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June 22, 2016

VIA ELECTRONIC MAIL

British Columbia Utilities Commission
Sixth Floor, 900 Howe Street
Vancouver, BC
V6Z 2N3

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 BC Hydro's 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 BRITISH COLUMBIA HYDRO AND POWER AUTHORITY (BC HYDRO) 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 BRITISH COLUMBIA HYDRO AND POWER AUTHORITY INFORMATION REQUEST #1 DATED MAY 30, 2016

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

Contents

1.0 Reference: CEC Evidence, Exhibit C1-10

"The evidence has been prepared by Mr. David Craig in consultation with commercial customers in the Greenhouse Growers sector and the Flood Pumping authorities sector as well as other general services customers."
(Exhibit C1-10, PDF page 1/100).

"Key companies in the forestry sector have expressed interest in the initiative to explore options for dealing with their problems with the demand charge structure and costs and would like to explore participation in a pilot initiative with regard to a non-firm interruptible service."
(Exhibit C1-10, PDF page 21/100).

1.1 Please provide a list of the general service customers that were consulted within the course of preparing the CEC's evidence (Exhibit C1-10), and indicate which of those customers are "in the Greenhouse Growers sector", which are in the "Flood Pumping authorities sector" and which are in the "Forestry sector".

The CEC has been in discussions with the BC Greenhouse Growers Association for over 12 years and with respect to electrical energy demand charges for about 5 years. These discussions have been with the Executive Director at times and at other times with the BCGGA energy committee or their members. In addition, the CEC has had numerous conversations with individual growers and with some of their staff experts on energy and the relationships to production. In regard to preparing the CEC evidence this has been based on some of the past conversations and a number of recent conversations used to refine components of the discussion. Responses to information request questions from other interveners, with respect to the source of certain information, have provided the specific approach to obtaining the information. The discussions the CEC has had with the BCGGA and its members have largely been verbal and have not involved formal minute exchanges or formal document exchanges. To the extent there have been references to the rate design the BCUC website and BC Hydro website have been discussed as the relevant materials.

The CEC evidence has been circulated to the BCGGA and it is the CEC understanding that this would be circulated to some of the members most interested and or affected. Some conversations with individual growers and some of the data from individual growers has been considered confidential and to the extent that it has been used in the CEC evidence the identity of the grower has been removed and the CEC believes the individual grower members identities are not relevant to the CEC evidence. However, to the extent that BC Hydro or the Commission require verification of information the CEC would undertake to arrange for a confidential review for that purpose. Some emails between the BCGGA and the CEC have been exchanged over the years but a complete set of these has not been assembled and the CEC would view this as unnecessary for the purpose of reviewing the CEC evidence, as they typically do not discuss relevant factual

information. Surveys conducted by the BCGGA have not been supplied to the CEC and only summary information has been provided. To the extent that information has been exchanged between the BCGGA and some of its members, all of the relevant information exchanged is either in the CEC evidence or in the answers to the IR #1 questions of the BCUC, BC Hydro and Interveners. Association formal support for the evidence is contained in letters from the association supporting the CEC initiative.

The CEC has been in discussion with the BC Flood Pumping Coalition only since Bruce Edwards came to the rate design hearing process to express concerns from the Dewdney Area Improvement District (DAID) with respect to consequences on their industry. Mr. Edwards has since worked to form the BC Flood Pumping Coalition (BCFPC) and is representing their interests. The BCFPC has decided to work through the CEC to have its interests put forward in the BC Hydro Rate Design hearing process. The CEC has engaged Mr. Edwards, B.A.Sc., M.A.Sc. to provide technical advice with respect to the flood pumping issues, with respect to the rate design and to obtain information from other flood pumping agencies. This information and information exchanges similar to the CEC exchanges with the BCGGA have been based on informal discussions. To the extent that the CEC has been asked about information sources in IRs the source and or the process and approach for obtaining the information have been identified but has not been reassembled here to answer a global question dealing with everything. Discussions with BCFPC members have been solely conducted by Mr. Edwards and the CEC relationship with the BCFPC has been entirely through Mr. Edwards. These discussions have included reviewing evidentiary information proposals and recrafting them into the evidence, which was done by Mr. Craig in consultation with Mr. Edwards. The CEC does not have minutes of its discussions with the Mr. Edwards and to the extent that there has been relevant discussion the documentation of that is included in either the evidence the CEC has filed or in the responses to IRs.

Discussion of formal information with reference the BC Hydro design application has not been based on CEC consultation materials but has been based on the full range of evidence available on either the BCUC website and or the BC Hydro website. The evidence and the responses to IRs have been circulated to the BCFPC and it is the CEC understanding that the same material will be circulated to interested and or concerned BCFPC members. Conversations with many of the BCFPC members have been confidential and to the extent that information has been provided from members the CEC has removed the identity of the members to protect their confidential participation in providing information. The CEC does not believe that the identity of individual members and their information is necessary for the review of the CEC evidence and responses to IRs. However, to the extent that BC Hydro and or the Commission require verification of the information the CEC will be prepared to undertake a confidential review. The CEC expects that proposed pilot will likely have a more definitive set of verified information as it would get into specific participant engagement. The CEC has exchanged emails with Mr. Edwards but these have not been assembled as they are largely procedural and would not be particularly relevant to the proceeding. All relevant information has been included in the evidence and or in response to information requests. Surveys conducted by the BCFPC have not been provided to the CEC

except as summarized results and to the extent that those have been received they have been included in the evidence and or in responses to IRs. The BCFPC formal support for the CEC initiative on their behalf has been documented in a letter of support.

