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September 7, 2023

Commercial Energy Consumers Association of British Columbia
c/o Owen Bird Law Corporation
Vancouver Centre II
2900 – 733 Seymour Street
Vancouver, BC
V6B 0S6

Attention: Christopher P. Weafer

Dear Christopher P. Weafer:

Re: FortisBC Energy Inc. (FEI)

Application for Acceptance of Demand Side Management (DSM) Expenditures Plan for the Period Covering 2024 to 2027 (Application)

Response to the Commercial Energy Consumers Association of British Columbia (CEC) Information Request (IR) No. 1

On July 12, 2023, FEI filed the Application referenced above. In accordance with the regulatory timetable established in British Columbia Utilities Commission Order G-178-23A for the review of the Application, FEI respectfully submits the attached response to CEC IR No. 1.

For convenience and efficiency, if FEI has provided an internet address for referenced reports instead of attaching the documents to its IR responses. FEI intends for the referenced documents to form part of its IR responses and the evidentiary record in this proceeding.

If further information is required, please contact Sarah Commander, Regulatory Projects Manager, at (250) 469-6081.

Sincerely,

FORTISBC ENERGY INC.

Original signed:

Sarah Walsh

Attachments

cc (email only): Commission Secretary
Registered Parties

1. Reference: Exhibit B-2, page 14

Table 4-2: 2024–2027 DSM Plan Expenditures Compared to the 2023 DSM Plan Expenditures

Program Area	Total Utility Expenditure (000s)[1]					
	2023	2024	2025	2026	2027	2024 - 2027 Total
Residential	$43,994	$33,197	$40,830	$48,263	$56,621	$178,910
Commercial	$26,570	$8,726	$12,958	$17,799	$21,151	$60,635
Industrial	$6,848	$7,585	$8,071	$8,963	$9,600	$34,219
Low Income	$13,251	$8,366	$9,753	$11,826	$14,676	$44,621
Indigenous	-	$2,704	$4,247	$5,481	$6,452	$18,885
Conservation Education and Outreach	$9,713	$14,652	$14,794	$15,433	$15,986	$60,865
Innovative Technologies	$25,960	$35,117	$20,807	$15,239	$18,059	$89,222
Enabling Activities	$12,010	$15,042	$12,451	$11,486	$11,265	$50,244
Portfolio Activities	$2,730	$5,281	$5,687	$5,507	$5,749	$22,223
Legacy Expenditures[2]	-	$36,200	$16,995	$8,401	$5,282	$68,878
All Programs	**$141,077**	**$166,870**	**$146,593**	**$148,398**	**$164,842**	**$626,703**
Year-over-year variance	0	18%	-12%	1%	11%	

Notes to Table:

1.1 Please provide the same table using historical data back to 2018.

Response:

The requested table is provided below.

Updated Table 4-2: DSM Plan Expenditures (2018-2022)

Program Area	Total Expenditures ($000s)					
	2018 Plan	2019 Plan	2020 Plan	2021 Plan	2022 Plan	2023 Plan
Residential	$ 11,383	$ 23,521	$ 25,721	$ 50,121	$ 34,816	$ 43,994
Commercial	$ 10,051	$ 13,837	$ 17,542	$ 20,735	$ 19,800	$ 26,570
Industrial	$ 2,983	$ 3,103	$ 3,152	$ 7,913	$ 9,477	$ 6,848
Low Income	$ 3,483	$ 6,630	$ 6,795	$ 10,322	$ 12,263	$ 13,251
Programs Sub-Total	**$ 27,900**	**$ 47,090**	**$ 53,211**	**$ 89,091**	**$ 76,356**	**$ 90,664**
Conservation Education and Outreach	$ 2,400	$ 7,155	$ 8,451	$ 8,578	$ 11,350	$ 9,713
Innovative Technologies	$ 1,210	$ 2,043	$ 2,218	$ 5,064	$ 13,214	$ 25,960
Enabling Activities	$ 4,365	$ 8,426	$ 8,671	$ 8,722	$ 8,921	$ 12,010
Portfolio Level Activities	$ -	$ 1,635	$ 1,882	$ 943	$ 1,979	$ 2,730
Programs Sub-Total	**$ 7,975**	**$ 19,259**	**$ 21,222**	**$ 23,307**	**$ 35,464**	**$ 50,413**
Total Portfolio	**$ 35,875**	**$ 66,350**	**$ 74,433**	**$ 112,398**	**$ 111,820**	**$ 141,077**
Year-over-year variance		**85%**	**12%**	**51%**	**-1%**	**32%**

2. Reference: Exhibit B-2, page 16-17 and Appendix A page 17

Table 4-4: Explanation of Key Changes for the 2024-2027 DSM Plan by Program Area

Program Area	Key Changes
Residential	• The discontinuation of conventional high-efficiency gas space and water heating equipment programming leads to a reduction of forecast expenditures and expected savings from this area when compared to 2023, particularly within the New Home program. • FEI plans for expenditures to increase over the plan period with substantial expenditures in dual fuel hybrid system offers across residential programs.
Commercial	• The discontinuation of conventional high-efficiency gas space and water heating equipment programming leads to a reduction of forecast expenditures and expected savings from this area when compared to 2023, particularly in prescriptive and new construction offers. • The Small New Construction Offer is incorporated into the Performance - New Buildings Program. Overall, the Performance - New Building Program is expected to have a ramp down in expenditures due to buildings with conventional space and water heating systems no longer being eligible for incentives. • Expenditures increase over the plan period primarily due to support for dual fuel hybrid systems and deeper retrofits and gas heat pumps, across commercial programs. • Additional expenditures and savings are expected with the new commercial Strategic Energy Management (SEM) offer within the Performance – Existing Buildings Program.
Industrial	• FEI's plan includes an increase in expenditures within the prescriptive offers such as steam trap replacements and insulation, as well as an increase in expenditures in industrial SEM. • Savings from the forecast expenditures within this Program Area are contributing to the climb back in estimated incremental annual savings of 1 PJ by 2027.
Low Income	• Conventional high-efficiency gas space and water heating equipment, such as furnaces, are discontinued from the Direct Install Program.
	• Forecast expenditures in new construction are expected to decline; previously this expenditure was under the Performance Program and will now be seen under the Support Program. • Additional expenditures include expenditures in dual fuel hybrid systems and gas heat pumps, and the continuation of conventional high-efficiency gas water heating.
Indigenous	• The increasing expenditures in this Program Area are driven by forecast expenditures in dual fuel hybrid systems, increased incentives for New Construction Indigenous offers, and the continuation of conventional high-efficiency gas space and water heating equipment where allowable until the end of the plan period. • Additional expenditures include the Indigenous-focused Strategic Energy Management offer and increased support in the other existing Programs.
Conservation, Education and Outreach	• FEI has increased investment within this Program Area for online and digital tools to enhance and potentially expand customer engagement and assessment tools.
Innovative Technologies	• This Program Area continues support for pilots, including for residential and commercial deep energy retrofits, residential and commercial dual fuel hybrid heating, and residential and commercial heat pumps. • The forecast expenditures fluctuate due to pilot lifecycles.
Enabling Activities	• FEI is increasing expenditures for capacity-building to support the transition to advanced DSM, and a continuation of supporting offers in the Commercial and Community Energy Specialists Program. • In line with the reduction in expected expenditures for conventional high-efficiency gas space and water heating equipment within the New Home Program, there is a decline in incentive expenditures in Codes and Standards, which supported adoption of Part 9 of the BC Energy Step Code.
Portfolio Level Activities	• Expenditures for all evaluation activities, which were previously included separately in each program, are now consolidated in this Program Area. • The expenditures for evaluation activities increases proportionately with the overall portfolio expenditure.
Legacy Incentives	• Legacy expenditures decline from 2024 to 2027 as expenditures in this Program Area have already been committed and there are no new commitments or offers being proposed on conventional high-efficiency gas space and water heating equipment.

