



**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  
[www.fortisbc.com](http://www.fortisbc.com)

September 28, 2021

British Columbia Public Interest Advocacy Centre  
Suite 803 470 Granville Street  
Vancouver, B.C.  
V6C 1V5

Attention: Ms. Leigha Worth, Executive Director

Dear Ms. Worth:

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

**Project No. 1599232**

**Annual Review for 2022 Delivery Rates (Application)**

**Response to the British Columbia Public Interest Advocacy Centre representing the British Columbia Old Age Pensioners' Organization, Active Support Against Poverty, Disability Alliance BC, Council of Senior Citizens' Organizations of BC, and the Tenant Resource and Advisory Centre (BCOAPO) Information Request (IR) No. 1**

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On July 30, 2021, FEI filed the Application referenced above. In accordance with the regulatory timetable established in British Columbia Utilities Commission Order G-277-21 for the review of the Application, FEI respectfully submits the attached response to BCOAPO 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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## 1.0 Reference: Exhibit B-2, Figure 3-5

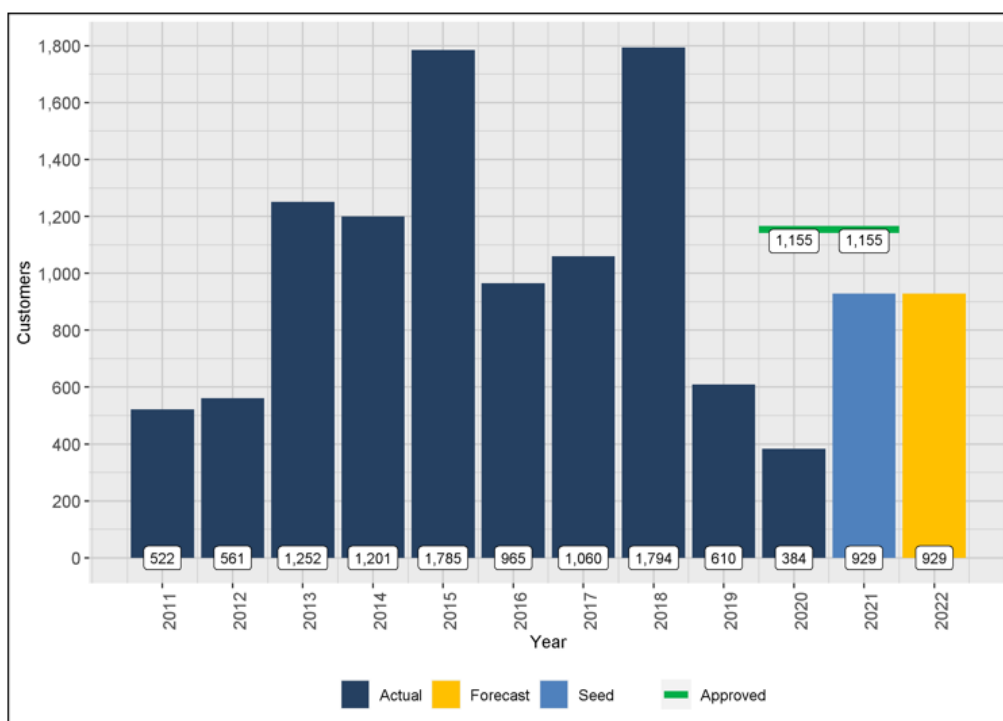
**Preamble: In Figure 3-5, Net Commercial Customer Additions are lower than approved for each of 2020 and 2021.**

1.1 Please fully explain why customer additions were lower than approved for each of 2020 and 2021

### Response:

The FEI commercial forecast is not based upon expectations of how certain industries might change or grow, and what factors influence that growth. Rather, the FEI commercial net customer additions forecast is based on a three-year historical average of customer additions. The approved values for 2020 and 2021 incorporated both the high number of additions experienced in 2018 and the lower number of additions in 2019, as shown in Figure 3-5 of the Application (reproduced below). FEI cannot fully explain why commercial customer additions did not remain consistent with the three-year average historical levels. Commercial customers operate in hundreds of different industry segments, and choose to join and leave the gas system for many reasons.

**Figure 3-5: Commercial Net Customers Additions**



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1 **2.0 Reference: Exhibit B-2, Figure 3-7**

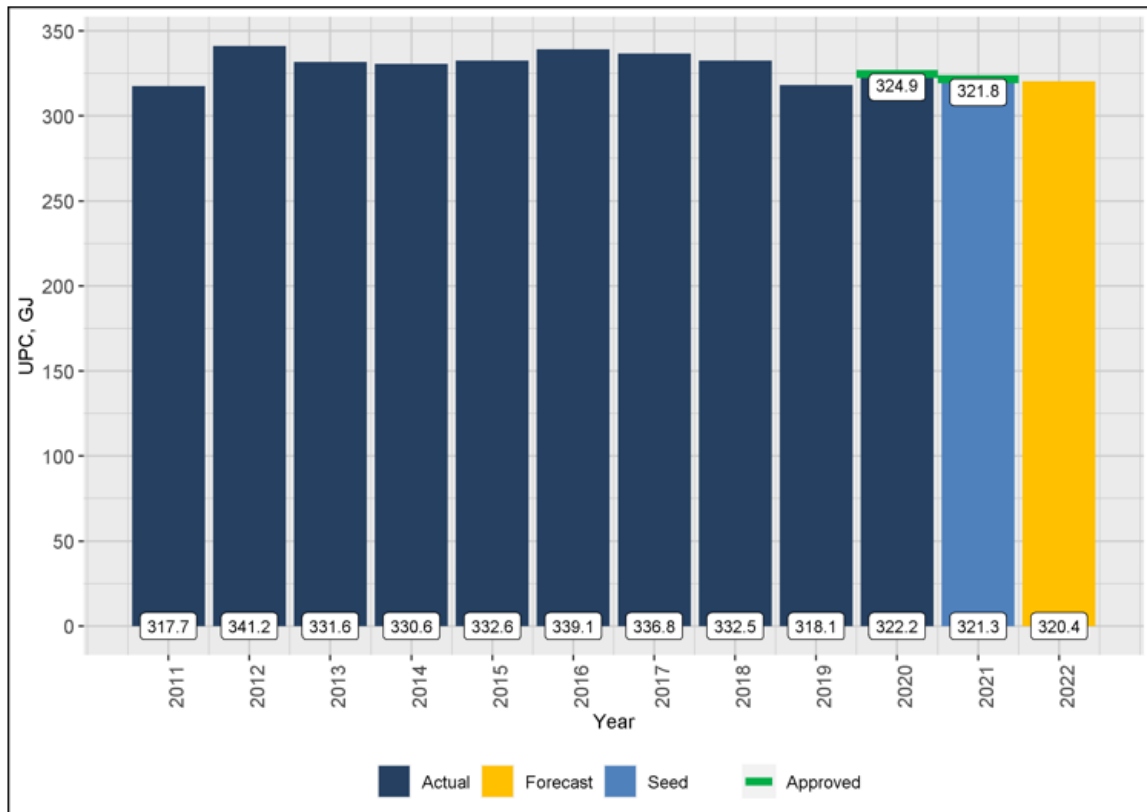
2 **Preamble: 2020 UPC increased to 322.2 from 316.1 in 2019.**

3 2.1 Please fully explain why 2020 UPC increased from 2019.

4 **Response:**

5 FEI assumes the preamble meant to refer to Figure 3-6, not 3-7. Figure 3-6 is reproduced below  
6 for reference. FEI also notes that the 2019 UPC was 318.1 GJ, not 316.1 GJ as indicated in the  
7 preamble.  
8

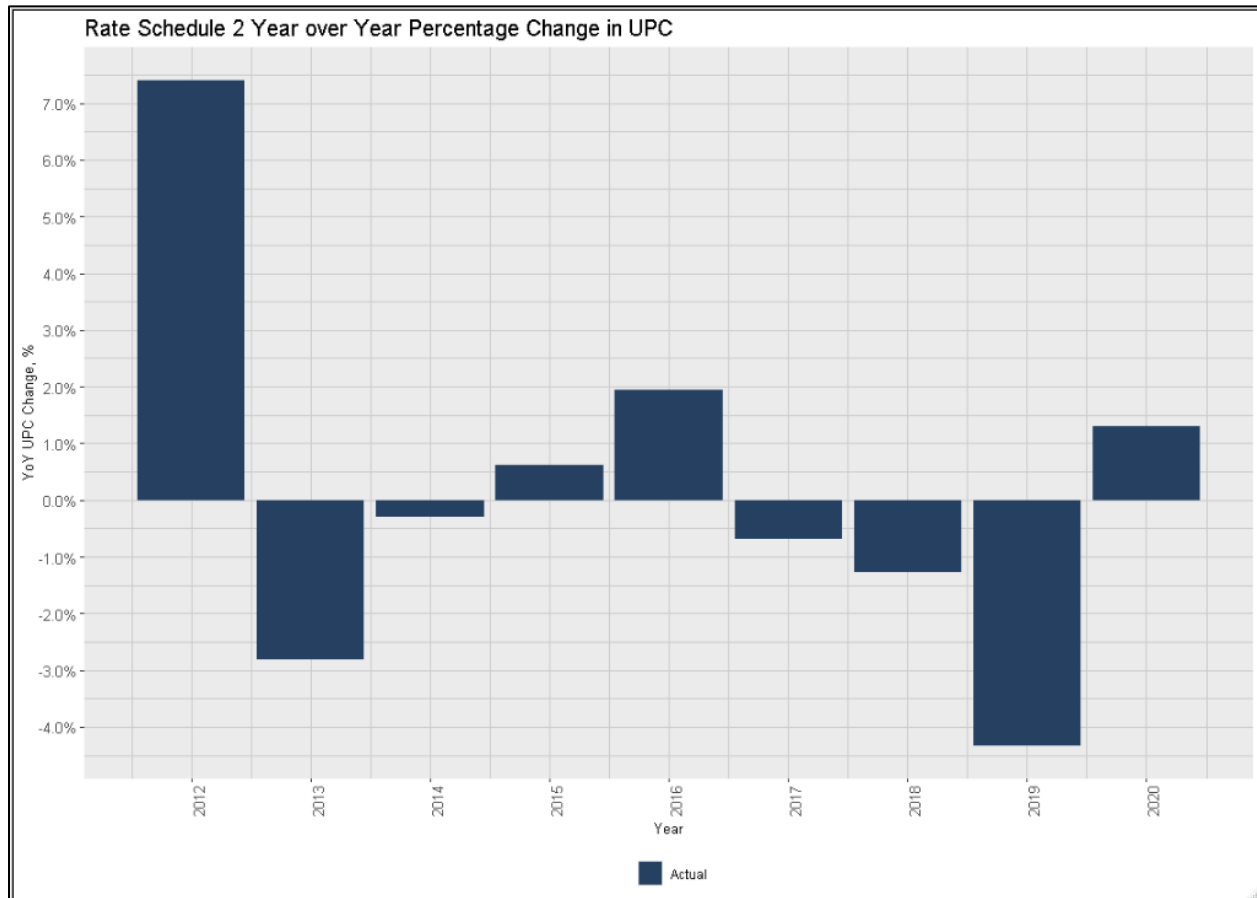
Figure 3-6: Rate Schedule 2 UPC



9

10 The change from 318.1 GJ to 322.2 GJ is an increase of 1.29 percent. As shown in the following  
11 figure, the change in 2020 is typical compared to the years since 2012.

