

July 6, 2020

**VIA E-FILING**

Marija Tresoglavic  
Acting Commission Secretary  
BC Utilities Commission  
6th Floor 900 Howe Street  
Vancouver, BC V6Z 2N3



Reply to: Leigha Worth  
ED@bcpiac.org  
Ph: 604-687-3034  
Our File: 7500.311

Dear Ms. Tresoglavic:

**Re: British Columbia Hydro and Power Authority (BC Hydro) Transmission Service  
Market Reference-Priced Rates Application – Incremental Energy Rate Pilot (Rate  
Schedule 1893)  
BCOAPO Final Argument**

We represent the BC Old Age Pensioners' Organization, Active Support Against Poverty, Council of Senior Citizens' Organizations of BC, Disability Alliance BC, Tenant Resource and Advisory Centre, and Together Against Poverty Society, known collectively in regulatory processes as "BCOAPO et al." ("BCOAPO").

Enclosed please find the BCOAPO's Final Argument with respect to Incremental Energy Rate Pilot of the above-noted matter.

If you have any questions, please do not hesitate to contact the undersigned.

Sincerely,  
**BC PUBLIC INTEREST ADVOCACY CENTRE**

*Original on file signed by:*

FOR / Leigha Worth  
Executive Director | General Counsel

Encl.

**BC OLD AGE PENSIONERS' ORGANIZATION, ACTIVE SUPPORT AGAINST POVERTY,  
COUNCIL OF SENIOR CITIZENS' ORGANIZATIONS OF BC,  
DISABILITY ALLIANCE BC, TENANT RESOURCE AND ADVISORY CENTRE,  
AND TOGETHER AGAINST POVERTY SOCIETY ("BCOAPO")**

**British Columbia Hydro and Power Authority (BC Hydro) Transmission Service Market  
Reference-Priced Rates Application – Incremental Energy Rate Pilot**

**BCOAPO Final Argument**

**July 6, 2020**

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Please be advised that we provide the following final argument regarding the above noted application on behalf of our client groups known in this and other regulatory processes as BCOAPO or BCOAPO et al. The constituent groups of BCOAPO et al. represent a diverse cross-section of residential energy utility ratepayers within BC who hold progressivist views, their interventions focus on the best interests of the residential ratepayer group as a class while taking into consideration the impacts of proposed rates, rate structures, and projects on the most economically vulnerable amongst them: the low and fixed income residents of BC.

**1.0 Introduction**

On October 31, 2019, the British Columbia Hydro and Power Authority (BC Hydro) filed an application with the British Columbia Utilities Commission (BCUC) seeking approval of an amended Freshet Rate (Rate Schedule 1892) and approval of a pilot for a new optional rate, the Incremental Energy Rate ("IER" or "RS 1893"), pursuant to sections 58 to 60 of the Utilities Commission Act (Application). By Order G-300-19 dated November 26, 2019, the BCUC approved the IER effective January 1, 2020 on an interim and non-refundable basis as requested by BC Hydro, until further BCUC order.

By letter dated March 2, 2020 (Exhibit A-5) and Order G-49-20 dated March 12, 2020, the BCUC bifurcated the review process of the Application to first address the Freshet Rate component, with further process on the balance of the Application to be determined. By Order G-111-20 dated

May 12, 2020, the BCUC amended the regulatory timetable for the review of the IER component of the Application.

Overall the regulatory process for the review of the IER component of the Application (as set out in Orders G-327-19, G-111-20 and G-136-20) involved two round of interrogatories and written submissions by both intervenors and BC Hydro.

Set out below is a summary of BC Hydro's Increment Energy Rate Pilot proposal followed by BCOAPO's submissions.

## **2.0 BC Hydro's Incremental Energy Rate Pilot Proposal (RS 1893)**

### **2.1 Summary of Proposal**

The Incremental Energy Rate Pilot (RS 1893) is a proposed new optional rate that would be offered on a non-firm, interruptible basis for electricity usage above normal monthly baseline amounts for energy and demand. Key aspects of the proposed rate are<sup>1</sup>:

- *Duration of the Pilot:* The Incremental Energy Rate Pilot is to be offered for a 51-month pilot period, commencing January 1, 2020 and ending March 31, 2024.
- *Availability:* The rate is to be open to any RS 1823 or RS 1828 customer that is not concurrently taking service under the Freshet Rate. BC Hydro is proposing that customers with self-generation may elect to use RS 1893 as an alternative to RS 1880 for the instantaneous pick-up of load due to loss of self-generation. However, the customer must choose one service or the other. There is no ability to regularly switch back and forth between RS 1893 and RS 1880.
- *Eligibility:* To be eligible for RS 1893 service, the customer must have a minimum of two years of electricity consumption history.

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<sup>1</sup> Exhibit B-1, pages, 63-72 and 84

- *Notice:* RS 1823 and RS 1828 customers must notify BC Hydro by March 1 of each year that they wish to take electricity under RS 1893 for the forthcoming Billing Year. There are two exceptions to this notice requirement: (i) if the first year of the rate pilot is approved by the BCUC effective January 1, 2020; and (ii) if a new RS 1823 customer commences taking service during the Billing Year and still meets the eligibility criteria (such as by acquiring an existing site with the required consumption history). In these cases, the customer must notify BC Hydro of its request for RS 1893 service at least 30 days prior to the start of the next Billing Period.
  
- *Cancellation and Opt In/Out Provisions:* BC Hydro has the discretion to automatically cancel RS 1893 service where: (i) a customer does not respond to a BC Hydro curtailment notice; and (ii) where a customer with self-generation requests RS 1880 service in place of RS 1893 service. On a voluntary basis, the subscribing customer can elect to opt-out of the pilot by providing written notice to BC Hydro at any time. After cancellation, whether automatic or voluntary, the customer is not eligible to re-enrol for RS 1893 service for the balance of the current Billing Year<sup>2</sup>.
  
