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June 22, 2016

VIA ELECTRONIC MAIL

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Attention: Ms. Laurel Ross, Acting Commission Secretary and Director

Dear Sirs/Mesdames:

Re: British Columbia Hydro and Power Authority ("BC Hydro") 2015 Rate Design Application, Project No. 3698781

We are counsel for the Commercial Energy Consumers Association of British Columbia ("CEC"). Attached please find the CEC's Responses to the Association of Major Power Customers' Information Requests #1 on the CEC's Evidence with respect to the above-noted matter.

Should you have any questions regarding the foregoing, please do not hesitate to contact the writer.

Yours truly,

OWEN BIRD LAW CORPORATION



Christopher P. Weafer
 CPW/jlb
 cc: CEC
 cc: BC Hydro
 cc: Registered Interveners

**COMMERCIAL ENERGY CONSUMERS ASSOCIATION
OF BRITISH COLUMBIA (CEC)**

**CEC RESPONSE TO ASSOCIATION OF
MAJOR POWER CUSTOMERS (AMPC)
INFORMATION REQUEST #1 DATED MAY 30, 2016**

**British Columbia Hydro and Power
Authority 2015 Rate Design Application
Project No. 3698781**

June 22, 2016

**CEC RESPONSE TO ASSOCIATION OF MAJOR POWER CUSTOMERS
INFORMATION REQUEST #1 DATED MAY 30, 2016**

**British Columbia Hydro and Power Authority 2015 Rate Design Application
Project No. 3698781**

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1.0 Reference: Exhibit C1-10, CEC Intervener Evidence, pp. 21, 33-35.

CEC states the following concerning the potential uptake of the proposed interruptible rate at p. 21:

If greenhouses with existing lighting were to participate there could be up to about 25 MW that might participate and if these greenhouses were to find the rate attractive they may seek to expand the use of lighting, which could take them up toward 80 MW of participating capacity.

CEC has conducted a jurisdictional assessment at pp. 33-35 that considers similar interruptible programs, and provides the following comparators:

Hydro Quebec offers an Interruptible Electricity Option for classes M (Medium Power), G-9 (Medium and Large Power customers with limited use of the power at its disposal) and L (Large Power) customers.

Rochester Public Utilities (RPU) offers an Interruptible Rate (INTR) to all commercial, industrial and governmental customers contracting for electrical service for a period of one year or more with a measure [sic] demand of 100 kW or more. All interruptible loads recognized under the INTR rate schedule are loads that are coincident with RPU's system peak. Nova Scotia Power offers an Interruptible rider to the Large Industrial Tariff. Newfoundland Power offers a seasonal demand charge.

AMPC would like to better understand this evidence.

1.1 Please elaborate on the potential of 80 MW of participating capacity from greenhouses under the proposed program, including the source for this number.

Response:

The CEC's estimates for participation of approximately 25 MW come from a determination that an average demand charge component for a greenhouse is about .5MW per acre under lighting. Therefore for the 55 acres that the CEC understands is under lighting this would amount to about 27 MW rounded down to 25 MW. If the 169 acres for greenhouses with lights is all transformed to lighting the total capacity would be (169 acres X .5MW/acre)¹ or 82 MW rounded down to 80MW.

¹ Exhibit C1-10, page 11

- 1.2 Please provide further details of the jurisdictional assessment to allow for a meaningful comparison of CEC's proposal to these comparator programs, including but not limited to:
- i the energy and demand charges that apply under the program relative to normal service;
 - ii. whether there is any load factor requirement to participate;
 - iii. whether lower electricity costs for the customer accrue only while interrupted (i.e. compensation for load shaving) or if demand charges are reduced throughout the year; and
 - iv. criteria for enrolment in these programs, including minimum usage during the system peak periods.

Response:

Hydro Quebec:

Hydro Quebec states the following on its website:

"If you are a Rate M, G-9 or L customer and can exercise some load-shaving capability at Hydro-Québec's request, these options offer a great opportunity for you to save money on your winter electricity bill.

