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September 21, 2016

Commercial Energy Consumers Association of British Columbia
c/o Owen Bird Law Corporation
P.O. Box 49130
Three Bentall Centre
2900 – 595 Burrard Street
Vancouver, BC
V7X 1J5

Attention: Mr. Christopher P. Weafer

Dear Mr. Weafer:

Re: FortisBC Energy Inc. (FEI)

Project No. 3698886

Multi-Year Performance Based Ratemaking Plan for 2014 through 2019 approved by British Columbia Utilities Commission (Commission) Order G-138-14 – Annual Review for 2017 Rates (the Application)

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

On August 2, 2016, FEI filed the Application referenced above. In accordance with Commission Order G-122-16 setting out the Regulatory Timetable for the review of the Application, FEI respectfully submits the attached response to CEC 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

1. Reference: Exhibit B-2, Page 6

> 1. ***The Regionalization Initiative*** is aimed at both enhancing the customer experience and achieving a more efficient process in the field. In the first part of 2016, efforts continued on transitioning more functions to the regions. By the end of the first quarter of 2016, the Pre-requisition, Closing and Hazards functions were successfully transitioned into the regions. This phase represents the second phase of the Regionalization Initiative that began in 2014 with the transitioning of the Field Dispatch and Planning and Design groups to the regional locations. The changes have enabled optimal decision making, and have been found to be more cost-effective and to serve customers better. The first full year operating under a regional business model was 2015. Annual O&M savings in 2015 were approximately $0.9 million compared to 2013 actuals. The second phase of the Regionalization Initiative is expected to result in incremental annual O&M savings of approximately $1.1 million.

1.1 What were the 2014 savings under the Regionalization Initiative?

Response:

Only Phase 1 of the Regionalization Initiative was in place in 2014. Please refer to Table C-1 of Appendix C-2 which shows 2014 O&M savings of $1.0 million for Phase 1 of the Regionalization Initiative.

1.2 Please describe the second phase of the Regionalization Initiative.

Response:

The second phase of the Regionalization Initiative was primarily focused on moving the pre-requisite, closing and hazards business functions closer to the customer in a regionalized structure to better adapt to and accommodate customer needs. This required relocating Operations Support Representative resources to the regional offices in order for them to provide more local support to the field resources (supervisors, construction crews, and field technicians). New work processes were also implemented.

Please also refer to the response to BCUC IR 1.4.6.

1.3 When does FEI plan to introduce the second phase of the Regionalization Initiative?

Response:

The second phase of the Regionalization Initiative was started in Q4 of 2015, and was largely implemented in Q1 of 2016 will full completion expected by the end of Q4 2016.

1.4 Will the incremental $1.1 million in savings occur all in 2016, and recur in the future, or will those savings be spread over a longer period of time? Please explain.

Response:

Yes, the incremental O&M saving of $1.1 million will occur in 2016 and is expected to recur annually in the future.

2. Reference: Exhibit B-2, Page 6

> 2. **Project Blue Pencil** is an initiative focused on reviewing and streamlining key customer-facing processes from the perspective of the customer. In 2014, a review was completed which found opportunities not only to improve the customer experience, but also to increase operational efficiencies at the same time. These improvements were completed in 2015, reducing operating costs in the contact center and billing operations departments by approximately $1 million annually as compared to 2013 actuals. In 2016, those operational savings have been sustained at approximately $1 million.

2.1 Please explain how Project Blue Pencil has improved the customer experience.

Response:

As a result of Project Blue Pencil, the customer experience was improved in three main areas.

New Construction:

A review of FEI's new service process showed that it was sometimes cumbersome and complex for customers to navigate. When customers called into the contact centre, they were asked many construction and service related questions which some customers found overwhelming and difficult to answer. As a result, a new simplified quoting process was put in place to require only five questions to be answered by the customer. In addition, more autonomy was given to the field resources in determining the most cost effective design plan in the installation of new services. This reduced planning costs and involved the customer in the planning process on site more effectively.

This simplified model was put in place on September 15th, 2014 and provided not only customer service benefits but also cost savings which reduced the cost of connecting new customers.

