



November 24, 2016

**VIA EMAIL**

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

**Re: BCUC Residential Inclining Block (RIB) Rate Report to the Government of British Columbia**

We write to provide submissions in this proceeding on behalf of our client organizations.

In FortisBC Inc. proceedings, we represent four community organizations, all of whom operate throughout the province. These are BC Old Age Pensioners Organization, Disability Alliance BC, Council of Senior Citizens' Organizations of BC, and the Tenant Resource and Advisory Centre. In most BC Hydro proceedings we represent the same four provincial organizations plus two regionally based anti-poverty organizations Active Support Against Poverty and Together Against Poverty Society. In BC Hydro's 2015 Rate Design Application, we also represent the BC Poverty Reduction Coalition. These groups are collectively referred to as "BCOAPO" in regulatory proceedings.

The constituent groups of BCOAPO represent the interests of BC's low and fixed income residential utility ratepayers.

**Background**

In a letter dated July 6, 2015, the Minister of Energy & Mines requested that the BC Utilities Commission report to the BC Government on five specific questions concerning the impact of the BC Hydro and FortisBC's (collectively, the "Utilities") residential inclining block (RIB) rates (the "RIB Rate Report"). Specifically the Minister requested the Commission provide the government with information in response to five questions:

1. Do the residential inclining block rates cause cross-subsidy between customers with and without access to natural gas?
2. What evidence is available about high bill impacts (greater than 10 percent as a result of the adoption of the residential inclining block rates) on low income customers?

3. What evidence is available about factors that lead to high energy use and, therefore, bill impacts for customers without access to natural gas, including low income customers?
4. What is the potential for existing Demand Side Management programs to mitigate these impacts?
5. Within the current regulatory environment, what options are there for additional Demand Side Management programs, including low income programs?

The Commission's RIB Rate Report is to include an analysis of the data the Utilities provide and the Commission's conclusions regarding the Minister's five questions.

In a letter dated August 15, 2015, the Commission outlined the proposed process it would follow to develop its report to government. The initial steps of the process involved:

- BC Hydro and FortisBC providing information on the methodology(ies) they would use to gather information and report on the five questions posed by the Minister and any other relevant issues to be included in the report;
- Interested stakeholders providing comments on the same; and
- The Commission making its determination on the report methodology(ies), any other relevant issues to be included in the reports, and the regulatory timetable for the process.

Following submissions by the Utilities and stakeholders, on January 16, 2016 the Commission issued a letter to the Utilities setting out the definitions and methodologies the Utilities were to use in preparing their reports. On February 2, 2016 the Commission directed the Utilities to file their reports by August 5, 2016. At the request of the Utilities, this date was subsequently extended to September 16, 2016 and then further extended to September 30, 2016. Both Utilities submitted their reports to the Commission on September 30, 2016.

Below we provide our comments on the Utilities' reports, and more specifically, on their responses to each of the questions on which the Commission must report to the Minister. We have organized our comments under headings corresponding to each of the Minister's five questions, and respond to BC Hydro and FortisBC's reports on each question separately under each.

### **Comments on Utilities Reports/Responses to Each of the Minister's Five Questions**

For the purposes of the Utilities' reports, the Commission determined that "access to natural gas" was to be determined by a "community approach". That is, a customer is defined as having access to natural gas if they live in a community with access to

natural gas or piped propane. Each of the Utilities provided a list of communities in their service territory that do not have access to natural gas or piped propane.

However, FortisBC indicated in its report that because it received input from a number of customers who were located in communities with access to natural gas, but who did not themselves have access to natural gas, FortisBC took the further step of breaking communities down into smaller areas and identifying customers with access to natural gas on an area-by-area basis. This resulted in FortisBC's analysis being based on a mixed approach because FortisBC's 2009 COSA was based on a community approach, rather than an area approach or mixed approach.

That FortisBC saw the need to breakdown "access to natural gas" into segments smaller than permitted by the "community approach" points to the first difficulty in analyzing the questions posed in the Minister's letter. The difference in the revenue to cost (R/C) ratio noted by the Utilities between customers with and without access to natural gas is less than the difference in the R/C ratio between customers who heat with natural gas and customers who heat with electricity. This points to a lack of de facto access to natural gas in the built housing stock even in communities with access to natural gas. The lower installation costs associated with electric heat and the cost prohibitive nature of retrofitting existing housing stock means many people lack access to natural gas even in communities with access.

**1. Do the residential inclining block rates cause cross-subsidy between customers with and without access to natural gas?**

In its January 2016 Letter the Commission set out two different methodologies that were to be used in addressing this question. The first was to use a FACOS approach and compare the R/C ratios for the two sub-groups of Residential customers using the utility's most recent FACOS Study. The second was to compare the average customer rate for each sub-group to the utility's most recent long-run incremental cost estimate to serve each respective subgroup.

The Commission also requested that the Utilities comment on the potential cross-subsidy between customers using electricity for space and water heating and those using natural gas, to the extent data is available.

Finally, if a cross-subsidy is found to exist, Utilities were to provide a general discussion as to the impacts and relevance of the cross-subsidy.

## **BC Hydro**

Based on the FACOS analysis, BC Hydro found that the R/C ratio for RIB customers without access to natural gas is only slightly higher than that for customers with access to natural gas (94.9% versus 90.2%).<sup>1</sup> BC Hydro also notes, however, that the R/C ratio for those customers with access to natural gas but who are non-electrically heated is 86.6% (as compared to 94.9% for those customers without access to natural gas).

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<sup>1</sup> BC Hydro Utility Report, p. 9.

BC Hydro also notes that the higher ratio for customers without access to natural gas is likely the result of higher revenues (due to higher use and therefore more use in the second Tier) offset partially by the fact that these customers have higher costs (due to higher peak coincidence and lower load factors).<sup>2</sup>

Based on the long-run marginal cost (LRMC) analysis the R/C ratio for the group without access to natural gas is again slightly higher than that for the group with access to natural gas (89% versus 86%).<sup>3</sup> Again, the ratio for customers with access to natural gas and with non-electric heat is lower still at 83%.

Overall BC Hydro concludes that, while there is a difference between the R/C ratios for the group with access to gas versus the group without, BC Hydro does not consider the differences to be substantive (i.e. indicative of a cross-subsidy) given the inherent limitations of the analysis.<sup>4</sup>

### BCOAPO Comments

Given that the range of reasonableness adopted by the Commission is 95% to 105%, and the differences between the two groups are materially less than 10 percentage points, BCOAPO submits that BC Hydro's conclusion that there is no evidence of a cross-subsidy is reasonable. Having said this, it is questionable as to whether BC Hydro's arguments regarding the relative distribution cost of serving the two groups is relevant since the approved FACOS methodology does not isolate the specific distribution plant used to serve each class of customers.<sup>5</sup>

BCOAPO notes that BC Hydro's analysis has not separated out, as a subgroup, those customers that have no access to natural gas and who use electric space & water heating as requested by the Commission. Rather, BC Hydro has assumed that all customers without access to natural gas use electric space & water heating, which is not the case.<sup>6</sup> It is not clear what the resulting R/C ratio would be for this sub-group using either analysis. However, based on the results for those customers with access to natural gas (where the R/C ratio is higher for electric space heating customers under either methodology), one would expect the FACOS result to be greater than 94.9% and the LRMC result to be greater than 89%.

Also, BCOAPO notes that BC Hydro has not specifically used either the FACOS methodology or the long-run marginal cost methodology to look at the potential cross-subsidy between customers using electricity for space and water heating versus those using natural gas as requested by the Commission,<sup>7</sup> nor commented (as FortisBC did) on its ability to do so (see below).

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<sup>2</sup> BC Hydro Utility Report, p.17.

