BC Hydro
Power smart

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September 11, 2019

Mr. Patrick Wruck
Commission Secretary and Manager
Regulatory Support
British Columbia Utilities Commission
Suite 410, 900 Howe Street
Vancouver, BC V6Z 2N3

Dear Mr. Wruck:

RE: Project No. 1598998
British Columbia Utilities Commission (BCUC or Commission)
Indigenous Utilities Regulation Inquiry
British Columbia Hydro and Power Authority (BC Hydro)
Responses to Information Request No. 1

BC Hydro writes in compliance with BCUC Order No. G-214-19 to provide, as Exhibit C2-3, its responses to BCUC and Interveners Information Request No. 1 on written evidence.

For further information, please contact the undersigned.

Yours sincerely,

Fred James
Chief Regulatory Officer

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Enclosure

1.0 Reference: Exhibit C2-2, Section 5.2, pp. 8–9
Different regulatory frameworks

On page 8 of Exhibit C2-2, the British Columbia Hydro and Power Authority (BC Hydro) states:

Having one set of rules and regulations for all Public Utilities should minimize the potential for disagreements between Public Utilities and/or between Regulators, thereby minimizing harm to customers in the form of higher regulatory costs to be passed on to customers.

On page 9, BC Hydro states:

Where a potential BC Hydro customer is itself a Public Utility, having that Public Utility regulated under a different regulatory framework (i.e., – regulated under a different set of rules than the UCA [*Utilities Commission Act*] and/or administered by a different regulator than the Commission) has the potential to create uncertainty and duplication, impact BC Hydro's ongoing operations and increase costs for existing and future ratepayers. For example, if BC Hydro and a Public Utility customer of BC Hydro's disagreed on the application of a BC Hydro rate or its terms of service, it is possible that two different regulators viewing this dispute under different regulatory frameworks could come to different conclusions and issue different decisions.

1.1.1 Please give specific examples of disagreements, uncertainty and/or duplication that have resulted from the different regulatory treatment of entities that are exceptions from the UCA definition of "public utility," such as municipalities and regional districts.

RESPONSE:

Shown below are two examples of disagreements, uncertainty and/or duplication that have resulted from the different treatment of entities with an exemption from the UCA definition of "public utility" which demonstrates a distinction in treatment between regulated, self-regulated, and unregulated entities.

The UCA definition of a public utility provides an exemption for "a municipality or regional district in respect of services provided by the municipality or regional district within its own boundaries". One example of how this exemption may be resulting in increased costs and uncertainty for some ratepayers is provided below.

- **Nelson Hydro is a public utility that provides service within the municipality of Nelson, for which the UCA exemption applies, and to rural customers, to which the exemption does not apply. This arrangement appears to be increasing costs and uncertainty for Nelson Hydro customers outside the**

municipal boundary. In their 2019 Rate Application[1] currently before the BCUC, Nelson Hydro has applied for a rate increase for rural customers that is approximately double the rate increase approved by Nelson City Council for customers within the municipal boundary. Various submissions from rural customers of Nelson Hydro articulate their fairness concerns with this approach, for example refer to Exhibit D-3-1 Letter of Concern dated April 13, 2019.[2]

- **BC Hydro notes that neither of BC Hydro or FortisBC, who provide electrical service on a fully regulated basis to all their customers in B.C., has differentiated electrical rates for the same service based on where a customer resides with respect to a municipal boundary. Rather, all customers of these fully regulated utilities benefit from lowest average cost rates.**

The UCA definition of a public utility provides an exemption for "person not otherwise a public utility who provides the service or commodity only to the person or the person's employees or tenants, if the service or commodity is not resold to or used by others". BC Hydro periodically receives complaints from entities that are being resold electricity from a landlord under terms and conditions that they believe are unfair. This situation can result in duplicative regulatory effort and increased costs for customers. One example is provided below.

- **A landlord, taking service from BC Hydro, was reselling electricity to residential tenants and imposing on them several charges for electricity service that would not apply were they a direct BC Hydro customer. A tenant complained to the BCUC, however the BCUC determined that the landlord was not subject to public utility regulation given the exemption from the UCA described above.**

- **The BCUC requested that BC Hydro investigate whether any remedies may exist under the Electric Tariff, given that the landlord was a BC Hydro customer. BC Hydro worked with the landlord regarding the obligations under the Electric Tariff. BC Hydro's understanding is that this solution resulted in at least a partial remedy for the tenants, for those charges covered by the terms and conditions of the Electric Tariff, but may not have been sufficient to address all the charges that were imposed on the tenant.**

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1 https://www.bcuc.com/ApplicationView.aspx?ApplicationId=668.

2 https://www.bcuc.com/Documents/Proceedings/2019/DOC_53808_D-3-1-Zinkan,C-Concerns.pdf.

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1.1.1 Please give specific examples of disagreements, uncertainty and/or duplication that have resulted from the different regulatory treatment of entities that are exceptions from the UCA definition of "public utility," such as municipalities and regional districts.

1.1.1.1 If no existing examples are available, please provide examples of how a different regulatory framework could result in uncertainty, and increased costs for ratepayers.

RESPONSE:

In BC Hydro's response to BCUC IR 1.1.1, we provide some examples of how different regulatory treatment of entities that are exempt from the UCA may result in increased cost and uncertainty.

Below we provide two examples of how a common regulatory framework governing more than one entity has benefitted utility customers.

<u>BC Hydro Supply to FortisBC</u>

The BCUC regulates both BC Hydro and FortisBC. FortisBC is a customer of BC Hydro and is also a Public Utility. There are benefits of the BCUC being the

common regulator of both BC Hydro and FortisBC with respect to the BC Hydro supply of electricity to FortisBC.

The BCUC approved BC Hydro's Rate Schedule (RS) 3808 for electricity service to FortisBC, while it also regulates FortisBC's other regulated activities. The BCUC has been able to take into account the unique relationship between BC Hydro and FortisBC, which may not have occurred if different regulatory frameworks were in place for each of BC Hydro's and FortisBC's jurisdictions.

The unique relationship between BC Hydro and FortisBC was the basis for the ratemaking principles that underpin the BCUC's approval of RS 3808. The New Power Purchase Agreement (PPA) with FortisBC, including RS 3808, was approved by BCUC Order No. G-60-14 on May 6, 2014.

In its Decision, the BCUC continued to recognize the unique hybrid nature of the relationship between BC Hydro and FortisBC, in which FortisBC is partly a customer of BC Hydro and partly an independent utility. RS 3808 in the New PPA has a rate structure with a lower Tranche 1 price and a higher Tranche 2 price. The threshold where the rate transitions from the Tranche 1 price to the Tranche 2 price is 1,041 GWh/year. The price for energy purchased up to the Tranche 1 threshold is equal to the energy charge component of BC Hydro's RS 1827, which is based on BC Hydro's embedded costs.

The BCUC acknowledged the hybrid nature of the relationship by approving a rate that allows FortisBC the flexibility to import energy to displace Tranche 1 energy with market priced energy. This is a benefit to FortisBC customers that other BC Hydro Transmission Service customers do not have, and which is a result of having a common regulator understanding the specific circumstances of the two utilities.

<u>Mandatory Reliability Standards (MRS) Program</u>

MRS are in place to preserve and maintain a minimum measure of reliability and security regarding the North American interconnected electric grid (the Bulk Electric System - BES) which covers most Canadian provinces, the U.S., and parts of Mexico. MRS are developed by the North American Electric Reliability Corporation and may be supplemented by region-specific reliability standards developed by appointed regional entities. MRS are adopted in Canada at a provincial level and in the U.S. and Mexico, at a federal level.

The application of MRS in all applicable BES jurisdictions is not limited to public utilities, but also includes any entity that is capable of impacting the BES and meets the criteria of MRS defined functions, which include but are not limited to, Distribution Provider, Transmission Service Provider, Transmission Owner, and Generator Owner. Implementation of and sustainment of compliance under MRS can result in incremental costs to applicable entities.

In B.C., the BCUC has jurisdiction with respect to MRS regulation. Having a common MRS regulator for all of B.C. ensures the following:

- **Application of a consistent framework which considers the broader public interest in deciding whether to adopt new or revised reliability standards in B.C. This includes determining whether the reliability standards improve or help preserve the reliability and security of the B.C. portion of the BES, whether proposed investments by applicable B.C. entities to implement and sustain compliance with reliability standards are reasonable and necessary, and the impacts to B.C. ratepayers.**
- **Prevention of lowered quality of service levels (i.e., lowered potential risk and frequency of power outages) for segments of the B.C. population by ensuring a common set of reliability standards are applied to all applicable B.C. entities.**
- **Consistency and fairness regarding MRS compliance monitoring (e.g., audits and spot-checks) and compliance enforcement activities (i.e., determination of administrative penalties, financial or otherwise, for compliance violations).**

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1.1.2 Please clarify whether the reference to "a potential BC Hydro customer is itself a Public Utility" means an entity that is <u>not</u> currently a BC Hydro customer but is a public utility.

RESPONSE:

The text referred to in the preamble above was not intended to be limited solely to Public Utilities that are not currently BC Hydro customers. Rather, the text in the preamble is intended to refer to existing and potential Public Utilities that are currently or wish to become customers of BC Hydro. To convey that meaning, the removal of the word "potential" from line 1 of the preamble above is therefore appropriate.

1.0 Reference: Exhibit C2-2, Section 5.2, pp. 8–9
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1.1.3 Please further explain in the example provided in the preamble, why a separate regulator of a hypothetical "Public Utility customer" might have any jurisdiction to make any decision over the application of a BC Hydro rate or its terms of service.

RESPONSE:

Public utility regulators exercise their responsibilities and powers in accordance with the legislative framework that establishes them, and within the geographical boundaries of that framework. However, the service territories of some utilities extend across those boundaries, which makes them subject to more than one regulatory scheme, and perhaps subject to more than one regulator. For example, as discussed in BC Hydro's response to BCUC IR 1.1.1, Nelson Hydro is regulated by the BCUC outside its municipal boundaries, and self-regulated within its boundaries.

Currently BC Hydro only provides service within a geographical area that is regulated by the BCUC. If in the future BC Hydro were to be a service provider in areas of the province in which the BCUC had no jurisdiction, then it would be subject to a different regulatory scheme in those other areas. Within the different geographic areas, in most instances, the provision of service and the

establishment of prices and non-price terms and conditions is provided by and in accordance with the applicable regulatory scheme or regulator. But because of the interconnected nature of electrical systems there will be instances where decisions by one regulator adversely affect BC Hydro in the jurisdiction of another. Indeed, this is true even where BC Hydro provides service within the geographic scope of only one regulator.

An example arose from the integration of the merchant Alberta-Montana transmission line (MATL) into the Alberta electrical system. The integration of that transmission line into the Alberta system required the development of a new rule. The Alberta Utilites Commssion (AUC) reviewed that rule, and on the basis of Alberta policy priorities expressed in the Alberta legislative framework, approved the rule despite the costs it imposed on BC Hydro.

MATL is a transmission line that allows for greater access to and from wholesale power markets outside Alberta. However it does not, because of certain physical characteristics, increase the Available Transmission Capacity (ATC) of the Alberta transmission system. ATC can be thought of as a measure of the ability of a transmission system to import and export electricity; it can also be thought of as a physical characteristic that in times of congestion needs to be allocated between the different import and export paths into a region.

The Alberta Electric System Operator (AESO) devised a pro-rata rule that allocates ATC between MATL and the existing import and export paths in proportion to the size of transmission lines. Under this allocation rule, the transmission line between B.C. and Alberta is effectively de-rated during times of congestion. The result is a diminuation of the value of the BC Hydro transmission assets that make up the B.C.-side of the interprovincial transmission line.

BC Hydro, Powerex, SaskPower and Northpoint (SaskPower's wholly-owned subsidiary) all objected to the AESO's pro rata allocation rule, as did others, in a lengthy proceeding before the AUC. Ultimately the AUC, in 2013, rejected the complaints and upheld the AESO's pro rata allocation rule, despite the harm it did to BC Hydro and similarly-situated parties. It was a complex proceeding and a complex decision, but in the result it was clear that the AUC felt bound to effect Alberta policy objectives that had been built into the Alberta legislative framework, including an "openly competitive operation of the electric market in Alberta" and the development of a merchant transmission sector, policy objectives that trumped the interests and investments of extra-Provincial participants in the Alberta electricity market.

The MATL example is not offered to continue the complaint about the AESO's ATC pro rata allocation rule, or the AUC's decsion in regard to it, but to illustrate how regulators will inevitably make decisions that reflect the priorities of the entity that establishes them, regardless of the effects on entities outside their boundaries.

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1.1.4 Please discuss whether BC Hydro considers that the risks described in the preamble could be mitigated with an appropriate delineation of jurisdiction between the British Columbia Utilities Commission (BCUC) and another regulatory body.

RESPONSE:

BC Hydro acknowledges that a number of First Nations are interested in advancing the objectives of their communities (e.g., economic prosperity and employment) and view entry into providing utility services as a means to do so. BC Hydro is supportive of an Indigenous utility located in British Columbia which operates under a different regulatory framework on reserve lands and current treaty settlement lands for which ownership has been transferred to the First Nation government (Current Treaty Settlement Lands), if the BCUC retains its current power to compel solutions to disputes between utilities, and the BCUC retains its jurisdiction of Mandatory Reliability Standards and other safety and reliability provisions of the UCA. Future treaty settlement lands should be considered on a case-by-case basis, in the context of the provisions of the particular treaty.

In addition, where the scenario described would create new electric utilities within BC Hydro's service territory, BC Hydro expects incremental costs and risks to BC Hydro. However, BC Hydro would support this regulatory model provided:

- **The cost of any new utility assets was born by the separate utility, not BC Hydro ratepayers;**
- **BC Hydro ratepayers are kept whole in respect of any assets it had to dispossess itself of, and any incremental costs it would incur in regard to operations and maintenance, and customer-related services – this would ensure that BC Hydro's customers not on reserve land would not bear the incremental costs;**
- **The BCUC retains the power to compel solutions between utilities as it currently does, regardless of the regulatory model chosen by the Indigenous government;**
- **The BCUC retains its jurisdiction over MRS and other safety and reliability provisions of the UCA; and**
- **BC Hydro would be regulated by the BCUC, where BC Hydro has or retains assets and/or operations on Reserve lands or on Current Treaty Settlement Lands.**
- **For a broader discussion of stranded asset risks, please refer to BC Hydro's response to BCUC IR 1.2.1**

2.0 Reference: Exhibit C2-2, Section 5.2, p. 9
Risks from different regulatory frameworks

BC Hydro states:

If a Public Utility customer of BC Hydro's falls under the jurisdiction of a different regulator and/or a different regulatory framework, the possibility exists that it could receive regulatory approval to construct electrical utility equipment that could impair the value of existing BC Hydro assets or render those assets stranded (not used and useful).

1.2.1 Please describe the types of electrical utility equipment constructed by the Public Utility that could impair the value of existing BC Hydro assets.

RESPONSE:

The types of electrical utility equipment constructed by the Public Utility that could impair the value of existing BC Hydro assets could include equipment for the generation, transmission, and distribution of energy, as well as customer care equipment (e.g., meters) and energy supply contracts. This impairment would arise if the creation of the Public Utility resulted in existing or planned future BC Hydro customers leaving BC Hydro for a new provider of electricity resources. Please refer to BC Hydro's response to BCUC IR 1.2.2 for a discussion of asset impairment that could result from technical and behavioural changes to how customers consume energy.

If BC Hydro customers were eligible to leave BC Hydro for a new provider of electric resources, this would result in costs for BC Hydro's remaining ratepayers. These costs arise because, under the UCA, BC Hydro has an obligation to provide service. As a result, BC Hydro has planned and built its system to ensure adequate and reliable supply to current and future customers. Ensuring adequate and reliable supply requires making large scale, long-term investments in electric utility assets, the cost of which is recovered over time from current and future ratepayers.

If customers leave BC Hydro for a new utility provider, they will no longer be contributing to the recovery of those costs. As a result, the assets may be underutilized relative to plan and the recovery of cost associated with the assets will be spread over a smaller group of customers. This increases costs for remaining customers.

The common models for protecting ratepayers from stranded asset risks is to offer electricity services through regulated monopolies, as is the case in British Columbia and most of Canada, or impose exit fees on customers that chose to

leave utility service, as is in the case in some U.S. regions such as California and Nevada. Where exit fees apply, they are designed to recover stranded asset costs, in order to protect remaining ratepayers from bearing the cost of utility investments made to supply customers who subsequently chose to leave the utility. However, the extent to which higher costs would be borne by existing customers would be circumstance-specific.

2.0 Reference: Exhibit C2-2, Section 5.2, p. 9
Risks from different regulatory frameworks

BC Hydro states:

If a Public Utility customer of BC Hydro's falls under the jurisdiction of a different regulator and/or a different regulatory framework, the possibility exists that it could receive regulatory approval to construct electrical utility equipment that could impair the value of existing BC Hydro assets or render those assets stranded (not used and useful).

1.2.2 Please discuss the extent to which BC Hydro already faces stranded asset risk similar to those described in the example in the preamble, such as: from self-generating customers; other "behind the meter" innovations; competing forms of energy (e.g. gas, wood burning); or other.

RESPONSE:

BC Hydro interprets this question to be asking the extent to which BC Hydro already faces stranded asset risk from technological and behavioural changes as to how customers consume energy.

In general, if the described changes occur they have the potential to result in reductions in BC Hydro's load. Substantive reductions in BC Hydro's customer load have the potential to result in stranded or impaired BC Hydro assets if such assets were built to serve load that no longer takes service from BC Hydro.

BC Hydro assesses such stranded asset risks through the use of load sensitivity analysis in BC Hydro's business analysis and integrated planning activities associated with asset decisions. BC Hydro commonly uses low, mid, and high load scenarios to assess the cost and rate impact of an asset decision under a range of potential future loads including those where incremental load does not materialize as expected.

There are several tools BC Hydro uses to mitigate stranded asset risks, including:

- **For interconnection assets related to new loads, BC Hydro holds financial security related to new connections that will at least partially mitigate the stranded asset risk should these new loads not materialize.**
- **For generation assets, BC Hydro's capability to transact with Powerex to dispose of surplus energy provides mitigation of a stranded generation asset.**

In addition to BC Hydro's efforts to mitigate stranded asset risk, the BCUC plays an important role with respect to minimize stranded asset risk through, for example, Certificate of Public Convenience and Necessity (CPCN) proceedings.

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1.2.2 Please discuss the extent to which BC Hydro already faces stranded asset risk similar to those described in the example in the preamble, such as: from self-generating customers; other "behind the meter" innovations; competing forms of energy (e.g. gas, wood burning); or other.

1.2.2.1 Please discuss what approaches BC Hydro takes to forecast and mitigate these risks.

RESPONSE:

Please refer to BC Hydro's response to BCUC IR 1.2.2.

2.0 Reference: Exhibit C2-2, Section 5.2, p. 9
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BC Hydro states:

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1.2.2 Please discuss the extent to which BC Hydro already faces stranded asset risk similar to those described in the example in the preamble, such as: from self-generating customers; other "behind the meter" innovations; competing forms of energy (e.g. gas, wood burning); or other.

1.2.2.2 Please discuss whether BC Hydro considers that a similar approach to forecasting and mitigating stranded asset risks is feasible in a situation where Indigenous utilities were not subject to the same regulatory treatment under the UCA.

RESPONSE:

Given the broad definition of Indigenous utilities and the scope of interest expressed in providing utility services by some interveners, BC Hydro believes that its current approach to forecasting and mitigating stranded asset risks, described in BC Hydro's response to BCUC IR 1.2.2, may not be sufficient to mitigate stranded asset risks should Indigenous utilities (or any other separate class of electrical utility) not be subject to the UCA.

BC Hydro would need to broaden the scope of its risk assessment and mitigation actions to protect BC Hydro ratepayers.

3.0 Reference: Exhibit C2-2, pp. 11, 12
Streamlined review process

BC Hydro states:

Regarding the regulation of small Public Utilities, BC Hydro believes that the financial and human resource burden of regulation is likely substantially higher for small Public Utilities than for large Public Utilities. BC Hydro believes that the Commission should consider streamlined or expedited review processes which would allow the public interest to be safeguarded while also allowing for a reduction in the overall regulatory cost placed on the utility and ultimately borne by its ratepayers.

1.3.1 Does BC Hydro foresee any concerns with respect to fulfilling its own mandate if smaller public utilities were to be subject to a streamlined or an expedited review process?

RESPONSE:

BC Hydro foresees no concerns with respect to fulfilling its own mandate if smaller public utilities are subject to such processes. In BC Hydro's view, the important characteristics of regulation are that it ensures safe, reliable, non-discriminatory service at reasonable rates. There should be no further regulatory burden than required to achieve these objectives.

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1.3.2 In BC Hydro's view, please discuss the characteristics of a streamlined process that would be appropriate for Indigenous utilities.

RESPONSE:

BC Hydro cannot confirm at this time what form of regulation or reporting might be appropriate. However, BC Hydro provides the following examples of actions the BCUC has taken to reduce the regulatory burden for smaller public utilities, followed by examples of BCUC processes that currently exist to provide expedited or streamlined regulatory review. In BC Hydro's view these processes have been successful in reducing regulatory burden while maintaining appropriate regulation of the public interest issues noted above.

1. The BCUC may require less extensive evidence in support of regulatory approval for a smaller public utility relative to larger utilities, as decisions with respect to smaller utilities can have a relatively lesser impact on the public interest. For example:

- **Silversmith is a small investor-owned utility providing service to the small community of Sandon in the West Kootenay region of B.C. In Silversmith's 2015 Revenue Requirements Decision, the BCUC recognized the need to balance just and reasonable rates for customers with the recognition of the resourcing and cost requirements of a regulatory process such as a Revenue Requirements proceeding and the desire for relatively stable rates. The following is an excerpt from the BCUC's decision conveying how the BCUC was able to reduce regulatory burden for this small utility in part by drawing on the knowledge the**

BCUC obtained by being the common regulator of all public utilities in B.C.:[1]

> **"The [Commission] Panel recognizes that RRAs [Revenue Requirments Applications] are costly and time-consuming, and are ultimately funded by ratepayers. Reducing such regulatory costs is always a consideration and particularly important in the case of a small utility with a modest customer base over which to spread such costs. In the interests of regulatory efficiency and given Silversmith's history of operations, and that if it were not in operation due to proximity it is likely that customers would be served by the British Columbia Hydro and Power Authority (BC Hydro), the Panel considers matching rates to BC Hydro in a flow-through rate adjustment mechanism to be a reasonable basis for setting rates. By allowing this mechanism, any changes in BC Hydro's rates will automatically flow through into Silversmith's rates, without the need for a formal RRA."**

2. **The BCUC may recommend exemptions from sections of the UCA that ease the regulatory burden and cost for applicants while maintaining safety and reliability standards and remedies for potential future customer complaints. For example:**

   - **Whitecap Resource Extraction owns and operates electrical substation and distribution facilities located in the Boundary Lake area of British Columbia. This distribution equipment is used by Whitecap Resource Extraction to resell electricity to a commercial entity, and to provide wheeling services to enable BC Hydro to cost effectively serve its residential and other customers in the Boundary Lake area. As such, it falls under the definition of a public utility. Whitecap applied to the BCUC for an exemption from the UCA and approval to resell electricity to a commercial entity. The BCUC recommended the exemption from section 71 and Part 3 except section 38 of the UCA that remains in effect until further order of the BCUC for reasons that may include the determination of any complaint the BCUC receives from a person whose interests are affected. The BCUC order granting the exemption also imposed safety and reliability requirements on Whitecap Resources Extraction.**[2]

3. **The BCUC may develop processes and guidelines that reduce the costs and time for regulatory approval of specific types of applications. For example:**

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1 https://www.bcuc.com/Documents/Proceedings/2015/DOC_44492_09-03-2015_Silversmith_2015-RRA_Decision.pdf.