With the Interruptible Electricity Options for Rate M, G-9 or L customers, Hydro-Québec offers you credits in exchange for curtailing your electricity consumption on request.

These options were developed to help balance electricity supply and demand in Québec. By limiting your power consumption, you contribute to better use of our collective resources. In return, Hydro-Québec pays you the equivalent of what it spends when it buys power on open markets."

Further information regarding the conditions of the application may be found at the website below:

<http://www.hydroquebec.com/business/rates-and-billing/rates/electricity-rates-business-customers/interruptible-electricity-rate-option-medium-power/>

- i. the energy and demand charges that apply under the program relative to normal service;**

Response:

The service offers financial compensation in exchange for interruptibility rather than a reduction in energy and/or demand charges. Customers can choose between Option 1 which enables interruption at any time in the winter period, and Option 2 which provides for restricted periods of interruption. The compensation is the same regardless of the customer rate schedule. The CEC provides the compensation rates for the 2 options in iii, and the regular rates for M, GM and L customer classes in the table below.

- ii. whether there is any load factor requirement to participate;**

Response:

The CEC is not aware of a load factor requirement to participate.

- iii. whether lower electricity costs for the customer accrue only while interrupted (i.e. compensation for load shaving) or if demand charges are reduced throughout the year; and**

Response:

Both options provide for both a fixed credit and variable credit based on the number of hours of interruption. For Option 1 the fixed credit is \$13.00 per kilowatt for the difference between the average hourly power during useable hours and the base power, and a variable credit (20 cents per kilowatt hour for each of the first 20 interruption hours, 25 cents per kilowatt hour between the 21st and 40th interruption hours (inclusive) and 30 cents per kilowatt hour for subsequent interruption hours)

For Option 2 the fixed credit is \$6.50 per kilowatt of effective interruptible power. The variable credit is 20 cents per kilowatt hour of effective hourly interruptible power for each interruption hour.

- iv. criteria for enrolment in these programs, including minimum usage during the system peak periods.**

Response:

Customers must submit a request to Hydro-Québec, indicating their proposed interruptible power, before October 1.

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Customers must commit to a base power not exceeding 80 % of their average billing demand for the preceding winter period.

The CEC is not aware of any other criteria.

The CEC provides the following standard charges for Hydro Quebec:

Hydro Quebec	Rate M Medium – Power customers whose maximum power demand has been 50 kilowatts (kW) or more at least once in the last 12 billing periods.	Rate G-9 Medium and large customers; limited use of power at its disposal; maximum power demand of 65 KW or more in last 12 months;	Rate L Rate L applies to an annual contract whose minimum billing demand is 5,000 kilowatts (kW) or more and which is principally for an industrial activity.
Energy charge	first 210,000 kWh 4.93 cents/kWh remaining consumption 3.66 cents/kWh	9.90 cents/kWh	3.26 cents/kWh
Demand charge/billing demand	\$14.37/kW	\$4.20/kW	\$12.87/kW
Billing demand in excess of 110% contract each day			\$7.53/kW
Billing demand in excess of 110% contract monthly max			\$22.59/kw

Rochester:

Rochester Public Utility provides the following information on its website which the CEC provides in response to questions i, ii, iii and iv.

<https://www.rpu.org/your-business/billing-payment/interruptible-rate.html>:

The interruptible rate (INTR) is available to all commercial, industrial, and governmental customers contracting for electrical service for a period of one year or more and having an interruptible load with a measured demand of 100 kW or more.

The interruptible rate schedule is used in conjunction with the Medium General Service (MGS), Large General Service (LGS), and Large Industrial Service (LIS) firm power rate schedules. To

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qualify, customers must have a minimum of 100 kW of interruptible demand. RPU reserves the right to limit the amount of interruptible load, which may be nominated.

Customers nominate either an interruptible demand amount or a firm demand amount. Customers nominating an interruptible demand amount shall be required to interrupt at least the amount nominated, or their total load if their total load is less than the amount nominated. In nominating the firm demand amount, customers shall be required to interrupt an amount sufficient to bring their load to or below the firm demand nominated. In no case shall the INTR rate be made available to customers with less than 100 kW of interruptible load.