- *Interruptible:* The proposed RS 1893 service is non-firm and interruptible. BC Hydro will only provide service where it has energy and capacity to do so. BC Hydro has the right to interrupt RS 1893 service for transmission and generation system constraints. RS 1893 service is not interruptible for economic reasons<sup>3</sup>.
  
- *Pricing:* Net Incremental Energy in HLH and LLH will be priced using the ICE Day Ahead Power Price Report for Mid-C Peak or Off Peak weighted average index prices, applicable to the hour. A price floor of \$0/MWh will apply and there will be no price cap. Daily Mid-C prices will be converted from U.S. dollars to Canadian dollars using the Bank of Canada daily exchange rate on the applicable day. In addition, there will be an energy price adder of \$3.00/MWh adder on net RS 1893 energy volumes during the freshet Billing Periods of May through July and a \$7.00/MWh adder in all other Billing Periods.

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<sup>2</sup> Billing Year is April 1<sup>st</sup> to March 31<sup>st</sup>

<sup>3</sup> Exhibit B-1, page 2

- *Customer Baselines:* For a customer with at least two years of consumption history, the default period for determining HLH and LLH Baselines and Monthly Reference Demand will be the 365 days of BC Hydro's fiscal 2019. A unique HLH and LLH Baseline and Monthly Reference Demand will be determined for each Billing Period of Fiscal 2019. This will result in 36 unique baselines (one HLH Baseline, one LLH Baseline and one Monthly Reference Demand for each of the 12 Billing Periods). If a customer's RS 1893 baselines are no longer representative of the customer's normal historical electricity usage absent the Incremental Energy Rate Pilot, then BC Hydro will make adjustments to those baselines consistent with the principles and criteria set out in TS 74.
- *Limitation on RS 1893 Usage:* If an RS 1823 customer's highest kVA Demand in HLH of a Billing Period is greater than the Monthly Reference Demand applicable to that Billing Period multiplied by 2.0, then: (i) the Monthly Reference Demand for that Billing Period will be automatically adjusted to be equal to 50% of the highest kVA Demand in HLH during that Billing Period; and (ii) the HLH and LLH Baselines for that Billing Period will be automatically adjusted to be equal to 50% of the total energy volumes taken by the customer in the HLH and LLH of that Billing Period.
- *Reporting:* BC Hydro proposes to evaluate the Incremental Energy Rate Pilot, and will provide an evaluation report to the BCUC. This evaluation is expected to be undertaken after completion of the third full fiscal year of the pilot (fiscal 2023) and will be filed with the BCUC in fall 2023.

## 2.2 Rationale for the Application

BC Hydro considers that the IER Pilot should be offered to transmission service customers on a pilot basis for three key reasons<sup>4</sup>:

- The proposed Incremental Energy Rate Pilot is responsive to feedback from transmission service customers. The Pilot is also responsive to the 2013 Industrial

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<sup>4</sup> Exhibit B-1, pages 58-59

Electricity Policy Review (IEPR) taskforce recommendations to develop innovative rate options for industrial customers.

- BC Hydro has experience with the use of market-referenced energy pricing to facilitate the use of incremental electricity, when available, and the determination and adjustment of electricity baselines to separate firm and non-firm service. BC Hydro has demonstrated that such market reference-priced rate designs are well understood and accepted by customers and can provide benefits to both participants and non-participants.
- BC Hydro expects that daily ICE Index Mid-C pricing, plus an appropriate adder, will generally reflect BC Hydro's short-run marginal cost of energy and therefore be economically efficient.

### 2.3 Approvals Requested

In its Application, BC Hydro sought approval of the Incremental Energy Rate Pilot on a 51-month pilot basis effective January 1, 2020<sup>5</sup>. The Application also sought that the approval of RS 1893 with an effective date of January 1, 2020 be made on an interim and non-refundable basis. As noted above, Order G-300-19 granted approval on an interim and non-refundable basis.

## 3.0 Submissions

### 3.1 Rationale for the IER and Need for Pilot

BC Hydro has offered three basic reasons why the IER should be made available to transmission service customers. The first of these is that the IER is responsive to industrial customers' requests for flexible rate options and there is strong customer support from existing and prospective new transmission service customers as well as AMPC for the optional Incremental Energy Rate<sup>6</sup>. In principle BCOAPO supports the development of flexible rate options for all customer classes. It also submits that such rate options should be ones that customers want and will be able to use

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<sup>5</sup> Exhibit B-1, page 11

<sup>6</sup> Exhibit B-1, pages 6-8

and, that in the case of the IER, the evidence indicates that the potential users of the IER support its offering.

However, BC Hydro does not presently have a rate schedule for the provision of non-firm, interruptible electricity that is available to all RS 1823 and RS 1828 transmission customers on a year-round basis. As result, it is unclear exactly what the level of participation will be and to what degree customers can benefit. Also, the IER involves new procedures with respect to the setting of baselines and billing and possible interactions with the administration of existing rates. All of these are issues that should be better understood before any decision is made to offer the IER on a permanent basis and, in BCOAPO's view, support the offering of the IER on a pilot basis.

However, while customer support is necessary in order for BC Hydro to consider offering a particular rate option, it is by no means sufficient. Subsection 60(1)(b) of the UCA provides that in setting a rate under the UCA the BCUC "must have due regard to the setting of a rate that: (i) is not unjust and unreasonable within the meaning of section 59<sup>7</sup>; (ii) provides the public utility for which the rate is set a fair and reasonable return on any expenditure made by it to reduce energy demand; and (iii) encourages public utilities to increase efficiency, reduce costs and enhance performance". Due regard for such considerations involves assessments as to whether or not there is cost of service basis and/or economic benefit (to the utility and all its customers) from offering the rate option.

