Analysis of BC Ferries' Drop Trailer Service

BC Ferry Commission

August 2016

Note: This report has been redacted such that information of a confidential and commercially sensitive nature is not included.

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Notice to Reader

This Report is issued by PwC for the exclusive use of the BC Ferry Commission in connection with its review of British Columbia Ferry Services Inc.'s ("BCFS") drop trailer service under Section 45.1(1) of the Coastal Ferry Act (the "Act").

Our work did not constitute an audit conducted in accordance with generally accepted auditing standards, an examination of internal controls nor attestation nor review services in accordance with the standards established by the Chartered Professional Accountants of Canada. Accordingly, we do not express an opinion nor any other form of assurance on the financial or other information, or operating internal controls, of the BCFS drop trailer service.

PwC did not examine, compile or apply agreed upon procedures to satisfy the requirements of the Chartered Professional Accountants of Canada to the financial information used in this Report and we therefore are unable to express assurances on such information except where expressly stated in the Report to form part of the scope of our work.

Further this Report does not constitute an opinion as to legal matters, including the interpretation of the Coastal Ferry Act or any other similar matters.

Our work is based primarily on the information and assumptions listed in the body of this Report. While we read information from various sources we did not perform checking or verification procedures except where expressly stated in the Report to form part of the scope of our work. Our work and commentary is subject to assumptions, which may change with the benefit of further detailed information. We make no representation regarding the sufficiency of our work and had we been asked to perform additional work, additional matters may have come to our attention that would have been reported to the BC Ferry Commission.

Some of the documents and figures we reviewed were produced by third parties. We did not corroborate or verify these documents and figures with these parties. It is outside the scope of our review to evaluate the methodology used to conduct independent studies; therefore, we have accepted the information as presented, including conclusions.

The outputs of the Report are intended to provide the BC Ferry Commission with information to assist in informing their decision making process pertaining to the regulations of BCFS' drop trailer service. PwC accepts no liability in respect of any loss, damage or expense of whatsoever nature caused by any use the reader may choose to make of this Report, or which is otherwise consequent upon the gaining of access to the Report by the reader.

Our Report, including schedules and appendices, must be considered in its entirety by the reader. Selecting and relying on specific portions of the analyses, or factors considered by us in isolation may be misleading.

Background

In April 2003, the Province of British Columbia (the "Province") established the B.C. Ferry Authority, an independent corporation that holds the single issued voting share of British Columbia Ferry Services Inc. ("BC Ferries" or "BCFS").

The Office of the BC Ferries Commissioner (the "Commission or Commissioner") is a regulatory agency operating under the Coastal Ferry Act (British Columbia) ("Act"). The Commission's mandate includes regulation of price caps for ferry fares, monitoring the compliance of BCFS to the Coastal Ferry Services Contract ("CFSC"), and approvals of major capital expenditures.

BCFS commenced drop trailer services in October 2009 enabling commercial customers to drop off their semi-trailers full of goods at one of the BCFS terminals and to pick up their trailers on the other side of the route. In the drop trailer service, hostling units haul the trailers onto vessels. This service is in contrast to the live trailer service where truckers drive directly onto vessels.

The Act was amended in June 2010 whereby the Commission became responsible for regulating unfair competitive advantage, initiating searches for Alternative Service Providers, monitoring of the customer complaints process and for considering the interests of ferry users in the regulation of ferry operators.

More specifically, Section 45.1 of the Act required the Commission to determine whether BC Ferries was operating a competitive service and, if so, determine whether the competitive service was:

i. pricing below direct costs and an appropriate proportion of indirect costs associated with providing the service; and
ii. at an unfair competitive advantage, including but not limited to:
    a) the use of, access to, or ownership of vessels or terminals that are or had been owned by the government or a government body within the meaning of the Financial Administration Act;
    b) any tax exemption; and
    c) any subsidy.

If the Commission found that BCFS' drop trailer service was a competitive service and is priced below cost, or had an unfair competitive advantage over other companies' drop trailer services, it must order BC Ferries either to (a) handle drop trailers through an alternative ferry service provider, or (b) charge a Commission-specified minimum tariff for them.