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1  
2 FEI cannot definitively explain any change in UPC in a given year as it is a result of many factors  
3 impacting nearly 97 thousand customers in 180 industry segments that may be both compounding  
4 and offsetting. For example, use rates may go down due to increased appliance efficiency and/or  
5 improvements in building envelopes, but this may be offset by an increase in the number of  
6 appliances, a change in how appliances are used and/or the number of customers or employees.

7 As explained in the introduction to Section 3.2 of the Application, FEI has adopted the Exponential  
8 Smoothing method (ETS) for the purpose of forecasting residential and commercial use rates, as  
9 ETS proved to be the most accurate method for this purpose. The ETS method considers 10  
10 years of historical data when preparing the UPC forecast. The UPC forecast is based on objective,  
11 statistical methods. FEI does not apply a subjective adjustment or override the objective forecast  
12 results based on recent events. Based on the statistical forecast methods, the increase is not  
13 expected to continue.

14  
15  
16



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- 1            2.2    Please fully explain why the 2020 increase is not expected to continue into 2021  
2                   and 2022.  
3  
4    **Response:**  
5    Please refer to the response to BCOAPO IR1 2.1.

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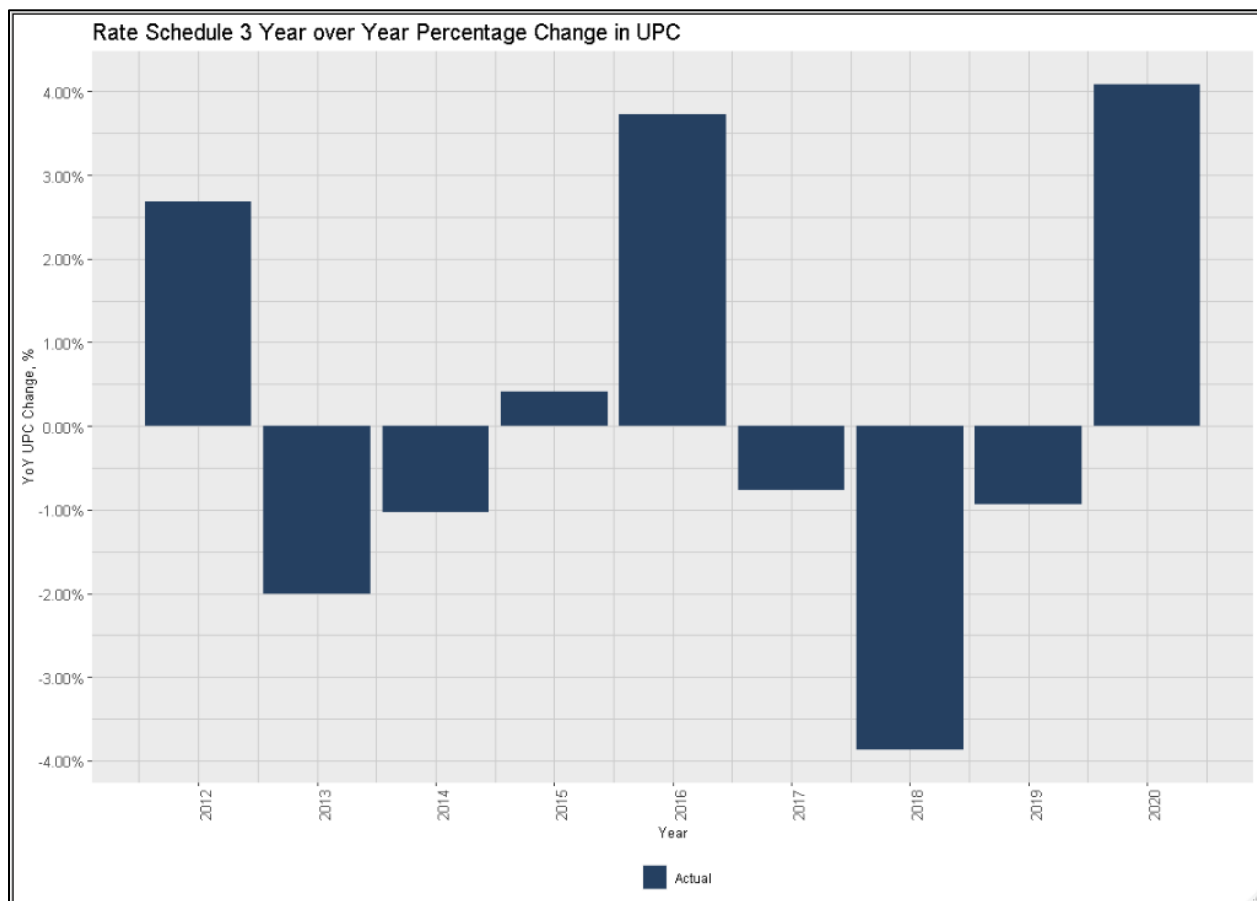
1    **3.0    Reference:    Exhibit B-2, Figure 3-7**

2            **Preamble:    2020 UPC increased to 3660.3 from 3516.7 in 2019.**

3            3.1    Please fully explain why 2020 UPC increased from 2019.

5    **Response:**

6    The change from 3,516.7 GJ to 3,660.3 GJ is an increase of approximately 4 percent. The  
7    following figure shows that while this change is larger in magnitude than the decline experienced  
8    in 2019, it is consistent with changes observed in 2018 and 2016.



9

10    There are more than 6,800 Rate Schedule 3 customers in many different sectors; accordingly,  
11    FEI cannot definitively explain any change in UPC in a given year as it is a result of many factors  
12    that may be both compounding and offsetting. For example, use rates may go down due to  
13    increased appliance efficiency and/or improvements in building envelopes, but this may be offset  
14    by an increase in the number of appliances, a change in how appliances are used and/or the  
15    number of customers or employees.

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As explained in the introduction to Section 3.2 of the Application, FEI has adopted ETS for the purpose of forecasting residential and commercial use rates, as ETS proved to be the most accurate method for this purpose. The ETS method considers 10 years of historical data when preparing the UPC forecast. The UPC forecast is based on objective, statistical methods. FEI does not apply a subjective adjustment or override the objective forecast result based on recent events. Based on the statistical forecast methods, the increase is not expected to continue.

3.2 Please fully explain why the 2020 increase is not expected to continue into 2021 and 2022.

**Response:**

Please refer to the response to BCOAPO IR1 3.1.

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1     **4.0     Reference:     Exhibit B-2, Figure 3-8**

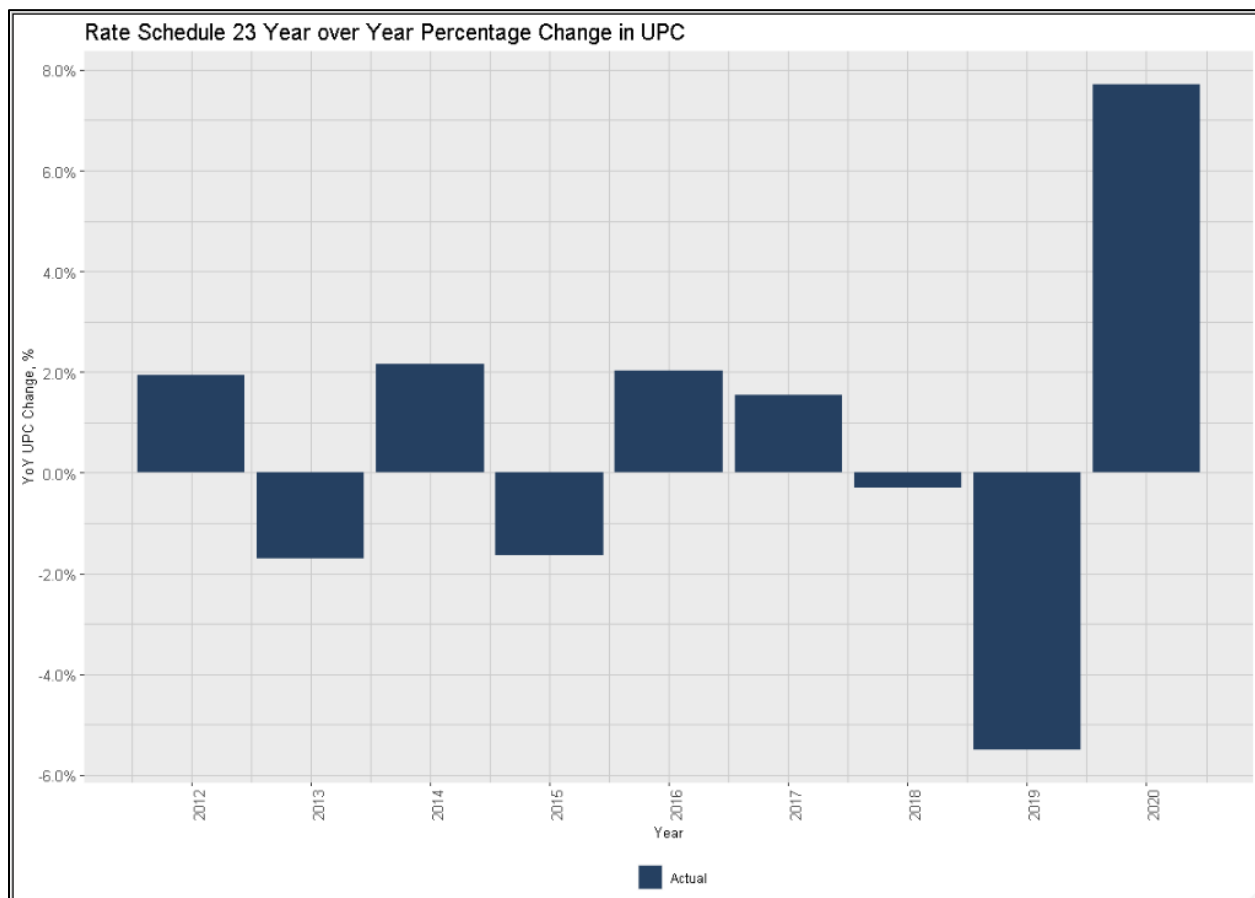
2             **Preamble:     2020 UPC increased to 5440.7 from 5051.3 in 2019.**

3             4.1     Please fully explain why 2020 UPC increased from 2019.

5     **Response:**

6     The change from 5,051.3 GJ to 5,440.7 GJ is an increase of approximately 7.7 percent. This  
7     increase is higher than the changes observed in recent years. FEI believes this increase could be  
8     a result of the large migration of customers from Rate Schedule (RS) 23 back to FEI's bundled  
9     service (RS 2, 3 and 5), effective November 2019. The customers remaining in RS 23 are slightly  
10    higher consumers than those that migrated, resulting in an increase in the UPC in 2020.

11   The following chart shows that the year over year change experienced in 2020 is higher than prior  
12   years.



13

14   As explained in Section 3.2, FEI has adopted the Exponential Smoothing method (ETS) for the  
15   purpose of forecasting residential and commercial use rates, as ETS proved to be the most  
16   accurate method for this purpose. The ETS method considers 10 years of historical data when





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1 preparing the UPC forecast. The UPC forecast is based on objective, statistical methods. FEI  
2 does not apply a subjective adjustment or override the objective forecast result based on recent  
3 events. Based on the statistical forecast methods, the increase is not expected to continue.

