Diane Roy
Vice President, Regulatory Affairs

Gas Regulatory Affairs Correspondence
Email: gas.regulatory.affairs@fortisbc.com

Electric Regulatory Affairs Correspondence
Email: electricity.regulatory.affairs@fortisbc.com

FortisBC
16705 Fraser Highway
Surrey, B.C. V4N 0E8
Tel: (604) 576-7349
Cell: (604) 908-2790
Fax: (604) 576-7074
Email: diane.roy@fortisbc.com
www.fortisbc.com

October 30, 2018

British Columbia Utilities Commission
Suite 410, 900 Howe Street
Vancouver, BC
V6Z 2N3

Attention: Mr. Patrick Wruck, Commission Secretary

Dear Mr. Wruck:

Re: FortisBC Inc. (FBC)

Project No. 1598973

2019-2022 Demand-Side Management (DSM) Expenditures Application (the Application)

Errata dated October 30, 2018

On August 2, 2018, FBC filed the Application referenced above. Concurrent with this Errata filing, FBC submitted its responses to Information Requests (IR) No. 1.

During the course of responding to IRs, FBC identified missing estimated energy savings in the Low Income Direct Install program in its 2019-2022 DSM Plan that requires corrections to the Application. FBC notes that all responses to the concurrently filed IR No. 1 use the corrected data where applicable. The following outlines the corrections made as part of this Errata.

The energy savings for two DSM measures in the Low Income Direct Install program were inadvertantly excluded. The correction results in the addition of 0.2 GWh of estimated savings for each year of the 2019-2022 DSM Plan. The incentives were correctly applied for each measure and the correction only impacts estimated savings. The correction also increases the yearly and total 2019-2022 DSM estimated savings. While the correction results in an increase to the Low Income Program Area TRC ratio, there is no material impact to the Portfolio TRC ratio of 1.5.

The following pages of the Application (Exhibit B-1) have been revised as a result of the corrections noted above.

- Page 1, Line 23
- Page 1, Table 1-1
- Page 14, Table 5-1
- Page 25, Table 6-1
- Appendix A, Page 1, Line 30
- Appendix A, Page 2, Table 1-1
- Appendix A, Page 6, Table 3-1
- Appendix A, Page 21, Table 10-1

FBC has attached the blacklined version of the affected pages.

If further information is required, please contact Sarah Wagner at (250) 469-6081.

Sincerely,

FORTISBC INC.

Original signed:

Diane Roy

Attachment

cc (email only): Registered Parties

1. INTRODUCTION

FortisBC Inc. (FBC or the Company) submits this Application for Acceptance of Demand Side Management (DSM) Expenditures for 2019 to 2022 (the Application) to the British Columbia Utilities Commission (BCUC or the Commission) pursuant to section 44.2(1)(a) of the *Utilities Commission Act*, R.S.B.C. 1996, c. 473 (UCA). The funding request outlined in the Application is supported by a detailed 2019 to 2022 DSM Plan (DSM Plan), found in Appendix A. The DSM Plan provides details on each of FBC's program areas and individual DSM programs, including cost-effectiveness test results.

On November 30, 2016, FBC filed its 2016 Long Term Electric Resource Plan (LTERP) and Long Term DSM Plan (LT DSM Plan). The LT DSM Plan was accepted by the BCUC on June 28, 2018 in Decision and Order G-117-18. The 2016 LTERP and LT DSM Plan included Conservation Potential Review (CPR) results for the FBC service territory (FBC CPR)[1]. The LT DSM Plan included an assessment of the appropriate level of cost-effective DSM resource acquisition to match FBC's resource needs over the LTERP's 20-year planning horizon. The High DSM scenario FBC selected for its LT DSM Plan contemplated annual DSM expenditures for 2019 and 2020 of $7.9 million ($2016) and annual DSM savings of 26.4 GWh[2].

The LT DSM Plan was premised on a ramp up in DSM spending and savings, beginning in 2021, that would offset an average of 77 percent of FBC's forecast load growth annually over the LTERP's planning horizon. In response to emerging customer activities, the DSM Plan builds on and is an escalation of the target savings contemplated in the LT DSM Plan. Table 1-1, below, shows that the proposed budget for the DSM Plan is $7.7 million more, in total, than the pro-forma budget contemplated in the LT DSM Plan (inflation adjusted) and is expected to achieve an additional 19.4 GWh of electricity savings for this period. Section 3.3 provides an overview of the customer activities that prompted the plan escalation and additional detail is provided in the DSM Plan (Appendix A).