2 https://www.bcuc.com/Documents/Proceedings/2016/DOC_46871_07-29-2016_G-120-16_Whitecap_Resources_Exemption_FinalOrder.pdf.

- **The BCUC Streamlined Review Process provides an option for the expedited review of smaller regulatory applications. The BCUC's Streamlined Review Process Policy Guidelines and Procedures (SRP Guidelines),[3] describes the SRP process as incorporating the benefits of a workshop, information requests and an oral hearing into one efficient process. It states that SRPs are designed for smaller regulatory applications with a limited number of issues. In BC Hydro's experience, SRP can reduce the time and cost required to complete a regulatory review and may be a suitable process for smaller utilities.**
- **The BCUC's Negotiated Settlement Process provides an option for expediting the review of regulatory applications and reducing the cost of regulatory applications. The BCUC's Negotiated Settlement Process Policy, Procedures and Guidelines (NSP Guidelines),[4] describes the NSP process as a tool that allows issues to potentially be settled outside of the traditional regulatory hearing process. In BC Hydro's experience, NSPs can reduce the time and cost to complete a regulatory review and may be suitable for processes where the issue is amenable to a negotiated settlement.**
- **The BCUC's Thermal Energy Systems (TES) regulatory framework[5] sets out the basis on which thermal energy systems below a specific capital cost threshold are exempt from sections of the UCA. The TES regulatory framework includes standardized reporting requirements for smaller TES and other standard reporting for larger TES seeking to construct a system extension. The TES may reduce the time and cost required for thermal energy utilities to complete regulatory processes.**

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3 https://www.bcuc.com/Documents/Guidelines/2012/DOC_30215_03-12-Streamlined%20Review%20Process%20Guidelines.pdf.

4 https://www.bcuc.com/Documents/Guidelines/NSPGuidelines_Jan2001.pdf.

5 https://www.bcuc.com/Documents/Guidelines/2015/DOC_42213_TES-Guidelines.pdf.

3.0 Reference: Exhibit C2-2, pp. 11, 12
Streamlined review process

BC Hydro states:

Regarding the regulation of small Public Utilities, BC Hydro believes that the financial and human resource burden of regulation is likely substantially higher for small Public Utilities than for large Public Utilities. BC Hydro believes that the Commission should consider streamlined or expedited review processes which would allow the public interest to be safeguarded while also allowing for a reduction in the overall regulatory cost placed on the utility and ultimately borne by its ratepayers.

1.3.3 Please provide any examples of existing streamlined processes that may be appropriate references.

RESPONSE:

Please refer to BC Hydro's response to BCUC IR 1.3.2.

4.0 Reference: Exhibit C2-2, pp. 10, 14–15; Exhibit C13-2, p. 12; Exhibit C14-2, pp. 6–7; Exhibit C16-2, pp. 13–14 Exemptions from the UCA

On page 10 of Exhibit C2-2, BC Hydro states:

At the same time as the UCA offers consistency in the treatment of Public Utilities, it also provides the Commission with flexibility to more lightly regulate a Public Utility where that Public Utility can demonstrate to Government and the Commission how its particular circumstances adequately meet or protect the broad public interest. Examples of the types of questions that BC Hydro believes the Commission may explore when considering a possible exemption from Public Utility regulation include:

(a) Is the Public Utility operating in a competitive market? (i.e. are there alternative suppliers and products available to customers, or are there significant barriers to alternative suppliers);

(b) To what extent does the Public Utility operate for the benefit, including the financial benefit, of all of its customers; and

(c) What accountability does the Public Utility have to its customers? (i.e. is there an opportunity for all customers to raise and have concerns about the cost and provision of services addressed through a fair process under an arbiter that has oversight and/or governance responsibilities for all of its customers).

1.4.1 In the case of Indigenous utilities, please discuss if BC Hydro views that possible exemptions from the UCA should be considered on a case-by-case basis, or on a “class” basis, using the criteria listed in the preamble?

RESPONSE:

BC Hydro supports exemptions from the UCA being considered on a case-by-case basis. Interveners have indicated the need for flexibility regarding the characteristics of Indigenous utilities (including services, ownership and operations, and governance) to reflect the unique context and objectives of each community and the presence of factors that support exemption.

4.0 Reference: Exhibit C2-2, pp. 10, 14–15; Exhibit C13-2, p. 12; Exhibit C14-2, pp. 6–7; Exhibit C16-2, pp. 13–14 Exemptions from the UCA

On pages 14 to 15 of Exhibit C2-2, BC Hydro states:

In British Columbia, public utility services provided by municipalities and regional districts are an example of publicly-owned utilities which are not regulated by the UCA. BC Hydro notes that municipalities and regional districts, which are incorporated and governed by the *Local Government Act*, are accountable to their customers, who are also their citizens. If customers have concerns regarding their service, they have the opportunity and right to demand improvements to their service, including by voting out of power elected officials they deem ultimately responsible for their service concern not being addressed. As well, because such utilities are not operated for profit, any financial gains flow back to all of the customers of the municipality or regional district. As all of the customers are either residents or organizations that reside within the municipal boundary, customers ultimately receive the financial benefits of the utility. Together, these factors provide the municipality or regional district with accountability to and alignment with customers. In doing so, they offer public interest protection against monopolistic characteristics.

A number of interveners have submitted that Indigenous utilities should not be considered a public utility for the purposes of the UCA, in a similar manner to municipalities or regional districts, but should be given similar relief from regulation under the UCA.[1]

1.4.2 In BC Hydro's view, could an Indigenous utility be considered similar to a municipality or regional district, with respect to accountability to and alignment with customers?

RESPONSE:

While BC Hydro recognizes that Indigenous governments differ in nature from municipalities or regional districts, an Indigenous utility could be similar to a municipality or regional district with respect to accountability to and alignment with customers where the Indigenous utility is owned and effectively controlled by the First Nation's government, operates within the boundaries of the First Nation's reserve or treaty settlement lands (for which ownership has been transferred to the First Nation government in the treaty), and serves customers who are the First Nation's members.

[1] Exhibit C13-2, p. 12; Exhibit C14-2, pp. 6–7; Exhibit C16-2, pp. 13–14.

Aside from the voting rights of resident customers, the governance requirements in the *Local Government Act* and the *Community Charter* support accountability and alignment of a municipal/regional district utility with resident customers' interests. These include specific requirements for public notice of and access to council proceedings, public access to records, municipal annual reporting, and processes for challenges to by-laws or council resolutions.

The ownership structure of an Indigenous utility, a First Nation's laws governing the Indigenous utility, and applicable legislation or treaty requirements relating to First Nation governance should all be considered on a case-by-case basis to assess the level of input and recourse that resident customers have in respect of the service and rates of the Indigenous utility which serves them.

4.0 Reference: Exhibit C2-2, pp. 10, 14–15; Exhibit C13-2, p. 12; Exhibit C14-2, pp. 6–7; Exhibit C16-2, pp. 13–14 Exemptions from the UCA

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A number of interveners have submitted that Indigenous utilities should not be considered a public utility for the purposes of the UCA, in a similar manner to municipalities or regional districts, but should be given similar relief from regulation under the UCA.[1]

1.4.2 In BC Hydro's view, could an Indigenous utility be considered similar to a municipality or regional district, with respect to accountability to and alignment with customers?

1.4.2.1 If similar to a municipality or regional district, please discuss whether BC Hydro considers this provides a case for providing an exemption/exception from the UCA, or what other considerations would be required.

RESPONSE:

Please refer to BC Hydro's responses to BCUC IRs 1.1.4 and 1.4.2.

[1] Exhibit C13-2, p. 12; Exhibit C14-2, pp. 6–7; Exhibit C16-2, pp. 13–14.

4.0 Reference: Exhibit C2-2, pp. 10, 14–15; Exhibit C13-2, p. 12; Exhibit C14-2, pp. 6–7; Exhibit C16-2, pp. 13–14 Exemptions from the UCA

On page 14 of Exhibit C16-2, the First Nations Leadership Council (FNLC) states:

…[E]xempting Indigenous utilities from regulation on the same basis as municipalities would require careful discussion and support to ensure that Nations' Title and Rights are upheld, Indigenous governance and legal processes are respected, and at the same time ensure that viable dispute resolution and appeal procedures are available to ensure Indigenous ratepayers' interests are protected.

…A question that arises in this analysis is what constitute the boundaries within which an Indigenous utility provides service. The FNLC maintains that to be consistent with Title and Rights, as well as for economic viability, <u>the boundaries must reflect a territorial approach rather than be limited to reserve. This territorial approach means Indigenous utilities must be empowered to determine their customer base, which reasonably would extend to non-Indigenous people and non-band members residing within the service area of an Indigenous utility</u>. To allow otherwise would provide for a patchwork of electricity provision in our territories and ultimately undermine the right of self-government of First Nations. A flexible approach that works with each Indigenous utility's specific needs and context should be adopted. Flexibility should also be applied to allow Indigenous utilities to provide service to industrial and commercial operations within our territories, at reasonable market rates to facilitate our economic viability.[1]

1.4.3 With respect to the Indigenous utilities' framework for exemption from regulation under the UCA, proposed by FNLC above, please outline BC Hydro's perspective on the potential impacts, both positive and negative, to existing public utilities such as BC Hydro.

RESPONSE:

Most of BC Hydro's service territory is located on lands claimed as the traditional territory of one or more First Nation and this is likely the same for other utilities in B.C.

BC Hydro understands the FNLC proposal would empower Indigenous utilities to determine their customer base within the traditional territories of each First Nation and they would not be subject to the UCA. Also, under the FNLC proposal an Indigenous utility may provide service over a broad range of territory and would presumably be interconnected to BC Hydro systems at one or more locations.

The FNLC position has important implications for utilities that are currently providing service in B.C. The following are two examples.

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[1] Emphasis added.

Obligations to Serve

Utilities that are regulated under the UCA have an obligation to provide service to all customers, including to customers that have higher than average cost to serve. If a utility is not subject to this obligation and may choose which customers to serve, the utility would presumably choose customers that are lowest cost, most profitable and they may choose not to serve those customers that are most costly and less profitable.

If BC Hydro has an obligation to provide service under the UCA, while another utility operating in the same geographic area did not, BC Hydro's remaining ratepayers would bear the costs of serving higher cost customers and forgo the benefits of serving lower cost customers. This situation would likely increase the rates for the remaining customers of regulated utilities such as BC Hydro.

Impact on BC Hydro System of Reliability, Safety and Efficiency

Where common regulators don't exist it may compromise reliability, safety and efficiency. This would be particularly important in situations where various Indigenous utilities were interconnected to the BC Hydro system. Please also refer to BC Hydro's response to BCUC IRs1.1.1.1 and 1.1.3 for details.

Because of the interconnected nature of electrical systems, adjoining utilities must work cooperatively to ensure reliability, safety and efficiency. If there is a disagreement between utilities a common regulator is required to resolve the disagreement consistent with public utility principles and the legislative regime.

Additionally, BC Hydro notes that if FNLC's proposal were pursued, such things as loss of load and costs imposed on existing BC Hydro customers as well as potential other customer concerns with the utility transition would need to be addressed.

Also, under FLNC's proposal, traditional territory overlap between different First Nations would need to be addressed in setting boundaries for an Indigenous utility service territory.

4.0 Reference: Exhibit C2-2, pp. 10, 14–15; Exhibit C13-2, p. 12; Exhibit C14-2, pp. 6–7; Exhibit C16-2, pp. 13–14 Exemptions from the UCA

On page 10 of Exhibit C2-2, BC Hydro states:

At the same time as the UCA offers consistency in the treatment of Public Utilities, it also provides the Commission with flexibility to more lightly regulate a Public Utility where that Public Utility can demonstrate to Government and the Commission how its particular circumstances adequately meet or protect the broad public interest. Examples of the types of questions that BC Hydro believes the Commission may explore when considering a possible exemption from Public Utility regulation include:

(a) Is the Public Utility operating in a competitive market? (i.e. are there alternative suppliers and products available to customers, or are there significant barriers to alternative suppliers);

(b) To what extent does the Public Utility operate for the benefit, including the financial benefit, of all of its customers; and

(c) What accountability does the Public Utility have to its customers? (i.e. is there an opportunity for all customers to raise and have concerns about the cost and provision of services addressed through a fair process under an arbiter that has oversight and/or governance responsibilities for all of its customers).

1.4.3 With respect to the Indigenous utilities' framework for exemption from regulation under the UCA, proposed by FNLC above, please outline BC Hydro's perspective on the potential impacts, both positive and negative, to existing public utilities such as BC Hydro.

1.4.3.1 Please identify any key differences if an exemption/exception from regulation under the UCA were applied to Indigenous utilities for services provided on-reserve only.

RESPONSE:

BC Hydro's view is that additional incremental costs and risks could arise by extending the above model to the scenario of an Indigenous Utility operating beyond reserve lands or Current Treaty Settlement Lands. Exemptions for these scenarios would need to be considered on a case-by-case basis.

Please refer to BC Hydro's response to BCUC IR 1.1.4 for a discussion on Indigenous utilities located on reserve lands or Current Treaty Settlement Lands.

5.0 Reference: Exhibit C2-2, Section 3, 5.2, pp. 4, 8, 9;
BC Hydro website, Remote Community Electrification Program
Service in remote areas

On page 4 of Exhibit C2-2, BC Hydro states:

BC Hydro also provides safe, reliable electricity to a number of small communities located in parts of British Columbia not connected to BC Hydro's integrated transmission grid. These customers are located in what we refer to as the non-integrated areas.

On page 8 of Exhibit C2-2, BC Hydro states:

Having one set of rules and regulations for all Public Utilities should minimize the potential for disagreements between Public Utilities and/or between Regulators, thereby minimizing harm to customers in the form of higher regulatory costs to be passed on to customers.

On page 9 of Exhibit C2-2, BC Hydro states:

Where a potential BC Hydro customer is itself a Public Utility, having that Public Utility regulated under a different regulatory framework (i.e., – regulated under a different set of rules than the UCA and/or administered by a different regulator than the Commission) has the potential to create uncertainty and duplication, impact BC Hydro's ongoing operations and increase costs for existing and future ratepayers.

On BC Hydro's website, BC Hydro provides a summary of its Remote Community Electrification Program.[1]

1.5.1 Please provide a brief description of BC Hydro's Remote Community Electrification Program.

RESPONSE:

The Remote Communities Electrification Program was established by BC Hydro in 2005 to help remote communities in B.C. receive electricity service from BC Hydro. Through the program, BC Hydro took over service and replaced or upgraded assets in 11 remote communities.

[1] https://www.bchydro.com/energy-in-bc/operations/remote_community_electrification.html.

5.0 Reference: Exhibit C2-2, Section 3, 5.2, pp. 4, 8, 9;
BC Hydro website, Remote Community Electrification Program
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On BC Hydro's website, BC Hydro provides a summary of its Remote Community Electrification Program.[1]

1.5.2 Please confirm, or explain otherwise, that at this time, BC Hydro is not accepting applications under the Remote Community Electrification Program.

RESPONSE:

BC Hydro ended the Remote Community Electrification Program in 2014. Any future consideration of communities which may be added to the Remote Communities Regulation will be undertaken by Government.

[1] https://www.bchydro.com/energy-in-bc/operations/remote_community_electrification.html.

5.0 Reference: Exhibit C2-2, Section 3, 5.2, pp. 4, 8, 9;
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On BC Hydro's website, BC Hydro provides a summary of its Remote Community Electrification Program.[1]

1.5.2 Please confirm, or explain otherwise, that at this time, BC Hydro is not accepting applications under the Remote Community Electrification Program.

1.5.2.1 If confirmed, please also explain under what circumstances that BC Hydro may reopen the Remote Community Electrification Program to further applications.

RESPONSE:

BC Hydro does not currently have any plans to reopen the Remote Community Electrification Program.

BC Hydro is required to provide service to customers in 11 remote communities as set out in the Remote Communities Regulation and in accordance with Certificates of Public Convenience and Necessity issued by the BCUC. Any future consideration of communities which may be added to the regulation will be undertaken by Government.

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[1] https://www.bchydro.com/energy-in-bc/operations/remote_community_electrification.html.

5.0 Reference: Exhibit C2-2, Section 3, 5.2, pp. 4, 8, 9;
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1.5.2 Please confirm, or explain otherwise, that at this time, BC Hydro is not accepting applications under the Remote Community Electrification Program.

1.5.2.1 If confirmed, please also explain under what circumstances that BC Hydro may reopen the Remote Community Electrification Program to further applications.

1.5.2.1.1 Please discuss whether BC Hydro is planning any other initiatives to enhance access to reliable electricity in rural communities.

RESPONSE:

BC Hydro currently has no initiatives to provide electricity service in remote communities not currently served by BC Hydro.

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[1] https://www.bchydro.com/energy-in-bc/operations/remote_community_electrification.html.

5.0 Reference: Exhibit C2-2, Section 3, 5.2, pp. 4, 8, 9;
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On BC Hydro's website, BC Hydro provides a summary of its Remote Community Electrification Program.[1]

1.5.2 Please confirm, or explain otherwise, that at this time, BC Hydro is not accepting applications under the Remote Community Electrification Program.

1.5.2.2 If confirmed, please also explain whether any potential conflicts exist between BC Hydro and a prospective Public Utility that may wish to establish itself in remote areas not currently covered by the Remote Community Electrification Program.

RESPONSE:

Please refer to BC Hydro's response to BCUC IR 1.5.3.1.

[1] https://www.bchydro.com/energy-in-bc/operations/remote_community_electrification.html.

5.0 Reference: Exhibit C2-2, Section 3, 5.2, pp. 4, 8, 9;
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On BC Hydro's website, BC Hydro provides a summary of its Remote Community Electrification Program.[1]

1.5.3 In BC Hydro's view, please discuss whether there may be rationale for different regulatory considerations for Indigenous utilities that may wish to operate in:

a) Communities currently served by BC Hydro in Non-Integrated Areas, with respect to reducing dependence on diesel; and
b) Areas not currently served by BC Hydro (or another electric public utility).

RESPONSE:

BC Hydro believes that there may be considerations that are unique to Public Utilities and/or existing BC Hydro customers not connected to BC Hydro's Integrated System, such as reducing diesel-generated electricity emissions. However, BC Hydro does not see the objective of reducing diesel-generated

[1] https://www.bchydro.com/energy-in-bc/operations/remote_community_electrification.html.

electricity, for example, to be so unique as to require a different regulatory framework.

BC Hydro is unaware of any compelling rationale regarding different regulatory treatment of remote communities not currently served by BC Hydro.

The UCA gives the BCUC the flexibility to explore unique circumstances alongside other information when reviewing Public Utility applications and making public interest determinations. As well, should the Government wish to advance or elevate the consideration by the BCUC of a particular Provincial policy objective, it may do so by amending the UCA, CEA or issuing other forms of legislation such as an order in council.

5.0 Reference: Exhibit C2-2, Section 3, 5.2, pp. 4, 8, 9;
BC Hydro website, Remote Community Electrification Program
Service in remote areas

On page 4 of Exhibit C2-2, BC Hydro states:

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a) Communities currently served by BC Hydro in Non-Integrated Areas, with respect to reducing dependence on diesel; and
b) Areas not currently served by BC Hydro (or another electric public utility).

1.5.3.1 Does BC Hydro consider there would be potential for disagreements between BC Hydro and Indigenous utilities if Indigenous utilities (excepted from BCUC regulation) were operating independently of BC Hydro (or another utility's) integrated system? Please provide specific examples of areas for potential disagreement.

[1] https://www.bchydro.com/energy-in-bc/operations/remote_community_electrification.html.

RESPONSE:

Provided that BC Hydro has no business relationship with either a Public Utility or Indigenous utility providing service in a remote community in question, there is no potential for disagreements.

6.0 Reference: Exhibit C14-2, p. 3
Protocol agreements

On page 3 of Exhibit C14-2, Adams Lake Indian Band submits:

Adams Lake and the Secwepemc Nation, of which it is a member, have actively engaged BC Hydro in respect of its claims for Aboriginal Title and Rights within the tradition territory of the Secwepemc Nation. In 2016, Adams Lake and other members of the Secwepemc Nation signed a protocol agreement with BC Hydro which is to guide reconciliation efforts between the parties.

The purpose of the protocol agreement was to develop a reconciliation framework that may lead to new social, economic and environmental arrangements and agreements between the parties. The development of Indigenous utilities in cooperation with BC Hydro is a prospect in line with the goals of the protocol agreement and that addresses both the assertion of Aboriginal Title and Rights and the need for historical and contemporary reconciliation between the parties.

1.6.1 Please provide a list of BC Hydro's protocol agreements with First Nations and an example of a protocol agreement between BC Hydro and a First Nation.

RESPONSE:

As there is some variation in the naming of BC Hydro's agreements with First Nations, we have assumed that the information requested is a list of all agreements with First Nations that are similar in nature to the Secwepemc Nation Relationship Protocol Agreement. BC Hydro has 13 finalized agreements with First Nations including:

1. **Doig River First Nation Renewal Agreement**
2. **Halfway River First Nation Renewal Agreement**
3. **Kwadacha First Nation Final Agreement**
4. **Kwantlen ya:yestel – Enduring Relationship Agreement**
5. **McLeod Lake Indian Band Renewal Agreement**
6. **Musqueam Indian Band Relationship Protocol Agreement**
7. **Okanagan Nation Alliance Enduring Relationship Agreement**
8. **Saulteau First Nations Collaboration Agreement**

9. Secwepemc Relationship Protocol Agreement

10. Squamish Nation Relationship Agreement

11. St'at'imc Final Agreement

12. Tsay Keh Dene First Nation Final Agreement

13. Tsleil-Waututh Nation Relationship Protocol Agreement

All agreements are treated in confidence. There is no generic example of an agreement that BC Hydro is able to file, as the specific actions that BC Hydro and the First Nation will take to address interests can vary. At a summary level, these agreements establish how BC Hydro will work with each First Nation and how we will advance key interests which may include:

- **Archaeology and cultural heritage**
- **Business development**
- **Customer care**
- **Engagement**
- **Energy conservation**
- **Employment, training, and education**

7.0 Reference: Exhibit C2-2, p. 10; Exhibit C4-2, pp. 8–9
Applicability of the UCA

On page 10 of Exhibit C2-2, BC Hydro states: "We believe that the UCA is the appropriate regulatory framework for the regulation of all Public Utilities in BC, including indigenous utilities that meet the UCA definition of a Public Utility."

Prepared by its legal counsel in Exhibit C4-2, FortisBC Group of Companies provides an analysis of constitutional considerations with respect to the applicability of the UCA and the jurisdiction of the BCUC on Reserve lands.