On July 19, 2010 the Commission found (in Memorandum 37) that the drop trailer service was a competitive service as defined in the Section 45.1 of the Act. The drop trailer service offered by BC Ferries on its major route group was substantially similar to services being provided by Seaspan Coastal Intermodal Company ("Seaspan") and Van Isle Barge Services Limited ("Van Isle"). These companies provided drop trailer services across Georgia Strait between terminals near to those of BC Ferries. They were sufficiently near BC Ferries' terminals that the Commission considered that BC Ferries' drop trailer service to be in competition with Seaspan and Van Isle. Accordingly the Commission found that BC Ferries' drop trailer service on its major routes across Georgia Strait was a competitive service as defined in Section 45.1 of the Act. The findings in Memorandum 37 triggered a requirement for the Commission to make certain determinations under Section 45.1 of the Act.

The Commission subsequently began a review of BCFS' drop trailer service as it related to Section 45.1 of the Act. On February 7, 2011 the Commission issued Order 11-01 and Memorandum 42 (together, the "2011 Drop Trailer Decision") determining that BCFS was pricing its drop trailer services below cost and that BCFS had an unfair competitive advantage. The Commission decided to regulate BCFS through a drop trailer minimum allowed average tariff ("MAAT"). Based on those determinations, the Commission ordered:

- The drop trailer MAAT was set in fiscal 2012 and changed each subsequent fiscal year by a consumer price index adjustment;
- Beginning in fiscal 2012, BCFS shall report quarterly to the commission the quarterly total revenue from its drop trailer tariff on the major routes and the number of vessel-feet occupied (land feet occupied by drop trailers and their hostler units);
- BCFS is required to ensure that the average revenue per vessel-foot for the quarter, shall not be less than the MAAT; and
- When the drop trailer volume exceeds a certain rate of vessel-fee per year, or at the discretion of the commissioner, the minimum tariff will be reset in light of experiences with actual costs and drop trailer volumes.

During 2015, BCFS' drop trailer service reached the volume specified in Order 11-01. The Commission on December 2, 2015, invited interested parties to submit comments on BCFS' drop trailer services. Submissions were received from eight interested parties, including BCFS and Seaspan. The Commission will take all comments into consideration in making certain determinations under Section 45.1 of the Act.

Scope of Work

PwC was asked to assess BCFS's compliance with the MAAT and to provide analysis and decision support to the Commission in their determinations related to Section 45.1 of the Act. In order to do so, we have:

Scope	Approach
1. Review of the Act, Commission's Orders and Memorandums, and filings related to the drop trailer service	• Reviewed the Act, Order 11-01, Memorandum 37 and Memorandum 42 • Reviewed BCFS' filing regarding Section 45.1(1) of the Act and Drop Trailer Service dated August 31, 2010 • Reviewed MAAT calculation methodology in the 2011 Drop Trailer Decision
2. Compliance review of BCFS' quarterly MAAT filing spreadsheets and supporting data since inception	• Examined the structure of Excel spreadsheets and key formulas to verify that inputs and calculations were consistent with the 2011 Drop Trailer Decision • For a sample quarter (ending September 30, 2015), reconciled contract details, pricing and volumes to BCFS' general ledger for all customers • For a sample quarter (ending September 30, 2015), randomly selected three customers and traced invoice details to general ledger • Reviewed the spreadsheets for errors and formula consistency using a spreadsheet analytics tool • Compared the average tariff per vessel-foot for each quarter from Q1 2012 to Q4 2016 against the MAAT • Met with BCFS representatives in person to discuss the drop trailer service MAAT calculations • Walked through the data flow between BCFS' general ledger, customer contracts and drop trailer working papers
3. Provide analysis and decision support in relation to the drop trailer service	• Reviewed the drop trailer service related feedback received from BCFS, Seaspan and other interested parties • Reviewed the financial information of the drop trailer service • Analyzed tax and other impacts related to the drop trailer service • Recalculated the MAAT based on fiscal 2016 results • Met with BCFS representatives in person to discuss the drop trailer service
4. Clarification of any issues observed	• Developed written questions for BCFS • Reviewed responses to questions from BCFS • See Appendix A for questions delivered to BCFS and their responses
5. Draft and finalization of the report	• Discussed the MAAT compliance results with the Commissioners • Discussed our analysis of the drop trailer service with the Commissioners • Debriefed a draft version of this report with the Commissioners