<sup>3</sup> BC Hydro Utility Report, p.18.

<sup>4</sup> BC Hydro Utility Report, pp. 8-9.

<sup>5</sup> BC Hydro Utility Report, p. 9.

<sup>6</sup> BC Hydro Utility Report, p. 16, lines 10-12.

<sup>7</sup> Exhibit A-1, p. 3.

## FortisBC

Using the FACOS approach, FortisBC determined that the R/C ratio for the “With Gas Access” group was 94% as compared to 108.5% for the “Without Access Gas Group”.<sup>8</sup> FortisBC acknowledged that the results indicate the customers in the Without Gas Access group have been paying more than it cost to serve them while those in the With Gas Access group have been paying less.

FortisBC then goes on to argue that separate classes should not be established based on the following:

- The distribution plant required to serve each group was not isolated and the Without Access to Gas customers are likely more costly to serve in this regard;
- COS Studies are imperfect and the results are not much out of line with the 95% to 105% range of reasonableness used by the Commission;
- There are likely additional factors besides “access to natural gas” that are leading to the difference in R/C ratios such that the difference cannot be solely ascribed to the presence/absence of natural gas;
- The principle of postage stamp rates has been accepted within the province.

In terms of the long-run marginal cost analysis, FortisBC indicates that the average rate for customers With Gas Access is 12.52 cents/kWh while it is 12.82 cents/kWh for customers Without Gas Access as compared to a long-run incremental cost of 11.20 cents per kWh. FortisBC then notes that both groups are paying rates that are above FortisBC’s current measure of LRMC.<sup>9</sup> However, FortisBC also notes that, in the absence of the RIB rate, the flat rate would be 11.433 cents/kWh and lowering the Tier 2 rate so that it is equivalent to the real LRMC would result in a rate design with a minimal Tier 1/Tier 2 differential.

### BCOAPO Comments

There are issues with several of the arguments FortisBC has put forward as to why the FACOS results do not indicate a cross-subsidy:

- As with BC Hydro, FortisBC did not isolate their distribution plant (either in their FACOS or for the RIB analysis). This may be seen as irrelevant in that that the Commission directed the Utilities to use their current FACOS methodology and distribution plant is not isolated by FortisBC in its current FACOS for purposes of allocating costs to its existing customer classes. However, it is relevant in considering the accuracy of the R/C ratios identified.
- The Commission has adopted 95% to 105% as the range of reasonableness in recognition of the fact that cost allocation inherently involves a level of discretion and inaccuracy. However, in the case of FortisBC the results for both groups fall outside and on opposite ends of the Commission determined range of reasonableness.

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<sup>8</sup> FBC Utility Report, p. 5.

<sup>9</sup> FBC Utility Report, p. 7.

- The argument that there are other factors contributing to the difference in R/C ratios is speculative given the wide difference (in excess of 10 percentage points) in the R/C ratios for the two groups. At best one can suggest that there may be other factors, but additional analysis would be needed to identify those factors.

The point regarding postage stamp rates is relevant. The principle of postage stamp rates reflects current government policy and would be a matter for the government to reflect on as it considers the report the Commission will ultimately provide as result of this process. In doing so, it is important to note that all customers differ in terms of their load characteristics and there are inevitably cross subsidies that take place when customers are grouped together.

With respect to FortisBC's long-run marginal cost results, one of the key issues with the analysis is that it uses the same LRMC value (11.2 cents/kWh) for both the With Gas Access and the Without Gas Access groups and this value is meant to capture both capacity and energy considerations.<sup>10</sup> However, FortisBC has said that the group Without Access is less likely to contribute to the system peak.<sup>11</sup> This means that the LRMC, when expressed on a kWh basis, should be less for this group which would increase to an even greater difference between the two groups when compared on a long-run marginal cost basis.

Further, there is no obvious explanation for the difference in the R/C ratios as between BC Hydro and FortisBC. In our submission, more analysis is required before any firm conclusion can be drawn.

Overall, in the case of FortisBC, the Commission should respond to the Minister's first question in a qualified affirmative. The Commission should note that there are inherent cross subsidies in any customer classification, and that to address this cross subsidy would require either establishing two separate classes (which would be counter to the current principle of postage stamp rates) or eliminating/redesigning the RIB rate, which would have a significant adverse impact on the vast majority of low income customers. However, as FortisBC has only provided a high level summary of the FACOS analysis that was undertaken and no distinction as to the relative LRMC values for the two groups, and because there is no obvious reason for the very different results found in BC Hydro and FortisBC service territory, a more detailed review is required before it would be appropriate to make any material changes to the RIB based on the results.

Finally, in its January 2016 letter the Commission directed the Utilities to comment on the potential cross-subsidy between customers using electricity for space and water heating versus those using natural gas to the extent data is available. FortisBC has indicated that it does not have the data to provide such an analysis.<sup>12</sup> However, it anticipates that the R/C ratios would differ as between those customers with and without electric heat. This lack of data is unfortunate as it may be that the differences are even greater than those found for customers with versus without gas access. This would result from the fact that there are likely to be customers in both of these groups that do

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<sup>10</sup> FBC 2017 DSM Expenditure Application, Exhibit B-5, CEC 2.3.

<sup>11</sup> FBC Utility Report, p. 3

<sup>12</sup> FBC Utility Report, p. 6

not use electric space heating as well as customer in both groups that do use electric space heating thereby making the groups more “similar” in terms of their load characteristics than the two groups defined on the basis of whether or not they have access to natural gas.

Overall, if the Government considers it appropriate for the Utilities and the Commission to address this apparent cross-subsidy then, in addition to the additional work noted above regarding the FACOS analysis, FortisBC should be directed to fully assess the potential cross-subsidy between Residential electric heat and non-electric heat customers, rather than as between customers with and without access to natural gas.

***2. What evidence is available about high bill impacts [greater than 10 percent as a result of the adoption of the residential inclining block rates] on low income customers?***

The Commission’s January 2016 Letter defined “high bill impacts” as impacts of greater than 10% when the 2015 RIB rate is compared to the 2015 equivalent flat rate.

## **BC Hydro**

BC Hydro concludes that it does not find evidence of high bill impacts for low income customers. However, BC Hydro also notes that 1% of low income customers experience a bill impact greater than 10% in moving from the Flat rate to the RIB rate.<sup>13</sup>

### BCOAPO Comments

While the majority of low income customers are better off when moving from a Flat rate to a RIB rate,<sup>14</sup> there is a small segment of low income customers (1%) that will see bill impacts of greater than 10% and some will see impacts as high as 17% based on BC Hydro’s analysis.<sup>15</sup> The Commission should note this point in its report to government.

The fact that the majority of low income customers benefit does not obviate the need to try and address/mitigate the high bill impacts that will be experienced by some low income customers. BCOAPO put forward detailed proposals about how bill affordability issues for low income BC Hydro ratepayers might be addressed during the 2015 BC Hydro Rate Design Proceeding, without making any changes to the RIB rate. In our submission, it is preferable to address the high bill impact of the RIB rate on those relatively few low income customers who are most adversely affected through means such as increased DSM and targeted low income rate relief than through changing the RIB rate. As noted above, implementation of the RIB rate has benefited the majority of low income customers, who also tend to be low use customers.

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<sup>13</sup> BC Hydro Utility Report, p. 19.

<sup>14</sup> BC Hydro Utility Report, pp. 22-23.

<sup>15</sup> BC Hydro Utility Report, p. 23.

## FortisBC

FortisBC's analysis (as presented in Table 3) uses 2015 rates but 2013 and 2014 consumption data. As a result, FortisBC cautions that the results do not take into account any behavioural changes that may have occurred between 2013/14 and 2015 as a result of the further widening of the gap between the Tier 1 and Tier 2 prices.<sup>16</sup>

The analysis indicates that once customer usage reaches between 22,500 and 25,000 kWh per year bill impacts will exceed 10% and that roughly 10% of the Residential customers overall fall into this category.