Meter Exchange:

Each year, FEI exchanges approximately 70,000 gas meters. Each exchange requires an appointment with the customer and requires someone to be present at the customer's premise in order to complete the re-lighting of appliances. The coordination of customer appointments is a complex task which requires FEI to balance the availability of the customer with the availability of field resources to complete the exchange.

The improved process has the contact centre and operations departments working more closely together in order to better meet the needs of customers and match resources to appointments. Appointments are organized in close geographical proximity, reducing driving time and reducing the customer inconvenience of these appointments.

High Bill Inquiries:

It was determined that escalations related to high bills could be reduced by properly distinguishing between "high bill" and "payment" concerns. CSRs were sometimes missing the customer cues that indicated an inability to pay and were mistaking it for the customer believing the bill was inaccurate. This sometimes resulted in the customer not being satisfied with the resolution.

In order to address these issues, CSRs and management within the contact centre received additional training on high bill resolution, escalation techniques and improved active listening. Customer benefits of these changes are evidenced by increased first contact resolution and satisfaction ratings related to high bill inquiries.

2.2 Please describe the key operational efficiencies that were achieved in 2015 and provide quantification.

Response:

The key operational efficiencies that were achieved in 2015 were as follows:

- New Construction: The simplification of the new construction process as described in response to CEC IR 1.2.1 resulted in lower FTE requirements resulting in savings of approximately $215 thousand.

- Meter Exchange: The simplification of processes for meter exchanges as described in response to CEC IR 1.2.1 resulted in the reduction of the average length of time a CSR spends on each call, which resulted in lower staffing level requirements in customer service and produced annual savings of approximately $737 thousand.

- High Bill Inquiries**:** The improvement in first contact resolution related to high bill calls as described in response to CEC IR 1.2.1 reduced repeat calls for the same issue which produced annual savings of approximately $48 thousand.

2.3 Have the operational savings of $1 million in 2016 already been achieved, or will those be the annual savings?

Response:

The $1 million in savings was initially achieved in 2015 and continue to be achieved in 2016. It is an annual savings amount. Please refer to Table C-3 in Appendix C-2.

3. Reference: Exhibit B-2, Page 6

> 3. ***Review of Technical and Infrastructure Support Provider*** is an initiative to review the existing agreement with the Company's technical and infrastructure service provider responsible for providing Information Systems (IS) Customer and Infrastructure Services to FEI. This includes the employee help desk and operation of the end-user environment, data centre infrastructure, communication and security networks. In 2015, FEI replaced its existing technical and infrastructure support provider with a new service provider, Compugen. The new contract with Compugen is designed to better support the Company's requirements and to drive efficiency. For each permanent reduction in Compugen's costs to support FEI, the vendor and FEI share in the savings that are achieved, providing an incentive for Compugen to work with FEI to continue to look for efficiencies. Additionally, the new contract provides dedicated support resources rather than a distributed support service resulting in quicker response times and better understanding of the Company's requirements. The 2015 O&M savings for the Information Systems department compared to 2013 actuals are approximately $1.8 million. For 2016, the Company is continuing to work with Compugen to identify efficiencies.

3.1 At what proportion do FEI and Compugen share the savings?

Response:

Savings for the purpose of sharing with Compugen must be permanent O&M savings for FEI that are attributable to efficiencies identified by Compugen which reduce Compugen's annual charges to FEI over the remainder of FEI's contract with Compugen. Twenty percent of the actual O&M savings are retained by Compugen in the first year they are realized, and for every year after for the remainder of the contract. Efficiencies that do not reduce Compugen's costs to support FEI, but otherwise reduce FEI's operating costs, are not shared with Compugen.

There are no savings subject to the Compugen sharing formula in 2016[1]; however, FEI provides a hypothetical example of a sharing calculation below.

Hypothetical Example of Calculation:

Where an initiative is identified by Compugen that reduces Compugen's costs to support FEI by $50,000 in year 1 (partial year) and $100,000 annually (full year) for the remainder of the Compugen contract, the sharing in year one would be as follows:

- 20% ($10,000) of savings to Compugen

[1] Note that Table C-4 in Appendix C2 shows $2 million in O&M savings in 2016 as compared to $1.8 million in 2015. The entire savings in both years is due to the switch from the TELUS contract to the Compugen contract and not due to efficiencies identified under the contract. The higher O&M savings amount in 2016 is due to a full year under the new contract.