All interruptible loads recognized under the INTR rate schedule shall be electrical loads that are coincident with RPU's system peak. Electrical loads occurring outside this peak period shall not qualify for the INTR rate. Any generation equipment used by the customer to qualify for the INTR rate shall be located at the site of the interruptible load such that RPU does not have to use its electrical facilities to transmit power for the customer.

The service must be three phase, 60 Hertz, alternating current at one of the standard secondary service voltages as described in RPU's published Electric Service Rules and Regulations. Service is subject to interruption at the sole discretion of RPU at any time during the year. There will be no more than 175 hours or 35 interruptions per year.

Customers approved for metering at 13.8 kV will receive a discount of 1.25 percent on base rate charges for measured demand and energy.

MSG and LGS customers owning transformers will receive a credit of \$.20 per kW on each month's measured demand.

The customer agrees to maintain an average power factor of 0.95 or greater for the billing period and to prevent a leading power factor. If the customer's average power factor is less than 0.95 for the billing period, the billing demand will be determined by multiplying the measured demand by 0.95 and dividing the results by the customer's average power factor. The average power factor is defined to be the quotient obtained by dividing the kWh used during the month by the square root of the sum of the squares of the kWh used and the lagging reactive kilovoltampere-hours supplied during the same period. The customer's average power factor will be determined by means of permanently installed meters.

Bills computed under this rate schedule are subject to adjustment in accordance with the Power Supply Adjustment (PSA).

Customers whose service is taken outside the Rochester City limits are subject to a 10% surcharge on their bills (excluding charges computed under the Power Supply Adjustment).

Unauthorized use of electricity during a peak period of service interruption ordered by RPU will require the customer to pay a penalty (in addition to standard charges) which is reflective of the

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uninterrupted load's cost impact on RPU's wholesale power cost from SMMPA over the ensuing 12 months:

- A. No impact – No penalty.
- B. Occurs on monthly peak – Uninterrupted kW contribution to RPU's peak billed at SMMPA rate.
- Occurs on annual peak (as determined by analysis from October 1 analysis of summer demands) – Uninterrupted kW contribution to RPU's annual peak is additionally penalized at two times SMMPA rate and added to participants October billing.

Exception for first-time participants in an RPU peak reduction rate who have interruptible nominations of less than 500 kW. The penalty for failure to interrupt will be waived during the initial 24 months.²

The CEC provides the following standard charges for RPU

Rochester (2016)	MGS Single or three phase, 60 Hertz, alternating current at any one of the standard secondary service voltages as described in RPU's published Electric Service Rules and Regulations.	LGS Three phase, 60 Hertz, alternating current at any one of the standard secondary service voltages as described in RPU's published Electric Service Rules and Regulations.	LIS Three phase, 60 Hertz alternating current at 13,800 GRDY/7970 volts; loads with measured demands in excess of 10,000 kW for three or more billing periods in a given calendar year,
Energy charge	Non-summer 5.84 cents/kWh Summer 5.84 cents/kWh	5.810 cents/kWh	5.340 cents/kWh
Demand charge/billing demand	Non-summer \$15.52/kW Summer \$19.67/kW	\$17.75/kW	\$18.50/kW

Nova Scotia:

The CEC provides the following information with respect to the Nova Scotia Power Interruptible rider for Large Industrial customers in response to i, ii, iii and iv. The information was obtained at the following website:

² <https://www.rpu.org/your-business/billing-payment/interruptible-rate.html>

<http://www.nspower.ca/en/home/about-us/electricity-rates-and-regulations/rates/interruptible-rider.aspx>

Availability

This rider will be available to a minimum regular billing demand of 2000 kV.A at 90% Power Factor, under the following terms and conditions:

1. The customer has provided written notice of his desire to take service under this option, identifying that portion of the load that is to be firm and that portion that is to be interruptible (minimum 2,000 kV.A).
2. The customers will reduce their available interruptible system load by the amount requested by NSP within ten (10) minutes of such request by the Company.
3. Following interruption, service may only be restored by the customer with approval of the Company.
4. Failure to comply in whole or in part with a request to interrupt load will result in penalty charges. The penalty charge shall be twice the cost of the appropriate firm billing effective at that time for the consumption used in that billing period.
5. Should any customer under this rider desire to be served under any appropriate firm service rate, a five (5) year advance written notice must be given to the Company so as to ensure adequate capacity availability. Requests for conversion to firm service will be treated in the same manner as all other requests for firm service received by the Company. The Company may, however, permit an earlier conversion. In the event that the Customer desires to return to interruptible service in the future, the Customer may convert to interruptible service following two (2) years of service under the firm tariff. The Company may permit an earlier conversion from firm to interruptible service.
6. Interruption is limited to 16 hours per day and 5 days per week to a maximum of 30% of the hours per month and 15% of the hours in a year.

Demand Discount

Customers who qualify for interruptible service will receive a \$3.43 per month per kilovolt ampere reduction in demand charge for billed interruptible demand. The billed interruptible demand is defined as the difference between any contracted firm demand

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requirements and the total billing demand. Where the billing demand is less than the contracted firm demand, no interruptible credit shall apply. The billed interruptible demand will be the maximum interruptible demand of the current month or the maximum actual interruptible demand of the previous December, January or February occurring in the previous eleven (11) months.

Sample Interruptible Rider Unit Cost

The average unit cost to the customer varies according to the billing demand and energy relationship measured by “Load Factor”. Average unit costs (¢/kW.h) are shown for a range of load factors. Monthly customer cost = ¢/kW.h x consumption (kW.h).

LOAD FACTOR	¢/KW.H (EXCLUDING TAXES)
20%	13.49
40%	10.51
60%	9.52
80%	9.03

The CEC provides the following information regarding the Nova Scotia Large Industrial tariff for comparison purposes.

Nova Scotia Power	Large Industrial Tariff Three phase electric power and energy supplied at the low voltage side of the bulk power transformer to any industrial customer having a regular billing demand of 2,000 kV.A or 1,800 kW, and over.
Energy charge	7.958 cents per kWh for firm sales; 7.54 cents per KWh for interruptible sales
Demand charge/billing demand	\$11.995/ month per kilovolt ampere of maximum demand of the current month or the maximum actual demand of the previous December, January or February occurring in the previous eleven (11) months.
Monthly minimum	The greater of \$12.65 or the demand charge

Sample Large Industrial Firm Unit Cost

The average unit cost to the customer varies according to the billing demand and energy relationship measured by “Load Factor”. Average unit costs (¢/kW.h) are shown for a range of load factors. Monthly customer cost = ¢/kW.h x consumption (kW.h).

LOAD FACTOR	¢/KW.H (EXCLUDING TAXES)
20%	16.29
40%	12.12
60%	10.73
80%	10.04

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Newfoundland:

The CEC does not have this information at hand, and will provide it as soon as it is able to locate the information.

Other:

A report entitled '*Interruptible Power Rates and Their Role in Utility Distributed Resources Programs*' EPRI, Palo Alto, CA – 2003. 1007717 is available online, which shows comparative information on US interruptible service programs.

2.0 Reference: Exhibit C1-10, CEC Intervener Evidence, p. 12-14.

With respect to greenhouse growers, CEC's evidence indicates:

Demand Charges and Minimum charges can represent a significant burden for general service customers, and is particularly challenging when such customers either do not, or need not cause significant portions of the demand costs. These issues are compounded for customers with more intermittent uses of electricity.

...demand costs are charged to and collected from customers in monthly billings based on the highest demand reached in the month or through a minimum charge, which is set at 50% of the highest demand reached in any one of the 4 months in which peak use on the BC Hydro system may occur. ...

