed Business Case Over \$15 M	Y	Y	Y	Y	Y	Y

Project Amendment Forms (PAFs)						
Form	Project Manager	Project Owner	Project Sponsor	CPBC (Chair)	President & CEO	Board
Capital Projects under \$15 Million						
Budget Variance under \$50k	NR					
Budget Variance under 5% and under \$250K (total project budget < \$15 M)	NR					
Budget Variance otherwise under \$500K (total project budget < \$15 M)	Y	Y	Y	Y	N	N
Budget Variance over \$500K (total project budget < \$15 M)	Y	Y	Y	Y	Y	N
Budget Variance increases total project budget over \$15 M	Y	Y	Y	Y	Y	Y
Scope Only Variance	Y	Y	Y	Y	Y	N
Schedule Only Variance	Y	Y	Y	Y	I	N
Capital Projects > \$15 Million						
Budget Variance under 5% and under \$500K	NR					
Budget Variance otherwise under \$1 M	Y	Y	Y	Y	N	N
Budget Variance over \$1 Million (under 10% and under \$7.5 M)	Y	Y	Y	Y	Y	N
Budget Variance over 10% or over \$7.5 M	Y	Y	Y	Y	Y	Y
Scope Only Variance	Y	Y	Y	Y	Y	Y*
Schedule Only Variance	Y	Y	Y	Y	I	Y*

Project Cancellation / In-Service / Closeout						
Form	Project Manager	Project Owner	Project Sponsor	CPBC (Chair)	President & CEO	Board
Cancellation or Deferral	Y	Y	Y	Y	Y	Y*
In-Service	Y	Y	Y	I	N	N
Partial In-Service	Y	Y	I	I	N	N
Closeout	Y	Y	Y	I	N	N

Regular Project Reporting						
Form	Project Manager	Project Owner	Project Sponsor	CPBC (Chair)	President & CEO	Board
Capital Progress Reports (CPRs)	Y	Y	I	I	N	N
Class "A" Detailed Progress Report	Y	Y	I	I	N	N
Class "B" Detailed Progress Report	Y	Y	I	I	N	N

Legend	
Description	Metric
Sign-off / Approval Needed (Yes)	Y
Sign-off / Approval Needed, at the Discretion of CFO and CEO (Yes)	Y*
Sign-off / Approval Not Needed (No)	N
Not Required	NR
Informed	I

PAF Approval Matrix Simplified	
Form	Highest Approval
Regular Capital Projects under \$15 Million	
Budget Variance under \$50k	NR
Budget Variance under 5% and under \$250K (total project budget < \$5 M)	NR
Budget Variance under \$500K (total project budget < \$5 M)	CPBC
Budget Variance over \$500K (total project budget < \$15 M)	CEO
Budget Variance increases total project budget over \$15 M	Board
Scope Only Variance	CPBC
Schedule Only Variance	CPBC
Regular Capital Projects > \$15 Million	
Budget Variance under 5% and under \$500K	NR
Budget Variance under \$1Million	CPBC
Budget Variance over \$1 Million (under 10% and under \$7.5 M)	CEO
Budget Variance over 10% or over \$7.5 M	Board
Scope Only Variance	CPBC
Schedule Only Variance	CPBC

APPENDIX 2: CPBC MEMBERSHIP AND MEETINGS

CPBC Voting Membership

As of June 2017, the CPBC is comprised of the following seven executive management positions:

	Position	Role	Divisional Representation
1	CFO*	Chair	Finance
2	Corporate Controller	Vice-Chair	Finance
3	VP Fleet Operations*	Voting Member	Operations
4	VP Engineering*	Voting Member	Operations
5	VP Customer Services*	Voting Member	Operations
6	VP & Chief Information Officer (CIO)*	Voting Member	IT
7	VP Strategic Planning and Community Engagement* (Delegated to Corporate Counsel, Corporate Affairs)	Voting Member	Strategic Planning and Community Engagement

* These members of the CPBC are also members of the Executive Management Committee (EMC).

Regular Committee Meetings

Regular committee meetings are held 12 times per year, typically in the first week of each month.

CPBC Quorum

A quorum is required for a decision or recommendation to be made by the CPBC. A quorum for the Committee requires a minimum of four voting members with at least one of those voting members being the Chair or Vice-Chair.

Delegation to the Chair

A quorum of the CPBC can agree to defer specific decisions or recommendations to the Chair. This is common when there is a need for follow up regarding an item that has been reviewed by the Committee.

APPENDIX 3: CAPITAL PROJECT DRIVERS

BC Ferries' Capital Plan recognizes four project driver categories. While each capital project is categorized by its primary driver, the scope of a project is often driven by multiple drivers. For example, most vessel and terminal asset replacements have an expansionary component as the new assets can have an expected lifespan of up to forty years or more.

Regulatory	Regulatory projects include expenditures deemed essential in order to comply with a new or existing regulatory requirement (e.g., WorkSafe BC, building codes, Transport Canada, etc.).
Restoration	Restoration projects maintain existing assets by upgrading and/or replacing major and minor components required for the asset to operate up to the end of its service life.
Replacement	Replacement projects are required when assets, or major components of assets, are functionally obsolete or have outlived their useful or economic life. At the end of the useful or economic life, a decision has to be made to either replace the asset or refurbish it to extend its original life. This decision is based on the results of the condition survey and an individual business case analysis.
Expansion	Expansion projects support the expansion of the capability of the organization or the development of new lines of business.

APPENDIX 4: MINOR FIXED ASSETS GUIDELINES

Simple, relatively low dollar value capital asset purchases are classified as Minor Fixed Assets (“MFA”). The MFA classification enables Project Sponsors to approve scope, schedule, and budget changes for these minor capital purchases without the need for approval at the CPBC level. Within a given fiscal year, Project Sponsors must manage their portfolio of MFA projects within an approved portfolio budget.

Criteria

To be classified as MFA, the Project must satisfy all of the following:

- Individual asset purchases (whether part of a Program or standalone) of no greater than \$500,000;
- Annual Program spend no greater than \$2 million; and
- Consist of simple purchases of physical assets with little or no requirement for subsequent capital or operating expenditures.

Provided they meet the above criteria, the following are examples of projects/programs that fall under the MFA classification:

- Light vehicle replacement program and hostling units;
- IT hardware evergreening programs for servers, computers, printers, handheld devices, CCTV, etc.;
- Catering equipment replacement program;
- Capital spares replenishment or net new purchases; and
- Fleet Maintenance Unit machinery & equipment program.

Determining the Annual MFA Budget

- Capital Programs compose a significant portion of the annual MFA budget. As detailed in Section 7.8 of the Framework, a Business Case must be submitted and approved by the CPBC for a Capital Program to be initiated. After initial approval of a multi-year Program, it becomes part of the MFA Portfolio and does not need to be re-submitted to the CPBC on an annual basis.
- Annual MFA budgets for the upcoming fiscal year (including any contingency) are reviewed at a portfolio level during the CPBC Annual Capital Plan and Budget Review and are then approved by the Board of Directors as part of their annual approval of the Capital Plan.
- Project-specific documentation is not required for the CPBC portfolio review, except for the initiation of Capital Programs (outlined above).

- Projects classified as MFA and approved as part of the Capital Plan are grouped under each Sponsor, forming that Sponsor's MFA portfolio budget for the fiscal year.

Management of the portfolio budget

- The approved MFA portfolio budget for each Sponsor is to be treated as a hard cap. Within the cap, Sponsors are expected to oversee their respective MFA portfolios and prioritize individual project scope, schedule, and budget as needed.
- Subsequent to fiscal year end, a Sponsor can request CPBC approval to carry forward prior-year MFA underspend to the current year, if the underspend is primarily due to timing.
- If a Sponsor is unable to manage to the hard-cap MFA portfolio budget by any other means, a request for a budget increase can be brought to CPBC where the requested portfolio increase will be prioritized against the broader Capital Plan.

Management of Projects/Programs within an MFA Portfolio

The Financial Planning and Analysis group can assist with the initiation of MFA requests. A Project Analyst, Manager, Owner, and Sponsor must be assigned and standard documentation and reporting requirements apply (Charters, Business Cases, CPRs, PAFs, AFUs, and Closeouts). Documentation for MFA Projects can be abbreviated, provided it meets the needs of the Project Executive and other stakeholders (including Accounting and Supply Chain).

Aside from the CPBC annual capital budget review, any changes to scope, schedule, or budget for MFA Projects are approved by the Project Sponsor. Urgent new requests are to be prioritized against the Sponsor's annual MFA portfolio. Less urgent requests can enter the plan as part of the Sponsor's proposed annual MFA budget for a subsequent year.

Requests to accelerate the replacement of specific assets within an existing MFA Program should be directed to the Project Manager, who can coordinate with the Project Owner and Sponsor on whether the purchase deserves to be prioritized ahead of other purchases within the Program. If competing urgent priorities cannot fit within the annual Program budget, a request can be made to the MFA Sponsor to increase the annual budget of the Program using a PAF. The PAF request will be prioritized against other Projects and Programs within the Sponsor's annual MFA portfolio.

Part 4

Strategies for Enhancing Efficiency in Performance Term Five



British Columbia Ferry Services Inc.

September 28, 2018



Caution Regarding Forward-Looking Statements

British Columbia Ferry Services Inc. ("BC Ferries") advises that this report may contain certain forward-looking statements which relate to future events or future performance. These forward-looking statements are based upon management's expectations and assumptions as to a number of factors, and BC Ferries believes that it has a reasonable basis for making such forward-looking statements. If management's expectations and assumptions prove to be incorrect, or factors change, then actual results could differ materially from the forward-looking statements contained in this report. In addition, forward-looking statements, by their nature, involve risks and uncertainties which could cause actual results to differ materially from those contemplated by the forward-looking statements. The risks and uncertainties include those risks and uncertainties described in BC Ferries' Annual Management's Discussion & Analysis, which is available under BC Ferries' company profile at www.sedar.com.

Executive Summary

British Columbia Ferry Services Inc. (“BC Ferries” or the “Company”) has made significant efforts over a number of years to lower costs and increase ancillary revenues to improve efficiency and contribute to BC Ferries’ financial health and sustainability. BC Ferries recognizes that efficiency is a long-term pursuit; it has been a focus during performance term four (April 1, 2016 – March 31, 2020) (“PT4”) and will continue to be a focus through performance term five (April 1, 2020 – March 31, 2024) (“PT5”) and beyond.

BC Ferries generates revenue from three sources: fares; ancillary services, such as catering, retail, travel packages and parking; and service fees paid by the Province for the delivery of service on all but the major routes¹. The more efficient the service provided by BC Ferries, the lower the revenue the Company requires to be sustainable. The efficiencies that BC Ferries achieves during a performance term help the Company build equity, which is reinvested in vessels, terminals and other initiatives to ensure the sustainability of the coastal ferry system and to reduce pressure on future fares.

Efficiencies Delivered During PT4

During PT4 thus far, traffic and related revenues have exceeded forecast levels. In response to the increase in traffic, BC Ferries has increased the number of sailings it provides. Operating from a stronger financial position, BC Ferries has been able to implement fare freezes, roll backs and promotions, which have resulted in greater affordability for ferry users.

The Company expects to exceed the efficiency target of \$27.6 million for PT4 set by the British Columbia Ferries Commissioner (the “Commissioner”). BC Ferries will achieve this through a combination of revenue growth and prudent cost management, providing a contribution of 5.9 percent versus 0.8 percent, which was forecast when the PT4 price caps were set. Contribution is measured as the ratio of net earnings divided by total revenues. During a performance term, net earnings greater than the performance term forecast are an indicator of efficiency and show how much is available to reinvest for every dollar earned in revenue.

BC Ferries has achieved its efficiency target through a complex and integrated strategy that includes a number of key initiatives, such as fueling with liquefied natural gas (“LNG”), which is about 50 percent of the price of ultra-low sulphur diesel; introducing technology to support a new reservation system to help shift demand; a major routes strategy that addresses vessel replacement and terminal upgrades; and a Southern Gulf Islands strategy, which focuses on schedule changes to facilitate efficiency and capacity optimization.

¹ The major routes comprise the routes connecting: Swartz Bay-Tsawwassen, Departure Bay-Horseshoe Bay, Duke Point-Tsawwassen, and Langdale-Horseshoe Bay.

Efficiencies Planned for PT5

BC Ferries is committed to operations and business practices that are environmentally and socially responsible. BC Ferries pursues initiatives that reduce the Company's environmental footprint, support sustainable operations, and encourage environmental stewardship.

In PT5, the Company will continue to focus on existing efficiency opportunities, including:

- Low-carbon clean technology;
- Maintenance and labour opportunities;
- Service strategy initiatives;
- Customer focused information technology; and
- Opportunities to grow and diversify.

To address the changing environment, the following will guide these efficiency opportunities:

- **Interests of Ferry Users:** Ensuring the continued delivery of a safe, reliable, efficient and affordable travel experience that aligns with the needs of customers and communities;
- **Capacity:** Building capacity to carry traffic at peak times;
- **Resiliency:** Effectively responding to operational challenges, changes in traffic, and how people travel;
- **Flexibility:** Being nimble in the face of evolving customer needs and transportation trends;
- **Sustainability:** Pursuing opportunities in a fiscally prudent and environmentally responsible manner; and
- **Low-Carbon Technologies:** Introducing modern assets, using clean technology and built for the 21st century.

Efficiency, sustainability, reliability and affordability are central to all BC Ferries' planning activities and continue to inform the long-term direction and culture of BC Ferries. Looking ahead, BC Ferries will continue to develop and implement innovative and cost effective ways to migrate its operations to low-carbon energy sources. It will also build upon efficiencies gained from more traditional sources such as maintenance and labour expenses, and will add capacity to support resiliency by adding an incremental vessel on the major routes as part of its service strategy initiatives. Customer-focused information technology will be introduced to improve both the customer experience and enhance revenue management capabilities, and will grow and diversify the business. The Company believes these initiatives offer the best opportunity to realize further efficiencies and contribute to affordability.

Table of Contents

Executive Summary	3
Introduction.....	6
Setting the Context	7
Defining Efficiency	7
Section 1: Setting the Stage for PT5 and Longer- Term Efficiencies	9
1.1 Traffic	9
1.2 Customer Expectations.....	10
Section 2: Performance Term Four Progress Report.....	11
2.1 PT4 Efficiency Measures	11
2.2 Operating Performance.....	12
2.3 PT4 Efficiency Opportunities.....	13
Section 3: Planning for Near and Long-Term Efficiency	17
3.1 Strategic Planning and Master Planning	17
3.2 A Future-Focused Ferry Service	17
Section 4: Performance Term Five Efficiency Opportunities	18
4.1 Low-Carbon Clean Technology.....	18
4.2 Maintenance and Labour Opportunities.....	19
4.3 Service Strategy Initiatives.....	20
4.4 Customer-Focused Information Technology.....	21
4.5 Opportunities to Grow and Diversify.....	21
Conclusion	22

Introduction

BC Ferries recognizes the importance of the coastal ferry system in the lives of the customers and the communities the Company serves. Efficiency, sustainability, affordability, and meeting the needs of travellers and businesses are central to all the Company's planning and activities, and continue to be key objectives at the forefront of the Company's decisions and plans.

Significant efforts in recent years to lower costs and increase ancillary revenues have improved efficiency, contributing to the financial health and sustainability of the ferry system. BC Ferries recognizes that efficiency is a long-term pursuit and it will continue to be a focus through PT5 and beyond.

Section 40(1.1) of the *Coastal Ferry Act* (the "Act") requires the Company to submit to the Commissioner a plan as to how BC Ferries intends to provide services more efficiently in the upcoming performance term. This plan sets out the following five opportunities for further efficiency gains in PT5 in compliance with this requirement of the Act:

1. Low-Carbon Clean Technology,
2. Maintenance and Labour Opportunities,
3. Service Strategy Initiatives,
4. Customer-Focused Information Technology, and
5. Opportunities to Grow and Diversify.

These efficiency initiatives are informed by the Company's vision to be trusted and valued and its mission to connect communities and customers to the people and places important in their lives. Customers, coastal communities, the Province and BC Ferries all share an interest in finding opportunities to realize efficiencies in the delivery of coastal ferry services. BC Ferries' dialogue with stakeholders, the Commissioner, the Province and Ferry Advisory Committees, has helped inform the initiatives included in this plan. This plan continues the focus on efficiency opportunities identified in the plans from previous performance terms and includes further opportunities to be explored in PT5 and beyond.

The Company believes its robust planning process will address changing demand in a sustainable, customer-focused and cost-effective way. As BC Ferries replaces end-of-life assets, opportunities arise to implement initiatives which enhance efficiency and address capacity, resiliency, flexibility and customer expectations with the introduction of modern assets, using clean technology and built for the 21st century.

This plan is structured in four sections. Section 1 provides information on the changes in traffic levels and customer expectations that have occurred in PT4. Section 2 provides an update on the progress made in implementing the PT4 efficiency initiatives. Section 3 provides an overview of the planning processes to support the identification of efficiency opportunities, while Section 4 sets out the efficiency initiatives the Company will undertake in PT5 and beyond.

Setting the Context

The beginning of each new performance term triggers the setting of the price caps by the Commissioner for the route groups served by BC Ferries. In setting the price caps, the Commissioner must, among other things, ensure that the Company is afforded sufficient revenue to ensure sustainability for the ferry system for decades to come. In simple terms, BC Ferries generates revenue from three sources: fares; ancillary services, such as catering, retail, travel packages and parking; and service fees paid by the Province for the delivery of service on all but the major routes. The more efficient the service provided by BC Ferries, the lower the revenue the Company requires to be sustainable. The efficiencies that BC Ferries achieves during a performance term help the Company build equity, which is reinvested in vessels, terminals and other initiatives to ensure the sustainability of the coastal ferry system and to reduce pressure on future fares. In the subsequent performance term, those efficiencies are “captured” by customers through lower price caps and/or by the Province through lower service fees. Accordingly, all three parties - customers (and the communities that derive economic benefits from the services offered by BC Ferries), the Province and BC Ferries itself - share an interest in finding opportunities to realize efficiencies in the delivery of coastal ferry services.

Defining Efficiency

The term ‘efficiency’ is defined as *the ability to produce a desired effect, product or service, etc. with a minimum of effort, expense, or waste, or it is the extent to which time and resources are well used for the intended task*. Within this definition, the ‘desired product or service’ or ‘intended task’ is critical. For the purposes of this plan, ‘desired product or service’ is the service provided by BC Ferries and the ‘intended task’ is connecting communities and customers to people and places important in their lives.

The Province sets the core service levels BC Ferries must provide for each of the regulated ferry routes. As the ferry operator, BC Ferries’ role is to supply the service that the Province requires and pays for under the Coastal Ferry Services Contract (“CFSC”) in the safest and most efficient manner possible. For each of the regulated routes, the CFSC defines the core service levels to include the minimum number of round trips that must be delivered, the originating ports, the hours of operation and the capacity that must be provided. The core service levels in the CFSC are subject to review in advance of each performance term. While BC Ferries has operational experience that it shares with the Province in the context of these reviews, the decision on service levels is provincial domain and a matter of public policy.

The views of stakeholders, including customers and coastal communities are important considerations as the Company progresses towards an efficient, sustainable, affordable, and customer focused ferry system for generations to come. The way the Company approaches efficiency is a reflection of the changing environment in which it operates and this influences the opportunities identified for PT5.