FortisBC indicates that it is unable to provide a similar analysis using customers below the LICO levels.<sup>17</sup> However, it provided data (based on customers who self-reported their income in the REUS) on average bills and RIB bill impacts for different levels of income. The report notes that for very low income customers (i.e., those in the <\$20,000 and \$20,000 - \$29,999 categories) the average bill impacts are around 9.6% to 9.8% and for the groups immediately above this the impacts are in excess of 10%.

### BCOAPO Comments

In its initial September 2015 submission, FortisBC noted the shortcomings of its REUS in terms of being able to identify low income customers for purposes of responding to Questions #2 and #3 and that additional research and analysis would be required to do so.<sup>18</sup> In its January 2016 methodology letter the Commission directed FortisBC to undertake the additional research and analysis of the REUS. FortisBC's report states that it was unable to complete the infill of data needed to provide an analysis of bill impacts according to income levels; however, no explanation was provided as to why. This shortcoming significantly impacts FortisBC's ability to respond to both Questions #2 and #3.

The analysis that has been provided regarding bill impacts for low income customers would suggest that there are low income customers (based on the LICO cut-off) who will have experienced bill impacts greater than 10% based on the Commission's methodology. BCOAPO submits that these customers should be targeted for low income DSM programs and/or low income rate relief. We see this as preferable to the elimination of the RIB rate, which has helped to reduce bills for the majority of low income customers.

### ***3. What evidence is available about factors that lead to high energy use and, therefore, bill impacts for customers without access to natural gas, including low income customers?***

In its methodology letter, the Commission indicated that for the purposes of answering this question, the Utilities were to provide analysis of the following, using their most current REUS:

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<sup>16</sup> FBC Utility Report, p. 8.

<sup>17</sup> FBC Utility Report, p.10.

<sup>18</sup> See also response to BCUC 1.1.1.

- a) all factors that lead to high energy use and therefore bill impacts;
- b) factors that lead to high energy use and therefore bill impacts for customers with access to natural gas;
- c) those factors from a) that lead to high energy use and therefore bill impacts for customers without access to natural gas; and
- d) those factors from c) that lead to high energy use and therefore bill impacts for customers without access to natural gas who are also low income.

The Commission also provided a list of specific factors that it requested that each utility examine, to the extent data was available.

In addition, the Commission requested that the Utilities do the following (to the extent data is available):

- Produce a chart to display the following three dimensions of data:
  - on the x axis: household income by quintile (bottom 20%, 20% to 40% etc.) or decile;
  - on the y axis: kWh consumption by decile; and
  - with the number and/or percentage of customers in each category.
- Provide examples of typical residences that consume 10,000, 20,000 and 30,000 kWh/year and explain, to the fullest extent possible, the difference in electricity consumption among them.
- Include discussion on the usefulness of this data in relation to the sample size of the REUS survey.

## **BC Hydro**

BC Hydro used its 2014 REUS data to compare the characteristics of Residential customers using 20,000 kWh or more per year (High Energy Use) with those for customers using less than 20,000 kWh per year (Not-High Energy Use).

BC Hydro's report indicates that high use customers as a group, regardless of income or access to natural gas, have higher proportion of the following factors<sup>19</sup>:

- Larger dwelling types (higher share of single family dwellings with a larger number of occupants);
- Higher share of electric baseboards; and
- Larger share in the ownership of higher intensity electricity using appliances, such as swimming pools, hot tubs, multiple refrigerators, larger electrically heated hot water tanks, and air conditioners.

BC Hydro's report also noted that the high use group tends to show higher proportions of those who are less likely to exhibit energy conservation related behaviour, such as<sup>20</sup>:

- Higher proportion who make less effort to conserve electricity if the trade-off is comfort;

<sup>19</sup> BC Hydro Utility Report, pp. 27-28.

<sup>20</sup> BC Hydro Utility Report, pp. 28-29.

- Higher proportion who are less willing to reduce usage if it allows the Province to delay the construction of new electricity generation projects; and
- Lower proportion who have stated conserving electricity is second nature.

BC Hydro also compared the characteristics of customers using 10,000 kWh, 20,000 kWh and 30,000 kWh per year. BC Hydro reports that the higher consumption customers tend to have higher proportions of the following<sup>21</sup>:

- Main heating equipment is Electric baseboards;
- Main heating equipment is Electric central forced air furnace;
- Main heating equipment is Hot water radiant floors (electric);
- Electric hot water tanks;
- Multiple Fridges;
- Multiple computers; and
- Outdoor swimming pool.

With respect to the question of characteristics specific to low income customers that were different as between High Energy Use and Not High Energy Use, in many instances the sample used by BC Hydro was too small to draw conclusions<sup>22</sup> regarding influencing factors.<sup>23</sup>

#### BCOAPO Comments

A detailed review of the analysis also indicated that High Energy Use customers are more likely to also have the following characteristics as compared to Not High Use Energy Customers:

- Be located on Vancouver Island and, to a lesser extent, the Southern Interior which are also the regions where the majority of communities without access to natural gas are located<sup>24</sup>;
- A higher share of electric heat pumps and central forced-air furnaces<sup>25</sup>; and
- While a greater proportion of low income customers are Not High Use customers, there are low income customers in the High Energy Use category.<sup>26</sup>

BC Hydro has only provided numerical analysis for some of the factors.<sup>27</sup> However, for others and, indeed, for some of the more critical ones such as primary space and water heating equipment it has not. In these latter cases all that has been provided is a qualitative analysis.<sup>28</sup> As a result, unlike FortisBC who used statistical analysis to

<sup>21</sup> BC Hydro Utility Report, p. 35.

<sup>22</sup> BC Hydro Utility Report, Appendix C.

<sup>23</sup> BC Hydro Utility Report, Appendix C.

<sup>24</sup> BC Hydro Utility Report, pp. 29-30.

<sup>25</sup> BC Hydro Utility Report, Appendix C, p. 1.

<sup>26</sup> BC Hydro Utility Report, p. 35.

<sup>27</sup> BC Hydro Utility Report, pp. 29-34.

<sup>28</sup> BC Hydro Utility Report Appendix C.

determine which factors were “significant” in differences between various groups of customers (see below), it is not clear what metrics BC Hydro used in determining whether for a particular factor the shares or proportions were similar or different when comparing various groups.

## **FortisBC**

For purposes of this analysis, FortisBC used the results of its 2012 REUS which were matched with the respondent’s consumption data for 2011.

In order to identify the factors leading to high energy use the following comparisons were made:

- i. The characteristics of customers with usage equal to or greater than 23,000 kWh per year were compared with those for customers using 11,500 kWh or less. Also, respondents in both groups were compared to all respondents.
- ii. Respondents of similar usage levels (9,000-11,000; 18,000-22,000 and 27,000-33,000 were grouped together and their characteristics compared.

To address the Minister’s question respondents were also classified as having Access to Gas or No Access to Gas. However, due to the low number of respondents definitively identified as low income, FortisBC was unable to provide any meaningful analysis in this regard.<sup>29</sup>

Based on the first analysis (i) FBC reports that high use dwellings are more likely than low-use dwellings to be<sup>30</sup>:

- Single-family detached homes;
- Larger (half are larger than 2,500 square feet);
- Have more occupants (3 people vs. 2 people in non-high-use dwellings);
- Have children in the household;
- Use electricity as the primary heating fuel (two-thirds vs. one-quarter in non-high-use dwellings);
- Have a larger electric domestic hot water tank;
- Have a higher incidence of secondary refrigerators, primary and secondary freezers; and
- Have a greater incidence of electrically heating swimming pools and/or hot tubs.
- Those that disagree with the statement that their household has reduced energy consumption as much as reasonably possible.

