

**BEFORE THE
BRITISH COLUMBIA FERRIES COMMISSIONER**

**REGARDING
SECTION 45.1(1) OF THE COASTAL FERRY ACT
AND DROP TRAILER SERVICE**

**REPORT OF
JOE N. LINXWILER, JR.**

**ON BEHALF OF
SEASPAN COASTAL INTERMODAL COMPANY**

NOVEMBER 24, 2010

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File No. 5402

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Mr. Richard J. Plecas,
Managing Director
Seaspan Coastal Intermodal Company
7700 Hopcott Road
Delta, BC Canada V4G 1B6

Subject: **Review of BC Ferries' Submission Regarding Drop Trailer Ferry Service**

Dear Mr. Plecas,

You have asked me to review and comment on the submission of August 31, 2010, by British Columbia Ferry Services, Inc., ("BC Ferries") to the British Columbia Ferries Commissioner, regarding BC Ferries' proposed pricing for drop trailer service. In this report, I will present and explain my findings, conclusions, and recommendations regarding that submission, which I will hereinafter refer to as the "August 31 Submission."

1. INTRODUCTION AND SUMMARY

As more fully explained in its August 31 Submission, BC Ferries has recently begun to offer and provide "drop trailer" ferry service to commercial trailer customers. For purposes of this report, I have accepted as accurate BC Ferries' description of that service and the history of BC Ferries' providing that service and other ferry services. For the sake of brevity I will not repeat that background here. I understand that BC Ferries is subject to "price cap" regulation by the British Columbia Ferries Commissioner (hereinafter, the "BC Ferries Commissioner" or just the "Commissioner"), which I understand to mean that the maximum revenues that BC Ferries may earn from its fares and fees for four route groups are subject to review and adjustment by the Commissioner, and within this regulatory framework BC Ferries has discretion with respect to its specific fares and other charges from time to time. I also understand that drop trailer service has been found to be a competitive service, in part because of incumbent providers of that service.¹ I understand this finding to require that (possibly among other things), in accordance with Section 45.1 of the Coastal Ferry Act (the "Act"), the Commissioner must determine whether:

- (i) BC Ferries is pricing the service below the direct costs and an appropriate proportion of the indirect costs associated with providing the service; and
- (ii) whether BC Ferries has an unfair competitive advantage in providing the service.

¹ One of those incumbent ferry service providers is Seaspan Coastal Intermodal Company ("SCIC").

BC Ferries has established certain maximum fees for drop trailer service, and they are set forth in BC Ferries' fare schedule. I understand further that BC Ferries may, and does, routinely exercise its discretion to offer discounted charges for drop trailer, but such discretionary, discounted charges are nevertheless subject to the requirements of the Act that are summarized above.

BC Ferries' August 31 Submission, in part, presents the results of a study (a so-called "cost of service analysis" or "COSA") that, BC Ferries alleges, determines the minimum rates or fees that meet the aforementioned requirement of the Act to recover BC Ferries' direct costs and an appropriate share of the indirect costs of providing drop trailer service. BC Ferries asserts that all of its *actual* rates for drop trailer service exceed those derived from the cost of service study and that, therefore, they reflect more than the minimum required recovery of direct costs and indirect costs of providing the service.

BC Ferries' proffered cost-of-service study was performed by the firm of EES Consulting, under the direction of its president, Mr. Gary Saleba. Mr. Saleba's report on the study is included as Appendix C to BC Ferries' August 31 Submission. BC Ferries claims that this cost of service study incorporates "generally accepted allocation principles used in the context of rate regulation both in British Columbia and elsewhere."² BC Ferries also argues that this type of study is evidence that it "conforms to the statutory test" in pricing drop trailer service.

BC Ferries' August 31 Submission also purports to demonstrate that BC Ferries does not enjoy an unfair competitive advantage over the incumbent providers of drop trailer service.

Summary of Findings

As I will explain in the remainder of this report, based on my review of the August 31 Submission of BC Ferries and my experience in matters of price and rate regulation, in regulated industries and elsewhere, it is my opinion that BC Ferries' proposed fees for drop trailer service are not fairly or appropriately priced because BC Ferries does not include in its cost of service analysis for that service *any* vessel-related costs or costs of associated terminal facilities, including fuel or crew costs. I have reviewed BC Ferries' proffered arguments for this unusual and unfair pricing and find that, in my opinion, they are not valid. Instead, the matching principle and other fairness considerations require that a reasonable, *non-zero* share of the ownership and operating costs of vessels and terminals be allocated to, and included in the fees for, drop-trailer service. The appropriate level of such costs to be included should be the greater of the results of the three approaches that I will outline and explain herein. The following are key principles and other considerations that underlie the foregoing conclusion.

BC Ferries' EES Consulting study is seriously flawed in that *no* portion of the costs of BC Ferries' ferry vessels have been allocated to the cost of providing drop trailer

² See page 4 of the August 31 Submission.

service. As a result, the costs attributed to the service, and the resulting rates, do not reasonably or fairly reflect the actual cost of providing the service. This failure to assign a reasonable portion of the costs of owning and operating the ferry vessels is not justified by the arguments put forth in the EES Consulting report (Appendix C to the August 31 Submission). As I will explain, those arguments are logically flawed and contrary to fair pricing. In particular, a zero allocation of ferry and terminal costs to drop trailer service is not justified on the basis that the service is an off-peak service. To the contrary, there are several reasons why it is appropriate to allocate a significant share of vessel and terminal costs to drop trailer service:

- Drop trailer customers should not be "free riders."
- Costs and benefits should be appropriately aligned.
- The price for a service like drop trailer service offered by a monopoly supplier should not be less than prevailing market prices (that is, prices offered by other suppliers and not distorted by the supplier in question) or long-run incremental costs.

In most forums today, either (i) there is an express recognition that a significant portion of fixed costs of production facilities are not demand related or (ii) the allocation method that is used for fixed costs at least partially takes into account non-peak usage. In particular, I believe that, in order to be consistent with mainstream cost allocation methods, a significant portion of the fixed costs of BC Ferries ferry vessels and associated facilities should be allocated on an average or total vehicle through-put rather than just peak usage.

