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January 23, 2018

Sent via eFile

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**Re: FortisBC Inc. – Project No. 1598911 – Community Solar Pilot Project – Final Order Amendment**

Dear Ms. Roy:

Further to our letter dated January 8, 2018 enclosing British Columbia Utilities Commission Order G-1-18 with Reasons for Decision, enclosed please find amended Order G-1-18A replacing Order G-1-18 due to a typographical error in the date of the Order.

The date of issuance is January 8, 2018, and not January 8, 2017.

Sincerely,

*Original signed by:*

Patrick Wruck  
Commission Secretary

/ad  
Enclosure



**ORDER NUMBER**

**G-1-18A**

IN THE MATTER OF

the *Utilities Commission Act*, RSBC 1996, Chapter 473

and

FortisBC Inc.

Application for a Community Solar Pilot Project

**BEFORE:**

R. D. Revel, Panel Chair/Commissioner

W. M. Everett, QC, Commissioner

D. A. Cote, Commissioner

on January 8, 2018

**ORDER**

**WHEREAS:**

- A. On April 26, 2017, FortisBC Inc. (FBC) filed, pursuant to sections 44.2 and 59-60 of the *Utilities Commission Act* (UCA), an application with the British Columbia Utilities Commission (Commission) seeking acceptance of a capital expenditure schedule relating to the proposed Community Solar Pilot Project in Kelowna, BC (CSPP) and for approval and implementation of new Rate Schedules 85A and 85B (Application);
- B. By Orders G-66-17 and G-79-17, the Commission established a regulatory timetable for the initial review of the Application which included a timeline for intervener registration and a procedural conference to be held in Vancouver on June 1, 2017;
- C. Following submissions made by interveners at the June 1, 2017 procedural conference, including a written submission dated May 31, 2017 by Mr. Scarlett, the Commission established, by Order G-89-17, an amended regulatory timetable which included one round of information requests (IRs) by the Commission and interveners, a deadline for interveners to file notice of their intent to submit evidence, and any further process to be determined;
- D. By Orders G-108-17 dated July 17, 2017 and G-114-17 dated July 21, 2017, the Commission established the remainder of the regulatory timetable, including a second round of IRs and the filing of written final and reply arguments; and
- E. The Commission has reviewed the evidence and arguments filed in the proceeding and finds that accepting the capital expenditure schedule related to the CSPP is not in the public interest.

**NOW THEREFORE** pursuant to sections 44.2 and 59-60 of the *Utilities Commission Act*, for the reasons attached as Appendix A to this order, the Commission orders as follows:

1. The capital expenditure schedule for the FortisBC Inc. Community Solar Pilot Project is rejected.
2. Approval of Rate Schedules 85A and 85B on an interim basis is denied.

**DATED** at the City of Vancouver, in the Province of British Columbia, this 8<sup>th</sup> day of January 2018.

BY ORDER

*Original signed by:*

R. D. Revel  
Commissioner

Attachment

**FortisBC Inc.**

**Application for a Community Solar Pilot Project**

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**Reasons for Decision**

January 8, 2018

Before:

R. D. Revel, Panel Chair/Commissioner

W. M. Everett, QC, Commissioner

D. A. Cote, Commissioner

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## 1.0 Introduction

### 1.1 Background and acceptances/approvals sought

On April 26, 2017, FortisBC Inc. (FBC) filed with the British Columbia Utilities Commission (Commission, BCUC), pursuant to sections 44.2 and 59-60 of the *Utilities Commission Act* (UCA), an application seeking acceptance of a capital expenditure schedule related to FBC's proposed Community Solar Pilot Project (CSPP, Program) and approval to implement two new rate schedules (RS) 85A and 85B (Application).

FBC proposes to construct and operate a 240 kilowatt (kW) community solar array, composed of 720 solar panels, on land it currently owns at its Ellison Substation in Kelowna, BC. FBC describes the CSPP as providing an opportunity for its customers to meet a portion of their energy needs with solar power. FBC estimates the total capital cost for the CSPP to be \$968,861, assuming an in-service date of April 2018.<sup>1</sup>

FBC seeks approval of two rate schedules associated with the CSPP – the Virtual Solar option (RS 85A) and the Solar Offset option (RS 85B) – but states that it intends to initially offer only the Virtual Solar rate option because its research indicates this is the “preferred” option and FBC considers offering only one option initially will be more administratively efficient.<sup>2</sup>

FBC proposes to implement the CSPP as a pilot project in order to “gauge customer interest and to gather information on the installation, operation, and maintenance of PV [photovoltaic] systems of this size.” FBC submits that this information “will allow the Company to make prudent decisions with respect to the potential to expand the Program in the future.”<sup>3</sup>

FBC therefore seeks Commission approval of the following:

1. Acceptance pursuant to section 44.2 of the UCA of the capital expenditure schedule consisting of the capital expenditures for the CSPP; and
2. Approval pursuant to sections 59-60 of the UCA of Rate Schedules 85A and 85B on an interim basis for a period of two years.<sup>4</sup>

### 1.2 Regulatory process

By Orders G-66-17 and G-79-17 dated May 8, 2017 and May 19, 2017, respectively, the Commission established regulatory timetables for the initial review of the Application, which included a deadline for intervenor registration and a procedural conference to be held in Vancouver on June 1, 2017.

The Commission also issued a letter on May 19, 2017 inviting participants to make submissions at the Procedural Conference on various matters, including whether there is a need for the Commission to hear, pursuant to section 44.2 of the UCA, a capital expenditure application, given that FBC is currently operating under a Performance Based Ratemaking (PBR) Plan.

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<sup>1</sup> Exhibit B-1, Application, p. ES-1; FBC Final Argument, p. 1.

<sup>2</sup> Exhibit B-1, p. ES-1.

<sup>3</sup> Ibid.

<sup>4</sup> Exhibit B-1, Appendix C.

At the Procedural Conference, FBC acknowledged that, although it is not necessary to file a section 44.2 capital expenditure application, it was appropriate to do so given the nature of the project, including the fact the project is a pilot dealing with issues of greenhouse gas (GHG) emissions and customer interest in solar energy, as well as customer engagement.<sup>5</sup>

Following the Procedural Conference, by Order G-89-17 dated June 2, 2017 and accompanying reasons for decision, the Commission established an amended regulatory timetable providing for one round of information requests (IR) and a deadline to file notice of intent to file intervener evidence. As part of the reasons for decision, the Commission accepted that it is appropriate for the Application to be reviewed under section 44.2 of the UCA given the nature of the project, namely that it is proposed to be a pilot, and the public interest considerations raised in the Application and during the Procedural Conference.

The remainder of the regulatory timetable was established by Orders G-108-17 and G-114-17 on July 17, 2017 and July 21, 2017, respectively, and included, among other things, a second round of Commission and intervener IRs and written final and reply arguments.