With respect to the second analysis (ii), the findings were similar to those of the first analysis in that high use (30,000 kWh) dwellings differed from low use dwellings with respect to the following characteristics<sup>31</sup>:

- More likely to be a single family detached dwelling rather than a duplex, townhouse, apartment or mobile home\*.

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<sup>29</sup> FBC Utility Report, p. 12.

<sup>30</sup> FBC Utility Report, p. 13.

<sup>31</sup> The points marked with an asterisk are those that are common with the first analysis.

- More likely to be 2,500 ft<sup>2</sup> or larger\*.
- More likely to have electric baseboards or an electric forced air furnace rather than a natural gas forced air furnace as the primary heating method\*.
- Less likely to have central air conditioning\* but more likely to use a portable air conditioner.
- More likely to have a large capacity (60 imperial gallon) electric hot water tank and less likely to have a 33 gallon tank\*.
- More likely to have a second refrigerator\*.

### BCOAPO Comments

According to FortisBC's detailed discussion,<sup>32</sup> and the Sampson Research Inc. report<sup>33</sup> supporting those conclusions, high use dwellings are also more likely than low use dwellings to:

- Be located in areas with somewhat colder winters and somewhat hotter summers.
- Turn down heat less frequently at night or when no one is at home, either manually or using a programmable thermostat.
- Turn down heat by fewer degrees at night or when not one is at home
- Have a "negative view" of natural gas.

FortisBC's report itself does not discuss in detail the Sampson Research findings with respect to the differences between high use dwellings With Gas Access vs. those dwellings With No Gas Access. A couple of notable findings in this regard are that high use dwellings With No Gas Access are more likely to<sup>34</sup>:

- Be located in areas with somewhat colder winters and somewhat warmer summers.
- Have electric domestic hot water heater.
- Not have central air.

Again, due to the data limitations noted above with respect to Question #2, FortisBC was unable to address those aspects of the question that related to low income customers.

The Utilities do not appear to talk about the energy efficiency of the dwellings. BCOAPO submits that this is another important factor to consider. In recent years, building codes have imposed increasingly stringent requirements that have the effect of increasing the energy efficiency of housing stock. BCOAPO notes that the age of the housing stock and/or the energy efficiency of the housing stock (including upgrades) do not appear to have been considered or to have played a significant role in the analysis of the Utilities. This appears to be a failing in the analysis and is of significant concern to BCOAPO since DSM programs are specifically designed to increase energy efficiency.

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<sup>32</sup> FBC Utility Report, p. 15.

<sup>33</sup> FBC Utility Report, Appendix B, pp. 4-5.

<sup>34</sup> FBC Utility Report, Appendix B, pp. 6-7.

#### **4. What is the potential for existing Demand Side Management programs to mitigate these impacts?**

To answer this question, the Commission directed the Utilities to provide a list and brief description of existing programs that customers can participate in that can impact the factors identified in Question #3 that lead to high energy use.

The Commission also directed the Utilities to examine the potential for existing DSM programs to mitigate the key factors that lead to high energy use and therefore bill impacts, in particular for low-income customers and those without access to natural gas. In addition, the Utilities were to address the aspect of household energy inefficiency, even at a high level, in examining the potential for existing DSM programs to mitigate high energy use and therefore bill impacts.

The Utilities were to identify typical bill reductions that an illustrative high use customer participating in the DSM programs would see and the extent to which these bill reductions (less any customer participation costs) mitigate bill increases resulting from the RIB rate assuming no changes to existing DSM programs or incentive levels.,

In addition, the Utilities were invited to comment on whether improvements could be made to increase uptake or overcome barriers to participating in these existing DSM programs by high-use customers, in particular low-income customers and those without access to natural gas.

#### **BC Hydro**

BC Hydro's report provides a brief description of each of its four DSM programs.<sup>35</sup> The report also provides a high level outline of how the DSM programs respond to the factors identified as leading to high electricity use in general as well as specifically for low income customers and those without access to natural gas.

In response to the question of whether existing DSM programs could be improved, BC Hydro states that the letters of comment to the Commission indicate that many customers are aware of their DSM opportunities and that, generally, the letters did not identify a lack of DSM programming initiatives. BC Hydro then goes on to state that it does not see any significant opportunity to improve the uptake of its residential DSM programs to high electricity users based on this review or any major barriers that its current programs do not already attempt to address.<sup>36</sup>

#### BCOAPO Comments

The descriptions of the low income programs are not definitive as to what is included, particularly the ECAP, which only indicates "some of the energy saving products that

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<sup>35</sup> BC Hydro Utility Report, pp. 37-38 & Appendix D.

<sup>36</sup> BC Hydro Utility Report, pp. 41-42.

may be included”<sup>37</sup> and therefore does not clearly/fully indicate how the programs will mitigate those factors identified as leading to high energy use.

Also, it is not immediately clear how BC Hydro arrived at the conclusions it did regarding customer awareness and satisfaction with its current DSM programs. A review of the letters of comment received by the Commission indicates that many of them make no reference to BC Hydro’s DSM programs and focus primarily on the impacts of the RIB rate and the fact that use of natural gas is not an option.

The fact no comment was made regarding its DSM programs cannot be interpreted as meaning customers are satisfied with BC Hydro’s DSM program initiatives. Similarly, those customers who indicate that they have undertaken conservation initiatives generally did so with no reference to BC Hydro’s DSM programs and frequently noted that they had concerns with the level of their hydro bills, due to the RIB rate, even after having undertaken a range of conservation measures.

BCOAPO made detailed submissions with regard to BC Hydro’s existing low income DSM programs in the 2015 Rate Design Application (the “RDA”).<sup>38</sup> There, BCOAPO argued that there is reasonable room for the expansion of BC Hydro’s low income DSM programs, and specifically that that BC Hydro should expand installs of its low income ECAP to serve a significantly higher percentage of the low income households than it is currently serving. For the Commission’s convenience, we have included the excerpts of our RDA submissions that were focused on that issue in their entirety at **Appendix A** to this submission; we request that those submissions also be considered part of our submission here. The submissions at Appendix A are relevant to both Questions #4 and #5 in the Minister’s letter, as those questions relate to BC Hydro.

## FortisBC

FortisBC has provided a summary of its Residential DSM programs noting that they respond to the factors leading to high electricity use in that<sup>39</sup>:

- All programs have offers targeted towards single family dwellings,
- All residential programs target major end-uses.
- The Home Renovation Retrofit program specifically focuses on electric heat and space heating.
- The Retail program targets many of the identified higher intensity electrical appliances.

For details regarding the programs and specifically what they address reference is made to the FortisBC website.

FortisBC identifies its three specific low income programs and provides a chart indicating the representative savings and bill impacts under its current DSM programs.<sup>40</sup>

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<sup>37</sup> BC Hydro Utility Report, Appendix E, p. 4.

<sup>38</sup> BCOAPO Final Argument dated September 26, 2016, pp. 95-98:

[http://www.bcuc.com/Documents/Arguments/2016/DOC\\_47664\\_09-26-2016-BCOAPO-Final-Arguments.pdf](http://www.bcuc.com/Documents/Arguments/2016/DOC_47664_09-26-2016-BCOAPO-Final-Arguments.pdf)

<sup>39</sup> FBC Utility Report, pp. 20-22.

## BCOAPO Comments

With respect to the low income programs, FortisBC provides little information in its report as to specifically what factors related to high energy use are being addressed. Furthermore, even the low income program descriptions on FortisBC's website are not definitive as to what is included:

- The description of what is included in the Energy Savings Kits only outlines what "may" be included.
- There does not appear to be a comprehensive listing of the products to be installed under the Basic ECAP program.