BC Hydro's second reason for offering the IER is that such market reference-priced rate designs can provide benefits to both participants and non-participants. In BCOAPO's view this rationale speaks directly to the requirement that the BCUC must have due regard to the setting of a rate that is not unjust and unreasonable within the meaning of section 59 of the UCA. BC Hydro uses its forecast of system marginal value from its energy study models to estimate the ratepayer impact of serving incremental customer load under the proposed Incremental Energy Rate for the

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<sup>7</sup> Under Section 59 a rate is "unjust" or "unreasonable" if the rate is (a) more than a fair and reasonable charge for service of the nature and quality provided by the utility, (b) insufficient to yield a fair and reasonable compensation for the service provided by the utility, or a fair and reasonable return on the appraised value of its property, or (c) unjust and unreasonable for any other reason.

pilot period<sup>8</sup>. The results suggest there is an annual net revenue gain under the proposed rate design<sup>9</sup>.

However, the results are sensitive to BC Hydro's forecast of system marginal values, forecast Mid-C market prices, and assumed customer-specific incremental consumption (including the assumed customer strike price). Also, the results do not include any allowance for load shifting or natural load growth. While the design of the IER may mitigate some of the associated risks, the overall results are unclear.

Again, BCOAPO submits that the need to understand the likely impacts on BC Hydro's net revenue and non-participating customers better before any decision is made to offer the IER on a permanent supports the offering of the IER on a pilot basis.

BC Hydro's third reason for offering the IER is that it expects that daily ICE Index Mid-C pricing, plus an appropriate adder, will generally reflect BC Hydro's short-run marginal cost of energy and therefore be economically efficient. However, BC Hydro has acknowledged that while Mid-C pricing is consider the marginal cost of energy under System Conditions No. 1 and No. 2, such is not the case under System Condition No. 3 where BC Hydro's marginal cost of energy is the system marginal value calculated by the monthly Energy Studies modelling. As the results of such studies are considered confidential, the Mid-C prices (which are an input to the Energy Studies) are used as a proxy<sup>10</sup>. Whether the use of Mid-C prices as a proxy is reasonable is compounded by the fact that BC Hydro has indicated Condition No. 3 is expected to dominate as the marginal resource condition in most non-freshet months<sup>11</sup>.

The overall result is that that ability of the proposed rate design (i.e., Mid-C pricing plus an energy adder) for the IER to be either economically efficient (i.e., to reflect BC Hydro's marginal) or benefit non-participants (i.e., produce positive net revenue) is uncertain. Again, BCOAPO submits that the need to understand these issues better before any decision is made to offer the IER on a permanent supports the offering of the IER on a pilot basis.

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<sup>8</sup> Exhibit B-1, pages 72-80

<sup>9</sup> Exhibit B-1, pages 79-80

<sup>10</sup> Exhibit B-4, BCUC 1.11.1 and Exhibit B-12, BCOAPO 3.71.1

<sup>11</sup> Exhibit B-5, BCOAPO 1.27.1

## 3.2 Specific IER Design Elements

### 3.2.1 Eligibility

RS 1823 and RS 1828 customers represent all but five transmission service load customers served under firm transmission voltage rate schedules. RS 1823 and RS 1828 customers have control over their electricity use, such that they have the ability to increase electricity use under the proposed IER Pilot<sup>12</sup>. In contrast, four of the other five customers are exempted from default service under RS 1823 with the approval of the BCUC and served under RS 1827 and the remaining customer is served under RS 3808. These customers are either a public utility or have made representations to the BCUC that they operate like a public utility and should be exempted from RS 1823 as they do not control electricity use by the customers they serve. In BCOAPO's view this rationale for their exemption for RS 1823 also serves as justification for excluding them from eligibility for the IER Pilot.

In response to interrogatories filed during the review of BC Hydro's 2015 RDA<sup>13</sup>, BC Hydro provided its rationale as to why General Service customers were not included in the Freshet Rate Pilot. BCOAPO considers these reasons to be equally applicable in the case of the IER Pilot.

Overall, BCOAPO supports the eligibility criteria (in terms of eligible rate classes) proposed by BC Hydro.

BC Hydro also proposes that, to be eligible for RS 1893 service, the customer must have a minimum of two years of electricity consumption history<sup>14</sup>. This is to ensure that a new customer has sufficient time for plant start-up and commissioning to achieve normal operations<sup>15</sup>. BCOAPO considers this to be a reasonable requirement given the IER is meant to apply to attract incremental load over and above what would otherwise be normal operations.

BC Hydro has proposed that the default period for determining HLH and LLH Baselines and Monthly Reference Demand will be the 365 days of BC Hydro's fiscal 2019<sup>16</sup>. Fiscal 2019 is the

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<sup>12</sup> Exhibit B-4, BCUC 1.1.3

<sup>13</sup> Exhibit B-5, CEC 1.77.1

<sup>14</sup> Exhibit B-12, BCOAPO 3.63.1

<sup>15</sup> Exhibit B-1, page 64

<sup>16</sup> Exhibit B-1, page 67

proposed default period for determining RS 1893 baselines because it is: (i) the most recent fiscal year prior to implementation of the Incremental Energy Rate Pilot; and (ii) the most recent fiscal year for which customers have a final Energy CBL that has been filed with and approved by the BCUC<sup>17</sup>.

However, proposed RS 1893 tariff also provides that “where the customer does not have historical annual electricity consumption for Fiscal 2019, the most recent 12 Billing Periods will be used”<sup>18</sup>. Such circumstances could arise during the proposed pilot period where the customer commenced taking transmission voltage electricity service from BC Hydro in F2019, F2020 or F2021<sup>19</sup>.

During the interrogatory process BCOAPO raised concerns<sup>20</sup> regarding the appropriateness of using F2020 or F2021 consumption data to determine the baselines due to the possible impacts of the COVID-19 pandemic on a customer’s usage in those fiscal years. In response BC Hydro stated:

“However, if the customer’s LLH and HLH Baselines and/or Monthly Reference

Demands so determined (i.e., based on the most recent 12 billing periods) are not representative of the customer’s normal expected RS 1823 or RS 1828 Electricity usage, alternative LLH and HLH Baselines and/or Monthly Reference Demands will be determined and filed with the BCUC in accordance with Special Conditions 8 and 9 of RS 1893. These Special Conditions provide BC Hydro and the customer with the ability to assess the impact of the COVID-19 pandemic on actual F2020 and F2021 Electricity usage and to make adjustments, if necessary, so that the RS 1893 baselines are representative of normal expected Electricity usage”.