Overview of the Competitive Drop Trailer Service

BCFS' drop trailer business is a service offered by the company which complements existing services provided to its commercial trailer business. The drop trailer business enables commercial customers to drop off their trailers full of goods at one of the designated BCFS terminals and to pick up their trailers on the other side of the route. BCFS has storage areas at its three terminals servicing Route 1 and 30. It moves trailers back and forth from vessels with the use of hostling units. In contrast, in its traditional "live" trailer business, truckers drive on and off vessels in their trailer vehicles.

The advantages for shippers using the drop trailer service include the cost savings associated with eliminating the need to have truck drivers travel on vessels and the efficiencies that are gained from scheduling deliveries and other related aspects of supply chain management.

Competitors

There have been notable changes to the competitive landscape of the drop trailer service since the 2011 Drop Trailer Decision. Seaspan is now BCFS' only competitor in the drop trailer market. In 2011, Seaspan acquired the only other major competitor in the market, Van Isle Barge Services Ltd. ("VIBS"). Seaspan provides freight only services to Vancouver Island on a year-round basis.

Seaspan is part of the Washington Marine Group, a family-owned company that also owns Vancouver Shipyards. Formerly the Canadian Pacific Railway's Coastal Marine Operations, the company has been in operation for over 60 years. At the time of the 2011 Drop trailer Decision, Seaspan ran five or six vessels and a total of 11 daily mid-week return trips and nine weekend return trips to Vancouver Island over two routes – Tilbury, Delta to downtown Nanaimo and Tilbury, Delta to Swartz Bay. With its acquisition of VIBS, Seaspan expanded its capabilities with three Articulating Tugs and Barges that are designed for the ocean carriage of roll-on and roll-off traffic, including semi-trailers between terminals on the Fraser River in Surrey and Duke Point in Nanaimo.

Types of Services

BC Ferries' drop trailer service is offered year round. The drop trailer service uses the same space allocated to the broader Commercial Reservation Pool. However, a "live" customer can book and hold a reservation for a specific sailing, and it can do so at no additional charge. By contrast, BCFS decides which sailings will carry drop trailers and, if so, how many it will carry. BCFS also decides which specific drop trailers are to be put on a certain sailings in order to maximize efficiencies while still maintaining the commitment to a customer of getting a trailer to its destination at or by a specific time.

There are two primary product offerings:

- The "At" service requires the customer to specify the desired delivery time for their goods. It provides certainty of delivery within two sailings.

- The "By" service in contrast is less time sensitive – it provides certainty of delivery within four sailings.

Customers may also be granted the privilege of dropping their trailers off for an appointment time of one hour prior to a mutually agreed upon sailing in order to maximize operational efficiencies. However, this does not guarantee that the trailers will be shipped on the next sailing. Only "live" customers can book and hold a reservation for a specific sailing.

Regulatory Framework

Regulatory Overview of the MAAT

Section 45.1 of the Act requires the commissioner to regulate unfair competitive advantage:

> ***45.1***
>
> *(1) If a ferry operator is providing a competitive service, the commissioner must determine whether the ferry operator is pricing the service below the direct costs and an appropriate proportion of the indirect costs associated with providing that ferry transportation service, or has an unfair competitive advantage, including, without limitation, an advantage resulting from the ferry operator having been provided with*
>
> > *(a) use of, access to or ownership of vessels or terminals that are or had been owned by the government or a government body within the meaning of the Financial Administration Act,*
> >
> > *(b) any tax exemption, or*
> >
> > *(c) any subsidy.*
>
> *(2) If the commissioner makes the determination referred to in subsection (1), the commissioner must regulate the ferry transportation service in one of the following ways:*
>
> > *(a) make an order under section 69 (1) and, after an alternative service provider satisfactory to the commissioner has been located through a competitive process established in a plan approved under section 69 (4) (a) or created under section 69 (4) (b) (i), order the ferry operator to arrange with that alternative service provider, under contract, franchise agreement or otherwise, for the alternative service provider to provide the ferry transportation service;*
> >
> > *(b) calculate the amount that the commissioner considers would be charged as a tariff for that ferry transportation service to recover the direct costs and an appropriate proportion of the indirect costs attributable to providing the service were none of the factors referred to in subsection (1) of this section present, and order the ferry operator to charge at least that tariff when providing that ferry transportation service.*