FortisBC provides no comments on whether improvements could be made to increasing uptake or overcoming barriers to participating in these existing DSM programs by high-use customers, in particular low-income customers and those without access to natural gas.

In FortisBC's recent Application for Approval of DSM Expenditures for 2015 and 2016,<sup>41</sup> BCOAPO said the following, which is also relevant here (internal citations omitted):

"Anecdotally, we have been told that low income customers do not experience significant savings from Energy Savings Kits; the very few low income customers we have spoken to that have applied for and received Energy Savings Kits have not experienced much savings, in part because they do not know how to install the items, and the majority of the kit ends up sitting on a shelf.

BCOAPO submits that there appears to be potential to expand the expected participation in the Low Income programs, given the current estimates for 2017 represent only a small fraction of the total households that would qualify. This accords with BCOAPO's understanding that low income customer awareness of ECAP is quite limited – the majority of anti-poverty advocates and clients with whom we are in contact are unaware of the program. BCOAPO is of the view that outreach for the program should be improved to increase uptake – it is likely that a lot of "low hanging fruit" is being missed."

### ***5. Within the current regulatory environment, what options are there for additional Demand Side Management programs, including low income programs?***

The Commission's January 2016 letter indicated that the Utilities are required to identify any additional DSM programs (for example, offered in other jurisdictions) that are

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<sup>40</sup> FBC Utility Report, p. 23.

<sup>41</sup> FBC Application for Approval of DSM Expenditures for 2015 and 2016, BCOAPO Final Submission: [http://www.bcuc.com/Documents/Arguments/2016/DOC\\_47923\\_10-26-2016-BCOAPO-Final-Argument.pdf](http://www.bcuc.com/Documents/Arguments/2016/DOC_47923_10-26-2016-BCOAPO-Final-Argument.pdf).

targeted at the key drivers of high-energy use, in particular for low income customers and those without access to natural gas.

It also stated that the Utilities should identify typical bill reductions that a high use customer participating in these potential additional DSM programs would see, and the extent to which these bill reductions (less customer participation costs) could mitigate bill increases resulting from the RIB rate.

The Commission further invited the Utilities to indicate (in general terms) if they are supportive of any of the potential additional DSM programs identified, and if so, whether they could be funded out of the existing DSM funding envelope.

For both Utilities, BCOAPO is of the view that it is preferable to improve existing DSM programs like ECAP rather than spending resources to develop new programs.

## **BC Hydro**

BC Hydro also provides an overview of DSM programs provided in other jurisdictions<sup>42</sup> and concludes that its programs compare favourably with respect to the factors that lead to high energy use identified in the response to Question #3, and to what other utilities are offering.<sup>43</sup> Some high level findings noted include:

- Most utilities offer comparable Energy Savings Kits (ESK) and Energy Conservation Program (ECAP) initiatives to low income customers;
- Renovation offers similar to our HERO program are common;
- Appliance and equipment incentive offers similar to our Retail program are common; and
- Several utilities offer online reports, tracking and advice similar to its Behaviour program.

BC Hydro does identify some additional program areas including<sup>44</sup>:

- The potential for heat pump water heater program,
- A re-start of its previous refrigerator buy-back program, and
- Education regarding best practices with respect to the operation of swimming pools and hot tubs.

However, BC Hydro observes that it has not identified any significant opportunities to develop new programs at this time that would address the factors that lead to high electricity use. It notes that the opportunities identified are less significant and that its current DSM programs provide support and coverage for high electricity users that address the factors leading to high electricity use. Overall BC Hydro concludes that adding additional programs to its DSM plan is not warranted at this time.

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<sup>42</sup> BC Hydro Utility Report, Appendix F.

<sup>43</sup> BC Hydro Utility Report, p. 43.

<sup>44</sup> BC Hydro Utility Report, pp. 43-44.

## BCOAPO Comments

Given the high level descriptions provided of the programs offered in other jurisdictions it is not immediately evident how the scope (e.g. measures included, planned installs per year, etc.) of the programs offered in other jurisdictions compares with the scope of BC Hydro's programs, particularly for the Low Income programs.<sup>45</sup> As a result, in such instances, it is not possible to judge whether BC Hydro's programs compare favourably with those in other jurisdictions, particularly with respect to those programs targeted at the factors identified as leading to high electricity use.

Apart from the high level jurisdictional comparison, it is not evident what analysis BC Hydro undertook, if any, to reach the conclusion that there are no significant opportunities to add to or modify its current DSM Plan.

BCOAPO submits that the Commission's report to the Minister should note that while BC Hydro's DSM programming addresses many of the characteristics of high use customers and many of the same areas as those of other utilities, it is not evident that the scope of BC Hydro's programs are as comprehensive as those offered by others. The Commission should also consider whether there is a need for closer scrutiny of BC Hydro's current proposed DSM Plan over Fiscal 2017 to Fiscal 2019.

BC Hydro notes that while it has not identified any significant opportunities to develop new programs to address the factors that lead to high electricity use, it will be exploring potential voluntary Residential rate options, including time of use rates, which may help high use energy customers mitigate bill impacts.<sup>46</sup> One of the issues with "voluntary" TOU rates is that customers with favourable load profiles will opt for TOU rates and lower their bills without necessarily changing their electricity use. This results in lower revenue to the utility concerned which must (typically) be made up by increasing overall rate levels. As a result, there is also the possibility that voluntary TOU rates could compound the bill impacts being experienced by some high use customers.

## **FortisBC**

To assist with its response FortisBC provided a jurisdictional assessment<sup>47</sup> of DSM programs undertaken by Esource Companies. FortisBC claims that its DSM programs compare favourably with respect to those factors that lead to high electricity used and to those programs being offered by other utilities, noting that<sup>48</sup>:

- Most utilities offer comparable ESK and ECAP initiatives to low income customers;
- Renovation offers similar to the HRR program are common;
- Appliance and equipment incentive offers similar to FBC's Retail program are common; and
- Many utilities offer heat pump (Air Source and Water Heater) programs.

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<sup>45</sup> BC Hydro Utility Report, Appendix F.

<sup>46</sup> BC Hydro Utility Report, p. 25.

<sup>47</sup> FBC Utility Report, Appendix D.

<sup>48</sup> FBC Utility Report, p. 24.

FortisBC has identified two program areas (Behavioural and Fridge Pick-Up) which could be augmented.

FortisBC notes that it will file a long-term DSM Plan in conjunction with the LTERP later this year which will be informed by the results of the BC wide dual-fuel Conservation Potential Review now underway.

### BCOAPO Comments

Given the high level descriptions provided of the programs offered in other jurisdictions,<sup>49</sup> it is not immediately evident how the scope (e.g. measures included, planned installs per year, etc.) of the programs offered in other jurisdictions compares with the scope of FortisBC's programs, particularly for the Low Income programs. As a result, in such instances, it is not possible to judge the comparability of FortisBC's programs.

The Commission's report should note that while FortisBC's DSM programming addresses many of the characteristics of high use customers and many of the same areas as those of other utilities, it is not evident that the scope of FortisBC's programs are as comprehensive as those offered by others. The Commission should also indicate that this is an issue it will be addressing in its review of FortisBC's forthcoming long-term DSM Plan.

### Conclusion

BCOAPO would welcome the opportunity to review and comment on a draft version of the Commission's report to the Minister, if the Commission would find such input useful and appropriate.

Please do not hesitate to contact me should you have any further questions.

