
British Columbia Ferry Services Inc.

Supplemental Filing with the
British Columbia Ferries Commissioner

Pursuant to
Orders 15-01 and 15-01A

For the
Fare Flexibility and Digital Experience Initiative

Pursuant to Section 55 (2) of the *Coastal Ferry Act*

August 24, 2016



**NOTE: IN THIS COPY OF THE FILING, INFORMATION OF A CONFIDENTIAL AND
COMMERCIALY SENSITIVE NATURE HAS BEEN REDACTED.**

CONTENTS

Section 1 – Introduction	3
Section 2 – Background.....	5
2.1 Overview	5
2.2 Objectives	6
2.3 Implementation.....	7
Section 3 – Procurement Update	8
3.1 Procurement Overview	8
Section 4 – Scope and Schedule Update	11
4.1 Original Scope	11
4.2 Revisions to Scope.....	13
4.3 Schedule Implications	15
Section 5 – Updated Project Budget.....	16
5.1 Full Software Upgrade (Option 2) Updated Financial Implications	16
5.2 Project Financing	21
5.3 Scenarios for Reducing Capital Expenditures	21
Section 6 – Risk Mitigation Update.....	22
6.1 Update on Public Acceptance Risk Mitigation	22
6.2 Update on Organizational Readiness Risk Mitigation	22
6.3 Update on Vendor Budget and Schedule Risk Mitigation.....	23
6.4 Update on Ace Program Synergy Risk Mitigation	23
6.5 Update on Internal Resource Availability Risk Mitigation	23
6.6 Update on Technical Complexity Risk Mitigation.....	23
Section 7 – Conclusion and Order Sought	24

Section 1 - Introduction

On December 2, 2014, British Columbia Ferry Services Inc. (“BC Ferries” or the “Company”) submitted an application (the “Application”) under section 55(2) of the *Coastal Ferry Act* (the “Act”) seeking the approval of the British Columbia Ferries Commissioner (the “Commissioner”) for the proposed major capital expenditures for the Fare Flexibility and Digital Experience Initiative (the “Initiative”).

On February 2, 2015, the British Columbia Ferry Commission (the “Commission”) issued Order 15-01 approving the Application with conditions. The Commission set a maximum amount of capital expenditure for the Initiative (the “Cost Cap”), as stated in confidential Order 15-01A.

Clause 1(c) of Order 15-01 provided that BC Ferries could commence the procurement process for the Initiative, but must not enter into a binding agreement until it satisfies the Commissioner that issues identified in the performance review of the parallel Automated Customer Experience (“ACE”) program, as they relate to the Initiative, have been addressed and that an appropriate, integrated information technology program management process is in place.

On September 17, 2015, the Commission confirmed that Clause 1(c) had been fully met, the first part having been demonstrated by the results reported May 11, 2015 by PricewaterhouseCoopers (“PwC”) arising from its follow-up review of the ACE program conducted for the Commission, and the second part having been confirmed by letter dated July 7, 2015 from PwC to the Commission in regard to its review of the inter-program coordination process supporting the various information technology capital projects.

BC Ferries determined to defer commencement of the procurement process for the Initiative until such time as Clause 1(c) was confirmed by the Commission as having been satisfied in full. Concurrently with the work done to develop the integrated information technology program management process, the Company took the opportunity to review the business requirements of the Initiative and to finalize the procurement strategy.

The Company initiated a negotiated request for proposal (“NRFP”) for the website content management and e-commerce software platform licenses and integration services (“website platform / integration”) component of the Initiative in September 2015. The pricing received through the NRFP process is higher than forecast. The Company has also taken the opportunity to revise other elements of the capital budget to reflect current information. As a result of these developments, an adjustment to the Cost Cap will be required in order for BC Ferries to proceed with the Initiative.

The higher forecast cost of the Initiative has not changed BC Ferries' views on the merits of proceeding with the Initiative. The Company continues to believe that the Initiative, with some modest amendments in scope, is reasonable, affordable and prudent, and meets the requirements of section 55 of the Act. The Company remains of the view that pursuance of the Initiative is in the best interests of taxpayers and fare payers as it will deliver the information technology elements and resources required for successful deployment of BC Ferries' *Fare Flexibility and Revenue Management Strategy* and *Digital Experience Strategy*. Together, these strategies are expected to enhance the customer experience, while generating financial benefits that will reduce pressure on future fare increases.

In summary, BC Ferries seeks an order permitting it to proceed with the Initiative based on a revised total budget for the Initiative of \$<> million, of which \$<> million is for operating costs.