However, BCOAPO continues to have concerns. For new customer who commenced taking service from BC Hydro in F2019 or after and whose most recent 12 billing period includes months where the customer was impacted by the COVID-19 pandemic there will be little to no information available to establish what “normal usage” would be. In BCOAPO’s view, for those customers

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<sup>17</sup> Exhibit B-11, BCUC 3.2.1

<sup>18</sup> Exhibit B-1, Appendix C, page 7 of 9

<sup>19</sup> Exhibit B-12, BCOAPO 3.63.2

<sup>20</sup> Exhibit B-12, BCOAPO 3.63.2

where F2019 consumption history is not available, the required 12 Billing Periods should exclude any months where the COVID-19 pandemic has impacted the customer's operations.

### 3.2.2 Notification and Availability

BCOAPO has no issues with BC Hydro's proposal that RS 1823 and RS 1828 customers must notify BC Hydro by March 1 of each year that they wish to take electricity under RS 1893 for the forthcoming Billing Year<sup>21</sup>. BCOAPO notes that this timing aligns with the notification timing for BC Hydro's Freshet Rate and is consistent with the requirement that the rate is open to any RS 1823 or RS 1828 customer that is not concurrently taking service under the Freshet Rate<sup>22</sup>.

The Application proposes that "BC Hydro has the discretion to automatically cancel RS 1893 service where: (i) a customer does not respond to a BC Hydro curtailment notice; and (ii) where a customer with self-generation requests RS 1880 service in place of RS 1893 service in order to prevent the customer from switching between the two rates". In BCOAPO's view it is reasonable to provide such discretion in cases where a customer does not respond to a BC Hydro curtailment notice in instances where exceptional circumstances led to a non-response. However, such discretion should be applied judiciously otherwise the non-firm basis for the rate will be compromised.

On the other hand, BCOAPO does not see the need for any discretion instances where the customer requests RS 1880 service to replace its self-generation. BCOAPO submits that such instances should be considered equivalent to a decision by the customer to opt-out of RS 1893 and be treated accordingly. Otherwise, there is clearly an opportunity for the customer to switch between the two rates depending upon their relative prices for the month concerned<sup>23</sup>.

The Application also proposes that, on a voluntary basis, the subscribing customer can elect to opt-out of the pilot by providing written notice to BC Hydro at any time. However, in such cases (as with cases where the service is terminated by BC Hydro) the customer is not eligible to re-enrol for RS 1893 service for the balance of the current Billing Year. BCOAPO agrees with the proposal to permit the customer to voluntarily opt-out at any time. After all it is a "pilot" and both

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<sup>21</sup> The one exception is the period ending March 2021. See Exhibit B-4, BCUC 1.1.2

<sup>22</sup> Exhibit B-1, page 63, and Exhibit B-4, BCUC 1.1.2

<sup>23</sup> Exhibit B-4, BCUC 1.27.2

BC Hydro and customers are learning about workings of the proposed rate. BCOAPO also agrees with the proposal that such a customer is not eligible to re-enrol for RS 1893 service for the balance of the current Billing Year. BCOAPO views such provisions as necessary in order to ensure that customers are not able to simply opt in/out based on the monthly price for firm (RS 1823) service and service under the proposed IER.

### 3.2.3 Non-Firm Service

BC Hydro is proposing that RS 1893 service is non-firm and interruptible. This means that: i) BC Hydro will only provide service where it has energy and capacity to do so and ii) BC Hydro has the right to interrupt RS 1893 service for transmission and generation system constraints. It also means that RS 1893 load will not be included in BC Hydro's load forecast for either long term capital planning purposes<sup>24</sup>, for purposes of its revenue requirement applications<sup>25</sup> or for its monthly Energy Studies<sup>26</sup>. Furthermore, BC Hydro will not advance any generation or network system investments to serve RS 1893 load<sup>27</sup>.

Given that BC Hydro's proposed pricing of the IER does not explicitly include any allowance for costs associated with providing either generation or transmission capacity, BCOAPO supports the proposal that IER service is non-firm and interruptible for transmission and generation system constraints.

However, BCOAPO notes that while implications of RS 1893 service being non-firm may appear to be fairly onerous, in reality they are not. First, RS 1893 service is unlikely to be interrupted due to transmission or generation system constraints. Indeed, while BC Hydro has a total of five existing interruptible rate schedules for similar non-firm service in its Electric Tariff for transmission service customers, BC Hydro has not interrupted any of its transmission service customers under any of its interruptible rate schedules in each of the last five years<sup>28</sup>. Second, BC Hydro expects that no current RS 1823 customer that is eligible to take service under RS 1893

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<sup>24</sup> Exhibit B-12, BCOAPO 3.52.2.1

<sup>25</sup> Exhibit B-12, BCOAPO 3.52.2

<sup>26</sup> Exhibit B-12, BCOAPO 3.52.1

<sup>27</sup> Exhibit B-1, page 64

<sup>28</sup> Exhibit B-12, CEC 3.14.1

would be prevented from doing so due to lack of available local or network transmission capability<sup>29</sup>.

BC Hydro has stated that IER service will not be interrupted for economic reasons. In the Application, interrupting service for economic reasons refers to curtailment of service under conditions where energy and capacity is available, but providing service may result in an economic loss to ratepayers. BC Hydro has acknowledged that the ability to interrupt service for economic reasons may reduce the risk of such an economic loss to ratepayers. However, it has identified a number of issues with developing and enforcing reliable and transparent conditions under which service may be interrupted for economic reasons<sup>30</sup>.

In BCOAPO's view it is reasonable to preclude interrupting RS 1893 service for economic reasons provided the IER pricing sufficiently mitigates the risks to ratepayers of not being able to do so.