1.7.1 Please discuss if BC Hydro has undertaken any legal review of the applicability of the UCA or the jurisdiction of the BCUC on Reserve or Treaty lands. If so, please provide a summary of this jurisdictional review.

RESPONSE:

The legal advice BC Hydro receives is privileged. The jurisdictional question is important and involves consideration of complex constitutional and policy issues, as well as individual treaties. BC Hydro respectfully submits that it is not necessary for the BCUC to resolve or express an opinion on these jurisdictional issues as part of this Inquiry in order to provide its recommendations as to the appropriate nature and scope of the regulation of Indigenous utilities. However, the BCUC may wish to note such considerations and complexities in their final report as issues for the Province to consider and resolve.

8.0 Reference: Exhibit C2-2, Section 5.2, pp. 8–9; Exhibit C6-3, p. 11, Appendix 3; Exhibit C20-2, p. 15; BC Hydro Application for Electricity Purchase Agreement (EPA) Renewals for Sechelt Creek Hydro, Brown Lake Hydro, and Walden North Hydro, pp. 1-2, 22
Access to BC Hydro's transmission system

Several participants in the Inquiry have noted issues related to grid access, for example as summarized in Appendix 3 of Exhibit C6-3. On page 11 of Exhibit C6-3, Kitselas Geothermal Inc. states:

[T]he only way for IUs [Indigenous Utilities] to be economically viable is to access markets outside of their traditional lands. Electricity production depends on scale, and in almost every instance, no Indigenous bands have the critical mass to self-supply at economically competitive rates. As such, successful reconciliation becomes linked with market success. Given that many First Nations can create IUs with scale generating assets, the only barrier to success becomes retail market access - which is currently restricted. Therefore, retail market access equivalent to that enjoyed by BC Hydro is a requirement for IUs. If a geothermal electricity facility became a reality and was owned by BC Hydro, its output would undoubtedly enjoy retail market access. IU owned geothermal facilities should enjoy the same retail market access rights.

IUs, from our perspective, are de facto Crown corporations, indistinguishable from other Crown Corporations, and therefore should enjoy access to the market on a par with BC Hydro, a crown corporation.

On page 15 of Exhibit C20-2, Coastal First Nations-Great Bear Initiative (CFN) states:

BC may (and in CFN's opinion, should) choose to take actions ensuring that Indigenous utilities and their customers can benefit from BC's Heritage Assets, including through access to an allocation of Heritage energy and capacity, and through a practical means of wheeling power on BC Hydro's transmission system.

On pages 8 and 9 of Exhibit C2-2, British Columbia Hydro and Power Authority (BC Hydro) states:

In the case of BC Hydro, our Open Access Transmission Tariff (OATT) provides power sellers and wholesale customers, such as electric utilities and power marketers, with access to BC Hydro's transmission system to move power within British Columbia or to other transmission systems to access customers and markets for their business needs. Access to BC Hydro's transmission system through the OATT is provided on a non-discriminatory basis with OATT rates being determined on a cost of service basis and approved by the Commission.

The concept of retail access allows for a customer to utilize the electrical system of the electrical utility to which it is connected, to service its own load directly through the purchase of market energy or energy purchased from another

seller(s). Retail access is not available to BC Hydro's load customers. Government has commented that "interest in retail access fluctuates with electricity market prices, with customers interested when open market prices are lower than local supply and not interested when market prices are higher than local supply. In a surplus situation, allowing retail access increases the amount of surplus energy that BC Hydro must export, possibly at a loss, increasing costs borne by ratepayers who do not or cannot opt for retail access

…

The Government has also commented that retail access may expose BC Hydro ratepayers to the cost of stranded assets, the cost of which would be borne by a smaller rate base and has directed the Commission to not set rates that would result in direct or indirect provision of unbundled transmission service to retail customers in British Columbia unless BC Hydro brings forward an application to do so. BC Hydro has no plans to advance retail access at this time.

On October 5, 2018, BC Hydro filed a revised application for Electricity Purchase Agreement (EPA) Renewals for Sechelt Creek Hydro, Brown Lake Hydro, and Walden North Hydro. On pages 1 to 2 of the application, BC Hydro states:

The EPA renewals that are the subject of this Filing provide for continued use of existing, reliable facilities generating electricity from clean or renewable hydro resources at cost-effective pricing.

BC Hydro also notes on page 22 of the Application:

In the absence of an EPA renewal with BC Hydro, the Brown Lake IPP [Independent Power Producer]'s intention and preferred course of action is to sell energy to another party.

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RESPONSE:

Confirmed. Any generator that executes a Standard Generator Interconnection Agreement (SGIA) can access the transmission system to sell energy outside B.C., but must have BC Hydro perform a Point-to-Point transmission study and secure adequate Point-to-Point transmission reservations to deliver their energy.

The lack of availability of retail access does not affect the ability of a power producer in B.C., whether or not owned wholly or partly by an Indigenous Nation, to access BC Hydro's transmission system for the purpose of selling power to:

- **A wholesale customer connected to the BC Hydro system, such as another public utility; or**
- **To an entity based in B.C., or otherwise, that is not a retail customer of BC Hydro.**

BC Hydro notes that a power producer would also need to abide by all other tariffs which may be applicable tariffs, laws and regulations. For example, there are NEB export requirements and there would be tariffs and regulations which would apply to the entity receiving the power.

The greenfield power producer must submit an Interconnection Request through the Open Access Transmission Tariff (OATT), Attachment M-1 of the Standard Generator Interconnection Procedures (SGIP) and indicate they have selected to be designated as Energy Resource Interconnection Service (a Network Resource designation would indicate the customer has an Electricity Purchase Agreement with BC Hydro). They must also meet all the SGIP's milestones including executing a SGIA. The SGIA itself allows for Interconnection but does not constitute a request for, nor the provision of, any transmission service under BC Hydro's OATT Tariff, and does not convey any right to deliver electricity to any specific customer or Point of Delivery. In order to utilize the Transmission System, the customer must also request a Point-to-Point Transmission Study that will identify any potential upgrades required (refer to OATT Attachment M-1 Appendix 5 section 4.1.1.2) and subsequently obtain Point-to-Point transmission service (firm or non-firm) to accommodate any energy delivery. This information is publicly available and can be found at: https://www.bchydro.com/content/dam/BCHydro/customer-portal/documents/corporate/tariff-filings/open-access-transmission-tariff/16-attachment-m1-oatt.pdf.

Also, the ability for an Interconnection Customer to inject its Generating Facility output beyond the Point of Interconnection will depend on the existing capacity of the Transmission System at such time as a transmission service request is made that would accommodate such delivery. The provision of firm Point-to-Point Transmission Service may require the construction of additional Network Upgrades, beyond what was required under the SGIA.

8.0 Reference: Exhibit C2-2, Section 5.2, pp. 8–9; Exhibit C6-3, p. 11, Appendix 3; Exhibit C20-2, p. 15; BC Hydro Application for Electricity Purchase Agreement (EPA) Renewals for Sechelt Creek Hydro, Brown Lake Hydro, and Walden North Hydro, pp. 1-2, 22
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1.8.1.1 Please briefly explain the requirements for a prospective greenfield power producer, owned wholly or partly by an Indigenous Nation, that may wish to connect and access BC Hydro's transmission system for the purposes of moving power within BC or to other transmission systems.

RESPONSE:

Please refer to BC Hydro's response to BCUC IR 1.8.1.

8.0 Reference: Exhibit C2-2, Section 5.2, pp. 8–9; Exhibit C6-3, p. 11, Appendix 3; Exhibit C20-2, p. 15; BC Hydro Application for Electricity Purchase Agreement (EPA) Renewals for Sechelt Creek Hydro, Brown Lake Hydro, and Walden North Hydro, pp. 1-2, 22
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1.8.1.1.1 Please also outline any factors that BC Hydro must assess before granting a greenfield IPP access to the transmission system.

RESPONSE:

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1.8.2 Please confirm, or explain otherwise, that when BC Hydro is in a surplus situation, EPAs will increase the amount of surplus energy that BC Hydro must export, which may be sold at a loss with costs borne by ratepayers.

RESPONSE:

In a scenario where:

- **BC Hydro has an operational load-resource balance surplus for the period in question (please note that BC Hydro assesses new and renewed EPAs using the planning load-resource balance rather than the operational view, given the long term nature of the contracts involved);**
- **Incremental new or renewed EPA contracts are entered into which include a minimum BC Hydro purchase obligation (such as through a take-or-pay obligation); and**

- **The cost of the EPA contract is more than market pricing for the period in question**

Then in such a scenario these incremental new, renewed or modified EPA contracts would increase the amount of surplus energy on the BC Hydro system. Any additional exports would be sold at a loss over the period in question with costs borne by ratepayers.

8.0 Reference: Exhibit C2-2, Section 5.2, pp. 8–9; Exhibit C6-3, p. 11, Appendix 3; Exhibit C20-2, p. 15; BC Hydro Application for Electricity Purchase Agreement (EPA) Renewals for Sechelt Creek Hydro, Brown Lake Hydro, and Walden North Hydro, pp. 1-2, 22
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1.8.2.1 Please discuss whether EPA renewals may expose BC Hydro to any stranded asset risks, and/ or underutilization of BC Hydro assets.

RESPONSE:

We would not expect an EPA renewal to expose BC Hydro to any stranded asset risk but it could lead to a loss depending on when the energy is received, current market prices, and the price paid for the energy.

8.0 Reference: Exhibit C2-2, Section 5.2, pp. 8–9; Exhibit C6-3, p. 11, Appendix 3; Exhibit C20-2, p. 15; BC Hydro Application for Electricity Purchase Agreement (EPA) Renewals for Sechelt Creek Hydro, Brown Lake Hydro, and Walden North Hydro, pp. 1-2, 22
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1.8.2.2 Please clarify why BC Hydro is seeking to renew EPAs at the same time as there is a prohibition on retail access for entities including Indigenous utilities.

RESPONSE:

BC Hydro does not understand the linkage between the provincial policy on retail access and the renewal of EPAs by BC Hydro.

The need for new resources, including EPA renewals, is identified by BC Hydro's Load Resource Balance. With respect to specific EPAs, there may also be other project specific benefits and considerations which may be taken into account, such as potential local reliability benefits. BC Hydro has been renewing individual

EPAs where it has been cost-effective to do so and has been guided by the 2013 IRP EPA renewal assumptions. For a discussion regarding BC Hydro's approach to assessing stranded asset risk, including the mitigation of stranded generation assets and reductions to BC Hydro's load, please refer to BC Hydro's response to BCUC IR 1.2.2.

1.0 Topic: Promoting sustainable partnerships with Indigenous communities

Mercury Energy is a New Zealand partially state-owned (51%) electricity generation and electricity retailing company.[1] Mercury operates 5 geothermal electricity stations, of which, 3 involve a partnership with a Māori trust (Indigenous group).[2] Though Mercury operates the geothermal electricity stations, the Trust's involved have benefitted significantly through the revenue generated and as a result, they are able to provide a variety of social and economic support programs to their members.

A 2017 University of Victoria survey report that involved the feedback from 102 BC First Nations and the Tribal Councils found that First Nations are eager for more involvement in the renewable energy sector.[3] 98% of the First Nations surveyed indicated that they are already involved or wish to be involved in the renewable energy sector.[4] Moreover, 75% of survey respondents indicated that they had projects in mind that they have not pursued or been able to pursue, with the main barriers being:

1. Lack of opportunity provided by BC Hydro programs;
2. lack of community readiness; and
3. difficulty securing financing.[5]

Excerpt from Exhibit C13-2 Submission on Behalf of Nuu-Chah Nulth Tribal Council, Cowichan Tribes, Gitanyow First Nation, Homalco First Nation and B.C. First Nations Clean Energy Working Group, pg. 2.

"The Clean Energy Act (B.C.)6 states: "2. The following comprise British Columbia's energy objectives:… (l) to foster the development of first nation and rural communities through the use and development of clean or renewable resources; …""

1.1.(a) Does BC Hydro envision offering a partnership program for Indigenous Nations to develop electricity projects that involve a form of revenue sharing?

RESPONSE:

At present, BC Hydro does not currently have a mandate for revenue sharing.

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1 Mercury Energy, "Investor Centre," accessed August 9, 2019, https://www.mercury.co.nz/investors.

2 Mercury Energy, "Geothermal," accessed August 9, 2019, https://www.mercury.co.nz/about/sustainability/renewable-energy/geothermal-generation.

3 Cook, Dana *et al.,* First Nations and Renewable Energy Development in British Columbia, *University of Victoria, School of Environmental Studies*, April 2017, pg. 3, https://dspace.library.uvic.ca/bitstream/handle/1828/7919/Shaw_Karena_First_Nations_Renewable_Energy_BC- 2017.pdf?sequence=1&isAllowed=y.

4 *Ibid, 3*.

5 *Ibid,*15-16.

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1.1.(b) Has BC Hydro offered renewable energy capacity building sessions to First Nations in BC interested in developing their own projects? If not, would BC Hydro consider offering these types of sessions?

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2 Mercury Energy, "Geothermal," accessed August 9, 2019, https://www.mercury.co.nz/about/sustainability/renewable-energy/geothermal-generation.

3 Cook, Dana *et al.,* First Nations and Renewable Energy Development in British Columbia, *University of Victoria, School of Environmental Studies*, April 2017, pg. 3, https://dspace.library.uvic.ca/bitstream/handle/1828/7919/Shaw_Karena_First_Nations_Renewable_Energy_BC- 2017.pdf?sequence=1&isAllowed=y.

4 *Ibid, 3*.

5 *Ibid,*15-16.

RESPONSE:

BC Hydro has assisted with capacity building through:

- **Participation in and funding for First Nations clean energy workshops, and working groups and providing funding and in-kind support for the development of initiatives such as the BC First Nation's Clean Energy Toolkit and other First Nation sponsored events.**
- **Direct discussions with First Nations that are advancing clean energy proposals in discussion with BC Hydro.**
- **Participation in academic events and responding to inquiries from groups of Indigenous leaders who are engaged in clean energy education.**

BC Hydro notes that there is an active Independent Power Producer (IPP) sector in B.C., and in BC Hydro's experience most First Nations work with or partner with IPP developers who are able to provide development capacity and assist in building capacity with the First Nation.

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Excerpt from Exhibit C13-2 Submission on Behalf of Nuu-Chah Nulth Tribal Council, Cowichan Tribes, Gitanyow First Nation, Homalco First Nation and B.C. First Nations Clean Energy Working Group, pg. 2.

"The Clean Energy Act (B.C.)6 states: "2. The following comprise British Columbia's energy objectives:… (l) to foster the development of first nation and rural communities through the use and development of clean or renewable resources; …""

1.1.(c) In BC Hydro's opinion, could requests (a) and (b) contribute to meeting the energy objective highlighted as well as help BC Hydro enhance grid reliability in targeted areas of the transmission system with existing issues?

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1 Mercury Energy, "Investor Centre," accessed August 9, 2019, https://www.mercury.co.nz/investors.

2 Mercury Energy, "Geothermal," accessed August 9, 2019, https://www.mercury.co.nz/about/sustainability/renewable-energy/geothermal-generation.

3 Cook, Dana *et al.,* First Nations and Renewable Energy Development in British Columbia, *University of Victoria, School of Environmental Studies*, April 2017, pg. 3, https://dspace.library.uvic.ca/bitstream/handle/1828/7919/Shaw_Karena_First_Nations_Renewable_Energy_BC- 2017.pdf?sequence=1&isAllowed=y.

4 *Ibid, 3*.

5 *Ibid,*15-16.

RESPONSE:

BC Hydro does not believe the requests in CANGEA IRs 1.1.(a) and 1.1.(b) would materially contribute to either the Provinces energy objectives described in the *Clean Energy Act* or enhance grid reliability as compared to BC Hydro's current approach. Currently BC Hydro is in a surplus position and does not have an expected need for new energy resources.

1.0 Reference: Exhibit C2-2, BC Hydro Written Evidence page 1

We are a Crown corporation owned by the Province of British Columbia and the largest electricity provider in British Columbia serving over four million British Columbians. BC Hydro's assets support the Province's energy objectives under the *Clean Energy Act* (***CEA***), and we are regulated by the Commission under the *Utilities Commission Act* (***UCA***).

1.1.1 Please confirm that BC Hydro provides service to indigenous communities.

RESPONSE:

BC Hydro can confirm that it provides services to multiple Indigenous communities.

1.0 Reference: Exhibit C2-2, BC Hydro Written Evidence page 1

We are a Crown corporation owned by the Province of British Columbia and the largest electricity provider in British Columbia serving over four million British Columbians. BC Hydro's assets support the Province's energy objectives under the *Clean Energy Act* (***CEA***), and we are regulated by the Commission under the *Utilities Commission Act* (***UCA***).

1.1.2 Please confirm that BC Hydro works cooperatively with indigenous communities for the supply of energy.

RESPONSE:

BC Hydro recognizes the importance of both reliable energy supply as well as clean energy development to Indigenous communities and work cooperatively with Indigenous communities who have approached BC Hydro with an interest in clean energy activities (including both demand-side and supply-side activities).

1.0 Reference: Exhibit C2-2, BC Hydro Written Evidence page 1

We are a Crown corporation owned by the Province of British Columbia and the largest electricity provider in British Columbia serving over four million British Columbians. BC Hydro's assets support the Province's energy objectives under the *Clean Energy Act* (***CEA***), and we are regulated by the Commission under the *Utilities Commission Act* (***UCA***).

1.1.3 Please provide an overview of other commercial interactions that BC Hydro has with indigenous communities.

RESPONSE:

In addition to Electricity Purchase Agreements, BC Hydro works with Indigenous nations to purchase many types of services examples include: security, tree and vegetation clearing, facility maintenance, archaeology monitors, civil works, consulting and construction services.

2.0 Reference: Exhibit C2-2 BC Hydro Written Evidence page 8

5.2 There are a number of advantages to retaining the *UCA* as the principal regulatory framework for the regulation of all Public Utilities in British Columbia.

BC Hydro is of the view that it is efficient and effective for the *UCA* to be retained as the principal regulatory framework for all Public Utilities operating within British Columbia, including those indigenous utilities who meet the *UCA* definition of a Public Utility. Having one set of rules and regulations for all Public Utilities should minimize the potential for disagreements between Public Utilities and/or between Regulators, thereby minimizing harm to customers in the form of higher regulatory costs to be passed on to customers.

As described in Section 5.1, the *UCA* currently provides a comprehensive, single set of regulatory considerations and requirements for all Public Utilities in B.C. Having one set of rules reduces the regulatory and operational complexity for all Public Utilities, customers and other public stakeholders. For example, it precludes conflicting regulatory decisions arising from different regulatory bodies, it reduces the complexity of the relationships between Public Utilities as they are governed by the same regulatory framework. It also promotes the appropriate allocation of costs and the efficient development of utility infrastructure between Public Utilities, thereby reducing the risk that one or more of a Public Utility's infrastructure assets becomes impaired or no longer used and useful (stranded asset risk). This is particularly relevant to BC Hydro. In addition to the over four million British Columbians we serve directly, we also maintain interconnections with, and infrastructure, to provide electricity and transmission service to energy sellers and other Public Utilities in B.C.

1.2.1 If possible, please provide a range order of magnitude of the risk of stranded assets that could occur based on BC Hydro's knowledge of the utilities in question. Please provide the range based on a single incident up to and including multiple incidents.

RESPONSE:

Please refer to BC Hydro's response to BCUC IR 1.2.1.

2.0 Reference: Exhibit C2-2 BC Hydro Written Evidence page 8

5.2 There are a number of advantages to retaining the *UCA* as the principal regulatory framework for the regulation of all Public Utilities in British Columbia.

BC Hydro is of the view that it is efficient and effective for the *UCA* to be retained as the principal regulatory framework for all Public Utilities operating within British Columbia, including those indigenous utilities who meet the *UCA* definition of a Public Utility. Having one set of rules and regulations for all Public Utilities should minimize the potential for disagreements between Public Utilities and/or between Regulators, thereby minimizing harm to customers in the form of higher regulatory costs to be passed on to customers.

As described in Section 5.1, the *UCA* currently provides a comprehensive, single set of regulatory considerations and requirements for all Public Utilities in B.C. Having one set of rules reduces the regulatory and operational complexity for all Public Utilities, customers and other public stakeholders. For example, it precludes conflicting regulatory decisions arising from different regulatory bodies, it reduces the complexity of the relationships between Public Utilities as they are governed by the same regulatory framework. It also promotes the appropriate allocation of costs and the efficient development of utility infrastructure between Public Utilities, thereby reducing the risk that one or more of a Public Utility's infrastructure assets becomes impaired or no longer used and useful (stranded asset risk). This is particularly relevant to BC Hydro. In addition to the over four million British Columbians we serve directly, we also maintain interconnections with, and infrastructure, to provide electricity and transmission service to energy sellers and other Public Utilities in B.C.

1.2.2 What form of regulator is BC Hydro contemplating when they discuss the potential for different regulators to arrive at different conclusions? Who does BC Hydro expect would conduct the regulation of the indigenous public utility if not BCUC? Please explain.

RESPONSE:

The quotation from BC Hydro's evidentiary submission provided in the preamble above contemplates a different regulatory legislation and/or a different regulator than the existing Public Utility regulatory framework that exists under the *Utilities Commission Act (*UCA*)*, including a First Nation government body or any self-regulated/unregulated Indigenous utility.

Please refer to BC Hydro's response to BCUC IRs 1.1.1 and 1.1.3 for further details.

2.0 Reference: Exhibit C2-2 BC Hydro Written Evidence page 8

5.2 There are a number of advantages to retaining the *UCA* as the principal regulatory framework for the regulation of all Public Utilities in British Columbia.

BC Hydro is of the view that it is efficient and effective for the *UCA* to be retained as the principal regulatory framework for all Public Utilities operating within British Columbia, including those indigenous utilities who meet the *UCA* definition of a Public Utility. Having one set of rules and regulations for all Public Utilities should minimize the potential for disagreements between Public Utilities and/or between Regulators, thereby minimizing harm to customers in the form of higher regulatory costs to be passed on to customers.

As described in Section 5.1, the *UCA* currently provides a comprehensive, single set of regulatory considerations and requirements for all Public Utilities in B.C. Having one set of rules reduces the regulatory and operational complexity for all Public Utilities, customers and other public stakeholders. For example, it precludes conflicting regulatory decisions arising from different regulatory bodies, it reduces the complexity of the relationships between Public Utilities as they are governed by the same regulatory framework. It also promotes the appropriate allocation of costs and the efficient development of utility infrastructure between Public Utilities, thereby reducing the risk that one or more of a Public Utility's infrastructure assets becomes impaired or no longer used and useful (stranded asset risk). This is particularly relevant to BC Hydro. In addition to the over four million British Columbians we serve directly, we also maintain interconnections with, and infrastructure, to provide electricity and transmission service to energy sellers and other Public Utilities in B.C.

1.2.3 What recourse would BC Hydro expect to have if two different regulators issued different decisions resulting in stranded assets for BC Hydro?

RESPONSE:

Regardless of the cause of stranded assets, once they arise, the associated cost is borne either by the utility shareholder or by the utility's remaining customers. While BC Hydro may have some recourse, it is not possible to determine at this time as it depends on the circumstances.