The forestry discussions began some years ago with the Coastal Forest Products Association, which had concerns about the impacts of demand charges on their business activity. The CEC was referred to a CFPA member who was the most concerned and was willing to share data and discuss information with respect to production and opportunities to address their problems. The CEC has provided information in the evidence and in response to IRs based on consultation with this particular BC Hydro customer and has not as of this point in time tried to generalize these issues across the industry or survey other customers. The CEC's process has been to establish the issues for one member and use this as a base from which to go further in consultation with the industry at a later time. The information received by the CEC's in consultation with this customer has been provided on a confidential basis and the CEC is not at liberty to disclose confidential information. To the extent that the Commission or BC Hydro would like to verify information on a confidential basis the CEC is prepared to arrange a confidential review for that purpose.

The CEC has not provided any consultation documentation and to the extent that there has been formal information with respect to the rate design the sources of information have been the BCUC website and or the BC Hydro website. The CEC's understanding is that this particular BC Hydro customer is very knowledgeable about the BC Hydro rates and the rate design components and the changes being applied for in the RDA process. The CEC has circulated the evidence it has provided in this proceeding to this customer and has circulated the answers to IRs. The identity of the customer has been removed from any of the information supplied to protect the confidentiality the customer has requested. Email exchanges with this customer have not been assembled as they would largely be procedural and not substantive. All of the relevant information exchanged has been included in the evidence or in the responses to IRs. The CEC does not have minutes of the conversations with this BC Hydro customer and does not have a formalized consultation process. The outcomes of these conversations are contained in the evidence and or in the responses to IRs. The CEC has not undertaken at this stage to have a survey conducted but will look to move to this step following this stage and based on further consultation with this customer.

1.2 Please describe how the CEC determined which general service customers to consult with for the purpose of preparing its evidence (Exhibit C1-10) and, in particular, how the CEC determined which general service customers did not to attempt to consult with.

Response:

Please see BCH 1.1.1.

1.3 Please provide a list of general service customers that the CEC attempted to but was unable to consult with for the purpose of preparing its evidence (Exhibit C1-10).

Response:

Please see BCH 1.1.1.

1.4 Please produce any materials that were created by the CEC for the purpose of the consultations referred to in the cover letter to the CEC's evidence (Exhibit C1-10).

Response:

Please see BCH 1.1.1.

1.5 Please produce any copies of any written feedback received by the CEC in the course of the consultations referred to in the cover letter to the CEC's evidence (Exhibit C1-10).

Response:

Please see BCH 1.1.1.

2.0 Reference: CEC Evidence, Exhibit C1-10

"The evidence has been prepared by Mr. David Craig in consultation with commercial customers in the Greenhouse Growers sector and the Flood Pumping authorities sector as well as other general services customers."
(Exhibit C1-10, PDF page 1/100).

2.1 Please confirm that Mr. David Craig is the primary author of pdf pages 2 to 41 of the CEC evidence (Exhibit C1-10) or, if he is not the primary author, please provide the name and curriculum vitae(s) of such author(s).

Response:

Confirmed. Mr. David Craig is the primary author of pdf pages 2 to 41 of the CEC evidence.

3.0 Reference: CEC Evidence, Exhibit C1-10

It is unclear what if any orders the CEC seeks from the Commission in its Module 1 decision:

"The CEC proposes that BC Hydro develop one or more Pilot Projects relating to the provision of a Non-firm or Interruptible Rate, and/or a Demand Response Program for Medium and Large General Service customers."
(Exhibit C1-10, PDF page 5/100, underlining added).

"A number of customer groups in the Commercial sector have expressed some urgency for bringing this issue forward because they face increased rates and constant pressures on their cost structures. They are interested in working with BC Hydro to develop the pilot initiatives proposed in this document."
(Exhibit C1-10, PDF page 6/100, underlining added).

At sections 4.1 and 4.2 of the CEC evidence the CEC proposes terms and conditions for a specific "MGS and LGS Interruptible rate pilot".

"A Demand Response Pilot Project should be determined to best suit BC Hydro requirements, whilst offering value to the customer."
(Exhibit C1-10, pdf pages 30/100-31/100).

"Time of Use rates would be another suitable option for BC Hydro to offer to General Service customers and should be examined for their potential to free-up BC Hydro capacity."
(Exhibit C1-10, PDF page 32/100, underlining added).

"Non-firm interruptible rates, and/or Demand Response/Load Curtailment Programs are valuable offerings that should be explored and made available to Large General Service and Medium General Service Customers."
(Exhibit C1-10, PDF page 41/100, underlining added).

3.1 Is the CEC seeking from the Commission:

- **orders immediately establishing one or more of:**
  - **one or more pilot programs?**
  - **the proposed "MGS and LGS Interruptible rate pilot"?**
  - **a demand response program?**
  - **an optional time of use rate?**
- **orders directing BC Hydro to develop one or more of:**
  - **one or more pilot programs?**
  - **the proposed "MGS and LGS Interruptible rate pilot"?**

- **a demand response program?**
- **an optional time of use rate for general service customers?**

- **other orders?**
- **no orders?**

Response:

The CEC is seeking an order for BC Hydro to develop a pilot for non-firm, interruptible capacity service for commercial customers; working cooperatively with the CEC and customer groups to develop the details, and returning to the Commission in a timely manner with a compliance filing with details.