The following parties registered as interveners in the proceeding:

- British Columbia Hydro and Power Authority (BC Hydro);
- BC Sustainable Energy Association and the Sierra Club of BC (BCSEA-SCBC);
- Mr. Donald Scarlett;
- British Columbia Old Age Pensioners' Organization *et al.* (BCOAPO);
- Industrial Customers Group (ICG); and
- Resolution Electric Ltd. (Resolution).

With the exception of BC Hydro, all other interveners actively participated in the proceeding. Additionally, three parties registered as interested parties and one individual submitted a letter of comment.

### 1.3 Statutory and regulatory context

This section reviews the provisions of the UCA governing the Commission in determining whether to accept or reject the capital expenditure schedule for the CSPP and whether to approve the establishment of the new rate schedules 85A and RS 85B, as requested by FBC.

#### *Commission acceptance or rejection of a capital expenditure schedule*

Subsections 44.2(3) and (4) of the UCA provide that the Commission must accept the capital expenditure schedule, in whole or in part, if it determines that making the expenditures would be in the public interest or, reject the schedule, in whole or in part.

Section 44.2(5) of the UCA states that in considering whether to accept an expenditure schedule filed by a public utility, other than BC Hydro, the Commission must consider:

- a) The applicability of BC's energy objectives;
- b) The most recent long-term resource plan filed by the public utility under section 44.1, if any;

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<sup>5</sup> Procedural Conference Transcript Volume 1, p. 10.

- c) The extent to which the schedule is consistent with the applicable requirements under sections 6 and 19 of the *Clean Energy Act* (CEA);
- d) If the schedule includes expenditures on demand-side measures, whether the demand-side measures are cost-effective within the meaning prescribed by regulation, if any; and
- e) The interests of persons in BC who receive or may receive service from the public utility.

### *Commission setting of rates*

Sections 59 and 60 of the UCA set out what the Commission must consider in determining whether to approve the setting of rates for a utility. The Commission must, in setting a rate, consider all matters that it considers proper and relevant affecting the rate and must have due regard to setting a rate that:

is not unjust or unreasonable within the meaning of section 59 (including whether there is any undue discrimination, preference, prejudice or disadvantage in respect of a rate or service),

provides the public utility for which a rate is set a fair and reasonable return on any expenditure made by it to reduce energy demands, and

encourages public utilities to increase efficiency, reduce costs and enhance performance.

## **2.0 Key elements of the CSPP**

### **2.1 Project description**

As stated, FBC proposes to construct and operate a 240 kW community solar array, composed of 720 solar panels, at its Ellison Substation in Kelowna, which is approximately 1 kilometre (km) northwest of the Kelowna airport.<sup>6</sup> FBC states that the proposed project will not affect the operation of the substation and that it has undertaken preliminary discussions with Kelowna Airport authorities from which no concerns have been raised regarding the proximity of the array.<sup>7</sup> FBC also provided notification of the proposed CSPP to residents who are in close proximity to the Ellison Substation. FBC states that no concerns were raised by residents regarding the “aesthetics of the proposed CSPP.”<sup>8</sup>

FBC describes the CSPP as providing an opportunity for its customers to meet a portion of their energy needs with solar power. FBC initiated a Request for Proposal (RFP) process and received Engineer, Procure and Construct (EPC) proposals from three vendors. Skyfire Energy Inc. (Skyfire) has been selected on the basis of it being the most experienced and the lowest cost vendor.<sup>9</sup>

FBC estimates the total capital cost for the CSPP to be \$968,861<sup>10</sup> based on an in-service date of April, 2018, inclusive of Skyfire costs and FBC’s project management, system connections, communications, and consultation costs, plus a five percent contingency applied to all costs.<sup>11</sup> In addition, operations and maintenance (O&M) costs for the facility are expected to be \$9,000 in 2019 with a two percent inflation escalator. The expected

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<sup>6</sup> Exhibit B-1, ES-1.

<sup>7</sup> Exhibit B-1, p. 5.

<sup>8</sup> Exhibit B-2, BCUC IR 4.1.

<sup>9</sup> Exhibit B-1, p. 6.

<sup>10</sup> As updated in response to BCSEA-SCBC IR 7.1 for in service date of April 2018.

<sup>11</sup> Exhibit B-1, p. 6.

annual output of the CSPP in the first year is approximately 290,000 kilowatt-hours (kWh), or about 400 kWh per panel. This output is expected to decline at approximately 0.5 percent annually, which according to FBC, is typical for solar panels.<sup>12</sup>

FBC states that there is increased interest in solar PV systems, which is partially in response to the falling cost of solar PV components. It expects prices to continue to fall and adoption of solar panels as an alternative energy source to increase, pointing to increased participation in its Net Metering Program as support for this expectation. FBC explains that even if the cost of solar PV were to fall to the point where it was an alternative to utility supply, it would not help all customers. This is because, for many of its customers, the ownership, placement and operation of a PV system are neither feasible nor desirable. Moreover, rooftop or ground mounted solar installations are feasible only for certain property owners as customers in rental units or townhouses have more limited options. Additionally, with ownership there is a requirement for capital costs and ongoing O&M expenses.<sup>13</sup>

FBC states that the CSPP is viewed in isolation from its Long Term Electric Resource Plan (LTERP) as the energy produced is not needed to meet customer load and even if a deficiency existed, it acknowledges that this project would not be its choice to meet such a need. FBC continues by stating:

In general, the timing of solar generation does not help meet FBC's energy and capacity load resource gaps and if the CSPP had to be considered within the criteria used in the LTERP to select the optimal set of resources to meet FBC's load, it would not be built.<sup>14</sup>

Instead the CSPP is being "proposed to gauge customer interest in a solar offering and to gather information on the installation, operation, and maintenance of PV systems of this size."<sup>15</sup>

## 2.2 Customer feedback

In order to gauge the level of customer interest and preferences related to a solar energy offering, FBC contracted Sentis Market Research Inc. (Sentis) to conduct two research surveys – one in February 2016 and one in November/December 2016. The total cost to conduct the surveys was approximately \$60,000.<sup>16</sup>

The February 2016 survey included 506 residential customers and 217 commercial customers and was intended to explore customer awareness, knowledge and attitudes towards solar PV installation electricity generation and provide assistance in making decisions to move forward with a solar-based program. According to FBC, key results of the survey indicated broad support for offering solar energy as an alternative to meet energy demand. The survey results indicate the primary reason to consider rooftop solar among both groups of surveyed customers is to save money; although, there were also secondary reasons including GHG emission reductions, energy independence, resource preservation and energy security. FBC states one of the main reasons customers may consider community solar is to be part of a green community project and that this is "a particularly strong motivator among the residential and commercial customers who are most interested in joining a community solar garden." While noting that the survey results provide support for the CSPP, FBC also acknowledges that expectations regarding savings and the current price of solar may present a challenge to initial subscriptions and

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<sup>12</sup> Exhibit B-1, p. 7.