2.0 Reference: Exhibit C2-2 BC Hydro Written Evidence page 8

5.2 There are a number of advantages to retaining the *UCA* as the principal regulatory framework for the regulation of all Public Utilities in British Columbia.

BC Hydro is of the view that it is efficient and effective for the *UCA* to be retained as the principal regulatory framework for all Public Utilities operating within British Columbia, including those indigenous utilities who meet the *UCA* definition of a Public Utility. Having one set of rules and regulations for all Public Utilities should minimize the potential for disagreements between Public Utilities and/or between Regulators, thereby minimizing harm to customers in the form of higher regulatory costs to be passed on to customers.

As described in Section 5.1, the *UCA* currently provides a comprehensive, single set of regulatory considerations and requirements for all Public Utilities in B.C. Having one set of rules reduces the regulatory and operational complexity for all Public Utilities, customers and other public stakeholders. For example, it precludes conflicting regulatory decisions arising from different regulatory bodies, it reduces the complexity of the relationships between Public Utilities as they are governed by the same regulatory framework. It also promotes the appropriate allocation of costs and the efficient development of utility infrastructure between Public Utilities, thereby reducing the risk that one or more of a Public Utility's infrastructure assets becomes impaired or no longer used and useful (stranded asset risk). This is particularly relevant to BC Hydro. In addition to the over four million British Columbians we serve directly, we also maintain interconnections with, and infrastructure, to provide electricity and transmission service to energy sellers and other Public Utilities in B.C.

1.2.3 What recourse would BC Hydro expect to have if two different regulators issued different decisions resulting in stranded assets for BC Hydro?

1.2.3.1 Please provide a rough approximation of the dollar value of a conflicting decision that could justify BC Hydro pursuing recourse for a single decision.

RESPONSE:

Please refer to BC Hydro's response to CEC IR 1.2.3.

2.0 Reference: Exhibit C2-2 BC Hydro Written Evidence page 8

5.2 There are a number of advantages to retaining the *UCA* as the principal regulatory framework for the regulation of all Public Utilities in British Columbia.

BC Hydro is of the view that it is efficient and effective for the *UCA* to be retained as the principal regulatory framework for all Public Utilities operating within British Columbia, including those indigenous utilities who meet the *UCA* definition of a Public Utility. Having one set of rules and regulations for all Public Utilities should minimize the potential for disagreements between Public Utilities and/or between Regulators, thereby minimizing harm to customers in the form of higher regulatory costs to be passed on to customers.

As described in Section 5.1, the *UCA* currently provides a comprehensive, single set of regulatory considerations and requirements for all Public Utilities in B.C. Having one set of rules reduces the regulatory and operational complexity for all Public Utilities, customers and other public stakeholders. For example, it precludes conflicting regulatory decisions arising from different regulatory bodies, it reduces the complexity of the relationships between Public Utilities as they are governed by the same regulatory framework. It also promotes the appropriate allocation of costs and the efficient development of utility infrastructure between Public Utilities, thereby reducing the risk that one or more of a Public Utility's infrastructure assets becomes impaired or no longer used and useful (stranded asset risk). This is particularly relevant to BC Hydro. In addition to the over four million British Columbians we serve directly, we also maintain interconnections with, and infrastructure, to provide electricity and transmission service to energy sellers and other Public Utilities in B.C.

1.2.4 Please confirm that the risk of different decision-making between regulators is a risk that could occur multiple times on multiple issues, but not meet an individual threshold for pursuing recourse.

RESPONSE:

BC Hydro confirms that the risk of different decision-making between regulators is a risk that could occur multiple times on multiple issues. Please also refer to BC Hydro's response to CEC IR 1.2.3 for additional discussion.

2.0 Reference: Exhibit C2-2 BC Hydro Written Evidence page 8

5.2 There are a number of advantages to retaining the *UCA* as the principal regulatory framework for the regulation of all Public Utilities in British Columbia.

BC Hydro is of the view that it is efficient and effective for the *UCA* to be retained as the principal regulatory framework for all Public Utilities operating within British Columbia, including those indigenous utilities who meet the *UCA* definition of a Public Utility. Having one set of rules and regulations for all Public Utilities should minimize the potential for disagreements between Public Utilities and/or between Regulators, thereby minimizing harm to customers in the form of higher regulatory costs to be passed on to customers.

As described in Section 5.1, the *UCA* currently provides a comprehensive, single set of regulatory considerations and requirements for all Public Utilities in B.C. Having one set of rules reduces the regulatory and operational complexity for all Public Utilities, customers and other public stakeholders. For example, it precludes conflicting regulatory decisions arising from different regulatory bodies, it reduces the complexity of the relationships between Public Utilities as they are governed by the same regulatory framework. It also promotes the appropriate allocation of costs and the efficient development of utility infrastructure between Public Utilities, thereby reducing the risk that one or more of a Public Utility's infrastructure assets becomes impaired or no longer used and useful (stranded asset risk). This is particularly relevant to BC Hydro. In addition to the over four million British Columbians we serve directly, we also maintain interconnections with, and infrastructure, to provide electricity and transmission service to energy sellers and other Public Utilities in B.C.

1.2.4 Please confirm that the risk of different decision-making between regulators is a risk that could occur multiple times on multiple issues, but not meet an individual threshold for pursuing recourse.

1.2.4.1 If not confirmed, please explain why not.

RESPONSE:

Please refer to BC Hydro's response to CEC IR 1.2.4.

3.0 Reference: Exhibit C2-2 BC Hydro Written Evidence page 10 and page 12

BC Hydro believes this flexibility provides Government and the Commission with the tools to grant lighter touch regulation after considering the characteristics of a Public Utility and to the extent that those characteristics either do not raise or adequately address public interest concerns.

small Public Utilities than for large Public Utilities. BC Hydro believes that the Commission should consider streamlined or expedited review processes which would allow the public interest to be safeguarded while also allowing for a reduction in the overall regulatory cost placed on the utility and ultimately borne by its ratepayers. As well, the Commission may consider the creation of standard reporting templates that would set out the format and nature of information required by the Commission for fundamental purposes such as determining that Public Utility's overall cost of service (Revenue Requirement) and for the setting of rates.

1.3.1 Please provide additional comments on the types of regulation that BC Hydro would consider appropriate in 'lighter touch' regulation. What information would be appropriate for standard reporting?

RESPONSE:

BC Hydro believes that the BCUC should explore and consider whether "lighter touch" regulation is practical and appropriate as a means of reducing the overall regulatory burden for all Public Utilities, including Indigenous Utilities.

As described in BC Hydro's response to BCUC IR 1.3.2, lighter touch regulation could include the development and implementation of streamlined or expedited review processes, procedures such as those which were implemented for certain thermal energy utility systems as well as use of the Negotiated Settlement Process. Also, the BCUC may also consider the possibility for issuing exemptions from some or all of Part 3 of the UCA for certain types of smaller Public Utilities, including Indigenous Utilities.

3.0 Reference: Exhibit C2-2 BC Hydro Written Evidence page 10 and page 12

BC Hydro believes this flexibility provides Government and the Commission with the tools to grant lighter touch regulation after considering the characteristics of a Public Utility and to the extent that those characteristics either do not raise or adequately address public interest concerns.

small Public Utilities than for large Public Utilities. BC Hydro believes that the Commission should consider streamlined or expedited review processes which would allow the public interest to be safeguarded while also allowing for a reduction in the overall regulatory cost placed on the utility and ultimately borne by its ratepayers. As well, the Commission may consider the creation of standard reporting templates that would set out the format and nature of information required by the Commission for fundamental purposes such as determining that Public Utility's overall cost of service (Revenue Requirement) and for the setting of rates.

1.3.1 Please provide additional comments on the types of regulation that BC Hydro would consider appropriate in 'lighter touch' regulation. What information would be appropriate for standard reporting?

1.3.1.1 If available, please provide examples of public utilities that are currently regulated with a 'lighter touch' that BC Hydro considers might be appropriate.

RESPONSE:

Please refer to BC Hydro's response to CEC IR 1.3.1.

3.0 Reference: Exhibit C2-2 BC Hydro Written Evidence page 10 and page 12

BC Hydro believes this flexibility provides Government and the Commission with the tools to grant lighter touch regulation after considering the characteristics of a Public Utility and to the extent that those characteristics either do not raise or adequately address public interest concerns.

small Public Utilities than for large Public Utilities. BC Hydro believes that the Commission should consider streamlined or expedited review processes which would allow the public interest to be safeguarded while also allowing for a reduction in the overall regulatory cost placed on the utility and ultimately borne by its ratepayers. As well, the Commission may consider the creation of standard reporting templates that would set out the format and nature of information required by the Commission for fundamental purposes such as determining that Public Utility's overall cost of service (Revenue Requirement) and for the setting of rates.

1.3.2 Would BC Hydro contemplate 'lighter touch' regulation with a particular time period attached, such as five years? Or would BC Hydro expect that 'lighter touch' regulation could be provided indefinitely? Please discuss.

RESPONSE:

BC Hydro believes that if "lighter touch" regulation is found to be in the public interest, that it should be allowed to continue until such time as reasons are brought forward to the BCUC that continuance of that form of regulation may not be in the public interest.

BC Hydro has observed that the BCUC has initiated reviews on the form and extent to which certain Public Utilities are regulated and has issued decisions intended to address its concerns. BC Hydro is of the view that this approach is in the public interest as it provides a mechanism for Public Utilities to remain accountable to customer and other potentially affected parties.

Please also refer to BC Hydro's response to BCUC IR 1.3.1.

4.0 Reference: Exhibit C2-2, BC Hydro Written Evidence page 13 and 14

The concept of retail access allows for a customer to utilize the electrical system of the electrical utility to which it is connected, to service its own load directly through the purchase of market energy or energy purchased from another seller(s). Retail access is not available to BC Hydro's load customers. Government has commented that "interest in retail access fluctuates with electricity market prices, with customers interested when open market prices are lower than local supply and not interested when market prices are higher than local supply. In a surplus situation, allowing retail access increases the amount of surplus energy that BC Hydro must export, possibly at a loss, increasing costs borne by ratepayers who do not or cannot opt for retail access… The prohibition of retail access can protect electricity consumers by providing price stability and reducing the duplication of costs that must be passed on to consumers (for example, duplicative systems of billing, customer service etc.). In Canada, it is generally true that regions with low and stable electricity prices like Quebec, Manitoba and British Columbia do not have full retail access… There is evidence from the U.S. that the average retail price of electricity tends to be more volatile in regions with full retail markets."[21] The Government has also commented that retail access may expose BC Hydro ratepayers to the cost of stranded assets, the cost of which would be borne by a smaller rate base and has directed the Commission to not set rates that would result in direct or indirect provision of unbundled transmission service to retail customers in British Columbia unless BC Hydro brings forward an application to do so.[22, 23] BC Hydro has no plans to advance retail access at this time.

1.4.1 If retail access were permitted, would BC Hydro alter its supply purchases over time? Please explain.

RESPONSE:

Given the clear government policy and regulation on retail access, BC Hydro has not contemplated what specific actions may arise if retail access were pursued.

4.0 Reference: Exhibit C2-2, BC Hydro Written Evidence page 13 and 14

The concept of retail access allows for a customer to utilize the electrical system of the electrical utility to which it is connected, to service its own load directly through the purchase of market energy or energy purchased from another seller(s). Retail access is not available to BC Hydro's load customers. Government has commented that "interest in retail access fluctuates with electricity market prices, with customers interested when open market prices are lower than local supply and not interested when market prices are higher than local supply. In a surplus situation, allowing retail access increases the amount of surplus energy that BC Hydro must export,

possibly at a loss, increasing costs borne by ratepayers who do not or cannot opt for retail access… The prohibition of retail access can protect electricity consumers by providing price stability and reducing the duplication of costs that must be passed on to consumers (for example, duplicative systems of billing, customer service etc.). In Canada, it is generally true that regions with low and stable electricity prices like Quebec, Manitoba and British Columbia do not have full retail access… There is evidence from the U.S. that the average retail price of electricity tends to be more volatile in regions with full retail markets."[21] The Government has also commented that retail access may expose BC Hydro ratepayers to the cost of stranded assets, the cost of which would be borne by a smaller rate base and has directed the Commission to not set rates that would result in direct or indirect provision of unbundled transmission service to retail customers in British Columbia unless BC Hydro brings forward an application to do so. [22, 23] BC Hydro has no plans to advance retail access at this time.

1.4.2 Does BC Hydro expect that interconnection with indigenous public utilities could have similar issues as those posed by retail access? Please explain.

RESPONSE:

Yes. Please refer to BC Hydro response to the following:

- **BCUC IR 1.1.4 for a discussion of BC Hydro's view of how costs and rates could increase;**
- **BCUC IR 1.2.1 for a discussion on stranded assets;**
- **BCUC IR 1.4.3 for a discussion regarding the impact on BC Hydro ratepayers relations due to BC Hydro's obligation to serve; and**

Below is a discussion regarding the potential need for the development of back-up services for wholesale customers using unbundled wheeling services.

A public utility, including a public utility owned by a First Nation, could be a wholesale customer of BC Hydro for transmission services under its OATT, and a

wholesale customer of third parties for energy supply. Such a utility would not be impacted by the provincial policy on retail access that applies to BC Hydro load customers.

With respect to such public utilities, BC Hydro notes the following:

- **A wholesale customer connected to the BC Hydro transmission system is an eligible customer under BC Hydro's OATT and would not be prohibited from using unbundled wheeling services to purchase its energy supply from an entity other than BC Hydro.**
- **BC Hydro's OATT ancillary services may require updating and augmentation should new wholesale OATT customers require back-up services related to their use of the BC Hydro transmission system. Currently, the OATT's ancillary services are only designed to deal with small variations which may occur within the scheduling hour. These ancillary services were not designed to provide continued service to back-up a load beyond the scheduling hour nor do these services take into consideration large variations which may occur if a transmission schedule to a load is curtailed.**
- **A wholesale customer connected to the BC Hydro distribution system is also not prohibited from using unbundled wheeling services; however, at this time, there is no unbundled wheeling service which has been developed for a wholesale customer connected to the BC Hydro distribution system nor have any ancillary services been developed to support and back-up an unbundled distribution wheeling service.**

4.0 Reference: Exhibit C2-2, BC Hydro Written Evidence page 13 and 14

The concept of retail access allows for a customer to utilize the electrical system of the electrical utility to which it is connected, to service its own load directly through the purchase of market energy or energy purchased from another seller(s). Retail access is not available to BC Hydro's load customers. Government has commented that "interest in retail access fluctuates with electricity market prices, with customers interested when open market prices are lower than local supply and not interested when market prices are higher than local supply. In a surplus situation, allowing retail access increases the amount of surplus energy that BC Hydro must export, possibly at a loss, increasing costs borne by ratepayers who do not or cannot opt for retail access… The prohibition of retail access can protect electricity consumers by providing price stability and reducing the duplication of costs that must be passed on to consumers (for example, duplicative systems of billing, customer service etc.). In Canada, it is generally true that regions with low and stable electricity prices like Quebec, Manitoba and British Columbia do not have full retail access… There is evidence from the U.S. that the average retail price of electricity tends to be more volatile in regions with full retail markets."[21] The Government has also commented that retail access may expose BC Hydro ratepayers to the cost of stranded assets, the cost of which would be borne by a smaller rate base and has directed the Commission to not set rates that would result in direct or indirect provision of unbundled transmission service to retail customers in British Columbia unless BC Hydro brings forward an application to do so.[22, 23] BC Hydro has no plans to advance retail access at this time.

1.4.2 Does BC Hydro expect that interconnection with indigenous public utilities could have similar issues as those posed by retail access? Please explain.

1.4.2.1 Would regulation by the BCUC resolve these issues?

RESPONSE:

Yes. Please also refer to BC Hydro response to CEC IR 1.4.2.

1.0 Reference: Exhibit C2-2, "3 BC Hydro's Mandate and Obligations", page 4, lines 2-7

BCH states:

"BC Hydro provides regulated electricity service to its customers through the ownership and operation of electricity infrastructure assets across British Columbia. Largely constructed in the 1960's, 1970's and 1980's, our assets consist of thirty hydroelectric and two natural gas fired generating stations, around 86,000 kilometers of transmission and distribution lines and about 300 substation, which we collectively refer to as the Integrated System."

1.1.1 Please confirm that the BCUC or predecessor did not regulate the development by BC Hydro of the WAC Bennett/Shrum, Peace Canyon, Mica, Revelstoke, Seven Mile and Kootenay Canal generating projects and associated transmission, and the northern cables to Vancouver Island.

RESPONSE:

BC Hydro confirms that prior to the UCA coming into effect, BC Hydro was not subject to public utility regulation. In September 1980, the UCA came into effect and was made applicable to BC Hydro, which meets the definition of a Public Utility in Section 1.

BCUC approvals for public utility capital projects are sought from the BCUC in accordance with section 45 (Certificate of Public Convenience and Necessity or CPCN) of the UCA. Under section 45 of the UCA, a public utility that is operating a public utility plant or system on September 11, 1980 is deemed to have received a CPCN, authorizing it to operate the plant of system, and to construct and operate extensions to the plant or system. Also under this section, the BCUC may order a Public Utility to seek a CPCN but this must take place no later than 30 days after the date of construction of an extension has begun.

BC Hydro has also sought, and continues to seek, acceptance of non-extension projects from the BCUC in accordance with section 44.2 (Expenditure Schedule). Under section 44.2 of the UCA, a public utility may also file with the BCUC an expenditures schedule, which after consideration, the BCUC must accept, reject, or accept a part of an expenditure schedule. BC Hydro's applications seeking acceptance of expenditure schedules per section 44.2 of the UCA have conformed to the information requirements for CPCN applications set out by the BCUC in its CPCN Guidelines.

Based on the effective date of the UCA of September 1980, the following is a table describing whether BCUC approvals were required for each of the facilities noted in the IR above.

WAC Bennett Dam/GM Shrum Generating Facility	**BCUC approval was not required for the construction of this facility. Construction commenced in November 1961 and reservoir filling began in December 1967. The first three units were in service on September 22, 1968, and all ten units were placed in service by February 12, 1980.** **In August 2009, pursuant to section 44.2 of the UCA, BC Hydro applied for and sought acceptance of expenditures related to the Replacement of Units 1 to 5 Turbines. Expenditures related to this project were publicly reviewed under a CPCN-like process and the BCUC issued its Decision on January 5, 2010. Refer to BCUC Order No. G-1-10 and accompanying Decision.** **In November 2015, pursuant to section 44.2 of the UCA, BC Hydro applied for and sought acceptance of expenditures related to the upgrading and replacement of the outer Rip Rap layer of WAC Bennett Dam. Expenditures for this project were publicly reviewed under a CPCN-like process and the BCUC issued its Decision on July 13, 2016. Refer to BCUC Order No. G-78-16 and accompanying Decision.**
Peace Canyon Dam and Generating Facility	**BCUC approval was not required for the construction of this facility. The first generating unit came into service on April 3, 1980, and all four units were in service by November 6, 1980.**
Mica Dam and Generating Facility	**BCUC approval was not required for the initial construction of this facility. Construction of the Dam was completed in 1973 with the Powerhouse added in 1977. Four units were installed as part of the original construction with the facility designed to accommodate two additional units.** **In August 2009, pursuant to section 44.2 of the UCA, BC Hydro applied for and sought acceptance of expenditures related to construction and installation of Gas Insulated Switchgear at Mica Dam. Expenditures related to this project were publicly reviewed under a CPCN-like process and the BCUC issued its Decision on March 16, 2010. Refer to BCUC Order No. G-38-10.** **Per section 7(1)(b) of the *Clean Energy Act*, construction of Mica Units 5 and 6 to install two additional turbines and related works at Mica is exempt from section 45 of the UCA.**

Revelstoke Dam and Generating Facility	**BCUC approval was not required for the initial construction of this facility. Construction of the Revelstoke facility began in 1978. Four units were installed as part of the original construction with the facility designed to accommodate two additional units.** **In 2007, BC Hydro applied to the BCUC per section 45 of the UCA for a CPCN to construct Revelstoke Unit 5. The BCUC issued a CPCN for the project on July 12, 2007 (refer to BCUC Order No. C-8-07 and accompanying Decision).** **Per section 7(1)(c) of the *Clean Energy Act*, construction of Revelstoke Unit 6 is subject to an exemption from section 45 of the UCA.**
Seven Mile Dam and Generating Facility	**BCUC approval was not required for the initial construction of this facility as construction was completed in 1979.**
Kootenay Canal Generating Station	**BCUC approval was not required for the initial construction of this facility as construction was completed in 1976.**
Northern Transmission Cables to Vancouver Island	**BCUC approval was not required for the installation of the Northern Transmission Cables to Vancouver Island, labelled 5L29 and 5L31. 5L31 cable was installed and went into service in 1979, and 5L29 entered service in 1983. Although this is after September 1980, BC Hydro assumes this project was in implementation prior to the effective date of the UCA, and as such had a deemed CPCN.**

1.0 Reference: Exhibit C2-2, "3 BC Hydro's Mandate and Obligations", page 4, lines 2-7

BCH states:

"BC Hydro provides regulated electricity service to its customers through the ownership and operation of electricity infrastructure assets across British Columbia. Largely constructed in the 1960's, 1970's and 1980's, our assets consist of thirty hydroelectric and two natural gas fired generating stations, around 86,000 kilometers of transmission and distribution lines and about 300 substation, which we collectively refer to as the Integrated System."

1.1.2 Please confirm that pursuant to Section 32 of the Hydro and Power Authority Act that: "… except as provide under this Act, the authority is not bound by any statute or statutory provision of British Columbia."

RESPONSE:

Please refer to BC Hydro's response to COLLECTIVE FIRST NATIONS IR 1.2.1.

1.0 Reference: Exhibit C2-2, "3 BC Hydro's Mandate and Obligations", page 4, lines 2-7

BCH states:

"BC Hydro provides regulated electricity service to its customers through the ownership and operation of electricity infrastructure assets across British Columbia. Largely constructed in the 1960's, 1970's and 1980's, our assets consist of thirty hydroelectric and two natural gas fired generating stations, around 86,000 kilometers of transmission and distribution lines and about 300 substation, which we collectively refer to as the Integrated System."

1.1.3 Please confirm that under section 35 of the Hydro and Power Authority Act, the Provincial Government has issued directives to BC Hydro regarding dividend payments from BC Hydro to this government.

RESPONSE:

Please refer to BC Hydro's response to COLLECTIVE FIRST NATIONS IR 1.2.1.

1.0 Reference: Exhibit C2-2, "3 BC Hydro's Mandate and Obligations", page 4, lines 2-7

BCH states:

"BC Hydro provides regulated electricity service to its customers through the ownership and operation of electricity infrastructure assets across British Columbia. Largely constructed in the 1960's, 1970's and 1980's, our assets consist of thirty hydroelectric and two natural gas fired generating stations, around 86,000 kilometers of transmission and distribution lines and about 300 substation, which we collectively refer to as the Integrated System."

1.1.4 Please confirm that pursuant to Section 3(1) of the Utilities Commission Act (B.C.) the Lieutenant Governor in Council has issued directives to the BCUC regarding the exercise by the BCUC of its powers and the performance of its duties with respect to BC Hydro.

RESPONSE:

Please refer to BC Hydro's response to COLLECTIVE FIRST NATIONS IR 1.2.1.