Section 1: Setting the Stage for PT5 and Longer-Term Efficiencies

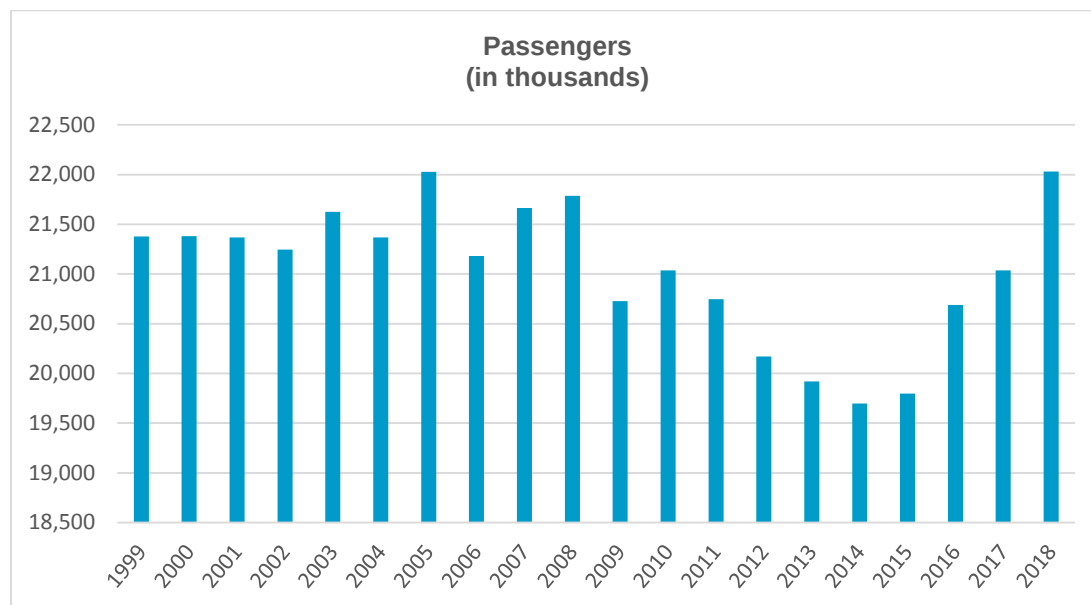
Much has changed since the PT4 Efficiency Plan was developed in 2014. More favourable economic conditions, including the low Canadian dollar and higher tourism, have contributed to traffic growth across all routes resulting in favourable earnings. BC Ferries reinvests all earnings back into the coastal ferry system. Operating from a stronger financial position, BC Ferries has implemented fare freezes, roll backs and promotions, resulting in greater affordability for ferry users.

1.1 Traffic

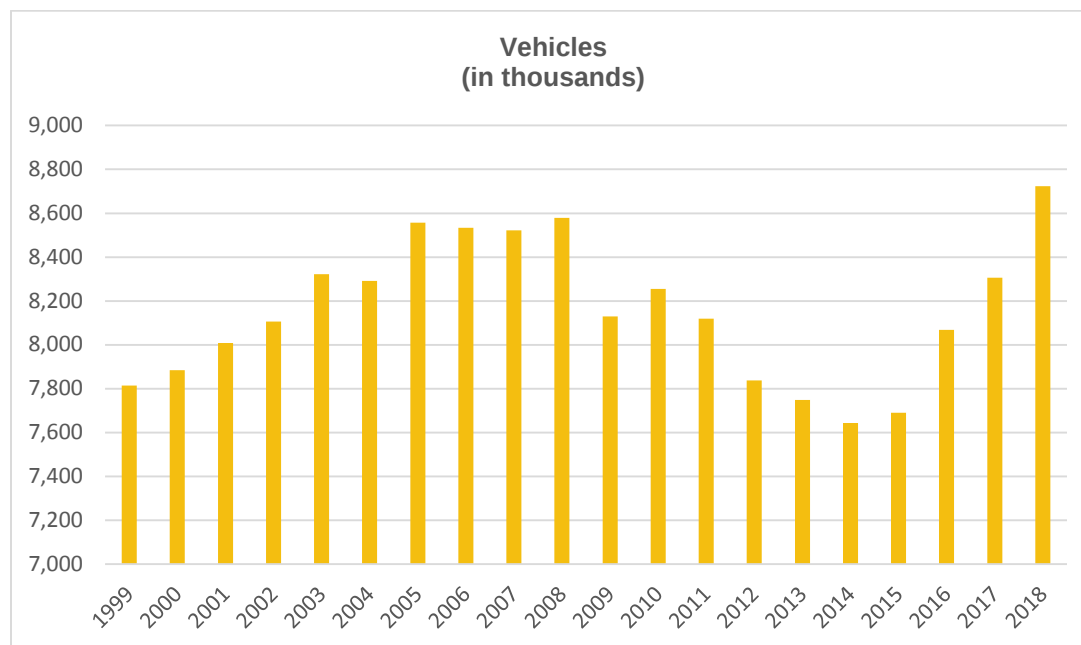
In fiscal 2018,² BC Ferries experienced the highest passenger traffic levels in 20 years (Figure A) and the highest levels of vehicle traffic ever (Figure B). BC Ferries provided over 174,000 sailings and 2,962 more round trips than required under the CFSC and 1,190 more round trips compared to the prior year. Recent record traffic levels have led to increases in overloads and sailing waits. BC Ferries has responded by adding more round trips and improving its reservations systems and processes.

In determining whether to add service above that required by the CFSC, BC Ferries takes into consideration customer needs, changes to operating expenses and forecast customer related revenues, and any contract fee changes required from the Province.

Figure A - Historical Passenger Volumes Fiscal 1999 to 2018



² Fiscal years run April 1 through March 31.

Figure B - Historical Vehicle Volumes Fiscal 1999 to 2018


1.2 Customer Expectations

BC Ferries is committed to a structured approach to engagement. Being a customer-centric organization, BC Ferries engages through a variety of channels. Customer expectations are changing related to the frequency of service, capacity provided, certainty of travel and connectivity to other modes of transit. Other factors such as changes in demographics and technological innovation also impact customer expectations. BC Ferries includes customers, communities, businesses and intermodal transportation stakeholders in the decisions that affect them. Effective engagement builds trust, resulting in an efficient service that meets customer expectations.

Section 2: Performance Term Four Progress Report

The past four years have been a period of growth following six relatively lean years since the 2008 economic recession. Traffic growth and retail sales have outperformed targets set in PT4. The outlook for the remainder of PT4 is favourable.

This section highlights the Company's performance during PT3 and the first two years of PT4, summarizes the outlook for the remainder of PT4, and addresses the progress made to date on the PT4 efficiency initiatives.

2.1 PT4 Efficiency Measures

The Commissioner set an efficiency target of \$27.6 million to be achieved by the Company over PT4. The PT4 price caps were based on traffic, revenue and expense forecasts, and achievement of the efficiency target, which resulted in a total forecast net earnings of \$29.4 million over the performance term. Based on these price caps and forecasts, for every dollar of revenue earned, less than one cent was forecast to be available for reinvestment in the ferry service.

The PT4 experience to date has seen traffic and related revenues exceed forecast levels. In response to the increase in traffic, the Company has increased the number of sailings provided. The incremental net earnings have enabled the Company to make fare adjustments to the benefit of BC Ferries' customers. During this same period, when adjusted for inflation, tariffs have on average decreased. Even under these conditions of higher traffic and expanded service and decreased real (inflation adjusted) tariffs, BC Ferries has been able to manage total expenses and improve its efficiency.

Adjusted for inflation, average tariffs have decreased in PT4.

Efficiency can be measured in terms of incremental net earnings and a contribution ratio, defined as net earnings divided by total revenues. During a performance term, net earnings greater than the performance term forecast are an indicator of efficiency. A contribution ratio shows how much is available to reinvest for every dollar earned in revenue. This contribution ratio enables the Company to measure efficiency in both growing and declining business cycles.

As shown in Table 1, the Company expects to exceed the efficiency target of \$27.6 million for PT4. BC Ferries expects to achieve this through a combination of revenue growth and prudent cost management, providing a contribution of 5.9 percent versus 0.8 percent, which was forecast when the PT4 price caps were set.

Table 1 – PT4 Efficiency Measures

\$ Millions		PT4				TOTAL
		2017	2018	2019	2020	
PT4 FORECAST³	Total Revenues	\$857.3	\$877.8	\$896.4	\$931.8	\$3,563.3
	Total Expenses	\$849.6	\$870.0	\$896.3	\$918.0	\$3,533.9
	Net Earnings	\$7.7	\$7.7	\$0.1	\$13.8	\$29.4
	% Contribution (of Total Revenues)	0.9%	0.9%	0.0%	1.5%	0.8%
ACTUALS / FORECAST: Actuals 2017 & 2018 Forecast 2019 & 2020	Total Revenues	\$895.2	\$937.3	\$966.4	\$992.3	\$3,791.7
	Total Expenses	\$817.8	\$877.3	\$915.7	\$955.5	\$3,566.3
	Net Earnings	\$77.4	\$60.0	\$50.7	\$36.8	\$224.9
	% Contribution (of Total Revenues)	8.7%	6.4%	5.2%	3.7%	5.9%
	Incremental Net Earnings	\$69.7	\$52.2	\$50.6	\$23.0	\$201.6
	% Incremental Contribution (of Total Revenues)	7.8%	5.5%	5.2%	2.2%	5.1%

All earnings are reinvested in the coastal ferry system.

The Company's stronger than anticipated financial performance enables it to reinvest in a number of ways to the benefit of ferry users. All net earnings support a sustainable ferry system by being reinvested in the following ways:

- Improving the service, including increasing the number of sailings provided on a number of routes;
- Supporting more affordable travel by offering discounts and freezing or reducing fares;
- Investing in appropriate infrastructure (vessels, terminals and information technology);
- Minimizing borrowing to lower the interest paid on debt; and
- Strengthening the ability to weather challenging economic conditions, including weak traffic years.

2.2 Operating Performance

Efficiency requires a balance between providing service that meets customers' needs while being fiscally prudent. In an environment of increasing traffic, the Company has achieved improvements in operational performance. Table 2 provides an overview of BC Ferries' performance against the Company's annual targets for key operational metrics.

³ "Assessment of BC Ferries' PT4 Submissions", British Columbia Ferry Commission, March 2015, pg. 8.

Highlights of BC Ferries' operating performance over the last three fiscal years and targets for fiscal 2019 include:

- Strong performance in employee and passenger safety;
- Reliability exceeding targets;
- Modest declines in on-time performance; and
- Continued overall high customer satisfaction.

Table 2 –Key Performance Indicators Targets and Results

Key Performance Indicators Targets and Results		PT3	PT4		
		2016	2017	2018	2019
Employee Safety Index	Actual	0.48	0.43	0.46	-
	Target	0.55	0.44	0.39	0.39
Passenger Safety Index	Actual	11.24	9.62	10.01	
	Target	11.90	11.26	10.68	9.59
Reliability Index	Actual	99.72%	99.69%	99.83%	-
	Target	99.55 - 99.74%	99.55 - 99.74%	99.55 - 99.74%	99.55 - 99.74%
On-time Performance	Actual	90.8%	89.5%	89.0%	-
	Target	91.0%	91.0%	91.0%	91.0%
Customer Satisfaction	Actual	4.14	4.18	4.16	-
	Target	4.11	4.14	4.20	4.20

2.3 PT4 Efficiency Opportunities

BC Ferries' PT4 efficiency opportunities sought to address both service and sustainability.

Four efficiency opportunities were identified for PT4, including two which could be accommodated within the terms and conditions of the CFSC and were near term in nature, and two which would require changes to the CFSC and were considered more long-term in nature.

Opportunities within the terms and conditions of the CFSC:

1. Liquefied Natural Gas; and
2. Business Transformation Strategies Enabled by Technology.

Opportunities requiring changes to the CFSC:

3. Major Routes Strategy; and
4. Southern Gulf Islands Strategy.

BC Ferries has made significant progress toward the PT4 efficiency opportunities. The following describes the Company's progress to date, noting that these efficiency opportunities will continue to be pursued in PT5 and are, therefore, further discussed in Section 4.

1. **Liquefied Natural Gas:** The PT4 Efficiency Plan included a strategy to transition to cleaner and more efficient energy sources, including LNG. In fiscal 2018, the Company introduced the *Salish Orca*, *Salish Eagle* and *Salish Raven* into operational service. The three dual-fuel capable vessels have replaced the solely diesel-burning *Queen of Burnaby* and *Queen of Nanaimo* on the Comox to Powell River and Tsawwassen to Southern Gulf Islands routes. In the summer of 2018, the *Spirit of British Columbia* re-entered service after successful conversion to dual-fuel propulsion. The *Spirit of Vancouver Island* will undergo an equivalent upgrade and return to service in 2019.

BC Ferries pioneered LNG fuelling on deck – a made in BC technology innovation.

Table 3 – PT4 Fuel Consumption

Fuel Consumption	PT4			
	2017 (Actual)	2018 (Actual)	2019 (Forecast)	2020 (Forecast)
Ultra-Low Sulphur Diesel (Litres)	119.4	118.2	106.8	97.4
LNG (Diesel Litre Equivalents) ⁴	-	2.0	14.9	27.1
Total Litres	119.4	120.2	121.7	124.5

For fiscal years 2019 and 2020, consumption of diesel is forecast to decrease significantly as the Company transitions to operating the three Salish class vessels and two Spirit class vessels primarily on LNG. By fiscal 2020, the last year of PT4, LNG is forecast to represent approximately 22 percent of overall fuel consumption, with diesel consumption dropping below 100 million litres per year.

2. **Business Transformation Strategies Enabled by Technology:** The PT4 efficiency plan described the fare flexibility and digital experience strategy as a platform that would help provide certainty of travel to BC Ferries' customers through modernizing the way BC Ferries sets prices, sells travel, and manages capacity of sailings. In 2018, BC Ferries rolled out a new reservation system which is the first step toward enabling this strategy. This roll-out and the increased use of reservations during PT4 have helped reduce the proportion of sailings with vehicle overloads. When fully implemented, the Company will be able to offer customers a choice of discounted pricing, which is anticipated to move people to less busy sailings,

⁴ BC Ferries converts LNG to diesel litre equivalents, an energy equivalency measure that allows LNG consumption to be compared directly to diesel consumption in litres.

increase demand and improve utilization rates. The Company expects an incremental increase of three to five percent in discretionary private vehicle traffic on reservable routes once these systems are fully implemented.

3. **Major Routes Strategy:** This opportunity focused on potential savings in terminal capital infrastructure at Horseshoe Bay and potential efficiencies in service to the mid-Vancouver Island corridor. These potential savings were not anticipated until later in PT5 and beyond. This strategy focused on seasonal underutilization of service provided between Metro Vancouver and Mid-Vancouver Island in response to declining ridership and an effort to reduce capital and operating expenditures. Various service change options were proposed for moving traffic from the Horseshoe Bay to Departure Bay route to the Tsawwassen to Duke Point route.

Since the submission of the PT4 Efficiency Plan in 2014, traffic has increased significantly. As a result, in early fiscal 2017 BC Ferries refocused its work on a new “major routes initiative.” This initiative includes BC Ferries’ four major routes and will help guide the replacement of six major vessels, major terminal development plans, as well as potential changes in the service profile to accommodate increases and changes in the nature of traffic. The major routes initiative looks at the impact of long-term traffic growth on routes that currently have high capacity utilization and the opportunity to develop standardized and interoperable assets. The initiative is discussed in more detail in Section 4.

4. **Southern Gulf Islands Strategy:** The introduction of the new Salish class vessels and schedule changes to the Southern Gulf Islands offered potential efficiencies related to schedule and capacity optimization, “live aboard” crewing arrangements, and the number and type of vessels required to replace retiring Bowen class vessels. The strategy further addressed the feasibility of a “short link” ferry service between Saturna Island and Mayne Island. No savings were anticipated during PT4 from this strategy. Progress to date on these efficiency opportunities is summarized below:

- **Schedule and capacity optimization:** The Company undertook extensive engagement with stakeholders on schedule options to align with the introduction of two Salish class vessels into the Southern Gulf Islands region. These new vessels and schedules now provide a better match of vessel capacity and traffic demand. The Company operates one vessel in the winter when demand is lower, and two vessels in the peak demand periods. These vessel and schedule changes have accommodated an increase in traffic and resulted in a reduction in annual fuel costs and off peak labour costs.

- **Potential for employing the new Salish class vessels with a “live aboard” crewing arrangement:** Salish class vessels include live aboard functionality at low incremental cost. While not presently used in the Southern Gulf Islands, live aboard crewing arrangements are common worldwide, and BC Ferries expects their implementation would help address scarcity in crew resources and lack of affordable accommodation. Live aboard arrangements would also allow the Company to explore service alternatives, reduce schedule complexity and enable tie-up in smaller communities overnight. Further studies are ongoing to assess the feasibility of implementing live aboard crewing on the Salish class vessels.
- **Other potential efficiency opportunities:** The Company continues to engage with its customers and other stakeholders to explore further efficiency opportunities for the Southern Gulf Islands service, including vessel replacement and the feasibility of a “short link” between Saturna Island and Mayne Island.

Section 3: Planning for Near and Long-Term Efficiency

3.1 Strategic Planning and Master Planning

The Company's capacity to operate efficiently is inherently linked to its approach and commitment to planning. BC Ferries has a 10-year strategic plan, updated annually through a comprehensive and engagement-oriented planning process.

BC Ferries' vision and mission inform the Company's strategic drivers and goals. These drivers and goals reflect the Company's commitment to efficiency. The Company's asset master plans convert strategy into practical policies and directions that guide the Company in its decisions and provide for an effective decision-making process that leads to enhanced efficiency.

The Company's capital plan flows from these master plans and sets out what vessel, terminal and information technology investments the Company will make over the coming 12-year horizon.

3.2 A Future-Focused Ferry Service

In its efficiency planning, BC Ferries must take into consideration shifts in population, demographics, innovation, and environmental awareness.

Population and demographic changes across coastal British Columbia have important implications for customer expectations and BC Ferries' investment decisions. To meet this ongoing challenge, the Company needs to build flexibility into its vessels, terminals and other infrastructure.

In an era of continuous innovation, BC Ferries closely watches evolving trends related to transportation and marine technology. This will ensure the Company is proactively working in alignment with innovations that improve and facilitate travel for customers. The adoption of electric vehicles is on the rise and autonomous vehicles are on the horizon. Communications technology has given rise to a sharing economy where hail and ride sharing services like Uber, Zipcar and Mobi Bike Share are changing the way people travel. These may present potential business opportunities for pursuing diversified revenue sources.

BC Ferries has invested more than \$350 million in clean technology since 2013.

BC Ferries is committed to pursuing clean technological innovations and ensuring that the Company's operations and business practices are environmentally and socially responsible. BC Ferries continues to pursue initiatives that reduce the Company's environmental footprint; support sustainable operations; and, encourage environmental stewardship.

Section 4: Performance Term Five Efficiency Opportunities

In PT5, the Company will continue to focus on existing efficiency opportunities, including:

- Low-carbon clean technology;
- Maintenance and labour opportunities;
- Service strategy initiatives;
- Customer focused information technology; and
- Opportunities to grow and diversify.

To address the changing environment, the following will guide these efficiency opportunities:

- **Interests of Ferry Users:** Ensuring the continued delivery of a safe, reliable, efficient and affordable travel experience that aligns with the needs of customers and communities;
- **Capacity:** Building capacity to carry traffic at peak times;
- **Resiliency:** Effectively responding to operational challenges, changes in traffic, and how people travel;
- **Flexibility:** Being nimble in the face of evolving customer needs and transportation trends;
- **Sustainability:** Pursuing opportunities in a fiscally-prudent and environmentally-responsible manner; and
- **Low-Carbon Technologies:** Introducing modern assets, using clean technology and built for the 21st century.