- 80% ($40,000) of savings to FEI

For year 2 and all remaining years of the Compugen contract, the sharing would be as follows:

- 20% ($20,000) of savings to Compugen
- 80% ($80,000) of savings to FEI

A similar response was provided to BCUC IR 1.4.4 in the FEI's Annual Review for 2016 Rates.

3.1.1 If on a 50/50 basis, is it fair to say that under the earnings sharing mechanism, ratepayers receive 25% of the total savings, FEI shareholders receive 25% of the savings, and Compugen would receive 50% of the savings?

Response:

As discussed in the response to CEC IR 1.3.1, Compugen receives the first 20% of total savings. The remaining 80% is then available to share on a 50/50 basis between ratepayers and the Company.

After consideration of the 50/50 earnings sharing mechanism, ratepayers receive 40% (i.e. 50% of the remaining 80%) of the total savings, the Company receives 40% (i.e. 50% of the remaining 80%) of the total savings and Compugen receives 20% of the total savings.

3.1.1.1 If not, please explain why not.

Response:

Please refer to the response to CEC IR 1.3.1.1.

3.2 Please confirm that the $1.8 million in savings represent the net savings achieved by FEI, and do not include the savings that Compugen received.

Response:

Confirmed.

None of the $1.8 million in O&M savings in 2015 ($2.0 million in 2016) was allocated to Compugen. The savings were attributable to the switch from the TELUS contract to the Compugen contract. The savings were not included in the ongoing sharing agreement with Compugen.

A similar response was provided in the Annual Review for 2016 Rates in response to BCUC IR 1.4.6.

3.2.1 If not confirmed, please provide the total savings received by FEI.

Response:

Please refer to the response to BCUC IR 1.3.2.

3.2.2 If confirmed, please provide the total savings that were achieved and shared by Compugen and FEI.

Response:

Please refer to the response to BCUC IR 1.3.2. No savings were shared with Compugen.

3.3 When did the previous technical and infrastructure support provider's contract expire?

Response:

The previous contract expired on January 31, 2015.

3.4 Please provide a description of the key elements of the savings achieved with quantification.

Response:

The $1.8 million non-labour savings in 2015 ($2.0 million in 2016) were attributable to a more competitive contract, reflective of market conditions. There was no reduction in services or service levels due to the contract.

A similar response was provided in the Annual Review for 2016 Rates in response to BCUC IR 1.4.7.

3.5 Over how many years does Compugen receive incentive sharing for a given level of saving?

Response:

The incentive sharing arrangement with Compugen is valid for the term of the contract which is for a three year term, with an option for FEI to extend the term for an additional two years.

3.6 How does FEI benchmark and determine a saving achieved by Compugen?

Response:

Please refer to the response to CEC IR 1.3.1.

3.7 Do saving initiatives generated by FEI and not Compugen result in Compugen receiving a sharing?

Response:

No.

3.8 How does FEI determine if a saving is permanent?

Response:

Permanent savings are measurable cost reductions that are permanently removed from the operating budget.

4. Reference: Exhibit B-2, Page 7

> 5. ***Online Service Application*** is an initiative to enhance service to customers. FEI is currently working on the development of an online service application for installation of new service lines. The Online Service Application initiative is designed to enhance the customer experience by offering customers another channel to request a service line in addition to the existing customer contact centre voice channel. The Online Service Application is in the final stages of development with an anticipated phased launch approach, with the first phase of the launch being a release to a select group of builder/developers for field trials early in the third quarter of 2016 and a broad launch in the fall of 2016, in line with the peak building season. Customers will be able to determine if gas service is available in their area and the cost to install the service and will be able to schedule the service online. For builders and developers as well as contractors, the online tool also offers additional capabilities to manage and track multiple service applications.

4.1 When did FEI commence the development of the online service application initiative?

Response:

Investigation of and analysis for the Online Service Application commenced in January 2015. Project approval was received in July 2015 allowing development to commence.

4.2 How long did the development of the online service application take?

Response:

It is expected that the full development of the Online Service Application will take 20 months in addition to the 6 months of analysis in support of market research and business case development.