2.0 Reference: Exhibit C2-2-, "5.2 There are a number of advantages to retaining the UCA as the principal regulatory framework for the regulation of all Public Utilities in British Columbia", page 8, lines 7-13

"BC Hydro is of the view that is efficient and effective for the UCA to be retained as the principal regulatory framework for all Public Utilities Operating within British Columbia, including those indigenous utilities who meet the UCA definition of a Public Utility. **Having one set of rules and regulations for all Public Utilities** should minimize the potential for disagreements between Public Utilities and/or between Regulators, thereby minimizing harm to customers in the form of higher regulatory costs to be passed on to customers. (emphasis added)

Table 2-1 in BC Hydro's Fiscal 2020 to Fiscal 2021 Revenue Requirements Application to the BCUC (Exhibit B-1) is a 7 page table of directions to the BCUC, in relation to BC Hydro, that have been repealed or modified.

In Chapter 2 of the same application in footnote 62 on page 2-26 it says:

> [62] In Exhibit B-18 of the Fiscal 2017 to Fiscal F2019 Revenue Requirements Application, BC Hydro informed the BCUC that "OIC 101 adds as prescribed undertakings for the purpose of section 18 of the *Clean Energy Act* investments in infrastructure in Northeast British Columbia that primarily serve natural gas producers and processors (the new section 4(2) of the Greenhouse Gas Reduction (Clean Energy) Regulation). This will include BC Hydro's planned transmission project known as the Peace Region Electricity Supply (**PRES**) Project and accordingly, should we decide to proceed with PRES, BC Hydro will not be filing an application under section 45(5) of the *Utilities Commission Act* for a Certificate of Public Convenience and Necessity for the PRES Project."

In the transcript for the workshop that BC Hydro held on March 19, 2019 in relation to BC Hydro's Fiscal 2020 to Fiscal 2021 Revenue can be found the following:

Heritage contract inquiry with the Commission back in 2003, and subsequent revenue requirement applications. So rebuilding that understanding and confidence is a particular objective of mine.

I want to acknowledge that the Commission has been unable to effectively oversee our revenue requirements these past eight years, as the government effectively controlled rates through reviews and directions. And this also meant that there was little input from intervenors in the regulatory process. And I believe as a result, there has been a loss of trust between BC Hydro and Commissioners, and the Commission and intervenors on the other side. And as a result of that, we have a significant challenge to rebuild that trust, and rebuild that confidence, as well as our collective capacity to move through these complex processes.

To look at this history more optimistically, we have been here before, as we have returned to regulation after a long period of rates being frozen in the 1990s and the early 2000s. This is about the 20th proceeding at the Commission that I have personally participated in at my career. I have also been involved in a few projects and initiatives that would have benefited from such a proceeding.

So, I personally appreciate how valuable an

1.2.1 Given for example Section 3(1) of the Utilities Commission Act and the directives issued thereunder to the BCUC with respect to BC Hydro, including as evidenced by Table 2-1, the contents of footnote 62, the extract from the above transcript and sections 32 and 35 of the Hydro and Power Authority Act is it accurate to suggest that there is one set of rules and regulations for all Public Utilities or has been since BC Hydro first was put under the oversight of the BCUC?

RESPONSE:

BC Hydro confirms that pursuant to section 35 of the *Hydro and Power Authority Act*, the Lieutenant Governor in Council has issued directives to BC Hydro regarding dividend payments. The current directive to BC Hydro regarding dividend payments is Heritage Special Directive No. HC1, Order-in-Council 1125/2003, as amended.

BC Hydro confirms that pursuant to section 3 of the UCA the Lieutenant Governor in Council has issued directions to the BCUC regarding the exercise of its powers with respect to BC Hydro. A current example of such a direction is Direction No. 8, Order-in-Council 051/2019.

BC Hydro confirms that pursuant to section 32 of the *Hydro and Power Authority Act*, it is generally not subject to provincial statutes (although there are a number of exceptions to the general exemption, including notably the UCA).

BC Hydro has considered the foregoing, and the evidence from BC Hydro's Fiscal 2020 to Fiscal 2021 Revenue Requirements Application included in the preamble of this information request. Despite this information, BC Hydro continues to believe that there is one over-arching regulatory framework for public utilities in B.C. (other than those, like municipalities, that are excluded by definition); that regulatory framework is established by the UCA.

The nature of regulatory legislation generally is to account for the unique circumstances of entities that are subject to it. The UCA does that by allowing for *ad hoc* exemptions, and by providing for government to direct the BCUC with respect to issues that are of provincial importance. The CEA provides for further exceptions to the default application of the UCA. In this regard it is important to note that exemptions and government directions are not solely in regard to BC Hydro. There are dozens of entities in British Columbia that are public utilities within the meaning of the UCA that have been exempted by *ad hoc* orders, and various Fortis companies have also been the subject of directions, and regulations under the CEA, that result in variances from the default application of the UCA.

BC Hydro acknowledges that the words in its evidence that there is "only one set of rules and regulations for all public utilities" if they are read literally and strictly, in that sense is not accurate.

3.0 Reference: Exhibit C2-2-, "5.2 There are a number of advantages to retaining the UCA as the principal regulatory framework for the regulation of all Public Utilities in British Columbia", page 9, lines 3-8

"Where a potential BC Hydro customer is itself a Public Utility, having the Public Utility regulated under a different regulatory framework (i.e., - regulated under a different set of rules than the UCA and/or administered by a different regulator than the Commission) has the potential to create uncertainty and duplication, impact BC Hydro's ongoing operations and increase costs for existing and future ratepayers."

1.3.1 Would BC Hydro's interconnection requirements, Wholesale Tariff or Open Access Transmission Tariff be adversely and materially impacted if indigenous utilities were under the oversight of First Nations? Would material uncertainty and duplication be created?

RESPONSE:

This IR asks two separate questions. The following is BC Hydro's response.

Question 1 Would BC Hydro's interconnection requirements, Wholesale Tariff or Open Access Transmission Tariff be adversely and materially impacted if indigenous utilities were under the oversight of First Nations?

Provided the BCUC retains jurisdiction over BC Hydro, none of BC Hydro's interconnection requirements (transmission voltage) or Open Access Transmission Tariff (OATT) would be impacted if Indigenous utilities were established under a separate regulatory regime.

Other aspects of BC Hydro's Electric Tariff (for distribution service) including for example, BC Hydro's Extension policy could be impacted if Indigenous utilities were established under a separate regulatory regime.

Question 2 Would material uncertainty and duplication be created [if indigenous utilities were under the oversight of First Nations]?

Please refer to BC Hydro's response to BCUC IR 1.1.1.

3.0 Reference: Exhibit C2-2-, "5.2 There are a number of advantages to retaining the UCA as the principal regulatory framework for the regulation of all Public Utilities in British Columbia", page 9, lines 3-8

"Where a potential BC Hydro customer is itself a Public Utility, having the Public Utility regulated under a different regulatory framework (i.e., - regulated under a different set of rules than the UCA and/or administered by a different regulator than the Commission) has the potential to create uncertainty and duplication, impact BC Hydro's ongoing operations and increase costs for existing and future ratepayers."

1.3.2 Is there one regulator for all public electric utilities in Canada and the U.S.?

RESPONSE:

Multiple regulatory bodies are responsible for the oversight of electrical utilities in Canada and the United States (U.S.). In Canada, provincial public utility regulators operate within regulatory frameworks similar to that in B.C. under the UCA. The federal energy regulator, the Canadian Energy Regulator (CER) (formerly known as the National Energy Board), has regulatory oversight over interprovincial or international energy matters (e.g., the export of electricity from Canada and the certification of interprovincial and international power lines).

The U.S. shares some similarities with the Canadian regulatory framework with the Federal Energy Regulatory Commission (FERC) responsible for matters related to electricity markets and transfers crossing state and/or international boundaries, while state utility commissions are responsible for within-state retail electric service. It should be noted that FERC's responsibilities are more expansive than the CER and includes certain responsibilities that would fall under provincial regulators in Canada, such as licensing and safety for hydroelectric facilities.

BC Hydro's bulk electric system is interconnected with both Alberta and Washington State. While the vast majority of BC Hydro's operations fall exclusively under BCUC jurisdiction, BC Hydro notes the following:

- **BC Hydro is subject to CER regulation relating to electricity exports from Canada and international powerlines as well as reliability standards compliance.**

- **While BC Hydro is not subject to the jurisdiction of FERC, in order for BC Hydro's wholly owned subsidiary, Powerex, to receive authorization to trade wholesale electricity at market based rates, FERC looks for a demonstration of comparable access to BC Hydro's transmission system using "a consistent with or superior to" standard for determining comparability. Consequently, BC Hydro chose to model its Open Access Transmission Tariff (OATT) for accessing its high voltage transmission system after the FERC pro forma tariff. Importantly, the BC Hydro Open Access Transmission Tariff is submitted to the BCUC for approval, not to FERC. Powerex submits the BCUC approved versions of the OATT to FERC to demonstrate that its affiliate, BC Hydro, provides comparable access. BC Hydro does not view this as an adverse impact on its operations and it has been beneficial to ratepayers.**

While BC Hydro is only subject to multiple regulators in a small number of cases, BC Hydro has observed regulatory duplication in the following areas:

- **The BCUC has oversight over BC Hydro's CPCNs and capital expenditures. However, where infrastructure is crossing an international boundary, BC Hydro must seek approval from the CER. While this is not a common occurrence, the example is relevant to a scenario where an Indigenous utility's operations or a geographic territory such as reserve lands or treaty settlement lands are subject to oversight by a separate regulator. This multiple regulator arrangement has the potential to create inconsistent regulatory decisions and duplication of regulatory processes.**

- **The CER currently has a duplicative enforcement jurisdiction in relation to the BCUC in B.C. and other provincial regulators in Canada regarding compliance with reliability standards that potentially impact the reliability and security of transmission interconnections with the U.S. This duplication carries the potential for inconsistent approaches for enforcement due to differing interpretations of standard requirements and expectations for best reliability and security practices. This can result in inconsistent compliance findings at audits which can lead to the potential duplication of financial penalties. Alternatively, this can result in inconsistent recommendations unnecessary actions, or actions with questionable benefits to transmission interconnections reliability or security. This can lead to potential adverse impacts to ratepayers in relation to cost recovery efforts on the part of the utility.**

- **For additional examples please refer to BC Hydro's response to BCUC IR 1.1.3.**

3.0 Reference: Exhibit C2-2-, "5.2 There are a number of advantages to retaining the UCA as the principal regulatory framework for the regulation of all Public Utilities in British Columbia", page 9, lines 3-8

"Where a potential BC Hydro customer is itself a Public Utility, having the Public Utility regulated under a different regulatory framework (i.e., - regulated under a different set of rules than the UCA and/or administered by a different regulator than the Commission) has the potential to create uncertainty and duplication, impact BC Hydro's ongoing operations and increase costs for existing and future ratepayers."

1.3.3 Is BC Hydro's system interconnected directly or indirectly to public utility electric systems in Canada and the United States?

RESPONSE:

Please refer to BC Hydro's response to COLLECTIVE FIRST NATIONS IR 1.3.2.

3.0 Reference: Exhibit C2-2-, "5.2 There are a number of advantages to retaining the UCA as the principal regulatory framework for the regulation of all Public Utilities in British Columbia", page 9, lines 3-8

"Where a potential BC Hydro customer is itself a Public Utility, having the Public Utility regulated under a different regulatory framework (i.e., - regulated under a different set of rules than the UCA and/or administered by a different regulator than the Commission) has the potential to create uncertainty and duplication, impact BC Hydro's ongoing operations and increase costs for existing and future ratepayers."

1.3.4 Are BC Hydro's ongoing operations and costs adversely and materially impacted by the regulation of these public utility electric systems in Canada and the U.S. by regulators other than the BCUC? Is material uncertainty and duplication created?

RESPONSE:

Please refer to BC Hydro's response to COLLECTIVE FIRST NATIONS IR 1.3.2.

3.0 Reference: Exhibit C2-2-, "5.2 There are a number of advantages to retaining the UCA as the principal regulatory framework for the regulation of all Public Utilities in British Columbia", page 9, lines 3-8

"Where a potential BC Hydro customer is itself a Public Utility, having the Public Utility regulated under a different regulatory framework (i.e., - regulated under a different set of rules than the UCA and/or administered by a different regulator than the Commission) has the potential to create uncertainty and duplication, impact BC Hydro's ongoing operations and increase costs for existing and future ratepayers."

1.3.5 Are these other systems adversely and materially impacted by the BCUC's regulation, as it may be, of BC Hydro?

RESPONSE:

Please refer to BC Hydro's response to COLLECTIVE FIRST NATIONS IR 1.3.2.

3.0 Reference: Exhibit C2-2-, "5.2 There are a number of advantages to retaining the UCA as the principal regulatory framework for the regulation of all Public Utilities in British Columbia", page 9, lines 3-8

"Where a potential BC Hydro customer is itself a Public Utility, having the Public Utility regulated under a different regulatory framework (i.e., - regulated under a different set of rules than the UCA and/or administered by a different regulator than the Commission) has the potential to create uncertainty and duplication, impact BC Hydro's ongoing operations and increase costs for existing and future ratepayers."

1.3.6 Does the U.S. Federal Energy Regulatory Commission's regulation of public utilities and others in the U.S. electricity markets such as Powerex, a wholly owned subsidiary of BC Hydro, have an adverse and material impact on BC Hydro's ongoing operations and increase costs for existing and future ratepayers?

RESPONSE:

Please refer to BC Hydro's response to COLLECTIVE FIRST NATIONS IR 1.3.2.

4.0 Reference: Exhibit C2-2, Miscellaneous

1.4.1 When a third party e.g. a First Nation, develops a greenfield residential, commercial or industrial real estate project on reserve lands or otherwise, does the third party pay the cost of the associated electrical infrastructure or BC Hydro?

RESPONSE:

This response also responds to COLLECTIVE FIRST NATIONS IRS 1.4.2 and 1.4.3.

COLLECTIVE FIRST NATIONS IR 1.4.2 asks "Does BC Hydro pay the third party any monies when the residential, commercial or industrial electrical infrastructure is transferred to BC Hydro?" and COLLECTIVE FIRST NATIONS IR 1.4.3 asks "Is the standard to which this electrical infrastructure is built in accordance with BC Hydro's interconnection requirements? Please explain."

When a third-party develops a project that requires new or increased electrical service, an Extension of the BC Hydro distribution system may be required. In accordance with section 8.3 of the Electric Tariff or Tariff Supplement No. 5, the third-party must pay the estimated construction cost of the extension, less the maximum contribution that BC Hydro provides in accordance with section 8.3. The estimated construction costs generally do not include system reinforcements. System reinforcement costs include additions, alterations to BC Hydro's existing facilities to provide new or increased service. BC Hydro ratepayers generally bear the cost of system reinforcements.

As of 2019, such third-parties have made the following contribution to the construction cost of BC Hydro's transmission and distribution assets: ~4.1 per cent of the total transmission asset value; and ~24.2 per cent of the total distribution asset value.

BC Hydro's tariff and Tariff Supplement No. 5 can be found at the following link: https://www.bchydro.com/about/planning_regulatory/tariff_filings/electric-tariff.html.

In a distribution context under BC Hydro's Electric Tariff, when the Extension fee has been paid by the third-party, BC Hydro will construct the Extension. Upon completion of the work, BC Hydro will assume ownership, operation and maintenance of the facilities.

In cases where BC Hydro constructs the Extension, the third-party pays the Extension Fee in cash.

In cases where the third-party constructs all or a portion of the Extension in greenfield developments, BC Hydro will provide a credit towards the Extension Fee based on the estimated value of the scope of work that the third-party will be completing. Under the conditions described in section 8.11 of the BC Hydro Electric Tariff, BC Hydro may assume ownership and responsibility of the components of the distribution facilities on private property.

As the cost of the Extension, less BC Hydro's contribution, is allocated to the third-party, BC Hydro does not pay monies (in excess of BC Hydro's contribution) when an asset constructed for an Extension is transferred to BC Hydro.

In accordance with section 8.2 of the Electric Tariff, any distribution infrastructure associated with an Extension must comply with BC Hydro's distribution standards. Customer owned equipment must satisfy the local electrical inspection authority (e.g., Technical Safety BC) and any customer owned equipment used at the point of delivery must also meet BC Hydro's requirements for connection to BC Hydro's distribution system.

4.0 Reference: Exhibit C2-2, Miscellaneous

1.4.2 Does BC Hydro pay the third party any monies when the residential, commercial or industrial electrical infrastructure is transferred to BC Hydro?

RESPONSE:

Please refer to BC Hydro's response to COLLECTIVE FIRST NATIONS IR 1.4.1.

4.0 Reference: Exhibit C2-2, Miscellaneous

1.4.3 Is the standard to which this electrical infrastructure is built in accordance with BC Hydro's interconnection requirements? Please explain.

RESPONSE:

Please refer to BC Hydro's response to COLLECTIVE FIRST NATIONS IR 1.4.1.

1.0 A. DEFINITIONS

Reference: THE DEFINITION OF "INDIGENOUS UTILITIES"
Exhibit #C2-2 Appendix A. p. 1
Public Utility and Village

The Terms of Reference define "indigenous utility' as follows: "a public utility that is owned or operated in full or in part, by an indigenous nation".

LOCAL GOVERNMENT ACT, Part 2 — Incorporation of Municipalities and Regional Districts,

Division 4 — Specific Powers in Relation to Municipal Letters Patent,
Section 26 - Letters patent for reserve village: additional powers

26 (1) Letters patent incorporating a village under section 9 (1) *[incorporation of reserve residents as village]* may

(a) include exceptions from statutory provisions,

(b) specify the effective period or time for an exception, and

(c) provide for restriction, modification or cancellation by the Lieutenant Governor in Council of an exception or its effective period.

(2)The letters patent or agreement referred to in section 9 (1) may exempt the municipality or owners or residents from a provision of this or another Act and may include a provision considered desirable whether or not it is consistent with any Act.

1.1.1 Would the word "village" from the LGA inserted into the definition of public utility in the UCA along with municipality and regional district be sufficient to create a level playing field that protects not only the customers but all utilities in the province? See excerpt below:

"public utility" means a person, or the person's lessee, trustee, receiver or liquidator, who owns or operates in British Columbia, equipment or facilities for

…

but does not include

(c) a municipality or regional district in respect of services provided by the municipality or regional district ***or village*** within its own boundaries,

…

RESPONSE:

In light of the complexity of the legislative framework (UCA and *Local Government Act*), BC Hydro is unwilling to comment on the proposed amendment to the UCA.

BC Hydro does agree that an appropriate amendment to the UCA could put First Nation Band Councils (in respect of reserve lands), or other First Nation governments (in respect of treaty settlement lands owned by the First Nations) on the same footing as municipalities in relation to the UCA. However, BC Hydro doesn't necessarily believe that such an amendment would "create a level playing field that protects not only the customers but all utilities in the province". Please refer to BC Hydro's response to BCUC IR 1.1.1.

1.0 A. DEFINITIONS

Reference: THE DEFINITION OF "INDIGENOUS UTILITIES"
Exhibit #C2-2 Appendix A. p. 1
Public Utility and Village

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(b) specify the effective period or time for an exception, and

(c) provide for restriction, modification or cancellation by the Lieutenant Governor in Council of an exception or its effective period.

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1.1.1 Would the word "village" from the LGA inserted into the definition of public utility in the UCA along with municipality and regional district be sufficient to create a level playing field that protects not only the customers but all utilities in the province? See excerpt below:

"public utility" means a person, or the person's lessee, trustee, receiver or liquidator, who owns or operates in British Columbia, equipment or facilities for

…

but does not include

(c) a municipality or regional district in respect of services provided by the municipality or regional district ***or village*** within its own boundaries,

…

1.1.1.1 If not, why not? Please elaborate.

RESPONSE:

Please refer to BC Hydro's response to FLINTOFF IR 1.1.1.

2.0 B. THE REMOTE COMMUNITIES PROGRAM:

Reference: The Remote Community Electrification Program
BC HYDRO'S INDIGENOUS ASSETS AND LIABILITIES

The Remote Community Electrification Program was established by BC Hydro in 2005 to help remote communities receive off-grid electricity service from BC Hydro. Often, this means a switch from diesel generation to our clean electricity.

1.2.1 Provide the value of the BC Hydro assets installed for or on Indigenous Nations district or treaty lands.

RESPONSE:

BC Hydro understands that this IR is seeking information on the value of BC Hydro assets located on or used to serve Indigenous Customers located in geographic areas associated with Indigenous Nations (e.g., – reserve lands, treaty area, treaty settlement Lands).

Information on the net book value of BC Hydro's assets is derived from its Asset Registry. However, this system does not contain an identifier to list asset values on reserve or on treaty settlement lands. While BC Hydro does have a Geographic Information System (GIS) which allows utility assets to be identified at specific geographic locations, this system is not sufficiently integrated with BC Hydro's Asset Registry to easily provide the information requested in this IR.

BC Hydro's GIS system has identified 180 different First Nations who have one or more distinct reserves and whose members are served by BC Hydro. To provide the requested information, a manual analysis would need to be undertaken for each reserve of each First Nation. Given the resources required to complete this task, BC Hydro is unable to provide the requested information within the timeframe permitted.

However, to provide an indication of the extent to which BC Hydro has assets on reserve, BC Hydro was able to extract the following approximate asset counts from its GIS and customer information systems.

Asset Category	Approximate Count of BC Hydro Assets
Customer Meters	**32,800**
Street Lights	**4,700**
Distribution Poles	**25,200**
Distribution Transformers (Overhead)	**7,100**
Distribution Transformers (Underground)	**1,200**

Please note that the above list is provided as an indication of some common assets located on reserve lands and does not represent a comprehensive list.

2.0 B. THE REMOTE COMMUNITIES PROGRAM:

Reference: The Remote Community Electrification Program
BC HYDRO'S INDIGENOUS ASSETS AND LIABILITIES

The Remote Community Electrification Program was established by BC Hydro in 2005 to help remote communities receive off-grid electricity service from BC Hydro. Often, this means a switch from diesel generation to our clean electricity.

1.2.2 Provide the annual operating costs for these assets above.

RESPONSE:

BC Hydro understands this IR to be requesting the annual operating costs associated with those assets identified in BC Hydro's response to FLINTOFF IR 1.2.1. Given the resource intensity of the analysis required to address this IR, BC Hydro is unable to provide this information at this time.

2.0 B. THE REMOTE COMMUNITIES PROGRAM:

Reference: The Remote Community Electrification Program
BC HYDRO'S INDIGENOUS ASSETS AND LIABILITIES

The Remote Community Electrification Program was established by BC Hydro in 2005 to help remote communities receive off-grid electricity service from BC Hydro. Often, this means a switch from diesel generation to our clean electricity.

1.2.3 Provide the value of any stranded assets as a result of the Remote Community Electrification Program assets installed for or on Indigenous Nations.

RESPONSE:

BC Hydro did not own any of the assets that were replaced in the 11 communities who received electricity service through the Remote Community Electrification Program. As a result, no BC Hydro assets were stranded.