As this filing is part and parcel of the original Application process, it should be considered in conjunction with the evidence filed as part of the original Application. This filing focusses principally on the differences that have resulted from the results of the NRFP process. In particular, this filing provides updated analysis, based on the NRFP results, that demonstrates that the Initiative continues to be reasonable, affordable, prudent and meets the other requirements of section 55 of the Act.

Section 2 - Background

2.1 Overview

BC Ferries intends to invest in the implementation of two key business strategies – *Fare Flexibility and Revenue Management Strategy* and *Digital Experience Strategy* – which will together modernize the way BC Ferries sets pricing, sells travel and manages capacity utilization of sailings. BC Ferries believes that these strategies will increase customer satisfaction, allow the customer more flexibility in selecting fare products, and enable a more optimal utilization of terminal and vessel capacity, which will reduce pressure on future fares.

As described in the Application, the Initiative will deliver the information technology elements required for the successful deployment of BC Ferries' *Fare Flexibility and Revenue Management Strategy* and the system-wide modernization of the Company's information technology platforms to support the *Digital Experience Strategy*. The Company believes that together, these strategies will drive a significant increase in customer use, transaction volumes and the amount of revenue collected from online self-serve channels.

The *Fare Flexibility and Revenue Management Strategy* sets out a new revenue management system for the purpose of managing fares and improving operational efficiency through better capacity management. This strategy envisages a change to the current business model on reserve-able routes such that, in the future, customers will be able to pay the full applicable fare in advance, without paying a separate reservation fee, and will have access to discounted fares subject to availability. This strategy will require the implementation of revenue management software ("Decision Support System") to manage fare availability over the booking life of a sailing.

By providing the means and the incentives for customers to purchase fares in advance of departure, the *Fare Flexibility and Revenue Management Strategy* is expected to drive a significant increase in online transactions. This increase necessitates a commercial strength e-commerce web platform envisaged as part of the *Digital Experience Strategy*. BC Ferries plans to replace its existing website and its rigid and inflexible platform with a new e-commerce site with commercial strength, multi-channel, secure e-commerce software that will enable purchases through a device of the customer's choosing – mobile, tablet or computer. Successful delivery of the *Digital Experience Strategy* will require BC Ferries to continuously deliver timely content, products and services through mobile devices and social channels. Both the new e-commerce site and Decision Support System will be consistent with industry standards in design and usability.

2.2 Objectives

As described in the Application, the principal objectives of the Initiative are to:

A. *Reduce Pressure on Future Fares and Improve Fare Affordability*

As envisaged by the two business strategies, the Initiative will enable generation of revenue by increasing both traffic and online ancillary purchases. In addition, BC Ferries will be better able to match capacity to demand, thereby reducing the number of additional sailings that are currently required. These outcomes will reduce pressure on future fares, improving affordability.

B. *Improve the Customer Experience:*

The Initiative will improve customer satisfaction by providing customers with:

- An exceptional e-commerce experience with access to timely and relevant information, the ability to research, compare prices, and purchase travel, on-board amenities, accommodation, vacations, and other ancillary components from anywhere, at any time, from the device and channel of their choosing;
- A choice of easy-to-understand fare products, including discounted fares and the ability to book and pay for a specific sailing in advance without paying a separate reservation fee; and
- Greater certainty that they will be able to travel on the sailing of their choice.

C. *Replace the Existing Platform:*

The Initiative will replace the current aged website platform with one that can provide a modernized and robust foundation for the successful delivery of key business strategies.

2.3 Implementation

The Company plans to implement the Initiative in phases:

- The first release will be focused on implementing a new e-commerce platform with streamlined content on a new multi-channel web content management system. This will deliver content on both traditional and mobile devices.
- The second release will implement a single cart purchasing flow with the capability to sell ferry travel, vacations, commercial services and onboard amenities.
- The third release will implement the Decision Support System needed for the *Fare Flexibility and Revenue Management Strategy*.

Concurrently, the Initiative will deliver two mobile applications: one with functionality to view schedules, terminal and vessel information and to manage reservations, and the other for use by commercial drop-trailer customers to track the movement of their trailers. These releases are aligned with, and will leverage, the functional capabilities rolled out by the Automated Customer Experience (“ACE”) program, a parallel program delivering new middleware and back-end software, hardware and development platforms using a multi-year, multi-phased approach.

Once BC Ferries launches the e-commerce site and has the new systems in place, it will initiate a phased roll out of the new revenue management approach across reserve-able routes. This is anticipated to drive an increase in both traffic and revenue, which will reduce pressure on future fares and improve the overall customer experience. The implementation will begin with the Major Routes¹ and then extend to all other currently reserve-able routes.