<sup>13</sup> Exhibit B-1, pp. ES-1, 4.

<sup>14</sup> FBC Final Argument, p. 2.

<sup>15</sup> Ibid.

<sup>16</sup> Exhibit B-2, BCUC IR 3.1.

ongoing viability of the program.<sup>17</sup> FBC further states that although the response by customers reflects an opinion that FBC should offer a solar option, the results do not provide an indication as to whether customers would necessarily take part in the offering.<sup>18</sup>

The November/December 2016 survey was an online survey of 305 residential and 102 commercial customers designed to examine perceptions and preferences for solar proposals more closely resembling those in the Application. Among the customers surveyed who stated they would not consider a community solar option, the main reason cited was a preference for installing solar panels on their own roofs. However, close to half of customers indicated they might consider participation in a community solar program within five years and both residential and commercial customers preferred the option of purchasing their own panels rather than a percentage of use from the community solar installation. Aside from cost, the study found that the main reason for not installing solar panels on roofs were concerns with respect to the customer moving and being unable to install the solar panels in the new premises. These concerns are intended to be addressed by the proposed CSPP. Based on its findings, FBC concludes there is reasonable support for a CSPP and customers recognize many of the impediments it is intended to address.<sup>19</sup>

### 2.3 Program description and rate schedules

All customers on a retail electricity rate are eligible to enroll in the CSPP, with the exception of those customers served under RS 81 (Radio-Off Advanced Meter Option) and those on a Time-of-Use (TOU) or flat energy charge rate. FBC states that these restrictions will minimize the billing system changes required to implement the pilot.<sup>20</sup>

FBC has designed the pricing for the CSPP to recover the incremental revenue requirement associated with the CSPP from Program participants over its 40-year expected life. Rates are designed to offset the initial capital costs and ongoing incremental program costs, but amounts collected in rates may differ from actual costs because they are based on an estimate. However, FBC does not intend to adjust rates on an annual basis.<sup>21</sup> The rate options are based on the recovery of the incremental revenue requirements solely from Program participants; however, this is dependent on the Program being fully subscribed for the entire 40 years.<sup>22</sup>

FBC states that for depreciation purposes the asset is classified under three broad groups: photovoltaic panels, substation type accessory equipment, and communication equipment. The average composite depreciation rate is 2.45 percent. FBC further states that the average service life of the photovoltaic panels based on panel degradation rates is 40 years. The panels to be installed in the CSPP have a typical output degradation of 0.5 percent per year and are expected to have an output of 80 percent at the end of the 40-year life. In accordance with standard industry practice, the average service life of the substation is 50 years while the communication equipment is 15 years.<sup>23</sup>

FBC has assumed a discount rate of 5.97 percent which equates to FBC's after-tax weighted average cost of capital (WACC). Inflation has been calculated at two percent for the purposes of the pilot. To value energy displacement costs due to solar generation, FBC has assumed the BC Hydro Power Purchase Agreement (PPA) as

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<sup>17</sup> Exhibit B-1, p. 2.

<sup>18</sup> Exhibit B-2, BCUC IR 3.7.

<sup>19</sup> Exhibit B-1, p. 3.

<sup>20</sup> Ibid., p. 10.

<sup>21</sup> Ibid.

<sup>22</sup> Ibid.

<sup>23</sup> Ibid., p. 11.

the resource and has taken into account future planned rate increases and BC Government target rate increases thereafter.<sup>24</sup>

FBC reports that it has developed two pricing mechanisms for use in the Program: the Virtual Solar option (RS 85A) and the Solar Offset option (RS 85B). These are equivalent in cost terms on a kWh basis but have different structures that may appeal differently to participants.

### *Virtual Solar option – Rate Schedule 85A*

Rate Schedule 85A, the Virtual Solar option, provides customers with the opportunity to receive the actual output of a specified number of solar panels by making a fixed monthly payment, meaning a customer would subscribe to a defined number of solar panels in the Ellison solar array at an estimated rate of \$7.58<sup>25</sup> per panel per month. In return, the customer would receive a credit on their energy bill equal to the proportionate output of energy produced by the number of subscribed panels relative to the total energy produced by the entire array. If, for example, a customer received credit for 100 kWh in a given month from their share of the solar array it would result in consumption being reduced by 100 kWh on that customer's bill. In the event that the subscribed energy generated by the solar array exceeds the customer's energy usage in a particular month, the excess energy will be carried forward on a kWh basis and applied to that customer's bill in a future month.<sup>26</sup> At the discretion of FBC, any unused excess energy as at March 31<sup>st</sup> of each year shall be credited to the customer at BC Hydro's 3808 Tranche 1 energy rate in effect at the time. In Fiscal 2017 this rate is \$46.99 per MWh.<sup>27</sup>

Under the Virtual Solar option customers may choose to receive the output from one or more panels up to a maximum of 100 percent of their usage on a kWh basis for the prior 12-month period. To allow residential customers the opportunity to subscribe, non-residential customers will be allowed to purchase a maximum of 25 panels during the first six months of the Program. After this period, remaining panels will be available for any eligible customers, although FBC retains the right to require customers to reduce the number of subscribed panels in the event of a material change in customer consumption resulting in the accumulation of unused annual output.<sup>28</sup>

### *Solar Offset option – Rate Schedule 85B*

Rate Schedule 85B, the Solar Offset rate option, will be offered only if the initial offering of the Virtual Solar rate option does not yield full subscription to the CSPP.<sup>29</sup>

Under RS 85B, customers will be allowed to specify a certain percentage of consumption in each billing period that will be served from the CSPP. Customers may elect to serve a set percentage from 10 percent to 100 percent, in 10 percent increments, of their energy consumption in each billing period from the Program at an estimated rate of \$0.248<sup>30</sup> per kWh. FBC states that this rate would not increase over time but notes that "subject to periodic review, [it] may need to be reduced in response to changes in Program participation or the competitiveness of the Program with other renewable options...." In the event the solar array does not generate sufficient output to offset the percentages of consumption subscribed by customers, FBC would reduce the

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<sup>24</sup> Exhibit B-1, pp. 11–12.

<sup>25</sup> As updated in response to BCSEA-SCBC IR 7.1 for in service date of April 2018.

<sup>26</sup> Exhibit B-1, p. 12.

<sup>27</sup> Exhibit B-1, p. 12, Appendix A, pp. 1-2.

<sup>28</sup> Exhibit B-1, p. 13.

<sup>29</sup> Exhibit B-1, p. ES-1.