The potential for growers to enhance production through increased lighting is particularly relevant because it potentially represents offsetting revenue for BC Hydro to replace the revenue reduction in demand charges with additional energy sale. Increase productivity for greenhouse growers can create benefits for the overall industry and province. ...

2.1 What is the average load factor for greenhouse growers?

Response:

The CEC does not have data on all greenhouses and therefore producing averages is not possible. However, there are two types of greenhouses to consider; those without lighting for the plants and those with plant grow lighting. Those without grow lighting would have fairly constant demand charges throughout the year and typically might have a load factor of around 52%. Those with plant grow lighting will typically have demand charges for 5 months of the year and minimum bill charges (ratchet) for 7 months of the year and typically might have an average load factor of 17% with peak month load factors approaching 70%, in a range from about 40% to 70% and transition months of about 17% and 7 months of 0%.

2.2 Please describe any steps greenhouse growers have taken to reduce their demand charges, or reduce their minimum charges, given they “represent a significant [financial] burden”.

Response:

At one time, some of the greenhouse growers used to use electrical energy all year around. As the cost of electricity has become more significant they have found that their production

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tradeoffs involve the marginal benefits of lighting in terms of plant productivity in summer months when there is adequate insolation to the greenhouses so these months were cut back toward zero usage of lighting. As the cost of electricity continued to increase the zero usage periods increase to 7 months and the transition months are severely curtailed because demand charges for intermittent use increases cost for the month based on the highest peak in the month. The next logical step for these greenhouse growers has become this effort to reduce the grade of their service from firm service to non-firm capacity interruptible service and attempt to reduce their demand charges by avoiding BC Hydro's coincident system peak and enabling the reduction of future capacity investment for the BC Hydro system.

3.0 Reference: Exhibit C1-10, CEC Intervener Evidence, p. 12, 14.

With respect to flood pumping agencies, CEC's evidence indicates:

Demand Charges and Minimum charges can represent a significant burden for general service customers, and is particularly challenging when such customers either do not, or need not cause significant portions of the demand costs. These issues are compounded for customers with more intermittent uses of electricity.

...flood pumping requirements are derived from the need to protect dykes and levees along the Fraser River and for tributaries or runoffs running into the Fraser. The cause of flood pumping requirements comes from two sources; rainfalls and spring snow melts. The pumping is required whenever the volumes are sufficient to overwhelm the natural runoff capabilities of the water flows, which happens when the Fraser levels reach certain critical levels.

3.1 What is the average load factor for flood pumping agencies?

Response:

The CEC does not have all of the energy use data for all flood pumping agencies and therefore cannot produce averages. However, there are two types of flood pumping agencies; those which pump flood waters into the Fraser River when the level of Fraser River is above their natural flow channels in which case they close gate flaps to hold out the Fraser River and pump any of their water flow and or flood waters into the Fraser and those which are pumping water from their lands primarily toward the ocean in which case the pumping is more continuous all year around involving both ground water and flood water.

The flood pumping agencies pumping into the Fraser are usually dealing with freshet flows in the Fraser as a key trigger and then potential pumping local flows and or flood water. These situations occur off the BC Hydro peak and are rare and limited in any given year. Occasionally there will be precipitation and flooding in the winter peak months which can create the flood pumping requirement. This is more likely a one in ten year phenomena. As the coldest days of the year typically will not involve much precipitation and or if precipitation much of it may fall as snow there is very rarely a potential for an overlap of flooding and the BC Hydro peak. With forecasting and advance pumping for preventative purposes the flood pumping agencies believe that they can avoid the BC Hydro peak. At typical load factor for an agency pumping into the Fraser River would be in the 0.34% average for the year. They would peak at 100% at peak flood times but most of the year around would be at about 0.006%.

The more continuous type of pumping which can often involve small pumps operating on SGS service from BC Hydro without demand charges and when operating on MGS or LGS service a typical load factor might be 60%.

3.2 Please describe any steps flood pumping agencies have taken to reduce their demand charges, or reduce their minimum charges, given they “represent a significant [financial] burden”.