Table 1-1: 2019-2022 DSM Plan compared with the LT DSM Plan

Plan	2019	2020	2021	2022	Total
Expenditures ($000s)					
2019-2022 DSM Plan	$10,900	$10,600	$11,100	$11,400	**$44,000**
LT DSM Plan	$8,100	$8,200	$9,400	$10,600	**$36,300**
Difference	*$2,800*	*$2,400*	*$1,700*	*$800*	***$7,700***
Energy savings (GWh)					
2019-2022 DSM Plan	32.8	32.3	32.6	33.3	**131.0**
LT DSM Plan	26.4	26.4	28.4	30.4	**111.6**
Difference	*6.4*	*5.9*	*4.2*	*2.9*	***19.4***

FBC has created a DSM Plan that is compatible with the LT DSM Plan using a number of inputs: Conservation and Energy Management (C&EM) guiding principles; review of historical

[1] FBC's CPR Technical and Economic report can be found in Appendix A of the LT DSM Plan.
[2] 2016 LTERP and LT DSM Plan, Volume 2, Section 3.3, Table 3-2: Pro-forma DSM Savings Targets, pg. 16.

Deleted: 18.7
Deleted: 6
Deleted: 1
Deleted: 4
Deleted: 1
Deleted: 0.3
Deleted: 2
Deleted: 7
Deleted: 0
Deleted: 7
Deleted: 8.7

5.3 *DSM EXPENDITURE FORECAST BY PROGRAM AREA*

Table 5-1 summarizes the DSM Plan forecast energy savings and expenditures (inflation adjusted) by program area (sector), non-program areas and portfolio level totals. The table also presents TRC Benefit/Cost ratios by program area and at the portfolio level. FBC used an inflation rate of two percent (2% annually) for program expenses and two and a half percent (2.5% annually) for program labour. Inflation is only accounted for in Table 5-1 for the plan years 2019 to 2022 and not the approved 2018 Plan figures.

Overall, the DSM Plan expenditures are 21 percent higher (at $44.0 million) than the pro-forma budgets provided in the 2016 LTERP ($35.7 million inflation adjusted). Over half ($4.0 million) of the $7.7 million increase is allocated to lighting measures in the Industrial sector, largely to address agriculture process lighting in the emergent cannabis industry. Other large increases are from the Residential Customer Engagement Tool ($1.1 million), the Demand Response pilot ($1.0 million), and the DSM tracking tool ($0.6 million) under Supporting Initiatives.

Table 5-1: 2019-2022 DSM Plan Proposed Expenditures (inflation adjusted)

Program Area (Sector)	2018 Plan	Expenditures ($000s)					Energy savings (GWh)					TRC 2019-2022
	Approved	2019	2020	2021	2022	Total	2019	2020	2021	2022	Total	Ratio
Residential	$1,591	$2,086	$2,304	$2,519	$2,795	$9,703	6.0	5.6	6.0	6.5	24.1	1.8
Low Income	$731	$843	$873	$899	$930	$3,545	1.2	1.2	1.2	1.3	4.9	1.7
Commercial	$3,592	$3,178	$3,031	$3,052	$3,047	$12,308	15.5	15.5	15.3	15.5	61.8	1.7
Industrial	$377	$1,762	$1,788	$1,813	$1,815	$7,178	10.0	10.0	10.1	10.1	40.2	1.7
Program sub-total	*$6,291*	*$7,870*	*$7,995*	*$8,284*	*$8,587*	*$32,735*	*32.6*	*32.1*	*32.4*	*33.1*	*130.3*	*1.7*
Education and Outreach	$165	$566	$497	$595	$666	$2,324						
Supporting Initiatives	$742	$1,218	$838	$1,024	$1,044	$4,124						
Portfolio	$743	$776	$913	$1,019	$956	$3,663						
Demand Response		$477	$324	$130	$133	$1,064						
Total	**$7,940**	**$10,900**	**$10,600**	**$11,100**	**$11,400**	**$44,000**	**32.8**	**32.3**	**32.6**	**33.3**	**131.0**	**1.5**
LT DSM Plan	**$7,900**	**$8,100**	**$8,200**	**$9,400**	**$10,600**	**$36,300**	**26.4**	**26.4**	**28.4**	**30.4**	**111.6**	**1.9**