3.2 On the assumption that the Commission does in its 2015 RDA Module 1 order direct BC Hydro to develop one or more of the CEC's preferred general service options described in its evidence (Exhibit C1-10), please explain whether in CEC's view the work BC Hydro would be directed to do should be prioritized over the other 2015 RDA Module 2 consultation efforts BC Hydro will be undertaking generally, or with regard to BC Hydro's planned consultation efforts for general service options particularly.

Response:

The CEC is not aware of the types of activities that BC Hydro has already undertaken, or what plans BC Hydro plans to undertake with respect to the 2015 RDA Module 2, and cannot comment on prioritization with respect to these remaining activities.

In the CEC's view it is important that BC Hydro provide significant capacity and effort to enable the approval of a pilot program in the context of BCUC's Module 1 decision to enable the information to be captured in IRP planning and the development of other rates scheduled for Module 2. Such capacity should include a cooperative working relationship with the CEC to establish Pilot details regarding the methodologies of its operation, timing and measurement of its efficacy. It would be most logical for an approval to be made available in time to capture the upcoming peak period between December and February. A timely pilot will provide BC Hydro with the opportunity to recognize the incoming evidence as planning is underway for the next IRP, and will enable certain participating customers to assess their ability to stay off peak and reduce their prospective demand charges.

There is urgency with respect to addressing prospective rate increases, avoiding BC Hydro revenue loss, increasing BC Hydro revenue gains, addressing the elimination of the conservation rate design, ensuring DSM is pursued aggressively, and informing the IRP that would likely go unmet if the determinations with respect to the Pilot were deferred until the conclusion of Module 2 of the RDA. Please see CEC's response to BCUC 1.1

3.3 Please confirm the CEC's understanding that the "Load Curtailment Pilot Project for Transmission Voltage Customers" referred to at pdf page 34/100 of its evidence (Exhibit C1-10) was not approved by the Commission as a "rate", "service", or otherwise.

Response:

Confirmed.

3.4 Please discuss the CEC's understanding of the Commission's jurisdiction to direct BC Hydro to undertake non-rate, non-service programs (including load curtailment programs).

Response:

The CEC's understanding is that the BCUC cannot direct BC Hydro to undertake non-rate, non service programs. However, the Commission has jurisdiction over whether or not BC Hydro can recover expenditures for activities which BC Hydro does or does not undertake, and/or for which it may apply for Commission approval as an expenditure schedule. The BCUC has exclusive jurisdiction over BC Hydro rates and services, which can include Pilot programs such as the TSR Freshet Pilot. The CEC is proposing the introduction of a pilot for a rate for non-firm, interruptible capacity service for general service customers.

4.0 Reference: CEC Evidence, Exhibit C1-10

"A Non-Firm Interruptible Rate and Demand Response Program Pilots are proposed at this time to coincide with the current BC Hydro Rate Design (RDA) proceeding. BC Hydro planned to address voluntary Residential and General Service options in Module 2 of the RDA, as it considered it imperative that issues with the default rates were addressed prior to optional rates. In this way, Module 1 was to lay the foundation for Module 2. The establishment of a pilot project at this time could permit development activities to be completed prior to or in conjunction with the evaluation of Module 2, ensuring that the program details and/or results are available for examination and approval during Module 2. Delaying the Pilot project could result in several years delay for its implementation if development activities are not initiated until after a Module 2 Decision is rendered." (Exhibit C1-10, PDF page 24/100, underlining added).

4.1 Please comment on the reasonableness of the following timeline:

- **2015 RDA Module 2 workshops and consultation initiatives starting in October 2016;**
- **a 2015 RDA Module 1 decision from the Commission in or about December 2016 or January 2017;**
- **a 2015 RDA Module 2 application in the spring or summer 2017; and**
- **if appropriate, an expedited process for optional general service rates and services in the fall 2017 (part of the 2015 RDA Module 2 proceeding and analogous to the streamlined review process employed in regard to the freshet rate service in the 2015 RDA Module 1 proceeding).**

Response:

The CEC cannot determine with certainty where the CEC's proposal would be included in this timetable. BC Hydro's proposal appears to suggest that the CEC Interruptible Service rate would be included in the Module 2 application in the spring of 2017 with an expedited process in the fall of 2017. Such a timetable would, if approved, possibly allow for the introduction of a pilot program in time for the 2017 peak season, a year later than the CEC proposal. If BC Hydro's timing for Module 2 and its degree of development is insufficient, the timing for a practical pilot could be expected to be 2018.

The CEC does not consider such a timetable to adequately address the value of incorporating the rate into IRP planning and scoping activities, maximizing capacity DSM savings and informing the remaining Module 2 rates. Timely mitigation of the Module 1 Demand charge changes through the introduction of an Interruptible Pilot would be prior to or simultaneously with the Module 1 decision. Some commercial customers are forecast to experience significant electricity price increases including energy charges and demand charges as a result of BC Hydro's RRA and Module 1 changes that can affect the cost-effectiveness of their business activities. Affected

customers need the opportunity to understand their options to mitigate these increases when the increases are introduced, rather than at some unknown time in the future. Otherwise, customers are forced to make business adjustments in the absence of full knowledge. Customers have requested that mitigation and conservation incentives be made available as soon as possible.

