BC hydro

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October 31, 2008

Ms. Erica M. Hamilton
Commission Secretary
British Columbia Utilities Commission
Sixth Floor – 900 Howe Street
Vancouver, BC V6Z 2N3

Dear Ms. Hamilton:

RE: British Columbia Utilities Commission (BCUC)
British Columbia Hydro and Power Authority (BC Hydro)
Application for Approval of Electric Tariff Supplement No. 76 – Agreement for Provision of Non-Firm Shore Service to Canada Place

Enclosed is BC Hydro's Application for approval of Electric Tariff Supplement No. 76 – Agreement for Provision of Non-Firm Shore Service to Canada Place which is being filed pursuant to sections 58 to 61 of the *Utilities Commission Act* and in compliance with Ministerial Order M252 (The Shore Power Regulation).

For further information please contact Fred James at 604-623-4317.

Yours sincerely,

Joanna Sofield
Chief Regulatory Officer

Enclosure (1)

Application for Approval of Electric Tariff Supplement No. 76 - Agreement for Provision of Non-Firm Shore Service to Canada Place

BC hydro

October 2008

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1.1 Introduction

1.1.1 Purpose and Organization of Application

BC Hydro is filing this application, pursuant to sections 58 to 61 of the *Utilities Commission Act*, and Ministerial Order No. M252 dated October 15, 2008 (Appendix A) for an order from the British Columbia Utilities Commission (**BCUC**) approving the attached Electric Tariff Supplement No. 76 (**TS No. 76**, refer to Appendix B) which sets out a rate (the shore service rate) of 7.61 cents/kWh and terms and conditions for the delivery of non-firm shore service to Port Metro Vancouver (**PMV** - previously the Vancouver Fraser Port Authority) at the Canada Place wharf in Vancouver, effective as of April 1, 2009.

This application is organized as follows:

- Section 1.2 provides the background to this application;
- Section 1.3 discusses the shore power regulation and rate design criteria; and
- Section 1.4 explains the structure and terms of shore service TS No. 76;

Appendices A and B are as noted above and Appendix C contains a copy of a BCUC draft order for approval of TS No. 76. Appendix D contains letters of support.

BC Hydro proposes that this application should be reviewed by way of a written process.

All communications regarding this application should be directed to:

Joanna Sofield
Chief Regulatory Officer
BC Hydro
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Phone: (604) 623-4046
Email: regulatory.group@bchydro.com

1.2 Background

1.2.1 Shore Power and Canada Place

On October 15, 2008 the Government issued Ministerial Order No. M252 - Shore Power Regulation (**The Shore Power Regulation**) that directs the BCUC to set a shore service rate designed to encourage operators of cruise ships docked at Canada Place to use port electricity instead of on-board, diesel-generated electricity.

Shore power commonly refers to the electrical service provided to commercial ships when they are berthed in port and connected to a utility's electrical system, receiving electricity from the grid and allowing the ships to shut down their on-board sources of electricity generation.

In this application, "shore service" means service provided by BC Hydro to the PMV to enable it to provide port electricity and covered by TS No. 76. "Port electricity" means electricity delivered by the PMV to cruise ships docked at Canada Place Wharf in Vancouver.

Canada Place, located on Burrard Inlet in downtown Vancouver, is operated by the PMV and is used primarily by commercial cruise ships during the summer cruise season of April through October. Carnival Corporation and PLC (**Carnival**), which also operates Holland America Line and Princess Cruises, has approached BC Hydro and requested a connection to shore power (most of Carnival's fleet is or will be configured to take shore power). Ships docked at Canada Place would therefore be connected to BC Hydro's grid during the summer cruise season which would allow on-board diesel generators to be shut down.

Over the past two years, representatives from the PMV, Carnival and the provincial Ministry of Transportation have held meetings with BC Hydro to discuss shore power for cruise ships. Subject to BCUC approval of TS No. 76 for non-firm shore service, BC Hydro has agreed to provide shore service and port electrification to the east and west berths at Canada Place and has targeted the start of the 2009 cruise season in April to begin service. The shore service for the PMV would enable cruise ships at Canada Place to use shore-side electrical power. This would be supportive of the B.C. Government's Green Ports initiative

which states:[1]

- "The port is also evaluating port-side electrification which would see vessels using shore-side electrical power while berthed rather than diesel power."

Letters of support for this application from the PMV, Carnival, the provincial Ministry of Transportation and Infrastructure and the Ministry of Environment are provided in Appendix D. While TS No. 76 is in alignment with the 2007 Energy Plan, as noted above, BC Hydro considers that the BCUC should evaluate the merits of the proposed non-firm shore service rate based on the ability of the rate to meet the eight rate design criteria that BC Hydro has set out in both its 2007 Rate Design Application (**2007 RDA**) and the Residential Inclining Block (**RIB**) Rate Application. The eight rate design criteria are discussed in section 1.3.2, below.

While the non-firm shore service rate contained in TS No. 76 is only for use at Canada Place, BC Hydro anticipates that other dock facilities will seek to have shore power available. BC Hydro will consider any further requests for shore power on a case by case basis.

1.2.2 Cruise ship Loads and Operating Schedule

Table 1 below shows the expected cruise ship berthing schedule of Carnival for Canada Place during the 2009 cruise season. The four main ships at the East berth will typically be in port, or call, ten times over the five month cruise season with a call frequency of every 14 days. The calls are on Saturdays and Mondays and last ten to 11 hours per call. The schedule for the West berth has one ship calling 21 times over the cruise season, with a call frequency of every seven days. The calls are on Saturdays and last about ten hours per call. The estimated energy consumption per vessel over the five month season is obtained by multiplying the number of hours per call by the number of calls and by the average load. The total energy consumption over the cruise season is obtained by adding the total estimated load for each vessel and is equal to 6,200 MWh. Therefore, the average load per month is expected to be 1,240 MWh (6,200/5 = 1,240).

[1] The BC Energy Plan: A Vision for Clean Energy Leadership (BC Energy, Mines and Petroleum Resources, February 2007), page 21.

Table 1 2009 Cruise Ship Schedule at Canada Place

									Electrical Power Requirements		
Cruise Line	Vessel	Berth	No. of Calls	Call Frequency (days)	Call Day	Date Range	Arrival	Avg Hours at Berth/Call	Est. Avg Load (MW)	Est. Avg Energy (MWh)	Est. Peak Load (MW)
Princess Cruises	Diamond	CPL-E	10	14	Sat	May-Sep	0700 hrs	11.0	10.6	1,165	10.6
Princess Cruises	Sapphire	CPL-E	10	14	Sat	May-Sep	0700 hrs	11.0	10.6	1,165	10.6
Princess Cruises	Coral	CPL-E	10	14	Mon	May-Sep	0700 hrs	10.0	8.5	850	10.5
Princess Cruises	Island	CPL-E	10	14	Mon	May-Sep	0700 hrs	10.0	8.5	850	10.5
Princess Cruises	Golden	CPL-E	2	Reposition	Various	May-Sep	0700 hrs	11.0	11	242	13.0
Holland America	Zuiderdam	CPL-W	21	7 days	Sat	May-Sep	0700 hrs	10.2	9	1,928	10.5
									Total load 5 Months	6,200	
									Average load per month	1,240	

If electricity service was provided under BC Hydro's Rate Schedule 1211 – General Service (35 kW and Over) (RS 1211), the estimated electricity cost based on the loads from the 2009 cruise ship berthing schedule would be $1,013,252. The average blended energy and demand rate if service to the cruise ships was provided by RS 1211 would be 16.3 cents/kWh (or $163/MWh). The demand charges would be approximately 78 per cent of the total bill and the energy charges would be approximately 22 per cent. A typical large customer's bill on RS 1211 consists of 20 per cent demand charges and 80 per cent energy charges.

BC Hydro does not consider that RS 1211 is the appropriate rate for shore service because it is for a firm service and, as explained in section 1.4.4 below, the shore service at Canada Place will be a non-firm service. Expensive infrastructure upgrades would also be required to provide firm delivery capability to Canada Place and both PMV and the cruise ship company are willing to accept a non-firm service.