The Commissioner found (in Memorandum 37) that the drop trailer service was competitive. The Commissioner subsequently began a review of BCFS' drop trailer service as it related to Section 45.1 of the Act. On February 7, 2011 the Commissioner issued the 2011 Drop Trailer Decision determining that BCFS was pricing drop trailer services below cost and that BCFS had an unfair competitive advantage. The Commissioner chose to regulate the drop trailer service through a tariff (i.e. the MAAT) in accordance with Section 45.1(2)(b) in the 2011 Drop Trailer Decision. The MAAT is calculated as "the amount that the commissioner considers would be charged as a tariff for that ferry transportation [drop trailer] service to recover the direct costs and an appropriate proportion of indirect costs attributable to providing the service" were there no unfair competitive advantages present. Memorandum 42 further defined the direct costs and indirect cost categories:

- Direct: costs directly attributable to the drop trailer service (labour to load/unload drop trailers to/from vessels, financing and amortization of hostler units, etc.).

- Indirect: costs indirectly attributable to the drop trail service applied through a “route overhead charge” to the costs of drop trailer service to recognize the provision of terminal deck space, and marine transport. The after-tax return on equity was specifically excluded as a cost for MAAT calculation purposes.

Fiscal 2012 MAAT Calculation (Order 11-01)

The 2011 Drop Trailer Decision set the MAAT in fiscal 2012. This was determined through the following calculations:

Step 1: Fiscal 2010 Expenses and Volume

The fiscal 2011 direct and indirect costs for the drop trailer service and their attributable footage volumes were used to calculate a cost per vessel-foot. The total cost per vessel-foot for fiscal 2010 was used as a starting point for the MAAT calculation. See Appendix B for detailed calculations of the Fiscal 2010 expenses per foot.

Step 2: Estimate the Horizon Volume

As described in Memorandum 42, unit costs cannot be reasonably based on initial start-up volumes nor “mature” volumes which were a multiple of 2010 volumes and too forward looking. For the purposes of setting the MAAT, the Commissioner decided to accept costs at a “horizon” volume. The assumed horizon volume was based on the 2010 drop trailer market size and an estimate of BCFS’ mature market share.

Step 3: Interpolate $/foot to Horizon Volume Estimate

Forecasted results were prepared for the mature market (fiscal 2016) total expenses and total feet. The total expenses per foot for the fiscal 2010 MAAT cost was determined through linear interpolation at the horizon volume. See Appendix B for a calculation of the expenses per foot interpolation.

Step 4: Index to Fiscal 2012

The MAAT was brought into effect for fiscal 2012 by Order 11-01. As such, it was necessary to index the fiscal 2010 MAAT cost by two years of inflation at 2%.

MAAT Compliance

PwC was engaged in January 2016 by the Commission to review the BCFS' compliance with the MAAT since inception. The results of our work are presented as a review. The review is not intended to represent recommentations by PwC to the Commission.

PwC was asked to review the information provided by BCFS, and, using the determinations found in the Commissioner's Orders and their professional expertise, provide an assessment of BCFS' compliance with the MAAT. Our review was conducted in accordance with the 2011 Drop Trailer Decision.

MAAT Review Findings

The MAAT was determined in accordance with Section 45.1(2)(b) of the Act to "calculate the amount that the commissioner considers would be charged as a tariff for that ferry transportation service to recover the direct costs and an appropriate proportion of the indirect costs attributable to providing the service were none of the factors referred to in [Section 45.1(1)] present, and order the ferry operator to charge at least that tariff when providing that ferry transportation service."