The proposal defers the pilot by at least a year, and potentially much longer if there are delays in the timetable, which is not unusual. The CEC expects that the Interruptible Rate can build capacity savings over years, and every year of delay will result in unnecessary deferral of the these savings, limiting the value of the service to create savings for BC Hydro and its ratepayers.

The CEC would prefer an expedited process in the fall of 2016 leading to an approval in time for this year's peak season between November 2016 and February 2017. In the alternative, the CEC would prefer a direction to continue development of the pilot and interruptible rate concept sufficiently to ensure an expedited process enabling the implementation for the November 2017 to February 2018 peak season.

5.0 Reference: CEC Evidence, Exhibit C1-10

BC Hydro has proposed, among other things, the establishment of flat demand charges for both its MGS and LGS customer classes in place of existing three-step demand charges (refer to page 1-7 and 1-8 of the 2015 RDA, Exhibit B-1, pdf pages 27/4902 and 28/4902). The CEC evidence states "The new BCH rate structures increase Demand Charges for Commercial customers and there will be significant rate impacts. These impacts can be mitigated in a couple of key areas where mitigation is a fair and reasonable objective mitigating potential rate shock impacts for certain key economic sectors."
(Exhibit C1-10, PDF page 5/100).

5.1 Explain how BC Hydro's demand charge proposals "increase Demand Charges"?

Response:

BC Hydro's proposals increase demand charges to customers through proposed tariff changes to: (1) increase the LGS demand charge from recovering 55% of the demand costs to 65% of demand costs; and (2) increase the MGS demand charge from recovering 15% of demand costs to 35% of demand costs. The LGS demand charge rate is proposed to increase from 10.55 $/kW to 11.21 $/kW ignoring the flattening of the demand charge and the MGS demand charge is proposed to increase from $0 for 35 kW and $5.5/kW for the next 115 kW or $4.22/kW for 150 kW to $4.92/kW for 150 kW.

The demand charges are increased by BC Hydro's proposals to recover an increased amount of demand costs in the demand charge. Moving LGS from 55% recovery of demand costs to 65% recovery of demand costs is an approximate 18% increase versus what would have happened without the BC Hydro proposal. Moving MGS from 15% recovery of demand costs to a 35% recovery of demand costs is an approximate 133% increase versus what would have happened without the BC Hydro proposal.

The CEC is not, in saying that demand charges have increased, critiquing BC Hydro's proposals but is just showing the rate changes as the BC Hydro customers might see them. This simply is for explanation as to the urgency that some BC Hydro customers feel with respect to having options to mitigate their cost impacts.

5.2 Explain the "significant rate impacts" and "rate shock impacts" that will arise from BC Hydro's MGS and LGS and demand charge proposals by reference to the general service customers that the CEC consulted with in the course of preparing its evidence (Exhibit C1-10).

Response:

The explanation for the perception of significant rate impacts comes from the MGS increase in demand charges from an effective $4.22/kW to $4.92/kW being a 16.7% increase and from the LGS demand charge increase from $10.55/kW to $11.21/kW being a 6.3% increase. Particularly for lower load factor customers these can become very significant cost increases. The CEC in consultation with various customers has particularly strong perceptions of cost increase from the flood pumping customers which can typically have low load factors. For other customers the CEC was consulting with the cost increases along with the problems they have with the monthly demand charge and potentially intermittent use at time has caused them to ask the CEC to work toward mitigation of their problems. An element of shock in the rates comes from perceptions that the costs are rising into a range where other alternatives to using BC Hydro grid power have been and are being seriously contemplated. So the comment is less about the regulatory definition of rate shock than the customer perception of the importance of these issues as they affect what they must do in their business to remain competitive and profitable.

6.0 Reference: CEC Evidence, Exhibit C1-10

"Commercial customers pay well in excess of their Cost of Service (COS) so mitigating structures which do not impact other customer classes are reasonable initiatives for BCH and the Commission, and other ratepayer groups, to consider and support."
(Exhibit C1-10, PDF page 6/100, underlining added).

6.1 Please confirm that under the approved negotiated settlement agreement regarding BC Hydro's F2016 Cost of Service Study (Commission Order No. G-47-16, Appendix A, page 23/56) the revenue-cost ratios of the SGS, MGS and LGS customer classes are 111.9 per cent, 117.2 per cent and 101.3 per cent respectively.

Response:

Confirmed.

6.2 Please confirm that if existing general service customers have their demand charges reduced, through interruptible rate pilots or otherwise, then BC Hydro will earn less revenues than would otherwise be the case (all else being equal).

Response:

Confirmed with a caveat. The CEC does not accept BC Hydro's underlying premise of 'all else being equal'. The CEC anticipates that a reduction in demand charges will compensate for lost BC Hydro revenues through increased consumption, and the avoided loss of customers who would otherwise leave the BC Hydro service territory or seek alternative energy sources. It is anticipated that the CEC proposed pilot with an established interruptible service will result in increased consumption. The CEC expects that retention of one large customer could result in revenue retention of $1 million per year.

6.3 Please assume that all of the various rates and pilots the CEC is advocating for in this proceeding would, if approved, result in a revenue loss to BC Hydro (i.e., less revenue to BC Hydro than would otherwise be the case, all else being equal). On this assumption:

Response:

On the basis of the assumption provided, any revenue loss related to the Pilot would be a shortfall of revenue anticipated from an approved revenue requirement. To the extent that the shortfall in revenue is transferred to a deferral account the shortfall would be recovered from customers to which the amortization of the deferral account is applied. If the pilot revenue

impact projections are included in BC Hydro's revenue requirements then only the relevant general service customer rate class would be affected.