Response:

The flood pumping agencies have had little option to deal with these costs. However, one strategy option when dealing with requirements for replacement of equipment or addition of equipment has been to acquire higher efficiency pumping equipment with lower demand. Motor start can create demand charges well in excess of the continuous pumping demand requirements so avoiding motor starts all at one time is an operating practice. The flood pumping agencies are approaching a point where it may become economic for them to provide for their own power supply leaving the BC Hydro grid as a source of power.

The Flood Pumping agencies have formed a coalition to work with the CEC to obtain rate design relief.

4.0 Reference: Exhibit C1-10, CEC Intervener Evidence, pp. 20-21.

CEC's evidence compares its proposed interruptible rate to the availability of shore power:

There is a fairness issue between the Medium and Large General Service Rate classes and other BC Hydro customers. Tariff Supplement (TS) 76, and Rate Schedules (RS) 1280 and 1891 provide for non-firm interruptible energy to be available to Shore Power customers, and non-firm interruptible power is not currently available to General Service customers. Tariff Supplement 76 provides non-firm interruptible electricity for shore power use by Port Metro Vancouver (PMV) for cruise ships docked at Canada Place wharf and Rate Schedules 1280 and 1891 provide non-firm interruptible electricity to Shore Power customers at Transmission and Distribution service levels respectively.

Very significant savings are available to Shore Power customers for their willingness to receive non-firm interruptible service. Many General Service customers are in substantially similar circumstances. Demand charges represent a significant challenge to the cost structures and viability/profitability of these customers, and they are equally willing to receive non-firm interruptible service and manage their demand according to reasonable requirements from BC Hydro to be assured that they will not use energy during peak times.

4.1 Please confirm that when greenhouse growers' and flood pumping agencies' service is interrupted under CEC's proposed interruptible rate, those customers will shift some or all of their energy usage that would have occurred during the interruption to other time periods. If not confirmed, please fully explain.

Response:

Not confirmed for greenhouse growers. They would reduce use for the BC Hydro peak and could not displace that to another time because the plants for which the grow lighting is provided can only productively use a maximum amount of light in any given day. The greenhouse growers would be taking a slight reduction in peak period times in their plant growth productivity in order to reduce demand charges and the minimum charges.

Confirmed for flood pumping agencies which pump into the Fraser River. To the extent that they have flood waters to pump they would need to do this at a non-peak time. The usual situation for the flood pumping agencies is that they are never pumping on the BC Hydro system peak. There are rare exceptions to this that are likely less than 1 in 10 years and even in those

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circumstances with forecasting and preventative pre-peak pumping the agencies can avoid being on the BC Hydro peak.

5.0 Reference: Exhibit C1-10, CEC Intervener Evidence, p. 21.

CEC's evidence also compares its proposed interruptible rate to the load curtailment pilot:

Very significant savings opportunities are available to Transmission customers (RS 1823) who are able to reduce their normal load by 5 MW during winter and shoulder seasons when notified in the Load Curtailment Pilot. The Load Curtailment Pilot has just completed Year 1 and is scheduled to commence Year 2 in October 2016. Incentive Options are showing the table opposite.

There are a significant number of MGS and LGS customers who are also capable of reducing significant portions of their load when notified.

5.1 Please confirm that the number of hours of curtailment from any single customer available under the load curtailment pilot is greater than those anticipated by CEC to be realized under its proposed interruptible rate. If not confirmed, please fully explain.

Confirmed. The curtailment program for Transmission Service Rate customers has greater hours of curtailment. The curtailment program is aimed at giving BC Hydro flexibility to respond to capacity needs on demand but is not aimed at a reducing BC Hydro's future capacity investment requirements as BC Hydro needs to continue to plan for this capacity to be available to the customers participating in the program. The CEC proposal is aimed at making a permanent reduction in future capacity requirements.

6.0 Reference: Exhibit C1-10, CEC Intervener Evidence, p. 25.

With respect to eligibility for the pilot program, CEC suggests that for an LGS customer:

Eligibility could also entail assessment of the customers' load demand as one which would never fall on the coincident system peak.