4.1 Low-Carbon Clean Technology

BC Ferries' transition to low-carbon clean technology is fiscally prudent and also advances the Company's commitment to environmental stewardship. The use of LNG reduces fuel expenditures by approximately 50 percent compared to ultra-low sulphur diesel, based on current fuel pricing. Vessel builds and conversions to support LNG use will continue to reduce operating costs, thereby decreasing pressure on future fares, while reducing the Company's environmental footprint.

The Company will continue to evaluate opportunities to move to innovative and cost-effective alternative energy sources as it replaces or upgrades its vessels. This is expected to result in lower energy consumption and emissions. Below is a summary of planned vessel projects:

- **Island Class New Build:** The Company currently has two Island class vessels under construction and plans to build another four during PT5. These vessels will be operated using diesel-electric propulsion with the option to upgrade to a full electric solution at a later date.

BC Ferries is in discussion with BC Hydro to enhance specific berths in the ferry system which will enable full electric operation in future.

- **Salish Class New Build:** BC Ferries plans to build one additional dual-fuel capable Salish class vessel to operate in the Southern Gulf Islands, bringing the total in this class to four.
- **Major Vessel New Build:** BC Ferries plans to build five standardized, interoperable vessels with the potential of using alternative fuel. These vessels will replace four long-serving C-class vessels starting later in PT5.

4.2 Maintenance and Labour Opportunities

Maintenance

Ship repair and maintenance activities are a significant cost to the Company. Over the past 10 years, BC Ferries has spent approximately \$1 billion at local shipyards on refits, repairs, mid-life upgrades and life extension projects. BC Ferries also operates its own certified ship repair yard – Fleet Maintenance Unit (“FMU”) – locally in Richmond, British Columbia with more than 150 employees. BC Ferries currently handles 45 percent of its ship repairs at FMU with the balance contracted to external shipyards. Access to timely and quality ship repair services is vital for the stability and resiliency of BC Ferries’ operations.

Maintaining an internal ship repair and project management capability ensures BC Ferries has access to repair resources for both planned and unplanned repair and maintenance events. BC Ferries is planning a major capital investment to renew and improve FMU. This facility has been in operation for more than 40 years, but its productivity is limited by an inefficient layout, aged infrastructure and undersized buildings. The planned site development provides an opportunity to improve efficiency and throughput at the site. This investment is expected to improve system resilience by providing reliable and timely access to a modern internal ship repair facility.

Labour

BC Ferries has worked diligently to collaborate with the B.C. Ferries and Marine Workers' Union (the “Union”) on industrial and employee relations issues and to partner with them relative to safety and the SailSafe initiative. In 2017, SailSafe won the prestigious Dupont International Safety Award, and in 2016 and 2017, BC Ferries was awarded Top BC Employer status. The current Collective Agreement expires in 2020 and the Company is committed to pursuing increased flexibility and productivity improvements (e.g. live aboard vessels) opportunities with the Union.

4.3 Service Strategy Initiatives

Major Routes Initiative

The growth potential of the major routes is currently limited by the size and number of existing ships. BC Ferries plans to replace the retiring C-class vessels with larger vessels and add an incremental major vessel. The incremental vessel will improve service resiliency and allow for supplementary service in the summer months when additional service is needed most. Adding an extra major vessel will also open the possibility of providing more frequent service on the route connecting Horseshoe Bay to Langdale beyond the summer months, which is not feasible with the existing fleet. Public engagement will be a key component in this program.

The objectives of the major routes initiative include:

- Increasing capacity to meet potential traffic growth and address peak demand challenges;
- Increasing flexibility to respond to changes in travel demand, including foot passenger growth;
- Increasing resiliency to address planned service changes and unplanned service interruptions; and
- Retiring older, less efficient ships.

Inter-Island Routes Vessel Replacement Strategy

Engagement with customers, communities and other stakeholders regarding planned vessel replacements for the routes between Vancouver Island and Quadra Island, and Vancouver Island and Gabriola Island have identified a preference for lower capacity, higher frequency service provided by two smaller vessels (Island class) rather than higher capacity, lower frequency service provided by one larger vessel. Benefits of this service strategy include the following:

- Increase in annual capacity provided;
- Increase in sailing frequency;
- More commuter sailings;
- Increased foot passenger capacity;
- More capacity during peak travel hours of the day;
- Flexible to meet changing demand;
- Consistent service offering, even during refits;
- Retirement of older, less efficient ships;
- Less terminal infrastructure requirements; and
- Less congestion on local roads.

The Island class is fully optimized to the operational requirements for routes with short crossings, designed to operate efficiently with high frequency and minimal in port time. This service strategy also

provides a benefit to the ferry system by enabling the redeployment of one of the two vessels in response to an unplanned service interruption on a similar route.

4.4 Customer-Focused Information Technology

Digital Strategy

BC Ferries expects to deliver personalized mobile experiences to support a continuous experience across channels for customers. The Company will further explore technology that will enhance the customer experience and promote efficiency through increased self-serve options.

Revenue Management

As customers respond to the introduction of variable pricing in PT4 on reservable routes, the Company will be better positioned to offer other fare products customers value. These fare products will also enable the Company to shift and grow demand, thereby improving capacity utilization. BC Ferries is also continuing to explore the possibility of offering a frequent traveller program that will provide additional benefits to customers who travel the most.

4.5 Opportunities to Grow and Diversify

BC Ferries will continue to explore opportunities to grow and diversify revenues to help the Company mitigate the impact of business cycles. New revenue streams will support continued financial sustainability and fare affordability.

Potential areas of exploration include:

- New routes, including passenger only services;
- Commercial service opportunities;
- Increased ship repair and ship modification capabilities;
- Joint venture and other business opportunities;
- Developing multiple related uses for land and terminal assets; and
- Business in related fields.

Conclusion

The Company's vision is to be trusted and valued by customers, stakeholders, employees and First Nations. The Company's vision, along with the mission to connect communities and customers to the people and places important in their lives, will guide BC Ferries' efficiency activities through PT5 and beyond.

Efficiency, sustainability, reliability and affordability are central to all BC Ferries' planning activities and continue to inform the long-term direction and culture of BC Ferries. Looking ahead, BC Ferries will continue to develop and implement innovative and cost-effective ways to migrate its operations to low-carbon energy sources. It will also build upon efficiencies gained from more traditional sources such as maintenance, and labour expenses. In addition, in the upcoming performance term the Company will focus on service strategy initiatives, customer focused information technology, and growing and diversifying the business. The Company believes these initiatives offer the best opportunity to realize further efficiencies and contribute to affordability.

Part 5

Traffic Demand Forecast

Fiscal 2019 Through 2024



British Columbia Ferry Services Inc.
September 28, 2018



Caution Regarding Forward-Looking Statements

British Columbia Ferry Services Inc. ("BC Ferries") advises that this report may contain certain forward-looking statements which relate to future events or future performance. These forward-looking statements are based upon management's expectations and assumptions as to a number of factors, and BC Ferries believes that it has a reasonable basis for making such forward-looking statements. If management's expectations and assumptions prove to be incorrect, or factors change, then actual results could differ materially from the forward-looking statements contained in this report. In addition, forward-looking statements, by their nature, involve risks and uncertainties which could cause actual results to differ materially from those contemplated by the forward-looking statements. The risks and uncertainties include those risks and uncertainties described in BC Ferries' Annual Management's Discussion & Analysis, which is available under BC Ferries' company profile at www.sedar.com.

Executive Summary

With a vision of being trusted and valued, the mission of British Columbia Ferry Services Inc. (“BC Ferries” or the “Company”) is to connect communities and customers to the people and places important in their lives.

A safe, reliable, efficient and sustainable ferry service requires BC Ferries to be able to fund day-to-day operations, and maintain and replace its assets. BC Ferries generates revenue from three sources: fares; ancillary services, such as catering, retail, travel packages and parking; and service fees paid by the Province for the delivery of service on all but the major routes¹. Customer revenues currently contribute in the order of 80 percent of total revenue and are a direct result of traffic carried.

Understanding anticipated traffic demand and related revenue is central to BC Ferries’ ability to plan for and provide a ferry service which is responsive to its customers’ needs. Correspondingly, traffic demand forecasting is central to the price cap setting process. The price cap requirements for a given performance term will be dependent on revenue anticipated from other sources and the traffic anticipated during each year of the performance term. Likewise the level of the fares will have an impact on the level of traffic, as price can be a significant demand driver.

BC Ferries’ passenger and vehicle traffic move in a cyclical pattern around a gradually-increasing, long-term growth trend which is strongly influenced by macroeconomic factors, including global and local economic conditions, tourism, population and demographics, and the cost of travel. The cyclical variations in traffic from the long-term trend can have a profound impact on revenues, with a +/-5 percent variation representing over \$30 million in customer revenues in a given year.

The traffic forecast is a significant input into the determination of the price caps set by the British Columbia Ferries Commissioner (the “Commissioner”). The Company has evaluated various traffic modelling approaches which can incorporate traffic patterns, current traffic trends, and other challenges. Two methods were selected to develop the traffic forecasts for performance term five (April 1, 2020 – March 31, 2024) (“PT5”).

An econometric approach was selected to generate a potential range of PT5 traffic forecasts. This approach focused on routes with the largest and most stable volumes and included key traffic drivers, such as employment, tourism, seasonality, fares, and major events. A simple trend approach was applied to route groupings with similar traffic patterns, geographic area, and service characteristics.

¹ The major routes comprise the routes connecting: Swartz Bay-Tsawwassen, Departure Bay-Horseshoe Bay, Duke Point-Tsawwassen, and Langdale-Horseshoe Bay. See Appendix G for a full listing of regulated routes.

Both approaches focused on passenger vehicle traffic, the results of which were applied to other traffic types based on strong historical correlations.

In fiscal 2017 and 2018², the first two years of performance term four (April 1, 2016 – March 31, 2020) (“PT4”), BC Ferries experienced traffic growth rates for vehicles of 2.9 percent and 5.0 percent, respectively. Vehicle traffic grew to a record level in fiscal 2018, and growth is expected to continue, at a slowing rate of 2.6 percent for fiscal 2019 and 1.7 percent for fiscal 2020. This will result in six consecutive years of positive traffic growth, exceeding record levels. At the same time, BC Ferries has limited ability to expand capacity as all vessels are in service during peak periods. As a result, there is limited capacity available to meet growing demand during peak periods which will constrain traffic growth.

The Company is pursuing business initiatives which are expected to drive incremental traffic. The fare flexibility initiative will offer customers enhanced fare choices, including discounts on less busy sailings, and through the major routes initiative, the Company plans to build five vessels to replace four retiring C-class vessels starting later in PT5 to address the current capacity constraints on those routes. The increase in the traffic associated with these initiatives is included in the forecast.

Based on the econometric modelling results, the cyclical nature of traffic, indications of economic activity plateauing, and the limited ability to expand capacity, BC Ferries is forecasting traffic to remain at the fiscal 2020 level through PT5, adjusted to reflect the impact of seasonality and the rollout of business initiatives.

The PT5 traffic demand forecast, the modeling approaches, methodologies and assumptions employed have been validated by InterVISTAS Consulting Inc., a third party subject matter expert.

² Fiscal years run April 1 through March 31.

Table of Contents

Executive Summary.....	3
Table of Contents	5
Introduction	7
Section 1: Historical Traffic Cycles and Sustainability	9
1.1 Historical Pattern and Key Factors.....	9
1.2 Sustainability and Affordability	10
Section 2: Traffic Forecast Approaches	12
2.1 PT5 Forecast Challenges	12
2.2 PT5 Modelling Approaches.....	12
2.3 Methodologies	13
Section 3: Explanatory Variables.....	14
3.1 Seasonal Drivers.....	14
3.2 Core Drivers.....	14
3.3 Fares.....	17
3.4 Major Events	18
Section 4: Forecast Output	19
4.1 Remainder of Performance Term Four	19
4.2 Performance Term Five.....	20
4.3 Business Initiatives	25
Section 5: Third Party Validation	26
Section 6: Summary	27
6.1 Traffic Demand Forecasts.....	27
Appendix A: Seasonality.....	28
A.1 Annual Seasonality.....	28
A.2 Holidays	28
A.3 Weather	29
A.4 Cancellations.....	31
Appendix B: Endogeneity	33
B.1 Adjusted Sample Size.....	33
B.2 Lagged Dependent Variable.....	34
B.3 Summary.....	34

Appendix C: MIDAS Models	35
C.1 Seasonality with MIDAS Models	35
C.2 Forecasting with MIDAS Models	35
Appendix D: Model Fit	36
D.1 General Fit	36
D.2 Autocorrelation	37
D.3 Homoscedasticity	38
D.4 Independence Testing	39
D.5 Summary	40
Appendix E: MIDAS Model Output	41
E.1 Victoria - Vancouver	41
E.2 Nanaimo - Vancouver	42
E.3. Sunshine Coast - Vancouver	43
Appendix F: Long-Term Growth Rates	44
F.1 Compound Annual Growth Rate (CAGR)	44
F.2. Ordinary Least Squares (OLS)	44
F.3. Output Summary	44
Appendix G: Regulated Routes	45
Appendix H: Validation Letter	46

Introduction

Traffic demand forecasting is central to the price cap setting process. The price cap requirements for a given performance term will be dependent on the traffic anticipated during each year of the term. Likewise the level of the fares will have an impact on the level of traffic, as price can be a significant demand driver. Given its importance and relevance, BC Ferries submits this Traffic Demand Forecast to the British Columbia Ferries Commissioner (the “Commissioner”) for consideration pursuant to section 40 of the *Coastal Ferry Act* (the “Act”). Section 40.1(g) states:

40 (1) For the purposes of section 38 (2) (c), each ferry operator must, at least 18 months before the beginning of a performance term for which a price cap is to be set, provide to the commissioner, the Authority and the Minister of Transportation and Infrastructure information, satisfactory to the commissioner, respecting the following in relation to each designated ferry route that is included within a route group for which a price cap is to be set:

...

(g) any other records considered by the ferry operator to be relevant to the setting of the price cap.

BC Ferries is an essential transportation link that connects coastal communities and facilitates the movement of people, goods and services. The Company is committed to providing a safe, reliable and efficient service to meet the needs of its customers. BC Ferries provides frequent year-round transportation, delivering approximately 470 sailings a day, with 36 vessels operating on 25 routes out of 47 terminals spread over 1,600 kilometres of coastline. In fiscal 2018, the Company carried 22.0 million passengers and a record 8.7 million vehicles.

BC Ferries is committed to ensuring a sustainable, world-class ferry service for generations to come. Sustainability is grounded in being able to fund day-to-day operations and reinvest net earnings in vessels, terminals and other assets while providing a service that meets customers' expectations. The Company generates revenue from three sources: fares, ancillary services, such as catering, retail, travel packages and parking; and service fees paid by the Province for the delivery of service on all but the major routes. Revenue from ancillary services and service fees helps alleviate pressure on fares. Customer revenues currently contribute in the order of 80 percent of BC Ferries' total revenue, and is a critical factor in ensuring the sustainability of the ferry system. The level of customer revenues is directly related to the traffic carried. The level of traffic anticipated over the next performance term, informs BC Ferries' service plan requirements and capital program, and therefore the Company considers a forecast of traffic demand to be relevant information in the determination of the PT5 price caps.

BC Ferries long-term annual average traffic growth rate is 0.6 percent, however annual growth rates have varied significantly. The annual growth rate experienced by the Company has ranged from a high of +5.0 percent in fiscal 2018 to a low of -5.2 percent in fiscal 2009. The impact of these variations in traffic to financial sustainability can be profound, as a fluctuation of +/- 5.0 percent can represent a revenue impact to the Company of over \$30 million in a given year. Consequently, it is important to consider the cyclical nature of traffic in the development of traffic forecasts.

The Traffic Demand Forecast is the result of an extensive assessment of the Company's historical traffic cycles, traffic demand patterns and drivers, and variables influencing fluctuations from year to year. This forecast is used to guide BC Ferries in determining its operational and capital requirements and consequently is relevant information for the Commissioner to consider in establishing price caps for PT5.

Section 1 provides an overview of BC Ferries' historic traffic cycles and sustainability. Section 2 reviews traffic modelling approaches which incorporate traffic patterns, current traffic trends and other challenges. Section 3 identifies the explanatory variables for BC Ferries' traffic and modelling considerations. Section 4 provides forecast model outputs and PT5 traffic projections. Section 5 provides third party validation of BC Ferries' forecast approach. Section 6 summarizes the Company's findings.

Section 1: Historical Traffic Cycles and Sustainability

Historical traffic cycles have a significant impact on the earnings of the Company and thereby the sustainability of the ferry service.

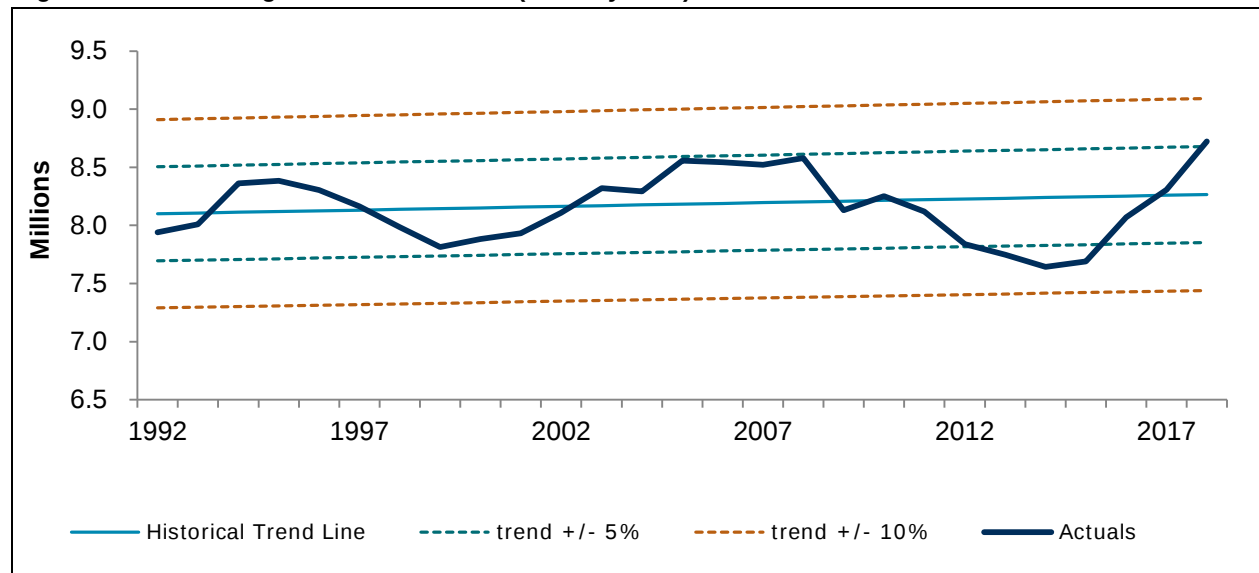
1.1 Historical Pattern and Key Factors

Passenger and vehicle traffic move in a cyclical pattern around a long-term growth trend, strongly influenced by macroeconomic factors. The most significant of the factors include:

- Global economic conditions;
- British Columbia economic conditions: Gross Domestic Product (“GDP”) and employment;
- Tourism: International travel, both by British Columbia residents and visitors to the province;
- British Columbia economy: GDP and employment;
- Cost of travel: Fares are a component of the overall cost of travel;
- Population and Demographics; and
- Service Levels: Addition of routes, service level reductions.