Yours truly,  
**BC Public Interest Advocacy Centre**

Erin Pritchard  
Staff Lawyer

- c. Tom Loski, Chief Regulatory Officer, BC Hydro  
Diane Roy, Director, Regulatory Services, FortisBC

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<sup>49</sup> FBC Utility Report, Appendix C.

denial of service for "collateral" matters. It matters not to other ratepayers whether a household fails to pay its Hudson's Bay bill if that household *will* pay its utility bill. The overwhelming data provided by BCOAPO demonstrates that consumers pay their utility bills before paying any other consumer bill.<sup>380</sup>

As Mr. Colton established, "nonpayment of non-utility bills has little relevance to whether utility bills will be paid."<sup>381</sup> Basic fairness requires that third-party credit information on non-utility transactions not serve as a basis for utility demands for a cash security deposit.

#### **6.4. Low Income DSM**

BCOAPO urges the Commission to find that there is reasonable room for the expansion of BC Hydro's low income DSM programs. In the Minister's July 6, 2015 letter to the Commission, the Minister specifically requested that the Commission provide information on several issues, including "within the current regulatory environment, what options are there for additional Demand Side Management programs, including low income programs?" While BC Hydro initially asserted that such information needs to be provided only if and to the extent that low income customers had significant (over 10 percent) bill impacts as a result of this proceeding,<sup>382</sup> there is no language in the Minister's letter that imposes such a limitation.<sup>383</sup>

##### **6.4.1. BC Hydro's Existing Low Income DSM Programs**

BC Hydro offers two DSM programs to its low income customers (defined as LICO plus 30% in the Demand Side Measures Regulation)<sup>384</sup>: (1) the Energy Saving Kits (ESK) program; and (2) the Energy Conservation Assistance Program (ECAP).

The ESKs provides "a package of basic, low-cost energy savings measured believed to be easily installed by any homeowner or tenant."<sup>385</sup> The ESKs have generated annual savings per customer of between 241 kWh and 329 kWh per year for participants.<sup>386</sup> These savings, however, include the ESKs that were "professionally installed." The savings from ESKs that were self-installed reached only 203 kWh per year.<sup>387</sup> At a Step

<sup>380</sup> Exhibit C2-20, BCOAPO Response to CEC 1.18.1 (including Attachments 1 through 8 presenting the underlying data).

<sup>381</sup> Exhibit C2-12, Direct Testimony of Roger Colton, p. 112 (PDF p. 117/341).

<sup>382</sup> Exhibit B-5, BCOAPO 1.102.1

<sup>383</sup> Exhibit C2-12, Direct Testimony of Roger Colton, p. 45 (PDF p. 50).

<sup>384</sup> BC Hydro's two DSM program offerings were originally designed for residential low income customers who had incomes at or below before-tax LICO, but on July 10, 2014, amendments to the Demand Side Measures Regulation came into effect whereby the low income program eligibility threshold was raised to 1.3 times the LICO, and extended to include a list of pre-qualified recipients of various government income and housing assistance programs: Exhibit B-1, pp. 5-75 & 5-76.

<sup>385</sup> Exhibit B-14, BCOAPO 1.105.1 (Revised), Attachment 1, p. 6.

<sup>386</sup> Exhibit B-14, BCOAPO 1.105.1 (Revised), at p. 7.

<sup>387</sup> Exhibit B-14, BCOAPO 1.105.1 (Revised), at p. 13.

1 rate of \$0.0829, therefore, the self-installed ESKs resulted in annual bill savings of roughly \$17, or a bill reduction of \$1.40 per month.

The ECAP offers two approaches: (1) the “basic” ECAP; and (2) the “advanced” ECAP. The Basic ECAP provides the same low-cost measures as the ESK plus “additional energy saving products such as energy-efficient refrigerators.”<sup>388</sup> The Advanced ECAP provides the Basic ECAP services plus comprehensive home insulation.<sup>389</sup> Out of roughly 2,326 homes receiving Basic ECAP services, about 700 received new refrigerators.<sup>390</sup> More than two-thirds ( $1,626 / 2,326 = 0.699$ ) of ECAP participants, in other words, received basically the same services as were provided through ESK.<sup>391</sup> ECAP resulted in an average annual energy savings of 874 kWh.<sup>392</sup> At a Step 1 rate of \$0.0829, therefore, ECAP resulted in an annual bill savings of \$72, or a bill reduction of six dollars (\$6) a month.

The Advanced ECAP program serves very few customers. BC Hydro projects that it will serve 50 low income homes a year through Advanced ECAP.<sup>393</sup> That represents about three percent (3%) of BC Hydro’s annual ECAP production.<sup>394</sup> In contrast, the Company reports that it has 84,777 low income electric heating customers on its system.<sup>395</sup> Each year, in other words, BC Hydro seeks to treat less than 0.06% (six one-hundredths of one percent) of the low income electric heating population through its advanced ECAP program ( $50 / 84,177 = 0.000594$ ).

Finally, it should be remembered that neither the ECAP nor the ESK programs should be confused with comprehensive energy efficiency programs offered to low income households. When asked, BC Hydro confirmed that the ESK program is not designed to identify and install all cost effective measures.<sup>396</sup> Moreover, BC Hydro further confirmed that ECAP, including both the “basic” ECAP and the “advanced” ECAP, is not designed to identify and install all cost-effective measures.<sup>397</sup> As Mr. Colton observed, “relying exclusively on ESK and ECAP will leave cost-effective usage reduction potential undone. And, once a home is treated through ESK or ECAP, BC Hydro will not later go back to the home to install cost-effective usage reduction measures left undone the first time around.”<sup>398</sup>

<sup>388</sup> Exhibit B-14, BCOAPO 1.105.1 (Revised), Attachment 2, p. 8.

<sup>389</sup> Exhibit B-14, BCOAPO 1.105.1 (Revised), Attachment 2, p. 8.

<sup>390</sup> Exhibit B-14, BCOAPO 1.105.1 (Revised), Attachment 2, p. 8.

<sup>391</sup> BC Hydro reports providing no energy savings appliances other than refrigerators. For a comparison of the services delivered by ECAP and ESK, compare BCOAPO 1.105.1 (revised), Attachment 1, Table 3.9, page 21 (ESK measures installed) to BCOAPO 1.105.1 (revised), Attachment 2, Table 3.6, page 25). The only measures delivered through ECAP, but not through ESK, are refrigerators (installation rate of 31.6%) and insulation (installation rate of 5.6%).

<sup>392</sup> Exhibit B-14, BCOAPO 1.105.1 (Revised), Attachment 2, p. 20.

<sup>393</sup> Exhibit C2-12, Direct Testimony of Roger Colton, p. 53 (PDF p. 58/341), citing BCOAPO 1.109.11.

<sup>394</sup> Exhibit C2-12, Direct Testimony of Roger Colton, p. 53 (PDF p. 58/341).

<sup>395</sup> Exhibit B-5, BCOAPO 1.60.5.

<sup>396</sup> Exhibit B-23, BCOAPO 2.330.8.

<sup>397</sup> Exhibit B-23, BCOAPO 2.330.9.