#### 3.2.4 IER Customer Baselines and Billing

In contrast to the Freshet Rate, where there are seasonal HLH and LLH baselines as well as a seasonal Reference Demand, BC Hydro proposes to use monthly HLH and LLH baselines and monthly Reference Demands for the IER. While not explicitly discussed in the Application BCOAPO assumes that the proposal for monthly baselines reflects the customer feedback received regarding the Freshet Rate Pilot where customers suggested moving to a monthly billing settlement (rather than seasonal)<sup>31</sup>.

BC Hydro acknowledges that with the use of monthly baselines and monthly billing settlement there some limited potential for load shifting under RS 1893 between months with no net increase in annual electricity use<sup>32</sup>. However, BC Hydro contends that the risks associated with such load shifting (i.e., reduced net revenues) are mitigated by: (i) the fact subscribing RS 1823 customers remain subject to the terms and conditions of TS 74, including Energy CBL resets, for annual RS 1823 energy purchases<sup>33</sup> and (ii) by the fact that customers must provide an estimate to BC Hydro of the amount of incremental energy that it expects to take, together with a description of the

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<sup>29</sup> Exhibit B-5, BCOAPO 1.5.1 and Exhibit B-12, BCOAPO 3.68.1

<sup>30</sup> Exhibit B-4, BCUC 1.9.4

<sup>31</sup> Exhibit B-1, Appendix D, page 15 of 296

<sup>32</sup> Exhibit B-5, BCOAPO 1.39.1 and CEABC 1.6.3

<sup>33</sup> Exhibit B-5, BCOAPO 1.39.2

operational and/or production changes that the customer plans to make at its plant to increase load<sup>34</sup>.

BCOAPO notes that TS 74 only triggers an adjustment in the CBL used for RS 1823 if “the total energy billed under RS 1823 in the previous Billing Year, as adjusted in accordance with section 4.4, is less than 90 per cent of the customer's Energy CBL or equal to or more than 110 per cent of the customer's Energy CBL”<sup>35</sup>. As result, while this provision does help mitigate against an RS 1893 customer undertaking a significant amount of load shifting, it by no means eliminates the risk associated with load shifting and the resulting reduction in net revenues.

Similarly, while the requirement that potential RS 1893 customers provide a description of the operational and/or production changes that the customer plans to make at its plant to increase load means that opportunity for load shifting cannot be the sole basis for a customer applying for rate, it does not totally preclude load shifting from occurring.

In light of the potential of load shifting (even with these provisions) BCOAPO submits that: (i) the risk of net revenue loss through load shifting should be recognized and accounted for the pricing of RS 1893 and (ii) the evaluation conducted at the end of the pilot should specifically look at whether the usage of RS 1823 energy has changed (i.e., declined) over the pilot period relative to what it was prior to the customer's participation in the Pilot.

BCOAPO also notes that setting the RS 1893 energy baselines and Reference Demand based on historic use means that the values do not incorporate any natural load growth that may occur during the years the Pilot is underway. Furthermore, BC Hydro has acknowledged that the RS 1823 Energy CBL reset will not capture any natural load growth that was billed under RS 1893 as, in accordance with TS 74, the Energy CBL reset determination can only consider RS 1823 energy purchases<sup>36</sup>.

BC Hydro notes that if the customer advises, or BC Hydro determines, that the customer has experienced natural load growth, alternative baselines and/or baseline adjustments would be determined in accordance with Special Conditions 8 and/or 9 and filed with the BCUC for

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<sup>34</sup> Exhibit B-11, BCUC 3.2.4

<sup>35</sup> TS 74, Section 4.3.1

<sup>36</sup> Exhibit B-5, BCOAPO 1.39.3

approval<sup>37</sup>. However, it is BCOAPO's view that in instances where incremental load arises as a result of the customer starting an idled production line, re-starting a piece of shutdown equipment or adding a production shift it may be difficult for BC Hydro to determine whether such result would have occurred even under RS 1823 pricing due to growth in demand for the customer's product(s) or was triggered by the IER pricing.

In light of the potential for customers' natural load growth to be included in the RS 1893 usage, BCOAPO submits that the associated net revenue loss risk should be recognized and accounted for the pricing of RS 1893.

The proposal regarding RS 1893 does include conditions (Special Condition 11<sup>38</sup>) designed to mitigate the risk of unintended use of incremental energy by limiting the amount of electricity a customer may purchase under RS 1893. Pursuant to Special Condition 11, if a customer's highest kVA Demand in HLH of a Billing Period is greater than the Monthly Reference Demand applicable to that Billing Period multiplied by 2.0, then: (i) the Monthly Reference Demand for that Billing Period will be automatically adjusted to be equal to 50 per cent of the highest kVA Demand in HLH during that Billing Period; and (ii) the HLH and LLH Baselines for that Billing Period will be automatically adjusted to be equal to 50 per cent of the total energy volumes taken by the customer in the HLH and LLH of that Billing Period. The adjustments to the Monthly Reference Demand and the HLH and LLH Baselines made pursuant to Special Condition 11 will be effective as of the start of the Billing Period in which the excess electricity was used and the adjusted Monthly Reference Demand and the adjusted HLH and LLH Baselines will remain in effect for that calendar month in future years of the RS 1893 pilot<sup>39</sup>.

In BCOAPO's view this limitation on RS 1893 use only addresses circumstances where there is a truly significant increase in consumption. It will clearly not capture situations where natural load growth as led to the re-start another production line or an added shift. Indeed, the 2 times factor has been chosen specifically to allow the IER to be used in such circumstances<sup>40</sup>. It will also not capture any load shifting that would arise under similar circumstances. In view of this, BCOAPO

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<sup>37</sup> Exhibit B-11, BCUC 3.2.3

<sup>38</sup> Per the renumbering of the Special Conditions in Exhibit B-1-2, Appendix C

<sup>39</sup> Exhibit B-1, pages 68-69

<sup>40</sup> Exhibit B-1, page 69

submits that there is still a need for the risk of net revenue loss through load shifting and natural load growth to be recognized and addressed through the pricing of the IER.