Figure 1.1 illustrates the cyclical variations around a gradually increasing long-term trend. The cyclical move from peak to trough can be over 10 percent with a comparable impact to revenues.

Figure 1.1: Passenger Vehicle Traffic (fiscal years)



The most significant factors found to influence variation from the long-term traffic trend include:

- Promotional Fares: temporarily discounted fares;
- Seasonality: The shift of holidays, especially Easter, can have a large impact;
- Weather: Snow and rain have negative impacts;

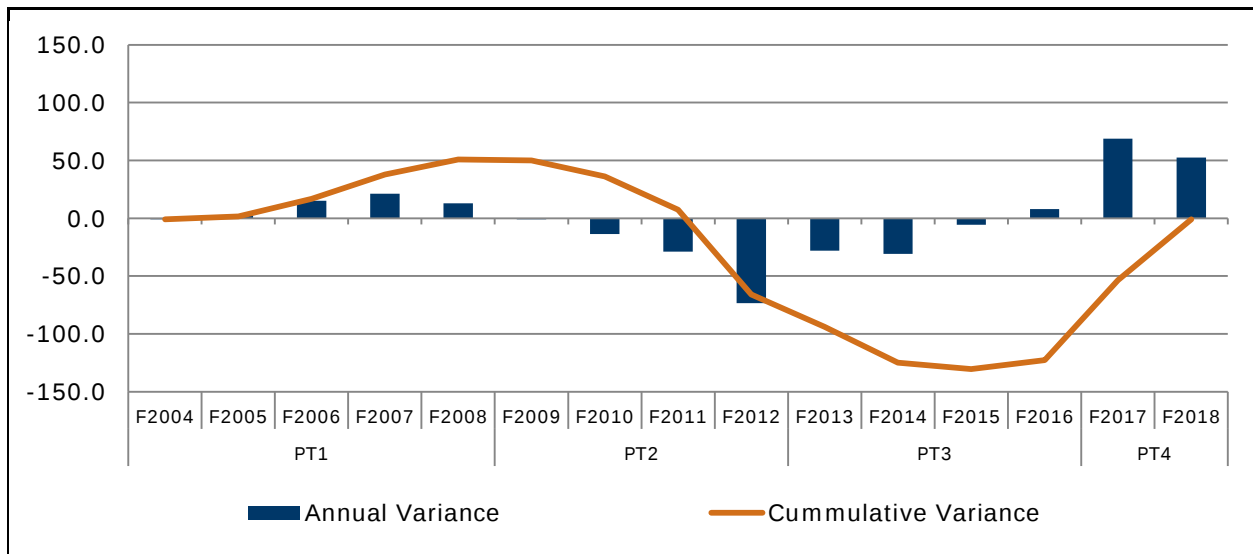
- Service Levels: Service disruptions; and
- Other Events (e.g., sporting events, forest fires, health outbreaks such as SARS).

Currently, BC Ferries' traffic is on an upward trajectory that is expected to continue at a slowing rate over fiscal 2019 and 2020, resulting in six years of positive traffic growth, after experiencing the lowest traffic levels since fiscal 1999. Current traffic levels are above the long-term trend and given historical cycles there is a strong possibility of a flattening or downturn in traffic. This potential change of trend is further substantiated by indications of changing economic conditions.

1.2 Sustainability and Affordability

The Company generates revenue from three sources: fares, ancillary services, such as catering, retail, travel packages and parking; and service fees paid by the Province for the delivery of service on all but the major routes. Customer revenues currently contribute in the order of 80 percent of BC Ferries' total revenue. A fluctuation in traffic of +/- 5.0 percent from the long-term trend can impact revenue by over \$30 million in a given year. In order for BC Ferries to continue to deliver a safe, reliable and efficient customer-focused ferry service and avoid volatile fare changes, it must be able to endure negative traffic cycles. This is a challenge as can be seen in Figure 1.2, which shows how actual net earnings have varied from the performance term forecasts. This demonstrates the need to take a long-term view of traffic, revenue, and net earnings.

As illustrated in Figure 1.2, in the period just prior to the global 2008 economic recession, BC Ferries had performed well against the performance term one (April 1, 2003 – March 31, 2008) ("PT1") forecast. Subsequently vehicle traffic decreased 11 percent over six years through to fiscal 2014. Over these years, traffic, revenue and net earnings levels were lower than anticipated when price caps were established. The variance in net earnings to the price cap forecasts reached a cumulative loss of \$130 million in fiscal 2015. This represents funds that would have been available to reinvest in the ferry service and its assets.

Figure 1.2: Variance in Actual Net Earnings to the Performance Term Forecasts


The average long-term annual growth rate of vehicle traffic is 0.6 percent. Over the last four years, vehicle traffic has grown by a total of 14 percent. Traffic increases have begun to place pressure on BC Ferries' infrastructure and capacity to accommodate record traffic demand. The challenge to plan and deliver needed infrastructure on a timely basis can be exacerbated by the unpredictable nature of traffic downturns and upturns. Consequently, it is important to incorporate the ability to weather traffic cycles into the determination of the price caps, thereby supporting a sustainable ferry service which is responsive to customer needs.

Section 2: Traffic Forecast Approaches

This section reviews traffic modelling approaches which incorporate traffic patterns, current traffic trends and other challenges for the purposes of developing and validating forecasts for PT5.

2.1 PT5 Forecast Challenges

The Company sought to identify traffic forecast approaches that best address the challenges posed by the complex nature of BC Ferries' traffic and the availability of input variables. These challenges include:

- **Variable Traffic Patterns:** Traffic patterns vary across the system, for example time of day, day of week, and month to month patterns.
- **Traffic Types:** Some traffic types are inherently more difficult than others to forecast due to their inconsistent volume and frequency of travel.
- **Forecast Granularity:** Need to determine the appropriate level of granularity for each forecasting approach in order to balance useable and meaningful insight with complexity.

2.2 PT5 Modelling Approaches

Taking into consideration the challenges above, two methods were used to create forecasts for PT5. The routes with the largest volumes of traffic were modelled using econometric models. The other routes were grouped based on similarity in traffic patterns, geographic area, and service characteristics, which were then evaluated based on long-term growth trends. Both approaches focused on passenger vehicle traffic, the results of which were applied to other traffic types based on strong historical correlations.

Econometric Models

A Mixed Information Data Sampling ("MIDAS") approach was used to produce a range of possible forecasts, due to its ability to effectively address the forecasting challenges:

- MIDAS regressions provide a simple and flexible means of incorporating variables with different data frequencies. This allows the model to capture nuances in higher frequency data that may be missed when using lower frequency averages.
- These models provide a good fit for major route passenger vehicle traffic patterns.
- The MIDAS approach has the ability to develop detailed seasonal patterns without introducing a significant number of parameters. The MIDAS models do this by determining an optimal weight for each of the 52 weeks to build the representative seasonal pattern within each fiscal year. The MIDAS models also capture the different day of week patterns that can occur in the 53rd partial week.

To develop a range of traffic forecasts using the MIDAS models, Monte Carlo simulations were run for each modelled route grouping. In each simulation, a forecast of each of the explanatory variables was randomly selected from a set of pre-determined forecasts. This simulation was then repeated to generate a reasonable range of traffic outcomes. These ranges of forecasts are displayed in terms of representative percentiles.

Long-term Growth Rate Method

The use of econometric models was challenging on routes with lower traffic volumes as traffic patterns are less stable. Many of these routes also have limited availability of statistically-meaningful economic variables. As a result, in place of econometric models for these routes, a combination of Compound Annual Growth Rates ("CAGR"), and Least Squares Regressions were used to determine a range of historical growth rates. For more detail on this methodology, see Appendix F.

2.3 Methodologies

To address the challenges above, routes were grouped based on similarity in traffic patterns, geographic area, and service characteristics. Table 2.1 shows the route groupings and the modelling approach used for each:

Table 2.1: Modelling Approaches by Route Groupings

	Routes	Model Type	Fiscal 2018 percent of Traffic	Fiscal 2018 percent of Revenue
Victoria – Vancouver	1	Econometric	27.1 percent	37.8 percent
Nanaimo – Vancouver	2 & 30	Econometric	23.4 percent	35.9 percent
Sunshine Coast – Vancouver	3	Econometric	12.7 percent	8.1 percent
Southern Gulf Islands	4, 5, 6 & 9	Long-term Growth Rate	10.4 percent	5.8 percent
Sunshine Coast	7, 13, 17, & 18	Long-term Growth Rate	4.5 percent	3.5 percent
Metropolitan Adjacent	8, 12 & 19	Long-term Growth Rate	10.5 percent	3.3 percent
Coastal Community Connectors	20, 21, 22, 23, 24, 25 & 26	Long-term Growth Rate	10.9 percent	2.9 percent
Northern	10, 11, 28	Long-term Growth Rate	0.4 percent	2.7 percent

Section 3: Explanatory Variables

In econometric modelling, hypothesized explanatory variables are tested to determine which set best explain the dependent variable. Explanatory variables that explain the variation of the dependent variable (i.e. traffic) are referred to as "drivers". After an econometric model is built that sufficiently explains the variation of the dependent variable, the model can be used for forecasting purposes.

BC Ferries tested a multitude of known and hypothesized drivers of traffic demand. Statistically-significant demand drivers were retained, while others were excluded. The most prominent demand drivers are categorized as: Seasonal, Core, Fares, and Major Events. This section provides an overview of each significant demand driver within these categories, and the development of their forecasts for use in the generation of the PT5 traffic forecast ranges.

3.1 Seasonal Drivers

Seasonal drivers affect traffic demand over the short term. Some, like the timing of Easter, are very predictable and are entered into the forecast model as known future events. Others, like snow, are unpredictable and are forecast based on their probability of occurring. Econometric modelling for traffic forecasts requires adjustments for seasonal patterns in order to clearly identify the relationship between other explanatory variables and the dependent variable. For more details regarding the modelling of these variables, see Appendix A.

3.2 Core Drivers

Core drivers explain the long-term trend and significant and sustained volatility around the long-term trend. Forecasts of these drivers are input into the MIDAS models to produce a range of possible traffic outcomes over the forecast period.

Employment

For the PT5 forecasts, BC Ferries used seasonally-adjusted British Columbia employment to represent the performance of the economy and demographic conditions of the province. Modelling results indicate that employment growth is positively correlated with traffic growth. As population grows, employment has potential to grow if the economic conditions remain favourable in the province. If economic conditions are unfavourable and population is increasing, there is still potential employment growth even as the economy may be contracting.

Tourism

There is a positive impact of tourism on traffic - as the number of tourists increase, traffic demand increases. A number of tourism indicators were tested for both Canadian residents leaving British

Columbia and international travellers entering British Columbia. For modelling purposes, the best tourism indicator for BC Ferries' traffic was determined to be travellers who stay one night or more.

Forecasting Core Drivers

Exponential Smoothing ("ES") models for British Columbia employment and tourism were developed from 18 years of monthly data. The ES models were developed using an economic software package to generate a range of forecasts. The resulting ranges of forecasts are plotted below. See Figure 3.1, Figure 3.2 and Figure 3.3.

Figure 3.1: British Columbia Employment

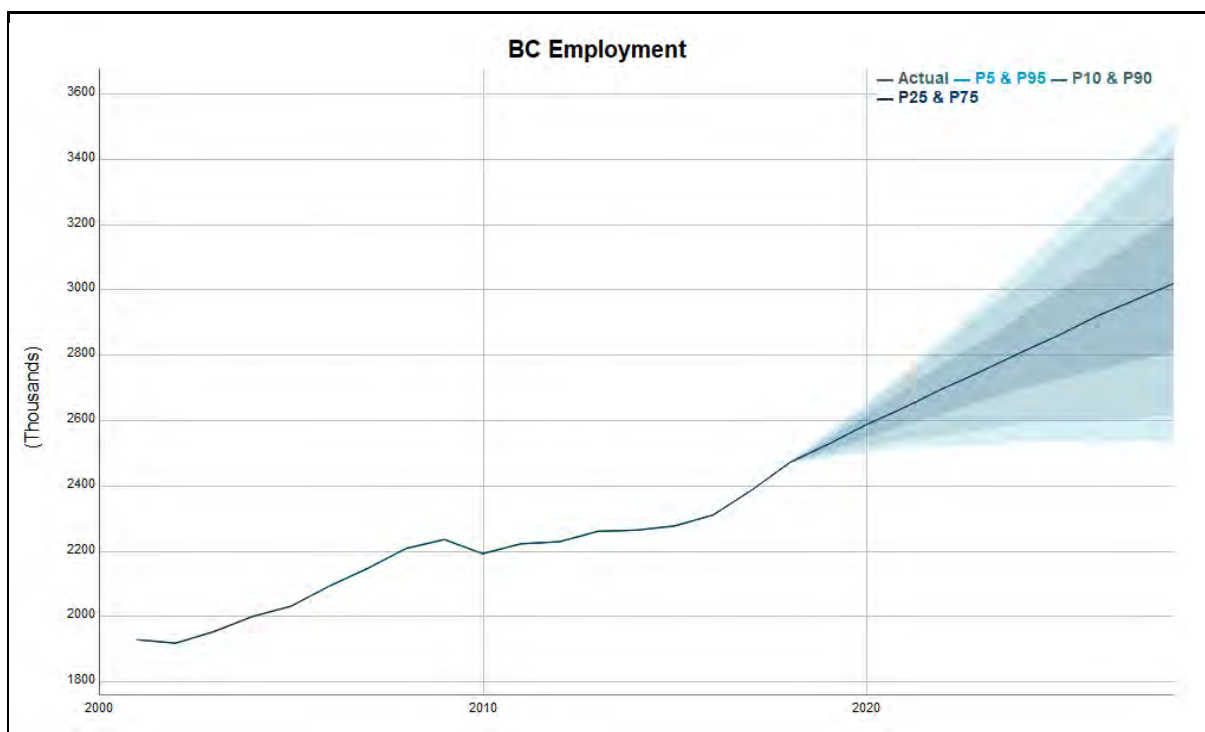
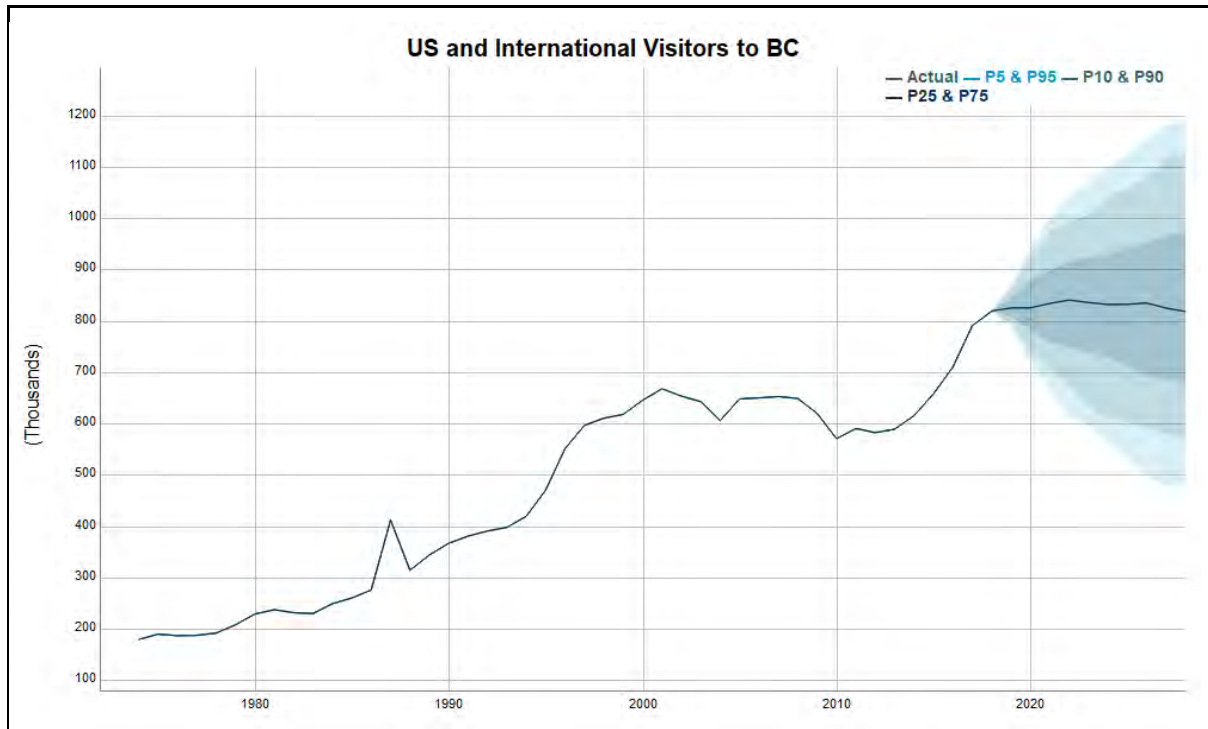
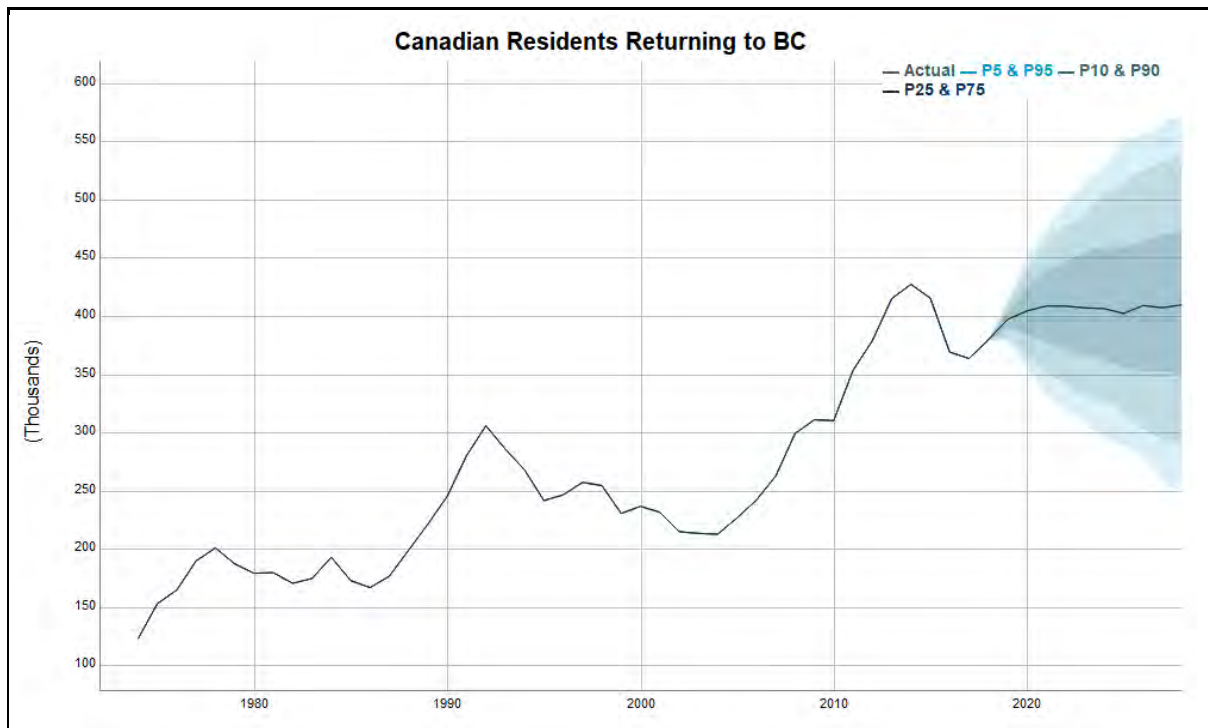