<sup>398</sup> Exhibit C2-12, Direct Testimony of Roger Colton, p. 60 (PDF p. 65/341)

BC Hydro estimates that approximately 250,000 units in its service territory are eligible for ECAP, based on an extrapolation of the 2014 Residential End Use Survey of BC Hydro's customers, considering ECAP eligible housing types and the income threshold of LICO x 1.3.<sup>399</sup>

#### 6.4.2. BC Hydro's Decreasing Commitment to Low Income DSM

BC Hydro is systematically reducing its commitment to low income DSM. Unlike its initial efforts to reach 2,625 homes per year, BC Hydro now seeks to serve only 1,550 homes per year through ECAP.<sup>400</sup> As Mr. Colton observed:

the Company proposes to significantly decrease its low-income program expenditures over time.<sup>401</sup> As a result, the incremental energy savings (and thus the incremental bill reductions) generated by BC Hydro's low-income programs are expected to be substantially curtailed as well.<sup>402</sup> The Company proposes to curtail the low-income program even though the low-income program has been found to be cost-effective.<sup>403</sup>

BC Hydro sets out the following low income program budget:<sup>404</sup>

	F2017 (\$000)	F2018 (\$000)	F2019 (\$000)	F2020 (\$000)	F2021 (\$000)	F2022 (\$000)	F2023 (\$000)	F2024 (\$000)
ESK (variable costs)	\$462	\$472	\$481	\$371	\$379	\$270	\$276	\$281
ECAP (variable costs)	\$1,041	\$1,062	\$1,083	\$940	\$958	\$776	\$791	\$807
Fixed Costs	\$1,032	\$1,074	\$1,096	\$1,119	\$1,143	\$1,167	\$1,191	\$1,216
Total	\$2,535	\$2,607	\$2,660	\$2,430	\$2,480	\$2,213	\$2,258	\$2,305

BC Hydro does not even seek to ensure that its annual low income "targets" are met. "BC Hydro has not spent to its budget for its low-income DSM programs in past years. In Fiscal Year 2014, BC Hydro budgeted \$2.652 million for its low-income programs, while spending only \$2.185 million (spending only 82% of its budget). In Fiscal Year 2015, BC Hydro under-spent even more, spending only \$1.925 million while having

<sup>399</sup> Exhibit B-51, BC Hydro Undertaking No. 6.

<sup>400</sup> Exhibit C2-12, Direct Testimony of Roger Colton, p. 53 (PDF p. 58/341), citing BCOAPO 1.109.10.

<sup>401</sup> Exhibit B-14, BCOAPO 1.108.7 REV.

<sup>402</sup> Exhibit B-14, BCOAPO 1.108.7 REV.

<sup>403</sup> Exhibit C2-12, Direct Testimony of Roger Colton, pp. 54-55 (PDF p. 59-60/341), citing BCOAPO Exhibit B-23, 2.330.4 and 2.330.6.

<sup>404</sup> Exhibit B-14, BCOAPO 1.108.7 REV.

budgeted \$2.478 million. Unspent funds budgeted for low-income DSM are not rolled over into future years.”<sup>405</sup>

### 6.4.3. BC Hydro Could Be More Proactive in Reaching Low Income Customers

BC Hydro could remedy its failure to reach a significant portion of its low income customer base with targeted DSM by being more proactive. This conclusion is based on several observations.

- First, BC Hydro could be more proactive in seeking out the types of community partnerships that are generally used to deliver low income DSM. The Company acknowledges that “with additional resources, BC Hydro and its contractors could process more than the target number of ECAP applications. However, meeting BC Hydro’s current targets already requires heavy and concerted efforts with a range of partner organizations to recruit customers into the program.”<sup>406</sup> BC Hydro’s use of a plural “contractors” in this statement is misleading. When directly asked, BC Hydro conceded: “Carillion Canada is the delivery contractor for Energy Conservation Assistance Program. There are currently no other delivery contractors.”<sup>407</sup> When asked, BC Hydro conceded that it “has not tried to create a list of organizations with the capability of delivering low-income DSM.”<sup>408</sup>
- Second, BC Hydro has not undertaken the steps that its own DSM evaluators have recommended in response to BC Hydro’s failure to reach low income customers. In the February 2012 evaluation of ECAP, the BC Hydro third party evaluator recommended that “BC Hydro should develop a better understanding of the characteristics of the residential customers that are not participating in DSM initiatives due to limited financial means to qualify and support an appropriately sized factor.”<sup>409</sup> Moreover, BC Hydro’s own evaluator concluded that “one barrier to higher market penetration in British Columbia may be the apparent difficulty in identifying those low income customers in electrically heated homes who require the more significant insulation upgrades. As this is most likely the result of insufficient outreach methods, a rigorous process review might identify important areas for improvement” (emphasis added).<sup>410</sup> The evaluator concluded: “Better penetration and understanding of the target market would result in a higher participation rate and savings value.”<sup>411</sup>

<sup>405</sup> Exhibit C2-12, Direct Testimony of Roger Colton, pp. 53-54 (PDF p. 58-59/341), citing Exhibit B-23, BCOAPO 2.333.1.

<sup>406</sup> Exhibit B-5, BCOAPO 1.109.12.

<sup>407</sup> Exhibit B-5, BCOAPO 1.109.1; Exhibit C2-12, Direct Testimony of Roger Colton, p. 54 (PDF p. 59/341).

<sup>408</sup> Exhibit C2-12, Direct Testimony of Roger Colton, p. 55 (PDF p. 60/341), quoting, BCOAPO 3.329.1.

<sup>409</sup> Exhibit B-14, BCOAPO 1.106.1 (revised), Attachment 2, at p. 34 of 40.

<sup>410</sup> Exhibit B-14, BCOAPO 1.105.1 (revised), Attachment 2, at p. 27 of 31.

<sup>411</sup> Exhibit B-14, BCOAPO 1.105.1 (revised), Attachment 2, p. 10 of 31.

Despite this recommendation, when asked to provide all planning documents for low income DSM programs, as well as all low income DSM evaluations, BC Hydro provided no such “process review.”<sup>412</sup> Indeed, despite the recommendation of its own evaluator, BC Hydro stated quite explicitly that “all the core elements of the program remain the same even if eligibility has changed as a result of the July 2014 DSM Regulation amendments. No new evaluation has been conducted over the last four years” (emphasis added).<sup>413</sup> In other words, BC Hydro continues to do the same things it has always done despite the fact that its own evaluator found these actions to be “insufficient” and recommended modifications.

- Third, BC Hydro states that it does not use the level of arrearages or payment history to target possible low income customers for ECAP.<sup>414</sup> The most BC Hydro can say is that “credit and collection agents at the BC Hydro call centre are trained to identify customers that likely meet the criteria for BC Hydro’s low income program offerings and offer enrollment in the ESK program as part of the solution to the customer’s credit issues”<sup>415</sup> (emphasis added). As described above, the ESK program differs sharply from ECAP, most notably in the negligible bill reductions it would provide to program participants (\$1.40 per month for self-installed ESKs, as documented above). BC Hydro has not sought to study the relationship between arrearages and consumption. It has not assessed the proposition that the greater the energy bill is in the pre-treatment period, the greater the reductions in energy consumption realized by DSM investments.<sup>416</sup> Moreover, BC Hydro concedes that it “has not assessed the impacts on customers’ on-time payment performance following participation in a low income DSM program.”<sup>417</sup> According to BC Hydro, “the evaluations of DSM measures have focused on the energy savings resulting from the respective programs. BC Hydro has not undertaken studies to determine the impacts on payment history or arrearages.”<sup>418</sup> Accordingly, there has been no effort to use the Company’s billing and payment records to target ECAP.

This failure occurs despite the documented role that low income DSM can play in reducing arrearages and improving bill payment patterns.<sup>419</sup>

- Fourth, a lot of “low-hanging fruit” is being missed. For example, BC Hydro contractors have not completed ESK and ECAP installs in all non-profit housing units.<sup>420</sup> BC Hydro estimates that 63% of non-profit units have yet to receive an

<sup>412</sup> Exhibit B-14, BCOAPO 1.105.1 (revised).

<sup>413</sup> Exhibit B-5, BCOAPO 1.109.9.

<sup>414</sup> Exhibit B-5, BCOAPO 1.128.1.

<sup>415</sup> Exhibit B-5, BCOAPO 1.128.1.

<sup>416</sup> Exhibit B-5, BCOAPO 1.121.1.

<sup>417</sup> Exhibit B-5, BCOAPO 1.122.1.

<sup>418</sup> Exhibit B-5, BCOAPO 1.126.1.

<sup>419</sup> Exhibit C2-12, Direct Testimony of Roger Colton, p. 59 (PDF p. 64/341).

<sup>420</sup> Exhibit B-52, BC Hydro Undertaking No. 5.

ESK or ECAP installation.<sup>421</sup> Even though, during cross-examination by Zone II Ratepayers Group, BC Hydro highlighted some initiatives it is undertaking to improve ECAP uptake among First Nations communities in Zone 1B and Zone 2,<sup>422</sup> in F2015, only 111 First Nations households participated in ECAP Basic offerings, and no First Nations households participated in ECAP Advanced offerings.<sup>423</sup>

- Finally, BC Hydro has not adequately extended ECAP to all areas within its service territory. Of the 6,976 assessments performed by the current contractor, BC Hydro states that 1,923 were in the Lower Mainland, 4,027 were on Vancouver Island, 889 in the South Interior, and 137 in the Northern Interior.<sup>424</sup> BC Hydro asserts that ECAP availability is not limited in the Northern and Southern Interior regions, but is available throughout BC Hydro's service area; however, offering a service area wide in-home installation service is a challenge given the dispersed nature of participants.<sup>425</sup> To serve as many customers as efficiently and safely as possible, regional service needs to be bundled so that a number of customers can be serviced during the trip to the area.<sup>426</sup>

Although BC Hydro does not deny additional eligible customers access to the ECAP program once it reaches its targets,<sup>427</sup> BC Hydro has acknowledged that there are no contractual obligations for Carillion Canada to provide a specified number of residential energy assessments each year. Instead, Carillion is compensated based on the actual number of assessments it completes each year.<sup>428</sup>

#### **6.4.4. Recommended Commission Action Relative to Minister's July 2015 RIB Review Letter**

In the Minister's July, 2015 letter to the Commission,<sup>429</sup> the Minister specifically requested that the Commission provide information on several issues, including "within the current regulatory environment, what options are there for additional Demand Side Management programs, including low income programs?" BCOAPO urges that in response to that letter, the Commission should report as follows:

1. BC Hydro is under-performing on providing DSM services to its low income population.

<sup>421</sup> Exhibit B-52, BC Hydro Undertaking No. 5.

<sup>422</sup> Exhibit B-44, BC Hydro Undertaking No. 8.

<sup>423</sup> Exhibit B-5, BCOAPO 1.135.8; Exhibit B-23, Zone II 2.26.3.

<sup>424</sup> Exhibit B-19, BCOAPO 1.109.3 REV.

<sup>425</sup> *Ibid.*

<sup>426</sup> Exhibit B-1, Appendix C-3B, p. 219 of 619.

<sup>433</sup> Exhibit B-52, BC Hydro Undertaking No. 6.

<sup>428</sup> Exhibit B-41, BC Hydro Undertaking No. 3.

<sup>429</sup> Exhibit A-1 in BCUC RIB Rate Report proceeding, PDF pp. 4-6.

2. BC Hydro has failed to undertake those reasonable efforts identified by the Company's own evaluator that would allow the Company to improve its performance.
3. By under-performing with low income DSM in particular, the Company is failing to use all reasonable and available resources to help low income customers respond to the increased bills those low income customers will face over time.
4. In the absence of reasonable BC Hydro expenditures on low income DSM, low income customers are effectively shut out of the market for responding to increased rates. This result is true both for market-based usage reduction measures and for energy efficiency investments that BC Hydro directs toward residential customers generally.
5. Directing BC Hydro to engage in those efforts recommended by its own low income DSM evaluator to "develop a better understanding of the characteristics of the residential customers that are not participating in DSM initiatives"<sup>430</sup> would expand the options for additional low income DSM programs, as BC Hydro's evaluator itself noted.
6. Directing BC Hydro to engage in efforts to remedy what its own evaluator referred to as "insufficient outreach methods"<sup>431</sup> would, as BC Hydro's evaluator, itself, noted, expand the options for additional low income DSM.
7. BC Hydro's ESK delivers minimal usage reductions, and thus minimal bill savings, to program participants.
8. Neither ESK nor ECAP seek to deliver all available cost-effective electric efficiency measures in a home. Moreover, BC Hydro will not revisit a home to deliver additional cost-effective measures once a program has been treated through the limited ESK and/or ECAP initiatives.

In addition, BCOAPO urges that the Commission report to the Minister in response to the Minister's explicit request for "what options are there for additional Demand Side Management Programs, including low-income programs," that the following options are available and reasonable:

1. Expanding ESK and ECAP to represent whole-house energy efficiency programs, charged with installing all cost-effective energy efficiency measures at the time each home is treated, is an option for additional DSM programs for low income households.<sup>432</sup>

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<sup>430</sup> Exhibit C2-12, Direct Testimony of Roger Colton, p. 55 (PDF p. 60/341).

<sup>431</sup> Exhibit C2-12, Direct Testimony of Roger Colton, p. 56 (PDF p. 61/341).

<sup>432</sup> Exhibit C2-12, Direct Testimony of Roger Colton, p. 59-60 (PDF p. 64-65/341).

2. Expanding ESK and ECAP targeting based on the existence and level of arrears and/or payment history is an option to expand the number of low income households served by DSM; to increase the cost-effectiveness of low income DSM; and to expand the savings potential of low-income DSM.<sup>433</sup>
3. Making certain minimum DSM service level guarantees for low income customers is appropriate. The level of DSM funding to be devoted to low income should be sufficient to reach 50% of the below 130% of LICO-PT low income population through ECAP, both heating and non-heating, within 15 years.<sup>434</sup>

As noted above, Mr. Colton's Direct Testimony states that based on BC Hydro's representations that it believes it more appropriate to leave the actual design of low-income DSM programs to the DSM review that is taking place as part of BC Hydro's F2017-F2019 RRA, and given the inextricable link between program design and program budget, BCOAPO proposes to defer actual program design and budgeting to that proceeding. Although BCOAPO is not seeking an expenditure order in this proceeding, in response to the RIB Review, we ask that the Commission recommend that BC Hydro be required to expand installs of BC Hydro's low-income ECAP program to serve a significantly higher percentage of the low income households than it is currently serving.

## **6.5. BCOAPO Proposals Not Involving Terms and Conditions**

BCOAPO is putting forward several proposals that will markedly improve service to low income BC Hydro customers, but for which we are not seeking Commission orders. Specifically, BCOAPO proposes that BC Hydro undertake a customer segmentation study, engage in data reporting, and establish a dedicated Low Income Customer Assistance Unit.

### **6.5.1. Customer Segmentation Analysis**

BCOAPO submits that BC Hydro should engage in a planning process to determine an appropriate response to nonpayment. To that end, BCOAPO requests that BC Hydro undertake a customer segmentation study that is specifically directed toward characterizing patterns of nonpayment; identifying the characteristics of nonpayers; identifying predictors of nonpayment; and identifying early indicators of nonpayment.<sup>435</sup> Mr. Colton recommended that this study "further be specifically directed toward assessing, for each customer segment (e.g., type of nonpayer, type of nonpayment), the extent to which, if at all, the following activities have the impact of reducing residential arrears and/or residential bad debt: (1) cash security deposits; (2) deferred

<sup>433</sup> Exhibit C2-12, Direct Testimony of Roger Colton, p. 56-59 (PDF p. 61-64/341).

<sup>434</sup> Exhibit C2-12, Direct Testimony of Roger Colton, p. 63 (PDF p. 68/341).

<sup>435</sup> Exhibit C2-12, Direct Testimony of Roger Colton, p. 120 (PDF p. 125/341).