4  
5  
6  
7 4.2 Please fully explain why the 2020 increase is not expected to continue into 2021  
8 and 2022.

9  
10 **Response:**

11 Please refer to the response to BCOAPO IR1 4.1.

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## 5.0 Reference: Exhibit B-2, Table 5-1

**Preamble:** In Table 5-1, FEI provides 2021 and 2022 data

5.1 Please provide an updated Table 5-1 that contains actual results for each of 2016-2020.

### **Response:**

Please refer to the updated Table 5-1 of the Application that includes the actual Other Revenues from 2016 to 2020:

\$ millions	Actual 2016	Actual 2017	Actual 2018	Actual 2019	Actual 2020	Approved 2021	Projected 2021	Forecast 2022
Late Payment Charge	2.326	2.750	2.583	2.778	0.818	2.954	2.768	2.704
Application Charge	3.253	3.139	2.875	1.707	1.668	1.984	1.990	2.013
NSF Returned Cheque Charges	0.081	0.091	0.080	0.037	0.011	0.028	0.028	0.028
Other Recoveries	0.271	0.229	0.269	0.353	0.297	0.288	0.288	0.288
NGT Related Recoveries	2.962	3.966	4.380	3.946	4.252	3.698	3.858	4.168
Biomethane Other Revenue	0.263	0.361	0.464	0.614	0.937	0.951	0.926	0.986
SCP Third Party Revenue	14.957	14.347	16.976	17.072	10.877	14.053	14.053	13.410
LNG Capacity Assignment	18.039	18.039	18.039	18.039	18.039	18.039	18.039	18.039
<b>Total (\$ millions)</b>	<b>42.152</b>	<b>42.922</b>	<b>45.666</b>	<b>44.546</b>	<b>36.899</b>	<b>41.995</b>	<b>41.950</b>	<b>41.636</b>

5.2 Please fully explain all changes between the 2020 actual results and the 2021 projected forecast.

### **Response:**

Please refer to the following table which summarizes the difference between 2020 Actual results and 2021 Projected.

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\$ millions	Actual 2020	Projected 2021	Change	Reasons
Late Payment Charge	0.818	2.768	1.950	In 2020, FEI implemented a number of COVID-19 relief measures, including the suspension of Late Payment Charges, resulting in the actual 2020 late payment charges being lower than the typical level. As of March 1, 2021, FEI has re-instated late payment charges on overdue balances, thus FEI is projecting a more typical level of late payment charges for 2021.
Application Charge	1.668	1.990	0.322	Application charges are based on the number of new customer connections or current customer reconnections. As discussed in Section 2.3 of the Application, FEI is projecting 20,500 gross customer additions in 2021, which is an increase from 2020 actuals of 18,980, thus resulting in the increase in Application charges for 2021 Projected.
NSF Returned Cheque Charges	0.011	0.028	0.017	Similar to Late Payment Charges, NSF Returned Cheque Charges for 2020 actual were lower than the typical level due to FEI's COVID-19 relief measures.
Other Recoveries	0.297	0.288	(0.009)	The variance is immaterial.
NGT Related Recoveries	4.252	3.858	(0.394)	NGT related recoveries includes CNG/LNG fueling station recoveries under the minimum take-or-pay contract, OH&M recoveries, and tanker rental charges. The 2021 projected recoveries are expected to be lower than the 2020 actuals primarily due to the closure of one LNG station and the expiry of the Teck Coal Limited LNG Fueling station. However, this is partially offset by an increase in tanker rental recoveries projected for 2021 and the opening of the Port Kells LNG station.
Biomethane Other Revenue	0.937	0.926	(0.011)	The 2021 projected is slightly less than 2020 actuals primarily due to lower income taxes resulting from increased CCA on the 2021 additions
SCP Third Party Revenue	10.877	14.053	3.176	Please refer to the response to BCOAPO IR1 6.2.
LNG Capacity Assignment	18.039	18.039	-	There is no variance between 2020 actual and 2021 projected. As approved under BCUC Order G-4-18 as part of FEI's 2016 RDA Decision, the BCUC approved to continue to allocate \$18.039 million of Mt. Hayes LNG facility costs to gas costs.
<b>Total (\$ millions)</b>	<b>36.899</b>	<b>41.950</b>	<b>5.051</b>	

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## 6.0 Reference: Exhibit B-2, Table 5-6

**Preamble:** In Table 5-6, FEI provides 2021 and 2022 data

6.1 Please provide an updated Table 5-1 that contains actual results for each of 2016-2020.

### Response:

FEI provides the following updated Table 5-6, which includes 2016-2020 Actual amounts, in addition to the 2021 Approved and Projected, and 2022 Forecast amounts filed in the Application.

**Updated Table 5-6: 2016-2020 Actual, 2021 Approved and Projected, and 2022 Forecast SCP Revenue Components (\$ millions)**

	Actual 2016	Actual 2017	Actual 2018	Actual 2019	Actual 2020	Approved 2021	Projected 2021	Forecast 2022
NW Natural	\$ 6.362	\$ 6.421	\$ 6.482	\$ 5.763	\$ 4.154	\$ -	\$ -	\$ -
MCRA	3.600	3.600	3.600	3.600	5.220	13.284	13.284	13.284
Net Other Mitigation - West to East Capacity	4.995	4.326	6.894	7.709	1.503	0.769	0.769	0.126
<b>Total SCP Revenue</b>	<b>\$ 14.957</b>	<b>\$ 14.347</b>	<b>\$ 16.976</b>	<b>\$ 17.072</b>	<b>\$ 10.877</b>	<b>\$ 14.053</b>	<b>\$ 14.053</b>	<b>\$ 13.410</b>

Variances between the approved and actual SCP Third Party Revenues are recorded in the SCP Mitigation Revenues Variance deferral account and are returned to or recovered from customers over a two-year period.

6.2 Please fully explain all changes between the 2020 actual results and the 2021 projected forecast.

### Response:

The following table shows the 2020 Actual and 2021 Projected SCP Third Party Revenues broken down into the various components. An explanation of the changes is provided following the table.

**2020 Actual and 2021 Projected SCP Revenue Components (\$ millions)**

	Actual 2020	Projected 2021
NW Natural	\$ 4.154	\$ -
MCRA	5.220	13.284
Net Other Mitigation - West to East Capacity	1.503	0.769
<b>Total SCP Revenue</b>	<b>\$ 10.877</b>	<b>\$ 14.053</b>

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**NW Natural:** As was discussed in FEI's 2020 and 2021 Annual Review application, during most of 2020 the SCP east to west capacity was held partly by NW Natural (46.5 MMcfd) via a firm transportation service agreement, and partly by the FEI midstream portfolio (58.5 MMcfd) with an allocation of costs to the Midstream Cost Reconciliation Account (MCRA). With the expiration of the NW Natural firm transportation service agreement on October 31, 2020, the total SCP east to west capacity (105 MMcfd) was taken back by FEI for use in its midstream portfolio.

**MCRA:** As part of FEI's 2020 and 2021 Annual Review application, FEI sought approval for debiting the MCRA and crediting Other Revenue for the 105 MMcfd of east to west SCP capacity based on the cost of service valuation of \$346.617 per MMcfd effective November 1, 2020. As such, 2021 reflects a full year of this treatment as opposed to 2020 which only reflects two months. In addition to the increased east to west SCP capacity being held in the midstream portfolio commencing November 1, 2020, the change in the valuation to the cost of service is the other significant driver of the higher SCP revenues shown at the MCRA line in the table. This request was approved as part of Order G-319-20.

**Net Other Mitigation – West to East Capacity:** The net other mitigation revenue generated from the SCP west to east capacity ties to market price differentials during the summer months and reflects the existing pipeline capacity within the region. The decrease in the mitigation revenue related to the west to east capacity for 2020 compared to 2021 is primarily a result of the market price differentials for summer 2021 being lower than those during summer 2020.

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1     **7.0     Reference:     Exhibit B-2, Section 5.3.2**

2             **Preamble:**     In Section 5.3.2 of its Application, FEI discusses Net Other Mitigation  
3                                     Revenue

4             7.1     Please fully explain the FEI forecasting methodology for Net Other Mitigation  
5                                     Revenue.

6  
7     **Response:**

8     For West to East forecast mitigation revenues on the Southern Crossing Pipeline (SCP), FEI uses  
9     forward market price differentials between Station 2 and Kingsgate. At the time of calculating the  
10    forecast revenues for the Application, the April to October 2022 forward curves were \$2.44  
11    CAD/GJ for Station 2, and \$2.88 CAD/GJ for Kingsgate.

12   FEI uses a forecast volume of 10,000 GJ/day for 30 days for spot transactions, and 10,000 GJ/day  
13   for 214 days for a term transaction. The forecast volume of 10,000 GJ/day for spot transactions  
14   is based on historical volumes in recent April to October periods. The forecast volume of 10,000  
15   GJ/day for a term transaction is based on prior commercial arrangements that FEI has undertaken  
16   with a counterparty.

17   The term transaction value is assumed at 75 percent of the total SCP West to East value due to  
18   the illiquidity at the Kingsgate market. There are few counterparties that are willing and have the  
19   ability to enter into a term transaction at the Kingsgate market and therefore require some  
20   protection for hedging risk.

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1 **8.0 Reference: Exhibit B-2, Table 6-2, lines 9-16**

2 **Preamble:** In lines 9-16 of Table 6-2, FEI provides the calculation of the 2020 O&M  
3 True Up

4 8.1 Please provide the impact on 2020 revenues and margins of the additional 1,363  
5 customers.

6  
7 **Response:**

8 Please refer to the table below for an estimate of the 2020 revenues and margins for the additional  
9 1,363 of 12-month average customers between 2020 Approved and 2020 Actual. The 1,363  
10 customers are the net difference between 2020 Approved and 2020 Actual, and therefore includes  
11 new customers connecting to FEI's system as well as existing customers leaving FEI's system.  
12 The 2020 revenues and margins are estimated based on the actual average use rates (use per  
13 customer in GJ) of each rate class. FEI notes that the revenues and margins shown below only  
14 account for the net difference in customer additions between 2020 Approved and 2020 Actual;  
15 the calculations do not include the total number of customers additions for 2020 and do not  
16 account for any changes in use rates in each rate class.

17 As the table below shows, although the 12-month average customer count increased by 1,363  
18 from 2020 Approved to 2020 Actual, revenues and margins actually decreased due to the reduced  
19 commercial and industrial volumes from those customers that left FEI's system. As explained in  
20 the response to BCOAPO IR1 8.2, the revenues and margins from the additional 2020 customers  
21 are recognized and accounted for in FEI's revenue requirements.

	Difference btw 2020 Approved and Actual 12-Month Average Customers	Incremental Revenue (\$000s)	Incremental Margins (\$000s)
Residential (RS 1)	1,566	1,274	840
Commerical (RS 2, 3, and 23)	(163)	(5,626)	(3,310)
Industrial (RS 4 - 7, 22, 25, 27, 46, BCH ICP, VIGJV)	(40)	(14,187)	(10,719)
<b>Total</b>	<b>1,363</b>	<b>(18,538)</b>	<b>(13,189)</b>

22  
23  
24  
25  
26 8.2 Please fully explain why FEI did not include a recognition that the additional  
27 customers provide additional revenues and margins in its analysis.