### 3.2.5 IER Pricing

As noted in Section 2.1 above, Net Incremental Energy sold under RS 1893 will be priced using day-ahead Mid-C weighted average index prices in the HLH and LLH, converted from U.S. dollars to Canadian dollars based on the Bank of Canada daily exchange rate on the applicable day(s). To this value BC Hydro proposes to apply a \$3.00/MWh adder on net RS 1893 energy volumes during the freshet Billing Periods of May through July and a \$7.00/MWh adder in all other Billing Periods<sup>41</sup>. The purpose of the “adder” is to mitigate the forecast risk of under-recovering marginal costs from participant customers and to incorporate a reasonable margin to address uncertainties and make a contribution to fixed costs (i.e., benefit all ratepayers<sup>42</sup>).<sup>43</sup>

#### *Marginal Cost to Supply IER*

In Appendix D of the Application<sup>44</sup>, BC Hydro explained that the marginal resource used to supply the Freshet Rate depended upon which of three system conditions existed at the time. In response to the information requests<sup>45</sup>, BC Hydro has confirmed that the same applies to the IER.

Under Conditions #1 and #2, the cost of the marginal resources is directly linked to the day-ahead Mid-C price<sup>46</sup>. More specifically, under Condition #1 (where the alternative is power export) the cost of marginal resource is the Mid-C price (in CDN \$) less the \$CDN equivalent of the \$US transmission charge and the 1.9 per cent losses deemed avoided<sup>47</sup>, which is roughly equivalent to the Mid-C price less \$7/MWh<sup>48</sup>. Under Condition #2 (where the IER is supplied by imports) the cost of the marginal resource is the Mid-C price (in CDN\$) plus the \$CDN equivalent of the \$US

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<sup>41</sup> Exhibit B-1, page 63

<sup>42</sup> Exhibit B-5, CEC 1.2.3

<sup>43</sup> Exhibit B-1, page 74, and Exhibit B-5, BCOAPO 1.25.1

<sup>44</sup> Page 22 of 296

<sup>45</sup> Exhibit B-12, BCOAPO 3.56.1

<sup>46</sup> Exhibit B-4, BCUC 1.11.1

<sup>47</sup> Exhibit B-12, BCOAPO 3.54.1.2

<sup>48</sup> Exhibit B-12, BCOAPO 3.71.1

transmission charge plus 1.9 per cent losses deemed incurred<sup>49</sup>, which is roughly equivalent to the Mid-C price plus \$7/MWh<sup>50</sup>.

However, under Condition #3, the cost of the marginal resource is the deemed marginal value of the water/energy removed to serve the additional load rather than being held in storage<sup>51</sup>. BC Hydro uses its Energy Studies to produce a value of the water in system storage over a three year operating time horizon and it is this “system marginal value” which is used to evaluate the cost of supplying IER under Condition #3<sup>52</sup>.

The Mid-C market price is an input to the Energy Studies, and is one of the key drivers that can significantly affect the output of the Energy Studies. As such, the Mid-C market price affects BC Hydro’s system marginal value, and BC Hydro has used the Mid-C price as a transparent proxy for BC Hydro’s modelled system marginal value as the Energy Studies and system marginal value are confidential. However, as noted, the Mid-C price is just a proxy. Furthermore, due to the confidentiality of its system marginal values BC Hydro is unwilling to provide information as to the historical correlation between the two<sup>53</sup>.

Overall, BCOAPO submits there is considerable uncertainty as to whether and to what degree the day-ahead Mid-C price reflects BC Hydro’s marginal cost to supply IER due to the fact that: i) the occurrence of System Conditions #1, #2 and #3 will vary from year to year depending upon hydraulic conditions, domestic load and transmission/generation availability and ii) when Condition #3 exists, the relationship between the day ahead Mid-C prices and BC Hydro’s marginal cost to supply IER usage (i.e., its system marginal value) is not readily defined. BCOAPO also notes that, since Condition #3 is expected to exist during most of the non-freshet period<sup>54</sup>, the uncertainty regarding the relationship between Mid-C prices and BC Hydro’s system marginal value is of greater concern with respect to IER pricing than is for the pricing of the Freshet Rate.

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<sup>49</sup> Exhibit B-12, BCOAPO 3.54.1.2

<sup>50</sup> Exhibit B-12, BCOAPO 3.71.1

<sup>51</sup> Exhibit B-1, Appendix D, page 24 of 296

<sup>52</sup> Exhibit B-4, BCUC 1.11.1

<sup>53</sup> Exhibit B-4, BCUC 1.20.6

<sup>54</sup> Exhibit B-12, BCOAPO 3.58.1

As a result, it is BCOAPO's conclusion that while the day-ahead Mid-C price is a reasonable starting point for pricing the IER, there is clearly a need for a mark-up or adder to address these uncertainties.

*BC Hydro's Proposed Energy Adder*

In support to its proposed energy adders (\$3/MWh in the freshet months and \$7MWh in the non-freshet months) BC Hydro modelled a number of adder values and alternatives where the adders varied by season<sup>55</sup>. The results, in terms of expected IER volumes and overall net revenues are summarized in the following table<sup>56</sup> where Option 2A-Flat represents BC Hydro's proposal.

**Table 13 Summary of Expected Net Revenue by Adder Option**

ENERGY CHARGE ADDER ALTERNATIVES	ADDER (\$/MWh)	Expected Incremental Load (GWh)	Expected Incremental Net Revenue (\$M)
Option 1A - Flat	<del>\$6.00</del> 8.00	264	\$ 1.47
Option 1B - Shaped		263	\$ 1.45
<b>Option 2A - Flat</b>	<b>\$ 7.00</b>	266	<b>\$ 1.32</b>
Option 2B - Shaped		265	\$ 1.29
Option 3A - Flat	<del>\$8.00</del> 6.00	268	\$ 1.12
Option 3B - Shaped		267	\$ 1.13

In its Application, BC Hydro also discusses the risks associated with its proposed adder<sup>57</sup>.