<sup>30</sup> As updated in response to BCSEA-SCBC IR 7.1 for in service date of April 2018.

energy allocations of the customers under this rate option. They will then receive the same percentage of the available output as if no shortage existed.<sup>31</sup>

FBC states that it will ensure the total output of the CSPP will not be exceeded by the total expected consumption. In the case of the Virtual Solar option there is no danger of a mismatch of output to consumption since only the actual solar array output is allocated to customers during a given month. However, as previously noted, this is not the case under the Solar Offset option where the usage is variable and may create a mismatch of output to consumption.

### *Terms and conditions for RS 85A and 85B*

Service under either RS 85A or 85B has a minimum subscription term of 12 consecutive months. FBC notes that this term is low as compared to a customer installing panels at their home but believes this will mitigate costs related to account management and the management of customer waitlists. Following completion of the 12-month term, customers have the option of leaving the Program without penalty. In the event a customer moves to a new location within the service area, the subscription is transferrable. If movement is out of the service area, the customer will be removed from the Program.<sup>32</sup>

Assuming the CSPP rates became permanent, FBC states the rates would not increase over time but, subject to periodic review, may need to be reduced in response to changes in Program participation or the competitiveness of the Program with other renewable options such as rooftop solar that may decrease during the life of the Program.<sup>33</sup> In support of this, FBC states it “believes that for the pilot project with benefits to all customers and the potential for a small impact only if not all costs are recovered... early adopters of the Program should continue to receive the certainty of price that is a feature of the pricing structure.”<sup>34</sup>

FBC submits that given the small number of panels in the solar array relative to its customer base, the current level of interest in small-scale generation and net metering, and the pricing of the Virtual Solar rate, it expects the CSPP will be fully subscribed.<sup>35</sup> In the event of Program under subscription, any unneeded power will be added to the FBC resource stack and displace other sources of power.<sup>36</sup> FBC further explains that in the event the CSPP is not fully subscribed in each year during the 40-year period, “the portion that is not recovered in each year from participants will be recovered from FBC general customers.” FBC further explains that if there is no subscription and the CSPP is terminated, the levelized rate impact on its general customers would be 0.017 percent over the 2017 approved revenue requirement.<sup>37</sup>

FBC states that these rate schedules are specific to the CSPP and acknowledges that based on this pilot there may be future solar projects where rates may need to be developed. To handle this eventuality, FBC has drafted these rates specifically for “Defined Solar Generation Resources” (DSGR) allowing future solar projects to be added to the rate schedule. This DSGR has been defined as the Ellison Solar Array.<sup>38</sup>

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<sup>31</sup> Exhibit B-1, p. 13.

<sup>32</sup> Ibid., pp.14–15.

<sup>33</sup> Ibid., p. 12.

<sup>34</sup> Exhibit B-2, BCUC IR 14.5.

<sup>35</sup> FBC Final Argument, p. 4.

<sup>36</sup> Exhibit B-1, p. 14.

<sup>37</sup> Exhibit B-2, BCUC IR 16.1.

<sup>38</sup> Exhibit B-1, p. 14.

## 2.4 Program administration, reporting and future process

FBC states that the promotion of the Program will be limited to a series of news releases and augmented by a presence on the website, twitter announcement and an e-mail notation to its E-billing customers. In the event these promotional efforts do not result in full subscription to the Program, additional customer communication will be considered. FBC does not consider the costs of these additional customer communications to be material.

FBC states it will be collecting performance data on the solar program and its value to customers on an ongoing basis. It plans to file a report with the Commission, also to be posted to the FBC website, with the following information on a quarterly basis:

- Project energy production;
- Operating and maintenance work and costs;
- Program subscription rates; and
- Program waitlist status.

FBC states that at the end of the two-year pilot it will either apply to the Commission to continue the Program with either one or both of the pricing schedules or to discontinue the Program. In order to assess the Program and determine whether it should be continued, FBC proposes filing with the Commission, two years after the initial start-up date, an assessment of the Program's ongoing viability.<sup>39</sup>

## 3.0 Issues arising

A number of issues have been raised with respect to the CSPP and its approval over the course of this proceeding. Among these are the following:

- Implications of Customer Feedback surveys;
- Proposed approach to rate schedules and cost recovery; and
- Statutory considerations, including BC's Energy Objectives, inclusion in the LTERP, interests of persons who receive or may receive service, and project need and its impact on the CSPP being in the public interest.

Each of these issues relates to the Panel's consideration and decision on approval of the CSPP proposal and rate schedules. Therefore, each will be outlined and discussed in some detail prior to the Panel outlining its conclusions and determinations on the proposed CSPP and related rate schedules.

### 3.1 Implications of customer feedback surveys

FBC states that its survey results indicate that interest in community solar is driven primarily by the prospect of saving money overall, although being part of a community green project is a strong secondary motivator. FBC also states that savings expectations among customers may present challenges with the initial subscription and ongoing viability and that "customers may choose not to participate once the current economics of solar are understood."<sup>40</sup>

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<sup>39</sup> Exhibit B-1, pp. 16–17; Exhibit B-2, BCUC IR 6.4.

<sup>40</sup> Exhibit B-4, BCSEA-SCBC IR 4.2.

FBC further submitted: “It is not possible to determine from the results of the research whether a customer’s interest in being part of a green community is a strong enough secondary motivator to overcome the lack of energy savings in the short to medium term expected from subscribing to the CSPP.”<sup>41</sup>

The nature of the survey questions and customers’ interpretation of the questions were explored in a number of Commission and intervener IRs. FBC responded in part as follows:

FBC acknowledges that the surveys it undertook were limited in scope and did not contain a full range of questions that could have been asked regarding the specifics of a community solar offering or customers’ general understanding of clean and renewable resources, such as those discussed in this series of IRs. Further, even if more questions had been asked, surveys are inherently limited in the information they can provide, particularly when they are asking prospective questions. Ultimately customer preferences related to community solar will not be well understood without a pilot. That is why FBC is proposing the CSPP.<sup>42</sup>

FBC confirmed that it did not ask questions regarding customer price sensitivity to participate in a community solar project, and stated that the “necessary line of questioning was omitted because there were no definitive contribution amounts available at the time the research was conducted.”<sup>43</sup> FBC also stated that the survey results “cannot speak to the level of understanding/awareness of the link between community solar and GHG emissions.”<sup>44</sup> Additionally, customers were not asked about their understanding of the meaning of “clean” energy, and FBC states that given that 50 percent of customers surveyed selected hydro as a clean energy source behind solar at 90 percent, wind at 85 percent and geothermal at 66 percent, it may be an indication that not all customers believe that hydro is clean and renewable.<sup>45</sup>

FBC notes that while solar power is “objectively more expensive and arguably no ‘greener’” than its existing electric resources, customers continue to install solar panels under the net metering program and states that the Nelson Solar Garden, according to Nelson Hydro, is fully subscribed. Moreover, for the CSPP to be fully subscribed there is a requirement for only 0.2 percent of customers to subscribe to 3 panels each.<sup>46</sup>

### *Position of the parties*

BCOAPO points out that the FBC customer surveys concluded that residential customers who are most likely to consider rooftop solar (which would be used in conjunction with net metering) are particularly motivated by energy security and resource preservation while commercial customers are most likely motivated by energy independence. BCOAPO submits that these are quite different than the reasons customers give for participation in a community solar project (i.e. saving money, participation in a green project and GHG emissions reduction). Based on these differences, and the fact that unlike in a community solar program, rooftop solar customers own (or lease) the installations, BCOAPO believes significant weight should not be attached to the increase in net metering customers when determining the need/interest in community solar projects.<sup>47</sup>

BCOAPO also raises concerns with respect to using the survey results as a means to gauge Program participation. In its view, there is a disconnect between what customers expect from participation and what will actually occur

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<sup>41</sup> Exhibit B-9, BCUC IR 19.2.