The specific components included as direct costs and an appropriate proportion of indirect costs are:

Category	Cost Components
Direct Operating Costs	• Direct labour and hostling unit costs • Direct terminal operating costs • Direct office and administration costs • Management costs allocated to drop trailer operations
Direct Asset Costs	• Amortization costs of direct assets (IT, terminals, hostling units) • Net financing costs of direct assets
Route Overhead Allocation	• An allocation of certain costs (vessel, terminal, regional management and corporate overheads) allocated on the basis of the lane feet occupied by the drop trailers as a percentage of total vehicle deck space (see Appendix F for a detailed description of the allocation methodology)
Income Tax Advantage	• An adjustment based on the equity directly and indirectly associated with the drop trailer service, multiplied by the difference between a pre- and post-tax percentage annual return *[Pre-tax cost of equity – Post-tax cost of equity] x [Equity directly/indirectly associated with the drop trailer operations]*

PwC has reviewed BCFS' compliance with the drop trailer MAAT requirements in accordance with the 2011 Drop Trailer Decision. The 2011 Drop Trailer Decision established the MAAT in fiscal 2012 and to be changed each subsequent fiscal year by a consumer price index adjustment. BCFS is required to ensure that the average revenue per vessel-foot occupied (lane feet occupied by drop trailers and their hostler units) for the quarter, shall not be less than the MAAT.

In order to determine BCFS' compliance with the drop trailer MAAT requirements, it is necessary to understand the flow of supporting inputs used to calculate the average revenue per vessel-foot occupied and to verify that calculations spreadsheets are functioning properly. The following specific procedures were performed as part of the MAAT compliance verification:

Procedure	Observations (s)
Examined the structure of Excel spreadsheets and key formulas to verify that inputs and calculations were consistent with the 2011 Drop Trailer Decision	• BCFS' supporting analysis has included terminal fees (hostling) and other charges (i.e. parking) in the total revenue from drop trailer in accordance with Memorandum 42 • BCFS' supporting analysis has (correctly) included hostler footage in the total number of drop trailer service feet in accordance with Memorandum 42 • BCFS' supporting analysis has correctly calculated the average tariff per foot figure used to verify compliance with the MAAT requirements • BCFS' supporting analysis starts fiscal 2012. This rate is indexed annually by the British Columbia consumer price index ("CPI") • BCFS' methodology for calculating CPI and indexation appear to be implemented correctly in the supporting analysis
For a sample quarter (ending September 30, 2015), randomly selected 3 customers and traced contract details, pricing and volumes to BCFS' general ledger	• PwC did not note any discrepancies between customers' contract terms, pricing/volume inputs on supporting analysis and BCFS' general ledger
Reviewed the spreadsheets for errors and formula consistency using a spreadsheet analytics tool	• PwC found no significant errors in the spreadsheet and any minor errors/inconsistencies had no impact on MAAT compliance
Compared the average tariff per vessel-foot for each quarter from Q1 2012 to Q4 2016 against the MAAT	• The average tariff per vessel-foot was above the MAAT in all quarterly instances • PwC observed that tariff rates per vessel-foot for certain individual customers are below the MAAT from time to time. It is important to note that individual customer tariff rates per vessel-foot below the MAAT does not indicate non-compliance as compliance is based on BCFS' average tariff rate per vessel-foot

Appendix C includes a table and graph which summarizes the lowest tariff per vessel-foot, average tariff per vessel-foot and MAAT for each quarter. PwC did not observe any instances where the average revenue per vessel-foot for the quarter was below the MAAT. The calculations and supporting data used by BCFS to report the quarterly total revenue from its drop trailer tariff on the major routes and the number of vessel-feet occupied (land feet occupied by drop trailers and their hostler units) were appropriate. Based on our observations, BCFS appears to be fully compliant with the drop trailer MAAT requirements of Order 11-01 and Confidential Order 11-01A and has not been pricing its drop trailer service below its direct costs and an appropriate proportion of indirect costs.