Figure 3.2: Tourism Forecast - International Arrivals (One Night or More)

Figure 3.3: Tourism Forecast - Domestic Departures (One Night or More)


3.3 Fares

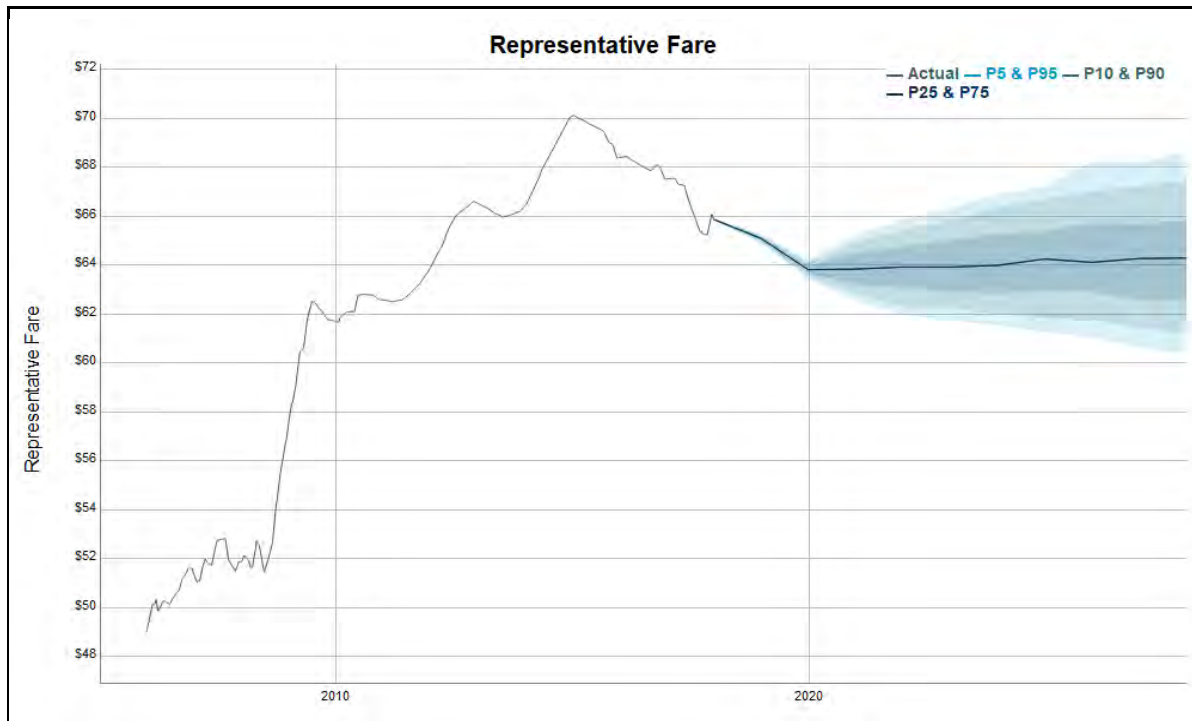
The impact of fares on traffic demand can be structural, seasonal and one-off in nature. A sustained real change in base fares will have a structural impact on traffic demand. Seasonal pricing and recurring promotions will behave as seasonal drivers of traffic demand. Fare changes may also be one-off events, such as a one-time promotion or a temporary fare reduction. The models incorporate all of these potential fare impacts.

The econometric models used a representative fare which was constructed from the fare for two adults and one passenger vehicle, including any applicable fuel surcharges/rebates. The representative fare works well to capture structural, seasonal, and one-off fare changes.

Forecasting Fares

For the forecast period, annual fare changes were limited to a range between 0 and 3 percent nominal fare increases. The forecasts have assumed that inflation will range between 1 and 3 percent, aligning with the Bank of Canada's targets. The model is set to allow any fare scenario to occur in any year and to enable each year to be set independently. Figure 3.4 shows the historical and range of forecast real representative fares on the Nanaimo-Vancouver route grouping.

Figure 3.4: Nanaimo – Vancouver Real Fares Forecast (Routes 2 and 30)



3.4 Major Events

For the routes that serve Metro Vancouver, major events such as the 2010 Winter Olympics and the 2015 FIFA Women's World Cup, were included in the model and, where possible, were weighted by attendance. Overall, for the routes that serve Metro Vancouver, where these events were found to be significant demand drivers, they were isolated to explain past traffic demand patterns. Forecast ranges do not include any major events from fiscal 2021 onwards

Section 4: Forecast Output

Following the identification of key traffic drivers and their associated forecasts, BC Ferries constructed core traffic forecasts for each of the route groupings. The forecasts are split into two components: the near-term remainder of PT4 and the PT5 forecasts. The incremental traffic benefits from business initiatives, such as the fare flexibility initiative which enables the Company to offer a range of discounted fares, were layered on top of the core traffic forecast to generate the final forecasts.

4.1 Remainder of Performance Term Four

In fiscal 2017 and 2018, the first two years of PT4, BC Ferries experienced traffic growth rates of 2.9 percent and 5.0 percent for vehicles. BC Ferries expects further growth in fiscal 2019 of 2.6 percent and in 2020 of 1.7 percent. These forecasts include the impacts of seasonality, fares, business initiatives, and core traffic drivers.

Fiscal 2019

BC Ferries expects 2.6 percent traffic growth in fiscal 2019 due to positive impacts from traffic drivers, as described below.

1. Seasonality /Events

Compared to the previous year, no net impact is expected. Although there is a positive impact from the World Junior Hockey Championships hosted in Vancouver and Victoria starting on December 26, 2018, this is offset by the negative impact from Easter. In fiscal 2018, there was 1.5 Easter long weekends (a full long weekend in April 2017, and half a long weekend in March 2018), whereas fiscal 2019 will only have half a long weekend (two days in April 2018).

2. Fares/Business Initiatives

In fiscal 2019, a majority of the traffic growth is driven by fares. On April 1, 2018, the Company applied a fare reduction of 15 percent on the northern routes, the minor routes and on the major route connecting Horseshoe Bay and Langdale. Fares are expected to remain at these levels through March 2020. BC Ferries and the Province are each contributing \$39 million to cover the cost of these fare reductions. Fares on the major routes connecting Metro Vancouver with Vancouver Island remained unchanged from the fiscal 2018 levels.

The British Columbia seniors' passenger discount increased from 50 percent to 100 percent for travel Monday to Thursday on the major and minor routes. The Province will contribute an additional \$20 million towards offsetting the value of the enhanced British Columbia seniors' discount through March 2020. The fare and seniors' discount initiatives are contracted to be in place until March 2020.

3. Core Traffic

Core traffic drivers are expected to remain positive through fiscal 2019. The British Columbia and Canadian economies and tourism are expected to continue to grow in fiscal 2019, though at lower levels than experienced in fiscal 2017 and 2018.

Fiscal 2020

The forecast traffic growth for fiscal 2020 is 1.7 percent over fiscal 2019. Seasonality will have some impact, but the majority of this growth is expected to be driven by fares, business initiatives, and continued growth in core traffic drivers.

- **Seasonality / Events**

Seasonality in fiscal 2020 will be a positive traffic driver, as there is a full Easter long weekend, compared to just half in fiscal 2019. This is offset by no major events, such as the World Junior Hockey Championship.

- **Fares / Business Initiatives**

Fares are expected to remain at the same level as fiscal 2019. Assuming inflation in fiscal 2020 and no fare changes, real (inflation adjusted) fares will decrease thereby positively impacting traffic. Business initiatives related to a new website and variable pricing are expected to drive traffic volumes by offering customers discounted fares on low demand sailings on the major routes between Vancouver Island and Metro Vancouver.

- **Core Drivers**

The growth seen in fiscal 2019 in core traffic drivers is expected to continue at near or slightly lower levels through 2020.

4.2 Performance Term Five

Vehicle traffic grew to a record level in fiscal 2018, and growth is expected to continue, at a slowing rate, over 2019 and 2020. This will result in six consecutive years of positive traffic growth. At the same time, BC Ferries has limited ability to expand capacity as all vessels are in service during peak periods. As a result, there is limited capacity available to meet growing demand during peak periods which constrains traffic growth. Taking these factors into consideration along with indications that economic activity is plateauing, and the econometric modelling results, it is reasonable to assume BC Ferries will experience flat traffic growth through PT5. BC Ferries acknowledges that the actual traffic experience in PT5 could be higher or lower, depending somewhat on factors that are beyond its control, such as the economy and tourism.

Econometric Model Forecasts

The econometric model outputs for Victoria, Nanaimo and Sunshine Coast to Metro Vancouver show a flat traffic forecast to be centrally located within the 25 to 75 percent probability bands. The forecast range identifies that there is a near equal probability that PT5 traffic will be higher or lower than fiscal 2020 levels and that historical cyclicalities falls within the range. These results validate that a core traffic forecast equal to 2020 for each year of PT5 is reasonable. (See Figure 4.1, Figure 4.2 and Figure 4.3.)

The econometric models use unconstrained demand, meaning that capacity constraints do not limit the forecast results. Current capacity utilization levels at peak times show that the major routes may not be able to accommodate much more growth in traffic. Pricing incentives to move traffic to less busy times or the provision of more capacity (e.g., an incremental major vessel) will be required to achieve positive traffic growth.

Figure 4.1: Victoria - Vancouver Passenger Vehicle Core Forecast (Route 1)

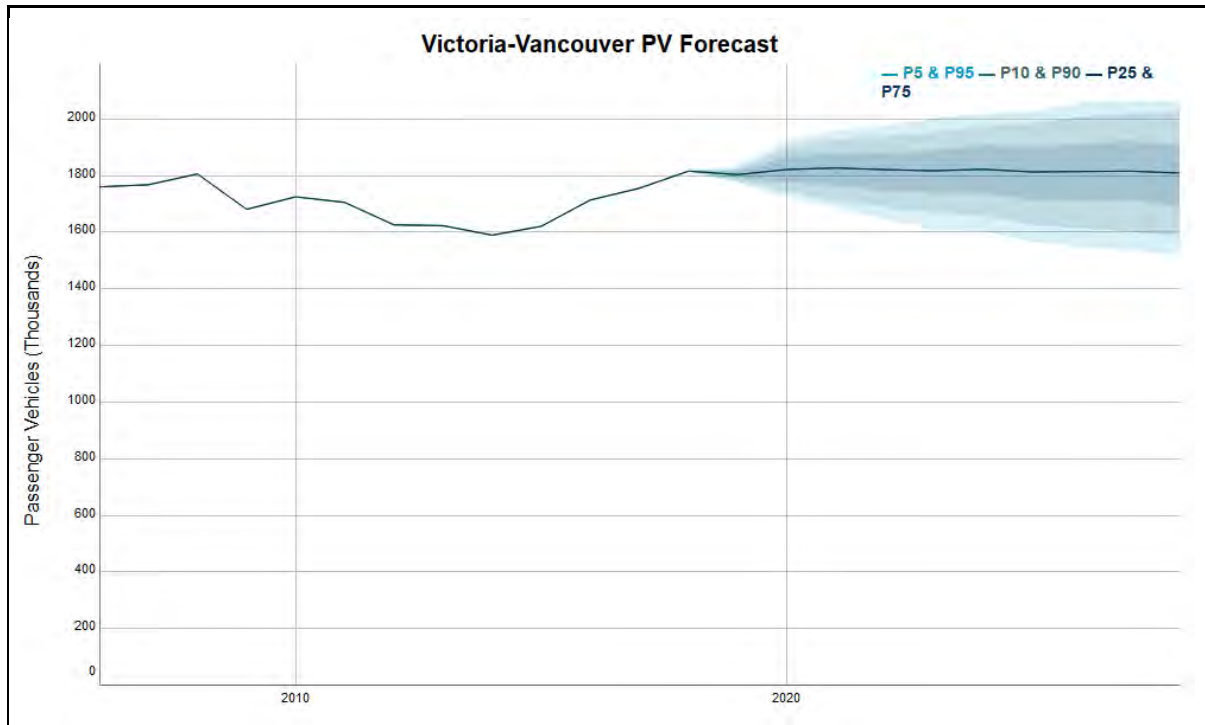
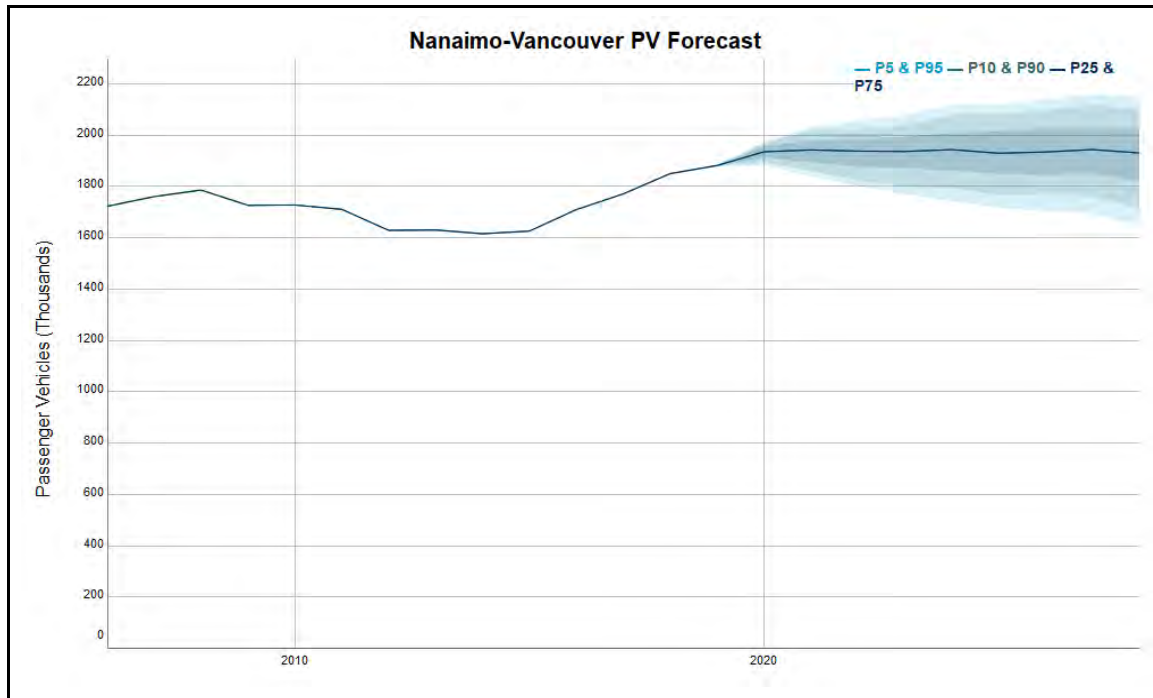
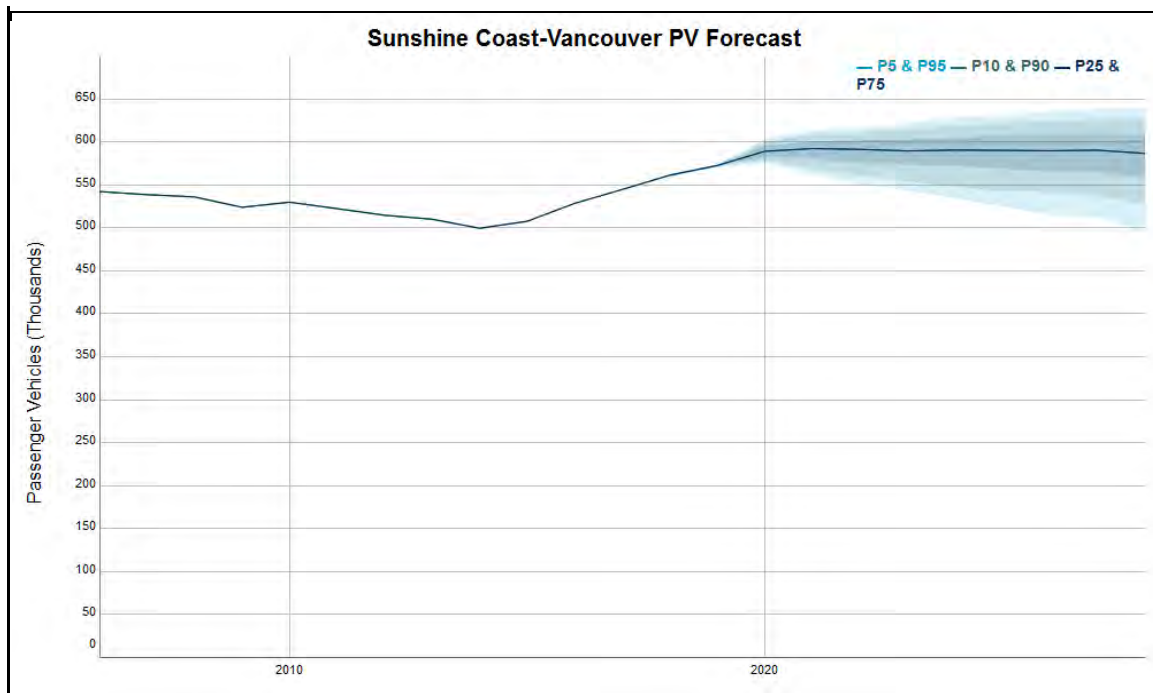


Figure 4.2: Nanaimo - Vancouver Passenger Vehicle Core Forecast (Routes 2 and 30)

Figure 4.3: Sunshine Coast - Vancouver Passenger Vehicle Core Forecast (Route 3)


Long-term Growth Rate Forecasts

For the remainder of the routes, a flat traffic forecast was compared to historical growth rates to assess its viability. For each route grouping, a high, medium and low long-term growth rate was calculated and applied to the fiscal 2020 forecast as the base year. This provides a good range for the potential PT5 forecasts; however, it does not reflect the full range of possible outcomes. For all route groupings, a flat traffic forecast fell within the bands of a range of long-term growth rates.