BC Ferries' proposed pricing is also not justified by the alleged "incremental" nature of drop trailer services. Indeed, the term "incremental customer" used by Mr. Saleba does not have an accepted meaning in the area of pricing or cost allocation. Moreover, the doctrine of avoidable costs is nothing more than the principle that price should not be less than incremental costs. Thus, I do not disagree that the price or rate for drop trailer service should not be below short-run incremental costs. However, that is too low a standard – the price should not be below *long-run* incremental costs, which would include a substantial contribution to fixed costs.

FERC, a leading regulator in the US has adopted a so-called "or pricing" policy, whereby the charges to a new transmission customer should be the higher of average cost or incremental cost. In my opinion, BC Ferries' drop trailer service should be similarly priced if it is to recover direct costs and an appropriate proportion of indirect costs.

Another reason that a fair, non-zero share of the costs of ferry vessels and related facilities should be allocated to drop trailer service pertains to price signals. Prices for utility services – indeed, prices for all products – should provide proper price signals in order that customers' consumption and usage decisions will be informed by the true cost of

the products and services at issue. If rates for drop trailer service are priced without any cost component for ferry capacity or operating costs, growth in that service will be encouraged artificially.

Because no ferry or terminal costs are allocated by BC Ferries to drop trailer customers, but all such costs are allocated to “core” customers, BC Ferries’ proposed pricing unfairly discriminates in favor of drop trailer service. That is, an undue preference would be provided by BC Ferries to drop trailer service at the expense of core customers.

BC Ferries’ proposed pricing is enabled by the existence of “core” customers to whom BC Ferries can allocate all ferry-related costs. This represents unfair leveraging by BC Ferries and also a unique and unfair competitive advantage of BC Ferries over other suppliers of the drop trailer service.

Because specific cost allocation and price information regarding BC Ferries’ drop trailer service has not been made available to me, I have not been able to develop a recommendation as to a specific portion of the costs of BC Ferries’ ferry vessels and terminal facilities that should be allocated on a commodity or through-put use basis. However, it is my professional opinion that the fees or rates for drop trailer service should satisfy the following criteria, which I explain below:

- (i) The fees should not be less than long-run incremental costs of the service;
- (ii) The fees (normalized taking into account length, width and height as well as weight), when expressed on a per-foot basis, should not be less than the fees for other off-peak customers; and
- (iii) The fees(normalized taking into account length, width and height as well as weight), when expressed on a per-foot basis, should not be less than what the average cost would be based on 100% utilization of the ferries.

As mentioned above, my opinions, findings, and conclusions are based on my many years of experience in cost of service analysis, pricing, and regulatory economics for regulated monopolies, including electric, natural gas, and other utility companies. I have testified as an expert witness on such matters in many regulatory and judicial proceedings. Among other things, I have testified as a expert witness before British Columbia Utilities Commission in two recent rate proceeding involving electric utilities. A copy of my resume is attached for your consideration.

2. BASIC PRINCIPLES

The Coastal Ferry Act

As part of my assignment, I have reviewed and have considered Section 45.1 of the Coastal Ferry Act. I have reviewed, worked under, and testified regarding many similar statutes regarding regulated monopoly utilities and services, and I find that Section 45.1 is quite similar to most of those other statutes. Like many other such statutes, Section 45.1 of the Act establishes certain basic requirements for fairness and reasonableness that protect both consumers and competitors from abuses of monopoly power. The basic notions of reasonableness and fairness of rates and prices for monopolies can be traced back to English common law and are quite well established.³ Among other things, it is widely recognized that regulation of monopolies like BC Ferries should be a proxy or substitute for competition.⁴ For example, rates and prices of a regulated monopoly should not be in excess of, nor much less than, prices that would result from fair competition. It is clear to me that Section 45.1 embodies basic regulatory principles that are applied to other regulated industries dominated by natural monopolies, and we may be informed by the application of those principles in other forums. Hence, to this limited extent, I agree with BC Ferries that accepted principles of rate regulation should guide the determination here of what constitutes “appropriate” cost recovery. Such principles largely focus on what constitute “fair” prices. An unfair price certainly cannot be considered to be an appropriate price.

The basic concepts of fairness, justness and reasonableness, and proper accounting for costs that are used in the electric, gas, and other utility industries are common to many industries. Indeed, many of these concepts and principles first arose in connection with monopoly transportation services such as toll roads, bridges, ferries, and railroads.⁵ They have undoubtedly been refined in the last century in connection with electric, gas, and other utilities because of their pervasive presence in modern society.

Standards of Fair Prices

I believe that it is almost universally recognized that, in regulated industries, firms must charge *fair* prices, particularly where they are regulated monopolies. “Fair” in this context is basically synonymous with “just and reasonable” – which is a term so widely used that it is often simply referred to as “J&R.”⁶ There may be many lay perceptions of what is just and reasonable, or fair, but in utility ratemaking, it is almost universally recognized by regulators and courts that J&R and fair both mean cost-based. That is, a fair rate is a rate that reflects the costs of providing service. A rate that is too high relative to costs is unfair to the customers. A rate that is too low relative to costs can also be unfair. It can be unfair to competitors and to some customers, as well.

³ Welch, Francis X., *Cases and Text on Public Utility Regulation, (Revised Edition)*, Public Utilities Reports, Inc. Washington, D.C., 1968, pp. 241-242.

⁴ Bonbright, James C., *Principles of Public Utility Rates*. Columbia University Press, New York, 1961, pp.93-94.

⁵ Welch, pp. 5-7.

⁶ Welch, p. 241.

Furthermore, fairness requires that the “costs of providing service” reflect cost causation rather than arbitrary assignment of costs. That is, fair, cost-based rates should recover the costs caused by providing the product or service in question. While this can seem simple, matters are often complicated by significant “common costs” that are not caused by one product or service, or one type of customer, to the exclusion of others. Such costs are incurred in connection with more than one product, service, or type of customer.