Deleted: 0
Deleted: 0
Deleted: 0
Deleted: 1
Deleted: 1
Deleted: 5
Deleted: 6
Deleted: 1
Deleted: 4
Deleted: 1
Deleted: 0
Deleted: .3

The DSM Plan was developed using the conservation potential review as an input.

5.4 *CONSERVATION POTENTIAL REVIEW (CPR)*

As part of the 2016 LTERP and LT DSM Plan, FBC partnered with three other BC utilities[16] to undertake a provincial, dual-fuel, conservation potential review (BC CPR). Navigant Consulting (Navigant) was engaged to determine the energy efficiency potential for electricity and natural gas across British Columbia in the residential, commercial, and industrial sectors over the planning horizon of 2016 to 2035.

[16] (BC Hydro, FEI and Pacific Northern Gas (PNG) (collectively, the BC Utilities)

Test (PCT)[27] applied at the program, program area (or sector) and portfolio levels. These cost-effectiveness tests are from the California Standard Practice Manual: Economic Analysis of Demand-Side Programs and Projects (California Manual). Table 6-1 shows the standard test results at the portfolio level.

Table 6-1: Portfolio level cost effectiveness results

Program Area (Sector)	TRC	mTRC	UCT	PCT	RIM	TRC	Utility Cost
	Ratio	Ratio	Ratio	Ratio	Ratio	$/MWh	$/MWh
Total	1.5	1.7	2.8	3.1	0.8	83.8	44.7

Deleted: 4.5

Deleted: 5.1

[26] Referred to as Program Administrator Cost Test in the California Manual. The Program Administrator Cost Test measures the net costs of a demand side management program as a resource option based on the costs incurred by the program administrator (including incentive costs) less avoided costs e.g. power purchase reductions.

[27] The Participants Test is the measure of the quantifiable benefits (Utility incentive, reduction in utility bills) and costs (principally the Measure cost) to the customer due to participation in a program.

APPENDIX A: DEMAND-SIDE MANAGEMENT

1 Introduction

FortisBC Inc. (FBC or the Company) has offered demand-side management (DSM) programs to customers since 1989 that are available to eligible customers served by FBC and its wholesale customers of Grand Forks, Nelson Hydro, Penticton, and Summerland.

The 2019-2022 DSM Plan continues many of the cost-effective programs previously accepted in FBC's 2018 DSM Plan, with some additions and modifications to simplify offers for customers, align programs with provincial partners, and comply with changes to applicable legislation. All figures in the 2019-2022 DSM Plan are expressed in constant 2019 dollars ($2019).

1.1 Summary of 2019-2022 DSM Plan

The 2019-2022 DSM Plan includes programs for: the Residential, Commercial, and Industrial customer classes; Low Income customers (formerly included in the Residential Program Area); and Irrigation and Street Lighting classes (included in the Commercial Program Area). The 2019-2022 DSM Plan also includes non-program expenditure categories: customer engagement and outreach; supporting initiatives; portfolio activities; and a new Demand Response pilot. Supporting initiatives contains funding for Codes and Standards (C&S) including support for the BC Energy Step Code to advance the energy efficiency performance of new building stock. The DSM Plan provides an overview and high-level description of each DSM program that FBC offers to its customers. Detailed Terms & Conditions for each program govern the actual measure incentives available, and process required, for qualifying customers.

Table 1-1, below, summarizes the proposed 2019-2022 DSM Plan energy savings and expenditures by program area (sector), non-program areas and at the portfolio level. The table also presents Total Resource Cost (TRC) Benefit/Cost ratios by program area and at the portfolio level.