Analysis of Current Drop Trailer Costs

BCFS updated MAAT calculations for fiscal 2017 based on the same methodology applied by Order 11-01. A comparison of fiscal 2012 and fiscal 2017 MAAT calculations (Order 11-01) can be found in Appendix D. PwC has analysed the differences between BCFS' F2012 and F2017 (Order 11-01) MAAT figures:

Cost Category	PwC Analysis
Direct Operating Costs	• Direct operating costs have increased • Drop trailer footage has increased. • BCFS has achieved economies of scale and as a result, the direct operation costs per foot have decreased • Overall direct asset costs have increased, however, costs have decreased on a per footage basis as costs are spread over a higher volume of drop trailer footage.
Direct Asset costs - Amortization and Net Financing costs	• Direct asset costs have increased • Drop trailer footage has increased • BCFS has achieved economies of scale and as a result, the direct asset costs per foot have decreased • Overall direct asset costs have increased, however, costs have decreased on a per footage basis as costs are spread over a higher volume of drop trailer footage.
Route Overhead Allocation	• The total capacity provided on Route 1 and 30 has decreased slightly while total route overhead charge has increased slightly • The overall result is a small increase in the route overhead allocation per foot
Income Tax Advantage – Drop Trailer	• The value of the drop trailer income tax advantage has increased • The total drop trailer footage has increased • The overall result is a decrease in the drop trailer income tax advantage per foot
Income Tax Advantage – Vehicle	• The value of the vehicle income tax advantage has decreased. The value of the vehicle income tax advantage in 2010 was based on an estimate of the mature market. The value of the vehicle income tax advantage in 2015 reflects actual results for fiscal 2015. • The total vehicle footage has decreased • The overall result is a decrease in the vehicle income tax advantage per foot
Total Cost per foot	• This value is calculated as the sum of the above cost categories
Total Cost per foot Interpolated to Horizon Volume	• An assumed horizon volume was based on the mid-point between the 2015 drop trailer market size and an estimate of BCFS' mature market share in 2020. • The total cost per foot in future years in 2020 was calculated as 90% of the 2015 total cost per foot, factoring a 10% efficiency gain assumption
MAAT after applying Inflation at 2%	• This value is calculated by indexing the MAAT calculated above to the applicable starting year at 2% inflation

Submissions Regarding the Drop Trailer Service

As indicated in the Background section, BCFS' drop trailer service reached the volume specified in Order 11-01 in 2015. Upon reaching this milestone, the Commission invited interested parties to submit comments on BCFS' drop trailer services. Submissions were received from eight interested parties, including BCFS and Seaspan, who provided the vast majority of the comments.

BC Ferries and Seaspan have provided extensive commentary on the drop trailer service, including responses to the following five questions posed by the Commission on January 15, 2016 on its website. PwC's comments and analysis on the submissions regarding the drop trailer service are presented below.

Direct and an Appropriate Proportion of the Indirect Costs

> An earlier section of this report has demonstrated that BCFS has priced the drop trailer service above direct costs and an appropriate proportion of indirect costs, as defined by the 2011 Drop Trailer Decision, since the inception of the MAAT. PwC's assessment is based on the calculation methodology for direct costs and an appropriate proportion of indirect costs used during the development of the 2011 Drop Trailer Decision.
>
> Whereas the initial assumption in 2011 was that per foot costs would increase at the rate of inflation, BCFS' costs have decreased on a per foot basis since the 2011 Drop Trailer Decision due to economies of scale.