1.3 Shore Power Regulation and Rate Design Criteria

1.3.1 Shore Power Regulation

The Shore Power Regulation was issued by Ministerial Order on October 15, 2008. For the purposes of amending and setting rates under the *Utilities Commission Act*, section 3(1)(a) of the regulation states that the BCUC must set a shore service rate that encourages operators of cruise ships docked at Canada Place wharf in Vancouver to use port electricity instead of on-board, diesel generated electricity. Section 3(1)(b) of the regulation includes the condition that port electricity may be only provided at a price not exceeding the price for shore service. Section 3(2) requires the BCUC to ensure that the rate allows BC Hydro to collect sufficient revenue in each fiscal year to enable it to recover costs incurred as a result of providing the shore service.

BC Hydro's proposed shore service rate has been designed to be consistent with sections 3(1)(a), 3(1)(b) and 3(2) of The Shore Power Regulation.

Section 3(2) is addressed by the fact that all incremental infrastructure and connection costs are borne by the customer. In addition, the energy cost is priced at BC Hydro's long run marginal cost adjusted for distribution losses (as discussed in Section 1.4.6 below). This ensures that energy revenues recover the cost of providing the energy, which is assumed to be the cost of energy purchased from IPPs in the last energy call (the F2006 Call for Tender). As a result, all other rate-payers are held harmless. This is discussed in greater detail in section 1.4 which outlines the structure and terms of TS No. 76.

Regarding section 3(1)(a) of the Shore Power Regulation, Carnival had indicated in initial discussions with BC Hydro that the existing large general service blended (energy and demand) electricity rate of about 16 cents/kWh estimated for port electricity would be prohibitive and would not encourage the use of port electricity instead of on-board, diesel generated electricity. Carnival indicated that this high rate would not encourage cruise ship operators to invest in the necessary ship-side and shore-side power infrastructure and equipment. Carnival also indicated that other jurisdictions which provide it with port electricity, such as Seattle, Washington and Juneau, Alaska, charge shore power rates in the range of 6 cents/kWh. As discussed earlier, the existing BC Hydro rate (RS 1211) is for

firm service. In order to encourage the consumption of port electricity and to comply with The Shore Power Regulation, BC Hydro is proposing a non-firm shore service rate which is lower than its existing blended firm service rate. Carnival is supportive of BC Hydro's proposed rate for non-firm service, as shown in its letter included in Appendix C.

In addition, TS No. 76 states that port electricity may be only provided at a price not exceeding the price for shore service and, if the rates and charges differ (e.g., to permit PMV to recover any charges pro rata from the cruise ship operators), at a price set to recover the overall price payable for shore service.

In developing the shore service rate, BC Hydro has also endeavoured to meet the eight rate design criteria which are discussed in the next section.

1.3.2 Rate Design Criteria

In its 2007 RDA and the RIB Rate application BC Hydro specified eight rate design criteria[2]:

- Recovery of revenue requirement;
- Fair apportionment of costs among customers;
- Price signals that encourage efficient use and discourage inefficient use;
- Customer understanding and acceptance;
- Practical and cost effective to implement;
- Rate and bill stability;
- Provision of revenue stability; and
- Avoidance of undue discrimination.

BC Hydro believes that these are well-recognized and accepted rate design criteria that are consistent with the statutory test of being fair, just and not unduly discriminatory. In the

following table BC Hydro evaluates the non-firm shore service rate contained in TS No. 76 against these criteria and within the context of The Shore Power Regulation. Thus the criteria that relates to the avoidance of undue discrimination is categorized as "Not Applicable" given that only cruise ships at Canada Place are mentioned as receiving port electricity in The Shore Power Regulation.

Criteria	Performance	Remarks
Recovery of revenue requirement	Good	The rate is designed to recover the cost of energy, which is the only material incremental cost of this rate.
Fair apportionment of costs among customers	Good	The rate is equal to the incremental long-run cost of energy, adjusted to reflect primary distribution losses, and recovers all incremental costs of serving the customer.
Price signals that encourage efficient use and discourage inefficient use	Good	Energy price sends an efficient price signal to the customer, as it is equal to BC Hydro's long-run marginal cost of energy.
Customer understanding and acceptance	Good	The customer understands the rate and is in favour of its approval.
Practical and cost effective to implement	Good	No incremental infrastructure costs for BC Hydro.
Rate and bill stability	Good	Rate is flat and will provide predictable bills.
Provision of revenue stability	Good	The flat rate produces stable revenues.
Avoidance of undue discrimination	Not Applicable	Although the rate is only available to PMV, this is consistent with The Shore Power Regulation.

[2] Paraphrased from James C. Bonbright, *Principle of Public Utility Rates*, Columbia University Press, March 1988.

1.4 Structure and Terms of Non-Firm Shore Service (TS No. 76)

The terms and charges for non-firm shore service are provided in Appendix B Electric Tariff Supplement No. 76 Agreement for the Provision of Shore Service to Canada Place. The following will discuss the rationale for the structure and terms of TS No. 76 in more detail.

1.4.1 BC Hydro and Customer Arrangements under Shore Service

PMV is a customer of BC Hydro and since it owns the infrastructure and dock at the point of delivery for port electricity, the PMV is also the customer for the purposes of the sale of non-firm shore service[3]. This arrangement means that the PMV will resell power to the cruise ships under the Terms and Conditions of BC Hydro's Electric Tariff. BC Hydro considers that the ships taking port electricity will be metered tenants of the PMV for the purpose of its tariff. BC Hydro will charge PMV for the metered non-firm shore service load at the rate contained in TS No. 76.

BC Hydro's Electric Tariff also states that "Where electricity is required under unusual conditions, BC Hydro may provide the service under special contract." (Refer to Terms and Conditions, section 9.4 Special Contracts, page 35). BC Hydro is filing the shore power rate as a Tariff Supplement because the non-firm shore service and port electricity loads are unique and the conditions of service are unusual. BC Hydro will be providing a non-firm service to a few large cruise ships docking at Canada Place which have both self-generation and the capability to connect to shore power. These ships have very large loads ranging from 10.5 MW to 13 MW and they will be accessing shore power only on a short-term basis. The load factor of these loads is therefore very low.

1.4.2 Availability

Non-firm shore service supplied by BC Hydro under the terms of TS No. 76 will only be available to PMV for the purposes of providing port electricity. This is consistent with The Shore Power Regulation which refers to the shore service rate as encouraging operators of cruise ships docked at Canada Place wharf in Vancouver to use port electricity.

[3] Note that TS No. 76 refers to PMV as the Vancouver Fraser Port Authority (VFPA), which is the name it currently retains for legal or contractual purposes.

1.4.3 Term Length

The initial term of TS No. 76 will be for a period of ten years. PMV will have the right to terminate the agreement at any time by giving BC Hydro 30 days' written notice and in such a case PMV would remain obligated to pay any amounts accrued and owing as of the date of termination. Section 1.4.11 below outlines rate revisions that may take place during the contract term.

1.4.4 Non-firm Shore Service to Canada Place

This section explains why the shore service will be non-firm as, under the proposed terms and conditions, BC Hydro will only provide shore power if it has the energy and capacity to deliver electricity available.

To avoid the need for the significant capital expenditures that would be required to provide firm delivery service to Canada Place, BC Hydro proposes to use the standby capacity in existing distribution cables; therefore shore service will be available on a non-firm basis and BC Hydro will incur no costs to upgrade the existing distribution system.

BC Hydro intends to utilize four cables to supply electricity for non-firm shore service at Canada Place. Two cables will supply the east berth with a maximum of 14 MVA of power. The other two cables will supply the west berth, also with a maximum of 14 MVA of power. The cables will be available on a non-firm basis as they have been installed as back-up cables for several other cables that supply electricity to Vancouver's downtown core. Extensions to these existing cables will be required to enable non-firm shore service. The cost of the extensions will be the responsibility of the PMV as per section 1.4.12 of this application.

1.4.5 Energy Charge

BC Hydro believes that non-firm shore service at Canada Place should be priced at a rate equivalent to that offered under its current Rate Schedule 1880 – Transmission Service - Standby and Maintenance Supply (RS 1880, but adjusted for losses as described in section 1.4.6) which is an ad hoc service available to transmission service customers who have their own self-generation. The service is used to provide electricity when customers'

self-generation is curtailed. RS 1880 is a non-firm service and, as it is available only if BC Hydro has the energy and capacity to do so, there is no demand charge.