Figure 4.4: Other Routes Core Traffic Growth Rate (LTGR) Forecasts

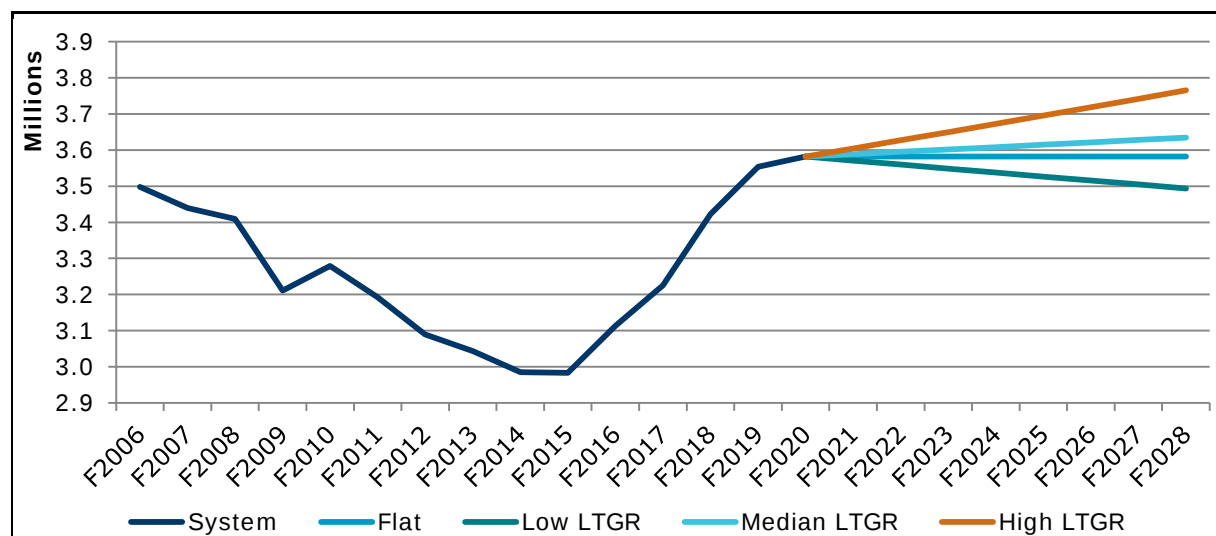


Table 4.1: Long-Term Growth Rate Based Traffic Forecasts

		Fiscal 2020	Fiscal 2021	Fiscal 2022	Fiscal 2023	Fiscal 2024
Southern Gulf Islands Core (Routes 4,5,6&9)	High	100.0 percent	101.0 percent	102.0 percent	103.1 percent	104.1 percent
	Low		99.4 percent	98.8 percent	98.3 percent	97.7 percent
Sunshine Coast (Routes 7,13,17 &18)	High		100.8 percent	101.6 percent	102.3 percent	103.1 percent
	Low		99.4 percent	98.9 percent	98.3 percent	97.8 percent
Metropolitan Adjacent (Routes 8,12 &19)	High		101.3 percent	102.6 percent	103.9 percent	105.2 percent
	Low		99.2 percent	98.5 percent	97.7 percent	97.0 percent
Coastal Community Connectors (Routes 20,21,22,23,24,25 &26)	High		100.2 percent	100.5 percent	100.7 percent	100.9 percent
	Low		99.0 percent	98.1 percent	97.1 percent	96.2 percent
Northern Long (Routes 10,11 & 28)	High		101.0 percent	101.9 percent	102.9 percent	103.9 percent
	Low		98.3 percent	96.7 percent	95.0 percent	93.4 percent

4.3 Business Initiatives

Fare Flexibility Initiative

The fare flexibility initiative will offer customers enhanced fare choices, including discounts on less busy sailings. Once fully implemented, the Company expects this initiative to lead to an incremental increase of 3 to 5 percent of discretionary passenger vehicle traffic on reservable routes.

Below is a table showing the estimated impacts by fiscal year of this initiative.

Table 4.2: Forecast Growth from Business Initiatives

Business Initiatives Forecast Incremental Traffic					
	Fiscal 2021	Fiscal 2022	Fiscal 2023	Fiscal 2024	PT5 Total
Vehicles	100,000	150,000	150,000	195,000	595,000
Passengers	290,000	440,000	440,000	555,000	1,725,000

Incremental Major Route Vessel

BC Ferries' major routes initiative looks at the impact of long-term traffic growth on routes that currently have high capacity utilization. The Company plans to build five vessels to replace four retiring C-class vessels starting later in PT5. The forecasts include incremental traffic generated from the additional capacity provided beginning in fiscal 2024.

Section 5: Third Party Validation

A third party subject matter expert was engaged to validate the methodology and assumptions used for these forecasts. See validation letter in Appendix H.

Section 6: Summary

Taking into account the historical traffic cycles, the model outputs, and long-term growth rates, the Company is forecasting flat core traffic for PT5. This core level of traffic is adjusted to reflect the impact of seasonality and the rollout of business initiatives. The results of these forecasts are presented below.

6.1 Traffic Demand Forecasts

Table 6.1 shows the expected traffic levels by the historical price cap route groups for each fiscal year. Fiscal 2020 has been set as the base at 100 percent.

Table 6.1: Traffic Demand Forecast

	PT5				
Vehicles	2020	2021	2022	2023	2024
Majors	100.0%	101.7%	102.6%	102.6%	103.1%
Minors	100.0%	100.2%	100.2%	100.2%	100.7%
North	100.0%	100.8%	101.6%	102.4%	102.8%
System	100.0%	101.1%	101.7%	101.7%	102.1%
Passengers	2020	2021	2022	2023	2024
Majors	100.0%	101.9%	102.8%	102.8%	103.3%
Minors	100.0%	100.2%	100.3%	100.3%	100.8%
North	100.0%	100.9%	101.8%	102.7%	103.2%
System	100.0%	101.3%	101.9%	101.9%	102.4%

Appendix A: Seasonality

A.1 Annual Seasonality

One of the largest regular drivers of traffic is the annual seasonal pattern. This pattern follows seasonal and weather patterns with the warmest and driest months being the busiest. Vehicle traffic in August is twice the level of that in January. While the level of influence that other explanatory variables have on traffic varies over time, seasonality remains consistent.

A.2 Holidays

For moving holidays that may fall between weeks, appropriate weightings are assigned based on historical traffic from historical holiday period patterns. For the forecasts, the timing of future holidays is determined through pre-set holiday calendars.

Easter

The timing of Easter has a significant impact of traffic levels for a given fiscal year. Easter can occur from mid-March to the end of April and, as a result, there can be as many as two Easters in a fiscal year and none in another year. In addition, the alignment of Easter with spring breaks has a large impact on the traffic generated by this holiday.

Spring Break

The timing of various school districts' spring breaks (how it aligns with Easter, and how early in March it is) can have a large impact on the traffic figures seen by BC Ferries. The influence of spring break on traffic is a combination of scheduling and school enrollments. For each forecast year, spring break schedules were based on the timing of Easter and forecast school district enrollments obtained from the Province.

Christmas

Similar to Easter, the timing of Christmas has a significant weight on the traffic levels for a given fiscal year. Unlike Easter, Christmas lands on different days of the week each year, creating different holiday periods, largely determined by school holidays and when the winter break begins.

Labour Day and Length of Summer

Primarily associated with the return to school and the end of summer, the timing of Labour Day has a significant impact on traffic levels by extending the busy travel summer period by up to a week. The start of the summer travel period is also important, but less so as the end of summer is marked by a moving holiday of Labour Day that provides more of a consistent end point to summer.

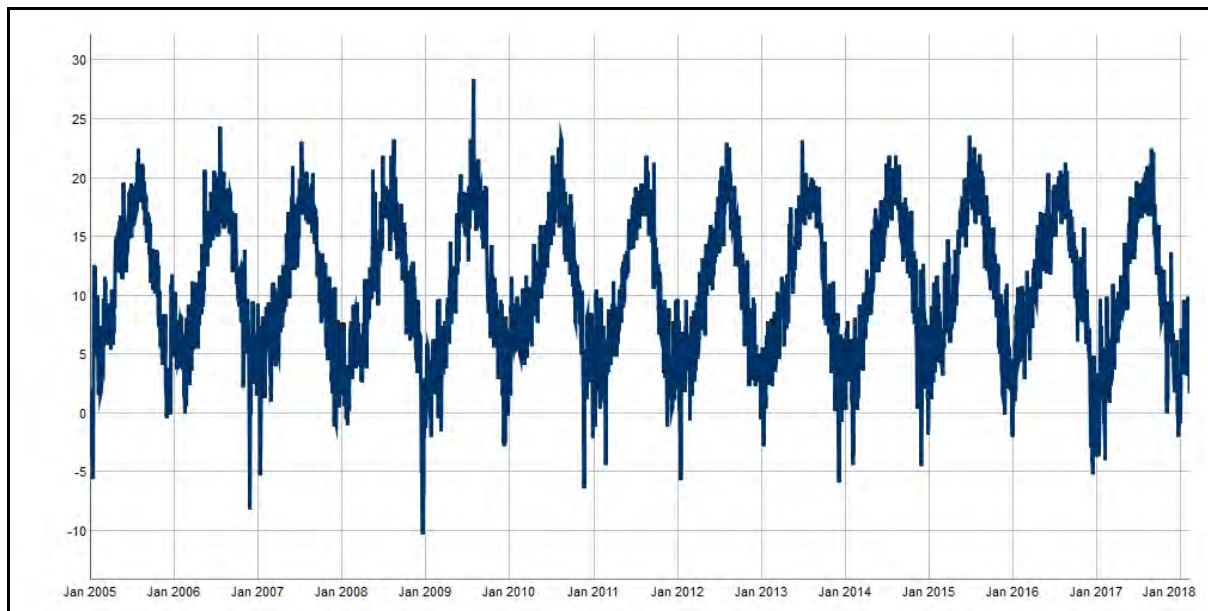
A.3 Weather

A variety of weather variables can impact BC Ferries' traffic. Weather is naturally seasonal and much of BC Ferries' annual traffic pattern mirrors the seasonal pattern of weather. Like seasonality, econometric modelling requires adjustments for weather patterns to clearly identify the relationship between explanatory and dependent variables

Mean Temperature

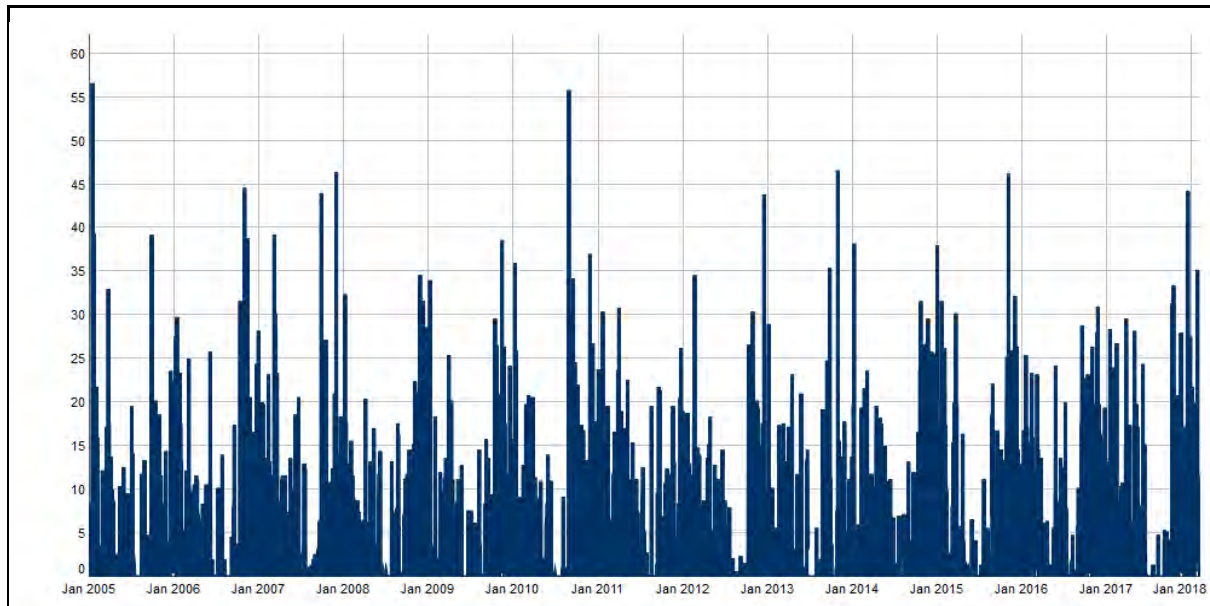
BC Ferries does not include mean temperature as a separate variable in its models as it would represent a significant duplication of the annual traffic pattern.

Figure A.1: Daily Mean Temperature



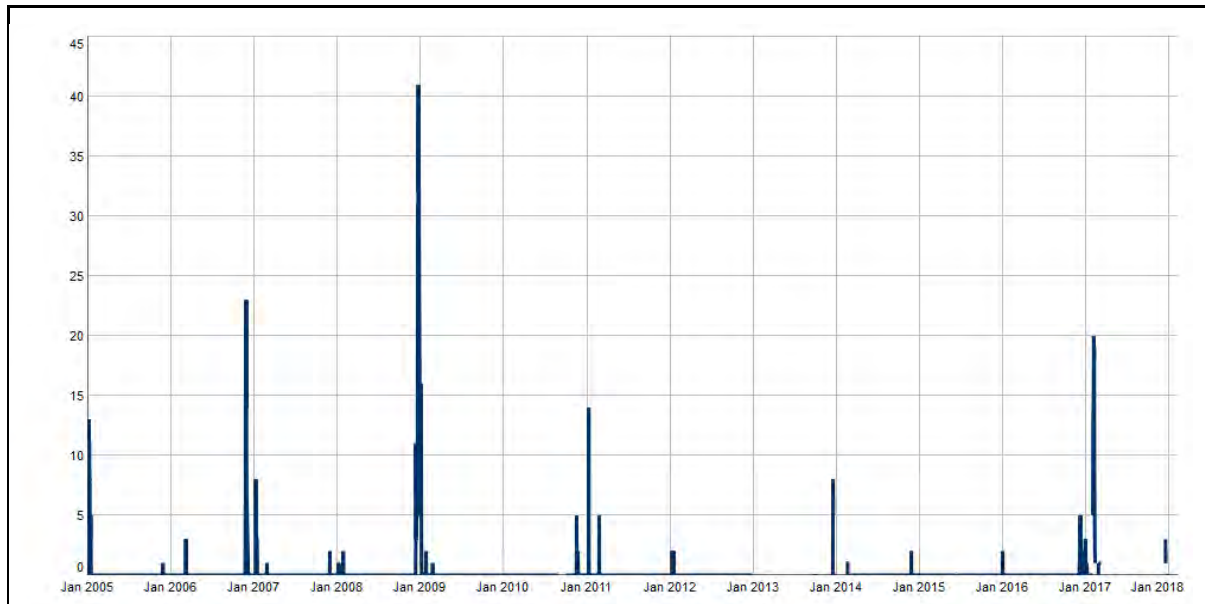
Daily Rain

Like mean temperature, rain has a strong annual seasonal pattern that will be inherently captured in the annual seasonality of the model. The aspect of rain not captured in the seasonality is the persistence and sheer volume of rain that may occur outside of the expected seasonal norm. In the models, a seven day rolling average of seasonally adjusted rain is incorporated to capture periods of significantly larger than anticipated rainfall.

Figure A.2: Daily Rain***Snow on the Ground***

In the model, snow on the ground is used instead of the amount of snow that has fallen for two reasons. First, snow often falls during the winter months, but it may or may not accumulate. Second, if the snow does indeed accumulate on the ground, how much accumulates and how long it lasts has a significant impact on driving and general travel conditions. Historically, BC Ferries has observed considerable drops in traffic on days where significant snow has accumulated.

Figure A.3 shows the daily snow on the ground for Metro Vancouver between 2005 and 2018. There are two general observations relevant to the modelling approach. First, there are years with little to no accumulated snow. Second, when there is snow on the ground, the amount and the persistence (number of days) varies considerably over the years. From these observations, simply assuming a consistent amount of snow and the timing significantly underestimates the uncertainty around snowfall.

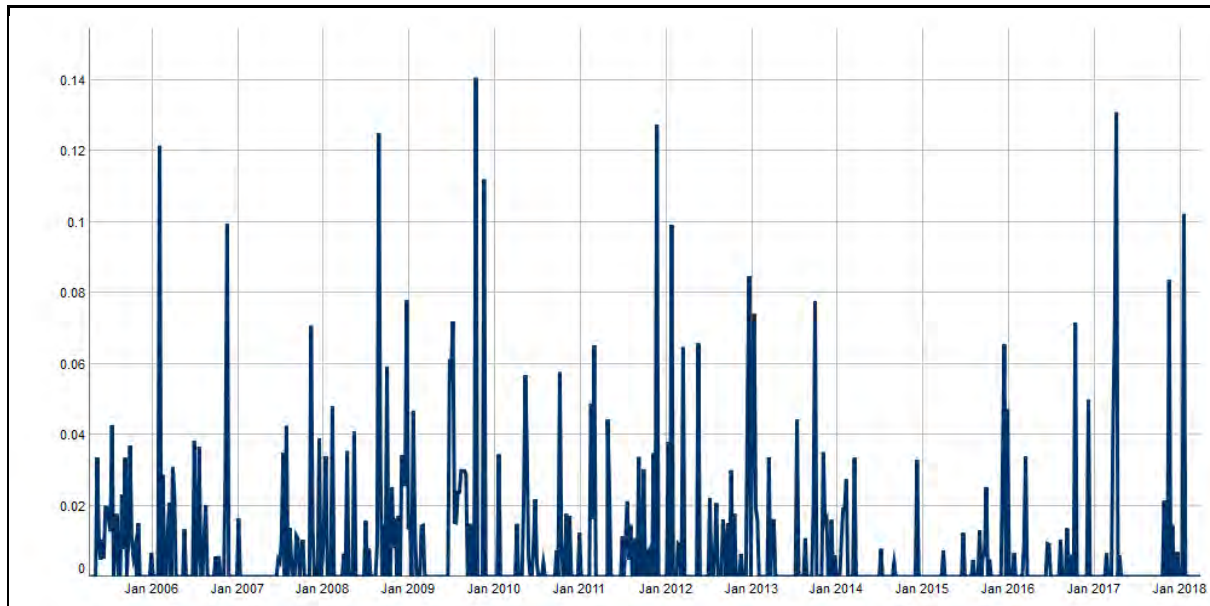
Figure A.3: Snow on the Ground

Forecasting Weather

To forecast the weather variables in the model, a simple two-step probability model is used to generate a forecast for weather. The first step determines the probability that the weather type under consideration will occur in each of the 1-53 weeks. The second step is to determine the mean and standard deviation of the weather event for each of the 53 weeks, given that the event occurred. Using the historical probabilities previously developed, future weather scenarios are developed by applying the historical probabilities and amounts to each week of the forecast period. This approach is repeated to provide a reasonable range of weather outcomes.

A.4 Cancellations

To represent the impact of service disruptions on traffic volumes, the percent of daily capacity cancelled was incorporated into the model. The model includes this measure as absolute changes in capacity have a varying level of impact given the amount of service offered in the time period. For instance, service levels on the summer are considerably higher than in the winter months. A single cancellation in the winter results in a much larger percent of the week's traffic being lost. In the summer, a single sailing cancellation has a much smaller percentage impact on the week's capacity. By using percent of service cancelled, cancellations are no longer directly linked to the seasonality of demand.

Figure A.4: Cancellations**Forecasting Cancellations**

Cancellations were forecast in much the same manner as weather. A simple two-step probability model is used to generate a forecast for percentage of the week's capacity that is cancelled. The first step determines the probability that greater than 0 percent of the week's total capacity will be cancelled in each of the 1-53 weeks. The second step is to determine the mean and standard deviation of the percent of capacity cancelled for each of the 53 weeks, given that the event occurred. Using the historical probabilities previously developed, future cancellation scenarios are developed by applying the historical probabilities and amounts to each week of the forecast period. This approach is repeated to provide a range of cancellation outcomes.

Appendix B: Endogeneity

Endogeneity in the context of ferry fares and demand arises around the concern that ferry fares may be correlated with the error term of the model when trying to estimate the demand equation. If this endogeneity is not adjusted for, the parameter on the endogenous variable will be biased and inconsistent.

To account for endogeneity issues, a two-stage or instrumental variables³ approach was used for the performance term three (April 1, 2012 – March 31, 2016) (“PT3”) models. This approach requires finding additional variables that act as instruments to adjust the model to compensate for the endogenous parameter(s). For a valid instrumental variable to be found, it must be highly correlated with the endogenous variable but uncorrelated with the error term in the model. Implementation of an instrumental variable approach is relatively straightforward; however it can be very difficult to find appropriate instruments.

For the PT5 models, it was decided that an instrumental variables approach imposed significant challenges with respect to finding feasible instruments; therefore, alternative approaches were sought.