The initial production launch occurred in July 2016 after 12 months of development. A release on FortisBC.com is anticipated for late September 2016. The remaining planned scope is expected to be completed by Q2 2017.

4.3 Are online service applications available in other jurisdictions and/or at BC Hydro?

Response:

This response also addresses CEC IR 1.4.3.1

Yes, other jurisdictions do have online service applications available with varying degrees of automation and functionality. FEI has reviewed online service applications at Northwest Natural and Union Gas which have been available since 2013. These are both gas utilities, and have similar service offerings and functionality to that which FEI plans to develop. BC Hydro has on its website an application titled "Single-Residential Construction & Renovation Connections," which has been available since 2012 for new service requests, service upgrades and service disconnections. FEI does not know the extent to which this application is integrated with BC Hydro's existing process and applications.

4.3.1 If yes, for how long have these types of service applications been available for in other jurisdictions and/or at BC Hydro?

Response:

Please refer to the response to CEC IR 1.4.3

4.4 Please provide a brief overview of the Online Service application and how it differs from that currently available.

Response:

Prior to the initial launch of the Online Service Application in July 2016, the only online service application option available to customers for the installation of new service lines was an electronic form that resulted in a call back to complete the transaction. The Online Service Application will allow a customer to start and finish all the steps in order to have a new service installed through an automated online interface. Through each step in the process, the Online Service Application communicates with various IT platforms (such as SAP, GIS and Click Schedule) in order to process the order and have the order sent to installation crews. The

Online Service Application is expected to improve customer service and experience by providing self-serve capabilities for customers, in a simplified, streamlined and intuitive way, particularly for simple service line requests that lend themselves to automation.

For simple service line requests, the additional functionality of the new Online Service Application includes:

- Providing the ability for customers to check for service in their area with a visual map displaying the location of the dwelling/lot in relation to the location of FEI's gas distribution mains;
- Estimating a cost for the customer, if the request falls within specified parameters;
- Scheduling service date installation, if the request falls within specified parameters; and
- Automated email notifications to customers advising them of their upcoming service line installation.

4.5 In what ways would the FEI Online Service application differ from the online contract for service requirements such as those available on the ATCO gas website?

- http://www.atcogas.com/Services/Commercial-and-Small-Business/Documents/ Commercial-Info-Sheet.pdf
- http://www.atcogas.com/Services/Service-Request/Documents/Contract-for-Service-Line-Requirements-and-Facilities.pdf

Response:

The ATCO gas application is not an online tool but rather a fillable PDF file. Once received by ATCO, the form must be manually input by staff and in that respect is similar to staff receiving a phone call from a customer.

FEI's Online Service Application provides greater functionality than that of a fillable PDF form. It will enable customer self-serve capabilities, including the use of an interactive map to determine if gas service is available and, for simple services, providing an estimate of the cost to install and scheduling installation. Please also refer to the response to CEC IR 1.4.4.

4.6 What are the anticipated savings from the online service application initiative on a year by year basis?

Response:

The annual anticipated savings for the Online Service Application are expected to be approximately $0.2 million in O&M and a further $0.2 million in capital expenditures per year starting in 2018. For 2017, it is expected that FEI will realize a prorated savings of approximately half of those amounts.

4.7 Would FEI have undertaken such an initiative in the absence of PBR? Please explain why or why not.

Response:

FEI initiated the Online Service Application project during the PBR term, as part of its efforts to enhance customer service and find efficiencies. If FEI was not under PBR, FEI believes it would have undertaken the initiative due to the expected benefits of improved customer service and experience by way of providing self-serve capabilities for customers (please refer to the response to CEC IR 1.4.4).

5. Reference: Exhibit B-2, Pages 8 and 9

> Another contributing set of factors consists of capital cost pressures such as the following:
>
> 1. The addition of certain larger industrial mains where the cost significantly exceeded the average customer addition cost that was contemplated under the formula, but that had incremental revenues attached to them and therefore passed the main extension test;
> 2. Capital costs required to carry out the Regionalization Initiative discussed above;
> 3. The installation of Jomar valves on meter sets to allow for meters to be exchanged without turning off gas to the residence;
> 4. Increased in-line inspection activity required to maintain alignment with evolving industry practice;
> 5. Unanticipated system improvements and new stations to supply gas to large new customers;
> 6. Integrity related capital for Burns Bog pipeline stress relief; and
> 7. Pressures from the increased cost of equipment and supplies purchased from the United States due to the unfavourable exchange rate.