The CEC does not agree with the assumption that the CEC proposals would necessarily result in a revenue loss. The CEC anticipates that its proposals may well provide revenue gains and/or avoid revenue losses.

Further, the CEC expects that any potential revenue loss related to the pilot proposed would be de minimus. The CEC proposes to limit pilot participation to maximum potential bill impacts of less than 1% to the relevant rate class. The CEC expects that the net benefits from the pilot may well exceed any potential revenue loss making the CEC's proposals revenue neutral to other customers or potentially revenue positive.

- **please confirm that "other ratepayer classes" are not impacted by the proposed rate pilots only if the assumed BC Hydro revenue loss is recovered from general service customers.**

Response:

Not confirmed. Not all revenue projected in an approved revenue requirement is collected from customers. To the extent that a shortfall is not collected in any given period no rate class would be affected in that period. To the extent that shortfalls are transferred to deferral accounts affected rate classes would be determined by the amortization rules for the deferral account. To the extent that additional revenue is required in a subsequent revenue requirement approval it may come from all customer cases subject to whether or not rebalancing is undertaken.

- **please confirm that if the assumed BC Hydro revenue loss is recovered from general service customers that only those general service customers who participate in the proposed rate pilots can be better off (i.e., will have electricity bills lower than they would otherwise have).**

Response:

Not confirmed. Customers will benefit from deferred generation and transmission costs which will ultimately lower their future bills. The CEC does not agree with the assumption and expects that non-participating customers will be better off in the immediate time frame because the CEC proposals are expected to lead to additional revenue and avoided lost revenue.

6.4 Please discuss the extent to which the possibility of cost-shifting between general service customers arising from the proposed rate pilots was the subject of the consultations engaged in by the CEC for the purpose of preparing the CEC evidence (Exhibit C1-10).

Response:

The CEC has assessed the possibility of cost-shifting between general service customers arising from the proposed rate pilot(s) as negligible because the CEC expects the rate to have a net positive business case. To the extent that some portion of the rate pilot proposes to deal with fair, just and reasonable rate concepts for customers not causing peak capacity requirements and/or costs any adjustment of costs between customers would be assessed as fair, just and reasonable.

7.0 Reference: CEC Evidence, Exhibit C1-10

At sections 4.1 and 4.2 of the CEC evidence (Exhibit C1-10, PDF pages 25/100 to 27/100 and 27/100 to 29/100, respectively) the CEC proposes terms and conditions for a specific "MGS and LGS Interruptible rate pilot... which would be consistent with BC Hydro proposed MGS and LGS firm energy rates...".

7.1 Please confirm that some elements of the CEC's "MGS and LGS Interruptible rate pilot" proposal are premised on the Commission's approval of BC Hydro's MGS and LGS default rate proposals.

Response:

Not confirmed. At this point the CEC's proposal is described in terms based on the Commission's approval of BC Hydro's MGS and LGS default rate proposals. However, the CEC's proposal is not premised upon, or dependent on, Commission approval of BC Hydro's MGS and LGS default rate proposal but can be independent of those proposals. The CEC believes that an interruptible rate is an appropriate commercial service and should likely be made available to customers regardless of the approval of the proposed rates. The CEC would expect to re-examine its proposal in the event that the Commission rejected the proposed rates, but most likely just to restructure the specific details and not to alter the basic concept.

7.2 Please confirm that the Commission may reject BC Hydro's MGS and LGS default rate proposals.

Response:

Confirmed. To the extent the Commission rejected BC Hydro's proposal and retained the existing two-step demand charges the CEC would likely re-examine and re-state its proposal. The CEC has been aligned with BC Hydro default rate proposals and supports the removal of the 2-step rate. The CEC believes this is true of other interveners as well.

8.0 Reference: CEC Evidence, Exhibit C1-10

At sections 4.1 and 4.2 of the CEC evidence the CEC proposes terms and conditions for a specific "MGS and LGS Interruptible rate pilot" (Exhibit C1-10, PDF pages 25/100 to 27/100 and 27/100 to 29/100, respectively). The CEC's proposed "MGS and LGS Interruptible rate pilot" includes MGS demand charges reduced by 60 per cent and LGS demand charges reduced by 65 per cent from the MGS and LGS demand charges that are part of the BC Hydro MGS and LGS default rate proposals
(Exhibit C1-10, PDF pages 28/100 and 25/100/100, respectively).

8.1 How were the CEC's proposed 60 per cent MGS and 65 per cent LGS demand charge reductions determined?

Response:

The CEC non-firm interruptible capacity pilot proposal will ensure that participating customers will not be operating on the peak, and will therefore not cause capacity-related transmission or generation costs, although distribution related costs will still be generated. In arriving at its proposed reductions the CEC therefore retained the Distribution Related costs in the demand charge, and eliminated the Generation Demand Related Costs and the Transmission Demand Related costs.

BC Hydro provides the following Summary of Costs by Classification.

In its initial calculations the CEC made use of earlier information. BC Hydro's current information (below) with respect to cost classification indicates that distribution demand Related Costs account for 39% of Total Demand Related Costs for both MGS and LGS rate classes. Utilizing this information the CEC now recommends a reduction of 61% for the rates in effect for the demand charge at the time for both LGS and MGS customers.