I note that BC Ferries’ cost allocation consultant, Mr. Saleba, uses the phrase “fair and equitable” to describe the proper criteria for rates and fees in this matter. See, for example, page 10 of the EES Report. Because he is basing his conclusions on his experience with regulated utility ratemaking, I believe that it is clear that he is using “fair” in the same manner I am, and that “fair and equitable” is synonymous with “just and reasonable.” Mr. Saleba also confirms, at page 2 of his report, that a “fair” rate reflects cost causality. Unfortunately, notwithstanding this seemingly common understanding of accepted criteria for rates and fees charged by public utilities, I disagree strongly with certain critical aspects of Mr. Saleba’s report and his conclusions.

Particularly where the causation of a cost is not readily apparent, or where differing degrees of causation are involved, another well-established principle that may be employed for determining fair prices is the so-called “matching principle.”⁷ The matching principle dictates that joint and common costs (which I discuss further below) should be allocated among products, services, or customers in proportion to the benefits derived from the expenditures of those costs. Where a customer derives a large benefit from a particular expenditure, then it is reasonable to charge that customer for a commensurate share of the cost of the expenditure. I believe that the matching principle is particularly important here, and I will address the matching principle further below.

Another fundamental concept in regulated prices is the avoidance of undue discrimination. Some consider basic fairness to encompass being nondiscriminatory, but the subject of price discrimination is important in its own right. “Discrimination” is, generally speaking, treating people differently without just cause or rationale. Price discrimination, more specifically, is pricing differently to different customers without a difference in the costs of serving those customers.⁸ Some people consider any discrimination to be bad, but in the area of rates and prices, discrimination basically means price differences. A price difference that reflects a real cost difference is not prohibited – it may be said to be *due* discrimination. *Undue* price discrimination is a price difference without a cost difference. Nevertheless, many industry participants use simply “discrimination” when they mean undue discrimination. For convenience, I will adopt that convention here: except as I otherwise indicate, henceforth I will refer to undue discrimination as simply discrimination.

⁷ See, for examples, FERC’s “Order Establishing PJM South,” FERC Docket Nos. ER04-829-000 and ER04-829-001, October 5, 2004.

⁸ Phillips, Charles F., *The Regulation of Public Utilities, Theory and Practice*, Public Utility Reports, Inc., Arlington Virginia, 1988.

Section 45.1 of the Act uses the word “appropriate” in relation to the rates or prices that BC Ferries charges. The word “appropriate” encompasses fair and J&R, but it is clearly broader. I believe that “appropriate” in this context encompasses other public policy goals and right dealing, to the extent that they are not inconsistent with the fair and J&R standard. The fair and J&R standard is within the bounds of what is appropriate because (i) a fair or J&R rate can hardly be said to be inappropriate per se, and (ii) in the narrow context of public utility rates, “appropriate” is often used to denote fair, and J&R, as well as desirable for other reasons. I and many other practitioners use “appropriate” as shorthand for fair, J&R, nondiscriminatory, and otherwise desirable. I also believe that, in light of the clear and specific meanings that have evolved for fair, and J&R, and the common use of those terms with respect to utility rates, the drafters of the Act could have simply used those terms if they intended for them to be the only standards. A broader standard is more likely to have been intended to apply to a Crown corporation – and I believe that “appropriate” expresses that broader notion of the public good.

Unfair Competition

Section 45.1 of the Act also mandates that BC Ferries not take advantage of an “unfair competitive advantage.” Based on my experience, an unfair competitive advantage means setting prices to obtain sales, or otherwise gaining market share, by virtue of a uniquely available characteristic or happenstance that is not available to competitors. In common sense terms, an unfair advantage is characterized as an unlevel playing field. Most often, in the context of a regulated monopoly, an unfair competitive advantage arises from leveraging or otherwise taking advantage of market share, including a protected monopoly status, in one service or product to undercut competitors for another product or service that do not enjoy that status. In the most common example of such a practice, which is certainly not J&R and which is almost universally prohibited, the monopoly utility will use revenues or income from its monopoly business to fund and subsidize its costs of providing other services, of which there are competing suppliers. Other suppliers usually cannot effectively compete against prices lowered by such subsidies. To avoid such an unfair competitive advantage, rates and prices of regulated monopolies should not reflect or embody such subsidies. Rather, the rate or rates for each type of service stand on its own and fully reflect the costs of providing that service.

Predatory pricing is an extreme form of pricing reflecting an unfair competitive advantage, whereby a seller obtains market share with pricing that is designed to drive competitors out of business, after which the predator is free to raise prices unhindered by competitors. Because predatory pricing ultimately raises prices to consumers, it is undesirable and contrary to public policy in most countries. In many jurisdictions, predatory pricing can be a criminal offense. There are various principles and tests that can be applied in different jurisdictions to ascertain whether a given price is predatory.

Predatory pricing is a notion that applies to all competitors, not just regulated utilities. However, predatory pricing is most likely to be successful for the predator when there are significant barriers to entry by new competitors, as is the case with natural monopolies – including BC Ferries. Moreover, regulated utilities and other monopolies are,

and in my opinion should be, held to the even higher standards of fairness and non-discrimination. Pricing by monopolies (including BC Ferries) should not be anticompetitive, even if it is not clearly intended to be predatory.

Direct and Indirect Costs

Section 45.1 refers to the recovery by BC Ferries of “direct” and “indirect” costs. These are two categories of costs. In theory they are mutually exclusive, but in practice, and also in a larger sense, the distinctions are not so clear. Most commonly, direct costs are costs that are easily identifiable as arising directly from providing a product or service. An indirect cost is simply a cost of providing a service or product that is not so easily identified or identifiable. A cost that is not at all related to or attributable to making or providing a service or product is neither a direct nor indirect cost. That is, for purposes of identifying or describing the costs of providing a product or service, such costs are often categorized in this fashion. A cost that is not associated with a product or service that is being considered is not relevant. I emphasize that whether a cost is considered to be a direct or indirect cost is largely a matter of semantics and point of view. One must first define precisely what the service or product of interest is – it is usually referred to as the “cost object.” Using a particular cost object definition, a cost may be considered to be an indirect cost. With another cost object definition, that cost may rightly be recognized to be a direct cost. In my experience, one refers to “direct and indirect costs” as a way of encompassing all pertinent costs.