BC Hydro considers that the provision of non-firm shore power at Canada Place is analogous to RS 1880 in that it is designed to serve large loads that have their own self-generation. In addition, the nature of the Canada Place load is short-term and non-firm, similar to loads that take service under RS 1880. The consumption of port electricity will occur on limited days during the cruise season and there is no obligation for the customer to consume load or for BC Hydro to supply load when there is not a supply of available energy or capacity.

For the above reasons BC Hydro proposes to charge the same energy rate as that charged under RS 1880 for non-firm shore service at Canada Place (currently 7.36 cents/kWh as of April 1, 2008), adjusted for losses.

The RS 1880 energy charge will provide a stable energy rate with relatively limited need to update frequently as it depends on BC Hydro having new Call for Tender price information, which is currently considered the long-term opportunity cost of new supply. The stable rate is an attractive feature which meets the customer's energy planning requirements. BC Hydro will adjust the non-firm shore service energy rate when there is an adjustment made to RS 1880.

1.4.6 Losses

For the purpose of non-firm shore service, BC Hydro proposes to adjust the RS1880 energy charge by 3.44 per cent to account for distribution losses. This will currently result in a rate of 7.61 cents/kWh (7.36 X 1.0344). The 3.44 per cent distribution loss factor is applicable to the General Service over 35 kW Primary customer category and is taken from the 2007 RDA (refer to 2007 RDA, March 2007, Exhibit B-1, Appendix A, Cost of Service Model, Schedule 5.0). BC Hydro does not propose to include in the energy charge an adjustment for transmission losses. BC Hydro notes that the RS 1880 energy charge does not include any adjustment for transmission losses, as the $73.60/MWh price is at the plant-gate and it was recently approved as the RS 1880 energy charge by BCUC Order No. G-97-08.

1.4.7 Demand Charge

There will be no demand charge for capacity for shore service at Canada Place, since the shore service rate is non-firm and since the incremental generation capacity costs are generally not a concern during the cruise season months. BC Hydro is generation constrained mainly in the high-demand winter months and not during the cruise season. Although transmission constraints can occur in the cruise-season months, the shore service is non-firm and the service will be interrupted if required.

With respect to incremental distribution capacity costs, BC Hydro typically must build delivery infrastructure to meet peak demand. However it will be able to deliver shore power to this dock by the use of standby cables which are already in place for reliability purposes. Again, as the service is interruptible, BC Hydro can still meet its reliability needs without having to build new capacity.

There is no contribution to the existing fixed costs of the system, since there is no demand charge for capacity and since the service is non-firm.

1.4.8 Administrative Charge

BC Hydro proposes to apply a $150 administrative charge per month per account during the cruise season. These charges will cover BC Hydro's incremental billing and administrative costs. BC Hydro will not need to do manual billing for the non-firm shore service rate, as is done with RS 1880 (and which charges $150 per ad hoc event) and therefore the costs of administration are lower. BC Hydro considers that the $150 per month charge will recover any incremental administration costs of this service.

1.4.9 Charge to Operate Switchgear

Under the non-firm shore service operating procedures, BC Hydro may have to send a crew to operate the switchgear to help connect and disconnect the ships. If this is required, BC Hydro will charge the customer for the time and labour cost of sending out the Power Line Technician (**PLT**) crew to operate the switchgear for each connect and disconnect that BC Hydro is required to perform. The charge will be based on prevailing contracted labour rates and will be separately itemized on the customer's monthly bill.

1.4.10 Rate Rider

Rate Schedule 1901 - The Deferral Account Rate Rider (RS 1901) applies to all charges payable under the Shore Power Agreement, before taxes and levies.

1.4.11 Rate Revisions

The rates and charges for non-firm shore service, including the administrative charge, are subject to adjustment from time to time in accordance with any changes made in BC Hydro's RS 1880 and RS 1901 as approved by the BCUC.

1.4.12 Infrastructure Costs

Infrastructure required at Canada Place includes conduit and cables; some structural dock reinforcement for a crane; a new transformer; electrical gear and ship cables and connectors.

PMV will be responsible for all distribution related capital costs that arise out of incremental infrastructure associated with the non-firm shore service project. These costs include:

a) civil infrastructure required to install cables from the nearest BC Hydro facility to the PMV connection points;

b) electrical cables from BC Hydro connection points to the PMV connection points; and

c) required substation improvements including protection and control equipment.

The shore power project is unusual in that the delivery of port electricity requires the interconnection of BC Hydro cables to the generating system on board the cruise ships and this interconnection will be unique within the BC Hydro system. Protection reviews indicate that such connections are feasible, but may require additional equipment to be installed in order to ensure that this connection does not impact other BC Hydro customers. Clarity on the type of equipment will become more apparent as PMV, the cruise ship company and BC Hydro's technical teams work through the details of the interconnection. PMV will also be responsible for the cost of any connections.

1.4.13 Conditions for Interruption

BC Hydro will interrupt the non-firm shore service if the standby cables are needed for any reason, including cable failure, cable or customer vault maintenance, or if a cable outage is required to connect or disconnect customers. BC Hydro's intent is to manage the maintenance timing with no material incremental cost and to facilitate ship connections as much as possible.

1.4.13.1 Probability of Interruption

As noted above, the distribution capacity to be used for non-firm shore service at Canada Place will be available from standby cables already in place. This capacity is currently being used as a contingency in the event of cable failure, cable or customer vault maintenance, or if a cable outage is required to connect or disconnect customers in downtown Vancouver. A standby cable is normally unloaded, but when required, all loads from the "running" cable are transferred to the standby cable. If at such time the standby cable was supplying shore power, the cruise ships would be required to disconnect from the BC Hydro system as per the Local Operating Order (**LOO**).

BC Hydro has reviewed the historical outage data for the standby cables covering the period May through September in 2006 and 2007. As described above, there are four categories of expected outages - forced outage, vault work, customer connections and system maintenance. Based on actual experience over the last two summers, the total probability of electricity being unavailable during the summer period during any day based on the above four categories of expected outages is 58 per cent. However BC Hydro will attempt to schedule work, when possible, in order to minimize the probability of interruption for those days when the cruise ships are docked at Canada Place. The rescheduling of work will not result in any material incremental cost to BC Hydro. Despite these efforts, however, it is likely that there will be periods of interruption to the shore service.

1.4.14 Metering

The east and west berths at Canada Place will be metered separately so that the non-firm service can be billed and monitored separately. Since shore service will require new

metering, the customer will be charged for the meter and meter installation as part of the overall infrastructure cost.

1.4.15 Maintenance

PMV owns and is responsible for the maintenance of all electrical equipment required for the supply of port electricity to docked vessels at the Canada Place wharf, other than the meters and metering transformers supplied by BC Hydro.

1.4.16 Operating Procedures

The day to day operation and interaction of BC Hydro's distribution system with the generators on board the cruise ships will be governed via a written LOO. This agreement will be strictly adhered to so that operation of the ship's electrical system and BC Hydro's system can be accomplished in the most safe and reliable manner.

Prior to energization of the service, a LOO specifying the connection and disconnection procedures for the interruption of electrical service will be agreed to between BC Hydro and PMV. BC Hydro has the right to operate the switchgear to connect and disconnect the ships. However, PMV may appoint a third party as its authorized agent to operate the switchgear owned by PMV and to perform the connection and disconnection procedures outlined in the LOO. However, PMV will remain responsible for performance of its obligations under the LOO.

When a ship comes into dock, it will seek permission from BC Hydro to connect to the BC Hydro system. Permission will be given if energy and the capacity to deliver the electricity are available.

Disconnection of a ship prior to it leaving the dock can occur for two reasons: either a standby cable is required to supply other load and cannot deliver electricity to the port, or there is an emergency failure of the cable that the ship is connected to.

If BC Hydro is to interrupt shore service due to capacity restrictions on the cable, it will contact the ship and provide notice for disconnection. Disconnection will occur as per the terms and conditions agreed to in the LOO. If there is an emergency cable failure, the ship's

automated system will initiate disconnection immediately under emergency conditions and the protection and control measures will ensure that there are no impacts to other customers.