An important component of the Initiative will be the ongoing engagement with BC Ferries’ customers and internal stakeholders on the specifics of the user interface experience, and fares. This work commenced as part of the development of the two strategies, and will continue throughout the implementation of this Initiative.

¹ The Major Routes consist of three regulated routes connecting Metro Vancouver with mid and southern Vancouver Island (Route 1: Swartz Bay – Tsawwassen; Route 2: Departure Bay – Horseshoe Bay; Route 30: Duke Point – Tsawwassen) and one route connecting Horseshoe Bay and Langdale (Route 3).

Section 3 - Procurement Update

BC Ferries' request to the Commissioner for initial approval of the Initiative, by necessity, preceded the procurement processes in order that meaningful and responsive proposals could be obtained from potential vendors. As a result, at the time of Application, it was envisaged that further process with the Commissioner may be required based on the results of the procurement process.

3.1 Procurement Overview

As described in the Application, three distinct tenders are being pursued as part of the Initiative. The status of each is described below.

3.1.1. Website Platform / Integration

As described in the Application, there are a number of software and integration vendors in the marketplace capable of delivering multi-channel web content management/e-commerce solutions, as well as firms that specialize in multi-channel user experience/interface design and mobile applications. Given the complexity of the marketplace and the number of solutions and solution providers in the market, the Company looked to procurement strategies which would minimize risk while still meeting the original objectives of acquiring web platforms and solutions that are "main-stream" and similar to those commonly in use, delivering functionality "out-of-the-box" or by configuration/extension, with a minimum amount of customization required. Certainty on cost is a key objective of the procurement process, with a fixed price contract for major elements of the Initiative viewed as an important outcome.

At the time of the Application, the Company envisaged pursuing a traditional procurement process for the website platform/integration elements of the Initiative involving the issuance of a request for proposal ("RFP"). Further study suggested that this approach could lead to a situation where the "right" integrator but the "wrong" solution (or vice-versa) could arise, with the Company having little or no leverage to achieve the optimal integrator/solution mix while minimizing risk to scope/schedule and/or budget. The Company sought advice from a procurement expert as to how best to achieve the flexibility it sought while minimizing the risk to the Initiative through change requests. The determination was that a negotiated request for proposal ("NRFP") process would be the best approach to meet the Company's major procurement deliverables.

While a more complex and time-consuming process “up-front”, the advantage of the NRFP process is that it tests the market at the initial stage, allowing the Company insight into the capabilities of multiple vendors and solutions at an early stage while maintaining flexibility to reduce the number of vendors at various stages. The process also allows flexibility “post-selection” to permit modifications to the original scope through confirmation of requirements as well as flexibility to optimize the integrator/solution mix prior to the final agreement. This process not only ensures the probability of securing the best systems integrator and the best software package is maximized but reduces the likelihood of negative impacts to scope, schedule or budget once the project proceeds.

The NRFP process for the Initiative comprised the following stages:

- *Stage 1 – Request for Pre-Qualification (“RFPQ”)*
The RFPQ was issued on September 4, 2015 and resulted in 61 potential proponents expressing initial interest, from which 16 formal responses were received. At the conclusion of the RFPQ stage, four proponents were shortlisted and invited to participate in Stage 2.
- *Stage 2 – Full Proposal Request*
The request for full proposal was issued October 19, 2015 to the four proponents shortlisted at the RFPQ stage. Proposals were received from all four proponents. Proponent meetings, including presentations and live demonstrations by the proponents of their proposed system solution occurred in this stage.
- *Stage 3 - Proposal Verification*
Verification of top ranking proposals occurred at this stage, which commenced January 4, 2016. At the conclusion of this stage, the Company determined that the top two proponents had submitted proposals of sufficient quality to proceed with the NRFP process. Over the course of the following weeks, the Company settled on the preferred proponent.
- *Stage 4 – Contract Negotiations*
The Company commenced non-binding contract negotiations with the preferred proponent on May 24, 2016. Two principal contracts have been negotiated, one for systems integration and the other for licenses, maintenance and support. The terms of the contracts have been finalized. BC Ferries’ intent is to execute the contracts once approval to proceed with the Initiative, inclusive of the adjustment in the Cost Cap, is received from the Commission.

3.1.2. Website User Experience / User Interface Design and Testing

In the Application, the Company described its intent to issue a RFP for the website, mobility and social media user experience, user interface design, usability testing services (“Website UX/UI”). As described earlier, the Company proceeded with a NRFP. Based on the proposals received, mobile applications has been removed from the scope of the primary contract and will be handled separately, as described in section 4.2 below.