The most common type of an indirect cost is so-called “common cost.” A common cost is a cost incurred for the common good of several products or services. For example, the cost of a building housing two distinct manufacturing lines is a cost common to both lines. Such costs usually arise when there are economies of scale that can be gained by combining and satisfying needs of several products or services. Determining the portion of the total costs attributable to each product or service requires a reasonable allocation of the total costs among and between different uses. Another example of a common cost would be the cost of a large electric generating station that serves the requirements of many customers. For pricing, the costs of the plant must be apportioned among, or *allocated to*, all of the customers. If rates or prices are to be cost-based, the method or methods of allocation or apportionment should reasonably reflect the customer classes’ respective contributions to the underlying need for the facilities in question.

Fixed and Variable Costs

For purposes of cost allocation and pricing generally, it is sometimes useful to classify costs as being either “variable” or “fixed.” A so-called *variable* cost is a cost that varies in relation to production volume or “output.” A *fixed* cost is just the opposite – a fixed cost does not vary with production volume. In the short run, the costs of fuel and other consumable commodities necessary for producing a product or service are variable costs, and some labor costs are variable costs, as well, generally speaking. On the other hand, mortgage or lease charges are often considered to be fixed costs because they do not vary with production, at least in the short term. Variable costs are often considered to be avoidable

costs, because they can be avoided (or significantly reduced) by reducing output or service volume.

The distinction between variable costs and fixed costs is not so clear when long-term operations are considered. Many costs that might be considered fixed in the short run are properly considered to be variable costs in the long run. For example, if production volume is to greatly increase, a new factory or plant will need to be constructed, and its carrying costs are reasonably considered to be a variable cost in this scenario. It has been said that all costs are variable in the long run.

Incremental Costs

In the most general sense, incremental cost is the difference in cost that results, or is expected to result, from following two different courses of action. That is, it is a differential cost – a cost that differs between alternatives in a decision-making situation or, sometimes, in a *post hoc* analysis. Given a supplier of a product or service, and given a particular object or activity of interest (such as serving a particular customer or group of customers, or making a new product), the incremental cost of that activity is the increase in costs that would be, or has, been incurred as a result of that activity – as compared to the alternative of *not* supplying it. Sometimes, it is easy to identify incremental costs, or at least some of them, because they result directly from the activity in question and are not complicated or obscured by costs related to other activities or products. These are *direct* costs, which are always incremental costs. Other incremental costs must be measured as an increase in costs incurred in connection with the activity of interest and other activities (i.e., other services or products). These are incremental *indirect* costs, and they are comprised of common or joint costs (or, more precisely, increases in such costs).

Depending on the purpose of the analysis, incremental costs may include only costs that change in the short run or costs that change in the long term. Long-run incremental costs (often referred to as “LRIC”) include incremental fixed costs, including incremental capacity costs associated with facilities that will need to be obtained if the subject activity is to be continued into the future.

Incremental costs are related to so-called “avoidable costs.” Incremental costs are, by their nature, avoidable. They may be avoided by not performing the activity in question. Somewhat confusingly, however, incremental costs are *unavoidable* with respect to the subject activity; they must be incurred if the subject activity is to be performed. If a cost (or an increase in some cost) is not avoidable by not performing an activity, then it is not an incremental cost of that activity.

It should be apparent that variable costs are closely related to incremental costs. However, they are not identical, even in the short run. This is because not all variable costs are equal or, more precisely, variable costs are not always directly or simply proportionate to output. Sometimes, each successive increment of output requires a higher and higher cost. This is often the case with electricity production and natural gas drilling, to mention just two examples. In times of inflation, LRIC will almost always exceed average,

existing costs. Also, in the long run, even fixed costs may be considered to be incremental costs, just as they may be considered variable in the long term.

3. BC FERRIES' PRICING OF DROP TRAILER SERVICE

BC Ferries' Cost of Service Study

As described above, BC Ferries purports to have conducted (or have conducted for it) an "allocated cost of service study," also referred to as a cost of service allocation ("COSA") study or analysis. In such a study, all of the various costs of a utility (in this case BC Ferries) are considered and assigned to, or allocated among, all of the various services provided by that utility. Such a study determines the costs or "revenue requirements" that should be obtained from the rates or prices for the various services. Such a study may be considered to be the first of two major steps in determining prices. The second step is determining the particular prices that, when applied to actual sales, will recover the respective, allocated costs of service.

In my consulting practice, I have performed and assisted in performing many such studies over the years – probably close to a hundred of them. I have participated in critical reviews of probably even more such studies performed by others.

I have only been able to review the non-confidential portions of BC Ferries' submission that were provided to SCIC. I understand that the confidential portions of that submission have not been made available for review. As a result, I have only been able to review and consider the narrative portions of BC Ferries submission that generally describe the allocated cost of service study. I have not been able to review any of the specific costs assigned or allocated to drop trailer service.

Based on my review of only the narrative description of the allocated cost of service study (which was the only information made available to me), I have concluded that the study is seriously flawed in a major respect – no portion of the costs of owning and operating BC Ferries' ferry vessels have been allocated to the costs of providing drop trailer service. As a result, the costs attributed to the service, and the resulting rates, do not reasonably or fairly reflect the actual costs of providing the service. Moreover, with the proposed pricing, BC Ferries' other customers will subsidize the costs of providing that service, which represents an unfair competitive advantage of BC Ferries over SCIC, which has no other customers from which it can obtain similar subsidies. I will address this serious flaw in more detail in the remainder of this report.

The Failure to Allocate Vessel-Related Costs

As explained on page 6 of the EES Report, vessel-related costs are classified into two categories: vehicle-related costs and passenger-related costs. The costs are differentiated by allocating them in proportion to the space on the vessels that support vehicles and passengers, respectively. Because drop trailer service involves no passengers, none of the passenger-related costs thus determined are allocated to drop trailer service. The

vehicle-related costs thus determined are allocated on a peak or reserved capacity allocator. But, as I will address shortly, this type of allocation also results in no vessel-related costs being allocated to drop trailer service. It is quite remarkable that a transportation service – drop trailer service – is not assigned any of the costs of the vessels that actually perform the transporting. For the reasons that I will explain, it is also wrong and highly inappropriate.