1.4.17 Resale of Electricity

TS No. 76 states that port electricity may be only provided at a price not exceeding the price for non-firm shore service and, if the rates and charges differ (e.g., to permit PMV to recover any charges pro rata from the cruise ship operators), at a price set to recover the overall price payable for non-firm shore service. This is consistent with section 3(1)(b) of The Shore Power Regulation.

Application for Approval of Electric Tariff Supplement No. 76 - Agreement for Provision of Non-Firm Shore Service to Canada Place

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Appendix A

Ministerial Order No. M252

October 2008

PROVINCE OF BRITISH COLUMBIA

REGULATION OF THE MINISTER OF ENERGY, MINES AND PETROLEUM RESOURCES

Utilities Commission Act

Ministerial Order No. M 252

I, Richard Neufeld, Minister of Energy, Mines and Petroleum Resources, order that the following regulation is made:

SHORE POWER REGULATION

Definitions

1 In this regulation:

"Act" means the *Utilities Commission Act*;

"shore service" means service provided by the authority to the Vancouver Fraser Port Authority to enable it to provide port electricity;

"port electricity" means electricity delivered by the Vancouver Fraser Port Authority to cruise ships docked at Canada Place wharf in Vancouver.

Purpose

2 This regulation is made for the purposes of section 58 (2.1) (a) of the Act.

Required rates

3 (1) Subject to subsection (2), the commission must set a shore service rate that

(a) is designed to encourage operators of cruise ships docked at Canada Place wharf in Vancouver to use port electricity instead of on-board, diesel-generated electricity, and

(b) includes the condition that port electricity may be provided only at a price not exceeding the price for shore service.

(2) In setting the rate for shore service, the commission must ensure that the rate allows the authority to collect sufficient revenue in each fiscal year to enable the authority to recover costs incurred as a result of providing the shore power service.

DEPOSITED
OCT 16 2008
B.C. REG. 291/2008

Oct 15/08
Date

Minister of Energy, Mines and Petroleum Resources

(This part is for administrative purposes only and is not part of the Order.)

Authority under which Order is made:

Act and section:- *Utilities Commission Act*, R.S.B.C. 1996, c. 473, s. 125.1 (4) (f)

Other (specify):-

October 7, 2008 R/1047/2008/27

Application for Approval of Electric Tariff Supplement No. 76 - Agreement for Provision of Non-Firm Shore Service to Canada Place

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Appendix B

Electric Tariff Supplement No. 76

Agreement for Provision of Shore Service to Canada Place

October 2008

AGREEMENT FOR PROVISION OF SHORE SERVICE

TO

CANADA PLACE

This Agreement (hereinafter referred to as "Shore Power Agreement" or "Agreement") is made to be effective on the _____ day of _____, 200_,

BETWEEN:

BRITISH COLUMBIA HYDRO AND POWER AUTHORITY,

having its head office at 333 Dunsmuir Street,

Vancouver, British Columbia V6B 5R3

("B.C. Hydro")

AND:

VANCOUVER FRASER PORT AUTHORITY

100 The Pointe

999 Canada Place

Vancouver, British Columbia, V6C 3T4

("the VFPA")

(Each of B.C. Hydro and the VFPA are referred to individually as the "Party" and collectively, as the "Parties")

WHEREAS the VFPA owns and is charged with operating the wharf at Canada Place, Vancouver Harbour, and wishes to install facilities to enable cruise ships docked at the Canada Place wharf to connect to and receive electricity supply from the wharf while they are at berth. This electricity supply will relieve the docked cruise ships of the need to operate their onboard diesel generating units while at berth, thereby reducing air emissions in the Vancouver Harbour area; and

WHEREAS the VFPA is currently receiving service from B.C. Hydro pursuant to Rate Schedule 1211 approved by the British Columbia Utilities Commission, and in addition, wishes to receive a non-firm electricity supply ("Shore Power") from B.C. Hydro for the east and west berths at Canada Place in order to provide the Shore Power to the docked cruise shipss, and

WHEREAS the B.C. Hydro and the VFPA wish to enter into this Shore Power Agreement to provide for the supply of Shore Power to the Canada Place wharf.

NOW THEREFORE, THIS AGREEMENT WITNESSES that the Parties agree as follows:

1 INTERPRETATION

1.1 Definitions

The following definitions and any terms defined internally in this Agreement will apply to this Agreement and all notices and communications made pursuant to this Agreement:

Delivery Points. The physical locations at the Canada Place Wharf at which Shore Power is delivered by B.C. Hydro to the VFPA and received by the VFPA from B.C. Hydro, as set forth in the Local Operating Order.

Canada Place Wharf. The VFPA wharf at Canada Place, Vancouver Harbour, for the berthing of cruise ships and other ocean going vessels.

Cruise Season. The months of April, May, June, July, August, September and October during any year of this Agreement.

Electricity. Electrical power and electrical energy. Power is measured and expressed in kilowatts (kW) or kilovolt-amperes (kV.A) and energy is measured and expressed in kilowatt-hours (kW.h).

Local Operating Order. The operating order entered into by B.C. Hydro and the VFPA which outlines the procedures to be followed when working on electrical facilities at or in the vicinity of the Delivery Points, and for connecting and disconnecting docked cruise ships to and from the Shore Power delivery facilities, and procedures for related matters, as the same may be revised from time to time.

Port Electricity. Electricity delivered by the VFPA to cruise ships docked at Canada Place Wharf in Vancouver.

Shore Power. Electricity supplied by B.C. Hydro on a non-firm basis to the VFPA for delivery as Port Electricity to cruise ships docked at Canada Place Wharf.

1.2 Interpretation

Unless otherwise specified herein, all references to Sections are to those set forth in this Agreement. Reference to any Party includes any permitted successor or assignee thereof. The term "including" followed by descriptive words is used in this Agreement by way of example only and is not intended to limit the scope of the provision. The headings used in this Agreement are for convenience and reference purposes only.

2 AVAILABILITY

2.1 Delivery Facilities

B.C. Hydro and the VFPA will each use commercially reasonable efforts to complete the installation of all necessary equipment and upgrades within B.C. Hydro's distribution system and the Canada Place Wharf ready for delivery of Shore Power and Port Electricity as of April 1, 2009. The "Distribution Extensions" provisions in Part 8 of B.C. Hydro's *Electric Tariff* Terms and Conditions will apply in respect of any "Extension" (as defined in the said Terms and Conditions) to B.C. Hydro's distribution system to enable the supply of Shore Power to the Canada Place Wharf, except that having regard to the nature of the service to be provided by B.C. Hydro under this Agreement no contribution will be payable by B.C. Hydro towards the cost of the Extension.

2.2 Use of Electricity

Shore Power supplied by B.C. Hydro pursuant to this Shore Power Agreement shall be used only for the supply of Port Electricity to cruise ships docked at the Canada Place Wharf from time to time during the Cruise Season. Shore Power taken under this Shore Power Agreement shall not displace Electricity that would otherwise be taken by the VFPA under Rate Schedule 1211 for uses other than supply of Port Electricity to docked cruise ships.

3 TERM

3.1 Term of Agreement

Notwithstanding the actual date of execution, the term of this Agreement will commence on the effective date specified on page 1 (the "Effective Date") and will continue for a ten year period (the "Term") unless terminated prior to the expiration thereof in accordance with Section 3.2 or 3.3.

3.2 Early Termination by the VFPA

The VFPA shall be entitled to terminate this Agreement at any time by giving B.C. Hydro 30 days advance written notice of termination, effective on the date specified in such notice; provided that the VFPA shall remain obligated to pay any amounts accrued and owing hereunder as of the date of termination.

3.3 Early Termination by B.C. Hydro

B.C. Hydro shall be entitled to terminate this Agreement by giving the VFPA 30 days advance written notice of termination if, at any time during the Term, the costs of this Agreement are determined by the British Columbia Utilities Commission ("BCUC"), or any other regulatory body having jurisdiction from time to time in respect of B.C. Hydro's rates, to be imprudent or not in the interests of B.C. Hydro's ratepayers, or if B.C. Hydro is unable for any reason to recover the costs of this Agreement in its rates. Upon termination under this section, neither party shall have any further or other liability or obligation to the other.