The **Prescriptive Program** offers rebates for the purchase and installation of specific qualifying measures. All such rebates conform to a simple archetype: market participants are informed of the fixed rebate amounts, qualifying measures are installed at a customer's location, and the rebates are provided to reduce the capital cost of the higher efficiency measures. Program delivery includes various adaptations of the archetype to suit the specific nature of both the measures and the target markets. For example, some rebates may be delivered directly to the end user, whereas others may see the rebate provided to midstream market actors, such as a product supplier. Communication materials and channels are adapted to suit the requirements of different target markets, and for the purpose of customer engagement some rebates are grouped in ways that are logical for a particular target market.

Exhibit 7 – Commercial Program Area Expenditures by Program ($000s), Not Including Inflation

Program	Incentive Expenditures ($000s)					Non-Incentive Expenditures ($000s)					Total Expenditures ($000s)				
	2024	2025	2026	2027	Total	2024	2025	2026	2027	Total	2024	2025	2026	2027	Total
Prescriptive	1,987	2,370	2,628	2,901	9,885	500	500	500	500	2,000	2,487	2,870	3,128	3,401	11,885
Performance	3,125	6,475	9,838	12,020	31,458	100	100	100	100	400	3,225	6,575	9,938	12,120	31,858
Performance New Construction	-	-	800	1,600	2,400	150	150	150	150	600	150	150	950	1,750	3,000
RAP	369	369	369	369	1,476	400	400	400	400	1,600	769	769	769	769	3,076
Labour	-	-	-	-	-	1,346	1,656	1,967	1,967	6,935	1,346	1,656	1,967	1,967	6,935
Non-Program Specific Expenditures	-	-	-	-	-	750	750	750	750	3,000	750	750	750	750	3,000
Total	5,481	9,214	13,634	16,890	45,219	3,246	3,556	3,867	3,867	14,535	8,726	12,770	17,501	20,756	59,753

2.1 The Application provides an overview of key changes in each program area. In Appendix A, FEI provides a discussion of the key elements Program Area Expenditures by Program and provides a summary table of the proposed expenditures. The CEC would like to relate FEI's comments in Table 4-4, such as those regarding the discontinuation of high efficiency gas space and water heating, to the planned expenditures in Exhibit 7. The CEC is doing this in order to quantitatively understand the reductions in expenditures by program and the increases occurring for dual fuel options.

2.1.1 For each Program in Exhibit 7 please show the specific program from Table 4-4 that is contained within the Exhibit 7 Programs.

Response

Please refer to the table below which provides the specific programs from Table 4-4 that are contained within Exhibit 7 programs, all of which pertain to the Commercial Program Area.

Table 1: Exhibit 7 Programs Corresponding to Table 4-4 Program Area and Key Changes

Programs from Exhibit 7 Applicable to Key Changes in Table 4-4	Table 4-4 Program Area	Table 4-4 Key Changes
Prescriptive	Commercial	The discontinuation of conventional high-efficiency gas space and water heating equipment programming leads to a reduction of forecast expenditures and expected savings from this area when compared to 2023, particularly in prescriptive and new construction offers.
Performance (Existing Buildings)		
Performance (New Construction)		
Performance (New Construction)	Commercial	The Small New Construction Offer is incorporated into the Performance – New Buildings Program. Overall, the Performance - New Building Program is expected to have a ramp down in expenditures due to buildings with conventional space and water heating systems no longer being eligible for incentives.
Prescriptive	Commercial	Expenditures increase over the plan period primarily due to support for dual fuel hybrid systems, deeper retrofits, and gas heat pumps, across commercial programs.
Performance (Existing Buildings)		
Performance (Existing Buildings)	Commercial	Additional expenditures and savings are expected with the new commercial Strategic Energy Management (SEM) offer within the Performance – Existing Buildings Program.

2.1.2 For each Exhibit 7 Program and each Table 4-4 program within please provide the related expenditures for the years 2023 to 2027.

Response

Please refer to the table below which provides the Commercial Program Area expenditures for 2023-2027.

Table 1: Commercial Program Area Expenditures for the Years 2023-2027 (Approved 2023 DSM Plan and Proposed 2024-2027 DSM Plan)

Program	Incentive Expenditures ($000s)					Non-Incentive Expenditures ($000s)					Total Expenditures ($000s)				
	2023	2024	2025	2026	2027	2023	2024	2025	2026	2027	2023	2024	2025	2026	2027
Prescriptive	7,464	1,987	2,370	2,628	2,901	1,264	500	500	500	500	8,728	2,487	2,870	3,128	3,401
Performance	8,292	3,125	6,475	9,838	12,020	400	100	100	100	100	8,692	3,225	6,575	9,938	12,120
Performance New Construction	4,036	-	-	800	1,600	195	150	150	150	150	4,231	150	150	950	1,750
Rental Apartment Program	1,649	369	369	369	369	417	400	400	400	400	2,066	769	769	769	769
Labour	-	-	-	-	-	2,103	1,346	1,656	1,967	1,967	2,103	1,346	1,656	1,967	1,967
Non-Program Specific Expenditures	-	-	-	-	-	750	750	750	750	750	750	750	750	750	750
Total	**$21,442**	**5,481**	**9,214**	**13,634**	**16,890**	**5,129**	**3,246**	**3,556**	**3,867**	**3,867**	**26,570**	**8,726**	**12,770**	**17,501**	**20,756**

2.1.3 For each Exhibit 7 Program and each Table 4-4 program within please provide an explanation for each of the reductions.

Response

The reductions in the Commercial Program Area in the 2024-2027 DSM Plan, as compared to the 2023 DSM Plan, are due to the following:

- **Prescriptive Program:** As a result of the amended DSM Regulation, the discontinuation of conventional high-efficiency gas space and water heating equipment, such as condensing boiler incentives, tank and tankless water heater incentives and condensing make-up air/air handling/rooftop unit incentives, leads to a significant reduction of expenditures and expected savings in the Commercial Prescriptive Program compared to 2023. In the absence of these incentives, the 2024-2027 DSM Plan expenditures will incent advanced DSM measures, such as heating system optimization, dual fuel hybrid systems, and gas heat pumps.
- **Performance (Existing Buildings):** Similar to the Commercial Prescriptive Program, as a result of the amended DSM Regulation discontinuing incentives for conventional high-efficiency gas space and water heating equipment, the Commercial Performance (Existing Buildings) has experienced a significant reduction in expenditures and expected savings in the 2024-2027 DSM Plan compared to the 2023 DSM Plan. In the absence of these measures, the 2024-2027 DSM Plan expenditures in this program will incent studies, assessments, and implementations of customized advanced DSM measures, such as control systems, building envelope retrofits, hybrid dual-fuel systems and gas heat pumps.
- **Performance (New Construction):** As a result of the amended DSM Regulation, one of the most impacted programs within the Commercial Program Area is the Performance - New Construction program, where FEI can no longer incent Part 3 new buildings that opt to incorporate conventional high-efficiency gas space and water heating equipment in their designs. Since the only viable pathway for these projects to receive incentives from this program is to incorporate gas heat pumps and hybrid dual-fuel systems for space and water heating needs, FEI is required to fundamentally overhaul its current Performance - New Construction Program. As such, FEI is expecting a significant reduction in expenditure and savings in 2024 and 2025 to zero, with a slow ramp up in the later years of the plan.
- **RAP (Rental Apartment Program):** This program is the least impacted by the amended DSM Regulation, as it primarily focuses on assessments, implementation support and direct install of measures such as showerheads and faucet aerators. While the implementation support for the conventional high efficiency gas space and water heating equipment will cease as a result of the amended DSM Regulation, the primary reason for reduction in RAP expenditure and expected savings compared to the 2023 DSM Plan is the market saturation and significant transformation that FEI believes it has achieved in this space. As such, in the 2024-2027 DSM Plan period, FEI will be looking to incorporate

other direct install measures and advanced DSM measures, going beyond showerheads and faucet aerators.

- **Labour:** Given the overall reduction in the Commercial Program Area expenditure in the 2024-2027 DSM Plan compared to the 2023 DSM Plan, FEI expects a reduction in labour expenditure in 2024 with a gradual ramp up to nearly the same levels as 2023 in the last two years of the plan period.