This very critical aspect of BC Ferries' cost allocation study (the failure to assign any vehicle-related vessel costs) is not readily apparent. The body of BC Ferries' August 31 Submission touts what I would characterize as the alleged robust and comprehensive nature of its cost of service study, but importantly and inappropriately fails to mention this very significant, and novel, feature of that study. One must look carefully through the letter report of EES Consulting, which constitutes Appendix C to the August 31 Submission. At page 7 of that report, BC Ferries' consultant, Mr. Gary Saleba states as follows:

When performing a cost allocation, it is necessary to distinguish "Peak" or "Core" Service from "Incremental" or "Off-Peak" Service. In general, the ferry system has been sized, built and is used to serve the Core customers [sic] peak capacity usage. [Footnote omitted.] *Under generally accepted cost of service principles, these Core customers are therefore responsible for all prudently incurred costs associated with each route.*

(Emphasis added.)

In *other* words, and in words that are more pertinent in this proceeding, Mr. Saleba and BC Ferries would ask that BC Ferries' drop trailer service customers not bear *any* of the basic costs of the ferry facilities that are used to transport the "dropped" trailers. This is confirmed, again in a very subtle way, on page 8 of the EES Report, under the heading "Vehicle Related Allocation Factor," where it is stated further that:

Because of unique type of service [sic], the appropriate allocator of vehicle related costs is a peak or reserved capacity allocator.

The vehicle-related vessel costs that are not, but should be, allocated to drop trailer service in BC Ferries' cost of service study include both operating costs and capital-related carrying costs. The operating costs include fixed costs and variable operating costs, the latter category including fuel costs and maintenance expenses, among others. The capital-related carrying costs to which I refer include both amortization (and/or depreciation) of the original costs of, and capital additions to, the vessels and the interest and return on such investment. These are major components of the costs of providing *any* ferry service. I find it remarkable that anyone would not include a reasonable share of either of these types of costs in purporting to determine the costs of providing such a transportation service. The

essence of a transportation service is, well, the transportation provided by some vessel. In determining the costs of providing such a service, there is no justification for excluding all of the costs incurred in obtaining the requisite vessels.

It appears from the August 31 Submission (including the EES Report) that the vehicle-related costs that are not allocated to drop trailer service (but should be) also include the operating costs and fixed costs (depreciation, interest, and return) of ferry terminal facilities (including land, structures and equipment). I surmise this from the statement on page 5 of the EES Report to the effect that the costs of Terminal Operations are classified as vehicle related costs, presumably along with vehicle-related ferry vessel costs. Henceforth, when I refer to vehicle-related vessel costs, I am including the costs of terminal facilities.

The EES Report offers two primary rationales for excluding vehicle-related vessel costs from the costs of drop trailer service. First, as indicated in the passage from page 7 of the EES report that I quoted above, the drop trailer service is an “incremental” or “off-peak” service that does not contribute to on-peak capacity requirements. Because only on-peak capacity demands (or reservations) are considered in BC Ferries determination of the need for new capacity (i.e., new ferry vessels, etc.), in BC Ferries’ view, only on-peak customers are rightly charged enough to cover the costs of such capacity.

Second, also at Page 7 of the EES report, Mr. Saleba likens drop trailer customers to “interruptible” utility customers to whom service is interrupted or curtailed during peak-demand periods. He incorrectly implies that the “widely accepted cost allocation expert” (Bonbright) believes that interruptible customers should not bear any demand or capacity-related costs.

For the reasons I explain below, neither of these rationales offered in the EES report are valid.

Even Off-Peak Customers Should Bear a Reasonable Share of Vehicle-Related Costs

With respect to the first argument of BC Ferries and Mr. Saleba, there are several reasons why it is improper – inappropriate – to fail to allocate a reasonable share of the costs of vessels and associated terminal facilities to off-peak customers and services, including drop trailer service.

First, there is a matter of basic equity. The drop trailer customers of BC Ferries should not be “free riders” with respect to the costs of the ferries that transport them. They should at least make an appropriate contribution to the costs of the facilities that make that service possible, even if the service is an off-peak service. An important objective of cost allocation should be to properly align or “match” costs and benefits – this principle is, indeed, called the “matching principle” in regulatory circles. Here, the drop trailer customers benefit greatly from the existence of the ferry capacity and should, therefore, pay a commensurate share of the costs of that capacity. There are several ways in which this fair share may be determined. One way to determine what a fair share of fixed costs is in

accordance with the matching principle is to ensure that the rate or price for the service in question (here, drop trailer service) is *not less than* prevailing market prices (that is, prices offered by other suppliers and not distorted by the utility in question). If the market price is not sufficient to provide a reasonable contribution to fixed costs, then it is not reasonable for the utility (BC Ferries in this case) to offer the service. In other words, one measure of the benefit of the ferry vessels to the drop trailer service, for purposes of applying the matching principle, is prevailing market prices. I emphasize that the market prices that should be used for these purposes should be those prevailing *before* BC Ferries entered the market and distorted market prices. Otherwise, BC Ferries' proposed pricing would be a self-fulfilling prophesy. Similarly, the market prices used for this analysis should be adjusted, if and to the extent necessary, to remove any other distortions and so that such prices truly represent a freely competitive market. If it is determined that the market is not competitively robust enough, long-run incremental costs should be used as the proper measure of market prices.

It should also be recognized that drop trailer service is able to use otherwise unused off-peak ferry capacity of BC Ferries because of *diversity*. Diversity refers to the time differences between when drop trailer service peaks and when other ferry service peaks. There are obviously similar diversities between customers and groups of customers of virtually all utilities and other businesses. Diversity is therefore routinely dealt with in setting utility rates. An important consideration is that diversity is a relationship between two or more services –diversity is not meaningful when considering only one service or customer class. That is, it takes two to tango. Fairness requires that the benefits of diversity (which are the avoidance of some new capacity) should be shared among all customers that contribute to that diversity. Here, BC Ferries would unfairly allocate all of the benefits of time diversity to drop trailer service (by allocating no ferry capacity costs to that service) and *none* of the benefits to its other, “core” customers.