5.1 What were the capital costs to carry out the Regionalization Initiative?

Response:

The total capital costs related to the Regionalization Initiative were approximately $1.6 million. Phase 1 capital costs incurred in 2014 were approximately $1.3 million. Phase 2 capital costs incurred in 2016 were approximately $0.3 million.

Please refer to Tables C-1 and C-2 in Appendix C2 of the Application which outline the details of the Regionalization Initiative.

5.2 Please confirm that FEI shareholders have received a financial benefit from the Regionalization Initiative based on the O&M savings that were achieved.

Response:

Confirmed that both FEI's shareholder and FEI's customers have received a financial benefit from the Regionalization Initiative based on the O&M savings that were achieved. The financial benefit is reflected through the earnings sharing calculation.

There are two components to the earnings sharing calculation – the capital expenditures and the O&M. The table below summarizes the earnings sharing impacts of both phases of the Regionalization Initiative based on the capital[2] and O&M set out in Tables C-1 and C-2 of Appendix C-2.

Regionalization Phases 1 and 2 ($ millions)

	2014	2015	2016	2017	2018	2019	Total
Cumulative Capex	1.30	1.30	1.60	1.60	1.60	1.60	
Earnings Sharing	**0.02**	**0.02**	**0.03**	**0.03**	**0.03**	**0.03**	**0.15**
O&M Expenditures	0.90		0.80				
O&M Savings	- 1.00	- 1.00	- 2.10	- 2.10	- 2.10	- 2.10	
Net O&M	- 0.10	- 1.00	- 1.30	- 2.10	- 2.10	- 2.10	
Earnings Sharing	**- 0.05**	**- 0.50**	**- 0.65**	**- 1.05**	**- 1.05**	**- 1.05**	**- 4.35**

The table above shows that customers and FEI's shareholder will have each received a net benefit of $4.2 million over the term of the PBR ($4.35 million, less $0.15 million). After the PBR term, any O&M savings will continue to benefit customers through lower rates into the future.

5.2.1 If not confirmed, please explain why not.

Response:

Please refer to the response to CEC IR 1.5.2.

5.2.2 If confirmed, please provide the total benefits to date that FEI shareholders have received from the Regionalization Initiative.

Response:

Please refer to the response to CEC IR 1.5.2.

[2] Assumes capital expenditures for the Regionalization Initiative are subject to earning sharing during the term of the PBR plan. Earnings sharing is calculated based on cumulative capital expenditures.

5.3 Have there been any O&M or capital savings associated with the installation of Jomar valves?

Response:

No, at this time, there have not been any O&M or capital savings associated with the installation of Jomar valves. Savings from the installation of Jomar valves are anticipated in association with any visits subsequent to the Jomar valve installation that require turning off gas at the meter set. At that time, FEI expects savings because the completion of work at locations with Jomar valves installed will not require appointment setting or shut off and relight. At this time, the Jomar valves have not been installed long enough to have had a return visit. Therefore savings have not yet been realized.

5.3.1 If so, please provide.

Response:

Please refer to the response to CEC IR 1.5.3.

5.4 Please confirm that industry practice is continually evolving and compliance is integral to the proper and safe provision of natural gas service.

Response:

FEI confirms that industry practice is always evolving; however, FEI will evaluate the applicability of industry practice to the safe and reliable operation of its transmission assets prior to adoption. Please refer to the response to BCUC IR 1.9.11 for further discussion of evolving industry practice.

5.4.1 If not confirmed, please explain why not.

Response:

Please refer to the response to CEC IR 1.5.4.