6.1 Does CEC mean that eligibility for its proposed program would depend on whether or not a customer uses electricity at the time of the coincident system peak?

Response:

No. The CEC is seeking relief for customers whose seasonal requirements mean that they are never on the BC Hydro coincident system peak and therefore are not causing capacity investment requirements as well as seeking relief for those whose use is now on the BC Hydro system peak and who can have the flexibility to arrange their business practices such that they never need to be on the BC Hydro peak. Consequently, this would not be used as criteria for eligibility but would be an information requirement to determine what if any pilot program features may be appropriate for the specific customer type.

7.0 Reference: Exhibit C1-10, CEC Intervener Evidence, pp. 36-39.

CEC provides a financial analysis to demonstrate the value of its proposed interruptible rate, which includes:

The Revelstoke unit 6 can be added to the BC Hydro hydroelectric system without environmental approvals. The unit would provide approximately 500 MW of capacity. BC Hydro's Base Resource Plan shows that requirement for capacity after demand side management initiatives would be growing at about 150 MW. ...

The Revelstoke 6 Project would be expected to cost about \$420 million. Given that the project would supply 500 MW of capacity the present value of a MW is approximately \$840,000, which equates approximately the \$50,000/MW-year.

The following analysis is made to illustrate the impact of greenhouse lighting load being removed from peak for a Greenhouse using approximately 6 MW of lighting under the assumption that all of the lighting load can be taken off peak. ...

7.1 Please provide the supporting calculation or reference that suggests that the \$840,000 present value of a MW equates approximately to the \$50,000/MW-year.

Response:

The following calculation shows the equivalence of the annual per MW cost and the suggested approximate present value of this amount, using a 6% discount rate.

YR	Annual Demand Cost in \$ for 1 MW	Present Value at Discount 6%	YR	Annual Demand Cost in \$ for 1 MW	Present Value at Discount 6%	YR	Annual Demand Cost in \$ for 1 MW	Present Value at Discount 6%
1	50000	47170	21	50000	14708	41	50000	4586
2	50000	44500	22	50000	13875	42	50000	4326
3	50000	41981	23	50000	13090	43	50000	4081
4	50000	39605	24	50000	12349	44	50000	3850
5	50000	37363	25	50000	11650	45	50000	3633
6	50000	35248	26	50000	10991	46	50000	3427
7	50000	33253	27	50000	10368	47	50000	3233
8	50000	31371	28	50000	9782	48	50000	3050

**Commercial Energy Consumers Association of British Columbia
Response to Association of Major Power Customers
Information Request #1 Dated May 30, 2016**

**British Columbia Hydro and Power Authority 2015
Rate Design Application, Project No. 3698781**

YR	Annual Demand Cost in \$ for 1 MW	Present Value at Discount 6%	YR	Annual Demand Cost in \$ for 1 MW	Present Value at Discount 6%	YR	Annual Demand Cost in \$ for 1 MW	Present Value at Discount 6%
9	50000	29595	29	50000	9228	49	50000	2877
10	50000	27920	30	50000	8706	50	50000	2714
11	50000	26339	31	50000	8213	51	50000	2561
12	50000	24848	32	50000	7748	52	50000	2416
13	50000	23442	33	50000	7309	53	50000	2279
14	50000	22115	34	50000	6896	54	50000	2150
15	50000	20863	35	50000	6505	55	50000	2028
16	50000	19682	36	50000	6137	56	50000	1914
17	50000	18568	37	50000	5790	57	50000	1805
18	50000	17517	38	50000	5462	58	50000	1703
19	50000	16526	39	50000	5153	59	50000	1607
20	50000	15590	40	50000	4861	60	50000	1516
							Total	808071

7.2 Please provide a similar financial analysis for the cost of the CEC’s proposed interruptible rate for flood pumping customers as has been provided for greenhouse growers.

Response:

The CEC does not yet have the data to provide a similar analysis to the one it has done for the greenhouse grower. When and if the data is available to the CEC it will provide this calculation.