<sup>42</sup> Ibid., BCUC IR 19.1.

<sup>43</sup> Exhibit B-2, BCUC IR 3.6.

<sup>44</sup> Exhibit B-9, BCUC IR 19.3.

<sup>45</sup> Ibid., BCUC IR 19.4, 19.5.

<sup>46</sup> Ibid., BCUC IR 19.1.

<sup>47</sup> BCOAPO Final Argument, p. 3.

as it is clear that customers will not save money but expect to have greater financial benefit through participation. Moreover, while customers indicate that they would be willing to contribute a small amount to offset the cost of solar, the surveys provided no indication as to how much the differential might be. BCOAPO also notes that the actual environmental benefit of the CSPP is negligible which is also contrary to customer expectations.<sup>48</sup>

BCSEA-SCBC considers FBC's expectation that the CSPP will be fully subscribed to be reasonable and "it would not be worthwhile for FBC to spend additional money trying to fine tune the estimate of market potential."<sup>49</sup>

Resolution states that the background market research questions are not sufficient to gain real insight as to customers' willingness to pay the solar offering cost of \$0.248/kWh. It submits that while the research established that participants would be willing to pay a small premium "no intelligence was gained with respect to any value in monetary terms". Resolution questions why an organization would invest close to \$1 million without knowing the level of commitment the customer was willing to carry.<sup>50</sup>

FBC submits the surveys it has conducted are sufficient and "there is no real substitute for undertaking a pilot project to gauge customer interest once the details are available." FBC reiterates that part of the reason of having a pilot is to "collect customer feedback and gauge interest in the CSPP structure."<sup>51</sup>

### 3.2 Proposed approach to rate schedules and cost recovery

As outlined in Section 2.3, the proposed rate schedules are designed to recover the incremental revenue requirements from the Program participants only if there is full subscription of the energy output from the Ellison solar array over its 40-year estimated life. If the array is not fully subscribed for the entire 40-year period, or the rate charged to participating customers is reduced during the 40-year period, a shortfall in revenue would exist which would then be recovered from all FBC ratepayers. FBC explains that any unsubscribed output would be added to the existing resource portfolio, reducing power purchases from other sources and increasing capital carrying costs, the net effect being a "modest cost" to all FBC customers.<sup>52</sup>

When asked to provide other rationale to support the CSPP being in the public interest beyond the potential level of customer interest in solar energy, FBC responded as follows:

Generally speaking, while customer desire is a consideration in the development of a rate or program, it would not be sufficient in itself to put such a project or rate in place. However, since the CSPP is designed to recover the associated costs from only those customers that participate in the Program the Company [FBC] has proceeded with the Application.<sup>53</sup>

The issue the Panel must consider is whether the evidence presented is sufficient to support the assertion that in all likelihood there will be full subscription over the 40-year life of the Program, and in the event this does not occur, whether it is reasonable to charge any shortfall in revenue requirements to all FBC ratepayers.

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<sup>48</sup> BCOAPO Final Argument, p. 3-4.

<sup>49</sup> BCSEA-SCBC Final Argument, p. 3.

<sup>50</sup> Resolution Final Argument, p. 2.

<sup>51</sup> FBC Reply Argument, p. 9-10.

<sup>52</sup> Exhibit B-2, BCUC IR 8.3, 14.6; Exhibit B-1, ES-2.

<sup>53</sup> Exhibit B-2, BCUC IR 9.2.

FBC submits that only 0.22 percent of residential customers would be required for the CSPP to be fully subscribed, but it will take approximately 17 to 40 years for an average residential customer to start saving enough money on his/her annual bills to offset the cost of the panel.<sup>54</sup>

The risks of the CSPP being able to maintain full subscription for the entire 40-year estimated life of the project amid future declining solar PV costs was explored in IRs. FBC stated that increases in future electricity prices would increase the relative financial benefit of the CSPP and even as more efficient and cheaper technology for generating clean renewable energy becomes available, customers will continue subscribing to the CSPP during the entire 40-year period. This is because customers may not be able to install or operate their own solar panels and thus cannot upgrade unless this option is offered by FBC. FBC states this is similar to customers who install and operate their own solar panels not being able to avail themselves of “more efficient and cheaper technology” without abandoning their original investment.<sup>55</sup>

FBC states that the CSPP rate would not increase over time, but subject to periodic review, may need to be reduced in response to changes in Program participation or the competitiveness of the Program with other renewable options such as rooftop solar, which may decrease in cost during the life of the Program.<sup>56</sup> FBC further stated that if in the future it believes “it has become more economic from a general ratepayer perspective to reduce rates and increase subscription levels than it is to maintain rates and have lower subscription levels, FBC would apply to reduce rates.” This could result in rates not fully recovering the incremental cost of the Program.<sup>57</sup> However, FBC submits that because the CSPP will gather technical information on solar installations, the level of customer participation, feedback from customers and financial information, it has value to “all customers, whether they participate in the pilot or not.” It is therefore appropriate to recover any shortfalls from non-participating customers so long as the costs were prudently incurred.<sup>58</sup>

FBC was asked whether the fact that the Nelson Hydro Solar Garden is reported to be fully subscribed indicates to FBC that it would be able to achieve full subscription for the CSPP under a similar type of program offering. As described in BCUC IR 17.1, the key characteristics of the Nelson Hydro Solar Garden are as follows:

- Investment in the project is for a term of 25 years;
- A minimum level of subscription was required prior to Nelson Hydro commencing construction of the solar garden; and
- Customers who wish to subscribe to the solar offering must pay for the full cost of the solar panel upfront, either through a lump sum payment or through the use of on-bill financing/loan.<sup>59</sup>

FBC responded as follows:

FBC believes it would be possible, although somewhat more difficult, to achieve full subscription for the CSPP under a program offering in which customers were required to pay the full cost of the solar panel upfront. This is because FBC believes a higher up-front investment from the

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<sup>54</sup> Exhibit B-2, BCUC IR 3.9, 13.3.