Overall, the 2019-2022 DSM Plan expenditures are 21 percent higher (at $43.3 million) than was contemplated by the pro-forma budgets provided in the 2016 LT DSM Plan ($35.7 million). Over half ($4.0 million) of the $7.6 million total increase in proposed DSM spending is allocated to lighting in the Industrial sector, largely to address agriculture process lighting in the emergent cannabis industry. Other large increases are from the addition of a Residential Customer Engagement Tool ($1.1 million), the Demand Response pilot ($1.0 million), and the DSM tracking tool ($0.6 million) under Supporting Initiatives. The program area sections that follow below provide more details on each of these items.

The 2019-2022 DSM Plan energy savings are also 17 percent higher (131.0 GWh) compared to the 2016 LT DSM Plan forecast (111.6 GWh) due largely to the estimated savings from the proposed cannabis production projects in the industrial sector.

Deleted: 0.3

Table 1-1: DSM Plan Expenditures & Savings, 2019-2022

Program Area (Sector)	Expenditures 2019 dollars (000s)					Energy savings (GWh)					TRC 2019-2022
	2019	2020	2021	2022	Total	2019	2020	2021	2022	Total	Ratio
Residential	$2,086	$2,290	$2,489	$2,750	$9,614	6.0	5.6	6.0	6.5	24.1	1.8
Low Income	$843	$870	$894	$923	$3,530	1.2	1.2	1.2	1.3	4.9	1.7
Commercial	$3,178	$3,008	$3,006	$2,980	$12,173	15.5	15.5	15.3	15.5	61.8	1.7
Industrial	$1,762	$1,783	$1,804	$1,801	$7,151	10.0	10.0	10.1	10.1	40.2	1.7
Program sub-total	*$7,870*	*$7,951*	*$8,193*	*$8,453*	*$32,467*	*32.6*	*32.1*	*32.4*	*33.1*	*130.3*	*1.7*
Education and Outreach	$566	$488	$572	$627	$2,252						
Supporting Initiatives	$1,218	$820	$981	$980	$4,000						
Portfolio	$776	$893	$975	$894	$3,536						
Demand Response	$477	$318	$125	$125	$1,045						
Total	**$10,900**	**$10,500**	**$10,800**	**$11,100**	**$43,300**	**32.8**	**32.3**	**32.6**	**33.3**	**131.0**	**1.5**
LT DSM Plan	**$8,100**	**$8,100**	**$9,200**	**$10,300**	**$35,700**	**26.4**	**26.4**	**28.4**	**30.4**	**111.6**	**1.9**

Deleted: 0
Deleted: 0
Deleted: 0
Deleted: 1
Deleted: 1
Deleted: 5
Deleted: 6
Deleted: 1
Deleted: 4
Deleted: 1
Deleted: 0.3

1.2 The Long Run Marginal Cost and Cost Effectiveness Results

The proposed 2019-2022 DSM Plan uses a long run marginal cost (LRMC) of $100 per MWh (2015 dollars) for clean or renewable BC resources accepted[1] by the Commission in the Company's 2016 LTERP. FBC continues to use the approved DCE factor of $79.85 per kW-yr[2] (2015 dollars). FBC updated these avoided costs to 2019 dollars using an inflation rate of 2% annually.

Based on those avoided costs, the 2019-2022 DSM Plan achieves a TRC Benefit/Cost ratio of 1.5 at the portfolio level.

[1] Accepted in BCUC Order G-117-18

[2] Accepted in BCUC Order G-9-17

3 Low Income Program Area

This program area specifically focuses on creating opportunities for energy savings for low income customers both directly through programs that low income customers can apply to and indirectly through programs that serve social housing providers which in turn benefits FBC's low income customers. It was previously included within the Residential Program area and is in a stand-alone section in the 2019-2022 DSM Plan because it is a distinct program area and includes both residential and commercial-type measures.

For the 2019-2022 DSM Plan, the suite of Low Income Program rea customer offerings are organized in the following programs:

- Self Install Program;
- Direct Install Program;
- Prescriptive Rebate Program; and
- Support Program

Table 3-1 outlines the Low Income programs planned expenditures, energy savings and the Benefit/Cost ratio on a Total Resource Cost (TRC) basis. Overall, the Low Income Program Area continues to grow throughout the plan period.

