



**Diane Roy**  
Vice President, Regulatory Affairs

**Gas Regulatory Affairs Correspondence**  
Email: [gas.regulatory.affairs@fortisbc.com](mailto:gas.regulatory.affairs@fortisbc.com)

**Electric Regulatory Affairs Correspondence**  
Email: [electricity.regulatory.affairs@fortisbc.com](mailto: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](mailto:diane.roy@fortisbc.com)  
[www.fortisbc.com](http://www.fortisbc.com)

September 20, 2018

Movement of United Professionals  
c/o Allevato Quail & Roy, Barristers and Solicitors  
405-510 West Hastings St.  
Vancouver, BC  
V6B 1L8

Attention: Mr. Jim Quail

Dear Mr. Quail

**Re: FortisBC Energy Inc. (FEI)**

**Project No. 1598964**

**Application for Acceptance of 2019-2022 Demand Side Management (DSM)  
Expenditures Plan (the Application)**

**Response to Canadian Office and Professional Employees Union, Local 378  
(known as Movement of United Professionals or MoveUP) Information Request  
(IR) No. 1**

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On June 22, 2018, FEI filed the Application referenced above. In accordance with the British Columbia Utilities Commission Order G-138-18 setting out the Regulatory Timetable for the review of the Application, FEI respectfully submits the attached response to MoveUP IR No. 1.

If further information is required, please contact the undersigned.

Sincerely,

**FORTISBC ENERGY INC.**

***Original signed:***

Diane Roy

Attachments

cc (email only): Commission Secretary  
Registered Parties

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1   **1.0   CONSISTENCY WITH BRITISH COLUMBIA ENERGY OBJECTIVES**

2               **REFERENCE: APPENDIX B, Page 4 Table 2-1**

3               Annual Gas Savings (Gj/yr.)                                 533,538

4               **AND REFERENCE: APPENDIX A Page 3 Exhibit 3 - Results for the Total DSM**  
 5               **Program Portfolio**

	Year	Total
7           Net Incremental Annual Gas Savings	2019	859,729
8           (Gj/yr.)	2020	913,134
	2021	1,093,421
	2022	1,181,761

11           **AND REFERENCE: FEI 2019 ANNUAL REVIEW EXHIBIT B-2**

12           Section 3.3 RESIDENTIAL AND COMMERCIAL USE PER CUSTOMER FORECAST

13           Pages 26-29:

14           Individual UPC projections for each residential and commercial rate schedule are  
 15           developed by considering the recent (three-year) historical weather-normalized  
 16           UPC. The analysis of historical normalized residential use rates indicates an  
 17           inclining trend for the residential and commercial rate schedules.

18           As shown in Figure 3-1, the Residential (Rate Schedule 1) UPC is forecast to  
 19           increase by approximately 0.6 GJs (0.7 percent) in 2019.

20           . . . . As shown in Figure 3-2, the Small Commercial (Rate Schedule 2) UPC is  
 21           forecast to increase by 2.3 GJs (0.7 percent) in 2019.

22           . . . . As shown in Figure 3-3, the Large Commercial (Rate Schedule 1 3) UPC is  
 23           forecast to increase by 68 GJs (1.8 percent) in 2019.

24           . . . . As shown in Figure 3-4, the Large Commercial Transportation (1 Rate  
 25           Schedule 23) UPC is forecast to increase by 56.4 GJs (1.0 percent) in 2019.

26           1.1   Please explain the 61% increase over two years from the reported 2017 Annual  
 27           Gas Savings of 533,538 Gj and the projected 2019 Annual Gas Savings of  
 28           859,729 Gj  
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1 **Response:**

2 The table below provides a breakdown of the 2017 actual gas savings and the 2019 projected  
3 gas savings. FEI notes that a correction was made to the overall 2019-2022 DSM Plan energy  
4 savings. The following analysis uses the corrected values. Please refer to the Errata filed  
5 concurrently with these IR responses.

6 In total, new measures are projected to provide an additional 236,380 GJ of gas savings in  
7 2019, which alone would lead to a 44 percent increase in savings between 2017 and 2019.  
8 Expected savings from new measures are most notable in the Industrial program area, where  
9 the new Strategic Energy Management Program is projected to provide 92,800 GJ of gas  
10 savings in 2019 alone. Other new measures in the Industrial program area include air curtains,  
11 direct contact water heaters, as well as pipe and tank insulation.