Next, BC Ferries' proffered cost allocation study improperly presumes that all of the costs of the ferry vessels (and, possibly, related facilities) are demand or capacity-related and that, therefore, all such costs arise solely from on-peak demands and reservations. But today, this is a rare and largely discredited notion in ratemaking, and for good reason. Instead, in most forums today, either (i) there is an express recognition that a large portion of the fixed costs of production facilities (which take the form of the ferry vessels and associated docking facilities) are not demand-related, but are instead commodity-related, or (ii) an allocation method is used for fixed costs that partially takes into account non-peak usage. An example of the former is the so-called equivalent peaker method of cost allocation which is increasingly used in the electric utility industry. An example of the latter is the so-called 12-CP allocation method, which is a more traditional method that is quite widely used and which allocates the fixed costs of an electric utility on the basis of all monthly peak demands (and not just the highest monthly demands during the year). Another such cost allocation method is the so-called average and excess method, which allocates fixed costs on a combined basis of peak and average demands (reflecting both on-peak and off-peak usage). For good reason, today, relatively few utilities allocate all costs solely on the basis of on-peak demands or usage as in BC Ferries' proffered cost allocation study. Based on my experience in such matters, I believe that, consistent with mainstream cost allocation

methods, a significant portion of the fixed costs of BC Ferries' ferry vessels and associated facilities should be allocated on average or total usage rather than just peak usage.

As another example, the BC Utilities Commission treats 55% of the fixed costs of hydroelectric generating facilities as energy- or commodity-related, and allocates those costs on the basis of customers' total energy requirements, irrespective of when they occur.⁹

In my home state, the Florida Public Service Commission has for some time considered a significant portion of the fixed costs of electric generating facilities to be energy-related (i.e., commodity-related) and allocated accordingly. In a representative case, 25% of such fixed costs were allocated on total usage (rather than peak usage), and the remainder was allocated on the average of monthly peaks through the year (including off-peak months).¹⁰

In the context of ferry service, what is properly considered the "commodity product" may need some explanation. In this context, it is the total vehicle volume transported in all ferry trips, adjusted to take into account differences in vehicle sizes; that is, it is the total through-put of transported vehicles. It may be expressed in passenger-vehicle equivalent terms or in terms of average unit length per trip. For each class of service, the average cost per vehicle trip, per foot of vehicle length, would represent the commodity price, excluding on-peak premiums and reservation charges. This throughput commodity is analogous to the total amounts of electric energy used by electric customers, or the volume of natural gas used by natural gas customers, as distinct from the provision of capacity in facilities to supply the commodities.

Another reason that a fair, non-zero share of the fixed costs of ferry vessels and related facilities should be allocated to drop trailer service pertains to "price signals." Prices for utility services – indeed, prices for all products – should provide a proper "price signal" so that customers' consumption and usage decisions are informed by the true costs of the products and services at issue. Proper, cost-based price signals allow consumers to make informed decisions and make efficient use of resources. If rates for drop trailer service are priced without any cost component for ferry capacity, growth in that service will be artificially encouraged. Ultimately, that service will likely be encouraged to grow beyond currently available capacity, so that new capacity will be needed. At the same time, the peak demand times could be shifted to weekdays, at which time a large shift in allocated costs would need to take place to realign rates with costs (increasing the drop trailer service rates and reducing other rates), if BC Ferries all-or-nothing approach is to be followed. Instead, rates today should reflect long-term capacity requirements in a manner that provides correct price signals and promotes price stability. This would also be more consistent with how prices would be set in a free, competitive market, which would be that the rates would approach so called long-run marginal or incremental costs. Such long-run incremental costs would include capacity-related and commodity-related fixed costs of replacement facilities,

⁹ British Columbia Utilities Commission, Order G-111-07, September 19, 2007.

¹⁰ Florida Public Service Commission, Order No. PSC-09-0283-FOF-EI, issued April 30, 2009.

or no seller would stay in the market for very long. As I mentioned before, regulation should endeavor to achieve prices comparable to those that would be obtained in a free, competitive market, and BC Ferries' rates for drop trailer service should not be allowed to fall below long-run incremental costs (including fixed costs).

Regarding Incremental Costs

The EES Report also mentions incremental costs, but in an ill-defined and non-meaningful way. At page 7 of the report, its author, Mr. Saleba, seems to refer to drop trailer service as an "incremental" service. However, this is not a term that has an accepted meaning in the area of pricing or cost allocation. The most common meaning is that it is a newly added customer or service. Mr. Saleba, though, never defines the term "incremental service" but merely implies that it is more or less the same as off-peak service and, perhaps, interruptible service. On page 8 of his report, Mr. Saleba states that this "type" of service should "at a minimum pay for any incremental (direct and indirect) costs incurred by BC Ferries due to providing the service." One can only gather from this that an incremental service is any service that is charged only incremental costs. Contrary to Mr. Saleba's statement on page 7 of his report, there is no "generally accepted cost of service principle" that dictates that drop-trailer service (even if it is an "off-peak" service) should *not* be charged a rate that includes a fair share of the costs of the existing facilities that are necessary to provide the service.

According to Mr. Saleba, the incremental costs of the ferry vessels and associated terminal facilities that should be recovered by the proposed rates are *short-run* incremental costs, because the allocated costs include no vessel replacement costs or other costs that would constitute long-run incremental costs. Indeed, because no vessel-related costs are allocated to drop-trailer service, even the short-run incremental costs of the vessels must be zero, according to Mr. Saleba.

BC Ferries' consultant, Mr. Saleba, states at page 8 of his EES Consulting report, that drop trailer customers should "at a minimum pay for any incremental (direct and indirect) costs" incurred to provide that service. But this is equally true for the service provided to all customers. The only thing that distinguishes drop trailer service from other ferry services in this respect, under BC Ferries' proposal, is that other customers are charged *more* than this minimum, but drop trailer customers would not be. Thus, this principle is almost an obvious truism that does little to inform one regarding fair, appropriate prices. I would say, instead, that it is manifest that all customers should be charged at least incremental costs, and more to the extent necessary to recover all existing costs, on a fair and nondiscriminatory basis.

I will add that the "doctrine" of avoidable costs is nothing more than the principle that price should equal or exceed incremental costs. I agree that the price or rate for drop trailer service should not be below short-run incremental costs. Indeed, as I stated above, it is more important that the price should not be below *long-run* incremental costs, which would include a substantial contribution to fixed costs.