3.1.3. Decision Support System Procurement

As described in the Application, the Decision Support System will enable the implementation of revenue management and the inventory controls envisaged in the *Fare Flexibility and Revenue Management Strategy*. The Company is proceeding with a two-stage procurement process for the Decision Support System:

- *Stage 1 – Request for Information (“RFI”)*
An RFI was issued on August 23, 2013 to five potential proponents. Non-binding responses were received from three potential proponents. Since the RFI was issued, a further three vendors expressed interest and several other potential vendors were identified by the Company.
- *Stage 2 – Request for Proposal*
The RFP was issued on August 23, 2016 to six potential proponents. Concurrently, the RFP was posted on the Company's public procurement website to ensure maximum exposure. The RFP closes on September 23, 2016.

Section 4 - Scope and Schedule Update

Since the Application was submitted, BC Ferries has undertaken a comprehensive process to review and revalidate the functional requirements of the Initiative. This process was undertaken in the period April through June 2015, and through it, BC Ferries' reconfirmed its view that the scope of the Initiative as set out in the Application, with modest amendments, continues to support the achievement of the objectives of the Initiative in a reasonable, affordable and prudent manner. The original scope and the proposed amendments are described below, as is the updated schedule of the Initiative.

4.1 Original Scope

The original scope of the Initiative, as described in the Application, consisted of four discreet releases each building upon the other to provide a stable, agile and extensible platform to deliver the information technology elements required for successful deployment of BC Ferries' *Fare Flexibility and Revenue Management Strategy* and the system-wide modernization of the Company's information technology platforms to support the *Digital Experience Strategy*.

Release 1 – Mobile Applications: The first release was envisaged as enabling the delivery of two mobile applications, the first being an application for customers with functionality to view the schedules, terminal and vessel information, as well as functionality to make and manage reservations; and second being an application for commercial drop trailer customers with functionality to track the movement of their trailers, including trailer status and estimated time of arrival, as well as to configure and view alerts and service notices.

Release 2 – Web Content Management: The second release encompassed the implementation of a new website concept on a multi-channel web content management system with supporting administrative tools. This would provide dedicated landing pages and streamlined multi-channel content for each of the Create Travel, Experience, My BCF Account, Commercial, Travel Agents and Tour Operators, and Corporate streams described in the new website concept.

- *Create Travel* - would link to the current website reservations flows. Release 2 would have brought forward linkages to the existing Vacations website and online Gift Shop and would have included upgrades to the Release 1 mobile applications.

- *My BCF Account* - The current web account flows would be migrated to this section on the new platform and streamlined for multi-channel access.
- *Experience* - would include expanded vessel, terminal and on-board amenities content.
- *Commercial and Partner Travel Agents and Tour Operators* - would be implemented largely based on streamlined content found in the current website.
- *Corporate* - corporate content on the current website would be re-implemented on the new platform. The legacy Release Centre, Business Opportunities, and Career Opportunities applications in the current website (including the administrative functions), would also be re-implemented on the new platform, thereby retiring these applications.

Release 3 – E-Commerce Engine: The third release encompassed the implementation of a single purchasing flow and shopping cart for ferry travel, vacations and on-board amenities, and the ability to up-sell on the selected multi-channel e-commerce platform. It would fully support functionality to deliver:

- Self-serve advanced purchase tickets;
- Pricing comparison tools that allow customers to quickly compare the cost of different itineraries and fare products;
- Personalization of purchasing flow content; and
- Offers based on a customer relationship management customer profile and purchase history.

This release and the supporting infrastructure was envisaged as being performance tested to ensure that it can accommodate significantly higher transaction volumes expected once online advance purchase of tickets is made available. This release was also envisaged as providing functionality for:

- Traveler ratings, testimonials, and social media integration;
- Improved change travel options;
- Tools for analytics, merchandising, customer feedback and surveys;

- Revamped web forms and workflow based on customer relationship management;
- Live commercial bookings, including bulk booking capability and change flows;
- Tour operator bookings (excluding bulk booking capabilities), and
- Mobile application upgrades.

It was envisaged that the implementation of this release on the new e-commerce platform would allow full retirement of the legacy Oracle ADF 10 development platform and Oracle 10g middleware platforms.

Release 4 – Decision Support System: The fourth release encompassed the implementation of the Decision Support System to enable the revenue management and inventory controls envisaged in the *Fare Flexibility and Revenue Management Strategy*. It was envisaged as including the implementation of the necessary automated interfaces with the booking system. In the six months prior to this release, BC Ferries would work with a vendor to design its control parameters and prepare the initial data set.

4.2 Revisions to Scope

The Company plans to implement the Initiative in the four releases as contemplated in the Application. However, the launch of the mobile applications will be deferred to a later phase, rather than being the first deliverable of the Initiative. In addition, scope reductions in Releases 2 and 3 related to the Company's vacations, accommodation and activities booking application and the proposed payment card management services are envisaged. These changes are further described below.