Summary of Costs by Classification

Cost Classes	Energy Related Costs	Generation Demand Related Costs	Transmission Demand Related Costs	Distribution Demand Related Costs	Total Demand Related Costs	Customer Related Costs	Total
Residential	658.3	350.5	355.8	386.8	1,093.1	338.0	2,089.4
GS Under 35 kW	130.0	54.0	54.8	73.6	182.4	35.2	347.6
MGS < 150 kW	120.1	50.0	50.8	64.9	165.7	4.4	290.2
LGS > 150 kW	388.2	140.3	142.4	179.1	461.7	2.3	852.2
Irrigation	2.8	0.0	0.0	3.1	3.1	0.6	6.5
Street Lighting	8.1	5.2	5.3	5.1	15.5	6.8	30.4
Transmission	531.8	154.1	156.4	0.0	310.6	1.1	843.4
Total Classes	1,839.3	754.0	765.5	712.6	2,232.1	388.3	4,459.7

[1]

8.2 Why do the proposed demand charge reductions differ between MGS (at 60 per cent) and LGS (at 65 per cent)?

Response:

Please see BCH 1.8.1 above. Using current information the CEC now recommends a reduction of 61% for both LGS and MGS customers.

8.3 BC Hydro's proposed MGS and LGS demand charges - part of BC Hydro's MGS and LGS default rate proposals - are to set the MGS and LGS demand charges at the per-kWh level sufficient to allow BC Hydro to recover 35 per cent of its demand-related costs attributable to the MGS class, and 65 per cent of its demand-related costs attributable to the LGS class, respectively. What if any relationship is there between BC Hydro's proposal and the CEC's proposed demand charge reductions?

Response:

They are aligned. The CEC proposal retains the same MGS 65% and LGS 35% collected through the per KWh energy charges. The CEC proposal provides for reduced demand charges for avoiding cost causation for generation and transmission capacity.

8.4 Please confirm the CEC's understanding that the demand charge elements of BC Hydro's proposed MGS and LGS default rate structures are meant to allow BC Hydro to recover a portion of its demand-related costs attributable to those customer classes, and no portion of BC Hydro's energy and customer-related costs.

Response:

[1] Exhibit B-1, Appendix C-2C, COST of Service 2016, Schedule 4.1

Confirmed. The CEC does not propose a change to the energy or other applicable charges in the commercial rate classes.

8.5 If a benefit of the proposed service is the deferral of new capacity resources, why should the proposed demand charges reductions be determined by reference to embedded costs?

Response:

Given that the rate proposal should recover appropriate demand costs the proposal is built around the existing embedded costs. The CEC accepts that deferral of new capacity resources is appropriate new capacity supply cost. The CEC has done this analysis and has evaluated its proposal as having a present value (PV) cost roughly equivalent to the cost of Revelstoke Unit 6.

9.0 Reference: CEC Evidence, Exhibit C1-10

At sections 4.1 and 4.2 of the CEC evidence the CEC proposes terms and conditions for a specific "MGS and LGS Interruptible rate pilot" (Exhibit C1-10, PDF pages 25/100 to 27/100 and 27/100 to 29/100, respectively). The CEC's evidence also refers to a demand response program, a time-of-use rate, and generically to one or more interruptible rate pilots. As BC Hydro understands the CEC's evidence, all the various proposals involve some element of non-firm service or interruptibility, and concomitant reductions in demand charges.

Response:

9.1 Would any of the various rates and pilots the CEC is advocating for in its evidence (Exhibit C1-10) be available only to new, incremental loads?

Response:

No. The CEC is proposing a pilot for an interruptible rate for non-firm capacity during the BC Hydro peak that is available to existing LGS and MGS customers for the purpose of making peak capacity savings and deferring future capacity addition costs.

9.2 To the extent that the various rates and pilots the CEC is advocating for in its evidence (Exhibit C1-10) would be available to existing firm-service loads, would that not create a stranded asset risk?

Response:

No. The CEC does not perceive a risk of stranded assets from its program, and considers that it will instead reduce the risk of stranded assets.

The CEC does not perceive a risk of stranded generation or transmission assets which will continue to be used up by other customers in the future to the extent that MGS and LGS customers do not use them. The reduction of peak capacity from participating interruptible commercial customers can defer the addition of new generation and transmission capacity resulting in cost savings to BC Hydro and ratepayers.

The CEC proposal retains that portion of the demand charges which relate to recovering Distribution costs. It does therefore not create the risk of stranded distribution assets.

It is the CEC's view that the current rate RRA increases and Module 1 changes will create a risk of stranded assets if CEC's proposals are not accepted. The CEC is aware of customers who are contemplating leaving the BC Hydro system as a result of these rate changes. Once a customer has left the BC Hydro system, they will not be recovered.

9.3 Assuming a stranded asset risk is created by allowing existing firm-service loads to take service under one or more of the proposals in the CEC's evidence (Exhibit C1-10), does the CEC have an opinion about who should bear that risk, as between participating general service customers, non-participating general service customers, non-general service customers or BC Hydro's shareholder?

Response:

To the extent that there is a stranded assets risk, it should be handled the same way that BC Hydro normally handles its stranded asset risk, which is that the costs are allocated on the basis of energy use, demand and customer costs- allocated accordingly to the various rate classes. Any risks associated with stranded assets can therefore end up impacting all customers.

To the extent that the CEC proposal is reducing strand asset risk, there would be a benefit to all customers.