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- 1
- 2 **Response:**
- 3 The referenced table addresses only O&M, and not any other aspects of the revenue requirement
- 4 that are driven by customer growth.
- 5 FEI does recognize, and has included, the additional revenues and margins from the additional
- 6 2020 customers in its 2022 forecasts for demand, as well as revenues. As discussed in Section
- 7 3 and Appendix A3 of the Application, the 2022 forecasts were developed using the 2020 actuals,
- 8 which included the additional 2020 actual customers. As such, the 2022 revenue forecasts, as
- 9 shown in Table 3-3 of the Application, included the additional revenues from the incremental 2020
- 10 customers.
- 11 Further, any incremental revenues and margin that are due to the additional customers in 2020
- 12 have been returned to customers through the Flow-through deferral account.



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1     **9.0     Reference:     Exhibit B-2, PDF page 47, lines 16-25, and Table 6-3**

2             **Preamble:**     On lines 16-25, FEI states:

3                     Offsetting the increase in Cybersecurity were lower expenditures of approximately  
4                     \$0.906 million for Gas Control and CEPA participation. Contributing to the lower  
5                     spend was the mid-year approval of the MRP, timing of the hiring of Gas  
6                     Controllers, and timing of control room management improvements. The plan is to  
7                     hire one net new Gas Controller per year and to coordinate the timing of the new  
8                     hires with retirements of existing employees. FEI will proceed with implementing  
9                     CEPA required control room management improvements in the coming months.

10                    For the Data Analytics, the lower spending of approximately \$0.307 million was  
11                    primarily due to one-time labour savings from the timing of new hires. In 2021, new  
12                    hires are expected that will reduce the variance.

13                    In Table 6.3, FEI actually spent zero on new spending for Data Analytics and Gas Control.

14             9.1     Please fully explain why FEI actually spent zero on new spending for Data  
15                     Analytics and Gas Control. In the response please fully discuss how FEI was able  
16                     to maintain its operations without incremental spending.

17  
18     **Response:**

19     ***Data Analytics***

20     Hiring for Data Analytics was delayed as, following the approval of the MRP, FEI's first step was  
21     to finalize the requirements and business case for the necessary information systems  
22     infrastructure, which continued into 2021. The procurement process is now complete and internal  
23     approval for the infrastructure expenditure is expected by the end of 2021. Assuming internal  
24     approval of the infrastructure is received, FEI expects to implement systems that would allow  
25     centralized data access in 2022 and add new data sources in priority sequence over the term of  
26     the MRP. As the amount of data and the breadth of available analytic tools increases, the number  
27     of staff required to support analysis (and the related expenditures) will increase. Prior to 2020,  
28     there were no dedicated resources and related funding for Data Analytics activities.

29     ***Gas Control***

30     There was zero incremental spending for Gas Control due to the mid-year approval of the MRP  
31     application, challenges with hiring Gas Control employees, and prioritizing a full assessment of  
32     the CEPA CRM (Control Room Management) recommended industry practices. The original plan  
33     was to hire one net new Gas Controller per year over the term of the MRP and a new Gas Control  
34     employee to handle additional control room auditing. Gas Control's training capacity in 2020 only  
35     allowed one new Gas Controller to be hired and trained. Even though a new Gas Controller was

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hired and trained during this time, there has been effectively no net new additions due to a retirement in the same period.

The CEPA related control room management improvements were also deferred to enable FEI to conduct a full-scale assessment of the CEPA CRM recommended industry practices. FEI is planning to commence implementation of control room management improvements in Q4 of 2021.

FEI was able to maintain operations without the incremental Gas Control spending in 2020 because minimum staffing levels were maintained. The delayed hiring of Gas Control employees and prioritizing a full assessment of CEPA CRM resulted in the deferral of the original timelines to meet industry CRM standards.

As noted in the Application, the funding for the different categories of new/incremental O&M approved for System Operations, Integrity and Security was developed based on the anticipated requirements over the term of the MRP, recognizing that the expenditures may vary from year to year depending upon factors such as the availability of resources (i.e., labour vacancies) and the timing of activities. Over the term of the MRP, FEI anticipates that the total new/incremental spending required in the combined categories of System Operations, Integrity and Security will be relatively close to the cumulative approved formula amounts, and there will continue to be variations from year to year.

9.2 Please provide actual costs for Data Analytics and Gas Control for 2016-2020.

**Response:**

***Data Analytics***

As discussed in the response to BCOAPO IR1 9.1, prior to 2020, there were no dedicated resources and related funding for Data Analytics activities.

***Gas Control***

The actual costs for Gas Control for 2016-2020 are as follows:

**2016-2020 Actual Gas Control Costs (\$000s)**

	2016	2017	2018	2019	2020
Gas Control	2,235	2,156	2,206	2,400	2,536

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1  
2           9.3     Please provide forecast cost data for Data Analytics and Gas Control for 2021 and  
3                   2022.

4  
5     **Response:**

6     ***Data Analytics***

7     FEI forecasts to spend \$0 on O&M related to Data Analytics in 2021 and approximately \$0.3  
8     million in 2022. Please refer to the response to BCOAPO IR1 9.1 for further details.

9     ***Gas Control***

10    FEI forecasts to spend \$0.275 million in 2021 and \$0.520 million in 2022 for Gas Control activities  
11    as the Company continues to ramp-up expenditures, recognizing the challenges in recruiting and  
12    training staff discussed in the response to BCOAPO IR1 9.1.

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1 **10.0 Reference: Exhibit B-2, Section 6.3.1**

2 10.1 Please provide a copy of the Willis Towers Watson (WTW) report that was used to  
3 develop the Pension and OPEB forecast.  
4

5 **Response:**

6 Please refer to Attachment 10.1 for a copy of the WTW report that was used to develop the  
7 Pension and OPEB forecast.  
8  
9

10  
11 10.2 Please provide a working paper that uses the result of the WTW report and derives  
12 the FEI forecast for Pension and OPEB forecast.  
13

14 **Response:**

15 The working paper that uses the results of the WTW report and derives the FEI Pension and  
16 OPEB forecast is provided below.

FEI Pension and OPEB Expense  
2022 forecast for Annual Review

Line No	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8
	Registered Pension Plan				Executive Supplemental Pension Plan		FEI & Fort Nelson Total	
1	<b>Net Benefit Cost</b>							
2	Employer current service cost	25,598	242	374	3,728	29,942	41	29,901 Service Costs
3	Interest cost	30,004	415	120	4,248	34,787		34,787 Non-Service Costs
4	Expected return on assets	(44,453)	-	-	-	(44,453)		(44,453) Non-Service Costs
5	Amortization:							
6	Net actuarial (gain) loss	24	119	-	(317)	(174)		(174) Non-Service Costs
7	Prior service cost (credit)	(1,282)	-	-	-	(1,282)		(1,282) Non-Service Costs
8	Transition (asset) liability	-	-	-	-	-		- Non-Service Costs
9	<b>Net Benefit Cost</b>	<b>9,891</b>	<b>776</b>	<b>494</b>	<b>7,659</b>	<b>18,820</b>	<b>41</b>	<b>18,779</b>
	Refer to BCOAPO IR 1.10.1 attached WTW Report Page 1	Refer to BCOAPO IR 1.10.1 attached WTW Report Page 2	Refer to BCOAPO IR 1.10.1 attached WTW Report Page 2	Refer to BCOAPO IR 1.10.1 attached WTW Report Page 3	Column 4 = Column 1 + Column 2 + Column 3 + Column 4	Column 7 = Column 5 - Column 6		
12	<b>O&amp;M and Capital Allocation</b>							
13	O&M				20,659	(11,122)		9,537
14	Capital Growth				1,693			1,693
15	Capital - Other (approved in 2020 MRP)				3,275			3,275
16	Capital - Other (to Pension & OPEB Variance Deferral)				1,712			1,712
17	Asset Removal				1,967			1,967
18	CMAE				595			595
19					29,901	(11,122)		18,779
					Agree to Line 2 at Column 7	Agree to Sum of Line 3 to Line 8 at Column 7		

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10.3 Please provide a table similar to Table 6-5 that includes 2016-2020 actual results.

**Response:**

Please refer to the updated Table 6-5 of the Application below which includes the 2016 – 2020 actual pension and OPEB expenses. For regulatory purposes, the amounts recorded as pension and OPEB expense equal the approved pension and OPEB expense, meaning that the amounts shown on Lines 1 through 7 of the table below are equal to the approved pension and OPEB expenses in each year.

In order to account for the actual pension and OPEB cost as determined by FEI's external third party actuary, the variance between the actual total pension and OPEB cost and the approved pension and OPEB expense is recorded in the Pension and OPEB Variance deferral account. The actual pension and OPEB costs as determined by FEI's external third party actuary are provided on Line 9 of the below table and the resulting variance between the actual cost and approved expense, which is recorded in the Pension and OPEB Variance deferral account, is shown on Line 8.

In 2020 there was no variance, which was due to the timing of the Annual Review for 2020 and 2021 Delivery Rates Application, which allowed for the use of the total actual 2020 pension and OPEB costs in the forecast.

Line No.	Description	Actual 2016	Actual 2017	Actual 2018	Actual 2019	Actual 2020	Approved 2021	Projected 2021	Forecast 2022
1	O&M	24.218	15.826	17.077	13.795	21.147	22.354	22.354	9.537
2	Capital Growth	1.035	0.676	0.795	0.903	1.519	1.832	1.832	1.693
3	Capital - Other	3.040	1.987	2.334	2.661	3.275	3.317	3.317	3.275
4	Capital - Other (to Pension & OPEB Variance Deferral)	-	-	-	-	1.198	2.079	2.079	1.712
5	Asset Removal	1.237	0.809	0.913	1.050	1.764	2.128	2.128	1.967
6	CMAE	0.377	0.246	0.278	0.317	0.534	0.644	0.644	0.595
7	<b>Total Pension &amp; OPEB Expense</b>	<b>29.907</b>	<b>19.544</b>	<b>21.397</b>	<b>18.727</b>	<b>29.437</b>	<b>32.354</b>	<b>32.354</b>	<b>18.779</b>
8	Pension and OPEB Approved and Actual Variance	(7.598)	(2.101)	1.163	(3.645)	-	-	-	-
9	<b>Total Pension &amp; OPEB Costs</b>	<b>22.309</b>	<b>17.443</b>	<b>22.560</b>	<b>15.082</b>	<b>29.437</b>	<b>32.354</b>	<b>32.354</b>	<b>18.779</b>



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1 **11.0 Reference: Exhibit B-2, Section 6.3.2**

2 11.1 Please provide a table similar to Table 6-6 that includes 2016-2020 actual results.

3

4 **Response:**

5 Please refer to the table below for the updated Table 6-6 of the Application which includes actual  
6 2016-2020 insurance expenses.