In BCOAPO's view there are shortcomings with BC Hydro's analysis. First, the financial analysis itself only considers the uncertainty associated with water flows<sup>58</sup>. There are several other inputs to the financial analysis where the actual future value is uncertain and BC Hydro has assumed a specific value as opposed to modelling a range of outcomes. These include: i) the strike price for incremental non-firm load for which a single value of \$55/MWh was used and ii) customer participation for which a fixed value of 33 MW per hour was used<sup>59</sup>.

<sup>55</sup> Exhibit B-1, page 71

<sup>56</sup> Exhibit B-1-1, page 79

<sup>57</sup> Exhibit B-1, pages 80-81

<sup>58</sup> Exhibit B-1, pages 59 & 75

<sup>59</sup> Exhibit B-12, BCOAPO 3.54.1.1

In the case of the strike price, BC Hydro states that the \$55 is based on its understanding of what customers consider the strike price to be<sup>60</sup>. However, in response to information requests BC Hydro has acknowledged that customers identified a range of possible strike prices varying from \$0/MWh to \$100.57/MWh<sup>61</sup>. Furthermore, sensitivity analyses indicate that a \$10 reduction in the assumed strike price will reduce expected net revenues by 30% whereas a \$10 increase would only increase net revenues by 20%<sup>62</sup>.

In the case of customer participation, basic economic theory plus the range of potential strike prices noted by customers clearly suggest that customer participation will likely increase at lower IER prices and vice-versa. Whether such results would lead to higher or lower net revenue overall is unclear. However, in BCOAPO's view, both this uncertainty and the uncertainty regarding the appropriate strike price need to be considered when establishing the appropriate value for the energy adder.

BCOAPO's second concern regarding the financial analysis filed with the Application is that it does not include any allowance for implementation costs nor does it make any attempt to include the potential impact of load shifting (including natural load growth). BC Hydro has acknowledged that these factors will affect an effect on the eventual ratepayer benefits<sup>63</sup>. In response to information requests BC Hydro revised its analysis to include implementation costs but readily acknowledged that the analysis did not include the impacts of load shifting or natural load growth<sup>64</sup>. Since no recognition of these factors has been incorporated into the financial analysis, BCOAPO submits that they should be a consideration in determining the appropriate level for the adder.

In addition to the preceding shortcomings regarding the financial analysis, BCOAPO has concern regarding the basis on which BC Hydro selected Option 2A-Flat from the range of alternatives considered. In its Final Argument<sup>65</sup> BC Hydro states the following with respect to the choice of the proposed \$7 adder:

“The \$7/MWh energy charge adder was proposed to maximize participation in the Pilot and encourage higher energy sales under the Incremental Energy Rate. Lower energy

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<sup>60</sup> Exhibit B-4, BCUC 1.21.4

<sup>61</sup> Exhibit B-12, BCOAPO 3.59.1

<sup>62</sup> Exhibit B-5, BCOAPO 1.41.2

<sup>63</sup> Exhibit B-12, BCOAPO 3.54.1.1

<sup>64</sup> Exhibit B-4, BCUC 1.16.2 and Exhibit B-11, BCUC 3.4.2

<sup>65</sup> Page 9

sales under the Incremental Energy Rate may mean reduced benefits to participating and non-participating customers.

BCOAPO notes that BC Hydro's financial analysis does not support the claim that lower energy sales may mean reduced benefits for non-participating customers. Indeed the analysis presented in the Application suggests that while a higher energy adder (i.e., \$8 as opposed to \$7) will reduce IER volumes from 0.8% it would increase expected incremental load net revenues (i.e., benefits to non-participating customers) by 12%<sup>66</sup>.

Moreover, when asked for the basis for choosing \$7 as opposed to \$8 for the value of the rate adder in the non-freshet period, BC Hydro replies included the following:

"In the Application, BC Hydro sought to balance feedback from the Association of Major Power Customers (AMPC) and customers who requested that the energy charge adder be priced lower and that the adder price be flat (rather than shaped) across non-freshet months for simplicity".<sup>67</sup>

"BC Hydro's proposal is to proceed with Option 2A (the \$7/MWh Adder) because it reflects AMPC's proposal and customer feedback"<sup>68</sup>.

"Through consultations with potential IER customers and AMPC, BC Hydro determined Option 2A was preferable to maximize participation in the pilot."<sup>69</sup>

BCOAPO further notes that the "customer feedback" that BC Hydro received regarding the design of the IER rate was almost exclusively from prospective customers (e.g., RS 1823 customers) or associations representing their interests<sup>70</sup>.

In BCOAPO's view BC Hydro's determination of the proposed value for the energy adder overly relied on the views of those customers who are likely to participate in the IER and whose interests therefore lie in having lower IER prices.

BCOAPO submits that a more balanced consideration of the benefits to participating and non-participating customer is required when determining the appropriate value for the adder. In this

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<sup>66</sup> Exhibit B-12, BCOAPO 3.60.1

<sup>67</sup> Exhibit B-4, BCUC 1.22.1

<sup>68</sup> Exhibit B-12, CEABC 3.15.7

<sup>69</sup> Exhibit B-12, BCOAPO 3.60.2

<sup>70</sup> Exhibit B-5, BCOAPO 1.22.1 and Exhibit B-12, BCOAPO 3.70.1 & 3.77.1

regard, BCOAPO notes that increasing the energy adder to \$8 reduces volumes by less than 1.0% while increasing expected net revenues by 12%<sup>71</sup>.

In addition, it is BCOAPO's submission that the determination of the energy adders needs to account for the following: i) the fact that BC Hydro's financial analysis did not consider the risks associated with a number of other key inputs (e.g. strike price and customer participation), ii) the fact that the analysis did not incorporate any assumptions regarding lower net revenue due to load shifting/natural load growth and iii) the fact the analysis did not allow for the uncertainty regarding the relationship between Mid-C prices and BC Hydro's system marginal values.

In light of these considerations, BCOAPO submits that, for purposes of the IER Pilot, the energy adder during the non-freshet period should be set at \$8/MWh, the value initially proposed by BC Hydro in its stakeholder consultations<sup>72</sup>.