2.0 B. THE REMOTE COMMUNITIES PROGRAM:

Reference: The Remote Community Electrification Program
BC HYDRO'S INDIGENOUS ASSETS AND LIABILITIES

The Remote Community Electrification Program was established by BC Hydro in 2005 to help remote communities receive off-grid electricity service from BC Hydro. Often, this means a switch from diesel generation to our clean electricity.

1.2.4 How many communities were in the RCE Program and how many communities where switched from diesel to clean energy?

RESPONSE:

There were 11 communities who received electricity service through the RCE Program. Four of these communities were switched from diesel generation to clean energy as a result of interconnection to BC Hydro's Integrated System. Concurrent with the RCE Program, two non-integrated communities reduced diesel consumption as a result of the construction of renewable resources.

3.0 C. EPAs AND SOPs

Reference: EPAs and SOPs
Transfer and/or Cancellation of SOP/EPA

Micro-SOP for First Nations and Communities, Program updates, February 14, 2019

As a result of government's comprehensive review of BC Hydro, a number of measures to lower our costs to keep rates low are being implemented, including reducing the amount of future energy purchases from independent power producers.

Effective immediately, our Standing Offer and Micro Standing Offer Program are suspended indefinitely, and we will not accept new applications or award any new electricity purchase agreements, with the exception of the five First Nations clean energy projects announced on March 14, 2018. Any applications received to date will not be advanced and BC Hydro will no longer maintain the SOP queue.

1.3.1 What is the amount of energy (kW.h) initially purchased from the Indigenous Nations?

RESPONSE:

BC Hydro notes that as per the BCUC's Letter of May 10, 2019 (Exhibit A-5) the Standing Offer Program and Micro-SOP are outside the scope of this inquiry. However, in the interest of transparency, we provide the following information as it is readily available.

On February 14, 2019, the Standing Offer Program (including the Micro-SOP) was indefinitely suspended, with the exception of five First Nations' clean energy projects that are related to Impact Benefit Agreements with BC Hydro and/or are SOP projects that are mature and have significant First Nations involvement. These projects represent approximately 128 GWh/year, based on information provided by the proponents.

As of August 31, 2019, BC Hydro has executed EPAs for three of these five First Nations' clean energy projects. The two remaining potential EPAs are yet to be completed. To the best of BC Hydro's knowledge, none of these projects have reassigned ownership to a non-Indigenous entity.

At the time of the indefinite suspension of the Standing Offer Program, energy prices by region were as provided in the table below. These prices are as included

in the Standing Offer Program Rules, Version 3.2 (April 2016) and have been updated to 2019$.

	2019 Prices ($/MWh)
Vancouver Island	**117.87**
Lower Mainland	**119.53**
Kelly/Nicola	**111.84**
Central Interior	**114.43**
Peace Region	**109.35**
North Coast	**110.86**
South Interior	**114.11**
East Kootenay	**117.80**

BC Hydro declines to speculate on the nature of a hypothetical future electricity procurement process.

3.0 C. EPAs AND SOPs

Reference: EPAs and SOPs
Transfer and/or Cancellation of SOP/EPA

Micro-SOP for First Nations and Communities, Program updates, February 14, 2019

As a result of government's comprehensive review of BC Hydro, a number of measures to lower our costs to keep rates low are being implemented, including reducing the amount of future energy purchases from independent power producers.

Effective immediately, our Standing Offer and Micro Standing Offer Program are suspended indefinitely, and we will not accept new applications or award any new electricity purchase agreements, with the exception of the five First Nations clean energy projects announced on March 14, 2018. Any applications received to date will not be advanced and BC Hydro will no longer maintain the SOP queue.

1.3.2 What is the total initial purchase price of the SOP/EPA contracts for the Indigenous Nations?

RESPONSE:

Please refer to BC Hydro's response to FLINTOFF IR 1.3.1.

3.0 C. EPAs AND SOPs

Reference: EPAs and SOPs
Transfer and/or Cancellation of SOP/EPA

Micro-SOP for First Nations and Communities, Program updates, February 14, 2019

As a result of government's comprehensive review of BC Hydro, a number of measures to lower our costs to keep rates low are being implemented, including reducing the amount of future energy purchases from independent power producers.

Effective immediately, our Standing Offer and Micro Standing Offer Program are suspended indefinitely, and we will not accept new applications or award any new electricity purchase agreements, with the exception of the five First Nations clean energy projects announced on March 14, 2018. Any applications received to date will not be advanced and BC Hydro will no longer maintain the SOP queue.

1.3.3 Of these SOP/EPA contracts, how many of these have been reassigned to non-indigenous entities and what is the value of those contracts that have been transferred?

RESPONSE:

Please refer to BC Hydro's response to FLINTOFF IR 1.3.1.

3.0 C. EPAs AND SOPs

Reference: EPAs and SOPs
Transfer and/or Cancellation of SOP/EPA

Micro-SOP for First Nations and Communities, Program updates, February 14, 2019

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1.3.4 Of these SOP/EPA contracts, how many of these have been cancelled and what is the value of those contracts that have been cancelled?

RESPONSE:

Please refer to BC Hydro's response to FLINTOFF IR 1.3.1.

3.0 C. EPAs AND SOPs

Reference: EPAs and SOPs
Transfer and/or Cancellation of SOP/EPA

Micro-SOP for First Nations and Communities, Program updates, February 14, 2019

As a result of government's comprehensive review of BC Hydro, a number of measures to lower our costs to keep rates low are being implemented, including reducing the amount of future energy purchases from independent power producers.

Effective immediately, our Standing Offer and Micro Standing Offer Program are suspended indefinitely, and we will not accept new applications or award any new electricity purchase agreements, with the exception of the five First Nations clean energy projects announced on March 14, 2018. Any applications received to date will not be advanced and BC Hydro will no longer maintain the SOP queue.

1.3.5 Should the Indigenous Nations be afforded a priority when BC Hydro continues to purchase (clean) energy at some time in the future?

RESPONSE:

Please refer to BC Hydro's response to FLINTOFF IR 1.3.1.

1.0 Reference: Exhibit C2-2, Section 2.1, p. 2, lines 20-25
Inquiry Terms of Reference
Exhibit C2-2, Section 5.2, p. 8, lines 20-23
There are a number of advantages to retaining the *UCA* as the principal regulatory framework for the regulation of all Public Utilities in British Columbia

On page 2, lines 20-25, BC Hydro states:

In our view, public interest concerns include such things as: 1) the consideration of higher costs for the remaining customers of an existing Public Utility caused by the stranding of assets and/or the erosion of customer base where a new Public Utility is seeking to build infrastructure or otherwise provide services where another utility already operates, 2) maintaining reliability standards where a new Public Utility interconnects to the BC Hydro system, and 3) providing for rates, terms and conditions that reflect the nature of the service purchased by Public Utilities.

On page 8, line 20-23

It also promotes the appropriate allocation of costs and the efficient development of utility infrastructure between Public Utilities, thereby reducing the risk that one or more of a Public Utility's infrastructure assets becomes impaired or no longer used and useful (stranded asset risk). This is particularly relevant to BC Hydro.

1.1.1 Would BC Hydro agree or disagree that, as Indigenous Nations acquire control over their traditional lands as governing entities, the Commission is required to consider the Indigenous government's policy objectives, in addition to those of the Government of British Columbia?

RESPONSE:

It would depend on the wording of the UCA at the time.

1.0 Reference: Exhibit C2-2, Section 2.1, p. 2, lines 20-25
Inquiry Terms of Reference
Exhibit C2-2, Section 5.2, p. 8, lines 20-23
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On page 8, line 20-23

It also promotes the appropriate allocation of costs and the efficient development of utility infrastructure between Public Utilities, thereby reducing the risk that one or more of a Public Utility's infrastructure assets becomes impaired or no longer used and useful (stranded asset risk). This is particularly relevant to BC Hydro.

1.1.2 The use of different regulatory bodies could potentially improve BC Hydro's assets. If the regional infrastructure is improved by the use of different regulatory bodies, then BC Hydro's assets could be utilized more efficiently, and increase grid reliability, thereby keeping with BC Hydro's underlying mandate. If BC Hydro's assets are not impaired and the infrastructure and reliability of the grid system overall is improved, please explain how BC Hydro's opinion about the use of different regulatory bodies would change.

RESPONSE:

Please refer to COLLECTIVE FIRST NATIONS IR 1.3.2 for discussion on issues with different regulatory bodies.

Please refer to BC Hydro's response to BCUC IRs 1.1.1, 1.1.1.1 and 1.1.3 for a discussion of the potential increased cost impacts and uncertainty resulting from separate regulators.

2.0 Reference: Exhibit C2-2, Section 3, p. 4, lines 16-20
BC Hydro's Mandate and Obligations
Exhibit C2-2, Section 5.1, p. 7, lines 22-23
What is the *Utilities Commission Act* and what does it cover?

On page 4, BC Hydro states:

…articulated the Province's energy objectives to include ensuring that BC Hydro's ratepayers (customers) receive the benefits of the heritage assets, and ensuring that BC Hydro's rates remain among the most competitive of rates charged by public utilities in North America.

On page 7, line 22-23, BC Hydro states:

As well, the UCA requires, in certain circumstances, the Commission to consider a number of government policy objectives, which are set out in Section 2 of the CEA and are referred to as "British Columbia's Energy Objectives".

1.2.1 Why does increased supply infer sub scale – export markets?

RESPONSE:

BC Hydro has interpreted this question to be asking why increased supply within B.C. (such as through new IPP resources) leads to increased energy exports from B.C. at low market prices.

Please refer to BC Hydro's response to BCUC IR 1.8.2 for a discussion of the conditions under which additional supply may lead to additional market exports at potential economic cost to ratepayers.

2.0 Reference: Exhibit C2-2, Section 3, p. 4, lines 16-20
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1.2.2 If, as BC Hydro suggests on p. 4 line 20 "rates remain among the most competitive of rates charged by public utilities in North America", increased internal supply does not preclude realization of this benefit?

RESPONSE:

BC Hydro understands the question to be asking whether additional energy supply from Independent Power Producers can impact BC Hydro rates. BC Hydro confirms that energy supply from Independent Power Producers can impact BC Hydro rates.

The cost of energy procured from Independent Power Producers was examined in the B.C. Government Comprehensive Review of BC Hydro Phase 1 Report.[1] As noted in section 4.2.2 of the report, "The cost of energy procured from Independent Power Producers is now one of BC Hydro's biggest cost drivers and these costs will be recovered from ratepayers. Though BC Hydro has not conducted competitive calls for power since 2011, it is projected to have an energy surplus into the 2030s."

[1] https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/electricity-alternative-energy/electricity/bc-hydro-review/final_report_desktop_bc_hydro_review_v04_feb12_237pm-r2.pdf.

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On page 7, line 22-23, BC Hydro states:

As well, the UCA requires, in certain circumstances, the Commission to consider a number of government policy objectives, which are set out in Section 2 of the CEA and are referred to as "British Columbia's Energy Objectives".

1.2.3 Can BC Hydro articulate why it has excluded from its discussion of public interest the benefits that would accrue from lower prices that could be available to ratepayers of new Public Utilities?

RESPONSE:

Electricity rates for all Public Utility customers is one of a number of public interest considerations that must be considered.

BC Hydro expects that the provision of electric utility services by smaller public utilities would not benefit from the economies of scale that BC Hydro enjoys. As a large, vertically integrated utility, BC Hydro's customer's benefits from lower rates in part because fixed costs, such as costs related to billing and vegetation management, are spread across a large customer base. Smaller utilities would not have this economy of scale advantage and as a result electricity rates may be higher than they otherwise would be if service were provided by a larger utility.

To illustrate, please refer to Hydro Quebec's annual comparison of electricity prices,[1] which show that the lowest average electricity price regions are those that are served by large vertically integrated utilities (Quebec, Manitoba, B.C.).

BC Hydro also notes that Ontario has been undergoing to process of consolidating its many local electricity distribution utilities in an effort to gain economies of scale and reduce costs to rate payers.[2]

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[1] **Refer to Hydro Quebec price comparison: http://www.hydroquebec.com/residential/customer-space/rates/comparison-electricity-prices.html.**

[2] **Refer to Recommendations 12 and 13 of the Ontario Ministry of Finance Drummond Report: https://www.fin.gov.on.ca/en/reformcommission/chapters/ch12.html#ch12-c.**

2.0 Reference: Exhibit C2-2, Section 3, p. 4, lines 16-20
BC Hydro's Mandate and Obligations
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On page 7, line 22-23, BC Hydro states:

As well, the UCA requires, in certain circumstances, the Commission to consider a number of government policy objectives, which are set out in Section 2 of the CEA and are referred to as "British Columbia's Energy Objectives".

1.2.4 Can BC Hydro provide a more detailed explanation of how they arrive at the conclusion that higher costs for the remaining customers would result from the erosion of their customer base? Please articulate all underlying assumptions, numerical or otherwise.

RESPONSE:

Please refer to BC Hydro's response to BCUC IR 1.2.1 for discussion of how erosion of BC Hydro's customer base could result in higher costs for remaining customers.

2.0 Reference: Exhibit C2-2, Section 3, p. 4, lines 16-20
BC Hydro's Mandate and Obligations
Exhibit C2-2, Section 5.1, p. 7, lines 22-23
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On page 7, line 22-23, BC Hydro states:

As well, the UCA requires, in certain circumstances, the Commission to consider a number of government policy objectives, which are set out in Section 2 of the CEA and are referred to as "British Columbia's Energy Objectives".

1.2.5 Can BC Hydro provide a fulsome definition of what they consider to be in the public interest?

RESPONSE:

The expression "public interest", and similar terms, have different meanings in different contexts.

At the highest level, the "public interest" is determined by government when, for example, it undertakes initiatives, enacts legislation, or provides express policy direction. For example, this inquiry is in the public interest of British Columbians because it has been established by the Lieutenant Governor in Council, an arm of the British Columbia Government.

The BCUC and other regulatory bodies serve the public interest by lawfully exercising their powers and responsibilities in accordance with the legislations established for them. For example, the BCUC serves the public interest of British Columbians when it establishes rates and terms of utility service in accordance with the requirements of the UCA.

The BCUC has a number of powers and responsibilities, and in some cases the exercise of powers and responsibilities is conditional upon an express public interest determination. For example, an "energy supply contract" may be declared unenforceable by the BCUC only if it concludes that the contract is not in the public interest, per UCA sub-sections 71(3) and 71(2).

In this latter context, the factors that relate to the public interest also vary depending on context. For example, environmental considerations are of no relevance to the BCUC's exercise of powers and responsibilities relating to the public interest of reliability standards under section 125.2 of the UCA, but can have some significant relevance in the context of an application for a "certificate of public convenience and necessity" under section 45 of the UCA.

When BC Hydro refers to the "public interest" it generally uses the expression in relation to the legislative framework governing the context. In contrast, it doesn't generally use the expression "public interest" in a generic way to refer to potentially desirable public policy outcomes unrelated to BC Hydro or that framework. For example, the "lower prices… available to ratepayers of new Public Utilities", referred to in KGI IR 1.2.3, is not a public interest objective from BC Hydro's perspective because the focus on "new Public Utilities" is not evident in the legislative framework; however, BC Hydro would readily agree that lower prices for service of comparable quality is a public interest objective because that concept is evident throughout the UCA and related enactments.

2.0 Reference: Exhibit C2-2, Section 3, p. 4, lines 16-20
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As well, the UCA requires, in certain circumstances, the Commission to consider a number of government policy objectives, which are set out in Section 2 of the CEA and are referred to as "British Columbia's Energy Objectives".

1.2.6 Can BC Hydro provide a perspective on the marginal cost (dollar value) of 1 MWh, generated by their dams?

RESPONSE:

Generation from BC Hydro facilities will have a marginal cost associated with water rentals paid to Government. Marginal water rental rates for BC Hydro for 2019 are $6.546/MWh.

For reference, the average cost of generation from BC Hydro's heritage assets inclusive of water rentals as well as operating and capital costs was approximately $31/MWh in Fiscal 2017, based on data from BC Hydro's F2017 Fully Allocated Cost of Service (FACOS) Study.[1]

[1] **Link to regulatory filing: https://www.bchydro.com/content/dam/BCHydro/customer-portal/documents/corporate/regulatory-planning-documents/regulatory-filings/reports/2019-02-14-facos-f2017-ff.pdf.**

3.0 Reference: Exhibit C2-2, Section 5.2, p. 9, lines 12-19
There are a number of advantages to retaining the *UCA* as the principal regulatory framework for the regulation of all Public Utilities in British Columbia

On page 9, lines 12-19, BC Hydro states:

Another example is asset impairment or stranded asset risk. If a Public Utility customer of BC Hydro's falls under the jurisdiction of a different regulator and/or a different regulatory framework, the possibility exists that it could receive regulatory approval to construct electrical utility equipment that could impair the value of existing BC Hydro assets or render those assets stranded (not used and useful). Under both examples, both BC Hydro and the Public Utility customer are exposed to higher regulatory/legal risk, resulting in higher regulatory/legal costs and increased cost recovery risk.

1.3.1 Can BC Hydro articulate why it has not addressed the potential benefits that substituting for, or replacing of BC Hydro's hydro equipment could bring to potential customers?

RESPONSE:

BC Hydro's assessment of whether to re-invest in existing assets assessment includes consideration of whether substitution or replacement of the assets will provide benefits to ratepayers.

3.0 Reference: Exhibit C2-2, Section 5.2, p. 9, lines 12-19
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exposed to higher regulatory/legal risk, resulting in higher regulatory/legal costs and increased cost recovery risk.

1.3.2 Could BC Hydro support its assertion that simple asset replacement leads to higher regulatory costs and risks? It is not clear to us that this necessarily follows.

RESPONSE:

The text included in the preamble above does not describe a scenario involving the simple replacement of an asset which has reached the end of its useful life.

Please refer to BC Hydro's response to BCUC IRs1.1.3 and 1.2.1.

4.0 Reference Exhibit C2-2, Section, 5.2, pp. 9-10, lines 24-26, 1-9
There are a number of advantages to retaining the UCA as the principal regulatory framework for the regulation of all Public Utilities in British Columbia

On pages 9-10, lines 24-29, 1-9

Examples of the types of questions that BC Hydro believes the Commission may explore when considering a possible exemption from Public Utility regulation include:

a) Is the Public Utility operating in a competitive market? (i.e. are there alternative suppliers and products available to customers, or are there significant barriers to alternative suppliers);

b) To what extent does the Public Utility operate for the benefit, including the <u>financial benefit</u>, of all of its customers; and

c) What accountability does the Public Utility have to its customers? (i.e. is there an opportunity for all customers to raise and have concerns about the cost and provision of services addressed through a fair process under an arbiter that has oversight and/or governance responsibilities for all of its customers). (emphasis added)

1.4.1 One question that is not addressed in this section is the costs or benefits to the environment. Does BC Hydro consider the costs or benefits to the environment an important factor to consider with regards to regulation exemptions for Public Utilities?

RESPONSE:

Exemptions from regulation under the UCA can arise by BCUC order under section 88(3) of the UCA (with the advance approval of the Minister responsible for the administration of the *Hydro and Power Authority Act*).

Given that the purpose of public utility regulation is to ensure that the monopoly provision of essential public services is done in a safe, reliable, and non-discriminatory manner, at reasonable prices, and the BCUC is charged with the relatively narrow responsibility to achieve these objectives, BC Hydro does not see that environmental considerations play a role in section 88(3) exemptions.

UCA exemptions may also be granted by Ministerial order under section 22 of the UCA. Given that Ministers of the Crown have a broader public interest mandate

than the BCUC, environmental considerations could be relevant to section 22 exemptions.

Finally, exemptions from public utility regulation under the UCA may be effected by the Legislature, through appropriate amendments to the UCA. The Legislature has the broadest possible public interest mandate, and so environmental considerations would certainly be legitimate considerations for the Legislature in passing amendments.

5.0 Reference Exhibit C2-2, Section 7, p. 13, lines 9-11
BC Hydro comments on the Independent Utility Regulation Report requisitioned and submitted by Commission Staff

On page 13, lines 9-11, BC Hydro states:

In the case of BC Hydro, our Open Access Transmission Tariff (OATT) provides power sellers and wholesale customers, such as electric utilities and power marketers, with access to BC Hydro's transmission system…

1.5.1 Could BC Hydro clarify exactly how much power was transmitted across their transmission system for each of the last 10 years, and then, as a subset, identify the total amount of power transmitted under the OATT?

RESPONSE:

All users of wholesale transmission service take service exclusively under BC Hydro's OATT, including BC Hydro. Since the OATT became effective, only grandfathered arrangements are exempted because they preceded the OATT. The approximate breakdown of non-OATT versus OATT energy that was transferred across BC Hydro's transmission system is set out in the table below for the last ten fiscal years.

	F2019 (MWh)	F2018 (MWh)	F2017 (MWh)	F2016 (MWh)	F2015 (MWh)	F2014 (MWh)	F2013 (MWh)	F2012 (MWh)	F2011 (MWh)	F2010 (MWh)
Non-OATT	**7,683,169**	**8,599,090**	**10,994,426**	**7,231,897**	**7,448,045**	**6,990,710**	**7,367,272**	**6,759,988**	**6,208,763**	**5,524,252**
OATT	**58,383,254**	**60,815,260**	**59,519,118**	**61,243,001**	**54,345,576**	**55,613,158**	**58,383,373**	**56,991,860**	**53,780,936**	**53,626,785**
Total	**66,066,423**	**69,414,350**	**70,513,544**	**68,474,898**	**61,793,621**	**62,603,868**	**65,750,645**	**63,751,848**	**59,989,699**	**59,151,037**

6.0 Reference: Exhibit C2-2, Section 7.1, pp. 13-14, lines 18-19 and 8-14
BC Hydro has adopted some of the utility industry changes noted in the Utility Regulation Report
Exhibit C2-2, Section 8, p. 15, lines 19-20
Conclusion

On page 13-14, lines 18-19 and 8-14, BC Hydro states:

Retail access is not available to BC Hydro's load customers.

The Government has also commented that retail access may expose BC Hydro ratepayers to the cost of stranded assets, the cost of which would be borne by a smaller rate base and has directed the Commission to not set rates that would result in direct or indirect provision of unbundled transmission service to retail customers in British Columbia unless BC Hydro brings forward an application to do so. BC Hydro has no plans to advance retail access at this time.

On page 15, BC Hydro states:

BC Hydro, as the largest Public Utility in British Columbia, provides low cost, high reliability electricity to British Columbians in fulfillment of British Columbia's Energy Objectives under the CEA and in light of its Public Utility obligations.

1.6.1 In the event of a positive outcome that improves infrastructure and thereby improves the reliability for the Provincial grid, lower the costs of electricity and the concerns BC Hydro has no longer exist, would BC Hydro advance retail access in those instances, i.e. in areas of grid instability or where BC Hydro is unable to serve customers.

RESPONSE:

As explained on page 13 of BC Hydro's Evidence submitted on July 15, 2019, "…retail access allows for a customer to utilize the electrical system of the electrical utility to which it is connected, to service its own load directly through the purchase of market energy or energy purchased from another seller(s)". BC Hydro cannot conceive of a likely scenario in which it would be beneficial to BC Hydro and its ratepayers to have a third-party serve a load connected to the BC Hydro system instead of BC Hydro supplying energy to such load.