B.1 Adjusted Sample Size

First, BC Ferries decided to limit the model sample size to eliminate the most problematic endogenous fares from the sample. This does not mean that the endogeneity issue is removed, but rather that the most suspicious pricing has been excluded from the sample. By limiting the starting date of the data sample to 2009, this has the following impacts to the models:

1. Eliminates periods where fares shifted regularly with supply and demand (variable pricing), potentially causing ambiguity in terms of estimating fare elasticities; and
2. The model sample begins after several key economic factors:
 - a. The 2008 financial crisis and subsequent recession;
 - b. Record-high (for the time) crude oil and retail gasoline prices; and
 - c. Significant BC Ferries fare increases (46.5 percent since 2005).

The PT5 models’ different sample period has been observed to lead to generally larger price elasticities than the models for the last two performance terms. This can be seen by starting with an expanded sample with a starting point the same as the PT4 models. As the sample period start point approaches the PT5 model sample starting point, the price elasticities continually increase. This is not

³ Instrumental variable approaches allow consistent estimation when the explanatory variables are correlated with the error terms as long as certain conditions are met and proper instruments can be found.

an entirely surprising result as less of the variable pricing period is included and more of the sample is weighted to a period of more straightforward pricing. In addition, the PT5 sample starts after the 2008 financial crisis and is at a point following nearly a decade of considerable fare increases. It is quite possible that customer responsiveness to fares significantly shifted at this point.

B.2 Lagged Dependent Variable

Another potential approach to address the endogeneity is to add a lagged dependent variable (“LDV”) to the models. This approach was tested, but the LDV in most models was found to be insignificant, have a negligible impact to model fit, and have little to no impact on the coefficient and standard error for fares. For these reasons, and the challenge⁴ of working with an LDV in the forecasting, the LDV approach was not pursued any further.

B.3 Summary

Given the history of BC Ferries fares and the market the Company operates in, it is difficult to say with confidence that the endogeneity issues can be fully managed through treatment methods or restraining the sample size. A point of comparison is looking at the PT5 results along with PT3 modelling, which did adjust for endogeneity, and the PT4 results that did not adjust for endogeneity. The non-adjusted PT4 elasticities were mostly consistent with the adjusted PT3 model results, an indication that the pricing used in the PT4 models was relatively clean of the endogeneity issue (or it is simply a coincidence). As the PT5 models have a sample period that is considerably different than the PT4 models, the inferences from the PT4 models to the PT5 models cannot be extrapolated. However, the PT5 models do use the same “representative fare” approach used in the PT4 models. While the sample period issue is a complicating factor, it is possible that the PT5 models use of the “representative fare” may have helped address some the endogeneity issues.

Overall, although there may be some consistency across the different performance term models, it does not confirm whether an endogeneity bias exists.

⁴ Forecasting with an LDV requires an iterative or dynamic process where one period is forecast, then that forecast is inserted into the LDV for the next period's forecast.

Appendix C: MIDAS Models

BC Ferries elected to employ a Mixed Information Data Sampling (MIDAS) approach to produce a range of possible PT5 forecasts. MIDAS regressions provide a simple and flexible means of incorporating variables with different data frequencies into the same model. By using a MIDAS approach, daily variables such as rain, snow, service levels and fares can be incorporated into the model in a more informative manner than using the weekly average of the higher frequency variables. This allows the model to capture nuances in higher frequency data that may be missed when using lower-frequency averages.

These models provide a good fit for major route passenger vehicle traffic patterns. Passenger vehicles and vehicle passengers represent in the order of 85 percent of system tariff revenue and are generally a good indicator of overall traffic on any given route and are a significant determinant in vessel capacity decisions.

C.1 Seasonality with MIDAS Models

Another advantage of the MIDAS approach is the ability to develop detailed seasonal patterns without introducing a significant number of parameters. Through MIDAS, the 52 primary weeks in the model can be handled by as little as two parameters instead of 51 individual weekly variables. This is done by constructing a 52 column matrix where the values of the matrix are either 1 if the observation falls in that week or 0 otherwise. The MIDAS models then determine an optimal weight for each of the 52 weeks to build the representative seasonal pattern within each fiscal year.

One challenge of modelling at a weekly frequency is that there are 52 full seven day weeks in a year and one week that is either one or two days long, depending if it is a leap year. To address the imbalance of the 53rd week, a MIDAS variable is developed containing a seven column matrix, each column representing the day of the week. The values of the matrix are either 1 if the day of the week is in week 53, 0 otherwise. This allows the MIDAS models to capture the different traffic levels experienced if, for example that week 53 is comprised of one or two busy weekend days versus one or two less busy mid-week days.

C.2 Forecasting with MIDAS Models

To develop a range of traffic forecasts using the MIDAS models, the Company ran Monte Carlo simulations for each modeled route grouping. In each simulation, a forecast of each of the independent variables was selected at random from a set of 1,000 pre-determined forecasts. This simulation was then repeated 10,000 times to generate a reasonable range of traffic outcomes. Once the range of forecasts had been developed, they were divided into the representative percentiles.

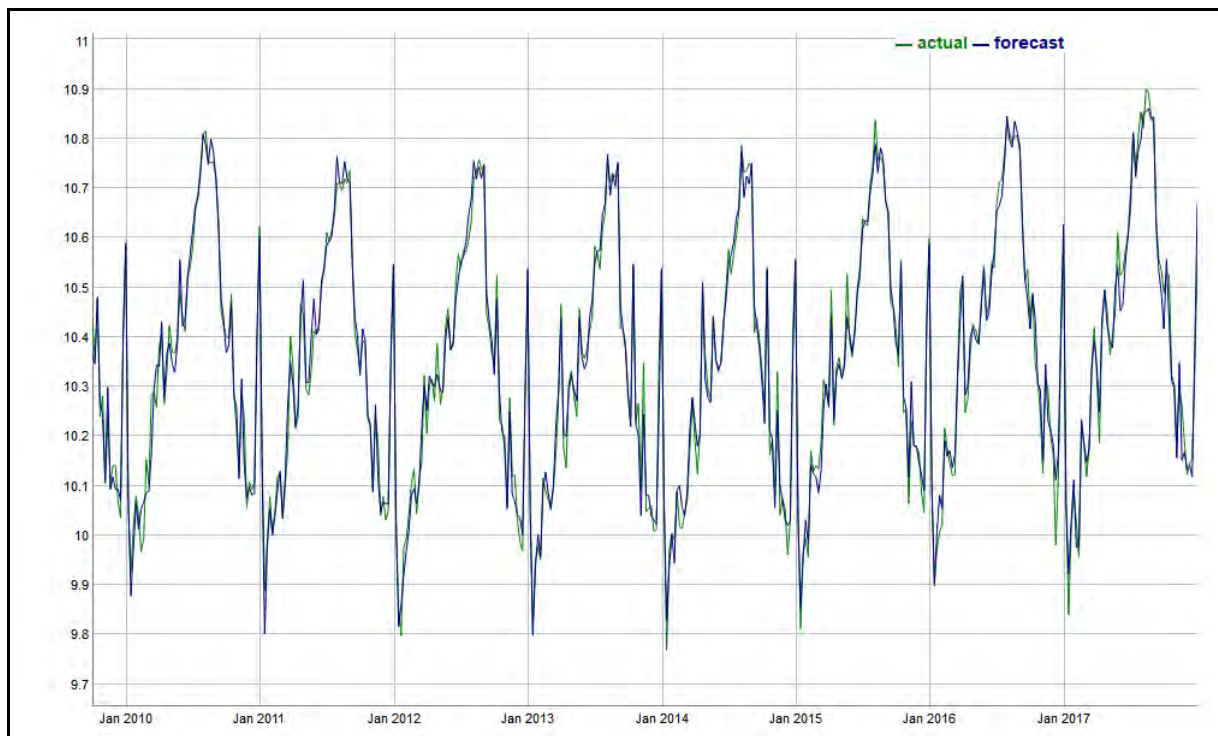
Appendix D: Model Fit

There are several areas of consideration to assess the quality of the model fit. First is how well the models capture the overall seasonality and trends exhibited in the data. Second, tests are conducted on the model residuals to determine if there are any problems such as heteroscedasticity and autocorrelations. Third, if there are any issues with the model fit, what adjustments to the models, if any, are possible and have been made?

D.1 General Fit

As these models' primary purpose is to generate forecast ranges at the fiscal year level, overall, they predict historical traffic patterns quite well. The models have some minor deficiencies at the weekly level, which appear to be the result of either unexplained events spanning more than one week, or the slight misalignment of the holiday variables in the model. Overall, these deficiencies can and will be addressed if these models were to be used for forecasting on a weekly basis.

Figure D.1: Model Fit



D.2 Autocorrelation

As mentioned previously, the weekly models have some misalignments with some of the weeks and holidays that are likely to result in some lack of independence in the error terms. The misalignments are visible in the autocorrelation plots of the residuals, albeit at a minimal level. The autocorrelation (ACF) plots below show there is a positive autocorrelation at the 52-week mark which represents the completion of the annual cycle. This is to be expected as the models have made the trade-off of going with three MIDAS variables versus 52 dummy variables in a non-MIDAS regression to arrive at a more simplistic model. Through this approach, there are bound to be some errors as a result, but the fact that the autocorrelations do not persist in the second year suggest that there is long run stability in the model.

Figure D.2: ACF Victoria - Vancouver

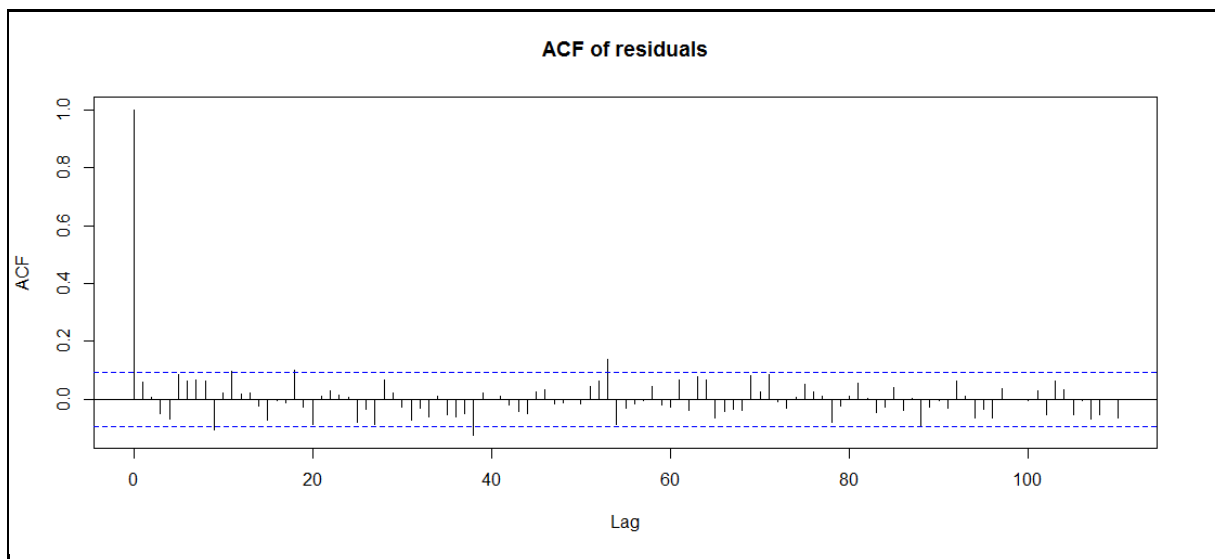
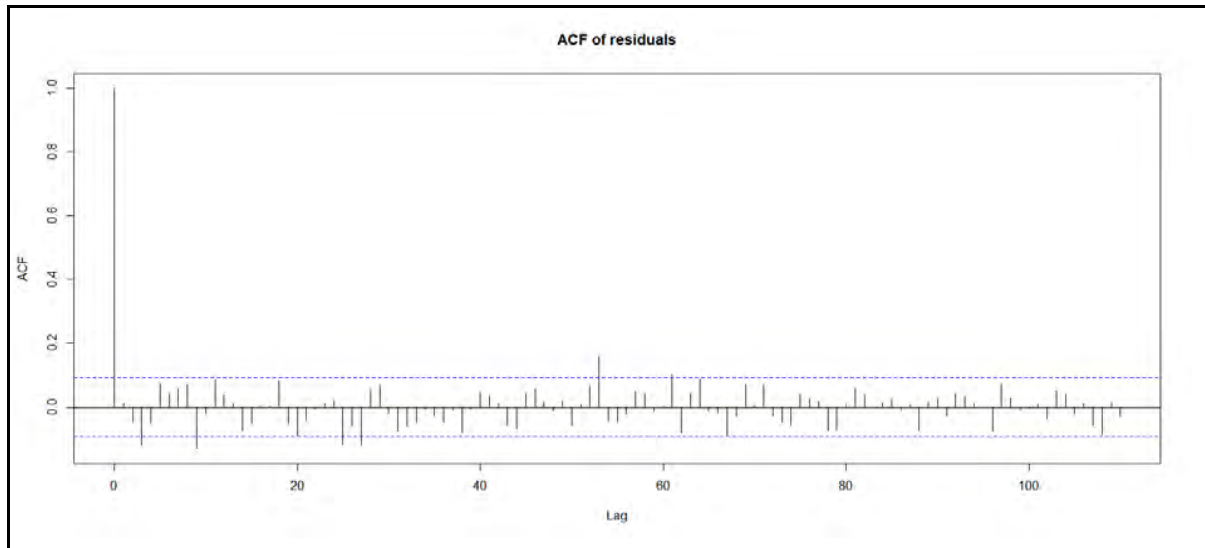
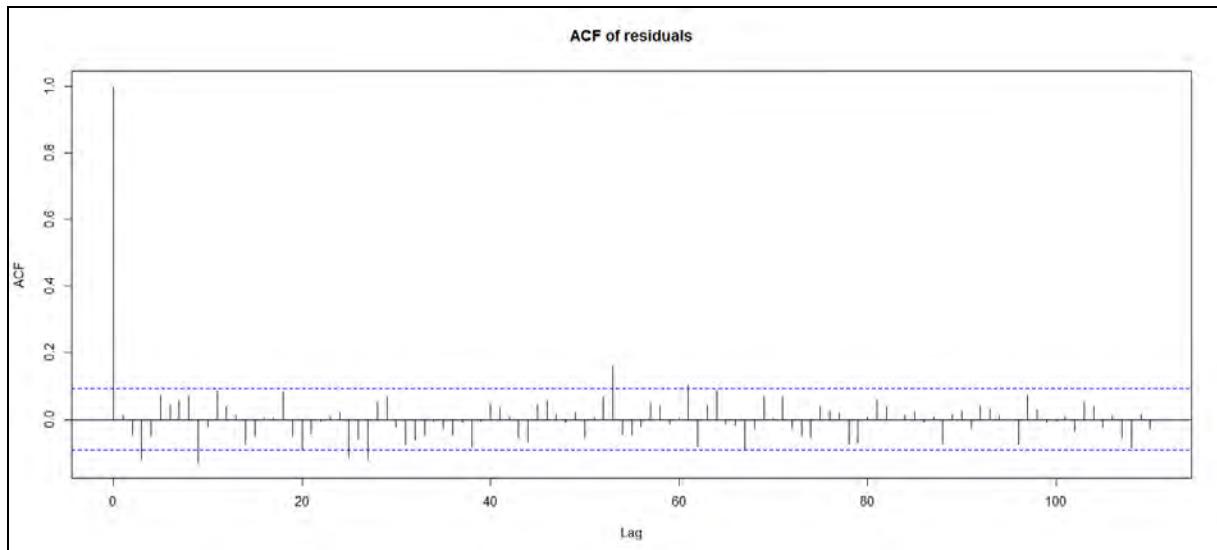


Figure D.3: ACF Nanaimo - Vancouver**Figure D.4: ACF Sunshine Coast - Vancouver**

Overall, the ACF plots show that there is no strong autocorrelation pattern in the 0-51 lag period. This implies that there is no strong autoregressive pattern in the residuals and that there is no need to add autoregressive variables or LDVs to the models.

D.3 Homoscedasticity

An important model fit test is to test the residuals for homoscedasticity or, more specifically, a consistent variance for the residuals across the sample. This is done by comparing the variance of one group of residuals to that of another group. The two variances are typically compared via an F test.

Overall, most of the models show some evidence of heteroscedasticity in the residuals. From this it can be concluded that the variance in the residuals is not consistent across the sample. Heteroscedasticity is not uncommon in time series analysis and in the PT5 model cases, there are clustered periods of higher volatility in the residuals. These higher volatility periods are not captured by the model variables and an effort was made to find additional variables that may explain the higher volatility periods. Overall, no suitable additional data was found.

To address the heteroscedasticity in the models, heteroscedasticity and autocorrelation consistent standard errors are used and reported in the model output tables. In the future, as the heteroscedasticity appear to be clustered in an ARCH or GARCH consistent manner, there may be merit in exploring a subclass of MIDAS modes called GARCH-MIDAS.

It should be noted that the heteroscedasticity was not detected in the PT4 models. As the PT4 structural time space models had an individual error term for each model variable, it is thought that much of heteroscedasticity was removed through the individual error terms. The result is the main error term for the model was relatively clean of heteroscedasticity and thus it did not show up. Whether this is an appropriate treatment for heteroscedasticity was not been determined.

D.4 Independence Testing

To test the independence of the model residuals, the Box-Ljung and Breusch-Godfrey are two tests that are typically applied. These tests are similar, but there are some key differences to note. The Box-Ljung test requires that all variables in the model are strictly exogenous while the Breusch-Godfrey tests has a weaker requirement that the variables be weakly exogenous. Given that there may be some endogeneity in the models, the Breusch-Godfrey test will be selected for independence testing.

Table D.1: Independence Test of MIDAS Models

Model	Test Statistic	χ^2 Critical Value (20 lag test)	Reject Null Of Independence
Victoria-Vancouver	34.54	31.41	Yes
Nanaimo-Vancouver	32.61	31.41	Yes
Sunshine Coast-Vancouver	33.91	31.41	Yes

As can be seen in Table 0.1, the models do not pass the Breusch-Godfrey test for independence (nor the Box-Ljung test, results which are not shown). This result was expected with the previously-discussed heteroscedasticity that is present in the residuals.

D.5 Summary

Overall, the models capture the seasonal and long run trends of the traffic data quite well. The model residuals do show some heteroscedasticity, which has led to the use of Heteroscedasticity and Autocorrelation Consistent (HAC) standard errors being used and reported. As expected the heteroscedasticity in the residuals leads to the models not passing the tests for independence. Aside from the heteroscedasticity, the model residuals do not exhibit significant autocorrelation that would lead to concern about the long run stability of the models.