12 In the Residential program area, new measures such as combination systems, direct vent wall  
13 furnaces, drain water heat recovery, communicating thermostats, and HVAC zone controls are  
14 expected to provide gas savings of 36,826 GJ in 2019. The Residential program area is also  
15 projected to see an increase in savings from fireplaces, as well as the New Home Program, due  
16 in large part to the introduction of the BC Step Code.

17 In the Commercial program area, the introduction of measures such as furnaces, roof insulation,  
18 kitchen demand control ventilation, vortex deaerators, and gas underfired boilers are projected  
19 to produce an additional 16,570 GJ of savings in 2019 compared to 2017. The remaining  
20 increase in projected gas savings is a result of net growth overall in existing measures.



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Program Area	2017	2019	Change (%)	Change (GJ)
Residential	137,161	238,946	74%	101,785
Draftproofing, Insulation (Attic, Basement, Wall)	15,846	22,838	44%	6,992
Furnaces and Boilers	37,821	48,100	27%	10,279
Fireplaces	30,039	59,979	100%	29,940
Water Heaters	28,331	31,226	10%	2,895
Low Flow Fixtures, Washers, Dryers	3,157	2,550	-19%	(607)
New Home	1,012	13,741	1258%	12,729
RAP	20,955	23,685	13%	2,730
New Measures	-	36,826	-	36,826
Commercial	238,688	280,314	17%	41,626
Space Heating	73,264	105,669	44%	32,405
Water Heating	11,703	11,066	-5%	(637)
Commercial Food Service	10,078	11,930	18%	1,852
Customized Equipment Upgrade	51,383	47,804	-7%	(3,579)
Continuous Optimization	47,472	47,227	-1%	(245)
Commercial Energy Assessment	14,671	2,310	-84%	(12,361)
Energy Specialist	7,549	-	-100%	(7,549)
RAP	22,569	37,738	67%	15,169
New Measures	-	16,570	-	16,570
Industrial	105,516	280,651	166%	175,135
Industrial Optimization	103,429	90,189	-13%	(13,240)
Specialized Industrial Process Technology	2,086	7,478	258%	5,392
New Measures	-	182,984	-	182,984
Low Income	47,263	76,022	61%	28,759
Energy Saving Kit	29,019	35,100	21%	6,081
Energy Conservation Assistance	8,251	10,120	23%	1,869
Space Heat Top Up	1,883	7,906	320%	6,023
Water Heating Top Up	353	2,121	501%	1,768
Non-Profit Custom	-	20,775	-	20,775
RAP	7,757	-	-100%	(7,757)
Conservation Education and Outreach	-	-	-	-
Innovative Technologies	4,910	-	-100%	(4,910)
Pilot Projects	4,910	-	-100%	(4,910)
Enabling Activities	-	-	-	-
Portfolio Level Activities	-	-	-	-
<b>ALL PROGRAMS</b>	<b>533,538</b>	<b>875,933</b>	<b>64%</b>	<b>342,395</b>

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1.2 Please discuss the relationship between the continuing upward trend in Use Per Customer (UPC) and the asserted net gas savings achieved by the current and proposed DSM plans

**Response:**

At this time, FEI does not have evidence to support any specific cause for the upward trend in Use Per Customer (UPC). However, there may be a variety of contributing factors including, but not limited to, changing habits, additional appliances, changes in housing makeup and changing process requirements (for example increased economic output). Gas savings realized as a result of the current and proposed DSM plans are realized by program participants and the proportion of customers participating in DSM programs will influence the overall impact of realized energy savings as it relates to total customer use.

In 2017, approximately 5.5 percent of residential, 0.7 percent of commercial and 1 percent of industrial customers participated in DSM programs. Given the current participation levels, a higher UPC among non-participating customers can offset the lower UPC of participating customers. FEI plans to realize increased participation and gas savings in the 2019-2022 DSM Plan.



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1    **2.0    OVERALL DSM PROGRAM PORTFOLIO RESULTS**

2    **REFERENCE: APPENDIX A Page 5 Exhibit 1**

3    2.1    Please provide an expanded Exhibit 1 incorporating results for 2017 and  
 4    projected 2018, and including annual percentage increases for each entry .

5  
 6    **Response:**

7    Exhibit 1 in Appendix A has been expanded to include 2017 actual results, projected 2018  
 8    expenditures (as of July 2018), and annual percentage increases. FEI notes that a correction  
 9    was made to the inflated DSM expenditure values for 2020-2022 presented in Exhibit 1. This  
 10    response incorporates the corrected values. Please refer to the Errata filed concurrently with  
 11    these IR responses for further information.