9.4 Assuming the establishment of one or more of the proposals advocated for in the CEC's evidence, and assuming a later request by one or more participating customers to return to firm non-interruptible service under BC Hydro's default general service tariffs, does the CEC accept the need for BC Hydro's distribution system extension policy to account for the possible change in service?

Response:

The CEC proposal recovers distribution costs in the demand charge and in the energy charge. The CEC proposes that the distribution be effectively considered as firm, non-interruptible capacity. The customer should therefore not be subject to the distribution extension policy.

Distribution capacity being paid for by the interruptible customer would not be available to other new customers.

If a customer were to take non-firm interruptible capacity service and then to return to firm, non-interruptible capacity service under BC Hydro's default general service tariff (after the appropriate waiting year period or at BC Hydro discretion) the customer returning to firm service would be able to do so based on BC Hydro providing for firm generation and transmission capacity through its regular planning processes. As the customer continues to use the distribution system there should not be system extension issues.

9.5 Assuming the establishment of one or more of the proposals advocated for in the CEC's evidence, and assuming a later request by one or more participating customers to increase their interruptible non-firm service (on a kW basis), on what basis would BC Hydro (and by extension non-participating customers) make any financial contribution through its distribution system extension policy or otherwise?

Response:

The CEC is not looking to compromise the distribution system. Non-firm, interruptible capacity customers will continue to recover distribution costs through demand and energy charges.

9.6 Please confirm the CEC's understanding that BC Hydro's distribution system extension policy is the subject, in part, of the 2015 RDA Module 2.

Response:

Confirmed. The CEC does not consider the BC Hydro distribution system extension policy as being relevant to the CEC proposal. The CEC is not looking to compromise the distribution system. Non-firm, interruptible capacity customers will continue to recover distribution costs through demand and energy charges.

10.0 Reference: CEC Evidence, Exhibit C1-10

At sections 4.1 and 4.2 of the CEC evidence the CEC proposes terms and conditions for a specific "MGS and LGS Interruptible rate pilot" (Exhibit C1-10, PDF pages 25/100 to 27/100 and 27/100 to 29/100, respectively). The CEC's evidence also refers to a demand response program, a time-of-use rate, and generically to one or more interruptible rate pilots. As BC Hydro understands the CEC's evidence, all the various proposals involve some element of interruptibility that would be exercised only at times of system peak demand.

10.1 Would any of the various rates and pilots the CEC is advocating for in its evidence (Exhibit C1-10) be interruptible by BC Hydro on the basis of short-term economic gain to BC Hydro?

Response:

The CEC proposal relates to the provision of a non-firm interruptible capacity service for general service customers. The CEC referenced demand response programs and time-of-use rates as possible options, but does not propose these at this time.

The CEC does not propose interruption on the basis of short-term economic gain to BC Hydro as part of the non-firm interruptible capacity pilot, which is premised on reducing demand at the system peak.

10.2 To the extent that the various rates and pilots the CEC is advocating for in its evidence (Exhibit C1-10) would be interruptible only at times of system peak demand

- **how does the CEC expect BC Hydro to know with certainty when times of system peak demand will arise?**

Response:

The system peak is predictable to a large extent based on historical experience and with ongoing weather monitoring. Typically, there is build up to the system peak which is observable prior to achieving peak. The CEC proposes that BC Hydro establish a threshold of 5% or 10% decremented from the design peak capacity. Once the system approaches the threshold, customers will be provided with the pre-established notice and interruption will occur if the threshold is reached. Such a system can be valuable in ensuring that the system peak is appropriately reduced in a timely manner, and also enables customers to conduct planning based on their own weather monitoring. It also facilitates specificity to the different regions.

- **does the CEC accept that BC Hydro will from time to time interrupt service in anticipation of system peak demand that does not materialize?**

Response:

The CEC proposal identified above, with a threshold decremented from the design peak could result in interruption based on a system peak that does not materialize above the threshold.

- **to the extent that BC Hydro can interrupt service a limited number of times in a particular period of time, does the CEC accept that BC Hydro risks not interrupting service during the actual system peak demand in the period?**

Response:

The CEC proposal of a threshold decremented from the design peak would enable BC Hydro to interrupt customers during the system peak. Restrictions on the number of times that BC Hydro can interrupt service in a particular period are not part of the CEC pilot proposal.

11.0 Reference: CEC Evidence, Exhibit C1-10

> *"The BC Flood Pumping Coalition represents the agencies which are engaged in managing major flood pumping requirements in the lower mainland. There is approximately 3.2 MW of MGS customer demand and 18.5 MW of LGS customer demand. Their 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 the 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."*
> (Exhibit C1-10, PDF page 15/100).

BC Hydro is concerned at the prospect of voluntarily interrupting service to customers who operate emergency flood control pump equipment (Flood Control Customers).

11.1 Would Flood Control Customers agree to indemnify and hold BC Hydro harmless from lawsuits seeking compensation for losses suffered by third parties as a result of flooding that would not have happened but for BC Hydro's interruption of service to Flood Control Customers?

- **If yes, please provide all supporting documentation.**
- **If no, does the CEC have any reason to believe that**
  - **BC Hydro could find third-parties willing to insure the liability risk?**
  - **The Commission would approve the necessary tariff amendments to fully eliminate the liability risk?**
  - **BC Hydro's shareholder or BC Hydro's non-Flood Control customers would be willing to have BC Hydro accept the liability risk?**

Response:

The CEC expects that BC Hydro's liability under its tariffs for not delivering service will be the same for the CEC proposed tariff as it is for all of BC Hydro's other tariffs. The CEC understands that BC Hydro cannot be sued for failure to deliver energy service and expects that the voluntary nature of the rate would further ensure an inability for a customer to sue BC Hydro.

