

British Columbia Utilities Commission

**FortisBC Inc. 2016 Long Term Electric Resource Plan (LTERP)
and
Long Term Demand Side Management Plan (LT DSM Plan)**

BCUC Project No.3698896

**Submission of
B.C. Sustainable Energy Association and Sierra Club B.C.**

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PART 1 – INTRODUCTION

A. Overview

i. Final Submission of BCSEA-SCBC

1. This is the final submission of the B.C. Sustainable Energy Association (BCSEA) and Sierra Club B.C. (SCBC) to the B.C. Utilities Commission in the Commission's proceeding regarding the FortisBC Inc. (FBC) 2016 Long Term Electric Resource Plan (LTERP) and Long Term Demand Side Management Plan (LT DSM Plan). This submission is filed pursuant to the regulatory timetable approved in Order G-155-17 dated October 6, 2017 [Exhibit A-20].
2. This submission responds to FBC's October 20, 2017 final argument.

ii. BCSEA-SCBC interests in the proceeding

3. BCSEA is a non-profit association of citizens, professionals and practitioners committed to promoting the understanding, development and adoption of sustainable energy, energy efficiency and energy conservation in British Columbia. BCSEA supports the province's transition to a lower-carbon economy. BCSEA has five chapters across B.C. and approximately five hundred individual and corporate members. Many of BCSEA's members are ratepayers of FortisBC. BCSEA represents individuals and corporations in BC who care about energy sustainability and climate change, and who want the energy they purchase and use to be sustainably produced and transmitted.¹
4. SCBC is a non-profit organization of British Columbians from all walks of life. SCBC represents individuals in BC who care about a broad range of environmental issues, including climate change and clean energy, and who want the energy they purchase and use to be produced and transported in ways that minimize harm to the natural environment. SCBC has five local groups and over 12,000 members and supporters across the province. Many of SCBC's members are ratepayers of FortisBC.²

¹ Exhibit C5-1.

² *Ibid.*

5. BCSEA-SCBC's interests in this proceeding are as a non-profit public interest environmental and energy policy organizations, and as representatives of their members' interests as ratepayers.

iii. BCSEA-SCBC involvement in the proceeding

6. BCSEA-SCBC have participated fully in this proceeding. They retained Mr. James Grevatt of Energy Futures Group, Inc. (EFG) to provide the Commission with expert evidence on demand-side management aspects of the LTERP and LT DSM Plan. Mr. Grevatt's evidence is filed as Exhibit C5-5. BCSEA-SCBC and Mr. Grevatt file responses to information requests on Mr. Grevatt's evidence by Commission staff,³ BC Old Age Pensioners, et al (BCOAPO),⁴ Commercial Energy Consumers (CEC),⁵ FBC,⁶ and Mr. Shadrack.⁷ BCSEA-SCBC also made information requests to FBC,⁸ Mr. Shadrack,⁹ and Industrial Customers Group (ICG).¹⁰

B. BCSEA-SCBC Key Points

7. BCSEA-SCBC highlight the following key points.
8. The Commission should reject FBC's legal submission that a "bare description" satisfies the requirement of UCA s.44.1(b)(f) that the utility's long term plan include an explanation of why future unmet energy needs are planned to be met with supply-side resources rather than demand-side resources.
9. The High DSM scenario in the long-term DSM plan is acceptable based on the cost-effectiveness analysis at the present time and should be accepted by the Commission. Under the proposed long-term electricity resources plan and the LT DSM Plan no new supply-side resources are contemplated for at least ten years¹¹ and certainly before 2021 when FBC's next long term resource plan is anticipated.

³ Exhibit C5-8.

⁴ Exhibit C5-9.

⁵ Exhibit C5-10.

⁶ Exhibit C5-11.

⁷ Exhibit C5-12.

⁸ Exhibits C5-2, C5-4.

⁹ Exhibits C5-7, C5-13.

¹⁰ Exhibit C5-6.

¹¹ Exhibit B-1, p.141, pdf p.162.

10. FBC should use marginal, rather than average, line losses in screening the cost-effectiveness of DSM initiatives, given that DSM saves energy and demand at the margin.
11. FBC should develop, obtain approval for, and implement carbon-reduction electrification measures under the amended Greenhouse Gas Reduction (Clean Energy) Regulation, in addition to acting on the opportunities for cost-effective low-carbon fuel switching DSM measures based on follow-up report of the BC Conservation Potential Review for FBC.

C. Outline of Submission

12. For convenience, this submission is organized according to more or less the same headings as used by FBC in its Final Argument. Subheadings where BCSEA-SCBC have no comment are omitted.

PART 2 – LEGAL AND REGULATORY FRAMEWORK

13. Sections 44.1(2), (6), (7) and (8) of the UCA are the main statutory provisions governing the Commission's review of FBC's 2016 LTERP and LT DSM Plan.
14. In its Final Argument, FBC goes out of its way to separate, both legally and organizationally, what it calls the requirements of s.44.1(2) and the public interest considerations in s.44.1(6) and s.44.1(8). This goes too far, in BCSEA-SCBC's respectful submission. BCSEA-SCBC submit that the public interest test for the Commission's acceptance or rejection of all or a part of a long-term resource plan filed under s.44.1 is the overarching lens through which the Commission must view the plan in relation to the various provisions of s.44.1.
15. FBC argues that as a matter of law the March 24, 2017 amendments¹² to the DSM Regulation are not applicable to the Commission's review of the LTERP that was filed on November 30, 2016.¹³ BCSEA-SCBC respectfully disagree.
16. In BCSEA-SCBC's submission, both s.44.1 of the UCA and the March 2017 amendment to the DSM Regulation are enactments¹⁴ that must be construed as

¹² B.C. Reg. 117/2017.

¹³ FBC Final Argument, para.26.

¹⁴ "'enactment" means an Act or a regulation or a portion of an Act or regulation," *Interpretation Act*, RSBC 1996, c.238, s.1.

“always speaking.”¹⁵ In addition, both s.44.1 and the DSM Regulation (as amended) “must be construed as being remedial, and must be given such fair, large and liberal construction and interpretation as best ensures the attainment of its objects.”¹⁶ The Commission’s determination as to whether carrying out the plan would be in the public interest¹⁷ is made in accordance with the law as it stands at the time of the determination.

17. BCSEA-SCBC submit that this is not fatal to the LTERP. Rather, it illustrates that FBC goes too far in trying to characterize the provisions of s.44.1(2) as rigid requirements to be applied on a yes or no basis with no consideration of the purpose.
18. BCSEA-SCBC concur with FBC’s paragraph 29. In reviewing under UCA s.44.1(8)(c) whether a plan shows that the public utility intends to pursue cost effective demand-side measures the Commission has consistently opted under s.4(1) of the DSM Regulation to review the cost effectiveness of DSM measures in the plan portfolio at the level of the portfolio as a whole. This remains appropriate.
19. BCSEA-SCBC do not disagree with FBC’s abbreviated description in paragraph 30 of the complicated manner in which s.4 of the DSM Regulation requires the Commission to determine the cost-effectiveness of a DSM portfolio (or measure) using the total resource cost test. BCSEA-SCBC add that s.4(1.1)(b) provides, with some exceptions, that for FBC the avoided electricity cost is FBC’s long-run marginal cost of acquiring electricity generated from clean or renewable resources in British Columbia.
20. BCSEA-SCBC do not disagree that under s.4 of the DSM Regulation the use of the modified TRC (MTRC) – the TRC increased to reflect the participant or utility non-energy benefits of the demand-side measure – is generally capped at 10% of the portfolio for an electricity utility such as FBC.
21. On the topic of MTRC, FBC said its approach is to use the MTRC only for DSM programs that would not otherwise pass the TRC test. EFG disagrees and

¹⁵ “7 (1) Every enactment must be construed as always speaking. (2) If a provision in an enactment is expressed in the present tense, the provision applies to the circumstances as they arise.” *Interpretation Act*, s.7.

¹⁶ *Interpretation Act*, s.8.

¹⁷ UCA, s.44.1(b)

recommends that FBC should “reflect environmental values based on the Modified TRC test as a standard practice, and not only when measures or programs do not pass screening using the standard TRC test.”¹⁸ FBC’s paragraph 31 apparently misunderstands EFG’s evidence on this point.

PART 3 – LONG TERM ELECTRICITY RESOURCES PLAN

A. Gross (Pre-DSM) Demand Forecasts

i. FBC’s Pre-DSM Load Forecasts

22. FBC’s reference case gross load forecast before DSM represents a compound annual growth rate of 1.1 percent over the 20 year planning period.¹⁹
23. For comparison, with FBC’s preferred High DSM scenario, FBC’s reference case gross load forecast net of DSM represents a compound annual growth rate of 0.26 percent over the 20 year planning period.²⁰
24. BCSEA-SCBC have chosen not to delve deeply into the accuracy of FBC’s gross load forecast in this proceeding because under the 2016 LTERP and LT DSM Plan FBC requires no new supply-side resources in the next ten years.²¹
25. FBC says that its long term load forecasts are not used for rate setting purposes and therefore “any perceived historical over-estimation of resource requirements in long term forecasts does not have a cumulative effect and would not impact FBC’s customers.”²² In response, while the long term load forecasts (pre-DSM and post-DSM) are not used for rate setting they are used to identify future gaps in the load resource balance. In that respect, the accuracy of FBC’s pre-DSM load forecast will be an important consideration in the review of FBC’s next long term plan, anticipated in 2021, when the prospect of new supply-side resources is more imminent.

¹⁸ Exhibit C5-5, p.3.

¹⁹ FBC Final Argument, para.39.

²⁰ FBC Final Argument, para.80.

²¹ Exhibit B-1, p.141, pdf p.162.

²² FBC Final Argument, para.41.

ii. Monte Carlo simulation and alternative load scenarios

26. FBC developed a Monte Carlo simulation model to derive a range of potential high and low load forecasts based on traditional load drivers. In conjunction, FBC developed load scenarios depicting non-traditional load drivers such as electric vehicle load, residential rooftop solar, low-carbon fuel switching.²³
27. FBC workshopped these scenarios with the Resource Planning Advisory Group in which a representative of BCSEA-SCBC participates. BCSEA-SCBC commend FBC for undertaking the scenario approach and involving stakeholders.
28. BCSEA-SCBC note that two of the scenarios developed – “Low Carbon World” and “Low Carbon World with Climate Change” – are particularly aligned with B.C. government policy reflected in the Climate Action Plan and Order in Council 101/2017 regarding low carbon electrification by BC Hydro. These scenarios are described as follows:

“Scenario 1 (“Low Carbon World”) is the first of the boundary scenarios and is designed to quantify the potential energy and demand impacts on the FBC system if there is substantial growth in the penetration of the three load drivers that *increase* load: large load sector transformation, gas-to-electric fuel switching and EVs.

Scenario 2 (“Low Carbon World with Climate Change”) is an offsetting scenario and is designed to quantify the potential energy and demand impacts on the FBC system if there is some growth in the penetration of load drivers that *increase* load (EVs and gas to-electric fuel-switching) accompanied by some growth in the penetration of a load driver that *decreases* load (weather changes).²⁴

29. The impact of selected load scenarios on 20-year energy and peak demand estimates is shown in Figure 4-1 and Figure 4-2, respectively.²⁵ The figures show that while the impact of the non-traditional load drivers on the reference case would not be large by 2021, it would be quite significant by 2035. Accordingly, BCSEA-SCBC recommend that FBC should fully implement a non-traditional load driver scenario development approach in its preparation of the next LTERP and LT DSM Plan, anticipated to be completed in 2021.

²³ Exhibit B-1, p.65, *et seq.*

²⁴ Exhibit B-1, pp. 67-68, pdf pp.88-89.

²⁵ Exhibit B-1, p.69, pdf p.90.

B. LT DSM Plan and Load Forecast net of DSM Savings

i. FBC's LT DSM Plan

30. In the development of its 2016 long term DSM plan, FBC analyzed four DSM scenarios: Base, Low, High and Max.
31. FBC's preferred DSM scenario is the High DSM scenario.²⁶ The High DSM scenario involves an initial DSM target of 66% of growth offset, beginning in 2021 to ramp up to 80% growth offset for a 20-year average of 77% growth offset.
32. Deferring to 2021 the ramp-up of DSM savings is designed to minimize the rate impact of the High DSM scenario by "optimizing" utilization of tranche 1 energy from the Power Purchase Agreement with BC Hydro under Rate Schedule 3808 (BC Hydro PPA).²⁷
33. FBC explains the High DSM scenario as follows:

"The preferred DSM level was based on the CEA requirement of 66 percent load growth offset (applicable to BC Hydro), which reflects FBC's current level of DSM offset, with ramping up to 80 percent to optimize use of PPA Tranche 1 energy. The preferred level of DSM was then included with other supply-side resource options in the portfolio analysis to determine the preferred portfolio of demand- and supply-side resources over the planning horizon."²⁸
34. The High DSM scenario is cost-effective using the TRC test.
35. BCSEA-SCBC's view is that the High DSM scenario in the long-term DSM plan is acceptable based on the cost-effectiveness analysis at the present time and should be accepted by the Commission. This view is informed by the understanding that under the proposed long-term electricity resources plan and the LT DSM Plan no new supply-side resources are contemplated before 2021 when FBC's next long term resource plan is anticipated.
36. BCSEA-SCBC note that the LT DSM Plan is based in part on the provincial, dual-fuel conservation potential review (BC CPR) carried by Navigant Consulting for FBC, BC Hydro, FortisBC Energy Inc., and Pacific Northern Gas.

²⁶ See FBC Final Argument, para.57.

²⁷ Exhibit B-1, Volume 2, p.11, pdf p.497.

²⁸ Exhibit B-4, BCSEA 8.2, pdf p.18.

ii. Eligibility of Self-Generation Customers for DSM Programs and Incentives

37. BCSEA-SCBC support FBC's approach to the eligibility of self-generation customers for DSM programs and incentives set out in section 5.2 of the LT DSM Plan:

“Customers that normally supply a portion of their load through self-generation may be eligible for DSM programs and financial incentives in proportion to the share of potential energy savings to the Company.”²⁹

38. BCSEA-SCBC do not agree with the position expressed in the evidence filed by the Industrial Customers Group.³⁰ In response to IRs from BCSEA-SCBC, ICG confirmed that on a simple *pro rata* basis, FortisBC supplied only 4.6% of the Zellstoff Celgar mill load in 2015.³¹ In addition, the energy provided by FortisBC is not tied to specific loads, and so the 4.6% of total consumption provided by FBC cannot be attributed to specific mill processes that might be the subject of ZC's specific efficiency project.³²

39. BCSEA-SCBC agree with FBC that in the case of efficiency projects by customer self-generators it is the reduction in FBC's load that is pertinent to the size of any incentive under FBC's DSM portfolio. They agree with FBC's statement that:

“The prorating of DSM incentives would be on a sliding scale ranging from 100% for customers who procure their entire electricity load requirements from the Company on an on-going basis, to zero percent for customers that normally supply their entire load from self-generation.”³³

iii. Fuel Switching

40. The term “fuel switching” requires further definition. For instance, “fuel switching” can describe:

- (a) A measure that would reduce energy usage but is explicitly excluded from the definition of “demand-side measure” because its “main purpose ... is to

²⁹ Exhibit B-1, Volume 2, p.24, pdf p.510.

³⁰ Exhibit C7-5.

³¹ Exhibit C7-7, ICG Response to BCSEA IR 1.1

³² Exhibit C7-7, ICG Response to BCSEA IR 1.2

³³ Exhibit B-1, Volume 2, p.24, pdf p.510.

encourage a switch from the use of one kind of energy to another such that the switch would increase greenhouse gas emissions in British Columbia,”³⁴

- (b) A measure that qualifies as a “demand-side measure” because it reduces energy use and in addition reduces GHG emissions (e.g., replacing an oil furnace with an efficient natural gas furnace, or replacing a natural gas furnace with an electric heat pump), or
 - (c) A carbon-reduction electrification measure under OIC 101³⁵ that replaces or substitutes the use of electricity for other sources of energy that produce more GHG emissions, independent of whether the switch also reduces net energy usage.
41. BCSEA-SCBC take no issue in principle with FBC’s paragraph 71 describing the evaluation of the cost-effectiveness of gas-to-electric DSM measures using the TRC. That is, in considering whether a gas-to-electric measure should be included in FBC’s DSM portfolio the cost-effectiveness of the measure should be evaluated as required under the DSM Regulation.
 42. Parenthetically, BCSEA-SCBC note that the cost-effectiveness of air source heat pumps as a replacement or substitute for gas heating is improving quickly. For instance, the Northeast Energy Efficiency Partnerships’ recently issued “Cold Climate Air-Source Heat Pump Specification” requires “a COP @ 5° F (Minus 15° C) >1.75 (at maximum capacity operation)” and much of the equipment that meets this specification “is designed to perform in heat pump mode without electric resistance backup at temperatures as low as -25° C.”³⁶
 43. BCSEA-SCBC take no issue with FBC’s description of OIC 101/2017, in paragraph 72 of its Final Argument.
 44. Further, BCSEA-SCBC agree with FBC in paragraph 73 that a low-carbon gas-to-electricity fuel switching program could meet the criteria of a prescribed electrification undertaking under the GGRR.
 45. However, BCSEA-SCBC respectfully disagree with FBC’s position that:

³⁴ CEA, s.1.

³⁵ The March 2017 amendment of the Greenhouse Gas Reduction (Clean Energy) Regulation, BC Reg. 102/2012. Found at Exhibit B-13, Attachment 29.1.

³⁶ Exhibit C5-5, p.6.

“Now that electrification is a prescribed undertaking pursuant to section 18 of the *CEA* and section 4 of the *GRR*, we submit that it no longer meets the legal definition of a DSM measure.”³⁷

46. In BCSEA-SCBC’s view, the measure itself, such as a gas-to-electricity measure, is different than the legal characterization of the measure. So, a gas-to-electricity measure would be a carbon-reduction electrification undertaking under GRR if it meets the requirements of the GRR. The same gas-to-electricity measure would also be a DSM measure if (and only if) it meets the requirements of a DSM measure, in particular that it conserves energy or promotes energy efficiency.
47. To be clear, BCSEA-SCBC acknowledge that a GHG emissions-reduction electrification undertaking under the GRR is not automatically a DSM measure as defined in CEA s.1, and *vice versa*. However, that does not mean that DSM measures that reduce net GHG emissions “no longer meet the legal definition of a DSM measure.”
48. FBC argues that its position that an electrification measure no longer meets the legal definition of a DSM measure “...is consistent with the separate rate treatment for prescribed undertakings under section 18(2) of the *CEA* and the separate definition of “cost-effective” in section 4(1) of the *GRR*, which establishes a significantly different methodology than the cost-effectiveness test provided for DSM measures under the *DSM Regulation*.³⁸ BCSEA-SCBC agree that the amended GRR differs from the DSM Regulation in terms of rate treatment and cost-effectiveness methodology. However, they disagree that these differences mean that an electrification measure no longer meets the legal definition of a DSM measure. They say these differences simply reflect the fact that an electrification undertaking under the GRR is legally different than a DSM program.
49. As FBC acknowledges, the cost-effectiveness methodology GRR electrification undertakings is significantly different than the cost-effectiveness methodology for demand-side measures set out in the DSM Regulation.³⁹
50. Under the amended GRR, a carbon-reduction electrification undertaking is cost-effective under the following definition:

³⁷ FBC Final Argument, para.73, underline added.

³⁸ FBC Final Argument, para.73.

³⁹ Exhibit B-13, BCSEA 2.29.8.

"cost-effective" means that the present value of the benefits of all of the public utility's undertakings within the classes defined in subsection 3 (a) or (b) exceeds the present value of the costs of all of those undertakings when both are calculated using a discount rate equal to the public utility's weighted average cost of capital over a period that ends no later than a specified year;"⁴⁰

51. BCSEA-SCBC agree with FBC's explanation as follows:

"In the DSM Regulation, the cost-effectiveness of demand-side measures uses the governing Total Resource Cost Test (TRC) or modified Total Resource Cost Test (mTRC), which considers the costs and benefits of a measure for both the measure participants and the utility.

The cost-effectiveness methodology set out in the new section 4(1) of the *GRR* (as amended) measures the cost and benefits of electrification on the utility, but does not include costs and benefits for the non-utility participants. Specifically, the benefits are defined as "all revenues the public utility reasonably expects to earn as a result of implementing the [electrification] undertaking less revenues that would have been earned from the supply of undertaking electricity to export markets". Cost effectiveness is defined as the present value of the benefits divided by the utility costs to implement the undertaking."⁴¹

52. FBC acknowledges that:

- (a) as a public utility in B.C., FBC is permitted to pursue the prescribed undertakings established by OIC 101/2017,⁴²
- (b) an FBC low-carbon fuel-switching electrification program could meet the criteria in subsection 4(3),⁴³
- (c) in principle FBC would be entitled to recover in rates its costs of such a program pursuant to CEA s.18,⁴⁴ and
- (d) GGRR low-carbon fuel switching electrification undertakings are appropriate for inclusion in FBC long-term electricity resource plan under UCA s.44.1 if they are expected to materially impact the forecast load requirements.⁴⁵

⁴⁰ GGRR, s.4(1), Exhibit B-13, Attachment 29.1, pdf p.25.

⁴¹ Exhibit B-13, BCSEA 2.29.8

⁴² Exhibit B-13, BCSEA 2.29.2.

⁴³ Exhibit B-13, BCSEA 2.29.3.

⁴⁴ Exhibit B-13, BCSEA 2.29.3.1.

⁴⁵ Exhibit B-13, BCSEA 2.29.4.

53. FBC confirms that it intends to examine and develop GGRR low-carbon electrification measures and that it would propose them if they would be cost-effective.⁴⁶

54. In terms of how it would bring GGRR undertakings before the Commission, FBC states:

“When undertaking prescribed activities as defined in the GGRR, FBC will file applications for recovery of the costs associated with the undertakings in customer rates. The nature of these applications has not been developed in detail, but it would likely make sense to develop rate recovery approaches that are applicable to a range of possible electrification undertakings.”⁴⁷

55. FBC adds:

“FBC notes that another Order in Council – OIC 100/2017 - was issued specifically for BC Hydro at the same time as OIC 101/2017 and requires certain categories of BC Hydro’s electrification undertakings to be treated in the same manner as its DSM expenditures. This approach may be suitable for FBC as well, but further consideration of rate recovery approaches for electrification initiatives is needed before settling on the proposed treatment.”⁴⁸

56. FBC says that “The nature of future applications regarding electrification and the approach FBC takes to rate recovery have not been developed at this time.” FBC says the second phase of the BC Conservation Potential Review process will help inform FBC’s evaluation of fuel-switching potential. If additional analysis is required, FBC says it “will be undertaken as support for an application with respect to section 18 of the CEA.”

57. BCSEA-SCBC acknowledge that FBC has had limited opportunity to evaluate the potential for electrification that may now be encompassed by the GGRR.⁴⁹

iv. Average versus Marginal Line Losses

58. BCSEA-SCBC submit that in its assessment of DSM cost-effectiveness FBC should use marginal, rather than average, line losses in screening the cost-

⁴⁶ Exhibit B-13, BCSEA 2.29.6.

⁴⁷ Exhibit B-11, BCUC 2.71.1.

⁴⁸ *Ibid.*

⁴⁹ *Ibid.*

effectiveness of DSM initiatives, given that DSM saves energy and demand at the margin. This is supported by the evidence of Mr. Grevatt of EFG.⁵⁰

59. Mr. Grevatt notes that FBC does recognize the capacity benefits derived from energy efficiency measures. However, he adds that “Line losses are greater at times of greater load, and logically the line loss reductions associated with energy efficiency that occurs during times of peak demand also occur at times of greater load.”⁵¹

60. On this point Mr. Grevatt cites the Regulatory Assistance Project as follows:

“First, energy efficiency measures typically provide significant savings at the time of the system peak demand, and that time occurs when the line losses are highest. The avoided line losses can add as much as 20% to the capacity value measured at the customer meter.”⁵²

61. In addition, Mr. Grevatt says marginal line losses should be used because energy savings reduce the level of required generating reserves. He cites the Regulatory Assistance Project:

“Second, because they are reducing loads, including marginal line losses, energy efficiency measures also reduce the level of required generating reserves. Each of these benefits increases the economic savings provided by energy efficiency investments. The compounding of a 20% marginal line loss savings and a 15% reserves savings can produce a 44% total generating capacity benefit, over and above the peak load reduction measured at the customer’s meter.”⁵³

62. Mr. Grevatt says that energy efficiency provides significant peak demand benefits whose value should be reflected in cost effectiveness screening. Therefore, the line loss values used in cost effectiveness screening should reflect marginal, rather than average values.⁵⁴

63. In response to an IR from BCOAPO, Mr. Grevatt explained that the value (in percent) used for line losses does not have to vary by efficiency measure based on the extent to which each measure’s savings occurred during high use periods. He states:

⁵⁰ Exhibit C5-5, p.3.

⁵¹ Exhibit C5-5, p.12.

⁵² *Ibid.*

⁵³ *Ibid.*

⁵⁴ *Ibid.*

“No, line losses could be established for the portfolio by demand period based on analysis of the different periods. These same values would be applied to all measures, but in proportion to the percentage of savings that each measure would be expected to achieve in each demand period. Each measure (or end use) for which savings were to be claimed would have an associated load shape indicating those percentages, and this would indeed vary by measure or end use.

Alternatively, Fortis could take a simplified approach to developing a weighted average value for marginal line losses that it could use in place of the current average line loss value. Such an approach would be similar to the approach that Fortis presumably uses now with average line losses, but would use a weighted average load shape for the portfolio as a proxy to estimate how much of the savings occur in each load period with its associated marginal line losses. This would certainly underestimate the value that certain measures provide and overestimate others, but would still be a better reflection of capacity benefits than is the current practice of using average line losses.”⁵⁵

64. FBC disagrees that marginal line losses should be used.⁵⁶ In response, the Regulatory Assistance Project report quoted by Mr. Grevatt⁵⁷ is strong evidence that energy efficiency measures avoid marginal line losses and reserve requirements. FBC could estimate marginal line losses by using a weighted average load shape for the DSM portfolio, as explained in the response to BCOAPO quoted above.

C. New Supply Side Resources and Facilities

i. The BCUC Resource Portfolio Analysis Guidelines

65. In paragraphs 87 to 89 of its Final Argument FBC characterizes a mere description of supply-side options resulting from a portfolio analysis as satisfying the requirements of s.44.1(2)(d) and (e) of the UCA. In BCSEA-SCBC’s view, the Commission has a broader role when it considers whether the plan meets the requirements of s.44.1(2)(d) and (e) in the course of determining if the plan is in the public interest.

⁵⁵ Exhibit C5-9, BCSEA response to BCOAPO IR 1.6.1.

⁵⁶ FBC Final Argument, paras.76-79.

⁵⁷ Exhibit C5-9, BCSEA Response to BCOAPO 6.2. And, Exhibit C5-5, p.12: Lazar, Jim and Baldwin, Xavier: *Valuing the Contribution of Energy Efficiency to Avoided Marginal Line Losses and Reserve Requirements*. Regulatory Assistance Project, August, 2011., p.8. <http://www.raponline.org/wp-content/uploads/2016/05/rap-lazareeandlinelosses-2011-08-17.pdf>

ii. Resource Options

66. FBC includes Wood-Based Biomass as a “clean or renewable resource.”⁵⁸
BCSEA-SCBC’s view is that electricity generated from the combustion of creosote or pentachlorophenol contaminated rail ties in wood-based biomass generating facilities is not, and should not be considered, electricity from a “clean or renewable resource” as defined in the CEA and regulations. BCSEA-SCBC asked FBC to confirm that consideration of “Wood-Based Biomass” as a clean or renewable resource did not include the combustion of creosote or pentachlorophenol contaminated rail ties.

67. FBC’s response is as follows:

“The FBC resource options are evaluated at a high level. In its economic modelling, FBC did not make any specific assumptions about the source of biomass.

However, the biomass generation options were developed using clean biomass fuel availability data from a biomass study produced for BC Hydro and FBC by Industrial Forestry Service Ltd. as part of the 2015 joint resource options inventory review process. Four sources of woodwaste biomass were examined in the study including sawmill woodwaste, roadside woodwaste, pulp logs and standing timber. Surplus supplies of municipal solid waste, as well as woodwaste from demolition and construction etc., were not reviewed. [Footnote: Wood Based Biomass in British Columbia and its Potential for New Electrical Generation. Industrial Forestry Service Ltd, July 2015, pages i-ii.]”⁵⁹

68. BCSEA-SCBC are satisfied with this response, in the context of a long term plan that is not considering specific resource options.

iii. Distributed Generation

69. BCSEA-SCBC make the following points regarding the consideration of distributed generation in the LTERP.

70. BCSEA-SCBC support small, clean distributed generation. And, BCSEA-SCBC support FBC’s Net Metering Program.

⁵⁸ Exhibit B-1, Table 8-1: FBC Demand-Side and Supply-Side Resource Options, p.96 (pdf p.117)

⁵⁹ Exhibit B-4, BCSEA 3.1.

71. BCSEA-SCBC will not address in this submission the specific issues that are under review in the Commission's ongoing Net Metering Reconsideration proceeding.⁶⁰
72. The term "distributed generation" (without capitals) is a broad term. For discussion in the LTERP context the term needs to be defined. Distributed generation can enter the long-term planning discussion in any or all of three ways:
- (a) as factor that reduces the load and changes the load shape that the utility must meet, due to customers choosing to install their own generation (inside or outside of a net metering program),
 - (b) as a demand-side resource for the utility, in which the utility implements a DSM program at ratepayers' expense aimed at reducing load by encouraging customers to adopt distributed generation facilities, and
 - (c) as a supply-side resource for the utility, in which the utility acquires power to add to its supply stack by purchasing net excess power from customers with their own generation facilities.
73. It is important to be clear that the FBC Net Metering Program is neither a supply-side resource nor a demand-side resource. In Decision and Order G-199-16, the Commission panel found that the purpose of the FBC NM Program is limited to enabling participants to offset some or all of their electricity consumption annually. As a result, the FBC NM Program cannot be considered a supply-side resource because it doesn't provide power to add to the utility's supply stack.
74. One consequence of this observation is that much of FBC's criticism⁶¹ of what it calls "Distributed Generation" (capitalized) is misplaced because it defines "Distributed Generation" as more or less the same as the FBC NM Program⁶² and then it provides reasons why the NM Program is not an adequate supply-side resource.

⁶⁰ FBC Application for Reconsideration and Variance of Order G-199-16 FBC Net Metering Program Tariff Update Decision ~ Phase 2 ~ Project No.3698875.

⁶¹ E.g., FBC Final Argument, paras.96, 97, 102.

⁶² "Distributed Generation - Individual use generation resource, such as solar or small wind turbines, distributed amongst and utilized by customers. Typically offset individual customer power consumption and is connected to the utility system via some form of net metering facility." [underline added] Exhibit B-1, Appendix A, pdf p.167.

75. It is equally clear that the FBC NM Program is not a demand-side resource. FBC's DSM portfolio contains no program incenting or otherwise encouraging customers to participate in the NM Program.
76. Thus, when FBC's Resource Options Report states, "DG can be considered both a supply-side or demand-side resource,"⁶³ this must be "DG" defined more broadly than the FBC NM Program.
77. BCSEA-SCBC suggest that in future long-term planning processes FBC make a clear distinction between the Net Metering Program, distributed generation as a supply-side resource, and distributed generation as a demand-side resource.
78. In paragraph 100 of its Final Argument, FBC says it is not "discouraging DG" and by this it refers explicitly to operating the NM Program. FBC says correctly that "Customer participation in the NM Program has been trending upwards over the last few years."⁶⁴ It can be anticipated that the participation rate will accelerate as small-scale generation costs decline and retail electricity rates increase. In jurisdictions with high insolation values and high electricity rates, participation in electric net metering programs is already burgeoning.
79. Again, however, the FBC NM Program is neither a supply-side resource nor a demand-side resource. This is not atypical. Energy Futures Group says it "is not aware of utilities that are incorporating net metering as an element of their long-term demand side and supply side resource options."⁶⁵
80. FBC says it maintains a "neutral approach to an expanded DG program, under which DG is evaluated from the same perspective as any other potential long term planning option that provides supply to FBC..." BCSEA-SCBC's view is that in the current LTERP process FBC limited its focus to the existing NM Program and has stopped short of analyzing a real supply-side distributed generation resource or, for that matter, a real demand-side distributed generation resource. That is not to say that a supply-side or demand-side DG resource would necessarily pass cost-effectiveness tests. Indeed, at the present time they would likely not. However, balance will shift over time as small, clean generation facilities decline in price and retail electricity rates rise. In BCSEA-SCBC's view, the door should be kept open

⁶³ Exhibit B-1, Appendix J, page 41, pdf p.429.

⁶⁴ Exhibit B-1, Volume 1, p.27, pdf p.42.

⁶⁵ Exhibit C5-12, BCSEA to Shadrack IR 1.8i, p. 5.

to future consideration of distributed generation as a DSM measure and/or a supply resource when the benefits and costs warrant it. This is in addition to continued support of the Net Metering Program.

iv. Self-Generator Supply

81. FBC uses the term “supply from self-generator customers” to describe larger, industrial customers that can provide electricity to FBC. FBC states:

“FBC is not seeking additional sources of supply at this time and is therefore not actively looking to purchase power from self generator customers.”⁶⁶

82. Similarly, FBC says it did not include in the portfolio analysis supply from IPPs whose current EPAs with BC Hydro expire and are not renewed over the course of the LTERP’s planning horizon.
83. FBC says it would consider opportunities to purchase supply from a self-generator customer in the future if the cost is lower than the alternatives, and the supply is otherwise consistent with the Company’s planning objectives and BC energy and environmental policies. Presumably, the same applies to supply from an IPP whose EPA with BC Hydro has ended. BCSEA-SCBC do not object in principle to FBC considering the unique merits of specific supply acquisition opportunities that may arise. However, BCSEA-SCBC emphasize that FBC has no need for new supplies for at least ten years.

v. Utility-Scale Solar Generation

84. FBC considered utility-scale solar PV as a potential resource option. A small amount of utility-scale solar PV (1% of incremental resources) was selected in the “100% Clean BC Resources” portfolio.⁶⁷ In terms of the cost attribute of utility-scale solar PV, BCSEA-SCBC note that the Commission’s Site C Inquiry report provides information on declining future costs of this supply-side resource.⁶⁸

⁶⁶ Exhibit B-1, p.113, pdf p.134.

⁶⁷ Exhibit B-1, Table 9-2, p.126, pdf p.147.

⁶⁸ Site C Inquiry, Final Report, Appendix A, s.1.2.7, pdf p.243.

<http://www.sitecinquiry.com/wp-content/uploads/2017/11/11-01-2017-BCUC-Site-C-Inquiry-Final-Report.pdf>

85. The Utilities Commission is currently considering an application by FBC for approval of a Community Solar Pilot Project (CSPP).⁶⁹ While the CSPP is not presented as a supply-side resource, questions have been raised in both the CSPP and LTERP proceedings about the relationship between the CSPP and the role of distributed generation in FBC's long term resource plan.
86. Further to FBC's paragraph 108, BCSEA-SCBC endorse the following comments they made in their final submission in the CSPP proceeding:

"BCSEA-SCBC see the Community Solar Pilot Project as a small pilot project aimed at learning whether and how this particular model can make benefits that are somewhat equivalent to those of net metering available to customers for whom installing their own small-scale self-generation is not possible or not desired. The CSPP is not a substitute for FBC's Net Metering Program, for future community-owned generation facilities, or for the development of an FBC distributed generation policy. Nor, in BCSEA-SCBC's view, does the CSPP constitute a threat to FBC's Net Metering Program, future community-owned generation facilities, or the development of an FBC distributed generation policy. On the contrary, in BCSEA-SCBC's view, the CSPP will modestly enhance public awareness of solar PV generation and environmentally-oriented rate designs and it will provide information on the implementation of one particular model that will be valuable for the development of various models. These benefits of the CSPP should not be overstated. In BCSEA-SCBC's view, the Community Solar Pilot Project is a small step in a favourable direction."

viii. The Selection of the Preferred Portfolio

87. FBC selected four alternative portfolios for consideration as the preferred portfolio.
88. BCSEA-SCBC prefer "Portfolio C4, 100% Clean BC Resources":

"*Portfolio C4*, a portfolio that would meet a clean or renewable BC resources energy target of 100 percent through new supply resources comprised of market supply (31 percent), wind (65 percent), biogas (3 percent), and biomass/solar (1 percent). The LRMC of this portfolio is estimated to be \$97/MWh."⁷⁰

89. BCSEA-SCBC strongly oppose any new gas-fired generation as a supply resource for FBC. This precludes "Portfolio C1, 93% Clean with CCGT," and "Portfolio A4, 93% Clean with SCGT."

⁶⁹ BCUC Project No.1598911.

⁷⁰ FBC Final Argument, para.118.

90. BCSEA-SCBC are not supportive of “Portfolio A1, No Self-Sufficiency” because market power is more carbon intensive than clean or renewable BC power or DSM resources.
91. Significantly, FBC acknowledges that under current assumptions it does not require new incremental generation resources until 2016. This means that FBC will not need to consider whether to build or acquire new generation resources until the time of its next long term resource plan and DSM plan anticipated in 2021. FBC states:

“Under the preferred portfolio (and based on the planning circumstances generally), FBC does not require new incremental generation resources until 2026 and market supply and PPA Tranche 1 energy will continue to be optimized in the short to medium term. Notably, if the LRB forecast does not change, FBC would not actually need to consider whether to build or acquire new generation resources until 2021, at the time of its next anticipated long term resource plan.”⁷¹

ix. Transmission System Reinforcements

92. FBC indicates only two anticipated transmission system reinforcements in the planning horizon: the Grand Forks Terminal Transformer Addition anticipated in 2018-2020, and the Kelowna Bulk Transformer Capacity Addition anticipated in 2019-2020. BCSEA-SCBC do not object to the inclusion of these projects in the 2016 LTERP, noting that both will be subject to CPCN applications in due course.

D. Why New Supply Resources are not being Replaced with DSM: UCA, s. 44.1(2)(f)

i. The Legislative Context

93. FBC asserts that “the requirement in section 44.1(2)(f) of the *UCA* is satisfied by a bare description of why additional DSM measures are not planned to further reduce demand,”⁷² for which FBC cites the Commission’s FEU 2014 LTRP Decision at page 11. BCSEA-SCBC ask the Commission to reject this assertion, for the reasons that follow.
94. The requirement in UCA s.44.1(2)(f) that a public utility’s long-term resource plan include, among other things, “an explanation of why the demand for energy to be

⁷¹ FBC Final Argument, para.121, underline added.

⁷² FBC Final Argument, para.128, underline added.

served by the facilities referred to in paragraph (d) and the purchases referred to in paragraph (e) are not planned to be replaced by demand-side measures,” requires an explanation, not a “bare description.” Nothing in the 2014 FEU LTRP Decision, supports the notion that a “bare description” constitutes the explanation required by s.44.1(2)(f).

95. First and foremost, s.44.1(2)(f) is to be interpreted by the Commission in accordance with the “modern principle” that “the words of an Act are to be read in their entire context, in their grammatical and ordinary sense harmoniously with the scheme of the Act, the object of the Act and the intention of Parliament.”⁷³ This requires consideration of textual meaning, legislative intent, and compliance with established legal norms.⁷⁴

96. In terms of textual meaning, there is a significant difference between an “explanation” and a “bare description.” “Explanation” is defined as:

“A statement, circumstance, etc., which makes clear or accounts for something; A declaration made with a view to mutual understanding and reconciliation.”⁷⁵

97. The phrase “bare description” is almost, but not quite, an oxymoron. It is comprised of “bare” – defined as “Without addition; mere, simple; scant, slight” – and “description” – defined as “A detailed account of a person, thing, scene, or event.”⁷⁶

98. In legal writing, the phrase “bare description,” that FBC would have the Commission equate to “explanation” in s.44.1(2)(f), is commonly used to refer to a description that is inadequate in the circumstances, as the following examples show:

“Therefore, I reject the bare description of “stable” as being accurate of the Appellant’s condition at the relevant time.”⁷⁷

⁷³ Elmer A. Driedger, *The Construction of Statutes* (Toronto: Butterworths, 1974), at p.67, cited by the Supreme Court of Canada in *Rizzo & Rizzo Shoes Ltd.*, [1998] S.C.J. No.2, [1998] 1 S.C.R. 27, at 41.

⁷⁴ *Sullivan on the Construction of Statutes*, Ruth Sullivan, Fifth Edition, pp.1-2.

⁷⁵ *The New Shorter Oxford English Dictionary* (Oxford: Clarendon Press, 1993)

⁷⁶ *Ibid.*

⁷⁷ *J. M. v Minister of Employment and Social Development*, 2015 CanLII 76619 (SST), <<http://canlii.ca/t/qm7c8>>, retrieved on 2017-11-07, para.76, underline added.

“Cst. Paterson’s notes were brief and contained a bare description of the event.”⁷⁸

The bare description of the convictions could not provide any assistance to the jury on the issue of Lopez’s propensity.”⁷⁹

“Ms. Oolup argues that bare description of the \$10,000 as "executrix fees" in what is clearly a standard form Distribution & Release letter is not determinative of the issue.”⁸⁰

“In the present case, the only words in the whole of the will which are capable of adding anything to the bare description of "31 Beckwith Road" are the words "my premises". I fail to see how the words "my premises" add anything at all to the bare description since a testator is normally presumed to contend to devise an asset which he either owns or believes that he owns at the time of making the will, or which he might intend to acquire between then and the time of his death.”⁸¹

99. In terms of textual meaning, the “explanation” required by s.44.1(2)(f) is a statement that makes clear, with a view to mutual understanding and reconciliation, why any unmet energy needs are planned to be met with supply-side resources rather than demand-side resources. The concept of that an explanation reconciles inconsistent thoughts is apt here because the premise of s.44.1(2)(f) is that supply-side resources are an exception to the norm of demand-side resources as the means of meeting unmet energy needs. A textual analysis does not support FBC’s contention that the “explanation” required by s.44.1(2)(f) is a “bare description.”

100. In terms of legislative intent, BCSEA-SCBC submit that the requirement that a public utility’s long-term resources plan provide an explanation of why planned supply-side resources are not instead planned to be replaced by demand-side measures evinces a clear legislative direction that DSM resources are to be considered the first and best approach to meeting anticipated shortfalls in meeting energy needs, ahead of supply-side resources. This is a high-level, substantive

⁷⁸ *R. v. Myran*, 2009 MBQB 71 (CanLII), <<http://canlii.ca/t/232nd>>, retrieved on 2017-11-07, para.8, underline added.

⁷⁹ *R. v. Lopez*, 1998 CanLII 5109 (BC CA), <<http://canlii.ca/t/1dz50>>, retrieved on 2017-11-07, para.28, underline added.

⁸⁰ *Stricker Oolup v. The Queen*, 2003 TCC 947 (CanLII), <<http://canlii.ca/t/1g5k2>>, retrieved on 2017-11-07, para.8, underline added

⁸¹ *Hickey et al. v. Stover et al* (1886), 11 O.R. 106, cited in *Re Butchers*, 1970 CanLII 302 (ON SC), <<http://canlii.ca/t/q1fxd>>, retrieved on 2017-11-07, underline added.

requirement. It expresses a legislative intention that demand-side measures are to be considered ahead of supply-side measures.

101. In terms of compliance with established legal norms, it is submitted that the Commission's FEU 2014 LTRP decision, relied upon by FBC, is not intended to reduce the requirements of s.44.1(2) to 'tick the box' status. Indeed, the panel's determination in that decision that the plan in question was "barely adequate" [underline added] implies an evaluation of the degree of adequacy. In addition, the Commission panel in the current proceeding is not legally bound to follow a previous panel's reasons for decision as a precedent.

ii. FBC's Explanation required by UCA s.44.1(b)(f)

102. FBC's explanation of why it plans to meet future unmet energy needs with supply-side resources instead of demand-side resources has two parts: cost, and deliverability risk. In BCSEA-SCBC's submission the cost component of the explanation is adequate at the present time.

103. However, BCSEA-SCBC submit that FBC's asserted deliverability risk component of the explanation required by UCA s.44.1(b)(f) is not supported by the evidence. The Commission should not accept FBC's position that DSM resources are not sufficiently firm and/or reliable to warrant consideration of higher levels of DSM in order to defer acquisition of future supply-side resources.

104. BCSEA-SCBC respectfully submit that the Commission should accept Mr. Grevatt's evidence on this point. He states:

"Fortis shows reluctance to consider higher levels of DSM than are proposed in the application in part on the grounds that DSM is too risky. This determination on Fortis' part is not well-founded in evidence. The cost effectiveness of increasing the size of the DSM portfolio may remain a limiting factor, but Fortis should not arbitrarily limit the size of its DSM portfolio, either now or in the future, based on suppositions about risk that are not strongly supported by evidence..."

Fortis asserts that DSM is not sufficiently reliable to warrant analyzing the potential use of DSM to defer capital investments. EFG finds that both energy efficiency and demand response can, in some cases, be used to defer such investments, and recommends that Fortis review the available research on leading practices in this area. Then, Fortis should conduct analyses specific to the FBC system to determine whether DSM would be a feasible and cost-effective alternative to defer future

distribution improvements, transmission improvements or supply-side capacity acquisition.⁸²

iii. FBC's criticisms of the Grevatt evidence

105. Under the heading "Jurisdictional Comparisons," FBC makes a series of unwarranted attacks on the evidence of Mr. Grevatt.⁸³

106. First, FBC claims incorrectly that Mr. Grevatt misstates FBC's position when he disagrees with what he describes as FBC's position that "high DSM savings targets are too risky."

107. The simple fact is that FBC cites two reasons for rejecting the Max DSM scenario: risk, and cost. FBC openly admits this when it states in para.141 that "DSM levels beyond the High DSM scenario involve certain risks that, when combined with cost-related factors, justify FBC's decision"⁸⁴ to reject the Max DSM scenario.

108. Mr. Grevatt is quite specific in his focus on FBC's risk argument. He neither states nor implies that risk is FBC's only objection to planning for DSM levels above FBC's proposal. This is made clear in the first sentence of his first summary point:

"Fortis shows reluctance to consider higher levels of DSM than are proposed in the application in part on the grounds that DSM is too risky."⁸⁵

109. Furthermore, in the last sentence of his first summary point Mr. Grevatt explicitly acknowledges that the cost of DSM is a relevant factor that he distinguishes from his focus on FBC's claim that high levels of DSM are too risky to be included in the long term DSM plan:

"The cost effectiveness of increasing the size of the DSM portfolio may remain a limiting factor, but Fortis should not arbitrarily limit the size of its DSM portfolio, either now or in the future, based on suppositions about risk that are not strongly supported by evidence."⁸⁶

110. FBC's allegation that Mr. Grevatt misstates FBC's position is without merit and should be rejected.

⁸² Exhibit C5-5, pp.2-3.

⁸³ FBC Final Argument, paragraphs 141 to 147.

⁸⁴ underline added.

⁸⁵ Exhibit C-5, p.2, underline added.

⁸⁶ *ibid.*

111. Second, FBC incorrectly and inappropriately implies some wrong-doing⁸⁷ associated with Mr. Grevatt's quotation of FBC's evidence concerning its argument that "insufficient customer participation" is one of "a number of reasons" to reject the Max DSM scenario. Mr. Grevatt's quotation of FBC's evidence omits the portions about FBC's cost argument for the obvious reason that it was the risk argument that Mr. Grevatt was addressing.
112. Third, FBC belittles as a "single metric from a single report"⁸⁸ Mr. Grevatt's citation of the "2016 State Energy Efficiency Scorecard from the American Council for an Energy-Efficient Economy (ACEEE)." This is unwarranted. The ACEEE Scorecard is a highly reputable and widely cited resource. It was cited by BC Hydro in response to the Commission's request for a jurisdictional comparison in the BC Hydro F2017-F2019 RRA proceeding.⁸⁹
113. Fourth, FBC claims that the ACEEE Scorecard does not support the point for which Mr. Grevatt cites it, which FBC says is that "there is ample evidence that even Fortis' proposed Max scenario is well below the level that effective programs can be expected to achieve." Actually, while that point is supported by the ACEEE Scorecard, the point for which Mr. Grevatt cites the Scorecard is that other jurisdictions in North America achieve considerably higher DSM levels than FBC's Max scenario despite DSM deliverability risk.
114. Significantly, FBC goes on in para. 142 to argue that the depth of savings for the High DSM scenario "compares favourably to the majority of U.S. jurisdictions" reported on in the ACEEE report. To reiterate, the point for which Mr. Grevatt cites the 2016 ACEEE Scorecard is that the risk of 'insufficient customer participation' does not prevent many U.S. states from achieving a depth of savings that is greater than either FBC's High scenario or the Max scenario.
115. Fifth, FBC accuses Mr. Grevatt of relying on jurisdictional comparisons without acknowledging their limitations.⁹⁰ This is not correct. Mr. Grevatt explicitly acknowledges "mitigating factors in the comparisons" of depth of savings reported in the ACEEE Scorecard.

⁸⁷ "It is telling in this regard..." FBC Final Argument, para. 141.

⁸⁸ FBC Final Argument, para. 142.

⁸⁹ BC Hydro F2017-F2019 RRA proceeding, Exhibit B-9, BCUC 1.176.2, pdf p.4778.

⁹⁰ FBC Final Argument, para. 143.

116. Sixth, FBC criticizes Mr. Grevatt for relying on the ACEEE Scorecard and not referring to Canadian jurisdictions and BC Hydro particular. This again misses Mr. Grevatt's point, which is focused on FBC's claim that generic delivery risk is a reason (in addition to the cost factor) for not targeting higher levels of DSM savings than FBC proposes. FBC's reference to BC Hydro is spurious because BC Hydro is cannot be an example of successful management of delivery risk at a high level of depth of savings given that, as FBC acknowledges, BC Hydro does not have a particularly high depth of savings (whether planned or achieved.)

117. Similarly, FBC misses Mr. Grevatt's point when it accuses him of not mentioning "any of the other metrics contained within the ACEEE report," as if these other metrics contradict his point.⁹¹ This is not a valid criticism. The only additional metric in the ACEEE Scorecard is electricity spending as a percentage of revenue,⁹² consideration of which yields the result that there are jurisdictions that have higher ED spending ratios than does FBC despite the existence of DSM deliverability risk.

118. In response to FBC's paragraph 144, as noted above the ACEEE Scorecard is reputable and widely cited, and was cited by BC Hydro for the jurisdictional comparison. Also, it should be noted that BC Hydro's most recent long term DSM plan calls for higher DSM savings than are reflected in its F2014-2016 and F2017-2019 DSM expenditure schedules.

119. In response to FBC's paragraph 145, most of the U.S. jurisdictions in the 2016 ACEEE Scorecard have considerably higher rates than does FBC and so their ratio of DSM spending to utility revenue would be correspondingly lower.

iv. DSM Reliability Issues

120. Contrary to FBC's paragraph 148, Mr. Grevatt acknowledges that DSM spending entails deliverability risk. His point is that the DSM portfolio administrator has the tools to manage that risk, including marketing and outreach, technical assistance, and incentives.⁹³ Mr. Grevatt's evidence is that portfolio administrators in other

⁹¹ FBC Final Argument, para.145.

⁹² ACEEE discusses potential new scorecard metrics on pages 119-120, but these have not been implemented yet.

⁹³ Exhibit C5-5, p.5.

jurisdictions have done so successfully at higher depths of savings than FBC proposes.

121.FBC states that “The fact that some U.S. jurisdictions may pursue higher levels of energy conservation than FBC proposes does not mean that high levels of DSM do not entail certain risks when compared to supply side resources.”⁹⁴ In response, supply-side resources have their own risks, including risks of capital cost overruns, operating cost overruns, fuel costs, overbuild and of becoming a stranded asset. BCSEA-SCBC emphasize that the utility has the means and the responsibility to manage the risks associated with both supply-side resources and demand-side resources.

122.FBC provides no response to Mr. Grevatt’s substantive point that it is the role and responsibility of the administrator of a DSM portfolio to manage the risk of insufficient customer participation in measures within the portfolio. Mr. Grevatt introduces the quotation of FBC’s statement about ‘insufficient customer participation’ as follows:

“While it may be true that “there is no guarantee that actual DSM program uptake will materialize,” it is also true that participation is not random. Fortis seems to underestimate its ability to influence customer participation.”⁹⁵

123.After setting out the quotation, Mr. Grevatt states:

“Achieving a specific level of savings, especially when the bar is high, requires implementing thoughtful strategies to ensure that enough customers participate in the programs. Fortis has many tools at its disposal to ensure that enough customers will participate for it to meet its proposed goals or goals that are higher, including marketing and outreach, technical assistance, and incentives. It is Fortis’ work to determine how to best use these tools to overcome the barriers that limit “voluntary” participation in DSM programs...”⁹⁶

124.Mr. Grevatt concludes the paragraph by stating:

“When [DSM savings] goals are higher, greater effort will certainly be required. However, there is ample evidence that even Fortis’ proposed

⁹⁴ FBC Final Argument, para.194, underline added.

⁹⁵ Exhibit C5-2, p.4, underline added.

⁹⁶ Exhibit C5-2, pp.4-5, underline added.

Max scenario is well below the level that effective programs can be expected to achieve.⁹⁷

PART 4 – PUBLIC INTEREST CONSIDERATIONS

...C. The LTERP and LT DSM Plan are in the Public Interest

125. BCSEA-SCBC acknowledge that the 2016 LT DSM Plan meets the adequacy requirements of the DSM Regulation. It includes measures to assist low-income customers, to improve the energy efficiency of rental accommodations, to support an education program for school students in the service area, and to support an education program for post-secondary students in the service area.

PART 5 – OTHER ISSUES RAISED IN THE PROCEEDING

A. Adequacy of the Action Plan

126. The “Action Plan” describes the activities that FBC intends to pursue over the next four years based on the LTERP and LT DSM Plan.⁹⁸ BCSEA-SCBC submit that the Action Plan should also include:

- (a) Developing, obtaining approval for, and implementing carbon-reduction electrification opportunities under the amended GGRR, and
- (b) Revising the LT DSP Plan to meet the recently amended adequacy requirements in the DSM Regulation.

B. Timing of FBC’s Next Long Term Resource Plan

127. FBC states:

“Given that FBC requires no new supply-side resources in the next 10 years, it expects that it would file its next long term resource plan in 2021, approximately five years from the filing of the present LTERP. This is consistent with the five year interval the Commission directed following acceptance of FBC’s 2012 LTRP.”⁹⁹

128. BCSEA-SCBC submit that the Commission should direct FBC to file its next long term resource in 2021 and not later.

⁹⁷ Exhibit C5-2, p.5, underline added.

⁹⁸ Exhibit B-1, s.11, pdf p.161.

⁹⁹ FBC Final Argument, para.196.

C. Rescinding RS 90

129.FBC seeks an ancillary order that the Commission consent to rescinding Rate Schedule 90 – Demand Side Management Service from FBC’s Electric Tariff pursuant to section 61(2) of the UCA.

130.FBC describes the background of RS 90 as follows:

“FBC’s Electric Tariff No. 2 Schedule 90, Energy Management Services (RS90), was introduced in 1990, pursuant to BCUC Order G-47-89. At that time, the purpose of RS90 was to describe each of the Company’s specific programs, including the associated offers and financial incentives, and the overall program terms and conditions. Any revisions or extensions to a specific DSM program required an application to and order from the Commission. In 2010 a major revision to RS90 removed much of the program specific pages and reduced RS90 to a generic high-level outline of program attributes.”¹⁰⁰

131.FBC summarizes the reasons for its request to rescind RS 90 as follows:

“In conclusion, FBC is proposing to rescind RS 90 from its Electric Tariff to increase the Company’s flexibility in DSM program design, to allow the Company to respond to market trends and new technologies more quickly and effectively, and to better align FBC’s DSM programs with similar DSM programs and best practices from other utilities, including BC Hydro and FEI. The terms and conditions contained in RS90 are already set out in the individual program specific terms and conditions, providing customers with better visibility of program obligations. Subject to Commission approval of FBC’s request to remove RS 90 from the Company’s Electric Tariff, FBC will file updated tariff sheets for endorsement.”¹⁰¹

132.BCSEA-SCBC have considered this request and support FBC’s request for Commission approval of rescission of RS 90.

¹⁰⁰ Exhibit B-1, Vol. 2, pp.24-26, pdf pp.510-512.

¹⁰¹ *Ibid.*

PART 6 - CONCLUSION

133. This concludes BCSEA-SCBC's final submission regarding FBC's 2016 LTERP and Long Term DSM plan.

ALL OF WHICH IS RESPECTFULLY SUBMITTED.

November 10, 2017

A handwritten signature in black ink, appearing to read 'WJ Andrews', with a horizontal line extending to the right from the bottom of the signature.

William J. Andrews
Counsel for B.C. Sustainable Energy Association and Sierra Club B.C.