Program Area	Total Utility Expenditures (\$000s)						Annual Percentage Increases (%)				
	2017 Actual	2018 Projected	2019 DSM Plan	2020 DSM Plan	2021 DSM Plan	2022 DSM Plan	2017 to 2018	2018 to 2019	2019 to 2020	2020 to 2021	2021 to 2022
Residential	12,203	13,968	23,521	25,722	28,476	31,383	14%	68%	9%	11%	10%
Commercial	10,834	11,361	13,837	17,355	27,437	31,074	5%	22%	25%	58%	13%
Industrial	2,099	1,624	3,103	3,152	3,644	3,708	-23%	91%	2%	16%	2%
Low Income	2,644	2,878	6,630	6,795	6,984	7,217	9%	130%	3%	3%	3%
Conservation Education and Outreach	2,590	2,729	7,155	7,353	8,578	9,433	5%	162%	3%	17%	10%
Innovative Technologies	928	1,280	2,043	2,202	2,631	3,062	38%	60%	8%	20%	16%
Enabling Activities	1,181	3,238	8,426	8,322	9,231	8,921	174%	160%	-1%	11%	-3%
Portfolio Level Activities	1,559	1,529	1,635	1,676	1,822	1,979	-2%	7%	2%	9%	9%
<b>ALL PROGRAMS</b>	<b>34,039</b>	<b>38,607</b>	<b>66,350</b>	<b>72,577</b>	<b>88,803</b>	<b>96,775</b>	<b>13%</b>	<b>72%</b>	<b>9%</b>	<b>22%</b>	<b>9%</b>

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17    Comment: We understand the note that this table is “Including Inflation” to mean that  
 18    the numbers it provides are not in constant dollars. If this understanding is correct:

19    2.2    Please provide an expanded Exhibit I as requested in Request 2.1 using  
 20    constant 2018 dollars.

21  
 22    **Response:**

23    The table below is an expanded Exhibit 1 in 2018 constant dollars.



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Program Area	Total Utility Expenditures (\$000s)						Annual Percentage Increases (%)				
	2017 Actual	2018 Projected	2019 DSM Plan (2018 \$)	2020 DSM Plan (2018 \$)	2021 DSM Plan (2018 \$)	2022 DSM Plan (2018 \$)	2017 to 2018	2018 to 2019	2019 to 2020	2020 to 2021	2021 to 2022
Residential	12,203	13,968	23,035	24,692	26,797	28,948	14%	65%	7%	9%	8%
Commercial	10,834	11,361	13,550	16,656	25,806	28,638	5%	19%	23%	55%	11%
Industrial	2,099	1,624	3,038	3,024	3,425	3,414	-23%	87%	0%	13%	0%
Low Income	2,644	2,878	6,492	6,521	6,568	6,650	9%	126%	0%	1%	1%
Conservation Education and Outreach	2,590	2,729	7,006	7,053	8,060	8,682	5%	157%	1%	14%	8%
Innovative Technologies	928	1,280	2,000	2,110	2,470	2,815	38%	56%	6%	17%	14%
Enabling Activities	1,181	3,238	8,250	7,983	8,678	8,215	174%	155%	-3%	9%	-5%
Portfolio Level Activities	1,559	1,529	1,598	1,598	1,695	1,793	-2%	4%	0%	6%	6%
<b>ALL PROGRAMS</b>	<b>34,039</b>	<b>38,607</b>	<b>64,968</b>	<b>69,637</b>	<b>83,498</b>	<b>89,155</b>	<b>13%</b>	<b>68%</b>	<b>7%</b>	<b>20%</b>	<b>7%</b>

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1   **3.0   LABOUR COSTS AND RESOURCES**

2           3.1   Please provide a table showing labour cost of each program (plus portfolio level)  
3           each year of the plan (i.e., consolidate the various labour cost line-items from  
4           Appendix A)

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6   **Response:**

7   The following table provides the labour expenditures by each program, program area and  
8   portfolio for each year of the DSM Plan.