At least one authoritative government agency has promulgated a definitive rule regarding the recovery of incremental costs for monopoly service. The Federal Energy Regulatory Commission (“FERC”) is one of the most important and influential regulatory agencies in the United States. It is similar to the British Columbia Utilities Commission, but FERC regulates all wholesale electric and natural gas service in interstate commerce in the entire US. FERC is required by law to ensure that the electric and natural gas rates that it regulates are “just and reasonable and not unduly discriminatory.”¹¹ With respect to electric transmission service (which is a *transportation* service rather than an energy generation or supply service), FERC in 1994 adopted its so-called “Or Pricing” policy, whereby the charges to each new transmission customer should be the *higher* of average cost or incremental cost.¹² Under this policy, if the incremental cost of serving a new customer is higher than the average cost for all customers (after adjustment to include the new costs), then it is permissible to charge the incremental cost to the customer. Otherwise (i.e., if the incremental cost is less than the average), the new customer must pay the same as all existing customers. This applies to both on-peak and off-peak service, although the incremental cost for service that is completely off-peak in nature will usually be much less than the average. Hence, among other things, under this policy, off-peak transmission service customers pay non-trivial contributions to the fixed costs of existing facilities, above incremental costs. FERC’s “Or Pricing” policy has withstood legal challenge. I believe that this “Or Pricing” policy is well founded and provides a fair and rational basis for pricing above incremental costs where (as here) average costs exceed incremental costs.

Interruptible Customers Should Pay Vessel-Related Costs

I will next address Mr. Saleba’s argument that interruptible customers should pay no capacity-related costs. As I mentioned previously, at pages 7-8 of the EES Consulting report, Mr. Saleba likens drop trailer service to “interruptible” electric service customers. He then *implies* that an accepted practice in the electric utility industry is to not charge such customers any capacity-related costs. There are several things wrong with this misleading implication. First, the passage in the *Bonbright* text to which Mr. Saleba refers is merely describing a practice of some utilities, and it is not proposed or endorsed by Bonbright and his collaborators. The passage is merely an observation regarding a practice of some industry participants.

Second, this text was published in 1988, when interruptible rates were quite rare and there was little consensus in the industry, including among regulators. The pricing of interruptible rates has greatly evolved in the past twenty years. Today, it is widely recognized that interruptible customers should contribute to the fixed costs of production capacity, and the discounts that they are offered are rarely more than a 20-30% of total capacity costs. Such discounts represent the avoidance of redundant reserve capacity, but not all capacity. I know of no jurisdiction in which interruptible electric customers are given a free ride with respect to capacity charges.

¹¹ See U.S. Federal Power Act and Natural Gas Act.

¹² FERC’s Order on Transmission Pricing Policy, issued December 1, 1994, in Docket No. RM93-19-000.

Third, it should be noted that the *Bonbright* passage quoted by Mr. Saleba refers to “demand or capacity costs.” As I have explained above, it is widely accepted to exclude a substantial portion of fixed costs from capacity-related costs, and instead treat them as commodity-related costs. One of the reasons for such treatment is so that interruptible and off-peak customers (who benefit greatly from the availability of the facilities in question) do pay a fair share of the fixed costs, even though those customers pay a reduced demand or reservation charge.

BC Ferries’ Proposed Pricing is Discriminatory

It is also my opinion that BC Ferries’ proposed pricing for drop trailer service is discriminatory – *unduly* discriminatory. Drop trailer customers are not the *only* off-peak customers. Many automobile customers and other customers also use the ferries during off-peak times. Yet, drop trailer customers are apparently the only off-peak customers the rates for whom need not recover *any* of the costs of ferry vessels and related facilities. Clearly, BC Ferries seeks to discriminate in favor of the drop trailer customers at the expense of (i) its other, “core” customers, and (ii) current and possibly future competing suppliers of that service.

If BC Ferries and its consultant were to truly believe that off-peak use of the ferries should make *no* contribution to the fixed costs of ferry vessels and related facilities, then BC Ferries’ rate structure for all customers would have much higher premiums for on-peak service (higher than the current premiums), because all vessel-related fixed costs would need to be recovered only from on-peak use. Off-peak service for all customers would also be much lower. Here, though, only drop trailer service is provided with a very low off-peak rate that does not include any vessel-related fixed costs. Because the details of BC Ferries’ cost of service analysis have not been made available to me, I cannot determine with any precision the level of ferry-related costs charged to off-peak core customers, but it is apparent to me from BC Ferries’ fare schedule that not all ferry-related costs are recovered from on-peak customers only. If that were to be so, the on-peak premiums charged by BC Ferries would undoubtedly be much greater. Even among other off-peak customers of BC Ferries, drop trailer customers are provided an undue preference.

There are always winners and losers in price discrimination, because pricing is largely a zero-sum game, as they say. Here, the winners are BC Ferries and drop trailer customers, but only until competing suppliers are run out of business. This discriminatory pricing is unfair, is otherwise not in the public interest, and should not be allowed to stand.

Holding Core Customers Harmless Is Not A Proper Standard

At page 7 of the EES Consulting report, it is stated that the proposed pricing for drop trailer service will “[keep] all other rate payers harmless and not increase rates to other service classes.” I submit that this statement expresses an inadequate and improper standard for pricing to drop trailer service. Certainly one hopes to avoid unnecessary price increases – rates for a service as important as ferry service should not be increased except as reasonably necessary. However, this alone is too low a standard for determining whether the

price established for drop trailer service is reasonable and appropriate. If “core” customers are merely held harmless – and do not benefit significantly – what is the justification for entering the drop trailer ferry business at all? If there are, as is claimed, efficiencies to be gained from offering drop trailer service, those efficiencies should be reflected in lower prices to the core customers and not only to the drop trailer customers. More importantly, a reasonable contribution to the fixed costs of the ferry system should be paid by the drop trailer customers in order that the cost that must be borne by the core customers is actually reduced.

If the “core customers” are just held harmless, and nothing more, what is the benefit that justifies pricing that will drive out established providers of drop trailer service? I submit that there is none.