4 ELECTRIC SERVICE TO BE PROVIDED

4.1 Non-firm Electricity

B.C. Hydro will sell and deliver to the VFPA, and the VFPA will purchase and receive from B.C. Hydro, at the Delivery Points, Shore Power during Cruise Season, but only if and to the extent that such Electricity and the ability to deliver the Electricity are available to B.C. Hydro at times appropriate for receipt by the VFPA.

The supply of Electricity shall be alternating current 3 phase 4 wire, having a frequency of approximately 60 hertz metered at a nominal potential of 12,470 volts phase-to-phase and

delivered at a nominal potential of 12,470 volts phase-to-phase at the Point of Delivery, subject to normal variations from the said frequency and voltages.

The load shall be limited to 14 MVA maximum at the Canada Place wharf east berth and 14 MVA maximum at the Canada Place wharf west berth, and shall not be increased without the prior written approval of B.C. Hydro.

The physical delivery of Shore Power may be interrupted, curtailed, or suspended at any time and for any reason by B.C. Hydro provided that B.C. Hydro shall give the VFPA as much advance notice of such interruption, curtailment, or suspension as is reasonably practical under the circumstances and as outlined in the Local Operating Order referred to in Section 7.1.

5 RATES, CHARGES, METERING AND BILLING

5.1 Applicable Energy Rate

The basic monthly rate or charge for Shore Power delivered in any billing month shall equal the product of (i) the number of kilowatt hours of Shore Power delivered to the VFPA in that month, multiplied by (ii) the energy charge set out in B.C. Hydro's Rate Schedule 1880 and multiplied by (iii) 1.0344 to account for distribution losses**.**

In addition to this basic monthly rate or charge, B.C. Hydro will also include in its bills or invoices to the VFPA, and the VFPA will also pay or reimburse B.C. Hydro for, the following: (i) any taxes, levies, surcharges and similar imposts required to be charged and collected pursuant to any applicable law, regulation or order binding on B.C. Hydro (ii) power factor penalties under Section 5.8, and (iii) any late payment charges, if applicable.

5.2 No Demand Charge

Because of the non-firm nature of the energy provided under this Agreement, and because the VFPA will bear the costs of all necessary delivery facilities and the costs of applicable operating, maintenance and related services, there is no demand charge for service under this Agreement.

5.3 Administrative Charge

In addition to the energy charge provided for in Section 5.1, the VFPA will pay an Administrative Charge of $150.00 per month per account in the cruise season. B.C. Hydro will establish a separate account for each of the east and west berths at Canada Place Wharf.

5.4 Charge to Operate Switchgear

On each occasion that B.C. Hydro is required to dispatch power line technicians or other workers to operate the switchgear for each connect and disconnect of cruise ships docked at the Canada Place Wharf, B.C. Hydro will charge, and the VFPA will pay, the reasonable time and labour costs for this service. The charge will be based on prevailing BC Hydro's contracted labour rates and will be separately itemized on the VFPA's monthly bill.

5.5 Rate Rider

The Deferral Account Rate Rider as set out in Rate Schedule 1901 applies to all charges payable under this Agreement, before taxes and levies.

5.6 Rate Revisions

The rates and charges set out in this Section 5, including the Administrative Charge provided for in Section 5.3, are subject to adjustment from time to time in accordance with any restructuring or other changes made to the rates in B.C. Hydro's Rate Schedule 1880 and Rate Schedule 1901 as approved by the BCUC; and further are subject to any restructuring or other changes made to the rates and charges provided for in this Agreement, as approved by the BCUC.

5.7 Power Factor

The average lagging Power Factor shall not be less than 90%. B.C. Hydro, in its discretion, may make continuous tests of Power Factor or may test the VFPA's Power Factor from time to time. If the VFPA's Power Factor is lower than 90%, B.C. Hydro may require the VFPA, at the VFPA's expense, to install Power Factor corrective equipment to ensure that a lagging Power Factor of not less than 90% is maintained.

5.8 Failure to Comply with Power Factor Requirements

If the VFPA neglects or refuses to install such Power Factor corrective equipment or auxiliaries as required by Section 5.6 above forthwith upon a request so to do, B.C. Hydro may at its sole option:

(a) disconnect service, or

(b) require a payment (in addition to the regular payment) of fifty cents (50¢) per month per 100 watts or fraction thereof of the connected load, or

(c) increase the VFPA's bill for Electricity by a surcharge in accordance with the following table; the amount of the surcharge so determined shall be added to the minimum bill or the calculation of the bill under the rate clause, whichever is the greater.

Lagging Power Factor as Determined by B.C. Hydro	Lagging Power Factor Surcharge
Less than 100% but 90% or more	Nil
Less than 90% but 88% or more	2%
Less than 88% but 85% or more	4%
Less than 85% but 80% or more	9%
Less than 80% but 75% or more	16%
Less than 75% but 70% or more	24%
Less than 70% but 65% or more	34%
Less than 65% but 60% or more	44%
Less than 60% but 55% or more	57%
Less than 55% but 50% or more	72%
Less than 50%	80%
No credit will be allowed for leading Power Factor.	

5.9 Metering and Billing

Shore Power is primary metered.

B.C. Hydro owns and is responsible for the maintenance of meters and metering transformers installed on the VFPA's premises for the purposes of billing.

B.C. Hydro may render accounts as often as it deems necessary. Current bills are due and payable upon presentation. A late payment charge at a rate and under terms and conditions contained in B.C. Hydro's Electric Tariff will be applied to amounts which remain unpaid one month from the billing date. If it becomes necessary to disconnect service, payment of the full amount due plus a reconnection charge will be required before service is restored.

6 MAINTENANCE

The VFPA owns and is responsible for the maintenance of all electrical equipment required for the supply of Port Electricity to docked cruise ships at the Canada Place wharf (the "Port Electricity Electrical Equipment"), other than the meters and metering transformers supplied by B.C. Hydro. The VFPA will at all times maintain, repair and replace the Port Electricity Electrical Equipment in accordance with the requirements of B.C. Hydro's Electric Tariff and the Local Operating Order.

7 OPERATIONS

7.1 Connection/disconnection procedures.

The procedures for connecting and disconnecting docked cruise ships to and from Port Electricity Electrical Equipment, and procedures for related matters (including synchronization, transfer of loads, communications, safety, among others) will be set forth in the Local Operating Order to be agreed upon and signed between B.C. Hydro and the VFPA. The Parties may from time to time agree in writing to change the provisions of the Local Operating Order without such changes or the Operating Order itself being considered modifications or amendments to this Agreement. B.C. Hydro shall not be obligated to deliver Shore Power under this Agreement until the Local Operating Order is signed.

8 PROTECTING EQUIPMENT AND POWER QUALITY

8.1 The VFPA's protection of B.C. Hydro's quality of power.

The VFPA shall at all times design, install, operate and manage its facilities and equipment (including generation and loads) to avoid adverse impacts on the quality and reliability of power available to B.C. Hydro and B.C. Hydro's other customers. B.C. Hydro shall be entitled to prescribe reasonable protective measures to implement this requirement. B.C. Hydro may from time to time reasonably change such requirements without such changes being considered modifications or amendments to this Agreement.

8.2 Protection by the VFPA of its own equipment and machinery.

During operation of its facilities, equipments, and loads, the VFPA will at all times take all necessary steps (including complying with requirements reasonably imposed by B.C. Hydro for this purpose) to prevent adverse impacts on the VFPA's equipment and machinery. The VFPA shall, for example, cause cruise ships docked at the Canada Place Wharf that are receiving, or will receive, Port Electricity under this Agreement to install and maintain in good operating condition suitable protective devices (including suitable motors) reasonably satisfactory to B.C. Hydro for equipment aboard the cruise ships including but not limited to:

(i) Line starting and overload protective devices;

(ii) Devices to protect against under- and over-voltage, and under- or over frequency;

(iii) Devices to protect three-phase equipment from single-phase operation and phase reversal.