5.5 Please provide quantification of the impact of the unfavourable exchange rate.

Response:

For the majority of capital items, the impact of the unfavourable exchange rate cannot be specifically quantified. Apart from the services and materials that FEI sources directly from the United States, there are large volumes of materials that are sourced from Canadian distributors where the higher cost of goods is passed on to FEI according to the terms of the contract. FEI's vendor contracts can have a negotiated currency clause that governs the treatment of fluctuations in exchange rate between the two parties and the terms of that clause could be different for each vendor. Services and materials for capital projects are also often negotiated specifically based on a detailed scope of work for the project and are therefore subject to the economic conditions and exchange rates in place at that time. The individual contribution of the various drivers on price cannot be isolated, and as a result, FEI is unable to definitively separate the impact of the unfavourable exchange rate on capital costs from inflationary pressures and other variables that drive service and material costs

However, FEI is able to provide examples to demonstrate the effect of the unfavourable exchange rate on specific capital items.

1. Meter purchases: Virtually all of FEI's meters purchased are manufactured in the United States. Purchasing a population of meters equivalent to what was purchased for $7.8 million CAD in the 2013 base year would cost an additional $2.3 million CAD today, which is equivalent to an approximate 30% increase in cost.

2. Compressor Dry Gas Seal Upgrade: This project required contracting with Solar Turbines from the United States to perform the work. The proposal for the 2016 upgrade was originally submitted in July of 2014 for a value of $2.1 million CAD based on an exchange rate of 1.07. Before signing the contract in September of 2015, Solar increased their pricing to approximately $2.5 million CAD, based on an exchange rate of 1.33 for an increase of $0.4 million in a span of just over two years.

FEI provided the forecast CAD/USD exchange rates over the course of the PBR term as compared to the 2013 base year in its responses to NGTL IR 1.1.a and 1.1.b. Utilizing those exchange rates, the decline in the value of the Canadian dollar relative to the US dollar during the PBR term is estimated to be between 20 to 30 percent. The magnitude of this decline in the Canadian dollar is causing a cost pressure for FEI in managing its formula-driven capital expenditures during the term of the PBR Plan.

6. Reference: Exhibit B-2, Page 8

> FEI has sought to mitigate the impact of the above factors through a combination of seeking out efficiencies in capital spending and re-prioritizing projects for further evaluation. Examples of efficiency initiatives undertaken to date include Project Blue Pencil, negotiating rates with contractors, better coordination with municipal and Ministry of Transportation projects, reuse of standardized bypass equipment, in-line inspection run coordination, and the in-sourcing of application and infrastructure development. For 2016, FEI is continuing this ongoing productivity focus through pursuing capital efficiencies associated with a number of projects, such as a change in process for the replacement of aging residential regulators, coordination with municipalities during mains renewals and updates to station design requirements.
>
> The re-prioritization process was described in FEI's annual review for 2016 rates. FEI's ability to re-prioritize capital spending, however, is limited and cannot be used to fully mitigate cost pressures. Specifically, further re-prioritization of significant portions of capital work to future years is not recommended as over time it will:
>
> - Result in increasing risk exposure in the system;
> - Result in projects being spread across multiple years that could otherwise be combined and completed for a lower total cost;
> - Lead to more equipment replacements done on an urgent basis and at a higher cost than a planned replacement; and
> - Limit the kind of capital investments required to realize productivity efficiencies and operational savings such as those identified in Section 1.4.3.

6.1 Will FEI likely be deferring capital spending as a result of the capital spending challenges? Please explain why or why not.

Response:

FEI will reprioritize capital spending as part of its routine management of the capital portfolio. However, FEI will not defer significant amounts of capital spending that would result in increased risk exposure in the gas delivery system.

FEI continuously manages its capital investment plan to:

- Ensure a safe and reliable gas delivery system;
- Maintain an acceptable risk profile for the system;
- Optimize resources and spending; and
- Achieve efficiencies and cost savings.

In order to achieve these goals, some projects that are assessed to be less critical to the system, or that are less time-sensitive, may be reprioritized to future years in favour of more urgent projects. Likewise, if additional capital is made available through project delays or cost savings, projects may be brought forward based on their assessed priority and their ability to be successfully executed.

Some degree of timing flexibility is built into the multi-year capital plan with the understanding that conditions change and the plan must be capable of adapting. However, the capital cost pressures that FEI is currently experiencing exceed its ability to reprioritize work within the plan without increasing the risk exposure in the gas delivery system. Since FEI will not defer significant amounts of capital spending, FEI anticipates capital expenditures to exceed the capital formula in some of the remaining years of the PBR term.