2.2 Please explain why the commercial class increases in spending related to new programs was not established to at least offset, or more than offset, any reductions related to discontinuation of certain programs.

Response:

As a result of the amended DSM Regulation, the Commercial Program Area will no longer be able to incent new applications for conventional high-efficiency gas space and water heating equipment after December 31, 2023. While FEI has introduced incentive programming for advanced DSM measures, such as dual fuel hybrid systems and gas heat pumps in the Commercial Program Area of the DSM Plan, these are in initial market adoption stages. Due to the early market adoption of the new advanced DSM measures, FEI is not expecting to completely offset the lost expenditures associated with the loss of its ability to incent conventional high-efficiency gas space and water heating equipment. To understand the magnitude of the change, in 2022, conventional high efficiency space and/or water heating incentives represented 514 out of 760 (or 68 percent) of participants in the Commercial Prescriptive Program.

Nonetheless, FEI is forecasting to achieve approximately 66 percent and 78 percent of its approved 2023 expenditure in 2026 and 2027, respectively, by transitioning to advanced DSM measure incentives.

2.3 What efforts did FEI undertake to avoid reducing expenditures to the commercial rate class, if any?

Response:

FEI has contacted the CEC and confirmed that where CEC has stated “rate class”, it is meant to indicate “program area”. For further clarity, FEI does not forecast expenditures or savings on a rate-class basis (i.e., for each rate schedule), as there is overlap between Program Areas and certain rate classes. The Program Area forecasts in the DSM Plan are based on major customer segments (Residential, Commercial, and Industrial), as there can be multiple different customer segments within a particular rate class (or rate schedule).

While maintaining total expenditure levels for a given program area, such as the Commercial Program Area, is not a key design consideration, the DSM Plan continues to provide cost-effective DSM programming supporting commercial customers. As discussed below, the total expenditures in the Commercial Program Area are ultimately an outcome of FEI's program stakeholder feedback.

FEI has relied upon several factors, including the 2021 Conservation Potential Review (CPR), Innovative Technologies pilot results and feedback from its commercial and industrial customers through extensive DSM consultations, to develop measures within the Commercial Program Area. In particular, FEI has expanded existing DSM measures not impacted by the amended DSM Regulations and added new measures, while creating a practical pathway to transition from incenting conventional DSM measures to incenting advanced DSM measures in 2024 and beyond.

FEI provides specific examples of its efforts to develop DSM programming for its commercial customers across the 2024-2027 DSM Plan period below:

- In the absence of conventional high efficiency gas space and water heating equipment incentives, FEI's proposed Commercial Prescriptive Program focuses on incenting advanced DSM measures, such as heating system optimization for space and water heating, dual fuel hybrid systems and gas heat pumps.
- In the Performance - Existing Buildings Program, FEI proposes to incent studies, assessments and implementation of customized advanced DSM measures, such as control systems, building envelope retrofits, dual fuel hybrid systems and gas heat pumps in commercial buildings. In addition, FEI is proposing to launch a Commercial Strategic Energy Management (SEM) offer within this program, where commercial customers will have the opportunity to identify and implement low-cost/no-cost measures, such as equipment tune-ups.
- FEI proposes to revamp its Commercial Performance-New Construction Program to incent the implementation of advanced DSM measures, such as gas heat pumps and dual fuel hybrid systems for space and water heating needs in Part 3 new buildings, while continuing the support for the promotion and further adoption of the BC Energy Step Code.
- In the RAP, FEI proposes to incorporate other DSM Regulation compliant direct install measures and advanced DSM measures, going beyond showerheads and faucet aerators. FEI will also be assessing the feasibility of enabling direct installs in other commercial buildings and archetypes.

2.4 Please provide the economic potential DSM programs and/or levels of programs, for which FEI has identified but decided not to offer incentives and/or non-incentive support in each of the years 2024 to 2027.

Response:

There are no gas DSM measures in the Commercial Program Area that were identified, either in the 2021 CPR or through stakeholder feedback, that are not eligible for receiving incentives and/or non-incentive support through FEI DSM programs (with the exception of conventional high-efficiency gas space and water heating measures excluded by the amended DSM Regulation).

The Performance – Existing Buildings program is designed to support and incentivize gas DSM measures where FEI does not offer a specific incentive under its Prescriptive Program.

2.5 Please describe how FEI could potentially increase DSM spending in the commercial sector over each of the 2024-2027 years, with additional economic DSM options.

Response:

Please refer to the responses to CEC IR1 2.3 and 2.4, in which FEI explains how it designs its DSM programs for specific customer segments and that all gas DSM measures in the Commercial Program Area, identified either in the 2021 CPR or through stakeholder feedback, are eligible for receiving incentives and/or non-incentive support through FEI DSM programs (with the exception of conventional high-efficiency gas space and water heating measures excluded by the amended DSM Regulation).

There are several technically feasible opportunities to increase DSM expenditures in the Commercial Program Area for each year of the Plan, including:

- **Increasing participation for programs/measures included in the Plan by providing higher incentives:** FEI has attempted to set commercial incentive levels to optimize participation at a cost-effective level. In FEI's view, significant increases in incentive levels would lead to diminishing returns in terms of GJ per marginal incentive dollar spent and potentially higher free ridership.
- **Increasing marketing and program supports:** Additional expenditures and participation could potentially be achieved through additional marketing, education, training, and awareness activities for customers and trade allies. However, similar to the setting of incentives, program supports were developed in consultation with stakeholders. Additional support activities may result in diminishing returns with respect to program participation, savings and incentive expenditures.

2.5.1 Why did FEI not include additional DSM spending for the Commercial Sector in the years 2024 to 2027 in order to maintain consistency and continuity of DSM support for the commercial sector?

Response:

FEI defines consistency and continuity of DSM support as having offers and DSM programming for all commercial customers for common commercial end-uses. As such, FEI's 2024-2027 DSM Plan has maintained consistency and continuity of DSM support for the commercial sector. FEI does not equate having consistent levels of expenditures as a requirement or outcome in meeting that principle.

FEI has proposed to offer advanced gas efficiency measures for common commercial end-uses, such as space and water heating in the absence of conventional high efficiency gas space and water heating measures. In addition, the Commercial Performance – Existing Buildings Program has the capacity and flexibility to allow identification and incentivization of a DSM measure that is not currently known to FEI by providing energy study funding and capital upgrade incentives. Thus, FEI program incentives are available for known commercial DSM measures and have the flexibility to support emergent or complex projects that are identified by customers.

The market adoption of advanced DSM measures is the primary challenge to rapidly ramping up DSM expenditures in the Commercial Program Area between 2024 and 2027. Nonetheless, FEI is proposing nearly $60 million in expenditures between 2024 and 2027 to expand existing program offers not impacted by the amended DSM Regulation, while promoting advanced DSM measures for its commercial customers.

3. Reference: Exhibit B-2, page 15 and page 24

Table 4-3: 2024–2027 DSM Plan Savings Compared to the 2023 DSM Plan Savings

Program Area	Utility Incremental Savings (GJ/Year)[1]					
	2023	2024	2025	2026	2027	2024-2027 Total
Residential	250,319	166,655	187,759	208,552	232,596	795,562
Commercial	563,816	93,986	138,321	185,927	222,140	640,373
Industrial	628,423	365,533	394,550	473,459	516,985	1,750,526
Low Income	77,408	50,684	56,992	64,579	75,588	247,843
Indigenous		16,076	22,237	27,421	29,225	94,959
Conservation Education and Outreach[2]	81,420	20,000	30,000	30,000	30,000	110,000
Innovative Technologies	-	-	-	-	-	-
Enabling Activities	-	-	-	-	-	-
Portfolio Activities	-	-	-	-	-	-
Legacy Expenditures[3]	-	147,185	57,878	31,361	21,340	257,765
ALL Programs	**1,601,386**	**860,119**	**887,737**	**1,021,299**	**1,127,874**	**3,897,028**
Year over year variance	0	-46%	3%	15%	10%	

Since the 2017 LTGRP, FEI has been increasing its annual investments in DSM programs to reduce energy demand from customers consistent with its commitment to the Clean Growth Pathway. Over the 2019-2023 planning period, FEI forecasts an investment of $496 million in DSM programs. Under the amended DSM Regulation, FEI is proposing to keep expenditures relatively consistent with 2023 DSM Plan expenditures as FEI manages the transition out of high-efficiency conventional gas space and water heating equipment and to advanced DSM measures like dual fuel hybrids, gas heat pumps and deeper retrofits. Due to the removal of incentives for most high-efficiency conventional gas space and water heating systems, FEI is no longer forecasting expenditures and energy savings in line with the High DSM setting in the 2022 LTGRP's Diversified Energy (Planning) Scenario.

3.1 Please provide the same table using historical data back to 2018.

<u>Response:</u>

Please refer to the requested table below.

Updated Table 4-3: DSM Plan Savings (2018-2022)

Program Area	Incremental Annual Gas Savings, Net (GJ)					
	2018 Plan	2019 Plan	2020 Plan	2021 Plan	2022 Plan	2023 Plan
Residential	157,890	238,946	271,677	272,112	238,323	250,319
Commercial	182,258	280,314	295,004	388,041	381,421	563,816
Industrial	189,465	280,651	269,863	458,768	466,317	628,423
Low Income	28,190	76,022	76,590	57,547	64,128	77,408
Programs Sub-Total	**557,803**	**875,933**	**913,134**	**1,176,468**	**1,150,189**	**1,519,966**
Conservation Education and Outreach	-	-	-	-	-	81,420
Innovative Technologies	29,468	-	-	-	-	-
Enabling Activities	-	-	-	-	-	-
Portfolio Level Activities	-	-	-	-	-	-
Programs Sub-Total	**29,468**	**-**	**-**	**-**	**-**	**81,420**
Total Portfolio	**587,271**	**875,933**	**913,134**	**1,176,468**	**1,150,189**	**1,601,386**
Year-over-year variance		**49%**	**4%**	**29%**	**-2%**	**40%**

3.2 Please confirm that DSM savings typically translate into bill savings for participating customers and all customers if the Utility Cost test is favourable.

Response:

The Utility Cost Test (UCT) is not a test to assess whether participating customers will achieve bill savings. Rather, the UCT calculates whether the benefits of offering a DSM measure or program by a utility will exceed the utility's incentive and administration costs.

Regardless of its UCT result, any DSM gas-efficiency measure can translate into gas usage savings and related bill savings (provided all else is equal) for a participating customer. It is nonetheless possible that some customers will not achieve <u>overall</u> savings where a measure saves gas but increases electricity use. In that case, the UCT would reflect the associated gas savings, but would not be impacted by the increase in electricity use and associated cost.

FEI considers the Participant Cost Test (PCT) to be a better cost-effectiveness test to assess the cost impact to customers, although it too has limitations to assess the potential of bill savings and overall impact to a customer. For example, a measure with a PCT less than 1.0 can realize bill savings, but may not have an economic payback. Please refer to the response to BCSEA IR1 13.2 for more detail on the PCT and its considerations.

3.3 Please provide the appropriate average price per GJ for each rate class and for each year (2023 to 2027) such that GJs times the average price represents the bill reduction of the rate class.

Response:

Please refer to the table below for the average price per GJ per rate class for 2023 and 2024. FEI has not developed or forecast its revenue requirement from 2025 to 2027 and, as such, is unable to provide the average price per GJ for these years.

FEI calculated the 2023 average prices per GJ based on the 2023 Approved[1] revenue and demand forecast per rate class. FEI calculated the 2024 Proposed average prices per GJ based on the 2024 Proposed revenue and demand forecast by rate class as part of FEI's 2024 Annual Review.[2] Please note that FEI has excluded transportation customers from this analysis as it does not have insight into the commodity charge portion of their total bills.

Table 1: 2023 Approved and 2024 Proposed Average Price per GJ by Rate Class

	Average price per GJ ($/GJ)	
	2023 Approved	2024 Proposed
Residential		
Rate Schedule 1	12.483	12.833
Commercial		
Rate Schedule 2	3.691	3.781
Rate Schedule 3	2.868	2.932
Industrial		
Rate Schedule 4	0.014	0.014
Rate Schedule 5	1.019	1.039
Rate Schedule 6	0.002	0.002
Rate Schedule 7	0.481	0.488

3.4 Please also provide the total estimated billings or revenue for each rate class for each year (2023 to 2027) and the estimated % change in total billing occurring for each as a result of the DSM expenditures plans.

1 Order G-352-22, dated December 5, 2022.
2 Filed with the BCUC on July 23, 2024.

Response:

Please refer to the response to BCOAPO IR1 13.3 for the estimated incremental revenue and percent change in total bill for each rate class due to the 2024-2027 DSM Plan. For the estimated revenue and bill impact due to the 2023 DSM Plan, please refer to Table 1 and Table 2 in response to BCOAPO IR1 9.4 in FEI's 2023 DSM Plan Application (which are reproduced below).

Table 1: Annual Effective Rate Impact by Customer Classes due to FEI 2023 DSM Plan in % and $

	2023 $/GJ	2023 %	2024 $/GJ	2024 %
Residential				
Rate Schedule 1	$ 0.012	0.08%	$ 0.160	1.08%
Commercial				
Rate Schedule 2	$ 0.009	0.07%	$ 0.118	0.92%
Rate Schedule 3	$ 0.007	0.06%	$ 0.091	0.80%
Industrial				
Rate Schedule 4	$ 0.004	0.04%	$ 0.047	0.51%
Rate Schedule 5	$ 0.005	0.05%	$ 0.062	0.63%
Rate Schedule 6	$ 0.007	0.06%	$ 0.088	0.82%
Rate Schedule 7	$ 0.003	0.03%	$ 0.038	0.44%

Table 2: Annual Revenue Impact by Customer Classes due to FEI 2023 DSM Plan in ($000s) and %

	2023 $000s	2023 %	2024 $000s	2024 %
Residential				
Rate Schedule 1	$ 1,024	0.08%	$ 13,420	1.08%
Commercial				
Rate Schedule 2	$ 261	0.07%	$ 3,425	0.92%
Rate Schedule 3	$ 179	0.06%	$ 2,345	0.80%
Industrial				
Rate Schedule 4	$ 1	0.04%	$ 9	0.51%
Rate Schedule 5	$ 52	0.05%	$ 676	0.63%
Rate Schedule 6	$ 0.1	0.06%	$ 2	0.82%
Rate Schedule 7	$ 17	0.03%	$ 229	0.44%

3.5 Please confirm that the Commercial sector spending is not 'relatively consistent' with 2023 spending, which explains the reduction in incremental savings.

Response:

Confirmed. As explained in Section 5.3.1 of the Application, year-over-year DSM expenditure spending within the 2024-2027 planning period is "relatively consistent" with the 2023 DSM Expenditure Plan at the overall portfolio level and not at the program area level, such as the Commercial Program Area.

Table 4-2 of the Application, reproduced below, compares year-over-year total DSM expenditures (including legacy expenditures) from 2024 to 2027 with those of 2023. Please refer to the responses to CEC IR1 2.2 and 2.3 for additional information regarding FEI's 2024-2027 DSM Plan expenditures for the Commercial Program Area.

Table 4-2: 2024–2027 DSM Plan Expenditures Compared to the 2023 DSM Plan Expenditures

Program Area	Total Utility Expenditure (000s)[1]					
	2023	2024	2025	2026	2027	2024 - 2027 Total
Residential	$43,994	$33,197	$40,830	$48,263	$56,621	$178,910
Commercial	$26,570	$8,726	$12,958	$17,799	$21,151	$60,635
Industrial	$6,848	$7,585	$8,071	$8,963	$9,600	$34,219
Low Income	$13,251	$8,366	$9,753	$11,826	$14,676	$44,621
Indigenous	-	$2,704	$4,247	$5,481	$6,452	$18,885
Conservation Education and Outreach	$9,713	$14,652	$14,794	$15,433	$15,986	$60,865
Innovative Technologies	$25,960	$35,117	$20,807	$15,239	$18,059	$89,222
Enabling Activities	$12,010	$15,042	$12,451	$11,486	$11,265	$50,244
Portfolio Activities	$2,730	$5,281	$5,687	$5,507	$5,749	$22,223
Legacy Expenditures[2]	-	$36,200	$16,995	$8,401	$5,282	$68,878
All Programs	**$141,077**	**$166,870**	**$146,593**	**$148,398**	**$164,842**	**$626,703**
Year-over-year variance	0	18%	-12%	1%	11%	

3.6 Please provide a detailed explanation as to why commercial DSM savings are expected to decline by about 460,000 GJ between 2023 and 2024.

Response:

Please refer to the response to CEC IR1 2.1.3 which explains why commercial savings are expected to decline in the DSM Plan period, by program. Please also refer to the response to CEC IR1 2.2 for why spending related to advanced DSM measures and other expenditures did not fully offset reductions related to the discontinuation of measures impacted by the amended DSM Regulation.

3.7 Please provide an explanation for why the Commercial Sector DSM savings do not recover to even half those levels by 2027.

Response:

Commercial Program Area savings do not recover to half the 2023 levels by 2027, primarily due to: (1) the discontinuation of conventional high-efficiency gas space and water heating equipment resulting from the amended DSM Regulation; and (2) the ramp-up time necessary to adopt advanced DSM measures (i.e., participation and savings are not expected to peak during the DSM Plan period). Please refer to the responses to CEC IR1 2.1.3 and 2.2 for further explanations of reductions in energy savings and expenditures in the Commercial Program Area.

Advanced DSM measures can recover significant savings through the introduction of hybrid dual-fuel systems, building envelope measures and gas heat pumps. However, these measures are early in their market adoption and face several barriers, such as lack of product availability, limited customer awareness and lack of contractor capacity and training that requires time to overcome. Additional measures and programs, such as the new Commercial Strategic Energy Management program, will also have an impact on recovering savings. FEI expects savings will continue to grow year-over-year, including in subsequent DSM Plan periods, but will take time to grow to the point where the lost savings from the discontinuation of conventional high-efficiency gas space and water heating equipment will be offset.

3.8 Please discuss, with quantification, whether or not FEI is achieving all the economic GJ savings potential in each year, for each rate class.

3.8.1 If not, please explain why not.

Response:

FEI has contacted the CEC and confirmed that where the CEC has stated “rate class”, it is meant to indicate “program area”.

The proposed 2024-2027 DSM Plan achieves savings (GJ) associated with the market potential and not with economic potential. Please refer to Exhibit 2 in Appendix D to the Application (FEI’s 2021 CPR) for a detailed explanation on the difference between technical, economic and market potential.

Please also refer to Table 5-2 of the Application (page 24) for the quantification and comparison between the 2024-2027 DSM Plan and FEI’s 2022 LTGRP. As explained in the Application (page 24), “[t]he overall expenditures proposed in the DSM Plan generally fall between the 2022 LTGRP Medium and High DSM Settings, while the energy savings generally align with the Medium DSM Setting”.

3.8.2 Please identify the metrics that would indicate whether or not FEI is achieving cost effective DSM savings for each rate class.

Response

FEI uses the UCT as prescribed by the amended DSM Regulation as the cost effectiveness metric for the 2024-2027 DSM Plan.

3.8.3 Please provide these cost test metrics or indicate where they may be found in the application.

Response

The UCT per program area is provided in the DSM Plan (Appendix A to the Application) in Exhibits 6, 8, and 10 for the Residential, Commercial, and Industrial program areas, respectively.

4. Reference: Exhibit B-2, page 19-20

4.4 *DSM GUIDING PRINCIPLES*

FEI's DSM Plan was guided by FEI's DSM guiding principles, which are listed below.

1. Programs will have a goal of being universal, offering access to energy efficiency and conservation for all residential, commercial, and industrial customers, including low income customers.
2. C&EM expenditures will have a goal of incentive costs exceeding 50 percent of the expenditures in a given year.
3. C&EM expenditures schedule plans and results will be analyzed on a program, sector and portfolio level basis, with acceptance based at the portfolio level.
4. The UCT result of the portfolio will have a ratio of 1 or higher.
5. FEI will submit its annual DSM Report to the BCUC, by the end of the first quarter of each year that details the results of the previous year's activity.
6. The DSM Plan will be compliant with the applicable sections of the UCA and the Clean Energy Act, and with the DSM Regulation as amended from time to time.
7. FEI will seek collaboration for programs from other parties, such as governments, other utilities, and equipment suppliers and manufacturers in recognition of the broader societal benefits resulting from successful program development and implementation.
8. Conservation Education and Outreach will be an integral part of FEI's DSM activities.
9. DSM expenditures schedules will be multi-year so as to create the funding certainty necessary to support effective implementation in the marketplace.
10. Programs will support market transformation by incenting eligible efficient measures through customers and/or trade allies (contractors, equipment manufacturers, distributors, retailers, etc.), developing trade ally capacity, and supporting codes and standards development and implementation.
11. FEI will retain a DSM stakeholder group (EECAG), comprised of government, industry, trades, manufacturers, non-governmental organizations, advocacy groups, other utilities and customers to provide it with strategic advice. Additionally, FEI will undertake program area specific stakeholder consultation(s) on effective program design and implementation.

4.1 Please elaborate on FEI's interpretation of the programs being 'universal' and 'offering access to energy efficiency and conservation for all residential, commercial and industrial customers, including low income customers'.

<u>Response:</u>

Reference to programs being "universal" in FEI's DSM guiding principles reflects FEI's goal of offering programs to all customer segments, while recognizing that individual customer segments may require unique supports and approaches to make energy efficiency programs available to them.

4.2 Please provide FEI's view of how DSM spending can be assessed for fairness between rate groups.

Response:

FEI has contacted the CEC and confirmed that where the CEC has stated "rate groups", it is meant to indicate "program area".

Please refer to the response to BCOAPO IR1 2.5 which provides a frame of reference for the cost allocation between program areas. While FEI considered the allocation of expenditures by customer segment in preparing the 2024-2027 DSM Plan, consistent with the universal access guiding principle, this was not the only principle it relied upon in developing the Plan. The expenditures, savings, and cost-effectiveness forecast for the DSM Plan is a direct outcome of the sum of individual program development and stakeholder engagement activities. In FEI's view, a cost-effective portfolio of measures, that is universally accessible to its customers and is based on stakeholder feedback, represents a DSM Plan that is in the best interest of FEI's customers.

4.3 Please provide FEI's view of what metrics could be employed in order to determine fairness between rate groups.

Response:

Please refer to the response to CEC IR1 4.2.

5. Reference: Exhibit B-2, page 23

> The selection of the High DSM setting in the 2022 LTGRP Diversified Energy (Planning) Scenario was based on both the availability of cost-effective demand-side measures, the objectives of FortisBC's Clean Growth Pathway to 2050,[17] and the need for FEI to reduce GHG emissions in alignment with the Roadmap. Section 9.2.1 of the 2022 LTGRP also acknowledges that, since the 2021 CPR was completed, additional information had emerged on key advanced energy efficiency technologies (e.g., deep energy retrofits, gas heat pumps and hybrid heating systems) that were not modelled in the 2021 CPR. FEI includes these important technologies along with the measures included in the 2022 LTGRP High DSM expenditures setting as part of FEI's plan to realize energy savings and reduce GHG emissions over the planning horizon.

5.1 Please provide a discussion of all the key advanced energy efficiency technologies that are now available and/or expected to be available and please discuss the extent to which FEI has included these technologies in its expenditure plan.

<u>Response:</u>

There are three key advanced energy efficiency technologies that are being considered in the DSM Plan. The details surrounding how these technologies are included in the Plan are as follows:

- **Deep Retrofits**: Measures that are well understood such as windows, insulation, and mechanical systems are proposed to be available to in the Residential, Commercial, Low Income, and Indigenous program areas throughout the duration of the DSM Plan with a focus on encouraging comprehensive building envelope-first retrofits involving multiple measures. Pilots and studies are proposed in the Innovative Technologies Program Area to continue to better identify barriers that exist when conducting a larger comprehensive retrofit and how to overcome those barriers.
- **Gas Heat Pumps**: This measure is already available to FEI Commercial customers and is proposed to continue and be introduced to the Low Income and Indigenous program areas during the DSM Plan period. Residential gas heat pumps are a newer technology that have limited market and performance data. In the DSM Plan, FEI proposes conducting pilots and studies in the Innovative Technologies Program Area to fill those information gaps.
- **Hybrid Heating Systems:** The Residential, Commercial, Low Income, and Indigenous program areas are proposing to launch residential dual fuel hybrid system and commercial roof top unit hybrid incentive offers starting in 2024. Additionally, pilots and studies are proposed to be conducted in the Innovative Technologies Program Area to better understand customer behaviour and acceptance, energy savings, system coefficient of performance (SCOP) and emerging control strategies of hybrid systems.

5.2 To the extent that additional opportunities are or could be available for inclusion in commercial DSM, would FEI be amenable to including or at least increasing their expenditures during the 2024-2027 DSM Plan? Please explain.

Response:

Please refer to the response to CEC IR1 2.5.

6. Reference: Exhibit B-2, page 33

6.1 COST-EFFECTIVENESS UNDER THE DSM REGULATION

The amended DSM Regulation replaces the TRC test with the UCT for the purposes of determining whether a utility's DSM activities are cost-effective. Further discussion of the UCT, and how it is calculated is provided below. FEI's proposed DSM portfolio for 2024-2027 is cost effective, with a portfolio UCT cost-effectiveness result of 2.1 based on the methodology set out in section 4 of the DSM Regulation. A score of 2.1 passes the threshold of 1.0 at the portfolio level, meaning the benefits from DSM to the avoided acquisition of renewable and low-carbon gases exceed the Utility's incentive and administration cost for the proposed DSM portfolio of programs.

Legacy Expenditures proposed for 2024-2027 under section 5 of the DSM Regulation are subject to the cost-effectiveness methodology set out in section 4 of the DSM Regulation effective prior to June 30, 2023. The proposed Legacy Expenditures in a Program Area have a blended TRC test cost-effectiveness result of 1.5.

FEI's approach to evaluating the cost-effectiveness of its DSM programs at the portfolio level is comprehensive and benefits customers and should be used for the 2024-2027 Plan period. In the sections below, FEI explains the cost-effectiveness test and demonstrates that the DSM Plan meets the requirements of the DSM Regulation.

6.1.1 Utility Cost Test

Section 4 (1.1) of the amended DSM Regulation requires the BCUC make determinations of cost-effectiveness by applying the UCT using the avoided cost of natural gas equal to the avoided cost of distribution plus $34.07 per GJ, escalating by the Consumer Price Index (equal to the maximum purchase cost of renewable and low-carbon gas outlined in section 9 of the GGRR).

The UCT is calculated as follows:[25]

$$UCT = \frac{\sum_{2024}^{2027}[NPV\ of\ NG\ Savings\ Using\ Avoided\ Cost\ of\ RNG\ Energy\ \&Distribution(\$)]}{\sum_{2024}^{2027}[Incentives + Non\ Incentive\ Costs\ (\$)]}$$

The first UCT formula uses the "NPV of natural gas savings using the avoided cost of RNG Energy & Distribution ($)", which is calculated for each year from 2024-2027 as follows:

$$NPV\ of\ NG\ Savings\ Using\ Avoided\ Cost\ of\ RNG\ Energy\ \&\ Distribution\ (\$)$$

$$= NG\ Savings\ (GJ) \times Cumulative\ Cost\ of\ RNG\ at\ the\ Measure\ Lifetime\ (\$)$$

6.1 Please elaborate on the differences between the Total Resource cost test (TRC) and the Utility Cost Test.

Response:

The UCT is a cost-benefit analysis from the perspective of the utility offering the DSM program. It primarily indicates whether a measure or program could be of benefit to the utility offering the DSM program; however, it does not consider the impact to the participant or other utilities.

In contrast, the Total Resource Cost (TRC) test is a cost-benefit analysis from the perspective of both the participant and all utilities impacted by a DSM program. It primarily enables the DSM program to be assessed as a resource option, considering both utility and participant costs.

The benefits and costs considered for both tests are as follows for FEI DSM programs:

Table 1: Comparison of UCT and TRC Benefits and Costs

	Utility Cost Test	Total Resource Cost Test
Benefits	Avoided cost of renewable gas	Avoided cost of renewable gas Avoided/increased cost of other energy sources
Costs	Program incentives Program administration costs	Incremental measure cost Program administration costs

6.2 Please confirm that FEI is able to utilize a variety of cost tests in addition to the Utility Cost Test when evaluating the cost effectiveness and fairness of the DSM plan.

Response:

Not confirmed. FEI uses the UCT to assess the cost effectiveness of the DSM Plan as required under the amended DSM Regulation.

Each cost-effectiveness test has its own perspective, but it would be difficult to conclude that any cost-effectiveness test would be able to quantitatively assess fairness. However, in preparing the 2024-2027 DSM Plan, FEI follows its guiding principles which includes having "a goal of being universal, offering access to energy efficiency and conservation for all residential, commercial, and industrial customers, including low income customers" which FEI views as supporting all customers with fair access to DSM programs.

6.3 Please identify the key other cost-effectiveness tests that are available to the utility when assessing the cost-effectiveness of its DSM plan.

Response:

In addition to the UCT (also known as the Program Administrator Cost Test (PAC)), the California Standard Practice Manual[3] outlines that the TRC test, Participant Cost Test (PCT) and Rate Impact Measure (RIM) test are other means of assessing a DSM measure, program, or portfolio.

[3] https://www.raponline.org/wp-content/uploads/2016/05/cpuc-standardpractice-manual-2001-10.pdf.

These tests are included in the DSM Plan for informational purposes, but are not used to determine if the DSM Plan is cost-effective under the amended DSM Regulation.

FEI notes that in British Columbia there is no defined Societal Cost Test (SCT) as found in other jurisdictions. Prior to the most recent amendments, the DSM Regulation included provision for a modified TRC (mTRC) that considered non-energy benefits similar to a Societal Cost Test. The mTRC test is no longer included in the amended DSM Regulation.

7. Reference: Exhibit B-2, page 34

> As noted above, the cost-effectiveness of class A demand-side measures and public awareness programs must be determined by the cost-effectiveness of the portfolio as a whole. Under section 1 of the amended DSM Regulation, class A demand-side measures include the following:
>
> - programs supporting low income customers and organizations;
> - programs supporting Indigenous customers and organizations;
> - education programs;
> - energy efficiency training;
> - community engagement programs;
> - technology innovation programs; and
> - resources supporting the development of energy conservation or efficiency standards.
>
> FEI has class A demand-side measures within its Low Income, Indigenous, Conservation Education and Outreach, Innovative Technologies and Enabling Initiatives Program Areas.

7.1 Please confirm that FEI is permitted to evaluate the DSM plan at the rate class level for residential, commercial and industrial program areas.

Response:

FEI has contacted the CEC and confirmed that where the CEC has stated “rate class”, it is meant to indicate “program area”.

The BCUC is permitted to evaluate the DSM Plan at the program area level for the Residential, Commercial and Industrial program areas. For the purposes of determining cost-effectiveness, section 44.2 (5) of the UCA requires that the BCUC consider whether the demand-side measures are cost-effective within the meaning prescribed by regulation. The amended DSM Regulation replaces the TRC test with the UCT for the purposes of determining whether a utility’s DSM activities are cost-effective.

Per section 4.1 of the DSM Regulation, the BCUC may evaluate the cost-effectiveness of a DSM Plan at:

(a) the demand-side measure individually,

(b) the demand-side measure and other demand-side measures in the portfolio, or

(c) the portfolio as a whole.

The BCUC has consistently determined cost-effectiveness at the portfolio level for the DSM expenditures schedules filed by FEI[4] and FEI maintains that the portfolio level approach remains the appropriate method for testing the cost-effectiveness of the 2024-2027 DSM Plan.

7.2 Please identify any other rate class program areas where FEI is enabled to evaluate their plans at the rate class level.

Response:

FEI has contacted the CEC and confirmed that where the CEC has stated "rate class", it is meant to indicate "program area".

Please refer to the response to CEC IR1 7.1.

7.3 Please provide the UCT for the DSM plan broken down by rate class, except for the DSM measures assessed at the portfolio level.

7.3.1 If FEI is not able to provide the UCT by rate class please explain why not, and please explain why FEI has not undertaken to examine these metrics.

Response:

FEI has contacted the CEC and confirmed that where the CEC has stated "rate class", it is meant to indicate "program area".

FEI has provided the UCT per program area in Appendix A to the Application. Residential, Commercial, and Industrial UCT results can be found in Exhibits 6, 8, and 10, respectively.

7.4 Please provide the TRC for the DSM plan broken down by rate class.

7.4.1 If FEI is not able to provide the TRC by rate class please explain why not, and please explain why FEI has not undertaken to examine these metrics.

[4] Most recently, in Decision and Order G-45-23 (page 15), the BCUC supported the use of the portfolio-level assessment of cost-effectiveness for FEI's 2023 DSM Expenditure Plan.

Response:

FEI has contacted the CEC and confirmed that where the CEC has stated “rate class”, it is meant to indicate “program area”.

FEI has provided the TRC for each program area in Exhibit 2 of Appendix B to the Application.

8. Reference: Exhibit B-2, page 35

- The BCUC first determined that assessment of cost-effectiveness be based on the overall portfolio in its decision on FEI's 2008 DSM Application[27] and, since then, has reached the same determination in each of its subsequent decisions with respect to FEI's DSM expenditures applications. The BCUC has taken a similar portfolio approach for DSM portfolios filed by FortisBC Inc., Pacific Northern Gas, and BC Hydro.
- Assessment at the portfolio level allows for a more equitable balance of expenditures and savings across sectors and enabling activities. The continued use of the portfolio approach will provide flexibility for FEI to implement programs that meet customer needs.
- As more programs, such as the Low Income and Indigenous programs, must now be assessed at the portfolio level, the portfolio level cost-effectiveness becomes more relevant. Per sections 4(4) and 4(5) of the DSM Regulation, the BCUC must, at a minimum, use the portfolio approach in assessing the cost-effectiveness of "class A demand-side measure"[28] and "public awareness programs".[29]
- The portfolio approach permits FEI to encourage increasing levels of efficiency in gas DSM. Advanced DSM measures that are relatively new to the market may have a higher initial cost because it is not yet benefitting from economies of scale. A program based on such measures are more likely to have low UCT results. Although the near-term results of such a program might be lower relative to past DSM Plans, the long-term prospects for such measures to provide benefits to customers is significant. The portfolio level cost-effectiveness analysis can absorb some of these types of programs without failing the cost-effectiveness test.

8.1 Please confirm that historically FEI has provided information to the Commission at a rate class level as well as at the portfolio level.

Response:

FEI has contacted the CEC and confirmed that where the CEC has stated "rate class", it is meant to indicate "program area".

Consistent with past DSM plan applications, FEI has historically provided information to the BCUC at the program area level. Therefore, the 2024-2027 DSM Plan is consistent with FEI's past DSM Plan applications in this regard.

8.2 Please confirm that the rate class level information remains relevant in determining whether or not the commercial customer interests in the DSM support is reasonable and or adequate, which is the CEC's interest in this proceeding.

Response:

FEI has contacted the CEC and confirmed that where the CEC has stated "rate class", it is meant to indicate "program area".

FEI confirms that evaluating the Commercial Program Area is relevant in determining whether the commercial customer interests in the DSM support is reasonable and/or adequate.

The UCT result for the Commercial Program Area of 4.5 demonstrates that the support levels are cost-effective under the DSM Regulation. In addition, there are commercial-focused education, capacity building, and training activities in FEI's Conservation Education and Outreach and Enabling Program Areas which comply with the class A requirements of the amended DSM Regulation.

In developing the 2024-2027 DSM Plan, FEI conducted 26 consultation sessions with various commercial stakeholders, in addition to the Energy Efficiency and Conservation Advisory Group (EECAG) engagement sessions. The DSM Plan also includes energy efficiency measures for all common commercial retrofit and new construction end uses (space heating, ventilation, water heating, kitchen, and laundry), energy assessment offers, recommissioning offers, as well as a program to support complex and custom measures. These considerations further support the reasonableness of the supports for commercial customers.

9. Reference: Exhibit B-2, page 39

8.1.2 Funding Carryover

FEI is requesting to continue the funding carryover rules that were previously approved as part of its 2019-2022 DSM Expenditure Plan[35] for its 2024-2027 DSM Plan, with one proposed change. FEI is requesting to be permitted to carryover overspent (or negative amounts) into the following year. For clarity, FEI would be permitted to carryover unspent **and overspent** expenditures in a program area to the same program area in the following year. In effect, FEI is requesting that the BCUC accept the total expenditures per program area over the time period of the expenditures schedule.

FEI considers that carrying over negative amounts is consistent with the spirit and intent of the funding carryover rules approved as part of FEI's 2019-2022 DSM Plan. The ability to carryover funding amounts from one year to the next within the DSM funding period was applied for and approved to provide FEI with additional flexibility to manage the portfolio expenditures as it strives to meet the overall expenditures targets set out in the DSM Plan.

Although the carryover rules focused on carrying over unspent amounts in the early years of the Plan to future years, the primary purpose of the carryover funding transfer request was to assist FEI to achieve the four-year total expenditures for the plan. Carrying forward negative amounts to future years of the DSM Plan will similarly help FEI to manage timing of expenditures and decrease the likelihood of underspending during the plan period. While spending may be higher than planned in one year, it may be lower than planned in the following year. Therefore, FEI considers that the funding carryover rules should include the flexibility to manage both positive and negative carry over amounts.

In summary, FEI is requesting the following funding carryover rule be in place for its 2024-27 DSM Plan:

9.1 Please elaborate on why funding could be lower in a following year.

Response:

If the proposed funding carryover rules are approved by the BCUC, funding could be lower in a given year if expenditures in the previous year are higher than planned expenditure levels. If such a variance becomes material, and more opportunities for energy savings are found that require additional expenditure, FEI would apply to the BCUC for additional funding.

Funding could also be lower in any year of the DSM Plan if FEI does not achieve expenditure targets. Please refer to the response to BCUC IR1 2.2 for further information regarding the risks associated with a market-based plan.

9.2 Please provide examples of when such situations have arisen and how the inability to carry over negative amounts has impacted FEI in managing its DSM in the past, for the best interests of its customers.

<u>Response:</u>

In October 2021, FEI filed an application requesting approval to carryover $1.388 million (1.9 percent of the 2020 budget) of over-expenditures from 2020 into 2021 (reducing 2021 expenditures by the same amount), among other requests. If the carryover rule was in place, this specific request in the application could have been avoided for what FEI believes was a relatively minor variance (1.9 percent).

In other years, such as 2016, 2017, 2018, 2021 and 2022, DSM expenditures were lower than plan expenditures. Having the ability to carry over negative amounts to future years would afford FEI the ability to explore a broader set of actions to catch up on plan expenditures and energy savings because some actions can take 6 months or longer to come to fruition.

10. Reference: Exhibit B-2, page 41

> As per existing approved practice, FEI will account for the balance of spending, up to the approved FEI funding amount and greater than $60 million, in FEI's non-rate base DSM deferral account. Further, consistent with this approved practice, the ending balance of the non-rate base DSM deferral account will be transferred to FEI's rate base DSM deferral account at the beginning of the following year. FEI's rate base DSM deferral account will continue to be amortized in rates over the approved amortization period of 10 years.

10.1 Please provide a brief discussion as to why 10 years is an appropriate amortization period.

Response:

10 years is the amortization period for FEI's DSM expenditures as previously approved by the BCUC, and FEI is not requesting any change as part of this Application.

10.2 Please confirm that a significant quantity of the customer changes made, with support from the DSM programs, will continue to provide benefits for extended periods of time into the future and might not be made in the normal course of events without the DSM incentives.

Response:

FEI's 2024-2027 DSM Plan will continue to incent customers to make changes that will provide benefits into the future that might not otherwise be made without incentives, consistent with FEI's previous DSM plans.

10.3 Please provide a brief discussion as to the appropriateness of increasing the amortization period to 15 years or 20 years, for programs that make permanent changes to heating equipment, heat use equipment and or heat retention envelopes and please provide quantification as to how such changes would impact customer rates.

Response:

While an amortization period of 15 to 20 years may be reasonable, the BCUC has previously considered the amortization period for FEI's DSM expenditures and determined that 10 years is appropriate. Please refer to the response to CEC IR1 10.1.

11. Reference: Exhibit B-2, Appendix D Conservation Potential Review

11.1 Please explain what activities FEI undertakes to update or revisit the 2021 CPR report.

Response:

For the next iteration of the CPR, FEI intends to undertake a similar revised technical, economic, and market potential review as conducted for the 2021 CPR. However, it is also assessing the following specific changes:

- The consideration of full electrification measures to more accurately reflect the impact of measure alternatives on market potential for gas efficiency. To date, the CPR has not considered measure alternatives to influence market adoption rates;
- The impacts from the amended DSM Regulation (including new cost-effectiveness screens); and
- Updating measure assumptions to reflect evolving governmental policy directives (e.g., limitation on the use of gas in new buildings in certain regions).

These additional activities will support future gas resource planning and future DSM expenditure plans.

11.1.1 If FEI intends to revisit the CPR report in the future, please explain when this is likely to occur.

Response:

Please refer to the response to BCUC IR1 1.1.4.

11.1.2 Please provide the expected cost of an Update or a new report.

Response:

FEI has budgeted $850 thousand for the new CPR in the 2024-2027 DSM Plan, compared to budgeted and actual costs from 2019-2022 of approximately $750 thousand.[5] The 2024-2027 CPR budget estimate includes both estimated consultant fees and labour costs for FEI personnel that will administer and manage the project. This budget also includes expanded scope as discussed in the response to CEC IR1 11.1.

[5] Annual Reports from 2019 to 2022 can be found: https://www.fortisbc.com/about-us/corporate-information/regulatory-affairs/our-gas-utility/gas-bcuc-submissions/fortisbc-energy-inc.-gas-submissions/C-DS-EM/annual-dsm-reports.

12. Reference: Exhibit B-2, Appendix E Legacy Expenditures Cost Effectiveness pages 21 and 22

> - The portfolio approach to measuring the cost-effectiveness of DSM expenditures has been in place for many years and remains an effective means of assessing the performance of DSM activities. The BCUC first determined that assessment of cost-effectiveness be based on the portfolio as a whole in its decision on FEI's 2008 DSM Application[12] and, since then, has reached the same determination in each of its subsequent decisions on FEI's DSM expenditure applications. Continued use of the portfolio approach will provide more flexibility for FEI to implement programs that meet customer needs while addressing the requirements of the DSM Regulation and maintaining a cost-effective portfolio. Alternatively, implementing cost effectiveness at some level below the Portfolio, such as at the program area or individual program level, is likely to be more restrictive on programs for some customer groups (Residential customers, for example) due to more restrictive cost-effectiveness requirements.

> - According to Sections 4(4) and 4(5) of the DSM Regulation, the BCUC must, at a minimum, use the portfolio approach in assessing the cost effectiveness of "specified demand-side measures"[13] and "public awareness programs".[14]
> - A portfolio approach to cost-effectiveness analysis promotes FEI's goal of making DSM accessible to all customers. Residential programs, for example, often have difficulty passing the Total Resource Cost test (TRC) and even the modified TRC test (MTRC) per the DSM Regulation on a program-by-program basis, and low income programs are especially challenged by the cost-effectiveness test. Moving away from a portfolio approach might result in fewer DSM programs being available to residential and low-income customers.
> - The portfolio approach permits FEI to encourage increasing levels of efficiency in natural gas equipment. Equipment that is relatively new to the market may have a higher initial cost due to the fact that it has not yet reached economies of scale. A program based on such equipment is more likely to have low TRC and MTRC results. Although the near-term results of such a program might be unfavourable, the long-term prospects for such equipment to provide benefits to customers could be significant. The Portfolio level cost-effectiveness analysis can absorb some of these types of programs without failing the cost-effectiveness tests.

12.1 Please elaborate on the statement that "the BCUC must, at a minimum, use the portfolio approach in assessing the cost effectiveness of 'specified demand side measures' and 'public awareness programs'".

<u>Response:</u>

Sections 4(4) and 4(5) of the amended DSM Regulation require the BCUC to review the cost-effectiveness impact of expenditures of 'specified DSM measures' (i.e., class A measures) and 'public awareness programs' at the portfolio level rather than assess the 'specified DSM measures' and 'public awareness programs' individually. Therefore, if the DSM Portfolio is cost-effective as a whole, 'specified DSM measures' and 'public awareness programs' are also cost-effective individually.

12.2 Please confirm that the BCUC may use information by rate class and or program to assess the cost-effectiveness of the portfolio at the portfolio level, if it so chooses.

Response:

FEI has contacted the CEC and confirmed that where the CEC has stated “rate class”, it is meant to indicate “program area”.

If the BCUC assesses the cost-effectiveness of the portfolio at the portfolio level, then, by definition, cost effectiveness at the program level would not be used.

Please also refer to the response to CEC IR1 7.1.

12.3 Please confirm that using the portfolio approach effectively results in those ratepayers with highly cost-effective measures subsidizing those ratepayers with less cost-effective measures, and that FEI manages the portfolio to provide reasonable DSM incentives to all rate classes and certain designated groups with lower economic capacities for implementing DSM.

Response:

Confirmed. However, in the 2024-2027 DSM Plan all program areas subject to the cost-effectiveness requirements of the amended DSM regulation are cost-effective; therefore, there is no cross-subsidization of Portfolio cost-effectiveness.

Historically, FEI used an approach whereby highly cost-effective measures subsidized less cost-effective measures (e.g., incentives for measures new to market) and programs for customer groups requiring additional support (e.g., programs for Low Income customers). Within a customer segment, some measures could be highly cost-effective while others could be less-cost-effective. The Industrial and Commercial program areas tend to have more highly cost-effective measures when compared to the Residential program area.

13. Reference: Exhibit B-2, Appendix E page 25

Table 5-1: 2023 DSM Plan Portfolio Level Cost Effectiveness Results – All Tests

	TRC	Portfolio	UCT	PCT	RIM
Total Portfolio	0.7	1.4	0.7	2.0	0.4

13.1 Please provide Table 5-1 for 2023 broken down by rate classes and for the plans for 2024 through to 2027 by rate class, so that the CEC has relevant information for being able to represent its customers' class interests.

Response:

FEI has contacted the CEC and confirmed that where the CEC has stated "rate class", it is meant to indicate "program area".

The UCT per program area is provided in the DSM Plan (Appendix A to the Application). The UCT results for the Residential, Commercial, and Industrial program areas can be found in Exhibits 6, 8, and 10, respectively. The TRC, PCT and RIM are provided for each program area in Appendix B, Exhibit 2. This includes the Residential, Commercial and Industrial program areas.

The table below provides the TRC, UCT, PCT and RIM for the 2023 DSM Plan, as reported in Exhibit 4 of the 2023 DSM Plan.[6] Please note that the calculations for TRC and UCT differ between the 2023 and 2024-2027 DSM Plans. Please refer to the response to RCIA IR1 5.2 for further information on the difference between cost test calculations.

Table 1: Cost-effectiveness Test Results for the 2023 DSM Plan

Program Area	TRC	UCT	PCT	RIM
Residential	0.4	0.5	1.2	0.3
Commercial	1.2	1.6	2.1	0.7
Industrial	2.8	4.7	3.5	1.0

[6] The 2023 DSM Expenditure Plan can be found here: https://www.cdn.fortisbc.com/libraries/docs/default-source/about-us-documents/regulatory-affairs-documents/gas-utility/220705-fei-2023-dsm-expenditures-plan-application-ff.pdf?sfvrsn=c0ef272c_2.