Line No.	Description	Actual 2016	Actual 2017	Actual 2018	Actual 2019	Actual 2020	Approved 2021	Projected 2021	Forecast 2022
1	Insurance Premiums (\$ millions)	\$ 5.519	\$ 5.283	\$ 5.203	\$ 6.294	\$ 8.457	\$ 9.908	\$ 10.430	\$ 11.474
2	Total (\$ millions)	\$ 5.519	\$ 5.283	\$ 5.203	\$ 6.294	\$ 8.457	\$ 9.908	\$ 10.430	\$ 11.474

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## 12.0 Reference: Exhibit B-2, Table 6-7

12.1 Please provide the cost per dig for each of the categories listed in Table 6-7.

### Response:

FEI developed its 2022 Forecast considering multiple factors, including the cost per dig category and geographic location of digs. Costs have been provided below for each of the categories listed in Table 6-7 of the Application on a per dig basis.

**Table 1: Costs by Category - Cost Per Integrity Dig**

Line No.	Reason for Digs	2022 Forecast Cost per Dig (million)	2022 Forecast Number of Digs	2022 Forecast Expenditure (million)
1	<b>ILI Digs – New Tool(s):</b> ILI digs attributed or projected due to an inspection with an ILI technology or ILI tool that has not been previously run in a given pipeline segment <sup>1</sup>	\$0.068	40	\$2.7
2	<b>ILI Digs – New Practice(s):</b> ILI digs attributed or projected due to changes to industry practices or standards (e.g., strain-based criteria for dent digs) requiring a corresponding change from FEI's past integrity dig practices <sup>2</sup>	\$0.031	20	\$0.6
3	<b>ILI Digs – Established Tools and Practices:</b> ILI digs identified through previously established technologies, tools, and practices <sup>3</sup>	\$0.027	80	\$2.2
4	<b>Non-ILI Digs:</b> Digs identified through above-ground cathodic protection and coating surveys	\$0.015	15	\$0.2
5	<b>Totals</b>		<b>155</b>	<b>\$5.7</b>

FEI only recently amended its practice to start forecasting dig costs based on the reason for dig categories. For 2021, costs were not planned, estimated, forecast, or budgeted based on reason for digs, nor were FEI's actual dig costs collected based on reason for digs. As a result, FEI does not have the requested data for 2021.

Within each of the reason for digs categories, there is considerable uncertainty related to scope, cost, timing, and volume of integrity digs. FEI expects that site-specific cost drivers, many of which remain unknown until the pipeline is exposed in the field for the dig (e.g. whether a repair is required), will continue to factor significantly into FEI's actual costs and drive uncertainty in integrity dig cost projections.

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12.2 Please fully explain why the 2021 projected digs for lines 1 and 2 is significantly lower than approved.

**Response:**

Projected digs for line 1 in Table 6-7 of the Application are lower than approved primarily due to the following reasons:

- ILI data did not warrant as many digs as were initially projected. When running an in-line inspection tool technology in a pipeline for the first time, predictions of the potential number of digs required are highly uncertain.
- Timing of analysis resulted in fewer digs scheduled in 2021 than were initially projected. Estimates of inspection schedules, reporting schedules, and subsequent analysis timelines are subject to change due to factors including resource availability (internal and vendor), pipeline availability (e.g. project or maintenance schedules can necessitate schedule changes), and resource prioritization (e.g. engineering resources may prioritize analysis of a line with greater integrity concerns).

Projected digs for line 2 in Table 6-7 are lower than approved primarily due to the timing of analysis resulting in fewer digs scheduled in 2021 than were initially forecast.

As explained in Section 6.3.3 of the Application, costs associated with integrity digs are primarily outside of FEI's control, and there can be considerable uncertainty related to scope, cost, timing and volume of expected digs. FEI expects continued variability between projected and actual integrity digs as it is appropriate and prudent for FEI to adjust its plans when new information becomes available. This is why FEI was approved to treat the costs of integrity digs as flow-through under the MRP<sup>1</sup>. The flow-through treatment ensures that only the actual costs of integrity digs are ultimately recovered from customers.

12.3 Please provide a table similar to Table 6-7 that includes 2016-2020 actual data.

**Response:**

The following table shows the same information as provided in Table 6-7 for the years 2016-2020.

<sup>1</sup> MRP Decision and Order G-165-20, p. 74.



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1

## 2016-2020 Integrity Digs Activities and Expenditures

Line No.	Reason for Digs	Number of Digs per Year				
		2016 Actual	2017 Actual	2018 Actual	2019 Actual	2020 Actual
1	<b>ILI Digs – New Tool(s):</b> ILI digs attributed or projected due to an inspection with an ILI technology or ILI tool that has not been previously run in a given pipeline segment <sup>1</sup>	10	44	36	11	27
2	<b>ILI Digs – New Practice(s):</b> ILI digs attributed or projected due to changes to industry practices or standards (e.g., strain-based criteria for dent digs) requiring a corresponding change from FEI's past integrity dig practices <sup>2</sup>	30	21	15	45	47
3	<b>ILI Digs – Established Tools and Practices:</b> ILI digs identified through previously established technologies, tools, and practices <sup>3</sup>	34	25	34	37	45
4	<b>Non-ILI Digs:</b> Digs identified through above-ground cathodic protection and coating surveys	0	8	1	24	27
5	<b>Total Integrity Digs</b>	<b>74</b>	<b>98</b>	<b>86</b>	<b>117</b>	<b>146</b>
6	Total Expenditures (\$000s)	\$2,500	\$3,200	\$2,500	\$3,100	\$5,900
7	Cost per dig (\$000s)	\$34	\$33	\$29	\$26	\$40

### 2 Notes to table:

3 <sup>1</sup> Previously reported as "Circumferential magnetic flux leakage in-line inspection digs", which is just one  
4 example of integrity digs due to a first-time inspection with an ILI technology or ILI tool in a given pipeline  
5 segment.

6 <sup>2</sup> Previously reported as "Dent digs (includes dig selections that were influenced by the strain-based  
7 criteria)". The intent of this Reason for Dig was to capture increasing numbers of integrity digs due to a  
8 change to an industry practice or industry standard. The current wording will facilitate FEI's future  
9 reporting of other potential changes to industry practices and standards that will require a corresponding  
10 change from FEI's past integrity dig practices.

11 <sup>3</sup> Previously reported as "Other ILI digs". These are digs resulting from FEI's routine and ongoing use of  
12 previously adopted ILI technology or ILI tools and in accordance with previously established practices.

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### 13.0 Reference: Exhibit B-2, Section 6.3.5

13.1 On lines 16-17 of PDF page 53, FEI indicates it will be restarting its customer education program.

13.1.1 Please fully explain when and why the program was stopped.

#### **Response:**

FEI stopped the customer education program when FEI ceased accepting enrollments in the RNG program in 2019, when demand for RNG was exceeding the available supply.

The RNG Program will re-open to all customers on October 15, 2021. FEI made this announcement via a press release on September 14, 2021. RNG program communications for the remainder of 2021 and 2022 will aim to educate customers about RNG, drive awareness among customers that the RNG program is again open and available for sign-up, and the different RNG blend options available to customers.

13.2 Please provide an updated Table 6-8 that includes actual data for 2016-2020.

#### **Response:**

Please refer to the updated Table 6-8 of the Application below which includes the actuals for 2016-2020.

Project	Actuals					Approved	Projected	Forecast
	2016	2017	2018	2019	2020	2021	2021	2022
Program Overhead	0.683	0.761	1.300	0.468	1.355	1.079	1.920	2.617
City of Surrey	0.000	-	0.000	-	0.010	0.010	0.006	0.010
Kelowna	0.129	0.547	0.993	0.405	0.771	0.512	0.501	0.502
Salmon Arm	0.284	0.224	0.303	0.276	0.193	0.204	0.211	0.196
Fraser Valley Bio Gas	-	-	-	-	0.012	0.010	0.010	0.010
Seabreeze Farms	-	-	-	-	0.003	0.010	0.010	0.010
Lulu Island WWTP	-	-	-	-	0.010	0.010	0.010	0.010
Dickland Farms	-	-	-	-	-	0.010	-	-
<b>Total Biomethane O&amp;M</b>	<b>1.096</b>	<b>1.532</b>	<b>2.597</b>	<b>1.149</b>	<b>2.354</b>	<b>1.845</b>	<b>2.668</b>	<b>3.355</b>

13.3 On lines 21-26 of PDF page 53, FEI discusses how it will grow its renewable gas portfolio. Please provide a complete list of all announcements, plans or proposals

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to eliminate the need for or use of natural gas in British Columbia, and convert to electricity. In the response, please provide complete references.

#### **Response:**

Currently, there are a number of announcements, plans or proposals across federal, provincial and local governments which aim to reduce GHG emissions associated with the use of natural gas, including measures that promote the use of renewable energy sources such as electricity or renewable natural gas. FEI has not included an exhaustive list, but to be responsive, it has included examples of more significant policies.

#### **Federal:**

- Pan Canadian Framework<sup>2</sup> – Canada's Pan Canadian Framework on Clean Growth and Climate Change is a comprehensive set of policies aimed at reducing emissions, growing the economy and building resilience to climate change. Within the framework, there are a number of policies which reduce the use of natural gas, including carbon pricing and measures to promote fuel switching and increased energy efficiency. For example, the framework includes a requirement that all space heating technologies for sale in Canada exceed energy performance of more than 100 percent by 2035, which limits the use of conventional gas furnaces.<sup>3</sup>

#### **Provincial:**

- BC Carbon Tax<sup>4</sup> – carbon taxes increase the cost of natural gas and promote the use of lower carbon energy sources, such as electricity or renewable natural gas.
- BC Energy Step Code<sup>5</sup> - the BC Energy Step Code sets performance requirements for buildings in BC based on increasing efficiency in building envelope and mechanical systems, which decreases energy use, including natural gas, in buildings.
- CleanBC Plan<sup>6</sup> - the CleanBC Plan includes a requirement to increase renewable gas content to 15 percent of supply as well as incentives to promote switching from natural gas to electric heat pumps for space heating.
- Phase 2 of the Comprehensive Review of BC Hydro<sup>7</sup> – amongst other recommendations, the review calls for discounted rates for industrial customers to encourage fuel switching to electricity from fuels such as natural gas. The recommendations also include incentives for residential customers to switch from natural gas furnaces to electric heat pumps for

<sup>2</sup> <https://www.canada.ca/en/services/environment/weather/climatechange/pan-canadian-framework.html>

<sup>3</sup> [https://www.nrcan.gc.ca/sites/www.nrcan.gc.ca/files/emmc/pdf/Market-Transformation-Strategies\\_en.pdf](https://www.nrcan.gc.ca/sites/www.nrcan.gc.ca/files/emmc/pdf/Market-Transformation-Strategies_en.pdf)

<sup>4</sup> <https://www2.gov.bc.ca/gov/content/environment/climate-change/clean-economy/carbon-tax>

<sup>5</sup> <https://energystepcode.ca/>

<sup>6</sup> [https://blog.gov.bc.ca/app/uploads/sites/436/2019/02/CleanBC\\_Full\\_Report\\_Updated\\_Mar2019.pdf](https://blog.gov.bc.ca/app/uploads/sites/436/2019/02/CleanBC_Full_Report_Updated_Mar2019.pdf)

<sup>7</sup> [BC Hydro Review sets path for electrifying economy, supporting CleanBC | BC Gov News](#) and [Recommendations from BC Hydro review to keep electricity affordable | BC Gov News](#)

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space heating. BC Hydro's electrification plan<sup>8</sup>, filed as part of its Integrated Resource Plan, is expected to incorporate these recommendations.

**Local:**

City of Vancouver<sup>9</sup> – the City has a number of plans and bylaws which promote the use of renewable energy and/or limit greenhouse gas emissions in buildings which reduces the use of natural gas in favor of electricity. The City of Vancouver's approach is described in detail in the response to MoveUp IR1 1.1.3.

Climate emergencies - Other municipalities have followed suit in declaring climate emergencies, which include the City of Burnaby, Metro Vancouver, Richmond, New Westminster and Port Moody, amongst others<sup>10</sup>. While these efforts have increased ambitions to reduce GHG emissions, they have not led to specific policies to eliminate the use of the gas delivery system.

MetroVancouver<sup>11</sup> - MetroVancouver's climate strategy includes reducing emissions by 45 percent by 2030 and becoming carbon neutral by 2050 through a number of actions, including switching from natural gas to renewable sources of energy such as electricity and renewable natural gas.

**Other:**

Buildings Electrification Roadmap<sup>12</sup> – the roadmap was created with participation from provincial and local governments as well as other industry participants. The roadmap is aimed at decreasing the use of natural gas in buildings in favor of electricity.

While these policies place downward pressure on the use of natural gas over the mid and long term, they do not have an incremental impact on demand within the forecast period for this Application. As stated on page 11 of the Application, in forecasting its gross customer additions, FEI has assumed that in 2022 there will be no further policy or building code impacts.

Further, FEI is responding to the need to take climate action through its climate strategy called the Clean Growth Pathway to 2050<sup>13</sup>, which includes, amongst other actions, a transition to renewable energy and investment in energy efficiency.

<sup>8</sup> [Electrification Plan \(bchydro.com\)](https://www.bchydro.com/electrification-plan)

<sup>9</sup> <https://vancouver.ca/green-vancouver/zero-emissions-buildings.aspx> and <https://vancouver.ca/green-vancouver/vancouvers-climate-emergency.aspx>

<sup>10</sup> <https://climateemergencydeclaration.org/climate-emergency-declarations-cover-15-million-citizens/>

<sup>11</sup> [http://www.metrovancouver.org/services/air-quality/AirQualityPublications/AQ\\_C2050-StrategicFramework.pdf](http://www.metrovancouver.org/services/air-quality/AirQualityPublications/AQ_C2050-StrategicFramework.pdf) and <http://www.metrovancouver.org/services/air-quality/climate-action/climate2050/Climate2050Docs/Climate2050BuildingsRoadmapMay2021.pdf>

<sup>12</sup> <https://www.zebx.org/wp-content/uploads/2021/04/BC-Building-Electrification-Road-Map-Final-Apr2021-1.pdf>

<sup>13</sup> [clean-growth-pathway-brochure.pdf \(fortisbc.com\)](https://www.fortisbc.com/clean-growth-pathway-brochure.pdf)

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**14.0 Reference: Exhibit B-2, Table 7-2, lines 11-16**

**Preamble:** On lines 11-16 Table 7-2, FEI provides the calculation of the 2020 O&M True Up

**14.1** Please provide the impact on 2020 revenues and margins of the additional 980 customers.

**Response:**

FEI interprets the preamble as referring to the formula growth capital true-up as shown in Table 7-2, not the O&M true-up. For revenues and margins related to the O&M true-up, please refer to the response to BCOAPO IR1 8.1.

Please see the Table 1 below for the estimated 2020 revenues and margins for the additional 980 gross customer additions (GCAs) between 2020 Approved and 2020 Actual. FEI notes the 2020 revenues and margins are estimated based on the actual average annual use rates (use per customer in GJ) of each rate class and the 12-month weighted average GCAs. The 12-month weighted average GCAs for 2020 is 546 customers, which is used in the calculation because the 980 additional GCAs do not reflect the fact that customer additions occurred on a monthly basis and would not have a full year of consumption. Please refer to Table 2 which shows the calculation of the 12-month weighted average GCAs.

FEI also notes the revenues and margins shown in the table below are calculated based on the gross additions only; therefore, the resulting revenues and margins in Table 1 below are a subset of the revenues and margins provided in the response to BCOAPO IR1 8.1, which are based on the net additions (including both customers added to the system as well as customers leaving the system). As such, the revenues and margins in BCOAPO IR1 8.1 and this information request are not additive.

As explained in the response to BCOAPO IR1 8.2, the revenues and margins for the additional gross customer additions are recognized and accounted for in FEI's revenue requirement.

**Table 1: Revenues and Margins from Additional GCAs between 2020 Approved and 2020 Actual**

	Difference btw 2020 Approved and Actual Gross Customers Additions	Difference btw 2020 Approved and Actual 12-Month Average Gross Customer Additions	Incremental Revenue (\$000s)	Incremental Margins (\$000s)
Residential (RS 1)	847	469	382	251
Commercial (RS 2, 3, and 23)	128	73	287	163
Industrial (RS 4 - 7, 22, 25, 27, 46, BCH ICP, VIGJV)	5	4	1,330	523
<b>Total</b>	<b>980</b>	<b>546</b>	<b>1,999</b>	<b>937</b>

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**Table 2: Calculation of 12-month Weighted Average of GCAs between 2020 Approved and 2020 Actual**

Line	Particular	2020 Approved			2020 Actual			Difference	
		Gross Additions	Monthly Weighting	Weighted Gross Additions	Additions	Monthly Weighting	Weighted Additions	Gross Additions	Weighted Average Gross Additions
(1)		(2)	(3)	(4) = (2) x (3)	(5)	(6)	(7) = (5) x (6)	(8) = (5) - (2)	(9) = (7) - (4)
1	January	1,200	12/12	1,200	1355	12/12	1,355	155	155
2	February	1,200	11/12	1,100	1256	11/12	1,151	56	51
3	March	1,400	10/12	1,167	1629	10/12	1,358	229	191
4	April	1,400	9/12	1,050	1428	9/12	1,071	28	21
5	May	1,400	8/12	933	1372	8/12	915	(28)	(18)
6	June	1,500	7/12	875	1494	7/12	872	(6)	(3)
7	July	1,500	6/12	750	1575	6/12	788	75	38
8	August	1,500	5/12	625	1511	5/12	630	11	5
9	September	1,500	4/12	500	1666	4/12	555	166	55
10	October	1,800	3/12	450	1853	3/12	464	53	14
11	November	1,800	2/12	300	2003	2/12	334	203	34
12	December	1,800	1/12	150	1838	1/12	153	38	3
13	<b>Total</b>	<b>18,000</b>		<b>9,100</b>	<b>18,980</b>		<b>9,646</b>	<b>980</b>	<b>546</b>

14.2 Please fully explain why FEI did not include a recognition that the additional customers provide additional revenues and margins in its analysis.

**Response:**

Table 7-2 of the Application provides the calculation of FEI's 2022 formula growth capital<sup>14</sup>, including the growth capital true-up for 2020. The table does not address any other aspects of the revenue requirement that are driven by customer growth.

Please refer to the response to BCOAPO IR1 8.2 which provides FEI's description of how the additional revenues and margins have been recognized in its revenue requirement calculations.

<sup>14</sup> Table 7-2 does not include the 2020 O&M true-up as suggested in the preamble.

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1    **15.0    Reference:    Exhibit B-2, Section 7.2.2**

2            15.1    Please provide the exact reference in Decision and Order G-165-20 where the  
3                            2022 forecast amounts for Sustainment Capital and Other capital are explicitly  
4                            approved.

5  
6    **Response:**

7    On page 131 of the MRP Decision, the BCUC Panel states the following:

8            ***The Panel approves the level of forecast FEI Sustainment capital and FBC***  
9            ***Regular capital to be incorporated in rates for the three-year period 2020-***  
10           ***2022. The Panel finds that FortisBC's capital forecasts for the three-year period***  
11           ***are reasonable given the evidentiary support provided by FortisBC in the***  
12           ***Application and in IR responses. The Panel agrees with FortisBC that no material***  
13           ***issues were raised through IRs or in Intervener arguments.***

14

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1     **16.0   Reference:   Exhibit, B-2, Table 7-5**

2             16.1   For each of the expenditures listed in Table 7-5, please provide the exact reference  
3                   in each of the respective orders where the 2022 forecast amount was explicitly  
4                   approved.

5  
6     **Response:**

7     The BCUC orders referenced in Table 7-5 do not provide explicit approval of forecast capital  
8     project expenditures. As FEI's acquisitions of biomethane are prescribed undertakings under the  
9     GGRR, the BCUC does not review the projects from a public interest perspective. Instead, the  
10    Biomethane Purchase Agreement (BPA) associated with each project is accepted for filing by the  
11    BCUC pursuant to section 71 of the *Utilities Commission Act* (UCA).

12   The purpose of Table 7-5 of the Application shows the current estimates of biomethane capital  
13   expenditures that are necessary to carry out the prescribed undertakings and therefore are  
14   forecast to have an impact on FEI's revenue requirement in the year they enter rate base. FEI  
15   re-forecasts capital expenditures annually and these forecasts can deviate from the original project  
16   plans.

17  
18  
19  
20             16.2   For each of "Net Zero Waste" and "Delta RNG" please fully explain how any costs  
21                   would be trued up should the projects not be approved as filed.

22  
23   **Response:**

24   As explained in the response to BCOAPO IR1 16.1, it is the BPA, not the project capital  
25   expenditures, which FEI files for acceptance in its applications to the BCUC. FEI fully expects  
26   that these projects will meet the definition of a prescribed undertaking under the GGRR and that  
27   the BPAs will be accepted by the BCUC.

28   FEI does not expect to incur any material capital costs prior to acceptance of the BPAs. Further,  
29   since the capital costs for these two projects would not be transferred to rate base until 2023,  
30   there are no costs included in 2022 rates that would require true-up in the event the BPAs are not  
31   accepted.



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**17.0 Reference: Exhibit B-2, Table 8-1**

17.1 Please fully explain why the 2021 projected 3-month T-Bill Rate is only 0.13%, down from the 2021 approved rate of 0.45%.

**Response:**

The difference in the 2021 Projected 3-month T-Bill Rate and the 2021 Approved T-Bill rate is due to an update in forecasting methodology and the actual rate in 2021 being lower than forecast by the five major Chartered Canadian banks.

The 2021 approved rate of 0.45 percent was a weighted average rate, which incorporated forecast rates by the five major Chartered Canadian banks in June 2020 and the budgeted rate provided in the BC Ministry of Finance Budget and Fiscal Plan 2020/2021 – 2022/2023 (the “BC 2020 Budget”) and is consistent with the methodology FEI has historically used. However, for the purposes of this Application, it was determined that the rate provided in the BC 2020 Budget was no longer relevant in the context of the latest T-Bill Rate projections as it was forecast prior to the COVID-19 pandemic in January 2020. In general, the T-Bill rates provided in the BC Ministry of Finance annual budget are determined only at one specific point in time during the year. Therefore, by the time the annual review application is filed (generally at the end of July or early August) the rates do not hold as much relevance as the recent rates obtained from the five major chartered Canadian banks.

In addition to this change in forecasting methodology, forecast short-term interest rates for 2021 have decreased slightly compared to last year.

Please refer to the rate calculation table provided in the response to BCOAPO IR1 17.2.