BC Hydro also wishes to clarify that a third-party generator is not precluded from connecting to BC Hydro's system, and accessing BC Hydro's transmission system, as a result of the prohibition of retail access. As discussed in BC Hydro's response to BCUC IR 1.8.1, a power producer in B.C. may sell power to:

- **A wholesale customer connected to the BC Hydro system, such as another public utility; or**
- **To an entity based in B.C., or otherwise, that is not a retail customer of BC Hydro.**

In addition, in a scenario where BC Hydro has identified that a generation resource may be able to support local grid reliability or defer infrastructure investments, BC Hydro would explore available alternatives including whether an energy purchase agreement with a third-party supplier is viable.

7.0 Reference: Exhibit C2-2, Section 7.1, pp. 13-14, lines 23-2
BC Hydro has adopted some of the utility industry changes noted in the Utility Regulation Report

On page 13-14, lines 23-2, BC Hydro states:

In a surplus situation, allowing retail access increases the amount of surplus energy that BC Hydro must export, possibly at a loss, increasing costs borne by ratepayers who do not or cannot opt for retail access...

1.7.1 Could BC Hydro clarify exactly how much power was exported by them from BC for each of the last 10 years and also how much revenue BC Hydro earned from these exports, in each year?

RESPONSE:

BC Hydro both exports and imports electricity, primarily though the Transfer Pricing Agreement (TPA) with Powerex. The following table provides BC Hydro's net annual imports and exports under the TPA for the period Fiscal 2010 to Fiscal 2019. Figures in (brackets) represent net exports (i.e., – export volumes and revenues) to BC Hydro. Positive figures represent net imports and costs to BC Hydro. Definitions for each of the terms in the table are provided below.

Market Energy (GWh)	F2010	F2011	F2012	F2013	F2014	F2015	F2016	F2017	F2018	F2019
Market Electricity Purchases	2,161	3,791	840	359	918	207	122	131	150	2,035
Surplus Sales	-	- 53	- 710	- 6,020	- 1,008	- 15	- 6,277	- 5,756	- 5,072	- 2,230
Net Purchases (Sales) from Powerex	1,525	1,077	- 3,993	- 883	1,365	512	- 6	138	- 557	647
Total Market Energy (GWh)	**3,686**	**4,816**	**- 3,863**	**- 6,544**	**1,275**	**704**	**- 6,162**	**- 5,488**	**- 5,479**	**452**
Market Energy ($ Millions)										
Market Electricity Purchases	$ 80.5	$ 128.4	$ 18.6	$ 10.1	$ 41.9	$ 6.0	$ 2.8	$ 3.4	$ 3.7	$ 125.0
Surplus Sales	$ -	$ (0.1)	$ (12.7)	$ (80.2)	$ (36.7)	$ (0.2)	$ (174.1)	$ (132.8)	$ (139.4)	$ (115.0)
Net Purchases (Sales) from Powerex	$ 67.2	$ 37.6	$ (131.9)	$ (21.1)	$ 28.9	$ 16.2	$ (0.1)	$ 2.3	$ (10.9)	$ 25.0
Total Market Energy	**$ 147.7**	**$ 165.9**	**$ (126.0)**	**$ (91.2)**	**$ 34.1**	**$ 22.0**	**$ (171.4)**	**$ (127.0)**	**$ (146.7)**	**$ 35.0**

Figures in the table above for the period F2015 to F2019 are taken from BC Hydro's Evidentiary Update filed in its Fiscal 2020 to Fiscal 21 Revenue Requirements Application (Refer to Exhibit B-11, Appendix A, Tab 4.0). Figures for the period F2010 to F2014 are taken from BC Hydro's Fiscal 2017 to Fiscal 2019 Revenue Requirements Application (Refer to Exhibit B-1-1, Appendix A, Tab 4.0).

<u>Market Electricity Purchases</u>: This is often referred to as domestic purchases and represents market purchases of electricity from Powerex by BC Hydro to meet domestic load requirements. This does not include purchases included in Net Purchases (Sales) from Powerex.

<u>Surplus Sales</u>: This is often referred to as domestic sales and represents sales of electricity to Powerex, when BC Hydro has generation in excess of its domestic load requirements. This does not include sales included in Net Purchases (Sales) from Powerex.

<u>Net Purchases (Sales) from Powerex</u>: This is often referred to as trade purchases (sales) and represents Powerex purchases/sales from/to BC Hydro for the purpose of trade related activities, provided that the BC Hydro system has the ability to accommodate those transactions. These are not purchases (sales) for domestic purposes.

7.0 Reference: Exhibit C2-2, Section 7.1, pp. 13-14, lines 23-2
BC Hydro has adopted some of the utility industry changes noted in the Utility Regulation Report

On page 13-14, lines 23-2, BC Hydro states:

In a surplus situation, allowing retail access increases the amount of surplus energy that BC Hydro must export, possibly at a loss, increasing costs borne by ratepayers who do not or cannot opt for retail access...

1.7.2 Could BC Hydro please provide a prospective electricity supply/demand balance for the first year in which the Site C dam is to come online and disclose all relevant assumptions?

RESPONSE:

Site C is planned to come into service in F2024. Table 1 in BC Hydro's response to BCUC IR 1.15.3 of the Fiscal 2020 to Fiscal 2021 Revenue Requirements Application (a copy of which is provided as Attachment 1 to this response) shows the operational load-resource balance information for F2024 excluding any generation from Site C.

In its first year of service, Site C will provide approximately 366 GWh to the integrated system. This increases to approximately 5,286 GWh when the project is fully in service. BC Hydro notes that it is not appropriate to extrapolate the table to determine the surplus when Site C is in full service as it does not consider the additional load growth.

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British Columbia Hydro & Power Authority **Fiscal 2020 to Fiscal 2021 Revenue Requirements Application**	**Exhibit: B-5**

15.0 D. CHAPTER 4 – COST OF ENERGY

Reference: COST OF ENERGY
Exhibit B-1, Section 4.7, pp. 4-28, 4-32–4-33, Figure 4-2; Appendix C, p. 22;
Zapped: A Review of BC Hydro's Purchase of Power from Independent Power Producers conducted for the Minister of Energy, Mines and Petroleum Resources, dated February 2019[1], p. 2;
BC Hydro F2017-F2019 RRA proceeding, Exhibit B-1-1, Tables 3-6–3-9
IPP renewal assumption

In Exhibit B-1-1 of the BC Hydro F2017-F2019 RRA proceeding, BC Hydro provides the load resource balance in terms of energy and capacity, with existing and committed resources and with planned resources, respectively, in Tables 3-6 through 3-9.

BC Hydro states on page 4-28 of the Application that "BC Hydro has been pursuing the renewal of expiring EPAs to meet future long-term energy needs and has renewed contracts with IPPs at lower prices than under their original contracts."

BC Hydro states on page 4-33 of the Application:

> **EPA Renewals:** This represents the net change in cost (i.e., certain new EPAs to replace existing expiring EPAs are forecast to increase in cost and others are forecast to decrease) from the fiscal 2019 RRA to the fiscal 2021 Plan of those EPAs that have been renewed since the Previous Application and those EPAs that are assumed to be renewed during the test period. This net increase includes the costs of expiring EPAs, the costs for hydro renewals and the costs associated with the Biomass Energy Program.

Figure 4-2 of the Application shows a breakdown of total IPP purchase cost forecast increases from F2019 to F2021, where IPP renewals accounts for $1.3 million increase to the cost of energy from F2019 to F2021.

In the February 2019 report titled Zapped by Ken Davidson, it states on page 2 that "there is an opportunity to address these financial issues when the EPAs for IPP projects expire and can be renewed on a commercial and market rate basis."

The Phase 1 Final Report filed as Appendix C to the Application states that "[t]he cost of energy procured from Independent Power Producers is now one of BC Hydro's biggest cost drivers and these costs will be recovered from

[1] https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/electricity-alternative-energy/electricity/bc-hydro-review/bch19-158-ipp_report_february_11_2019.pdf.

ratepayers. Though BC Hydro has not conducted competitive calls for power since 2011, it is projected to have an energy surplus into the 2030s."

1.15.3 Please provide an updated load resource balance as provided in the F2017-F2019 RRA proceeding (Tables 3-6 through 3-9). If an updated load resource balance is not available, please explain why not.

RESPONSE:

This answer also responds to CEABC IR 1.4.1.

Tables 3-6 and 3-8 of the Previous Application show long-term energy load resource balances (LRBs) which were indicative of a long term operational view. As an update to these Tables, BC Hydro provides the following:

- **Table 1 below which provides the surplus/deficit of an energy LRB from an operational view based on BC Hydro's Energy Studies. Table 1 is an update of Table 3-8 of the Previous Application which shows the LRB after planned resources. Energy Studies are the operational studies that underpin the financial analysis in the Application. In the operational view, surplus is defined as the amount by which system inflows plus deliveries from EPA contracts exceeds load, and deficit is defined as a negative surplus.**

  The Energy Studies model operations for the next five years (i.e., to the end of fiscal 2024 in the current studies). These results are used for operational decision making (e.g., setting the threshold sale price) and for near-term financial forecasts (e.g., the Cost of Energy forecast in the Application). However, operational forecasts are not used to determine the need for new resources.

- **Attachment 1 to this response provide the surplus/deficit of a capacity and an energy LRB from a planning view. Attachment 1 to this response is BC Hydro's response to BCUC IR 1.11.2.2.1 from the Electricity Purchase Agreement Renewals for Sechelt Creek Hydro, Brown Lake Hydro and Walden North Hydro proceeding.**

  The planning LRB is the view used to determine the need for new resources and reflects the capability of resources based on BC Hydro's planning criteria. It incorporates supply information that is consistent with the Energy Studies but it includes adjustments to the May 2016 20-year load forecast as described in the attachment.

  Table 2 below provides the first five years of Table 3 in Attachment 1 using the October 2018 Load Forecast instead of the adjusted May 2016 20-year load forecast.

In summary, the planning view reflects the capability of resources based on BC Hydro's planning criteria while the operational view shows the forecasted operation of these same resources given market and system conditions.

BC Hydro is currently developing a new 20-year load forecast and the associated planning LRB which we will file in this proceeding once available.

Table 1 Operational View of Energy Surplus/Deficit based on October 2018 Energy Study

GWh	F2020	F2021	F2022	F2023	F2024
Surplus/Deficit	2,985	3,834	4,318	4,119	3,029

Table 2 Planning Vie of Energy Surplus/Deficit based on October 2018 Short Term Load Forecast

	GWh	F2020	F2021	F2022	F2023	F2024
Line 14	**Surplus / (Deficit)**	5,677	6,293	6,517	6,191	5,348
Line 15	**Surplus / Deficit as % of Net Load**	110%	111%	111%	111%	109%
Line 16	**Small Gap Surplus / (Deficit)**	7,009	8,183	8,753	8,938	8,646
Line 17	**Large Gap Surplus / (Deficit)**	4,096	3,996	3,763	2,807	1,320

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11.0 B. ECONOMIC ANALYSIS

Reference: BC HYDRO ENERGY/CAPACITY GAP
Exhibit B-1, p. 3; 2017 BCUC Site C Inquiry, Exhibit F1-1, pp. 7, 8, Exhibit A-24-2-1, Commission Illustrative Alternative Portfolio
Need for new resources

BC Hydro states on page 3 of the Application that based on the mid-level load forecast in the F2017-F2019 RRA, the LRB identifies a need for new resources in F2022.

1.11.2.2.1 Please provide an updated Table K-3 and K-4 above, using BC Hydro's most recent estimates for each row and explain any significant differences (Updated LRB).

RESPONSE:

Tables K-3 and K-4 provided in the BCUC Site C Inquiry only provide the LRB after planned resources. For completeness and for the purpose of answering other questions in this proceeding that refer to this response, we are providing the updates to the LRB tables both before and after planned resources (i.e., Tables K-1 to K-4 of the Site C Inquiry where Tables K-1 and K-2 do not include Site C, and Tables K-3 and K-4 include Site C). Please refer to Tables 1-4, which all include Site C, in section 3 below.

Tables 1-4 provide an updated LRB[1] that incorporates new and updated information as discussed more fully in section 1 below. This updated LRB is not a new long term load forecast. This update includes new supply information and incorporates adjustments to the May 2016 load forecast. The updated LRB in Table 1 below shows that the first year of LRB shortfall (before planned resources) has moved from fiscal 2022 (in the Application) to fiscal 2027.

Additional detailed information is provided below as follows: (1) new and updated information to the LRB; (2) the first year of deficit in the updated LRB; and (3) updated LRBs.

[1] BC Hydro notes in our applications subsequent to the F17-F19 RRA (i.e., BCUC Site C Inquiry [Tables K1-K4], Waneta 2017 Transaction), BC Hydro provided updates to the LRB which largely reflected revisions and re-allocations to certain values, and had no impact on the fiscal 2022 LRB shortfall.

SECTION 1: New and Updated Information

The key updates to the LRBs reflected in Tables 1-4 include:

a) Adjustments to the May 2016 Load Forecast;

b) Updates to our existing and committed resources; and

c) Updates to our planned resources (shown in Tables 3 and 4 only).

a) Adjustments to the May 2016 Load Forecast

BC Hydro's new long term load forecast has not yet been completed. However, we have made some updates to the May 2016 long term load forecast in response to certain issues raised previously by the BCUC that could be easily incorporated. Specifically, the following adjustments have been made:

- **The price elasticity factor has been updated from -0.05 to -0.1, based on findings of an electricity price elasticity study conducted by a third party consultant;**
- **Updated methodology and new information on LNG and LNG uncertainty bands, and**
- **Updated DSM plan developed for the F20-F21 RRA.**

Figure 1 below presents the May 2016 Load Forecast and the adjusted May 2016 Load Forecast for energy with their respective uncertainty bands. This figure also includes BC Hydro's short-term mid-load forecast (fiscal 2019 to fiscal 2024) from the F20-F21 RRA (October 2018 Load Forecast).[2] Figure 2 below presents a similar view for peak demand without a short term forecast. BC Hydro considers the adjusted May 2016 forecast is reasonable for the following reasons:

- **Although the short-term October 2018 Load Forecast suggests more modest load growth relative to the May 2016 forecast, it remains within the May 2016 forecast's band of uncertainty; and**
- **The adjusted May 2016 load forecast has not incorporated potential load growth of the CleanBC Plan announced on December 5, 2018 which is expected to increase demand due to electrification.**

[2] The methodology used to develop this short term forecast addresses many of the issues raised previously by the BCUC.

b) Updates to existing and committed resources

The updated LRB reflects changes to existing and committed resources relative to the information provided in the Tables K-1 to K-4 (and the Tables 3-6 to 3-9 in the F17-F19 RRA), including the following:

- **The Heritage system capability has been updated to reflect new information, such as facility upgrades, major outage assumptions, Treaty and operational assumptions, and updated water records. BC Hydro notes that the Waneta 2017 Transaction, completed in 2018, does not impact the LRB as the lease with Teck extends past the forecast period;**

- **Future energy savings from codes and standards have been reallocated to existing and committed (i.e., were previously planned resources);**

- **The IPP forecast was updated from May 2016 to October 2018 to reflect updated IPP operational history and other expected changes to operations; and**

- **New EPAs, such as EPA renewals, and SOP EPAs that have been reallocated to existing and committed (i.e., were previously planned resources).**

BC Hydro notes that these changes to existing and committed resources are consistent with the information provided in the F20-F21 RRA.

c) Updates to planned resources

The updated LRB reflects the following material updates to planned resources relative to the information provided in Tables K-1 to K-4 (and the Tables 3-6 to 3-9 in the F17-F19 RRA):

- ***EPA renewals*. In addition to the IPP forecast updates discussed above, as a result of the recently announced Biomass Energy Program, which is part of Phase 1 of Government's Comprehensive Review, the renewal assumption for seven biomass projects has increased from 50 per cent to 80 per cent for energy, and from 50 per cent to 100 per cent for capacity. For all the other EPA renewals (including those biomass projects that are not eligible to participate in the Biomass Energy Program), the renewal percentage assumptions have not been changed to reflect the recent decision to use market price as an interim assumption for cost effectiveness. As such, these assumptions remain the same as in the BC Hydro May 2016 IPP forecast; and**

- ***Expected SOP and other First Nations commitments.* The Standing Offer Program (SOP) has been indefinitely suspended and accordingly SOP**

volumes have been reduced, with the exception of four First Nations clean energy projects under the SOP[3] and three other potential EPAs related to Impact Benefit Agreements with First Nations.

BC Hydro notes that these changes to planned resources are consistent with the information provided in the F20-F21 RRA.

SECTION 2: The First Year of Deficit in the Updated LRB

Table 1 demonstrates that the first year of energy deficit in the updated LRB is in fiscal 2027 (line 8 "surplus/(deficit)" of Table 1). Table 2 demonstrates that the first year of capacity deficit in the updated LRB is in fiscal 2023 (line 9 "surplus/(deficit)" of Table 2). BC Hydro notes that when evaluating the need for energy resources, such as EPA renewals:

- **The planning view of the LRB is applicable and is used to determine the first year of deficit. For an explanation of planning vs. operational view please see Appendix B of the Application; and**
- **The LRB (before planned resources) - i.e., Table 1 – is applicable because all planned resources, including EPA renewals, are not committed. Table 3 (after planned resources) would be used for determining the need for a resource that is not included in our planned resources.[4]**

SECTION 3: BC HYDRO'S UPDATED LOAD RESOURCE BALANCE TABLES

As discussed above,

- **Tables 1 to 4 show the planning view of the updated LRB;**
- **Tables 1 and 2 show the LRB with only existing and committed resources (before planned resources); and**
- **Tables 3 and 4 show the LRB after planned resources.**

[3] There are five excepted First Nation clean energy projects; one EPA has already been signed and is now an existing and committed resource.

[4] Please note that Tables K-3 and K-4 from the Site C Inquiry, similar to Table 3 and Table 4 (both after planned resources), would also not be applicable because they include planned resources.

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Table 1 Planning view of energy load resource balance based on existing and committed resources

	(GWh)		F2020	F2021	F2022	F2023	F2024	F2025	F2026	F2027	F2028	F2029	F2030	F2031	F2032	F2033	F2034	F2035	F2036
	Existing and Committed Heritage Resources																		
1	Heritage Resources (including Site C)	(a)	46,916	46,916	46,916	46,916	47,282	50,808	52,202	52,202	52,202	52,202	52,202	52,202	52,202	52,202	52,202	52,202	52,202
2	***Existing and Committed IPP Resources***	(b)	16,898	16,607	16,293	14,173	13,762	13,511	13,221	13,113	13,006	12,537	11,766	11,229	10,949	10,824	10,518	9,809	8,283
3	**Total Supply (Planning View)**	(c) = a + b	63,814	63,523	63,209	61,089	61,043	64,319	65,423	65,315	65,208	64,739	63,968	63,431	63,151	63,026	62,720	62,011	60,485
	Demand - Integrated System Total Gross Requirements																		
4	Adjusted 2016 May Mid Load Forecast Before DSM (with -0.1 elasticity)	(d)	(61,129)	(62,066)	(63,444)	(64,672)	(66,252)	(68,201)	(69,563)	(71,047)	(72,030)	(72,990)	(74,057)	(75,128)	(76,283)	(77,204)	(78,129)	(78,946)	(79,815)
	Existing and Committed Demand Side Management & Others Measures																		
5	F16-F19 DSM Portfolio Savings - F20-F21 RRA		2,557	2,463	2,388	2,352	2,332	2,311	2,274	2,235	2,194	2,148	2,111	2,050	1,964	1,884	1,766	1,678	1,577
6	F20+ Codes & Standards - F20-F21 RRA and Voltage and VAR Optimization		220	617	967	1,238	1,483	1,715	1,921	2,108	2,271	2,427	2,583	2,724	2,853	2,982	3,110	3,240	3,368
7	Sub-total	(e)	2,777	3,080	3,355	3,590	3,815	4,026	4,195	4,343	4,465	4,575	4,694	4,774	4,817	4,866	4,876	4,918	4,945
8	**Surplus / (Deficit)**	(f) = c + d + e	**5,461**	**4,538**	**3,120**	**7**	**(1,393)**	**144**	**55**	**(1,389)**	**(2,357)**	**(3,675)**	**(5,395)**	**(6,923)**	**(8,315)**	**(9,312)**	**(10,533)**	**(12,018)**	**(14,384)**
9	**Surplus / Deficit as % of Net Load**		**109%**	**108%**	**105%**	**100%**	**98%**	**100%**	**100%**	**98%**	**97%**	**95%**	**92%**	**90%**	**88%**	**87%**	**86%**	**84%**	**81%**
10	**Small Gap Surplus / (Deficit)**		**8,849**	**8,362**	**7,404**	**4,654**	**3,711**	**5,782**	**5,988**	**4,758**	**4,037**	**2,978**	**1,519**	**216**	**(841)**	**(1,587)**	**(2,632)**	**(3,848)**	**(5,987)**
11	**Large Gap Surplus / (Deficit)**		**1,125**	**(296)**	**(2,363)**	**(6,947)**	**(8,637)**	**(7,382)**	**(8,106)**	**(9,846)**	**(11,144)**	**(12,874)**	**(15,054)**	**(16,846)**	**(18,518)**	**(19,773)**	**(21,267)**	**(23,032)**	**(25,694)**

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Table 2 Peak capacity load resource balance based on existing and committed resources

	(MW)		F2020	F2021	F2022	F2023	F2024	F2025	F2026	F2027	F2028	F2029	F2030	F2031	F2032	F2033	F2034	F2035	F2036
	Existing and Committed Heritage Resources																		
1	Heritage Hydroelectric (including Site C)	(a)	11,588	11,588	11,588	11,528	11,588	12,319	12,319	12,676	12,676	12,676	12,676	12,676	12,262	12,262	12,733	12,733	12,733
2	***Existing and Committed IPP Resources***	(b)	1,536	1,455	1,482	1,207	1,196	1,136	1,104	1,104	1,091	1,080	948	912	908	884	835	590	517
3	14% of Supply Requiring Reserves - excl. Rio Tinto Alcan and FortisBC	(c)	(1,808)	(1,796)	(1,792)	(1,745)	(1,752)	(1,853)	(1,848)	(1,898)	(1,897)	(1,895)	(1,877)	(1,871)	(1,813)	(1,810)	(1,869)	(1,865)	(1,855)
4	**Effective Load Carrying Capability**	(d) = a + b + c	11,317	11,246	11,278	10,990	11,032	11,602	11,575	11,882	11,870	11,861	11,748	11,716	11,357	11,336	11,699	11,458	11,395
	Demand - Integrated System Total Gross Requirements																		
5	Adjusted 2016 May Mid Load Forecast Before DSM (with -0.1 elasticity)	(e)	(11,340)	(11,502)	(11,704)	(11,930)	(12,260)	(12,508)	(12,709)	(12,900)	(13,133)	(13,345)	(13,574)	(13,801)	(14,026)	(14,257)	(14,485)	(14,723)	(14,953)
	Existing and Committed Demand Side Management & Others Measures																		
6	F16-F19 DSM Portfolio Savings - F20-F21 RRA		476	465	451	442	435	426	417	407	398	387	378	367	352	338	325	315	301
7	F20+ Codes & Standards - F20-F21 RRA		43	129	198	246	288	327	360	390	416	440	463	484	503	521	544	568	591
8	Sub-total	(f)	519	594	649	688	723	753	777	797	814	827	841	851	855	859	869	883	892
9	**Surplus / (Deficit)****	(g) = d + e + f	**496**	**338**	**223**	**(251)**	**(505)**	**(153)**	**(357)**	**(221)**	**(449)**	**(657)**	**(985)**	**(1,234)**	**(1,813)**	**(2,062)**	**(1,917)**	**(2,382)**	**(2,666)**
10	**Surplus / Deficit as % of Net Load ****		**105%**	**103%**	**102%**	**98%**	**96%**	**99%**	**97%**	**98%**	**96%**	**95%**	**92%**	**90%**	**86%**	**85%**	**86%**	**83%**	**81%**
11	**Small Gap Surplus / (Deficit)****		**1,111**	**1,031**	**1,002**	**611**	**427**	**857**	**708**	**886**	**710**	**556**	**282**	**80**	**(435)**	**(628)**	**(444)**	**(850)**	**(1,083)**
12	**Large Gap Surplus / (Deficit)****		**(318)**	**(574)**	**(859)**	**(1,528)**	**(1,822)**	**(1,564)**	**(1,863)**	**(1,756)**	**(2,045)**	**(2,322)**	**(2,735)**	**(3,034)**	**(3,666)**	**(3,969)**	**(3,882)**	**(4,411)**	**(4,760)**