### 3.3 Pilot Evaluation and Reporting

BC Hydro proposes to evaluate the Incremental Energy Rate Pilot, and provide an evaluation report to the BCUC. This evaluation is expected to be undertaken after completion of the third full fiscal year of the pilot (fiscal 2023) and will be filed with the BCUC in fall 2023. The Application sets out a list of thirteen items that will be evaluated<sup>73</sup>.

BC Hydro submits that an evaluation in December 2023 presents the best timeframe for assessing the Pilot as it will allow an evaluation of performance results over a range of conditions for a period over three years (from the commencement of January 1, 2020 to the end of BC Hydro's fiscal 2023, March 31, 2023). BC also notes that December 2023 is the earliest date by which it can provide a report that includes fiscal 2023<sup>74</sup>.

BCOAPO has a number of concerns with respect to the items to be evaluated:

- First, BCOAPO submits that the evaluation conducted at the end of the pilot should specifically look at the interaction between RS 1823 and RS 1893 during the pilot period and the BCUC should direct it to do so. This would include: i) looking at how customers' RS 1893 Energy Baselines (when summed for the 12 months) compare with their RS 1823 (annual) Energy Baselines and ii) looking at whether the usage of RS 1823 energy has changed (i.e., increased or decreased) over the pilot period

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<sup>71</sup> Exhibit B-12, BCOAPO 3.60.1

<sup>72</sup> Exhibit B-1, page 38

<sup>73</sup> Exhibit B-1, page 84

<sup>74</sup> Exhibit B-11, BCUC 3.5.1

- relative to what it was prior to the customer's participation in the Pilot (as discussed in section 3.2.4 above). BCOAPO notes that BC Hydro as indicated it is not opposed to including the type of information related to item (i) in its evaluation report<sup>75</sup>. With regard to item (ii), BCOAPO notes that this may already be included in BC Hydro's load shifting analysis<sup>76</sup> but that if it isn't the analysis should be expanded to do so.
- Second, BC Hydro intends<sup>77</sup> to apply the analysis methodology developed for the Freshet Rate Pilot and which is described in section 3.1.7 of Appendix D to analyse the load shifting (including natural load growth) under RS 1893. In the case of the Freshet Rate, this analysis included the 9 month non-freshet period where the determination of RS 1823 usage was not impacted (potentially constrained) by the Freshet Rate's baselines. However, in the case of RS 1893 the IER baselines can impact the determination of RS 1823 usage in all months of the year. As a result, it is unclear to BCOAPO how the methodology set out in Appendix D can provide an unbiased estimate of the impacts of load shifting. BCOAPO submits that the Evaluation Report will need to specifically address the appropriateness of using the methodology set out in Appendix D to assess load shifting in the case of RS 1893 and/or indicate how it has been adjusted to do so in an unbiased manner and the BCUC should direct BC Hydro to do so.
  - Third, as noted in section 3.2.5 above, System Condition #3, where BC Hydro's "system marginal value" is the marginal cost of the resources used to supply IER, is expected to prevail during most of the non-freshet months. As a result, one item of interest is the relationship (if any) between BC Hydro's system marginal values and the Mid-C prices which are the basis for pricing the IER. Indeed, there were information requests during the current proceeding which attempted to explore this relationship<sup>78</sup>. BCOAPO acknowledges that BC Hydro views its system marginal values as being confidential. However, it is BCOAPO's view that, given Condition #3 is expected to prevail for most of the year<sup>79</sup>, BC Hydro should attempt to find some way of addressing this issue that does not breach its confidentiality concerns and the BCUC should direct it to do so.

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<sup>75</sup> Exhibit B-12, BCOAPO 3.69.1

<sup>76</sup> Exhibit B-1, Appendix D, Section 3.1.7, Step

<sup>77</sup> Exhibit B-11, BCUC 3.4.2 and Exhibit B-12, BCOAPO 3.65.1

<sup>78</sup> Exhibit B-4, BCUC 1.20.6 and Exhibit B-12, BCOAPO 3.58.2

<sup>79</sup> Exhibit B-12, BCOAPO 3.58.1

BC Hydro also anticipates that the evaluation report will help guide whether any changes to the Incremental Energy Rate Pilot will need to be made and whether it should be made a permanent rate<sup>80</sup>. In BCOAPO's view an evaluation of what will effectively be a three-year pilot period (i.e. January 2020 to March 2023) may be sufficient to identify changes that may be need to the administration of the IER. However, it is likely to be an insufficient period to determine whether the IER should be made a permanent rate. The water flows on BC Hydro system can vary significantly from year to year<sup>81</sup>, such that three years of results for items such as net revenues may not provide a reasonable indication as to what the results are likely to be in future years. BCOAPO notes that this issue is further compounded if, for purposes of determining whether the IER should be offered on a permanent basis, BC Hydro intends to rely primarily on the result of the pilot as opposed to a forecast regarding the future performance of the IER as it did in the case of the Freshet Rate<sup>82</sup>.

If the evaluation results suggest that the IER should continue to be offered, then BCOAPO submits that evaluation should also address the need for continued monitoring of the rate and the frequency of subsequent "evaluation" reports. BCOAPO notes that BC Hydro appears to be amenable to including the question of continued monitoring in its evaluation of the IER Pilot<sup>83</sup>.

#### **4.0 Conclusion**

BCOAPO does not oppose the offering of the IER on a pilot basis subject to our concerns and recommendations outlined above.

ALL OF WHICH IS RESPECTFULLY SUBMITTED:

*Original on file signed by:*

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**For/Leigha Worth**, Executive Director  
BC Public Interest Advocacy Centre

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**Irina Mis**, Staff Lawyer  
BC Public Interest Advocacy Centre

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<sup>80</sup> Exhibit B-1, page 85

<sup>81</sup> BC Hydro F2020-F2021 RRA, Exhibit B-6, Ince 1.7.6

<sup>82</sup> BC Hydro's (Freshet Rate) Reply Argument, paragraph 20

<sup>83</sup> Exhibit B-12, BCOAPO 3.76.1