<sup>55</sup> Exhibit B-3, BCOAPO IR 4.1; Exhibit B-9, BCUC IR 22.3.

<sup>56</sup> Exhibit B-1, p. 12.

<sup>57</sup> Exhibit B-3, BCOAPO IR 9.2.2.

<sup>58</sup> Exhibit B-9, BCUC IR 23.6.

<sup>59</sup> Exhibit B-2, BCUC IR 17.1; Exhibit A2-1.

customer will be less appealing to customers that do not actually receive a physical solar panel.<sup>60</sup>

However, FBC confirms that this type of offering was not explored in the Sentis customer surveys.<sup>61</sup>

### *Position of the parties*

BCOAPO raises two concerns with regard to the rates. The first of these relates to the permanency of rates for those who enroll under the CSPP. The second relates to FBC's lack of commitment to the handling of the Program at the end of the two-year pilot. BCOAPO states that any Commission approval should clearly signal the temporary nature of the rate in the rate schedules.<sup>62</sup>

BCOAPO states that it considers the most compelling evidence that the project will be fully subscribed to be the success of the Nelson Hydro Solar Garden which it describes as "more aggressive in its requirements for upfront payments." While this provides some assurance, BCOAPO states it does not share FBC's certainty that the project will be fully subscribed.<sup>63</sup>

BCOAPO notes that the Commission identified two possible ways to mitigate the risk of CSPP costs being passed on to all ratepayers. One was to require a minimum subscription prior to construction, and the other was to extend the subscription period from 12 months to five years. BCOAPO submits that neither of these alternatives materially mitigates the risk, as there are problems with both. With respect to requiring a minimum subscription prior to construction, customers would be less likely to confirm participation unless they know the price, and fixing the price prior to construction would not allow for increased rates to offset actual cost overruns. A requirement for a 5-year subscription rate would likely affect the level of participation and is not in keeping with a pilot program which may not continue beyond two years.<sup>64</sup>

Scarlett states that while it is important to protect the interests of the CSPP participants it is also important to protect the interests of the rest of FBC customers. He considers the risk to non-participating customers to be significant as 40 years is a "very long time to predict whether participants will stay in the program". Moreover, an "obvious risk" to the Program is that "CSPP participants will improve their understanding of the program or the price of solar panels will continue to fall dramatically...."<sup>65</sup>

ICG submits that customers other than those taking service from the CSPP should not be held responsible for the costs. All costs should be borne by either the CSPP participants or FBC itself.<sup>66</sup>

BCSEA-SCBC states it is satisfied that FBC's financial estimates are reasonable and the level of risk to ratepayers is small and manageable and justified by the value of the project. In its view, the size of the exposure if the program is undersubscribed is small and manageable having a maximum impact of only 0.017 percent.<sup>67</sup>

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<sup>60</sup> Ibid., BCUC IR 23.1.

<sup>61</sup> Ibid., BCUC IR 23.3.

<sup>62</sup> BCOAPO Final Argument, p. 10.

<sup>63</sup> Ibid., p. 4.

<sup>64</sup> Ibid., p. 13.

<sup>65</sup> Scarlett Final Argument, p. 2.

<sup>66</sup> ICG Final Argument, p. 9.

<sup>67</sup> BCSEA-SCBC Final Argument, p. 3.

Resolution favours FBC moving forward with a community solar offering using terms and conditions similar to the Nelson Hydro Solar Garden project, arguing that it offers less risk to the FBC ratepayers in the event of lower subscription levels.<sup>68</sup>

FBC takes issue with ICG's suggestion that non-subscribing customers should bear no cost under any circumstance, arguing that this suggestion is unreasonable and inconsistent with the handling of other optional rate programs offered by FBC. FBC similarly argues against ICG's assertion that FBC should bear any unsubscribed costs. FBC submits the Program is responsive to customer demand, has customer benefits and should be encouraged.<sup>69</sup>

With respect to concerns raised by BCOAPO, FBC states it had previously clarified that rates would not increase but could be lowered over the life of the project. FBC also confirmed it covered in both its Application and in response to BCSEA-SCBC IR 15.2, that there is a potential to modify the structure of the rate or to pool the costs of future commissioned projects.<sup>70</sup>

FBC reiterated its comments concerning challenges to subscription and ongoing viability, relating its experience with the Net Metering Program, the Nelson Solar Garden and discussions underway with First Nations. It also submits that "risks that might be associated with unfriendly pricing can be mitigated by being mindful of what forms of pricing might be unattractive, and avoiding them." FBC states it has been mindful of rate-setting that could serve as a deterrent, noting that it does not wish to amend the proposed rate schedules from a 40-year recovery period to a 25-year recovery period because of the 15 percent impact on rates.

FBC states that if the Commission is concerned about the level of subscription, although not ideal, it is prepared to implement the following to help further mitigate risk:

- A minimum subscription requirement prior to commencing construction, such as requiring that the CSPP be 75 percent subscribed prior to commencing construction (FBC states that this relates as well to certain points made by Resolution about reducing risk); and/or
- Extending the minimum subscription period to a minimum of 5 years or some other time period.<sup>71</sup>

### 3.3 Statutory considerations

In the following subsections the Panel considers the requirements under section 44.2(5) of the UCA. Subsection 44.2(5)(d) does not apply because the expenditure schedule for the CSPP does not include demand-side management measures.

#### 3.3.1 BC's clean energy objectives and sections 6 and 19 of the CEA

Section 6 of the CEA requires a public utility, other than BC Hydro, to consider BC's energy objective of achieving electricity self-sufficiency by generating at least 93 percent of the electricity in BC from clean or renewable resources.

Section 19 of the CEA does not apply because FBC is not a prescribed public utility.

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<sup>68</sup> Resolution Final Argument, p. 3.

<sup>69</sup> FBC Reply Argument, pp. 6-7.

<sup>70</sup> FBC Reply Argument, p. 23.

<sup>71</sup> Ibid., pp. 13-14.