(iv) Devices to protect against reverse power flowing from the cruise shipss into the B.C. Hydro system.

The VFPA will further cause the cruise ship owners to permit B.C. Hydro to inspect the protective devices aboard the cruise ships from time to time to determine that the protective devices comply with the requirements of this section.

9 RESALE OF ELECTRICITY

In respect of any resale of Shore Power by the VFPA as Port Electricity to cruise ship operators, the VFPA agrees that the price it will charge for the supply of Port Electricity to cruise ships docked at Canada Place Wharf during any Cruise Season will not exceed the price payable to B.C. Hydro for the Shore Power supplied during that Cruise Season. The rates and charges for Port Electricity may be set by the VFPA on a different basis from the rates and charges payable to B.C. Hydro for Shore Power, for instance to permit the VFPA to recover the charges payable to B.C. Hydro under sections 5.3 and 5.4 of this Agreement pro rata from cruise ship operators, so long as the rates and charges set by the VFPA are designed to recover only the overall price payable to BC Hydro for Shore Power supplied during that Cruise Season.

10 GENERAL CONDITIONS

10.1 Terms and Conditions of Agreement:

Except to the extent inconsistent with the terms and conditions of this Agreement, in which case the terms and conditions of this Agreement shall prevail, the supply and taking of electricity is subject to the terms and conditions of the B.C. Hydro's Electric Tariff (including amendments thereto or replacements thereof) as filed with and approved by the BCUC. The VFPA may inspect B.C. Hydro's Electric Tariff during normal business hours at B.C. Hydro's Head Office or its other general offices and such right to inspect is sufficient notice of the terms and conditions contained therein.

10.2 Assignment:

Neither Party will assign this Agreement or its rights hereunder without the prior written consent of the other Party, not to be unreasonably withheld.

10.3 Law:

This Agreement is governed by the laws of British Columbia and the laws of Canada applicable therein, without regard to conflict of laws rules that would lead the Proposal of any other law.

11 NOTICES

11.1 Notices:

All notices specified in this Agreement, to be given for record purposes must be provided as outlined below.

11.2 Address for Notice

All written notices, statements or payments will be made to the addresses and or facsimile numbers specified below.

If to the VFPA:

Vancouver Fraser Port Authority
100 The Pointe
999 Canada Place
Vancouver, B.C., V6C 3T4

Facsimile: _____

If to B.C. Hydro:

B.C. Hydro Customer Care and Power Smart
900 – 4555 Kingsway
Burnaby, British Columbia V5H 4T8

Facsimile: (604) 453-6285

A Party may change its address by providing notice of same in accordance with this Section.

11.3 Delivery of Notices

Notices required to be in writing will be delivered by letter, facsimile or other documentary form. Notice by mail will be deemed received on the date of actual delivery. Notice by facsimile or courier delivery will be deemed received on the Business Day on which it was transmitted (sender having received evidence of successful transmission) or delivered (unless delivered after the close of the Business Day in which case it will be deemed received on the next Business Day).

10.4 VFPA Authorized Agent

The VFPA may appoint a third party as its authorized agent to act on the VFPA's behalf in connection with any of the matters or things to be done or performed by the VFPA under this Agreement, and may delegate such powers to its authorized agent as it deems advisable, provided that the VFPA shall at all times remain responsible for performance of its obligations hereunder, and for all breaches or defaults in its obligations and for any liabilities arising therefrom. The VFPA may change its authorized agent from time to time as it sees fit. The VFPA shall give prompt notice in writing to B.C. Hydro of the appointment of an authorized

agent, and of any changes thereto, and shall also notify B.C. Hydro in writing of the powers delegated to its authorized agent from time to time.

12 MISCELLANEOUS

12.1 General

This Agreement constitutes the entire agreement between the Parties relating to the subject matter contemplated by this Agreement. No amendment or modification to this Agreement will be enforceable unless reduced to writing and executed by both Parties.

12.2 No Third Party Beneficiaries

This Agreement will not impart any rights enforceable by any third-party (other than a permitted successor or assignee bound to this Agreement).

12.3 Waiver

No waiver by a Party of any default by the other Party will be construed as a waiver of any other default. No waiver shall be valid and effective unless it is in writing signed by the Party giving the waiver.

12.4 Relationship

Nothing in this Agreement will be construed to create an association, trust, partnership or joint venture between the Parties or impose a trust or partnership covenant, obligation or liability on or with regard to any one or more of the Parties.

12.5 Severability

Any provision declared or rendered unlawful by any applicable court of law or regulatory agency or deemed unlawful because of a statutory change will not otherwise affect the remaining lawful obligations that arise under this Agreement.

12.6 Signing in Counterpart

The Parties may execute this Agreement in one or more counterparts to be construed as one, effective as of the Effective Date.

The Parties have executed this Agreement.

BRITISH COLUMBIA HYDRO AND POWER AUTHORITY

By: _____

Name: _____

Title: _____

VANCOUVER FRASER PORT AUTHORITY

By: _____

Name: _____

Title: _____

Application for Approval of Electric Tariff Supplement No. 76 - Agreement for Provision of Non-Firm Shore Service to Canada Place

BC hydro

Appendix C

BCUC Draft Order

October 2008

SIXTH FLOOR, 900 HOWE STREET, BOX 250
VANCOUVER, B.C. V6Z 2N3 CANADA
web site: http://www.bcuc.com

BRITISH COLUMBIA UTILITIES COMMISSION

ORDER NUMBER G-

TELEPHONE: (604) 660-4700
BC TOLL FREE: 1-800-663-1385
FACSIMILE: (604) 660-1102

IN THE MATTER OF
the Utilities Commission Act, R.S.B.C. 1996, Chapter 473

and

An Application by British Columbia Hydro and Power Authority (BC Hydro)_
Application for Approval of Electric Tariff Supplement No. 76 – Agreement for Provision of Shore Power Service to Canada Place

BEFORE: _____, Commissioner _____, 200

O R D E R

WHEREAS:

A. October 15, 2008 the Government issued Ministerial Order No. M252 – The Shore Power Regulation to the Commission stating that the Commission must set a shore service rate that is designed to encourage operators of cruise ships docked at Canada Place in Vancouver to use port electricity instead of on-board, diesel generated electricity and includes the condition that port-electricity may be provided only at a price not exceeding the price for shore service; and

B. The Shore Power Regulation also stated that in setting the rate for the shore service, the Commission must ensure that the rate allows the authority to collect sufficient revenue in each fiscal year to enable the authority to recover costs incurred as a result of providing the shore power service; and

C. On October 31, 2008, British Columbia Hydro and Power Authority (BC Hydro) filed an application pursuant to sections 58 to 61 the Utilities Commission Act for approval of Electric Tariff Supplement No. 76, an agreement for the provision of non-firm electricity available for shore power use by the Port Metro Vancouver (PMV) at the Canada Place Wharf; and

D The application also complies with the requirements of The Shore Power Regulation.

NOW THEREFORE the Commission orders as follows that effective on the date of this order:

1. Electric Tariff Supplement No. 76 is approved.

DATED at the City of Vancouver, in the Province of British Columbia, this day of _____ 2008.

BY ORDER

Application for Approval of Electric Tariff Supplement No. 76 - Agreement for Provision of Shore Non-Firm Power Service to Canada Place

BC hydro

Appendix D

Letters of Support

October 2008

BRITISH COLUMBIA
The Best Place on Earth

JUL 15 2008

Bev van Ruyven
Executive Vice President
Customer Care and Conservation
BC Hydro

Email: bev.vanruyven@bchydro.com

Dear Ms. van Ruyven:

Re: Port Metro Vancouver Shore Power Project

This letter is to confirm the ministry's support for the installation of shore power facilities within Port Metro Vancouver.

The B.C. Government recently released the BC Air Action Plan (www.bcairsmart.ca), which outlines 28 specific actions to improve air quality throughout British Columbia. Implementation of Action #13: Support greener ports and marine vessels is a key component of the Plan. Port Metro Vancouver's shore power plans are an important clean air initiative consistent with meeting government's clean air goals. We are confident that the provision of shore power at competitive rates along the west coast of North America will reduce emissions of fine particulate matter from ships and thereby improve our local air quality.