Table 3-1: Low Income Expenditures and Savings, 2019-2022

Program	Expenditures 2019 dollars (000s)					Energy savings (GWh)				
	2019	2020	2021	2022	Total	2019	2020	2021	2022	Total
Self Install (ESK)	$74	$74	$74	$74	$296	0.2	0.2	0.2	0.2	1.0
Direct Install (ECAP)	$665	$687	$704	$726	$2,781	0.9	0.9	0.9	0.9	3.5
Social Housing Support										
Prescriptive Rebate	$15	$16	$18	$20	$68	0.1	0.1	0.1	0.1	0.4
Support	$26	$30	$35	$40	$130					
Labour and expenses	$64	$64	$64	$64	$254					
Program	**$843**	**$870**	**$894**	**$923**	**$3,530**	**1.2**	**1.2**	**1.2**	**1.3**	**4.9**

Deleted: 7
Deleted: 7
Deleted: 7
Deleted: 7
Deleted: 2.8
Deleted: 0
Deleted: 0
Deleted: 0
Deleted: 1
Deleted: 1

3.1 Self-Install Program

This program is simple to apply to and provides a means by which low-income customers can take initial steps to improve the energy efficiency of their homes. The primary measure within the self-install program is the Energy Saving Kit (ESK) which is a bundle of energy efficiency measures that participants install themselves. The kits are delivered to the participant's home address or picked up at a FortisBC attended venue (e.g. Food Bank).

3.2 Direct Install Program

The primary measure within the Direct Install program is the Energy Conservation Assistance measure. The Direct Install program recognizes that some low-income customers do not have the expertise and/or physical capabilities to install energy efficient measures themselves. In the case of the Energy Conservation Assistance measure, a program contractor visits the eligible customer's homes to perform

10 Detailed Benefit-Cost Ratios

The following table provides the governing (TRC, mTRC) benefit-cost ratios for the 2019-2022 DSM Plan, at the Program, Sector and Portfolio levels; as well as the auxiliary B/C ratios calculated according to the California Standard Practice manual.

Table 10-1: DSM Plan Benefit-Cost Tests, 2019-2022

Program Area (Sector)	TRC	mTRC	UCT	PCT	RIM	TRC	Utility Cost
	Ratio	Ratio	Ratio	Ratio	Ratio	$/MWh	$/MWh
Total	**1.5**	**1.7**	**2.8**	**3.1**	**0.8**	**83.8**	**44.7**
Residential Program							
Home Renovation	2.2	2.4	4.2	4.3	0.8	77.2	39.7
New Home	2.2	2.4	3.9	4.0	1.0	92.0	52.4
Lighting	1.9	2.2	13.6	1.9	1.1	58.3	8.2
Rental Apartment	3.0	3.4	3.0	-	0.7	38.2	38.2
Total	**2.1**	**2.3**	**4.8**	**3.5**	**0.9**	**72.6**	**32.4**
Low Income Program							
Self Install	3.6	3.6	3.6	-	0.3	30.6	30.6
Direct Install	1.9	1.9	1.9	-	0.8	60.6	60.6
Social Housing Rebate Support							
Prescriptive Rebate	1.5	1.5	10.2	1.4	1.1	75.7	11.3
Support							
Total	**1.9**	**1.9**	**2.1**	**-**	**0.6**	**59.3**	**54.4**
Commercial Program							
Commercial Custom	1.3	1.5	4.7	1.9	0.8	92.5	25.2
Commercial Prescriptive	2.8	3.2	6.7	5.2	0.8	43.9	18.4
Total	**2.0**	**2.2**	**5.8**	**3.2**	**0.8**	**62.2**	**21.0**
Industrial Program							
Industrial Custom	1.8	2.1	5.1	2.3	1.0	58.7	21.2
Industrial Prescriptive	1.4	1.5	4.9	1.7	0.9	91.6	25.4
Total	**1.7**	**2.0**	**5.1**	**2.2**	**1.0**	**64.0**	**21.8**

Deleted: 4.5
Deleted: 5.1
Deleted: 6
Deleted: 6
Deleted: 6
Deleted: 7
Deleted: 73.5
Deleted: 73.5
Deleted: 7
Deleted: 7
Deleted: 1.8
Deleted: 68.4
Deleted: 62.9