- *Mobile Applications*

As described in the Application, the original plan was to launch full “native” mobile applications to support the existing website as the first release of the Initiative and then, later, to rework that applications to function with the new e-commerce website when it was implemented. A “native” application is a program that has been developed for use on a particular platform or device. Because native applications are written for a specific platform, they can interact with and take advantage of operating system features and other software that is typically installed on that platform (e.g. Apple iOS, Google Android).

At the time that the Application was submitted, the leading trend within industry was overwhelmingly in favour of native applications. Over time, however, it has become clear that the cost of developing and then maintaining native applications is high, particularly in light of new solutions that have become available, such as responsive web design and hybrid applications that lower the total cost of ownership.

Through the verification stage of the NRFP process, it was confirmed that the market has matured in the intervening period since the Application, and that options not originally considered may provide the Company with an effective solution as noted above. Consequently, it has been determined that delivery of mobile applications would be better re-aligned to go-live after the e-commerce website is functional. This will save on costs by eliminating re-work, potentially reducing development and maintenance costs while continuing to meet the business needs.

In addition, the change in sequence for the mobile applications permits BC Ferries to explore all options available through the use of the selected software platform up to and including native applications. The Company will look to meet all business needs in the most cost-effective manner available, noting that the optimal solution may continue to be the implementation of full native applications.

- *Travelink*

The scope of Release 3, as originally contemplated, included a sizeable element related to enabling integration with the Company's vacations, accommodation and activities booking application ("Travelink"). The scope of the Initiative has been optimized to reduce complexity and costs by shifting some functionality from Travelink to the selected software platform, with Travelink being used purely as a database to hold inventory and availability for hotels and related amenities.

- *Card Management Services*

Release 2, as originally contemplated, included some scope elements related to the requirements for payment card management services that were to be ready for implementation in conjunction with the second phase of the ACE program. While these elements continue to be viewed as important, they have been removed from the scope of the Initiative and will be incorporated into the second phase of the ACE program. When card management services are implemented, the e-commerce website will support access to these services.

4.3 Schedule Implications

The Company indicated in the Application that the timeframes and milestone dates for the Initiative would be further reviewed, and possibly adjusted, once the tendering process was complete. The schedule for the Initiative has now been amended. The revisions to the milestone dates are set out in Table 1. The schedule is subject to further refinement as the Company continues to pursue opportunities to tighten the timeline, without negatively impacting cost or adding undue risk in the achievement of the core deliverables of the Initiative.

Table 1: Updated Schedule

Phase	Original Milestone Dates	Revised Milestone Dates
Release 1 <ul style="list-style-type: none"> Mobile applications (available for use) 	April 2016	TBD
Release 2 <ul style="list-style-type: none"> Multi-channel web content management (available for use) 	October 2016	November 2017
Release 3 <ul style="list-style-type: none"> E-Commerce, single cart (available for use) 	February 2017	February 2018
Release 4 <ul style="list-style-type: none"> Revenue management decision support (available for use) 	March 2017	March 2017

As described above, it has been determined that delivery of mobile applications would be better realigned to go-live after the e-commerce website is implemented. Timing for the delivery of the mobile applications has yet to be determined.

The schedule for the core deliverables of the Initiative, Release 2 – web content management and Release 3 – e-commerce engine, have been delayed 13 months and 12 months respectively, primarily as a result of the extended time required to complete the procurement process for the website platform/integration services. The procurement process took 10 months to complete.

Implementation of the revenue management Decision Support Software, which is not dependent on the web or mobile application work-streams, is planned to proceed as per the original schedule.

Section 5 - Updated Project Budget

Three options for the website software upgrade were presented in the Application:

- Option 1: Oracle software platform upgrade only
- Option 2: Full software upgrade
- Option 3: Status quo

Maintaining the status quo (Option 3) was not considered a viable option, given the inflexibility and technical issues associated with the current website software platform.

Option 1 was considered the minimum required to continue maintaining the current web-based services for BC Ferries' customers, but was not recommended as it would not support the business strategies put forward in the Initiative, nor would it produce the benefits anticipated from the associated strategies. The Company has no reason to believe that the financial implications of Option 1 relative to the preferred option have changed in any material respect since the Application was filed. Accordingly, the financial analysis of this option as set out in the Application has not been updated.