Appendix E: MIDAS Model Output

E.1 Victoria - Vancouver

Table E.1: Victoria - Vancouver Model Output

Variable	Estimate	Std.Error	t-value	p-value
(Intercept)	11.0593	0.5783	19.1231	0.0000
Weeks.Peak.1	5.3623	0.2688	19.9469	0.0000
Weeks.Peak.2	-0.0356	0.0030	-11.9345	0.0000
Weeks.Shoulder.1	3.2792	0.2893	11.3336	0.0000
Weeks.Shoulder.2	-0.0465	0.0063	-7.3781	0.0000
Weeks.OffPeak.1	-1.1837	0.3638	-3.2534	0.0012
Weeks.OffPeak.2	0.1472	0.0463	3.1825	0.0016
Weeks.Base.1	2.0113	0.4018	5.0058	0.0000
Weeks.Base.2	-0.0776	0.0146	-5.3230	0.0000
Week53.DOW.Composition.1	4.7332	0.2274	20.8172	0.0000
Week53.DOW.Composition.2	-0.1469	0.0157	-9.3835	0.0000
Fares.	-0.4198	0.1083	-3.8760	0.0001
Cancelled. Capacity.	-0.4937	0.0971	-5.0844	0.0000
Snow.	-0.0615	0.0139	-4.4086	0.0000
LF. XMAS.	0.4516	0.0391	11.5375	0.0000
LF. Easter.	0.2393	0.0186	12.8728	0.0000
LF. Thanksgiving.	0.2879	0.0116	24.8927	0.0000
LF. Victoria Day.	0.1740	0.0225	7.7482	0.0000
LF. Labour Day.	0.1545	0.0089	17.3877	0.0000
LF. August LW.	0.1440	0.0130	11.1057	0.0000
LF. Family Day.	0.1712	0.0215	7.9545	0.0000
LF. Olympics.	-0.1298	0.0764	-1.6999	0.0899
Week 37.	-0.2746	0.0315	-8.7213	0.0000
Week 53.	-2.3656	0.0641	-36.9266	0.0000
LF. Spring Break.	0.0000	0.0000	5.2157	0.0000
LF.Canada150.	0.0310	0.0150	2.0647	0.0396
LF.WWC.	0.0013	0.0007	1.9949	0.0467
LF. Rain.	-0.0033	0.0019	-1.7344	0.0836

E.2 Nanaimo - Vancouver

Table E.2: Nanaimo - Vancouver Model Output

Variable	Estimate	Std.Error	t-value	p-value
(Intercept)	5.9490	0.6064	9.8111	0.0000
Weeks.Peak.1	6.4020	0.2889	22.1592	0.0000
Weeks.Peak.2	-0.0349	0.0029	-12.0944	0.0000
Weeks.Shoulder.1	3.3869	0.2841	11.9201	0.0000
Weeks.Shoulder.2	-0.0596	0.0061	-9.7997	0.0000
Weeks.OffPeak.1	-1.5042	0.4179	-3.5992	0.0004
Weeks.OffPeak.2	0.1485	0.0418	3.5559	0.0004
Weeks.Base.1	2.4219	0.4813	5.0324	0.0000
Weeks.Base.2	-0.0712	0.0156	-4.5738	0.0000
Week53.DOW.Composition.1	4.8167	0.1106	43.5363	0.0000
Week53.DOW.Composition.2	-0.1189	0.0108	-10.9626	0.0000
Fares.	-0.3261	0.0550	-5.9340	0.0000
Cancelled. Capacity.	-0.5626	0.1524	-3.6913	0.0003
Snow.	-0.0732	0.0175	-4.1910	0.0000
LF .XMAS.	0.5114	0.0395	12.9514	0.0000
LF. Easter.	0.2482	0.0121	20.5723	0.0000
LF. Thanksgiving.	0.2034	0.0134	15.2179	0.0000
LF. Victoria Day.	0.1769	0.0137	12.8718	0.0000
LF. Labour Day.	0.0361	0.0085	4.2460	0.0000
LF. August LW.	0.1033	0.0153	6.7375	0.0000
LF. Family Day.	0.0816	0.0247	3.3032	0.0010
LF. Olympics.	-0.2387	0.0691	-3.4530	0.0006
Week 37.	-0.3084	0.0321	-9.6025	0.0000
Week 53.	-2.4626	0.0432	-57.0092	0.0000
LF. Spring Break.	0.0000	0.0000	3.9539	0.0001
LF. Rain.	-0.0031	0.0017	-1.8449	0.0658
BC. Tourism. Can.	-0.2662	0.0272	-9.7910	0.0000
BC. Employment.	1.1600	0.0728	15.9446	0.0000

E.3. Sunshine Coast - Vancouver

Table E.3: Sunshine Coast - Vancouver Model Output

Variable	Estimate	Std.Error	t-value	p-value
(Intercept)	8.4328	0.5907	14.2771	0.0000
Weeks.Peak.1	5.0032	0.1252	39.9473	0.0000
Weeks.Peak.2	-0.0302	0.0027	-11.0874	0.0000
Weeks.Shoulder.1	4.3914	0.2966	14.8081	0.0000
Weeks.Shoulder.2	-0.0452	0.0045	-10.0832	0.0000
Weeks.OffPeak.1	-0.4296	0.0796	-5.3956	0.0000
Weeks.OffPeak.2	0.5878	0.2256	2.6053	0.0095
Week53.DOW.Composition.1	4.9280	0.7656	6.4370	0.0000
Week53.DOW.Composition.2	-0.0414	0.0406	-1.0191	0.3088
Fares.	-0.3737	0.0726	-5.1465	0.0000
Cancelled. Capacity.	-0.0990	0.0766	-1.2930	0.1967
Snow.	-0.1036	0.0232	-4.4740	0.0000
LF. XMAS.	-0.0625	0.0518	-1.2067	0.2282
LF. Easter.	0.1110	0.0240	4.6299	0.0000
LF. Thanksgiving.	0.2381	0.0188	12.6427	0.0000
LF. Victoria Day.	-0.0843	0.0152	-5.5289	0.0000
LF. Labour Day.	-0.0574	0.0145	-3.9511	0.0001
LF. August LW.	0.0669	0.0103	6.5112	0.0000
LF. Family Day.	0.0554	0.0204	2.7080	0.0071
LF. Olympics.	-0.5476	0.0782	-7.0003	0.0000
Week 37.	0.0713	0.0698	1.0227	0.3071
Week 53.	-2.4659	0.1320	-18.6746	0.0000
LF. Spring Break.	0.0000	0.0000	-0.2696	0.7876
LF. Rain.	-0.0060	0.0019	-3.0851	0.0022
LF. SLA.	-0.0035	0.0066	-0.5406	0.5891
LF. Hourly Sailings.	0.0387	0.0159	2.4351	0.0153
BC. Tourism. US Int.	0.2511	0.0288	8.7076	0.0000
BC. Tourism. Can.	-0.0946	0.0411	-2.3028	0.0218
LF. Employment. Growth.	3.6203	0.7540	5.3145	0.0189

Appendix F: Long-Term Growth Rates

The use of econometric models was challenging on routes with lower traffic volumes as traffic patterns are less stable. Many of these routes also have limited availability of statistically meaningful economic variables. As a result, in place of econometric models for these routes, a combination of compound annual growth rates and least squares regressions were used to determine a range of historical growth rates. Long term growth rates were measured for periods of 26, 25, 20, 15, and 10 years. 26 years was chosen as the maximum as it was the first full year of operation after the last major expansion to the BC Ferries' route network, Route 30.

F.1 Compound Annual Growth Rate (CAGR)

CAGR is a smoothed growth rate between a chosen starting and end point. CAGR's calculate a smoothed growth over a long term period, while ignoring short term volatility. This is useful when looking at the long-term, but may lead to over or understating traffic growth in the short-term.

F.2. Ordinary Least Squares (OLS)

OLS is a standard regression methodology. The regression fits a line through a dataset that minimizes the total absolute distance between the line and the data points. The slope of the regression line is the long-term growth rate.

F.3. Output Summary

The calculated outputs from the two methodologies were compared. The highest and lowest long term growth rates were selected as reasonable bounds around the true long-term growth rate. These bounds are shown by route grouping in Table F.1:

Table F.1: Long Term Growth Rates

		F2020	F2021	F2022	F2023	F2024
Southern Gulf Islands Core (Routes 4,5,6&9)	High	100.0%	101.0%	102.0%	103.1%	104.1%
	Low		99.4%	98.8%	98.3%	97.7%
Sunshine Coast (Routes 7,13,17 &18)	High		100.8%	101.6%	102.3%	103.1%
	Low		99.4%	98.9%	98.3%	97.8%
Metropolitan Adjacent (Routes 8,12 &19)	High		101.3%	102.6%	103.9%	105.2%
	Low		99.2%	98.5%	97.7%	97.0%
Coastal Community Connectors (Routes 20,21,22,23,24,25 &26)	High		100.2%	100.5%	100.7%	100.9%
	Low		99.0%	98.1%	97.1%	96.2%
Northern (Routes 10,11 & 28)	High		101.0%	101.9%	102.9%	103.9%

Appendix G: Regulated Routes

REGULATED ROUTES	
MAJOR ROUTES 1 2 3 30	Tsawwassen – Swartz Bay Horseshoe Bay – Nanaimo Horseshoe Bay – Langdale Tsawwassen – Nanaimo
NORTHERN ROUTES 10 11 28	Port Hardy – Prince Rupert Prince Rupert – Skidegate Port Hardy – Mid Coast – Bella Coola
INTER-ISLAND ('MINOR') ROUTES 4 5 6 7 8 9 12 13 17 18 19 20 21 22 23 24 25 26	Swartz Bay – Saltspring Island Swartz Bay – Outer Gulf Islands Crofton – Saltspring Island Saltery Bay – Earls Cove Horseshoe Bay – Bowen Island Tsawwassen – Gulf Islands Brentwood Bay – Mill Bay Langdale – Gambier – Keats Islands Comox – Powell River Powell River – Texada Island Nanaimo Harbour – Gabriola Island Chemainus – Thetis – Penelakut Islands Buckley Bay – Denman Island Denman – Hornby Islands Campbell River – Quadra Island Quadra Island – Cortes Island Port McNeill – Alert Bay – Sointula Islands Skidegate – Alliford Bay

Appendix H: Validation Letter

**InterVISTAS
Consulting Inc.**

Suite 550
Airport Square
1200 West 73rd Ave.
Vancouver, BC
Canada V6P 6G5

TEL:
+1-604-717-1800

FAX:
+1-604-717-1818

OFFICES:
Canada
United States
United Kingdom
The Netherlands

www.intervistas.com
info@intervistas.com

26 September 2018

Alana Gallagher
Vice President and Chief Financial Officer
BC Ferry Services Inc.
Suite 500 – 1321 Blanchard Street
Victoria, BC V8W 0B7

Dear Ms. Gallagher:

Re: Forecasting Approach for BCFS traffic for PT5

This letter is in response to your request to review and comment on the general approach being used by BC Ferry Services Inc. (BCFS) to forecast ferry vehicular and passenger traffic for the upcoming PT5 Price Cap Review. I have divided my comments into two sections: one on the methodology used by BCFS and a second on the results.

Qualifications

I begin by briefly noting my qualifications. I have a PhD in economics from the University of Wisconsin, majoring in econometrics. I have been involved in forecasting traffic in transportation and utilities sectors since 1980. I was an advisor to Transport Canada in developing the methodologies it used for forecasting the aviation and maritime sectors. I was a professor in the transportation and logistics division of the Sauder School of Business at the University of British Columbia from 1983 to 1996, and have been an Adjunct Professor in several years subsequently. I co-founded the InterVISTAS Consulting Group in 1997, I am its Chief Economist and have served in various roles including Chief Operating Officer.

I note that I had produced a traffic forecast for BCFS for PT3, and reviewed the BCFS internally produced forecast for PT4.

Review of Methodology

The forecasting challenge for BCFS can be summed up as follow. After several decades of steadily rising traffic and relatively stable relationship of traffic with key variables such as population and GDP growth, the first two decades of this century witnessed traffic growth that was both negative at times and erratic. This trend began before the change in governance model for coastal ferry service in

British Columbia. Analysis undertaken for the PT3 price cap review found no one variable or collection of variables could explain the traffic development. This is something my company, InterVISTAS Consulting Inc., also observed in other intercity highway related traffic trends. In this post 2000 period, fuel price increases/decreases explained traffic changes in some years, but not others. The same was found for traffic drivers GDP, tourism arrivals and the regulated prices of BCFS services. The PT3 forecast used a traditional econometric based forecast as had been used by Transport Canada since the 1980s for maritime and aviation traffic and complemented it with a risk based analysis which is able to produce confidence ranges around the forecast. The results at the time showed relatively flat traffic projections into PT3, but with the central range of traffic outcomes embracing both some positive traffic growth as well as further stagnation.

For the PT4 forecast, BCFS made a fundamental change in the methodology used to forecast traffic, and it also decided to move from forecasting using quarterly or annual data, as was done for several decades for previous forecasts, to using higher frequency daily data. The use of daily data was intended to both provide for a richer data set on traffic which could utilize daily changes in capacity and promotional fares, and to provide management with a tool that could better allow it to project quarterly revenues for price cap compliance.

For PT4, BCFS decided to develop the short to medium term route traffic forecasts using a “structural time series model” methodology. This more complex technique is well founded in the statistical /econometric field, although not previously applied to ferry traffic. The key advantage to the method is that it does not treat the parameters/coefficients in the model as fixed, but rather allows them to evolve over time, which seems to better reflect developments in ferry traffic (and intercity highway traffic more generally). The company also sought to use as much data as possible, which meant daily traffic data on most individual routes.

Like the PT3 forecast, the PT4 forecast was for relatively flat traffic (vehicles – the main measure of vehicle ferry traffic) for the short and medium terms. However, in fact, traffic began to grow in PT4, back toward the previous 2008 systemwide peak levels, and bit more.¹ While the recent traffic into PT4 is up, it is still not back to the long term trends observed in the 1980-2000 period. Despite the recent growth in traffic, the medium term observation is that since the late 1990s, BCFS traffic has oscillated around a relatively flat traffic level. This pattern predates the 2003 change in BCFS governance model.

For PT5, BCFS decided to adopt a somewhat simpler specification, using weekly rather than daily data, focussing on the main traffic category (vehicles),² and analysing types of routes rather than individual routes. The model maintains the flexibility for parameters to evolve. It also uses a technique (Midas – mixed information data sampling) which allows use of data of different periodicities; some data is quarterly (e.g., GDP), some monthly, some weekly and some daily. The change from daily to weekly traffic data is not a major issue, as it still allows for a more granular analysis (compared to the quarterly data used in the earlier PT forecasts), but alleviates

¹ The forecasted traffic confidence range embraced increased traffic for PT4, but the most likely scenario was for relatively flat traffic.

² In its report, BCFS notes the high correlations between vehicle and other traffic categories, such as passengers.

computational issues faced in PT4's forecast with the daily data. The use of route groupings and how the routes were grouped is also sensible, as is the use of the MIDAS technique given the availability of the data for demand drivers such as GDP, which is not readily available at such granular (weekly) levels.

The BCFS forecast report does note an issue with the “endogeneity” of the price and traffic variables (as was present in the previous forecast). Endogeneity is a term of art in economics, indicating that the forecasted traffic level is jointly determined with price. This is a well-known issue/problem/challenge in econometric analysis and receives much attention in the classroom and in academic discussions. Regression methods such as ordinary least squares (OLS) are theoretically likely to result in biased coefficients. The BCFS report acknowledges this issue (which was also present in the PT4 forecast) but notes that in practice this could not be addressed for a number of legitimate reasons. As an applied econometrician, I note that the endogeneity issue is prevalent in transportation traffic forecasting across all modes of transport. However, concerns are greatly alleviated by BCFS' comparison of the PT5 analysis key results on fare elasticities to previous forecast results. The rough similarity of price elasticity estimates partially suggests that the endogeneity problem might be secondary or tertiary in importance.

In sum, I find that the methodology used by BCFS for its PT5 forecast is acceptable, well known among industry and academic econometricians/statisticians, and suitable for the BCFS case where past traffic drivers have lost their potency in explaining traffic evolution.

Review of the Results

First, I note that the estimation of the model is well documented by BCFS. They thoroughly discuss the model and provide background information on trends in the key traffic influencers, such as BC Employment, tourism, prices, population, major events that drive traffic, capacity provided by BCFS itself,³ and fares. Forecasting is not merely a numeric exercise at BCFS, but rather one steeped in broad based insight into key economic and demographic drivers.

I also note that an appropriate set of statistical tests on the estimated model have been conducted and these generally support the use of the model, hence use of the results.

Second, the key results on fare elasticity are sensible. The findings are that there is a consumer response to price increases or discounts, but this is of modest elasticity. This is consistent with past research on BCFS traffic and the effects of fare changes. I have also observed this in some other major North American coastal (or Great Lakes) ferry systems -- even where prices have not increased significantly, ferry traffic is declining or flat.

Third, to me the aggregation of routes into groups is sensible. The routes were grouped based on similar demographic and operating characteristics. This alleviated data availability issues faced in

³ Planned and unplanned capacity decreases (such as from maintenance) affects the amount of demand that can be accommodated and should be a factor in the econometric model based on historical data.

the PT4 forecast. Forecasting traffic on individual routes, some of which have low and highly variable traffic levels is problematic.

Fourth, the forecasts themselves seem reasonable.

- Following the identification of key traffic drivers and their associated forecasts, BC Ferries constructed core traffic forecasts for each of the route groupings. The forecasts are split into two components; the near term remainder of performance term 4 and the performance term 5 forecasts. The incremental traffic benefits from business initiatives, such as the fare flexibility initiative which enables the company to offer a range of discounted fares, were layered on top of the core traffic forecast to generate the final forecasts.
- As noted in the BCFS report, vehicle traffic grew to a record level in fiscal 2018, and growth is expected to continue, at a slowing rate, over 2019 and 2020. This will result in six consecutive years of positive traffic growth. At the same time, BC Ferries has limited ability to expand capacity as all vessels are in service during peak periods. As a result, there is limited capacity available to meet growing demand during peak periods which constrains traffic growth. Taking these factors into consideration along with indications that economic activity is plateauing, it is reasonable to assume BC Ferries will experience flat traffic growth through the end of performance term 5. BC Ferries acknowledges that the actual traffic experience in performance term 5 could be higher or lower; depending somewhat on factors that are beyond its control, such as the economy and tourism.
- Again, as noted by BCFS, the forecast for Victoria, Nanaimo and Sunshine Coast to Metro Vancouver show flat traffic; specifically, the most likely forecast is centrally located within a 25 to 75% probability band which includes both somewhat higher traffic growth and some probability for negative growth. This forecast band is consistent with actual BCFS traffic experience in the past two decades. These results validate BCFS' traffic forecast that is flat at 2020 levels for each year of performance term 5.
- For the remainder of the routes, a flat traffic forecast is also consistent with the historical record as the most likely scenario. However there is wide range of possible outcomes, dependent on factors such as whether the current near record economic expansion will continue or come to an end.

The forecasts are displayed with ranges and associated probabilities, reinforcing the notion that the future is inherently uncertain. The central forecast shows the most likely outcome, but traffic could materialise at higher or lower levels. The future is not certain and the BCFS forecast information reminds us of this.

Fifth, for some smaller routes, BCFS used a trend analysis. I am satisfied with this approach. Several decades of experience have taught me that any transport service with low levels of traffic and low service frequency becomes difficult to forecast as variations in behaviour of some consumers in some years do not always even out with other consumers. In statistics we refer to "the law of large numbers", which essentially says that the higher the traffic, the more reasonable will be estimated models and the consequent forecasts. The use of a long term trend analysis is a reasonable approach considering the modelling challenges.

Finally, I note that the traffic forecasts are contingent about what happens to fares in PT5. The current forecast is based on an assumption of between 0% and 3% increases in fares each year; this is a forecast of -3% to 2% in real (i.e., inflation adjusted) fares. As has been noted in the past, the overall level of BCFS fares in PT5 is a matter for the BC Ferry Commission to establish, based in large part on the level of support to be provided by the Province of British Columbia under the *Coast Ferries Act* and the services contract between the Province and BCFS. The current BCFS traffic forecast is contingent on an assumption of future allowed fare/revenue increases. The final forecast of PT5 ferry traffic will depend on the specific price cap established by the Commission.

To summarise, I find the model results to be reasonable and well documented.

Sincerely,

A handwritten signature in black ink that reads "MW Tretheway". The signature is written in a cursive, flowing style with a horizontal line underneath the name.

Mike Tretheway
Chief Economist