17.2 Please provide the T-Bill forecast rates referenced in note 1 from Table 8-1 for each of the 2021 approved, 2021 projected and 2022 forecast, along with the weightings to derive FEI forecasts.

**Response:**

The following table provides the forecast rates referenced in Note 1 to Table 8-1 of the Application.

Source	Approved 2021	Projected 2021	Forecast 2022
TD Bank Group	0.21%	0.10%	0.30%
RBC Economics	0.25%	0.20%	0.80%
Scotiabank Economics	0.20%	0.15%	0.90%



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Source	Approved 2021	Projected 2021	Forecast 2022
BMO Capital Markets	0.19%	0.10%	0.12%
CIBC Economics	0.31%	0.10%	0.24%
BC Ministry of Finance Budget and Fiscal Plan	1.52%	NA <sup>1</sup>	NA <sup>1</sup>
<b>Equal weighted rate used by FEI</b>	<b>0.45%</b>	<b>0.13%</b>	<b>0.47%</b>

1 Notes to table:

2 <sup>1</sup> Please refer to the response to BCOAPO IR1 17.1.

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1    **18.0    Reference:    Exhibit B-2, Section 9.2**

2            **Preamble:**    On PDF page 84, at lines 19-20, and PDF page 85, lines 1-3 FEI states:

3                    Changes in Tax Rates. Tax Rates are expected to change for 2022 as follows:

4                    (a) Municipal rates are expected to increase by 0.25 percent for Lower Mainland  
5                    municipalities, and 0.50 percent for all other municipalities;

6                    (b) School rates are expected to decrease by 1.0 percent;

7                    (c) Rural rates are expected 1 to decrease by 2.0 percent;

8                    (d) Tax rates on First Nations are expected to increase by 0.25; and

9                    (e) Other rates are not expected to change overall.

10            18.1    For each of the items (a-e) listed please provide a detailed explanation of the basis  
11            for the FEI forecast.

12

13    **Response:**

14    Property tax rates vary from jurisdiction to jurisdiction, and may vary even within a jurisdiction  
15    depending on the property type. In addition, tax rates change annually, and are usually set  
16    sometime between March and the middle of May during the taxing authorities' annual budgeting  
17    processes. Tax rate estimates rely largely on anecdotal evidence, such as prior experience,  
18    expected assessment increases and media reports related to municipal budgets. While  
19    properties may fall into one of nine property classes, the majority of FEI's properties are classified  
20    as Class 2 – Utility. FEI therefore predicts general tax rate increases based on changes to this  
21    class of property. The COVID-19 pandemic has created some unique challenges for predicting  
22    tax rates but, for the most part, utility properties did not receive exemptions or temporary  
23    reductions in tax rates received in other property classes.

24    Tax rate changes in 2022 reflect the following:

25            (a) **Municipal Rates.** These include all taxes levied directly by municipalities. Under B.C.  
26            Regulation 329/96, General Municipal taxes are capped at \$40.00 / \$1,000 of assessment  
27            or 2.5x the Business / Other Rate, whichever is greater. Tax rate calculations used to  
28            generate estimates apply the cap when estimates are created. FEI provides the following  
29            additional details for specific municipalities:

30                    (i) The Lower Mainland rate increase is forecast to be 0.25 percent. About 50 percent of  
31                    the Lower Mainland municipalities are at or near the rate cap already, limiting their  
32                    ability to increase tax rates. In addition, utility classed properties represent a smaller  
33                    proportion of the total property values within the municipalities. Further, a significant  
34                    portion of the assessment roll is exempt from general municipal taxes and FEI pays 1  
35                    percent of gross revenues in-lieu of those taxes.

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(ii) For all other municipalities, rates are expected to increase by a higher rate of 0.50 percent. Municipalities outside the Lower Mainland tend to be smaller, and a smaller proportion (38 percent) are at or near the rate cap. In addition, municipalities outside of the Lower Mainland are more likely to have improvements that would not be exempt from general municipal taxes because they are not defined as being used solely by the municipality or group of adjoining municipalities for local purposes.

(b) **School taxes** are set by the Province and are expected to decrease by 1 percent, essentially to reflect a decrease in the actual Class 2 - Utility rate from 2021 rates of \$12.86 / \$1,000 of assessment to \$12.73 / \$1,000. While utilities saw no relief in school taxes when compared to Class 4 - Major Industry or Class 6 - Business/Other, they have been on a downward trend over the past six years and FEI's expectation is that this will continue in a moderate way in 2022.

**School Tax Rates 2016 to 2021**

	<b>02 Utility</b>	<b>04 Major Industry</b>	<b>06 Business/Other</b>
<b>2021</b>	12.86000	3.86000	3.86000
<b>2020</b>	13.03000	0.00010	1.10700
<b>2019*</b>	13.20000	3.70000	3.70000
<b>2018*</b>	13.40000	4.20000	4.20000
<b>2017*</b>	13.40000	4.80000	4.80000
<b>2016*</b>	13.50000	5.40000	5.40000

Data from Provincial Municipal Statistics Schedule 702

\* Major Industry provides 60% Credit not included in posted rates

(c) **Rural general tax rates** are set by the Province as well, and are legislated as a ratio of 3.5:1 to the Class 1 Residential Rate. Given the significant appreciation in Residential property market values during the pandemic, it is expected residential rates will decrease. Based on experience and past rate changes, FEI assumed a 2 percent decrease to be reasonable.

(d) **Tax Rates on First Nations.** First Nations set tax rates individually, and generally keep their rates in line with the nearest municipality. It is expected their rates will increase similar to those of the municipalities.

(e) **Other tax rates** include taxes paid to regional districts, hospital districts, transit authorities, and the BC Assessment and Municipal Finance Authority (MFA) levy. While the BC Assessment and MFA levy are set provincially, the others are set separately for each



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1 municipality and regional district electoral area. There are expected to be some increases  
2 and some decreases in these rates, but overall no change has been forecast.  
3

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1    **19.0    Reference:    Exhibit B-2**

2            **Preamble:**    On PDF page 85, at lines 8-193 FEI states:

3                    ***Changes in Assessed Values.*** Forecast changes in the assessed values of FEI's  
4                    property 9 are based on expected inflationary increases. These include:

- 5                    a)    A 3.0 percent increase in assessed values of distribution lines and  
6                    services plus 11 additional new construction;
- 7                    b)    A 3.0 percent increase in assessed values of transmission lines. In  
8                    consideration of the impacts of the COVID-19 pandemic, changes to linear  
9                    rates from BC Assessment's systematic review that concluded in 2019 are  
10                   expected to be delayed until 2023;
- 11                   c)    A 2.0 percent increase in assessed values for LNG assets; and
- 12                   d)    Land value changes which are expected to increase on average between  
13                   5.0 percent for right of ways and 7.0 to 8.0 percent for market value for  
14                   properties owned in fee simple.

15            19.1    For each of the items (a-d) listed please provide a detailed explanation of the basis  
16            for the FEI forecast.

17

18    **Response:**

19    Whenever possible, FEI relies on actual changes in the assessed values of FEI's property;  
20    however, because of the diversity of assets and locations, a degree of judgement is also required.

21    The following explains the basis for the FEI forecast on assessed values:

- 22            a)    Distribution lines and services are estimated based on changes expected to input costs,  
23            such as polyethylene pipe, labour, materials and equipment. The assumption at the time  
24            the forecast was developed were that labour costs and material costs would increase,  
25            resulting in the forecast 3 percent increase. New construction is determined based on  
26            actual additions for the 2020 calendar year costed using expected updated rates.  
27
- 28            b)    For transmission lines, rates are legislated. In 2021, rates increased by 2 percent, and  
29            with increases being experienced in oil prices and steel prices, it was assumed that 2022  
30            rate increases would be higher at 3 percent.
- 31
- 32            c)    In the absence of any specific evidence, LNG improvements were assumed to increase  
33            by 5 percent to account for increases in steel and concrete costs. This increase was  
34            partially offset by additional depreciation of 3 percent.  
35
- 36            d)    Increases in land values reflect changes to FEI's specific property tax portfolio, which  
37            makes up 11 percent of the total assessed values.



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- 1 e) Right of ways are valued using legislated rates. BC Assessment has advised it would be  
2 proposing a 5 percent increase for transmission line right of ways for 2022.  
3  
4 f) Land values for properties owned by FEI, such as offices, are located in more urban areas  
5 and are expected to increase at higher rates. Properties for stations, on the other hand,  
6 are assumed to increase at lower rates because many are located in rural areas. Overall  
7 FEI determined 7 to 8 percent to be reasonable.

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1     **20.0     Reference:     Exhibit B-2, Table 13-9**

2             **Preamble:**     In Table 13-9, FEI indicates that its meter reading accuracy is below the  
3                                     benchmark and Threshold for 2020 and June 2021 Year to date. It is noted  
4                                     that in lines 4-14 of PDF page 166, FEI states:

5                     The 2020 result was 89.2 percent which was lower than the benchmark and  
6                     threshold. The impact of the COVID-19 pandemic and the need for physical  
7                     distancing and enhanced hygiene practices by meter readers has resulted in a  
8                     larger percentage of estimated reads in both 2020 and 2021 year-to- date. The  
9                     BCUC anticipated this impact in Letter L-20-20, which granted public utilities relief  
10                    from meter reading, when necessary, for the duration of the State of Emergency  
11                    in the Province of BC and while social distancing practices remain in place.

12                   FEI continues to work closely with its meter reading service provider, Olameter, to  
13                   achieve as many actual meter reads as safely possible during the pandemic. In  
14                   addition to using the best available historical billing information to estimate reads  
15                   for billing purposes, FEI is working with some customers to acquire additional  
16                   information to support minimizing the variance between estimated and actual  
17                   reads.

18             20.1     Please fully explain why social distancing would impact the accuracy of meter  
19                                     reading.

20  
21     **Response:**

22     Meter reading is a manual process and as such, successful completion of meter reads is impacted  
23     by variables that affect the ability of the meter reader to access the site.

24     Safety guidelines introduced in response to the ongoing COVID-19 pandemic, which included  
25     physical distancing protocols, resulted in a reduction of meters being physically read, thereby  
26     increasing the number of estimated reads and impacting the accuracy percentage as a result.  
27     More specifically, physical distancing guidelines limited access to meters that are located indoors.  
28     Accessing these meters requires the meter readers to access common indoor areas and confined  
29     spaces in apartments and townhouses. Physical distancing and public health guidelines also  
30     limited access to outdoor meters that were located behind a gate. With more customers working  
31     from home, the number of locked gates and outdoor pets also increased which further limited  
32     access to meters located outside.

33     FEI continues to work closely with its meter reading service provider to improve performance of  
34     this metric as the impacts and circumstances of the pandemic continue and evolve.



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20.2 Please fully explain any plans FEI has to move to Automated Meter Reading.

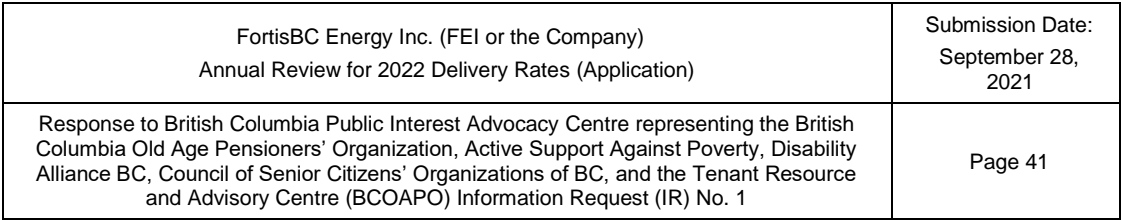
**Response:**

On May 5, 2021, FEI filed an application with the BCUC pursuant to sections 45 and 46 of the UCA for a Certificate of Public Convenience and Necessity (CPCN) for the Advanced Metering Infrastructure (AMI) Project to transition from manual meter reading to automated meter reading. The regulatory process for this project is currently ongoing.

20.3 Please fully discuss why customers should pay in rates for services that do not meet the threshold metric.

**Response:**

Please refer to the response to BCUC IR1 22.1.



2       **Preamble:**   In Table 13-10, FEI indicates that its Historical 1 TSF (Non- Emergency)  
3       Results is below the benchmark and Threshold for June 2021 Year to date.

21.1 Please fully discuss why customers should pay in rates for services that do not meet the threshold metric.

8 As described in the response to BCUC IR1 22.1, performance below threshold does not  
9 necessarily indicate that a serious degradation in service has occurred. In accordance with Order  
10 G-107-15, factors considered in the determination of whether a serious degradation in service  
11 has been present include whether the circumstance was transitory in nature and the extent of the  
12 impact on customers of the below threshold performance. In that regard, to the extent that  
13 performance below threshold has occurred but it is determined that a serious degradation in  
14 service has not been present, penalties for performance below threshold may not apply and  
15 customers will continue to pay for that service through rates.

6 Further, an aspect of the approved process for the evaluation of SQL performance is the direction  
7 in Order G-44-16 that the BCUC will evaluate SQL performance for any given year in the  
8 subsequent year, when actual results are known. Therefore, the BCUC will evaluate FEI's 2021  
9 SQL performance in the Annual Review for 2023 Delivery Rates when actual SQL results are  
0 known.

1 Finally, and as indicated in the Application, the TSF (Non-Emergency) performance is expected  
2 to improve during the remainder of the year and meet the threshold. This would be within the  
3 acceptable performance range for the metric. FEI will file its TSF (Non-Emergency) 2021 actual  
4 performance in the Annual Review for 2023 Delivery Rates, at which time FEI's 2021 actual  
5 performance can be evaluated.

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**22.0 Reference: Exhibit B-2, PDF page 222, Table B-1 and Schedule 1, PDF page 226**

**Preamble:** In Table B-1, the projected 2021 costs are lower than the approved 2021. Then the forecast 2022 increases back to the approved 2021 levels. In schedule 1, FEI provides a variance explanation for the 2021 decreases.

22.1 Please fully explain why the lower level of costs experienced in 2021 could not be maintained into 2022.

**Response:**

Explanations, broken down by the cost component level used in the Application, are provided below:

**Information Systems (IS)** – Costs savings achieved in 2021, and reflected in the 2021 Projected amount, are due to the earlier than anticipated cancellation of the Entegrate system support agreement, significantly reducing the 2021 overlap of systems support costs during the ongoing transition phase to the new Energy Trading and Risk Management (ETRM) system. The lower IS support costs related to the cancellation of the Entegrate support agreement continue going forward, and are reflected in both the 2021 Projected and the 2022 Budget Request amounts.

**Consulting and Legal** – The 2022 Budget Request amount is based on the forecast of upstream regulatory work anticipated to occur in 2022, and also includes a forecast of the consulting and legal work required to support a review of gas supply market conditions related to the Annual Contracting Plan, and to support the review/renewal of the Gas Supply Mitigation Incentive Program (GSMIP). The forecast level of work forecast for 2022 is higher than that of 2021.

**Subscriptions & Memberships** – The 2022 Budget Request amount is based on the forecast costs for the required service levels, net of savings related to sharing the costs of some subscriptions with Aitken Creek Gas Storage ULC (ACGS). There were contractual rate increases for a number of the subscriptions for commodity price data and market information, resulting in the forecast costs for 2022 being higher than costs in 2021.

**Sundries** – The 2022 Budget Request amount is based on the forecast of regulatory proceeding costs related to BCUC gas supply applications during the year, as well as the recurring expenditures for facilities communications and data charges, and other miscellaneous costs. The higher 2022 forecast costs are primarily due to the anticipated incremental regulatory proceeding activity and

FortisBC Energy Inc. (FEI or the Company) Annual Review for 2022 Delivery Rates (Application)	Submission Date: September 28, 2021
Response to British Columbia Public Interest Advocacy Centre representing the British Columbia Old Age Pensioners' Organization, Active Support Against Poverty, Disability Alliance BC, Council of Senior Citizens' Organizations of BC, and the Tenant Resource and Advisory Centre (BCOAPO) Information Request (IR) No. 1	Page 43

costs related to the upcoming Gas Supply Mitigation Incentive Program (GSMIP) review/renewal.

**Training & Travel** – Cost savings achieved in 2021, and reflected in the 2021 Projected amount, are due to the prolonged travel restrictions experienced during 2021 related to the COVID-19 situation. The 2022 Budget Request amount is based on the anticipated and measured resumption of travel activity as restrictions related to the COVID-19 pandemic are lifted.

**MoveUP Labour and Benefits** – Cost savings achieved in 2021, and reflected in the 2021 Projected amount, are primarily due to a temporarily unfilled position during the year. The 2022 Budget Request amount is based on the positions being staffed during the year, and include forecast increases related to labour inflation and benefits loading factors.

**M&E Labour and Benefits** – Cost savings achieved in 2021, and reflected in the 2021 Projected amount, are primarily due to temporarily unfilled positions and projected lower than budgeted benefits loading during the year, partially offset by reduced cross charging. The 2022 Budget Request amount is based on the positions being staffed during the year, and include forecast changes related to labour inflation and benefits loading factors. The forecast labour inflation factor is largely offset by a forecast decrease in the benefit loading factor. As well, there are some additional forecast reductions related to changes to the budgeted M&E positions and associated salary levels, as unfilled positions have been filled.

**Shared Services** – The 2022 Budget Request amount remains unchanged from the 2021 amount.

FEI notes that any cost savings related to actual costs being lower than the CMAE Approved costs are captured in the gas cost deferral accounts and are fully refunded to customers as part of future rates.



FortisBC Energy Inc.  
Financial Information for Employee Future Benefit Programs  
as at December 31, 2021 – In Accordance with ASC 715

**Estimated 2022 Net Benefit Cost - Registered Pension Plans**  
(Amounts shown in thousands of Canadian Dollars)

	M&E Plan				VI Plan	Energy Plan								Union Plan	Total by Entity				Total
	FEI Reg OP	FHI Holdings Inc.	FHI Non-Reg	Total	FEI Reg OP	FEI Reg OP	FHI Holdings Inc.	FHI Non-Reg	FEI Reg OP	FEI COPE	FMI	FAES	Total	FEI Reg OP	FEI	FHI	FMI	FAES	
<b>2022 Net Benefit Cost</b>																			
Employer current service cost	\$ -	\$ -	\$ -	\$ -	\$ 912	\$ 10,755	\$ 836	\$ -	\$ 524	\$ 1,041	\$ 593	\$ 154	\$ 13,903	\$ 12,366	\$ 25,598	\$ 836	\$ 593	\$ 154	\$ 27,181
Interest cost	1,759	83	-	1,842	1,890	6,932	512	-	310	389	133	81	8,357	18,724	30,004	595	133	81	30,813
Expected return on assets	(1,092)	(45)	-	(1,137)	(2,942)	(10,033)	(733)	-	(440)	(468)	(148)	(117)	(11,939)	(29,478)	(44,453)	(778)	(148)	(117)	(45,496)
Amortization:																			
- Net actuarial (gain) loss	26	-	-	26	-	-	-	-	-	(2)	(3)	(2)	(7)	-	24	-	(3)	(2)	19
- Prior service cost (credit)	-	-	-	-	-	-	-	-	-	-	-	-	-	(1,282)	(1,282)	-	-	-	(1,282)
- Transition (asset) liability	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	\$ 693	\$ 38	\$ -	\$ 731	\$ (140)	\$ 7,654	\$ 615	\$ -	\$ 394	\$ 960	\$ 575	\$ 116	\$ 10,314	\$ 330	\$ 9,891	\$ 653	\$ 575	\$ 116	\$ 11,235

**Estimated 2022 Net Benefit Cost - Supplemental Pension Plans**  
(Amounts shown in thousands of Canadian Dollars)

	Supplemental												Total by entity				Total	Executive SERP	Grand Total
	Supplemental M&E Plan				VI Plan	Supplemental Energy Plan													
	FEI Reg OP	FHI Holdings Inc.	FHI Non-Reg	Total	FEI Reg OP	FEI Reg OP	FHI Holdings Inc.	FHI Non-Reg	FMI	FAES	Total		FEI	FHI	FMI	FAES			
2022 Net Benefit Cost																			
Employer current service cost	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 242	\$ 67	\$ -	\$ 56	\$ -	\$ 365	\$ 242	\$ 67	\$ 56	\$ -	\$ 365	\$ 374	\$ 739	
Interest cost	254	456	267	977	26	135	45	46	12	-	238	415	814	12	-	1,241	120	1,361	
Expected return on assets	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Amortization:																			
- Net actuarial (gain) loss	29	158	34	221	1	89	31	34	-	(1)	153	119	257	-	(1)	375	-	375	
- Prior service cost (credit)	-	-	-	-	-	-	-	-	24	-	24	-	-	24	-	24	-	24	
- Transition (asset) liability	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total	\$ 283	\$ 614	\$ 301	\$ 1,198	\$ 27	\$ 466	\$ 143	\$ 80	\$ 92	\$ (1)	\$ 780	\$ 776	\$ 1,138	\$ 92	\$ (1)	\$ 2,005	\$ 494	\$ 2,499	

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**Estimated 2022 Net Benefit Cost - Post-Retirement Benefits**

(Amounts shown in thousands of Canadian Dollars)

	FortisBC Union PRBs			FortisBC Non-Union PRBs						VI PRBs		Total by Entity				Total
	FEI IBEW	FEI COPE	Total	FEI Reg OP	FHI Holdings	FHI Non-Reg	FMI	FAES	Total	FEI Reg OP		FEI	FHI	FMI	FAES	
<b>2022 Net Benefit Cost</b>																
Employer current service cost	\$ 901	\$ 1,212	\$ 2,113	\$ 1,366	\$ 94	\$ -	\$ 49	\$ 25	\$ 1,534	\$ 249	\$ 3,728	\$ 94	\$ 49	\$ 25	\$ 3,896	
Interest cost	1,280	1,259	2,539	1,375	89	-	49	15	1,528	334	4,248	89	49	15	4,401	
Expected return on assets	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Amortization:																
- Net actuarial (gain) loss	(232)	-	(232)	-	-	(19)	48	7	36	(85)	(317)	(19)	48	7	(281)	
- Prior service cost (credit)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
- Transition (asset) liability	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total	\$ 1,949	\$ 2,471	\$ 4,420	\$ 2,741	\$ 183	\$ (19)	\$ 146	\$ 47	\$ 3,098	\$ 498	\$ 7,659	\$ 164	\$ 146	\$ 47	\$ 8,016	