FBC submits that “the existing resources utilized by FBC to serve customer load are already overwhelmingly clean and renewable; being composed primarily of FBC’s own embedded hydro-electric generation and long-term contracts with other entities engaged in hydro-electric energy production.”<sup>72</sup> FBC estimates that 95 percent of the 2017 forecast load, after planned DSM, will be served by clean and renewable resources.<sup>73</sup> As a result, FBC confirms the CSPP is not necessary to meet either its own clean energy objectives or to meet any clean energy objectives put forth by government.<sup>74</sup> Furthermore, the CSPP is not expected to result in GHG reductions and the output of the CSPP will likely offset hydro-based energy purchases and therefore will have “little to no effect” on FBC’s overall percentage of clean generation.<sup>75</sup>

### 3.3.2 Long-term electric resource plan

FBC reports that it filed its most recent LTERP on November 30, 2016 and the CSPP was identified in section 2.3.3.1 of the LTERP.<sup>76</sup> FBC submits:

[The CSPP is] viewed in isolation from the LTERP since the energy it will produce is not required to meet customer load, and were FBC forecasting an energy deficiency it is unlikely that a resource similar to the CSPP would be the option of choice to meet the need.<sup>77</sup>

FBC further states:

The CSPP is a customer driven project that does not rely upon the energy it produces as a justification for either proceeding with the initial installation covered by the current Application, or any future expansion that might occur with the planning horizon of the LTERP. For this reason, FBC considers the CSPP and the LTERP to be unrelated and while they should not, and do not, conflict with each other, complete alignment should not be expected. If the CSPP had to be considered within the criteria used in the LTERP to select the optimal set of resources to meet FBC’s load, it would not be built.<sup>78</sup>

#### *Position of the parties*

ICG argues the following: “In other words, FortisBC acknowledges that in the case of the CSPP the LTERP should not be ‘carried out.’ Or the inverse, FortisBC acknowledges that the CSPP should not be built if the LTERP is ‘carried out.’” ICG concludes that the Commission must either reject the LTERP and approve the CSPP or accept the LTERP and reject the CSPP.<sup>79</sup>

BCSEA-SCBC states in its view the CSPP is neither intended to be a resource option nor should it be evaluated in this way. BCSEA-SCBC submits the Commission should consider the Application in terms of the purpose of the CSPP which is “to provide customers with a new renewable energy option, and to provide information to consider in the development of potential expanded offerings in the future.”<sup>80</sup>

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<sup>72</sup> Exhibit B-1, Table 5-1, p. 9.

<sup>73</sup> Exhibit B-2, BCUC IR 9.4.1.

<sup>74</sup> Ibid., BCUC IR 9.3.

<sup>75</sup> Ibid., BCUC IR 9.2, 9.4.

<sup>76</sup> Exhibit B-1, Table 5-1, p. 9.

<sup>77</sup> Exhibit B-2, BCUC IR 9.6.

<sup>78</sup> Exhibit B-2, BCUC IR 9.7.

<sup>79</sup> ICG Final Argument, pp. 3–4.

<sup>80</sup> BCSEA-SCBC Final Argument, p. 3.

FBC submits that ICG's position is "unsound" as the LTERP and CSPP applications serve separate functions and not everything done by a utility need be in the LTERP. FBC states that its position on this matter has been clear from the outset and agrees with BCSEA-SCBC that the purpose of the CSPP is to provide customers with a renewable energy option and to gather information which may be helpful in designing future offerings. In FBC's view, the matter before the Commission is the approval of the CSPP and asserts it has addressed the relationship between the CSPP and the LTERP in its responses to information requests.<sup>81</sup>

### 3.3.3 Interests of persons who receive or may receive services

FBC confirms that customer interest in solar energy is the primary public interest justification for the CSPP<sup>82</sup> and submits the CSPP is being proposed primarily as a result of the following:

...FBC's research involving its own customers, the current level of interest in the FBC net metering program, and publicly available customer perception data regarding the emergence of solar technology in North America lead the Company to believe that a certain portion of its customer base will want solar energy as an option, and may not have the ability or desire to install it themselves.<sup>83</sup>

FBC acknowledges that while customer desire is a consideration in the development of a rate or program, it is not, by itself, sufficient justification for a rate or project. However, in this instance FBC has moved ahead because the Program has been designed to recover associated costs from only those customers participating in the Program.<sup>84</sup>

As previously stated, FBC explains that the CSPP is "designed to gauge customer interest and to gather information on the installation, operation, and maintenance of PV systems of this size"<sup>85</sup> and it "will gather technical information on solar installations in the FBC service area, level of customer participation, feedback from customers, and financial information."<sup>86</sup>

As outlined in Section 3.1, FBC has undertaken two research studies it believes supports moving ahead with the project but also states there is no substitute for conducting a pilot project to gauge customer interest.

#### *Position of the parties*

BCOAPO in principle supports environmentally sustainable energy but believes this project offers "little real benefit" as it neither displaces GHG-generated energy nor fulfills FBC's clean energy goals or generation needs. Instead, in BCOAPO's view, this pilot project has been designed to fulfill what FBC perceives as its customers' preferences. Because of the lack of a clear, demonstrable need, BCOAPO states it is difficult to question the prudence of a project in which "the risk of under subscription lies with FBC's non-participating ratepayers" as opposed to project subscribers or shareholders. BCOAPO summarizes its position by stating it is not convinced there is a demonstrable need for the project and it does not believe FBC has put in place sufficient protections for its non-participating ratepayers.<sup>87</sup>

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<sup>81</sup> FBC Reply Argument, pp. 1–2.

<sup>82</sup> Exhibit B-2, BCUC IR 9.1.

<sup>83</sup> Ibid., BCUC IR 9.2.

<sup>84</sup> Ibid.

<sup>85</sup> Exhibit B-4, BCSEA IR 1.1.

<sup>86</sup> Exhibit B-9, BCUC IR 23.6.

<sup>87</sup> BCOAPO Final Argument, pp. 13–14.

Resolution states that FBC has created “a very elaborate scheme” offering no long-term solution but providing a quick termination option for FBC with all the costs passed on to the rate base. Resolution is opposed to the proposed terms and conditions of the CSPP offering, but is in favour of FBC developing a community solar offering using similar terms and conditions as the Nelson Hydro Community Solar Garden project.<sup>88</sup>

While not specifically addressing section 42.2 of the UCA, BCSEA-SCBC supports Commission approval of the CSPP and the associated rates. In BCSEA-SCBC’s view, “the CSPP’s level of risk to ratepayers is small and manageable and justified by the value of the project.”<sup>89</sup>

FBC addresses project need in its reply argument, stating “need should not be the only circumstance in which a pilot project may be undertaken.” It argues that if a utility were constrained from “taking and exploring steps in advance of immediate need, in the future it might find itself in a reactive stance, and indeed less equipped to address whatever ultimately does arise.” With reference to BCUC IR 1.1 where the existence of service offerings not driven by public need was questioned, FBC interprets (in the context of the question) public need to refer to the utility’s ability to deliver on its primary obligation, which is to deliver electricity to its customers in a safe and cost effective manner. FBC acknowledges that by this definition the CSPP does not qualify as a “public need”. However, it does outline a number of service offerings that have been put in place based on customer preference rather than public need under this definition.<sup>90</sup>

FBC responds to certain interveners’ suggestion that there is lack of benefit to be derived from the CSPP. FBC submits the CSPP provides benefits to all its customers, whether direct participants to the CSPP or not; namely, (i) more reliable information gathering that will allow the utility to assess whether to potentially engage in solar energy on a bigger scale; (ii) providing information to other stakeholders, potentially allowing more customers to access net metering-like benefits; (iii) enhancing public awareness of solar power, potentially enhancing customer awareness of green energy and enhancing public awareness of environmentally-oriented rate designs; and (iv) responding to customer interest.<sup>91</sup>

#### 4.0 Commission determination

A number of important issues have been raised with respect to this Application which leads the Panel to find that the CSPP is not in the public interest. Primary among these is the finding that FBC has not established an adequate basis for the need for this additional product offering nor has it provided justification that the benefits offset the risks undertaken by FBC ratepayers.