Option 2 was identified as providing the necessary software platforms and tools to enable the full implementation of the business strategies put forward in the Initiative, and was presented as BC Ferries' preferred option. By Order 15-01, the Commissioner conditionally approved this option. BC Ferries has updated the financial analysis of this option to reflect the results of the procurement process for the website platform/integration services. The Company has also taken the opportunity to revise other elements of the capital budget to reflect current information. Based on the results of the updated analysis, BC Ferries concludes that the Initiative remains reasonable, affordable and prudent.

5.1 Full Software Upgrade (Option 2) Updated Financial Implications

The key financial assumptions articulated in section 2.1 of the Application have been updated to reflect the following:

- The inflation factor for tariff revenue has been amended to 1.9 percent, reflecting the Commissioner's price cap determination for performance term four; and
- The investment life has been modified to reflect lower future capital costs, given the technology and useful life of the web platform being proposed.

Further updates to the financial analysis have been made, inclusive of the following:

- Higher base traffic levels reflecting growth experienced since the Application was filed;
- Higher combined capital costs for external integration and software licenses, maintenance and support reflecting the procurement process outcome; and
- Updates to various line items based on more recent information.

Consistent with the Application, the ranges for the net present value (“NPV”) analyses have been updated based on incremental traffic growth scenarios of 3 percent and 5 percent (see Table 2), as follows:

- The 3 percent scenario is based on full traffic growth by year three of the Initiative on the Major Routes, and four years on all reserve-able routes. This growth rate is deemed the minimal growth rate obtainable based on industry benchmarks and operational and regulatory considerations. The growth rate per annum has been updated to acknowledge that the current planned launch date of April 2018 provides a better opportunity to leverage the busy summer season earlier in year one. The Application contemplated a fall launch date.
- The 5 percent scenario is based on the same growth rate over the first three years of the Initiative followed by two years of further growth, with the full 5 percent achieved by year five. This growth rate is deemed to be the upper range of outcomes considered achievable, and within the range of benefits achieved by benchmarked companies.

**Table 2: Updated Traffic Growth Scenarios
(13-year NPV)**

Incremental Passenger Vehicle and Passenger Traffic Growth on Reserve-able Routes					
Initiative Year	Year 1	Year 2	Year 3	Year 4	Year 5
Targeted Routes	1, 2, 3, 30	1, 2, 3, 30 plus 9, 10, 11, 17			
3% Traffic Growth Scenario					
Application \$10.5M NPV	0.75%	1.50%	3.00%	3.00%	3.00%
Current Forecast \$19.7M NPV	1.00%	2.00%	3.00%	3.00%	3.00%
5% Traffic Growth Scenario					
Application \$33.5M NPV	0.75%	1.50%	3.00%	4.25%	5.00%
Current Forecast \$54.0M NPV	1.00%	2.00%	3.00%	4.00%	5.00%

As described in the Application, the positive NPV results are based on a phased rollout of the *Fare Flexibility and Revenue Management Strategy* across reserve-able routes; the Major Routes only in the first year and extended to all other reserve-able routes in the following year. This rollout plan is highly dependent on the implementation of the ACE program, which to date is progressing on schedule.

The forecast incremental revenue growth is higher than projected in the Application. Incremental tariff revenue growth from this option, at maturity, is estimated in the range of \$11.4 million to \$19.8 million, arising from anticipated growth in traffic. As well, there is an anticipated increase in ancillary revenue attributed to the implementation of a multi-channel e-commerce single cart purchasing flow. The forecast has been updated to reflect fiscal 2016 traffic levels, which are higher than the fiscal 2013 base traffic levels incorporated in the Application.

To support this level of revenue growth, incremental costs, at maturity, estimated in the range of \$<> million to \$<> million will be mainly incurred in the following areas: Customer Service Centre, terminal operations, credit card fees, and systems maintenance and support. These costs are similar in magnitude to those projected in the Application with some refinement to reflect the updated traffic base.

As described in the Application, opportunities exist to further improve the NPV by introducing a pricing strategy that encourages customers to book online rather than by telephone to the Customer Service Centre, which would reduce Customer Service Centre costs. This could be achieved by providing some incentives for online booking, including ensuring the ease of use of customer self-serve tools available online.

This option also provides a solid foundation for expansion of future sales opportunities with the integration of the online Gift Shop into the single cart purchasing flow and the future expansion of business-to-business commerce interfaces to new partners and resellers should BC Ferries wish to do so.