Potential Sources of Unfair Competitive Advantage

> The Act requires that four factors or categories be considered in the determination of possible sources of unfair competitive advantage: 1) use of or access to government owned terminals/vessels that are or had been owned by government; 2) tax exemptions; 3) subsidy; or 4) any other factor.
>
> In the 2011 Drop Trailer Decision, the use of or access to government-owned terminals/vessels and potential subsidy of major routes were not found to be sources of competitive advantage. The same conditions remain. In addition, we observe no cross-subsidization of drop trailer services on the Major Routes.
>
> Other conditions giving rise to the determination of unfair competitive advantage may have changed:
>
> - the non-taxable status of BCFS continues, however, the impact of the tax advantage has been substantially reduced. The tax advantage is estimated as the difference between the pre-tax and post-tax rate of return on regulated assets directly and indirectly associated with the drop trailer service. Since 2012 there is no longer a requirement for a regulated cost of equity in the calculation of the price caps for performance terms. As a result, the cost of equity has not been updated for some time. PwC has estimated a lower cost of equity in Appendix D based on a preliminary analysis of input factors that are used in the estimation of cost of equity. Furthermore, corporate tax rates have declined since 2011;
> - the obligations under the CSFC that result in excess capacity suggest they also restrict the ferry operator's ability to take full advantage of that capacity in different ways, including managing the

demands of different users, seasonal peaks and schedule inflexibility. It is also noted that excess capacity for a seasonally influenced transportation business is not unique to BCFS; and

- other changes to the regulatory framework include the requirement for oversight of the ferry operator's long term capital plan, approval of major capital expenditures and performance reviews – these provide the Commission new tools for balanced regulatory oversight of ferry services including competitive services.

Inclusion of Return on Equity as a Cost

PwC has interpreted the definition direct and indirect costs, from a cost accounting perspective. In contrast, the concept of recovery of the cost of capital in regulated industries is typically expressed as a revenue requirement, not a cost.

We note that pricing for individual services provided by BCFS does not build in a cost of capital. Rather, the recovery of debt service costs is reflected in the system for setting price caps (which includes the drop trailer service) whereby the price cap is applied to the weighted average pricing of the entire basket of regulated services.

Indirect Cost Allocation

BCFS have argued that only marginal costs should be applied in the calculation of the MAAT. This position is supported by the extensive commentary from the economist Dr. Roger Ware who was engaged by BCFS. Dr. Ware's arguments are premised on what should be included in "appropriate costs" of the drop trailer service, drawing from principles of competition law.

Seaspan, on the other hand, have provided extensive arguments that "appropriate costs" should include "fully-allocated costs[1]" if BCFS' drop trailer service is not solely off-peak or "100% Utilization Cost[2]" if BCFS' drop trailer service is viewed as off-peak. Seaspan's position is supported by detailed commentary from the Drazen Consulting Group.

The approach adopted in the 2011 Drop Trailer Decision allocates indirect costs through a route overhead charge. The route overhead charge is intended to capture an appropriate portion of the indirect cost of providing terminal and deck space, and marine transport. The approach is to allocate the general overheads associated with vessels and terminals to each traffic type on the same basis, by dividing the general route overheads by the total route capacity to arrive at a per-foot charge. A cost allocation between passengers and vehicles (for vessel-related, terminal-related and system-related costs) is required in this approach. All overhead costs, including regional management, corporate services, amortization and financing, have been captured through the route overhead charge.

The Commission's position from the 2011 Drop Trailer Decision supported by PwC's analysis was that competitive services must be allocated a share of indirect costs. In the case of the drop trailer service, these costs include vessel, terminal, regional management and corporate overheads.

Drop Trailer Horizon Volume Adjustment

A strong argument exists that actual drop trailer volumes should be used as the basis for allocation of the MAAT on a go-forward basis. The challenges with the current formula using the share of the estimated "mature market state" as a basis for calculating overheads include not knowing what the total size of the market is. Estimating the horizon volume is further complicated by a lack of understanding of how

[1] This would set the MAAT at a level that includes the full indirect cost to provide drop trailer service.
[2] This unit cost approach calculates the unit cost of the deck space (and landside facilities) as if the capacity were 100% utilized. This is the current approach used in calculating the MAAT.

economic factors and competitive forces including pricing of other modes of transport influence both market share and the total size of the market. Under the current formula the difference in overheads calculated based on the original estimate of the horizon volume is greatly diminished with increased volumes.

Four-Quarter Trailing Average Compliance

BC Ferries have also requested that the quarterly compliance with the MAAT be assessed based on BCFS' average performance over the previous four quarters (i.e. a four-quarter trailing average). The four-quarter trailing average approach appears reasonable from an administrative efficiency perspective and is supported by a precedent in the price cap compliance calculation.