FBC has acknowledged that its existing resources relied upon for customer load are overwhelmingly clean and renewable, and the addition of a solar array does not result in GHG reductions, nor is it necessary to meet either the provincial government or its own clean energy objectives. FBC also acknowledges the CSPP does not qualify as a public need in terms of delivery of electricity to its customers in a safe and cost effective manner. BCOAPO has characterized this project as offering little real benefit and as being designed to fulfill what FBC perceives as its customers’ preferences. The Panel agrees. We believe there may have been some justification in moving ahead with the Program if the need for additional clean energy had been established or if it could be demonstrated there was no risk of additional costs to non-participating ratepayers. However, the evidence does not support this. In spite of being unable to specify an identifiable need for this project, FBC has designed the

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<sup>88</sup> Resolution Final Argument, p. 4.

<sup>89</sup> BCSEA-SCBC Final Argument, p. 3.

<sup>90</sup> FBC Reply Argument, p. 3.

<sup>91</sup> FBC Reply Argument, pp. 4-5.

Program so the risk for any revenue shortfall that may be incurred over the 40-year life of the project will be borne by all ratepayers regardless of whether they have participated in the Program or not.

The Panel notes that FBC has relied on research studies it conducted on solar energy offerings to determine the level of customer interest and preferences, stating they are sufficient, but asserts there is no substitute for undertaking a pilot project in order to gauge customer interest. The Panel does not agree. Contrary to FBC's assertions, the Panel finds the research studies have not provided support for moving ahead with the CSPP. The research studies have been clear in stating that the primary reason for consideration of community solar among both residential and commercial customers is to save money, with a number of secondary reasons including participation in a green community project and GHG emission reductions. The Panel notes that with the exception of participating in a green community project, the CSPP does not address these reasons. Customers will not save money in the short to medium term as the break-even point is 17 to 40 years depending upon the level of inflation applied. This cost differential is most significant in the short-term where customers will be paying a significant premium to be part of the Program. FBC has acknowledged this by its admission that the expectations of savings may prove challenging in securing initial subscriptions. This was further addressed by Resolution, who questioned the value of the research that provided no intelligence as to the amount customers were willing to pay for solar. In addition, there are no material reductions in GHG emissions nor does this Program create energy independence as it is still provided through the utility. Moreover, FBC has also acknowledged the surveys it undertook were limited in scope and did not ask the range of questions that could have been asked concerning the specifics of a solar offering or the level of customer understanding of clean renewable resources.

FBC has instead asserted that the CSPP provides benefits for all of its customers whether or not they participate. It justifies this by stating that proceeding with this pilot will allow FBC to assess whether solar energy should be pursued on a larger scale. Proceeding will also enhance awareness of solar power and green energy as well as responding to customer interest and allowing more customers to access "net metering-like" benefits. The Panel accepts that a pilot project is helpful in determining actual customer interest and provides an opportunity to learn more about customer preferences. However, this does not mean that moving forward with a pilot project is justified in all cases. In the Panel's view, it is important to learn as much as possible about customer interest and preferences prior to committing financial resources to a pilot project. The Panel finds the research conducted to date to be inadequate to justify moving to the pilot stage. In addition to FBC's proposed Program aligning poorly with customer expectations, the Panel finds that too many questions as to customer requirements remain unanswered and there is a limited understanding as to what customers would be willing to pay for this product offering. Therefore, we are not persuaded that full Program subscription is likely to occur.

FBC has stated that the rate schedules require full subscription over the 40-year life of the solar panels to recover the incremental revenue requirements from the CSPP. In the event of less than expected subscription levels, FBC has stated it may apply to the Commission to reduce rates. Any shortfall in the subscription level or revenue recovered through rates will be charged to non-participating ratepayers. In the Panel's view, this raises a number of considerations concerning FBC's proposed approach to pricing and cost recovery for the project. Specifically, the Panel has concerns with FBC's proposed approach to the level of commitment required from potential solar customers, the potential for future price reductions, and the impact of these on the risk assumed by general ratepayers.

As noted, FBC has proposed that customers subscribe to the Program for a 12-month term to be renewed each year. Even if the Program is fully subscribed initially, there is no assurance that this will remain the case over the 40-year lifespan of the project. Moreover, if the Program is not fully subscribed, FBC may be obliged to apply for a rate reduction from the Commission. In either case, the revenue shortfall will be charged to non-participating ratepayers who will be required to backstop a product where neither the level of purchase interest nor the need

has been established. Many of the interveners raised this issue stating that non-participating ratepayers should not bear the risk or be accountable for such costs. The Panel agrees and finds FBC's proposed approach to be unreasonable as the benefits of creating greater awareness of solar power and green energy do not offset the financial risk borne by non-participating customers.

The Panel acknowledges FBC's assertion that any increases in future electricity prices that may occur over time will increase the relative financial benefit of the CSPP and make it more attractive. However, this does not impact the early years where there is no financial benefit to subscribers. In response to queries regarding the Nelson Hydro Solar Garden, FBC has stated that it believes it would be possible but more difficult to achieve full subscription under a similar model due to Nelson Hydro's requirement that customers pay for the full cost of the solar panels upfront. The Panel disagrees and points out that if the model employed by Nelson Hydro is fully subscribed, it is likely a similar model would work in a much larger market like Kelowna. While the model employed by Nelson Hydro is quite different than that proposed by FBC, as outlined previously in these Reasons for Decision, it would result in far less risk being borne by non-participating customers. Moreover, it would provide an opportunity for FBC to pre-sell most or all of the solar panels prior to construction, further reducing the risk to non-participating customers.

**For the reasons outlined above, the Panel rejects FBC's capital expenditure schedule application to construct and operate a 240 kW community solar array made up of 720 panels at the Ellison Substation in Kelowna as not being in the public interest.**

Given that the proposed rate schedules 85A and 85B are designed exclusively for the CSPP, in the absence of the Panel's acceptance of the proposed expenditure schedule to construct the CSPP and in consideration of the concerns raised by the Panel regarding the pricing and design of the rate schedules, **the Panel denies FBC's request for approval of RS 85A and 85B.**