11.2 Have the Flood Control Customers consulted with all relevant government agencies about the prospect of taking non-firm interruptible electrical service?

- **If yes, please provide all supporting documentation.**

Response:

At this time the flood pumping customer discussion are in an early stage but initially all have expressed an interest in the CEC proposal. At this time formal documentation of consultation does not exist and would not be appropriate to pursue unless there is a clearly defined rate which the CEC is trying to obtain through the initiative of filing its evidence.

11.3 Have the Flood Control Customers consulted with all persons who might be impacted as a result of flooding that would not have happened but for BC Hydro's interruption of service to Flood Control Customers?

Response:

The flood pumping customers regularly manage the responsibilities for this public interest and may not find it necessary to consult every single person. The flood pumping agencies have adequate means for communication and are expected to use these as the potential reality of the CEC proposal evolves. Flood pumping customers manage the risks related to their flood pumping customers all the time and would be fully capable of doing so under the CEC proposals.

12.0 Reference: CEC Evidence, Exhibit C1-10

At sections 4.1 and 4.2 of the CEC evidence the CEC proposes terms and conditions for a specific "MGS and LGS Interruptible rate pilot"
(Exhibit C1-10, PDF pages 25/100 to 27/100 and 27/100 to 29/100, respectively).

12.1 Please confirm that the CEC's proposed "MGS and LGS Interruptible rate pilot" does not address the following items:

- **whether an eligible customer could nominate some amount less than its full load requirement as non-firm and interruptible;**

Response:

Not confirmed. The CEC proposes that customers be permitted to allocate the specific portion of their load that would have non-firm, interruptible capacity. The CEC proposes separate metering for the two loads.

- **assuming that a customer could nominate less than its full load requirement as non-firm and interruptible, who would pay for the incremental metering costs;**

Response:

The CEC expects that the customer would pay incremental metering costs, assuming the costs are reasonably economic and appropriate for the benefits.

- **whether the BC Hydro's MGS and LGS meters are capable of being remotely disconnected;**

Response:

The CEC understands that BC Hydro smart meters are capable of being remotely disconnected. However, the CEC does not expect that remote disconnection should be introduced in the pilot, and believes that email notification is adequate.

The potential for remote disconnection could be evaluated following a successful pilot and evaluation of the costs and benefits of implementing Remote Disconnection. Both financial and non-financial consideration should be assessed.

- **a non-compliance rate to be charged if customers take service during a period of interruption;**

Response:

Not confirmed. The CEC does propose a non-compliance rate. The CEC proposes that the pilot experiment with the penalty size required to ensure compliance with the required off-peak time requirements as outlined in BCUC 1.4.5 and 1.5.6. Amounts of $85,000 per MW, $155,000 per MW and $225,000 per MW would be recommended as potential options. These are designed from concepts of (1) to remove the capacity savings benefit (2) to equate to the cost of supplying a backup capability to ensure no violation. These are significant penalties and would be expected to result in serious and predictable compliance. The higher penalty might be applied to a violation of the super-peak and a lower penalty might be applied to a violation of the peak.

- **the permitted frequency, individual duration, and cumulative duration of interruptions in a year;**

Response:

The CEC does not propose to define permitted frequency, duration and cumulative interruptions for a year. The CEC proposes to define interruption based on the forecast time for the BC Hydro system in the Lower Mainland to reach a level of demand equal to 5% below its design capacity; and then to define the end of interruption when demand drops below a level that is below 5% below design capacity.

- **participation requirements; and**

Response:

Participation in the pilot should be voluntary, and reflect the ability of the customer to remove existing peak load from the system peak, or as a matter of fairness to acknowledge the customer's seasonal demand which is not on peak. Customers should also be willing to provide confidential information with regard to production and productivity. An additional criterion could provide preference for customers able to show potential increased productive use of electricity and/or demonstrate a significant probability of loss of load for BC Hydro.

- **subscription limits or over-subscription rules.**

Response:

The CEC proposes that subscription for the pilot should be on the basis of application merit and be limited to potential revenue loss of no more than 1%, which the CEC estimates could involve from 50 MW to 100 MW.

13.0 Reference: CEC Evidence, Exhibit C1-10

Section 4.2 of the CEC evidence shows the load profiles of flood-pumping customers (Exhibit C1-10, PDF pages 25/100 to 27/100 and 27/100 to 29/100, respectively).

13.1 Please confirm that flood-pumping can be required on or near the day of BC Hydro's system peak.

Response:

Confirmed. However, it is highly improbable that heavy rainfall would be immediately followed by subzero weather unless a "Pineapple Express" occurs during a cold spell.

The CEC provides a discussion of flood-pumping with respect to the system peak in response to the BCUC 5 series of Information Requests.

Weather forecasts provide at least a two-day warning of heavy local rainfall and of subzero temperatures.

Water Survey of Canada's Realtime Hydrometric website provides stage and discharge throughout the Fraser basin, so closing of flood-box flap-gates can be predicted at least two days in advance. This permits pumping down waterways inside dikes in advance of flooding.

If there were significantly reduced and or no Demand and Monthly Minimum Charges, it would be affordable to run pumps in advance even if the heavy rainfall didn't materialize because the probability of a correct projection would enable adequate pumping in advance of flooding.