Summary

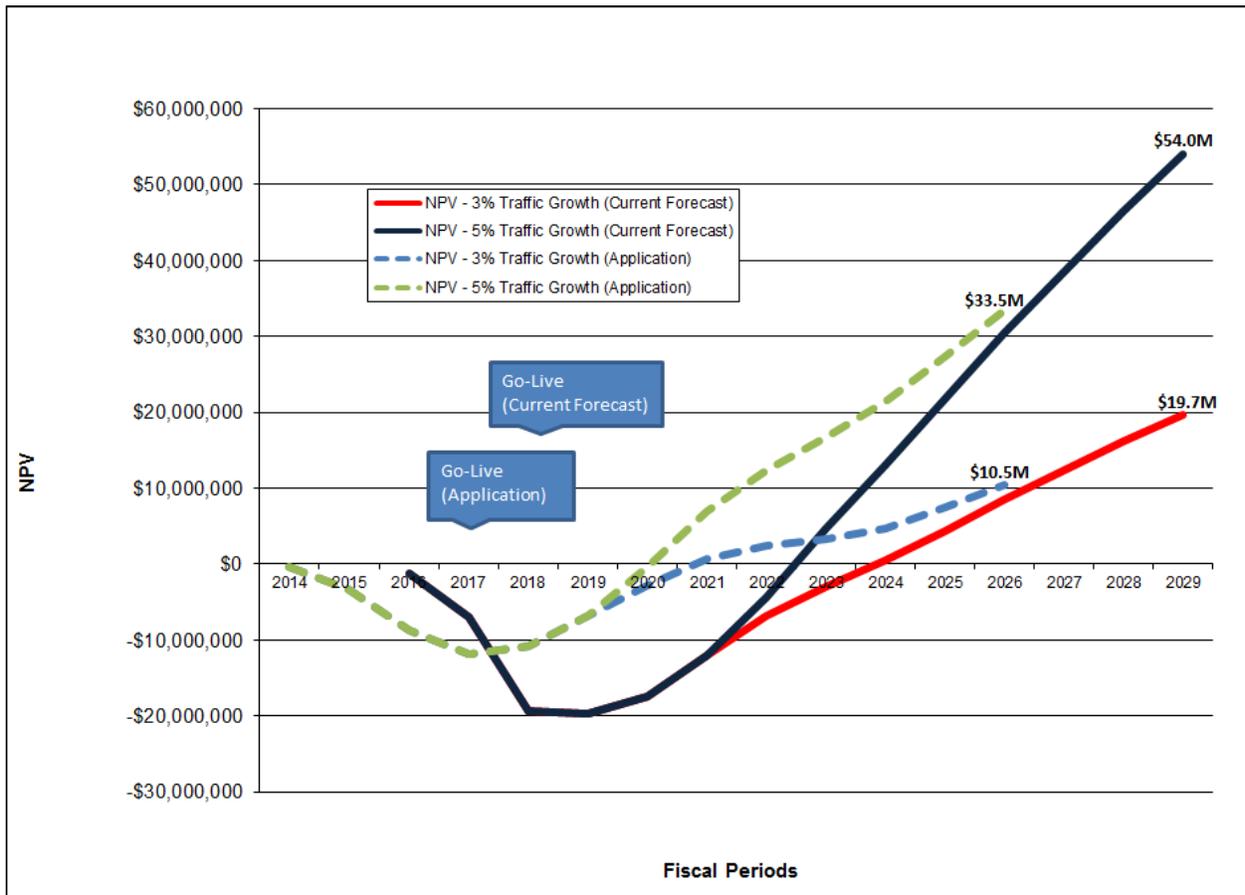
The updated financial implications of this option are summarized in Table 3 and shown in Figure A. As shown, the capital cost of this option is forecast to be higher than estimated in the Application. This reflects, primarily, the results of the procurement process for the website platform/integration services. A modest increase in operating costs is also projected. Despite the higher costs, the option continues to generate a positive NPV, with the projected 13-year NPV showing a marked improvement to the forecast in the Application. The principal reason for this improvement is the ability to avoid a full website renewal in the 13-year period as a result of the type of web platform being proposed by the vendor.

Given the continued prospect of a positive return on the proposed investment, the Company continues to believe there is significant merit in proceeding with this option as a means of improving the customer experience and generating incremental revenue that will help to reduce upward pressure on future fares.

Table 3: Updated Financial Implications

Option 2	Project Costs		Total Project Costs (incl. IDC)	4-year Post Implementation Net Present Value	13-year Net Present Value
	Capital	Operating			
Application	\$<> M	\$<> M	\$<> M	\$0.7 M to \$7.0 M	\$10.5 M to \$33.5 M
Current Forecast	\$1<> M	\$<> M	\$<> M	(\$6.9 M) to (\$4.4 M)	\$19.7 M to \$54.0 M

**Figure A
Updated Cumulative NPV**



5.2 Project Financing

BC Ferries plans to finance the Initiative, along with other forecast expenditures in its \$3.1 billion long term capital plan approved by the Commissioner, through a combination of cash flow generated from operations and issuance of incremental debt. The Company will not seek an extraordinary price increase under section 42 of the Act to accommodate the higher required capital expenditure to conduct the Initiative, nor will it seek an enhancement to the approved capital plan. The Company will take a risk-based approach in reviewing and reprioritizing the projects within the capital plan, including reducing scope and possibly cancelling of low priority projects.