If you have any questions regarding the BC Air Action Plan, please contact me.

Sincerely,

Glen Okrainetz
A/Assistant Deputy Minister

pc: Darren M. Richter, Key Account Manager, BC Hydro
Dave Duncan, Executive Director, Climate Action Team, Ministry of Transportation
Warren Bell, Executive Director, Climate Change Policy, Climate Action Secretariat

CARNIVAL
CORPORATION & PLC

THOMAS M. DOW
Vice President
Public Affairs

July 14, 2008

Ms. Bev van Ruyven,
Executive Vice President
Customer Care and Conservation
BC Hydro
900-4555
Burnaby, BC V5H 4T8

Dear Ms. van Ruyven,

Please consider this letter of support, on behalf of Carnival Corporation, for the development of an interruptible electricity rate by BC Hydro for cruise ships which can connect to grid-based electricity at Canada Place.

Two Carnival Corporation subsidiary companies, Holland America Line and Princess Cruises, have ships based in Vancouver, and are committed to the reduction of air emissions from our cruise ships while they are in dock.

Key to this endeavour is to connect to BC Hydro's grid-based electricity system and turn off the diesel generators that serve shipboard "hotel" electric loads.

Princess Cruises and Holland America Line are currently using similar to connections in Seattle Washington. Princess also connects to shore power in Juneau, Alaska.

The Vancouver "Shore Power Project" would require significant investment by Princess, Holland America, and Vancouver Fraser Port Authority. Costs include: the remedial changes to retrofit the ships, the purchase and installation of connection and transformer equipment at the terminal, and upgrades to protection and control equipment as specified by BC Hydro.

The existing tariff includes demand charges inside of the existing Large General Service Tariff (1211). This demand charge does not adequately recognize the unique nature of this shore power connection and the ships' ability to routinely generate electricity power.

For this reason, shore power agreements in Juneau and Seattle incorporate provisions for "interruptible" electric service. Interruptible service is anticipated in San Francisco, San Diego, and several other locations.

1101 Pennsylvania Avenue, NW, Suite 530, Washington, DC 20004
Tel: (202) 347-7150 Fax: (202) 347-7176 E-mail: tdow@carnival.com

We understand that electricity service to Canada Place would be provided via distribution circuits which are dedicated as backup to several of BC Hydro's distribution lines. As such, we appreciate that ships may be refused connection or be forced to interrupt a connection if BC Hydro requires that circuit for other customers. Carnival accepts, and is prepared for, these circumstances. We simply will use our existing on-board generators during that ship's particular stay.

As the electricity service would be interruptible, we support BC Hydro's development of an electricity rate that reflects potential disruption, the seasonal nature of this service, as well as our ability to operate through our existing generators. It is our understanding that BC Hydro's interruptible tariff for transmission customers with curtailable generation (Rate Schedule 1880) is the most relevant proxy for electricity costs at this time.

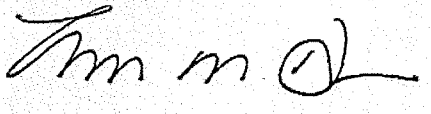
Time is of the essence for determining the rate. Availability of an adequate supply of electricity at a reasonable cost, is key to the economics of a successful Shore Power connection. We have the construction estimates. We now need to understand the electricity rate that we'll be charged so we can determine operating costs and overall project economics.

If the shore power rate is not submitted and approved in time to order equipment, we will miss installation to meet the 2009 cruise season. If 2009 is missed, there will be at least a 2-year delay (until May 2011) as the VFPA will be turning over Canada Place to VANOC during the fall and winter of 2009/2010 - there would be no opportunity to have the required infrastructure upgrades installed.

We respectfully request you to make every effort to secure favourable consideration of BC Hydro's Rate Schedule 1880 for providing interruptible shore power to cruise ships in Vancouver.

Thank you for your attention to this important matter.

Sincerely,



Thomas Dow

PORT METRO vancouver

July 22, 2008

Ms. Bev van Ruyven
Executive Vice-President
Customer Care and Conservation
BC Hydro and Power Authority
18th Floor, 333 Dunsmuir Street
Vancouver BC V6B 5R3

Dear Ms. van Ruyven,

RE: CANADA PLACE SHORE POWER PROJECT

On behalf of Port Metro Vancouver (PMV), I urge you to fast-track BC Hydro's efforts to submit a "shore power" rate application to the British Columbia Utilities Commission to enable the supply of interruptible electricity at a reasonable and competitive cost to cruise ships calling Canada Place. Your letter dated April 15, 2008 to our Chief Sustainability Officer Allen Domaas acknowledged that the shore power project is "a complex project with an aggressive timeline...our respective teams are in regular contact and working hard to complete this important project in time for the 2009 cruise season." The timeline for submitting this application to the BCUC has slipped from its target date of the end of May 2008, and we are concerned that further delays may put at risk this entire project that our organizations are working hard to complete.

Prior to initiating and throughout this project the cruise lines have consistently identified that the provision of an adequate supply of electricity at a reasonable rate is a key determinant in their decision to invest in shore power capital in the Vancouver gateway.

The cruise lines, as well as BC Hydro, Port Metro Vancouver and Federal and Provincial agencies now face imminent capital investment decisions in this project. These investments include upgrades to protection and control equipment as requested by BC Hydro in your April 15 letter, as well as investments in transformers and related equipment and on dock infrastructure at Canada Place.

In your letter you also informed us of the work that was being done by BC Hydro to develop this shore power rate application. We will not be able to move forward with the Canada Place Shore Power Project under the existing tariff as the demand charges inside of the

☐ **New Westminster**
400–625 Agnes Street
New Westminster, BC
Canada V3M 5Y4
Office: 604-665-9500
Fax: 1-866-284-4271

☑ **Vancouver**
100 The Pointe
999 Canada Place
Vancouver, BC
Canada V6C 3T4
Office: 604-665-9000
Fax: 1-866-284-4271

PORT METRO vancouver

existing Large General Service Tariff (1211) do not adequately recognize the unique nature of this shore power connection. If the shore power rate proposal is not submitted to BCUC and approved in a timely manner, we risk delay or outright cancellation, given that Canada Place will be largely turned over to VANOC in the winter of 2009/2010 and the opportunity to construct the required infrastructure will then not occur until after 2011.

By shutting off their ships' engines and plugging into shore power, the cruise lines participating in this project will help reduce GHG carbon dioxide in the Lower Fraser Valley Airshed by nearly 5,000 tonnes during the first year alone. Emissions reductions are expected to double over the next 10 years. There would also be additional reductions of smog forming pollutants including particulate matter, hydrocarbons, nitrogen oxides, sulphur oxides and ammonia emissions. These reductions could make a significant contribution to meeting British Columbia's newly set targets of reducing GHG emissions by 33 per cent by 2020.

I would like to thank BC Hydro for your continued commitments to this project including your investment of considerable staff resources. Please help us complete this project successfully by submitting the shore power rate application to the BCUC.

Regards,

PORT METRO VANCOUVER

Peter Xotta
Vice President, Business Development

Cc: Darren Richter, Key Account Manager, BC Hydro

BRITISH COLUMBIA
The Best Place on Earth

August 6, 2008

Bev van Ruyven
Executive Vice-President
Customer Care and Conservation
BC Hydro and Power Authority
18th Floor, 333 Dunsmuir Street
Vancouver, BC V6B 5R3

Dear Ms. Van Ruyven:

Re: Canada Place Shore Power Project

I'm writing to express the Ministry of Transportation and Infrastructure's support for the installation of shore power facilities at Canada Place in the Port of Vancouver. This project is an important element in helping the Province of BC meet its commitment to reduce green-house gas (GHG) emissions by 33% by 2020.

People and goods movement through our ports is rapidly increasing, however so are the related GHG emissions. Our estimates show that, without action, GHG emissions from port-related activities will increase 70% by 2020. Provision of shore power to allow cruise ships to turn their engines off while in port is an important step in reducing these port-related GHGs. In addition to the GHG reductions, the shore power project will also reduce the emission of a number of smog-forming pollutants. To this end, the Ministry has signed a Memorandum of Understanding with the Vancouver Fraser Port Authority and is working towards finalizing a Provincial contribution to the project.