Improper Leveraging

As I stated above, I believe that a firm unfairly competes with other firms offering the same product or service when the former firm is able to lower prices, and otherwise gain market share, with respect to that product by virtue of a unique happenstance that is not available to those other firms. I believe that this is particularly true of BC Ferries’ drop trailer service. Here, BC Ferries’ proposes to be able to collect no ferry-related costs from drop trailer customers. It can only do so and continue in business because it has its so-called “core” customers from which to collect all vessel-related costs. The incumbent providers of drop trailer service do not have such core customers from whom they may collect all of their vessel-related costs. Rather, the incumbent providers must collect all of their costs from drop trailer service or fail. Among drop trailer service providers, only BC Ferries’ has such a secure source of funding to pay for the ferry vessels and related terminal facilities. It is available to BC Ferries, and only to BC Ferries, by virtue of its contract with the Province of British Columbia; namely, the Coastal Ferries Contract. This unfair advantage is referred to as “leveraging” because the core customers represent a figurative lever by which a firm like (and including) BC Ferries is able to more easily lift weight than its competitors. Clearly, under BC Ferries’ proposal, its core customers will improperly subsidize BC Ferries’ drop trailer service. Because, in its core business, BC Ferries enjoys a government-bestowed monopoly, BC Ferries’ proposal to continue collecting all ferry-related costs from core customers, and to collect little or none from drop trailer customers, would be unfair. Moreover, among other things, BC Ferries’ proposal in this regard would, in my opinion, be tantamount to the government of British Columbia picking winners (or, more to the point, a particular winner) and losers in the drop trailer market.

Additionally, BC Ferries’ proposed cost allocation (that is, its lack of allocation of costs to drop trailer customers) renders virtually moot some otherwise pertinent considerations and requirements. For instance, BC Ferries’ claims that it is charging a fair pre-tax rate of return to drop trailer customers. However, return on investment is one of those several ferry-related costs that BC Ferries claims is a “capacity cost,” which should be allocated fully to core customers. Thus, in fact, BC Ferries proposes to allocate a zero rate of return to drop-trailer customers. Similarly, whether or not BC Ferries actually has paid market value for its ferry vessels (as BC Ferries claims in its Submission) is actually

immaterial, because no amortization of such vessel costs is allocated to drop-trailer customers. No matter what the costs of the ferries may be, BC Ferries would charge none of those costs to drop trailer customers. Such is the nature of BC Ferries proposed subsidization of its drop trailer service by its core customers.

4. WHAT WOULD CONSTITUTE FAIR PRICING FOR DROP-TRAILER SERVICE

Because specific information regarding BC Ferries' costs was redacted from the information made available to me, I have not been able to develop a recommendation as to a specific portion of the fixed costs and BC Ferries' ferry vessels and terminal facilities that should be allocated on a commodity or average use basis. However, I can describe in general terms how the rate or rates for drop trailer service should be determined reflecting the principles I have described. In my opinion, BC Ferries' fees for drop trailer services, if they are to be fair and nondiscriminatory and otherwise appropriate, should satisfy three criteria:

(i) First, for the reasons I have described above, BC Ferries' fees for drop trailer service should not be less than the long-run incremental costs of providing the service, including a share of the costs of eventually replacing the ferry vessels and associated terminal facilities. For this purpose, a reasonable (and much higher than zero) share of fixed costs should be allocated on the basis of total through-put for all types of vehicles.

(ii) Second, also for reasons I explain above, in order to be non-discriminatory and to provide a reasonable benefit to other ferry customers, the normalized rate per foot of transported trailer (taking into account length, width, and height, as well as weight) should not be less than the price charged for transporting other vehicles at the same time. That is, the normalized rate per foot (for vehicle-related ferry costs) should be the same for all customers traveling at the same time.

(iii) Third, in order to provide proper price signals, and also determine a minimum reasonable share of costs reasonably allocated to off-peak customers, the normalized rate or average cost per foot (for vehicle-related ferry costs) should not be less than the average cost per foot that would be obtained if the ferry vessels were to be fully utilized. I will explain the basis for this calculation below.

Fees Reflecting 100% Utilization

The rates for drop trailer service should recover an appropriate contribution to the vehicle-related costs of the ferry vessels and associated facilities that should not be less than that determined by dividing the total of such costs for the year by the total possible traffic volume or through-put for the year (based on current capacity). In other words, the rates for drop trailer service should reflect full utilization of the ferry system, equivalent to a 100% "load factor." Load factor is simply the ratio of actual utilization or traffic volume to the total volumetric capacity.

This pricing methodology assigns to off-peak customers the amount of capacity costs that would be assigned to all customers if the entire system were utilized at full

capacity. This reflects the principle that, at 100% load factor, the fixed costs of the system *per customer* are minimized. In other words, at full utilization, costs per customer are at the lowest possible level, other than through price discrimination. When utilization is less than 100%, prices should only rise, so that it is illogical to set the price for any customer (even an off-peak customer) below the 100% utilization level (which is what BC Ferries' proposed rates for drop trailer service would do).

Rates lower than the 100% utilization rate also sends the wrong "price signal" to customers, suggesting to them that they can increase off-peak usage with very little increased costs. The reality is that off-peak capacity is ultimately limited and that too much growth in usage will create a *new* peak with new capacity requirements. Hence, the economically efficient price is that which reflects full utilization of system capacity. This additional "floor" that I recommend for off-peak pricing for drop-trailer service should also be applied to other classes of service by BC Ferries.

5. CONCLUSION

In summary, for the reasons described herein, it is my opinion that BC Ferries' proposed fees for drop trailer service are not fairly or appropriately priced because they do not include *any* vessel-related costs or costs of associated terminal facilities. I have reviewed BC Ferries' proffered arguments for this unusual and unfair pricing and find that, in my opinion, they are not valid. Instead, the matching principle and other fairness considerations require that a reasonable, *non-zero* share of vessel and terminal costs (including both fixed costs and operating costs) be allocated to, and included in the fees for drop-trailer service. The appropriate level of such costs to be included should be the greater of the results of the three approaches that I outline above.

Yours very truly,

Linxwiler Consulting Services, Inc.

/s/ Joe N. Linxwiler, Jr.

Joe N. Linxwiler, Jr.
President