Frequency of Tariff Adjustment

If required, there appears to be benefit in adjusting the tariff from an administrative perspective at the beginning of each performance term.

Recalculated MAAT Calculation

PwC has recalculated the MAAT using the approach in the 2011 Drop Trailer Decision with some modifications to: 1) using the current tax rate and the current cost of equity as it relates to the income tax advantage; and 2) elimination of the drop trailer horizon volume adjustment. These modifications are meant to update the MAAT to reflect current operating assumptions if a minimum tariff for BC Ferries' drop trailer service is still required.

The effect of these changes on the calculation of the MAAT can be found in Appendix E.

Conclusion

PwC has reviewed BCFS' compliance with the drop trailer MAAT requirements in accordance with the 2011 Drop Trailer Decision. BCFS is required to ensure that the average revenue per vessel-foot occupied (land feet occupied by drop trailers and their hostler units) for the quarter, shall not be less than the MAAT. PwC did not observe any instances where the average revenue per vessel-foot for the quarter was below the MAAT. The calculations and supporting data used by BCFS to report the quarterly total revenue from its drop trailer tariff on the major routes and the number of vessel-feet occupied (land feet occupied by drop trailers and their hostler units) were appropriate. Based on our observations, BCFS appears to be fully compliant with the drop trailer MAAT requirements of Order 11-01 and Confidential Order 11-01A and does not price its drop trailer service below its direct cost and an appropriate proportion of indirect costs.

Overall drop trailer costs have decreased on a per foot basis since the 2011 Drop Trailer Decision. The decline in costs results mainly from economies of scale and increased operational efficiencies. These cost declines are offset slightly by an increase, on a per foot basis, in the route overhead allocation.

PwC has reviewed submissions from BCFS, Seaspan and other parties with an interest in the drop trailer service and provided support to the Commission in its review.

If a minimum tariff is still required PwC has recalculated the MAAT using the approach in the 2011 Drop Trailer Decision with some modifications made to allow the MAAT to reflect current operating assumptions. The recalculated MAAT can be found in Appendix E.

The following appendices have been removed as they include information of a confidential and commercially sensitive nature:

Appendix A - Questions to BCFS and their Responses

Appendix B – 2011 MAAT Calculation

Appendix C – Actual Drop Trailer Pricing Compared to the MAAT

Appendix D – Current Drop Trailer Pricing

Appendix E – MAAT Calculation based on Current Pricing

Appendix F

By way of background, BCFS allocates costs for the purposes of the annual route statement report prepared for the Commissioner. BCFS allocates all costs into one of four categories: Vehicle-related, Passenger-related, Revenue-related (i.e. corporate overheads) and Drop Trailer-related. The Revenue-related costs can be further disaggregated into vehicle and passenger related subcategories. All of BCFS' costs are accounted for in the cost allocation.

Costs Included in Allocation Methodology
Ships Wages
Crews Not on Board & Staffing Pool
Fuel Costs
Ship Other
Ship Refit & Maintenance
Marine Insurance
Terminal Operations
Terminal Catering Expense
Drop Trailers
Commercial Management
Terminal Maintenance
Regional Management
Corporate Services
Amortization - Capital Assets
Amortization - Deferral Accounts
Interest Expense

In the 2011 Drop Trailer Decision, the Commissioner applied a "route overhead charge" to the MAAT to recognize the provision of drop trailer overhead costs, terminal and deck space, and marine transport. The route overhead charge is calculated by allocating vehicle related costs (for vessel, terminal, regional management and corporate overheads), for Routes 1 & 30, on the basis of the lane feet occupied by the drop trailers as a percentage of total vehicle deck space. This methodology is consistent the cost allocations used by BCFS for its annual route statement report. The methodology to calculate the route overhead charge for Routes 1 & 30, as required by the MAAT, includes only Vehicle-related overhead costs and the Revenue-related overhead costs excluding the passenger related proportion. Drop Trailer-related costs are allocated to drop trailer direct costs for the purposes of the MAAT. This allocation methodology is illustrated below: