REQUESTOR NAME: **BC Sustainable Energy Association and Sierra Club BC**
INFORMATION REQUEST ROUND NO: **1**
TO: **FortisBC Inc. (FBC)**
DATE: **September 16, 2016**
PROJECT NO: **3698889**
APPLICATION NAME: **Application for Acceptance of Demand Side Management (DSM) Expenditures for 2017**

1.0 Topic:2016 Projected Figures at the Program Level
Reference: Exhibit B-1, Table 4-1; Exhibit B-1, Appendix A, Tables A1-1, A2-1, A3-1, A4-1

Table 4-1 shows Projected as well as Approved figures for 2016 at the Program Area level but not at the Program level. Tables A1-1, A2-1, A3-1, A4-1 show figures at the Program level but do not show 2016 Projected.

1.1 Please provide versions of Tables A1-1, A2-1, A3-1, A4-1 showing 2016 Projected figures.

2.0 Topic: Response to Directions
Reference: Decision and Order G-186-14 regarding FBC's 2015-2016 DSM expenditure schedule; Exhibit B-1, Appendix B, p. 4 (pdf p.54)

FBC states that in its 2014 DSM Annual Report it addressed Directions 7, 15 and 17 of Decision and Order G-186-14. These directives state:

> 7. FBC is directed to include in its next DSM Annual Report an update on its efforts to increase DSM expenditures and plan savings back to the levels included in the 2012 LTRP ($9 million and 34 GWh/year).
>
> 15. Commission Panel directs FBC to include in its next DSM Annual Report a review and discussion of whether opportunities exist in expanding DSM funding to 2013 approved levels for industrial customers while continuing to obtain cost-effective energy savings.
>
> 17. Commission Panel directs FBC to include in its next DSM Annual Report an update on FBC's efforts to identify and mitigate (though DSM programs) market barriers to energy efficiency investment and consumption decisions of its industrial customers. FBC is also required to include in its next DSM Annual Report an update on its proposal to increase the funding available for energy efficiency studies.

2.1 Please provide FBC's 2014 DSM Annual Report.

2.2 Please provide responses to Directives 7, 15 and 17 of Decision and Order G-185-14 based on current information.

3.0 Topic: Response to G-186-14
Reference: Decision and Order G-186-14 regarding FBC's 2015-2016 DSM expenditure schedule

In the Commission's Decision and Order G-186-14 regarding FBC's 2015-2016 DSM expenditure schedule the panel accepted the 2015-2016 DSM expenditure schedule but also stated that:

> "[The Panel] is concerned about the adequacy of expenditures especially given that FBC's proposed DSM expenditures are less than those accepted in 2013 and those proposed in the 2012 LTRP (in particular for industrial customers). The Panel encourages FBC to file supplemental DSM expenditure schedules to bring DSM spending levels back up to previously accepted levels." [p.11, underline added]

3.1 Did FBC file supplemental DSM expenditure schedules to bring DSM spending levels back up to previously accepted levels? If so, please provide the details. If not, why not?

4.0 Topic: Savings, Spending and Budgets
References:
Exhibit B-1, Appendix A, Table A-1, 2016 Approved and 2017 DSM Plan Expenditures & Savings, p.A2, pdf p.29;
Table 4-1 FBC DSM Expenditures & Savings – 2016 Approved/Projected and 2017 Plan, p.9, pdf p.14;
Table 1-1 FortisBC Inc. DSM Portfolio Results for 2015, Appendix B, p.2, pdf p.52

4.1 If FBC has updated figures for 2016 please provide them and use them for the responses to these information requests.

4.2 For 2016, Savings Approved are 27,189 MWh and Savings Projected are and 21,160 MWh. Please confirm, or otherwise explain, that this represents a shortfall of approximately 20% between Approved and Projected Savings for 2016.

4.3 Please fully explain the causes of the 2016 Projected Savings being approximately 20% below 2016 Approved Savings. Please explain by customer class and overall.

4.4 For 2016, DSM Expenditures are Approved at $7,534,000 and Projected at $6,838,000. Please confirm, or otherwise explain, that this represents a shortfall of approximately 10% between Approved and Projected Expenditures for 2016.

4.5 Please fully explain the causes of the 2016 Projected Expenditures being approximately 10% below 2016 Approved Expenditures. Please explain by customer class and overall.

In the 2015 DSM Annual Report dated March 31, 2016, FBC states: "Given that 2015 was a transition year from 2014's scaled-back programs and considerable development work was undertaken for new and relaunched programs, the Company believes it now has the necessary resources and a fulsome complement of programs in place going forward to achieve budget and target performance in 2016." [Exhibit B-1, Appendix B, p.3, underline added, pdf p.53]

4.6 Are the projected results for savings and spending in 2016 consistent with the March 31, 2016 expectation to achieve budget and target performance in 2016?

4.7 To what extent, and why, can the Commission expect that the proposed 2017 budget and target performance will be achieved if the expenditure schedule is accepted?

"The Company has a long record of successfully meeting or exceeding its savings targets, while keeping expenditures within approved plans and 2015 results were not in line with past performance." [Exhibit B-1, Appendix A, p.3, pdf p.53]

4.8 Please provide a graph and accompanying table showing for 2017 (Plan), 2016 (Approved and Projected), and 2015 to 2010 (Approved and Actual), DSM Spending Approved and DSM Spending Actual/Projected/Plan as lines, and DSM Savings Approved and DSM Savings Actual/Projected/Plan as bars.

4.8.1 In the requested table, please provide the portfolio TRC and the avoided cost estimate for each year.

5.0 Topic: 2015 DSM Savings and Spending
Reference: Exhibit B-1, Appendix B, pp.2-3, pdf pp.52-53

For 2015, FBC acknowledges that DSM savings were 48% of the target approved in Decision and Order G-186-14 and spending was 48% of the approved level [p.2, pdf p.52]. FBC lists several factors it says contributed to the 2015 outcome [p.3, pdf p.53]

5.1 Please provide an analysis of the extent to which the shortfall in electricity savings in 2015 consists of missed opportunities (e.g., to have long-lasting efficiency and conservation measures included in new construction or retrofits) as distinct from potential savings that remain available.

5.2 FBC says that one of the factors contributing to the 2015 results was the timing of the Commission's decision to accept the 2015-2016 DSM expenditure schedule (December 3, 2014). Does FBC anticipate that the timing of the Commission's decision regarding the current 2017 DSM expenditure schedule will impact the likelihood of achievement of the 2017 savings and spending targets? If so, by what date would a decision be required in order to eliminate the timing of the decision being a factor in the likelihood of meeting 2017 savings and spending targets?

5.3 FBC says that one of the factors contributing to the 2015 results is that "Collaboration with other public utilities resulted in harmonized rebates at lower levels than those offered on a stand-alone basis in the past, which resulted in diminished returns on certain maturing programs (e.g., top tier Energy Star appliances)." Is this a factor that applied in 2016 as well? Will this factor apply in 2017, i.e., to contribute to spending and savings being below target levels?

5.4 FBC says that one of the factors contributing to the 2015 results is that "The withdrawal of partners in the LiveSmartBC and ecoEnergy programs

left the Company offering stand-alone programs with lower customer rebates, the consequence of which was reduced participation in the Home Improvement program." Is this a factor that applied in 2016 as well? Will this factor apply in 2017, i.e., to contribute to spending and savings being below target levels?

6.0 Topic: Carbon reduction fuel switching
Reference: Exhibit B-1 ; Decision and Order G-186-14, pp.13-14

6.1 Does FBC acknowledge that pursuant to the definition of DSM in the *Clean Energy Act* FBC's DSM portfolio can include conservation and efficiency measures regarding natural gas energy? Alternatively, please explain.

6.2 In the 2015-2016 FBC DSM Decision, the Commission Panel noted on page 13: "FBC's heat pump programs require electricity to be the primary energy source. Likewise, building envelope measures (insulation, draft-proofing, windows and doors) all have a prerequisite of electric heating." Is that still the case and is it a prerequisite FBC proposes to continue in 2017? Alternatively, please explain.

In the 2015-2016 FBC DSM Decision, the Commission Panel said on page 14 that it "is concerned that FBC excludes customers from eligibility for FBC DSM incentives where they are switching from gas to electricity." And: "The Panel considers that this approach acts <u>contrary to BC's energy objective</u> to encourage the switching from one kind of energy source or use to another that decreases GHG emissions in BC." As a result, the Panel issued Direction 9.

In response to Direction 9, FBC states "<u>The BC CPR will examine the fuel switching potential and its cost-effectiveness. FBC does not have a fuel switching program at this time</u>." [Exhibit B-1, Table 2-1, underline added]

6.3 Please provide documents or excerpts of documents from the ongoing BC Conservation Potential Review (CPR) that set out how the Review is examining fuel switching potential and its cost-effectiveness. (The focus is on methodologies, not results.) If there is no documentation of how the CPR will examine carbon-reduction fuel switching opportunities, please explain why not.

6.4 What steps if any has FBC taken to develop programs to address carbon-reduction fuel switching opportunities?

6.4.1 Does FBC intend to wait until the final BC CPR Report to decide whether to develop carbon-reduction fuel switching opportunities?

6.4.2 If the BC CPR Report finds achievable carbon-reduction fuel switching opportunities, and FBC decides to develop programs to address them, how long will it take for such programs to be put into operation?

6.5 FBC is integrating its DSM department with FortisBC Energy Inc.'s Conservation and Energy Management Program. [Exhibit B-1, Appendix

A, p.A15, pdf p.42] Is FBC's decision-making regarding adopting carbon-reduction fuel switching programs influenced in any way by the potential impact of such programs on FEI? If so, please describe how FBC addresses or intends to address these factors.

In addition to Direction 9, the Panel in G-186-14 "encourages FBC to file supplemental DSM expenditure schedules to address" the fact that FBC's 2015-2016 DSM proposal did not support BC's energy objective to encourage the switching from one kind of energy source or use to another that decreases greenhouse gas emissions in B.C. [underline added]

6.6 Did FBC file supplemental DSM expenditure schedules to address BC's energy objective "to encourage the switching from one kind of energy source or use to another that decreases greenhouse gas emissions in British Columbia"? If so, please provide details. If not, why not?

7.0 Topic: DSM expenditure amortization, intra-budget transfer rules
Reference: BCUC Project No.3698797, FBC 2015-2016 DSM Application, Exhibit B-7, BCSEA IR 1.1

"On September 15, 2014, the Commission issued its Decision and Order G-139-14 on FBC's Application for approval of a Multi-Year PBR Plan for 2014-2018. The Commission denied FBC's request to change the DSM expenditure amortization period from 10 to 15 years, approved FBC's request to move to annual DSM reporting effective January 1, 2014 and declined to rule on FBC's proposed funding transfer rules."

7.1 Please confirm FBC's current amortization period for DSM expenditures.

7.2 Please confirm the intra-budget transfer rules currently applicable to FBC's DSM expenditures.

7.3 Please confirm, or otherwise explain, that in the current proceeding FBC is not seeking approval of any changes to the DSM amortization period or intra-budget transfer rules.

8.0 Topic: Conservation Potential Review
Reference: Exhibit B-1, p.1

"The Company intends to include a new Long Term DSM Plan (2016 LT DSM Plan) as part of the 2016 Long Term Electric Resource Plan (LTERP) which will be filed on or before November 30, 2016. The provincial dual-fuel Conservation Potential Review (BC CPR) is currently underway jointly by FortisBC Energy Inc. (FEI), British Columbia Hydro and Power Authority (BC Hydro) and FBC, and will inform the new Long-Term DSM Plan. Since the BC CPR report is not final, and FBC is seeking acceptance of the DSM expenditure schedule for 2017 only as suggested by the Commission, no BC CPR results have been incorporated in this filing." [underline added]

8.1 FBC says that the BC CPR report is not final and that it will inform FBC's new 2016 Long Term DSM Plan to be filed on or before November 30, 2016. Does this mean that the BC CPR report will be finalized before FBC

files the 2016 LT DSM Plan on or before November 30, 2016? Or will FBC's 2016 LT DSM Plan be informed by work-in-progress results from the BC CPR?

8.2 When will the BC CPR Report be finalized? How will the BC CPR Report be made available to the Commission and stakeholders?

8.3 Please summarize the interim results of the BC CPR as they relate to FBC's DSM planning.

8.3.1 Directionally, does FBC anticipate that the BC CPR results will support upward, or downward, adjustment of the amount of FBC's intended DSM savings?

8.4 Although FBC refers to it as a 2016 Long Term DSM Plan, is the intention that the plan would apply to DSM beginning in 2018?

8.5 Will the 2016 Long Term DSM Plan filing include a DSM expenditure schedule? If so, for what test year(s)?

8.6 If the BC CPR Report provides results that support increased DSM savings and spending by FBC, will FBC file a supplemental expenditure schedule during 2017 in order to begin capturing such savings? Or to ramp up in order to be in a position to implement new initiatives at the start of 2018?

9.0 Topic: Average cost of DSM savings
Reference: Exhibit B-1

9.1 What is the average cost of FBC's proposed 2017 DSM electricity savings in $/MWh?

10.0 Topic: Consistency with Long Term Resource Plan
Reference: Decision and Order G-110-12 regarding FBC's 2012-2013 RRA, Integrated System Plan and 2012 Long Term Resource Plan; Exhibit B-1, s.2.3 Consistency with Long Term Resource Plan

"Under section 44.2 of the UCA, the Commission, in considering whether to accept an expenditure schedule by a utility, must consider the utility's most recent long-term resource plan filed under section 44.1 of the Act. For FBC, the current 2012 LTRP was accepted by the Commission in August 2012.[4] The measures in the 2017 DSM Plan are consistent with the measures assessed and the benefit/cost methodology used in the 2012 LTRP, and the Commission's directives[5] regarding that Plan. More specifically, the number and breadth of DSM measures and programs that pass the Total Resource Cost (TRC) test[6], is similar to that projected in the 2012 LTRP (and approved for the 2015-16 DSM Plan)." [Exhibit B-1, p.4, underline added]

In the G-110-12 Reasons for Decision, the Panel states:

"FortisBC's Long-Term DSM Plan includes the years 2012-2030. The Plan sets out the expected DSM programming, energy savings and spending for 2012-2016 as an extension of the spending and savings levels from the 2011 DSM Plan

previously approved by the Commission. For the years 2017-2030, FortisBC has included a constant proxy figure of 28 GWh/year in energy savings. Overall, the Plan was designed to achieve electricity savings to offset 50 percent of FortisBC's load growth until 2030." [G-110-12, Reasons for Decision, p.126, underline added]

10.1 FBC's proposed 2017 DSM electricity savings is what percentage of FBC's forecast 2017 pre-DSM load growth over 2016?

"As shown in Figure 3-1 below, the total load, net of losses, is forecast to be 3,282 GWh in 2017, up 29 GWh from 2016S." [FBC 2017 Rates, Exhibit B-2, p.16, underline added]

10.2 Please confirm that the table in section 2.1 titled "Gross Load (MWh)" of Appendix A2 of Exhibit B-2 of the 2017 Rates proceeding [pdf p.133] shows Before-Savings 2016S (Seed) and Before Savings 2017F (Forecast) of 3,550,870 MWh and 3,604,756 MWh, respectively.

10.2.1 Please confirm that the difference between the two figures is 53,886 MWh.

10.2.2 Is 53,886 MWh the forecast Pre-DSM Load Growth between 2016 and 2017? If not please explain why not and provide the forecast Pre-DSM Load Growth between 2016 and 2017.

10.2.3 Please file the table in section 2.1 titled "Gross Load (MWh)" of Appendix A2 of Exhibit B-2 of the 2017 Rates proceeding [pdf p.133].

10.3 In the G-186-14 Reasons for Decision, Table 1 is a Comparison of FBC Planned GWh Savings in DSM Plan [2015 and 2016] and 2012 LTRP. Please provide an extended version of this table showing the figures for 2017.

In Decision and Order G-186-14, the Commission panel found that FBC's DSM expenditure request for 2015-2016 is reasonably consistent with the 2012 LTRP. In partial explanation, the panel states

> "FBC's 2012 LTRP included DSM objectives related to: (i) achieving 50 percent reduction in load growth, and (ii) achieving approximately 34 GWh/year reductions in energy demand for each of 2015 and 2016." [p.11, underline added]

10.4 Please confirm that for 2015 and 2016 FBC's forecast DSM savings were approximately 26 GWh and 27 GWh, respectively, but actual/projected DSM savings are only approximately 12.6 GWh and 21 GWh, respectively. If not confirmed, please provide the correct figures.

10.5 Given that in the Commission-approved 2012 LTRP the forecast 2015 and 2016 DSM savings were 34.8 GWh and 34.4 GWh, respectively, does FBC agree with the characterization that its actual/projected 2015

and 2016 DSM savings of 12.6 GWh and 21 GWh, respectively, have turned out to be inconsistent with the 2012 LTRP? If not, why not?

10.6 Given that FBC's 2017 DSM Plan is substantially the same as its 2016 DSM Plan in terms of proposed savings and spending, is the 2017 DSM Plan inconsistent with the 2012 LTRP? If not, why not?

11.0 Topic: 2017 DSM Savings Estimate
Reference: BCUC Project No. 3698887, Exhibit B-2, p.16, Table 3-1; Exhibit B-1, Table 4-1

In its 2017 Rates and 2016 Annual Review filing [BCUC Project No. 3698887, Exhibit B-2, p.16], FBC indicates in Table 3-1, reproduced below, Forecast 2017 DSM Savings of approximately 32 GWh and 34 GWh including losses.

Table 3-1: Forecast 2017 DSM and Other Savings (GWh)

Line No.	Description	DSM	AMI	CIP	RCR	Rate-Driven	Total
1	Residential	(10)	12	(2)	(10)	(1)	(11)
2	Commercial	(15)				(1)	(16)
3	Wholesale	(2)				(1)	(3)
4	Industrial	(4)					(4)
5	Lighting	(1)					(1)
6	Irrigation						
7	Net	(32)	12	(2)	(10)	(3)	(35)
8	Losses	(3)	(6)				(9)
9	Gross Load	(34)	6	(2)	(10)	(3)	(43)

However, in the 2017 DSM Plan, FBC indicates in Table 4-1, reproduced below, 2017 forecast DSM savings of 25,715 MWh or approximately 26 GWh.

Table 4-1: FBC DSM Expenditures & Savings – 2016 Approved/Projected and 2017 Plan

	Program Area	2016 Approved		2016 Projected		2017 Plan		
		Savings MWh	Cost ($000s)	Savings MWh	Cost ($000s)	Savings MWh	Cost ($000s)	TRC B/C ratio
1	**Programs by Sector**							
2	Residential	12,909	3,349	7,098	2,607	10,493	2,718	2.5
3	Commercial	12,695	2,564	11,734	2,547	13,666	3,131	2.2
4	Industrial	1,585	209	2,327	330	1,556	309	1.9
5	**Subtotal Programs**	**27,189**	**6,122**	**21,160**	**5,484**	**25,715**	**6,158**	**2.3**
6	Supporting Initiatives		675		678		674	
7	Planning & Evaluation		737		675		777	
8	**Total (including Portfolio spend)**		**7,534**		**6,838**		**7,610**	**2.0**

11.1 Please reconcile the 2017 forecast DSM savings figures in the two tables.

11.1.1 Please include a discussion of the treatment of Wholesale, Lighting, and Losses.

11.1.2 Please explain if one table supersedes the other or if the two tables stand alone for different purposes.

11.2 Please file Table 3-1 of Exhibit B-2 in FBC's 2017 Rates and 2016 Annual Review filing [BCUC Project No. 3698887].

12.0 Topic: Ductless heat pumps
Reference: Exhibit B-1, Appendix A, s.A1-2 Heat Pumps, p.A3, pdf p.30; Appendix B, s.2.2.1 Home Improvement Program and Heat Pump Program, pp.7-8, pdf pp.57-58 Decision and Order G-186-14, Appendix A, p.5

In Decision and Order G-186-14, the Panel noted that FBC expressed particular support for its ductless heat pump program because "they are an energy-efficient solution for FBC customers that use electric baseboard heating." [Decision and Order G-186-14, Appendix A, p.5]

12.1 Does FBC consider that the ductless heat pump component of the Heat Pump Program continues to be an energy-efficient solution for FBC customers that use electric baseboard heating?

12.2 Has FBC considered expanding the ductless heat pump component of the Heat Pump Program in particular to help meet the needs of residential customers without access to natural gas? Will FBC address this in the upcoming Long Term DSM Plan? Will FBC address this in the Commission's RIB Rate Report proceeding?

13.0 Topic: Innovative technologies
Reference: Exhibit B-1,

In G-186-14, the Commission Panel states that it "encourages FBC to continue to support pilot projects of new DSM technologies, and to include in the next DSM expenditure request a description of the actions FBC has and plans to take to support innovative technologies." [p.13]

In Exhibit B-1, Table 2-1, quotes the B.C. energy objective "(d) to use and foster the development in British Columbia of innovative technologies that support energy conservation and efficiency and the use of clean or renewable resources, " and states: "FBC supports pilot projects of new DSM technologies, and the DSM Plan allows new measures to be incented if B/C ratio is positive. See Appendix A, section A1.5."

In Appendix A, section A1.5, FBC states:

> "Approximately 50 percent of FBC customers' water heaters are heated with electricity. To encourage efficient water heating, FBC will continue to offer rebates for the installation of heat pump water heaters (HPWH) for customers with electrically heated hot water.
> To improve product availability, FBC will continue discussions with manufacturers and retailers to increase availability and awareness for customers. A <u>pilot project, in collaboration with BC Hydro and NRCan, is testing the suitability of ducted integrated HPWH and non-integrated HPWH (condenser and compressor are located outside the homes) in the BC climate</u>. [p.A4, pdf p.31]

13.1 Is the pilot project in collaboration with BC Hydro and NRCan regarding the suitability of ducted integrated HPWH and non-integrated HPWH the full extent of FBC's plan to support innovative DSM technologies?

14.0 Topic: Freeridership and Spill-over Effects
Reference: Exhibit B-1, s.6.2 Net-To-Gross Ratio; Table 6-1: FBC Program Free-Rider and Spill-Over Rates; Exhibit B1, Appendix A, 2017 DSM Plan, Tables A1, A1-1, A2-1, A3-1

In section 6.2, FBC says it calculates a Net-To-Gross ratio using estimates of freeridership and spill-over effects. FBC says it will continue to evaluate and quantify free-rider and spill-over effects on a program by program basis. [p.16]

14.1 Do the program and portfolio DSM savings results and TRCs in Tables A1, A1-1, A2-1, A3-1 include estimates of freeridership and spill-over effects? If not, please provide versions of these tables taking into account FBC's estimates of freeridership and spill-over effects.

14.1.1 Please comment on whether inclusion, or exclusion, of free-rider and spill-over effects makes a material difference to the 2017 DSM spending proposal.

14.2 FBC states that Table 6-1: FBC Program Free-Rider and Spill-Over Rates "lists the free-ridership and spill-over rates currently deployed by FBC [p.16]. Is the NTG that FBC uses based on a simple subtraction of the Spill-Over percentage from the Free-Rider percentage? If not, please explain how the NTG is calculated and applied.

14.3 Regarding Table 6-1, five programs have a Free-Rider rate but not a Spill-Over rate. Why is that? Did the source documentation estimate a 0% Spill-Over rate, or did it not address the Spill-Over rate?

14.4 When does FBC anticipate updating its estimates of freeridership and spill-over effects?

14.5 For the programs in Table 6-1 that do not have estimates of spill-over effects, does FBC intend to make or acquire estimates of spill-over effects in the future?

14.6 Has FBC modified the design or incentive levels of any of its 2017 DSM programs based on the free rider and spillover rates given in Table 6-1?

15.0 Topic: Home Improvement Program
Reference:
Exhibit B-1, Appendix B, Sub-Appendix B, Table B-1: Historical FBC Costs and Energy Savings 2010-2014;
Exhibit B-1, Appendix B, Table 1-1: FortisBC Inc. DSM Portfolio Results for 2015 [pdf p.52];
Exhibit B-1, Appendix A, Table A1-1: Residential Program Expenditures & Savings;
Exhibit B-1, Appendix B, Sub-Appendix C, "Evaluation of the FortisBC

Home Improvement Program," December 14, 2015, by Evergreen Economics

15.1 Since 2010, FBC's Home Improvement Program has achieved energy savings ranging from an annual low of 231.2 MWh in 2015 to a high of 5,222 MWh in 2013. There has frequently been a large variance between the approved savings plan and actual savings for a particular year. Would FBC agree that an examination of approved spending, actual/projected/planned spending, planned savings and actual/projected/planned savings for the Home Improvement Program annually for 2010 to 2017 indicates (a) substantial fluctuation in savings and spending from year to year, and (b) frequent instances of substantial differences between approved and actual results for both savings and spending?

15.2 Please provide a narrative explaining on a year by year basis the changes in the approved and actual results for the Home Improvement Program from 2010 to 2017 (using Projected for 2016 and Plan for 2017).

15.3 Table A1-1 [pdf p.29] indicates that FBC's 2017 Plan for the Home Improvement Program is Savings of 364 MWh, Cost of $348,000. Savings and Cost are down from 2016 Approved figures of Savings of 3,106 MWh and Cost of $884,000. If not addressed in the response to the previous IR, please explain why FBC proposes this apparently substantial reduction between 2016 Approved and 2017 Plan.

Evergreen Economics' December 14, 2015 report "Evaluation of the FortisBC Home Improvement Program provides Recommendation #7, which states:

> "Recommendation #7: Consider revising the qualifying measures for the Home Improvement Program to increase the net-to-gross ratio. Measures such as windows, insulation, thermostats, and bathroom fans are well established in the market, relatively inexpensive in certain cases, and are commonly purchased as part of a scheduled household upgrade or retrofit, regardless of available rebates or incentives in the market. As a result, these measures dramatically increase free ridership and consequently decrease the program's net-to-gross ratio."[page 6, pdf p.87]

15.4 Please describe whether and how FBC has changed the Home Improvement Program for 2017 in response to Evergreen Economics' Recommendation #7.

15.5 The Evergreen Economics report has a different estimate of net-to-gross ratio for the Home Improvement Program than does the LiveSmart, BC Hydro, April 2012 figure shown in Table 6-1. Why does FBC use the LiveSmart figure?

16.0 Topic: Low income DSM programs
Reference: Exhibit B-1, Appendix B, pages 10 & 11 [pdf pp.60-61]; Exhibit B-1, Appendix A, page A16 [pdf p.43]

"[For 2015] Savings were 281.8 MWh for the Low Income programs. <u>No savings</u>

were attributed to the Basic ECAP, as the program was launched in November and only energy evaluations were completed by the end of the year." [pdf p.60, underline added]

"For eligible low-income single or multi-family dwellings, the Company designed and launched ECAP for the FortisBC shared service area, in collaboration with BC Hydro and in partnership with FEI. The ECAP program provides energy evaluations, advice, and the direct installation of energy efficiency measures like LED and CFL lighting, low-flow showerheads and faucet aerators at no cost to eligible households. Some single-family homes may also qualify for new Energy Star refrigerators, high-efficiency furnaces, and draft-proofing and insulation at the "advanced" program level. The program met its 2015 participation objectives within the first six weeks of launching." [pdf p.61, underline added]

16.1 Given that the ECAP program met its 2015 participation objectives within the first six weeks of launching in November 2015, why were no savings attributed to the Basic ECAP for 2015? Is it because it is expected that actual savings would not occur until sometime after enrolment?

16.1.1 Please explain the difference in this respect between "Basic ECAP" and "ECAP."

16.2 Please provide an interim assessment of the success of the ECAP program in 2016 to date. Are projected spending and energy savings in line with planned spending and savings?

16.3 Table A-6 projects 3,247 MWh of savings for low income and rental programs in 2017, at a cost of $1,367,000. How much of the costs and savings are attributed to Energy Savings Kits, and how much to ECAP?

16.4 Approximately how many homes does FBC plan will participate in its ECAP program in 2017, and how many homes does FBC plan will receive ESKs?

16.5 Approximately how many homes in FBC's service area would be eligible to participate in the low income program?

16.6 Approximately how much energy will be saved on average by each ECAP participant?

16.7 Approximately how many homes does FBC plan will participate in the rentals program in 2017?

16.8 Approximately how many homes in FBC's service area would be eligible to participate in the rental program?

16.9 Approximately how much energy will be saved on average each rental program participant?