5.3 Scenarios for Reducing Capital Expenditures

BC Ferries continues to believe that the proposed capital expenditure for the Initiative is reasonable and prudent. In light of the higher pricing received through the NRFP process, the Company has carefully considered all scope assumptions of the Initiative. As described in section 4.2 above, the Company has determined that certain scope adjustments related to the Company's vacations, accommodation and activities booking application and the proposed payment card management services can be made without significant negative impact on the achievement of the objectives of the Initiative. In addition to these, the Company has considered at a high level, the option of utilizing a Software as a Service ("SaaS") solution. Preliminary analysis indicates that, while the upfront capital cost of a SaaS solution may be lower, the total lifecycle cost will be considerably higher. There are no other obvious opportunities to reduce the proposed capital expenditure. Accordingly, the Company believes it is prudent to proceed with the Initiative as contemplated in the Application with the amendments to scope set out in section 4.2 above.

Section 6 - Risk Mitigation Update

The Company has a rigorous process in place to identify, monitor and address the risks of the Initiative. A detailed risk matrix and methodology for the Initiative has been developed and updated as planning for the Initiative has proceeded.

In the Application, BC Ferries identified the following key risks associated with the Initiative:

- Public acceptance of new business model;
- Organizational readiness;
- Selected vendor proposal budget and schedule impact;
- ACE program synergy;
- Internal resource availability; and
- Technical complexity issues.

The risk matrix for the Initiative lists these and multiple detailed risks in each of these risk categories. The risks considered highest as at the date of this filing continue to be those described in the Application. The current and planned mitigation strategies to address these risks are set out below.

6.1 Update on Public Acceptance Risk Mitigation

As described in the Application, there is a risk that customers may be slow to embrace the new advance purchase model as anticipated, resulting in lower traffic and/or revenue. Several mitigation strategies to address this risk were identified in the Application. Since that time, further research and analysis supports the acceptance of the new advance purchase model and the mitigation strategies identified.

6.2 Update on Organizational Readiness Risk Mitigation

BC Ferries described in the Application that there exists a risk that the Company and its employees will not be ready to deliver the large change in business process arising from the Initiative. The Company has taken significant steps to mitigate this risk since the Application was filed. The extensive organizational readiness effort for the ACE program has been leveraged to include the Initiative, thereby significantly raising the awareness of the Initiative within the Company.

6.3 Update on Vendor Budget and Schedule Risk Mitigation

Subsequent to the Application, a robust NRFP process has been conducted, and fixed price contracts have been concluded (subject to the successful outcome of this filing) for software licenses and the integration services of a tier one integrator, including a robust statement of work. These actions have significantly mitigated this risk.

6.4 Update on Ace Program Synergy Risk Mitigation

As required by the Commissioner, the Company has implemented a significant portfolio oversight process. The portfolio oversight representative is, among other things, developing a portfolio roadmap. This work will identify deliverables for both the ACE program and the Initiative, and determine where interdependencies exist so that these can be managed at the portfolio level, thus mitigating this risk.

6.5 Update on Internal Resource Availability Risk Mitigation

The Company maintains a significant resource plan for the ACE program, which is updated quarterly. As the Initiative project plan is finalized, the resource plan will be updated to incorporate the impact of the Initiative.

6.6 Update on Technical Complexity Risk Mitigation

As indicated earlier, the Company has negotiated a fixed price contract with a tier one integrator for the implementation of all software solutions under the Initiative, excepting the Decision Support System and mobile applications. This contract (which is subject to the successful outcome of this filing) will significantly mitigate this risk.

Section 7 – Conclusion and Order Sought

BC Ferries respectfully requests that the Commissioner issue an order supplemental to Order 15-01A approving a major capital expenditure for the Fare Flexibility and Digital Experience Initiative of up to \$<> million, inclusive of interest during construction and supplemental costs of up to \$<> million, for a total expenditure for the Initiative of up to \$<> million.

BC Ferries submits that the proposed capital expenditure is reasonable, affordable, prudent, and is consistent with the Company's current 4-year and 12-year capital plans approved by BC Ferries' board of directors, and the current Coastal Ferry Services Contract.

The Company continues to believe that implementation of the Initiative will increase customer satisfaction while generating financial benefits that will contribute positively to the financial performance of the Company and reduce upward pressure on future fares across all routes in the coastal ferry system.