** Capacity load resource balances are only shown in Planning View.

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Table 3 Planning view of the energy load resource balance after planned resources

	(GWh)		F2020	F2021	F2022	F2023	F2024	F2025	F2026	F2027	F2028	F2029	F2030	F2031	F2032	F2033	F2034	F2035	F2036
1	***Existing and Committed Heritage Resources (incl. Site C)***	(a)	46,916	46,916	46,916	46,916	47,282	50,808	52,202	52,202	52,202	52,202	52,202	52,202	52,202	52,202	52,202	52,202	52,202
2	***Existing and Committed IPP Resources***	(b)	16,898	16,607	16,293	14,173	13,762	13,511	13,221	13,113	13,006	12,537	11,766	11,229	10,949	10,824	10,518	9,809	8,283
	Future Supply-Side Resources																		
3	IPP Renewals		593	1,105	1,201	3,430	3,789	3,990	4,267	4,350	4,434	4,838	5,365	5,829	5,963	6,003	6,241	6,889	8,177
4	Expected SOP Projects and other First Nations Commitments		67	145	226	226	226	226	226	226	226	226	226	226	226	226	226	226	226
5	Rev 6		-	-	-	-	-	-	-	-	-	-	11	26	26	26	26	26	26
6	Sub-total	(c)	659	1,250	1,427	3,656	4,015	4,216	4,493	4,576	4,660	5,064	5,602	6,081	6,215	6,255	6,493	7,141	8,429
7	**Total Supply (Planning View)**	(d) = a + b + c	64,473	64,774	64,635	64,745	65,058	68,535	69,916	69,891	69,868	69,804	69,570	69,512	69,366	69,280	69,213	69,152	68,914
	Demand - Integrated System Total Gross Requirements																		
8	Adjusted 2016 May Mid Load Forecast Before DSM (with -0.1 elasticity)	(e)	(61,129)	(62,066)	(63,444)	(64,672)	(66,252)	(68,201)	(69,563)	(71,047)	(72,030)	(72,990)	(74,057)	(75,128)	(76,283)	(77,204)	(78,129)	(78,946)	(79,815)
	Existing and Committed Demand Side Management & Others Measures																		
9	F16-F19 DSM Portfolio Savings - F20-F21 RRA		2,557	2,463	2,388	2,352	2,332	2,311	2,274	2,235	2,194	2,148	2,111	2,050	1,964	1,884	1,766	1,678	1,577
10	F20+ Codes & Standards - F20-F21 RRA and Voltage and VAR Optimization		220	617	967	1,238	1,483	1,715	1,921	2,108	2,271	2,427	2,583	2,724	2,853	2,982	3,110	3,240	3,368
	Planned Demand Side Management Measures																		
11	F20+ Rates - F20-F21 RRA		64	129	145	149	145	142	140	139	137	137	136	136	136	136	136	136	136
12	F20+ Programs - F20-F21 RRA		128	382	570	699	833	954	1,070	1,187	1,298	1,397	1,492	1,510	1,515	1,561	1,592	1,619	1,632
13	Sub-total	(f)	2,969	3,591	4,070	4,438	4,793	5,122	5,405	5,669	5,900	6,109	6,322	6,420	6,468	6,563	6,604	6,673	6,713
14	**Surplus / (Deficit)**	(g) = d + e + f	**6,313**	**6,299**	**5,261**	**4,511**	**3,600**	**5,456**	**5,758**	**4,514**	**3,738**	**2,923**	**1,835**	**804**	**(449)**	**(1,361)**	**(2,312)**	**(3,122)**	**(4,187)**
15	**Surplus / Deficit as % of Net Load**		**111%**	**111%**	**109%**	**107%**	**106%**	**109%**	**109%**	**107%**	**106%**	**104%**	**103%**	**101%**	**99%**	**98%**	**97%**	**96%**	**94%**
16	**Small Gap Surplus / (Deficit)**		**9,682**	**10,071**	**9,473**	**9,071**	**8,604**	**10,983**	**11,569**	**10,526**	**9,986**	**9,420**	**8,584**	**7,776**	**6,857**	**6,191**	**5,411**	**4,865**	**4,025**
17	**Large Gap Surplus / (Deficit)**		**1,957**	**1,413**	**(294)**	**(2,530)**	**(3,744)**	**(2,181)**	**(2,526)**	**(4,078)**	**(5,195)**	**(6,432)**	**(7,989)**	**(9,286)**	**(10,819)**	**(11,995)**	**(13,225)**	**(14,319)**	**(15,682)**

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Table 4 Peak capacity load resource balance after planned resources

	(MW)		F2020	F2021	F2022	F2023	F2024	F2025	F2026	F2027	F2028	F2029	F2030	F2031	F2032	F2033	F2034	F2035	F2036
	Existing and Committed Heritage Resources																		
1	Heritage Hydroelectric	(a)	11,588	11,588	11,588	11,528	11,588	12,319	12,319	12,676	12,676	12,676	12,676	12,676	12,262	12,262	12,733	12,733	12,733
2	***Existing and Committed IPP Resources***	(b)	1,536	1,455	1,482	1,207	1,196	1,136	1,104	1,104	1,091	1,080	948	912	908	884	835	590	517
	Future Supply-Side Resources																		
3	IPP Renewals		143	225	254	529	538	547	576	576	586	597	662	640	628	643	680	925	966
4	Expected SOP Projects and other First Nations Commitments		12	12	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19
5	REV 6		0	0	0	0	0	0	0	0	0	0	488	488	488	488	488	488	488
6	Sub-total	(c)	155	236	273	548	557	566	594	595	605	616	1,169	1,147	1,135	1,150	1,187	1,432	1,473
7	14% of Supply Requiring Reserves - excl. Rio Tinto Alcan and FortisBC	(d)	(1,829)	(1,829)	(1,830)	(1,822)	(1,830)	(1,932)	(1,932)	(1,982)	(1,981)	(1,981)	(2,040)	(2,032)	(1,972)	(1,971)	(2,035)	(2,066)	(2,061)
8	**Effective Load Carrying Capability**	(e) = a+b+c+d	11,450	11,450	11,513	11,461	11,512	12,088	12,086	12,393	12,390	12,390	12,753	12,702	12,334	12,326	12,720	12,689	12,662
	Demand - Integrated System Peak																		
9	Adjusted 2016 May Mid Load Forecast Before DSM (with -0.1 elasticity)	(f)	(11,340)	(11,502)	(11,704)	(11,930)	(12,260)	(12,508)	(12,709)	(12,900)	(13,133)	(13,345)	(13,574)	(13,801)	(14,026)	(14,257)	(14,485)	(14,723)	(14,953)
	Existing and Committed Demand Side Management & Others Measures																		
10	F16-F19 DSM Portfolio Savings - F20-F21 RRA		476	465	451	442	435	426	417	407	398	387	378	367	352	338	325	315	301
11	F20+ Codes & Standards - F20-F21 RRA		43	129	198	246	288	327	360	390	416	440	463	484	503	521	544	568	591
	Planned Demand Side Management Measures																		
12	F20+ Rates - F20-F21 RRA		8	15	17	17	17	16	16	15	15	15	15	15	14	14	14	14	14
13	F20+ Programs - F20-F21 RRA		19	58	87	108	129	148	166	183	199	213	225	229	232	237	244	250	254
14	Sub-total	(g)	546	667	753	813	869	917	959	995	1,028	1,055	1,081	1,095	1,101	1,110	1,127	1,147	1,160
15	**Surplus / (Deficit)****	(h) = e + f + g	**656**	**615**	**562**	**345**	**121**	**497**	**336**	**488**	**285**	**101**	**260**	**(3)**	**(591)**	**(822)**	**(638)**	**(887)**	**(1,131)**
16	**Surplus / Deficit as % of Net Load ****		**106%**	**106%**	**105%**	**103%**	**101%**	**104%**	**103%**	**104%**	**102%**	**101%**	**102%**	**100%**	**95%**	**94%**	**95%**	**93%**	**92%**
17	**Small Gap Surplus / (Deficit)****		**1,268**	**1,298**	**1,327**	**1,192**	**1,034**	**1,488**	**1,380**	**1,573**	**1,420**	**1,288**	**1,501**	**1,284**	**761**	**586**	**808**	**617**	**422**
18	**Large Gap Surplus / (Deficit)****		**(161)**	**(307)**	**(534)**	**(947)**	**(1,214)**	**(933)**	**(1,192)**	**(1,069)**	**(1,335)**	**(1,590)**	**(1,516)**	**(1,831)**	**(2,470)**	**(2,754)**	**(2,630)**	**(2,944)**	**(3,254)**

British Columbia Utilities Commission Information Request No. **1.11.2.2.1** Dated: **September 27, 2018** British Columbia Hydro & Power Authority Response issued **March 15, 2019**	Page 9 of 10
British Columbia Hydro & Power Authority **Electricity Purchase Agreement Renewals for Sechelt Creek Hydro, Brown Lake Hydro and Walden North Hydro**	**Exhibit: B-5**

Figure 1 Comparison of load forecasts for energy. All forecasts are after DSM and with LNG.

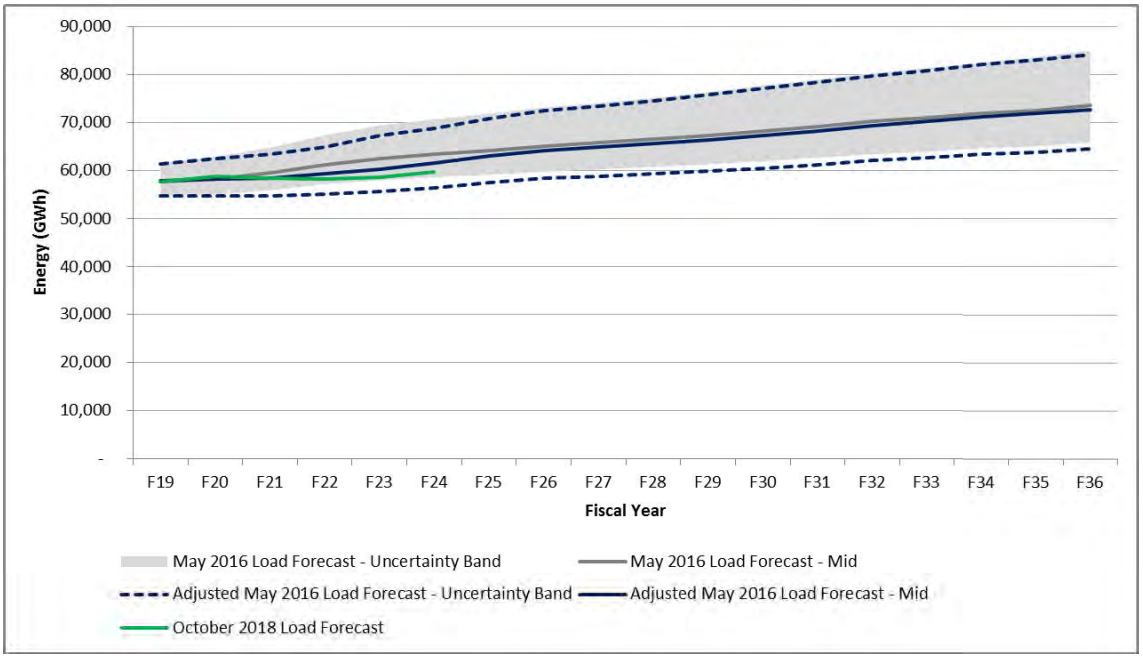
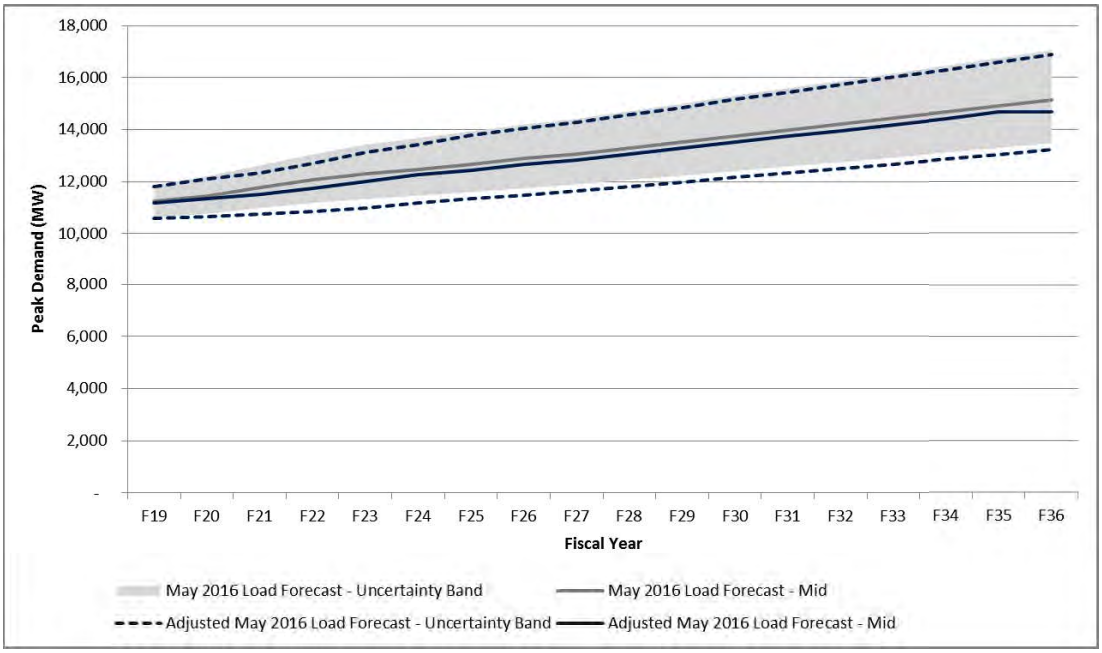


Figure 2 Comparison of load forecasts for peak demand. All forecasts are after DSM and with LNG.



8.0 Reference: Exhibit C2-2, Section 4, p. 6, lines 8-9
What is a Public Utility and why is regulation necessary?
Exhibit C2-2, Section 5.1, p. 9, line 20
There are a number of advantages to retaining the UCA as the principal regulatory framework for the regulation of all Public Utilities in British Columbia

On page 6, lines 8-9, BC Hydro states:

It is BC Hydro's view that a Public Utility should be regulated if it is a monopoly and/or it is in the public interest to regulate.

On page 9, line 20, BC Hydro states:

… the UCA offers consistency in the treatment of Public Utilities…

1.8.1 Could BC Hydro please indicate why the decision to build the Site C dam did not come before the BCUC ?

RESPONSE:

Section 7 of the Province of British Columbia's *Clean Energy Act* exempted BC Hydro from portions of the *Utilities Commission Act* with respect to specific projects, including Site C. As a result, the initial decision to construct Site C made in 2014 did not require a Certificate for Public Convenience and Necessity and did not come before the BCUC.

In 2017 the Province referred Site C to the BCUC requesting an inquiry on the implications of completing Site C, suspending Site C and terminating Site C. Documents related to this proceeding can be found on the BCUC website.[1]

In addition to the above, BC Hydro voluntarily submits quarterly progress reports on Site C to the BCUC. These reports provide information on project progress, accomplishments, challenges, risks and costs. These reports are available on the Site C project website.[2]

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[1] **Link to proceeding website: https://www.bcuc.com/site-c-inquiry.html.**

[2] **Link to Site C Quarterly Progress Reports on BC Hydro website: https://www.sitecproject.com/news-and-information/progress-reports-to-the-bcuc.**

9.0 Reference: Exhibit A-18-1, pp. 1-2, reference 8.0
Exhibit C6-3, pp. 11-2
Exhibit C6-3, page 5-7
Exhibit C6-3, pp. 16, 19-20, 25

On page 1 of the BCUC Information Request No. 1, the BCUC cites Kitselas Geothermal Inc.'s written submission as follows:

…the only way for IUs to be economically viable is to access markets outside of their traditional lands. Electricity production depends on scale, and in almost every instance, no Indigenous bands have the critical mass to self-supply at economically competitive rates.

As such, successful reconciliation becomes linked with market success.

Given that many First Nations can create IUs with scale generating assets, the only barrier to success becomes retail market access – which is currently restricted.

Therefore, retail market access equivalent to that enjoyed by BC Hydro is a requirement for IUs. If a geothermal electricity facility became a reality and was owned by BC Hydro, its output would undoubtedly enjoy retail market access. IU owned geothermal facilities should enjoy the same retail market access rights.[1]

On page 2 of the BCUC Information Request No. 1, the BCUC asks the following of BC Hydro:

8.1 Please confirm, or explain otherwise, that the prohibition on retail access does not affect the ability of a power producer owned wholly or partly by an Indigenous Nation to access BC Hydro's transmission system for the purposes of selling power to an entity (based in BC or otherwise) **that is not currently a retail customer of BC Hydro or another public utility in BC.** (emphasis added)

8.1.1 Please briefly explain the requirements for a prospective greenfield power producer, owned wholly or partly by an Indigenous Nation, that may wish to connect and access BC Hydro's transmission system for the purposes of moving power within BC or to other transmission systems.

8.1.1.1 Please also outline any factors that BC Hydro must assess before granting a greenfield IPP access to the transmission system.

On pages 5 to 7 of KGI's submission, KGI provided examples of how partial retail access for generation projects, including Indigenous Utilities and their prospective customers, can improve overall energy security and environmental performance by providing distributed generation and alternatives to reliance on single transmission corridors. KGI also provided examples of how Indigenous Utilities can assist in solving regional energy challenges (such as the one precipitated by the expansion of the LNG industry in the North West BC).

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[1] Exhibit C6-3, p. 11.

Further, on pages 11-12 of KGI's submission, KGI argued that market access should not be restricted by arbitrary provisions of an access tariff, such as the Open Access Transmission Tariff (OATT) and Indigenous Utilities should not be subject to artificial production caps. KGI proposed that Indigenous Utilities should have energy market access equivalent to that enjoyed by BC Hydro, and for the BC Government to establish an electricity market access program, for Indigenous Utilities that allows for regional difference.[2]

In the BC government Retail Access document, retail access is defined as "the ability for customers to secure electricity from the market via a third-party provider rather than its local utility."[3]

1.9.1 KGI wants to expand on the BCUC's question in reference 8.1. In its submission, KGI provided examples as to how geothermal energy projects, including those of Indigenous Utilities, can have a broader socio-enviro-economic impact on the energy market, if these utilities are allowed to have market access.[4]

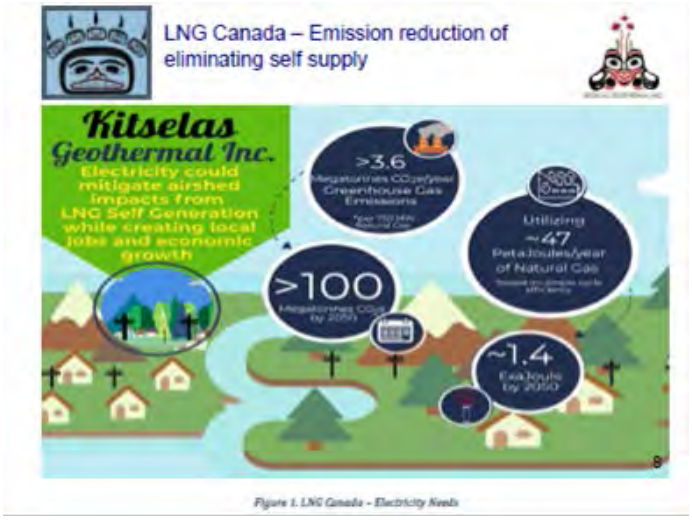

Figure 1. LNG Canada – Electricity Needs

In Figure 1 above, the electricity required by the customer may far exceed what a geothermal project may provide. However, a geothermal project may be able to provide some of the electricity supply with base-load service, for example, high reliability.

Figure 2 below is an example of a geothermal energy project that could benefit from partial retail access.

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2 *Ibid*, p. 25.

3 https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/electricity-alternative-energy/electricity/iepr/iepr_retail_access.pdf

4 Exhibit C6-3, p. 16.

At this moment in time, if an industrial customer is using BC Hydro as an electricity supplier, and BC Hydro is not meeting their entire electricity needs, it is our understanding that the customer cannot use a third party electricity supplier to meet the balance of, or part of their energy needs. A third party has to either supply all the electricity needs of the customer or none, outside of any customer self-generation (behind the fence). There are no negative externalities that KGI is aware of allowing for partial retail access in the example we have provided.

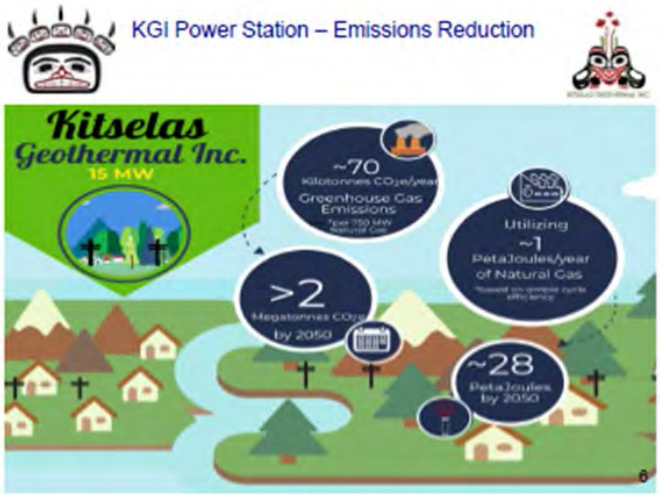

Figure 2. KGI 15 MW Electricity Plant

KGI would like to know how BC Hydro would consider the potential benefits of partial retail access? Specifically, in the event that a regional area or customer has an electricity demand, but the load is significantly higher than what the Indigenous Utility can provide, would there be a provision for partial retail access that would allow the Indigenous Utility to provide some of the supply as opposed to the requirement to provide 100% (or none) of the supply? Please explain.

RESPONSE:

Please refer to BC Hydro's response to CEC IR 1.4.1.