We understand that provision of electricity at a commercially feasible rate is very important to the success of this project, and support BC Hydro's rate application to the British Columbia Utilities Commission. We also recognize that the shore power project is under an aggressive timeline in order to complete this project for the 2009 cruise season, and appreciate the considerable resources BC Hydro has committed in moving this project forward.

Sincerely,

Kevin Volk
A/Project Director, Climate Action Program

Ministry of Transportation and Infrastructure
Office of the Project Director
Climate Action Program
Mailing Address:
PO Box 9850 Stn Prov Govt
Victoria BC V8W 9T5
Telephone: 250 387-6742
Fax: 250 387-6431
Location:
5B – 940 Blanshard St.
Victoria BC V8W 3E6
www.gov.bc.ca/tran

BC hydro

Joanna Sofield
Chief Regulatory Officer
Phone: (604) 623-4046
Fax: (604) 623-4407
regulatory.group@bchydro.com

December 2, 2008

Ms. Erica M. Hamilton
Commission Secretary
British Columbia Utilities Commission
Sixth Floor – 900 Howe Street
Vancouver, BC V6Z 2N3

Dear Ms. Hamilton:

RE: British Columbia Utilities Commission (BCUC)
British Columbia Hydro and Power Authority (BC Hydro)
Application for Approval of Electric Tariff Supplement No. 76 (TS 76) -
Agreement for Provision of Non-Firm Shore Service to Canada Place

BC Hydro attaches the responses to BCUC Information Request No. 1.

For further information, please contact Fred James at 604-623-4317.

Yours sincerely,

Joanna Sofield
Chief Regulatory Officer

Enclosure (1)

ERICA M. HAMILTON
COMMISSION SECRETARY
Commission.Secretary@bcuc.com
web site: http://www.bcuc.com

SIXTH FLOOR, 900 HOWE STREET, BOX 250
VANCOUVER, B.C. CANADA V6Z 2N3
TELEPHONE: (604) 660-4700
BC TOLL FREE: 1-800-663-1385
FACSIMILE: (604) 660-1102

Log No. 27453

VIA E-MAIL
bchydroregulatorygroup@bchydro.com

November 12, 2008

Ms. Joanna Sofield
Chief Regulatory Officer
British Columbia Hydro and Power Authority
333 Dunsmuir Street
Vancouver, B.C. V6B 5R3

Dear Ms. Sofield:

Re: British Columbia Hydro and Power Authority ("BC Hydro")
Application for Approval of Electric Tariff Supplement No. 76 –
Agreement for Provision of Non-Firm Shore Service to Canada Place

Further to BC Hydro's Application to the British Columbia Utilities Commission ("the Commission") for Approval of Electric Tariff Supplement No. 76 – Agreement for Provision of Non-Firm Shore Service to Canada Place ("Shore Service Application"), the Commission requests the following information prior to making a determination on the matter.

1.0 The application at page 1-10 states that BC Hydro considers the provision of non-firm shore power at Canada Place as analogous to RS 1880. Ministerial Order M 252 (the "Ministerial Order") attached as Appendix A states that "In setting the rate for shore service, the commission must ensure that the rate allows the authority to collect sufficient revenue in each fiscal year to enable the authority to recover costs incurred as a result of providing the shore service."

1.1 Will the RS 1880 rate meet the requirement for the authority to collect sufficient revenue in each fiscal year to enable the authority to recover costs incurred as a result of providing the shore service, as required by the Ministerial Order?

1.2 Should BC Hydro be charging a price based on its incremental cost of purchased power, such as the Standing Offer Program ("SOP") Base Price in order to ensure that it is recovering its costs? If not, why not?

1.3 Please provide a comparison of the rate development in table format comparing the RS 1880 starting price of $73.60/MWh with an SOP Base Price of $83.86 for delivery to the Lower Mainland.

.../2

2.0 Section 1.4.12, Infrastructure Costs, outlines the costs for which the Port Metro Vancouver is responsible. Are there any capital costs for which BC Hydro will be responsible? If so, how will those be recovered in the proposed shore service rate?

A response at your earliest convenience would be appreciated.

Yours truly,

Erica M. Hamilton

JWF/yl

1.0 The application at page 1-10 states that BC Hydro considers the provision of non-firm shore power at Canada Place as analogous to RS 1880. Ministerial Order M 252 (the "Ministerial Order") attached as Appendix A states that "In setting the rate for shore service, the commission must ensure that the rate allows the authority to collect sufficient revenue in each fiscal year to enable the authority to recover costs incurred as a result of providing the shore service."

1.1.1 Will the RS 1880 rate meet the requirement for the authority to collect sufficient revenue in each fiscal year to enable the authority to recover costs incurred as a result of providing the shore service, as required by the Ministerial Order?

RESPONSE:

Yes, BC Hydro expects to receive sufficient revenue from the RS 1880 energy charge and $150 administration charge to recover all of its incremental costs of providing shore service.

The RS 1880 energy rate reflects BC Hydro's long-run opportunity cost of new supply, which is assumed to be the cost of energy purchased from IPPs in the last energy call (the F2006 Call for Tender). This long-run cost is currently higher than BC Hydro's overall average cost of energy. BC Hydro acknowledges that on any particular day the short-run marginal cost of electricity market purchases could be greater than the long-run opportunity cost of new supply. However, given that the cruise ship season is in the summer months (when BC Hydro's overall domestic load is low) it is highly unlikely that BC Hydro would be required to make market electricity purchases in order to provide shore service.

The $150 per month per account administrative cost recovers BC Hydro's incremental billing and administrative costs, which are expected to be minor.

All other operating costs, such as the cost of sending any line crews for operating switchgear to connect or disconnect the ships will be paid by the customer.

As discussed in the response to BCUC IR 1.2.0 all incremental capital costs will also be paid by the customer.

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1.1.2 Should BC Hydro be charging a price based on its incremental cost of purchased power, such as the Standing Offer Program ("SOP") Base Price in order to ensure that it is recovering its costs? If not, why not?

RESPONSE:

BC Hydro believes that the RS 1880 price of $73.60/MWh is the appropriate price to charge as it is based on the weighted average of the plant gate costs of both the Large Project and the Small Project streams in the F2006 CFT and is therefore more reflective of the incremental cost of purchased power.

BC Hydro notes that it did not propose a price based on the SOP Base Price since this price is based on the cost of energy solely from the Small Project stream in the F2006 Call for Tender. This price is not representative of the overall cost of energy since the volume of energy from the Small Project stream is relatively small (654 GWh/year) compared to the Large Project volume (6,471 GWh/year).

Please also refer to the response to BCUC IR 1.1.1.

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1.1.3 Please provide a comparison of the rate development in table format comparing the RS 1880 starting price of $73.60jMWh with an SOP Base Price of $83.86 for delivery to the Lower Mainland.

RESPONSE:

The following table shows a comparison of the rate development using the RS 1880 starting price of $73.60/MWh and the SOP starting price of $83.86/MWh for delivery to the Lower Mainland.

The final prices shown in row (3) are obtained by adjusting the starting prices by a 3.44 per cent[1] loss factor for primary service to reflect delivery to the Lower Mainland.

	RS1880	**SOP Lower Mainland**
(1) Starting price ($/MWh)	**73.60**	**83.86**
(2) Losses (3.44% distribution loss factor for primary service)	**1.0344**	**1.0344**
(3) Final price after adjustment for losses ($/MWh) = (1) x (2)	**76.13**	**86.74**

[1] BC Hydro 2008 Cost of Service Study, Appendix A, Schedule 5, 2007 Rate Design Application, Exhibit B-1.

2.0 Section 1.4.12, Infrastructure Costs, outlines the costs for which the Port Metro Vancouver is responsible. Are there any capital costs for which BC Hydro will be responsible? If so, how will those be recovered in the proposed shore service rate?

RESPONSE:

There are no capital costs related to the provision of shore service for which BC Hydro will be responsible. As indicated in section 1.4.4 of the Application, BC Hydro proposes to use standby capacity in existing distribution cables and therefore BC Hydro will incur no costs to upgrade the existing distribution system.