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	Labour (\$000's)				
	2019	2020	2021	2022	TOTAL
<b>Residential</b>	<b>726</b>	<b>726</b>	<b>726</b>	<b>726</b>	<b>2,905</b>
Home Renovation Rebate Program	483	483	483	483	1,932
New Home Program	228	228	228	228	912
Rental Apartment Efficiency Program	15	15	15	15	61
Non-Program Specific Expenses	0	0	0	0	0
<b>Commercial</b>	<b>835</b>	<b>983</b>	<b>1,635</b>	<b>1,838</b>	<b>5,290</b>
Prescriptive Program	592	734	969	1,140	3,435
Performance Program	159	165	177	193	694
Rental Apartment Efficiency Program	22	22	22	22	88
Performance Program - New Buildings	62	62	466	484	1,074
Non-Program Specific Expenses	0	0	0	0	0
<b>Industrial</b>	<b>380</b>	<b>380</b>	<b>380</b>	<b>380</b>	<b>1,520</b>
Performance Program	270	270	270	270	1,080
Prescriptive Program	50	50	50	50	200
Strategic Energy Management Program	60	60	60	60	240
Non-Program Specific Expenses	0	0	0	0	0
<b>Low Income</b>	<b>494</b>	<b>494</b>	<b>494</b>	<b>494</b>	<b>1,975</b>
Self Install Program	44	44	44	44	175
Direct Install Program	175	175	175	175	700
Prescriptive Program	175	175	175	175	700
Support Program	100	100	100	100	400
Non-Program Specific Expenses	0	0	0	0	0
<b>Conservation Education and Outreach</b>	<b>870</b>	<b>870</b>	<b>1,000</b>	<b>1,070</b>	<b>3,810</b>
General Residential Education Program	300	300	300	300	1,200
Residential Customer Engagement Tool	180	180	230	300	890
Commercial Education Program	150	150	200	200	700
School Education Program	190	190	220	220	820
Non-Program Specific Expenses	50	50	50	50	200
<b>Innovative</b>	<b>491</b>	<b>491</b>	<b>491</b>	<b>491</b>	<b>1,963</b>
Technology Screening	93	93	93	93	373
Pilot Project Expenditures	398	398	398	398	1,590
Non-Program Specific Expenses	0	0	0	0	0
<b>Enabling Activities</b>	<b>875</b>	<b>900</b>	<b>900</b>	<b>850</b>	<b>3,525</b>
Enabling Activities	875	900	900	850	3,525
<b>Portfolio Level Activities</b>	<b>1,345</b>	<b>1,345</b>	<b>1,395</b>	<b>1,495</b>	<b>5,580</b>
Portfolio Level Activities	1,345	1,345	1,395	1,495	5,580
<b>Total Portfolio</b>	<b>6,016</b>	<b>6,189</b>	<b>7,021</b>	<b>7,344</b>	<b>26,569</b>

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2           3.2    Please provide a table showing the approximate number of employee FTEs

3                    devoted to each program in 2017 and the total employee FTEs devoted to the

4                    DSM plan during that year

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6    **Response:**

7    The table below includes the approximate number of employee FTEs by primary program area

8    and the approximate number of employee FTEs providing support services across multiple

9    program areas in 2017. Examples of support services include technical support,

10   communications and direct customer engagement/key account management.

Program Area Labour	Approximate FTEs (2017)
Commercial & Industrial	6
Conservation Assistance (Low Income)	3
Conservation Education & Outreach	2
Enabling Activities	5
Innovative Technologies	2
Portfolio	4
Residential	4
Support Services	12
<b>Total</b>	<b>38</b>

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14           3.3    Please provide a table showing the approximate number of contracted FTEs

15                    devoted to each program in 2017 and the total contractor FTEs devoted to the

16                    DSM plan during that year

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18    **Response:**

19    The table below includes the approximate number of dedicated contracted FTEs by Program

20    Area in 2017, including approximate contracted FTEs for specific programs where a program

21    delivery agent was used.

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Program Area Labour	Approximate Contracted FTEs (2017)
Conservation Assistance (Low Income)	
- Energy Savings Kit	2
- ECAP	6
Residential	
- Furnace and HRR site visits	1
- Application processing and customer inquiries	10
Rental Apartment Program	8
Communications (Website)	0.25
<b>Total</b>	<b>19.25</b>

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3.4 Please describe any planned or anticipated increases in these employee and contractor resources under the proposed 2019-22 Plan.

**Response:**

FEI forecasts that the 2019-2022 DSM Plan will require labour expenditures equal to approximately 15 new FTE positions beginning in 2019 and continuing through to 2022. No additional dedicated contractor resources are currently anticipated.

3.5 Please describe the criteria applied by FEI in deciding whether to engage employees or contracted resources to tasks and functions.

**Response:**

FEI's criteria in deciding whether to engage employees or contracted resources for the C&EM department include but are not limited to: if specific subject matter expertise is needed for the tasks and functions required, the nature and the duration of the work in question, whether the resource need is temporary for vacation or employee leave coverage or due to a temporary high volume period, and if the work volumes are variable or consistent.