6.2 If yes, how much capital spending does FEI expect to defer, and for how long will FEI make these deferrals?

Response:

As noted in the response to CEC IR 1.6.1, FEI will reprioritize capital spending as part of its routine management of the capital portfolio, but will not defer significant amounts of capital spending that would result in increased risk exposure in the gas delivery system. Until a pressure or opportunity becomes known, FEI cannot predict the evolution of the capital portfolio that would occur, nor quantify the magnitude or duration of any reprioritization.

6.3 Would FEI consider deferring capital spending that would otherwise occur before the end of the PBR period to after the PBR period? Please explain why or why not.

Response:

As stated in the response to CEC IR 1.6.1, FEI is constantly managing and optimizing the capital investment plan to achieve the stated goals. This routine capital plan management could include moving some projects outside of the PBR period that were previously within it and moving some projects into the PBR period that were previously outside of it.

Apart from this routine capital plan management, FEI would not consider deferring any significant capital spending to after the PBR period for the reasons stated on page 8 of the Application. FEI believes that deferring any significant capital spending to after the PBR period would result in increased risk exposure to the system and would ultimately result in higher costs to execute the work. Furthermore, deferral of projects to after the PBR period could lead to an accumulation of work that could exceed FEI's ability to execute in a timely manner.

7. Reference: Exhibit B-2, Page 12

> At this time, for 2016, FEI is projecting to be within the 10 percent one-year capital dead band, but to exceed the 15 percent two-year cumulative dead band. Specifically, over 2015 and 2016, capital spending will be cumulatively 19.1 percent above the combined capital formula amounts for those years, which exceeds the two-year cumulative dead band by 4.1 percent. Accordingly, FEI has added 4.1 percent of its 2016 capital spending, or $6.118 million[14] to its opening plant in service for 2017. FEI has also reduced the cumulative capital expenditures utilized in the earning sharing mechanism by the same amount ($6.118 million), such that the earnings sharing with customers is increased (see section 10 of the Application). In this way, there is no earnings sharing on the amount by which FEI exceeded the dead band.

7.1 Please confirm that the two-year cumulative deadband uses rolling figures, such that the following year will consider capital spending from 2016 and 2017.

Response:

Confirmed.

7.1.1 If not confirmed, please explain why not and if the two-year cumulative deadband would recommence with 2017 and 2018 figures.

Response:

Please refer to the response to CEC IR 1.7.1.

8. Reference: Exhibit B-2, Pages 12 and 13

> At this time, FEI is not recommending an increase to the annual capital formula amount for the remaining years of the PBR term. Within the many projects that contribute to capital spending in any given year, FEI is unable to isolate any that in particular are ongoing and should be added to the formula. FEI does not believe that a lengthy process to review what capital items should be added into the capital formula is an efficient solution to the ongoing capital issues. By not adjusting the capital formula amount, the incentive properties of the PBR Plan remain intact and will remain consistent throughout the remainder of the PBR term. While FEI expects to continue to experience capital cost pressures, the dead band mechanism remains a reasonable way to deal with capital cost pressures by ensuring no sharing of negative earnings impacts with customers for capital expenditures in excess of 10 percent of the formula amount or 15 percent over two years.

8.1 Does FEI expect to exceed the dead band 10% or 15% in terms of sharing negative earnings impacts?

Response:

FEI cannot determine at this point whether the dead band will be exceeded and by how much in each of the remaining years of the PBR Term.

9. Reference: Exhibit B-2, Page 22

> **3.1 INTRODUCTION AND OVERVIEW**
>
> This section describes FEI's forecast of gas sales and transportation volumes based on the forecast total energy demand from residential, commercial and industrial customers in 2017, as well as the revenue and margin at 2016 common delivery rates and applicable 2016 commodity, storage and transport rates[16]. As described in detail below, FEI's forecast of demand for natural gas is based upon a methodology that is consistent with that used in prior years, and provides a reasonable estimate of future natural gas demand for 2017. FEI is forecasting an increase in consumption in 2017 compared to both the new 2016 projected demand and the 2016 Approved demand. The total normalized demand is forecast to be approximately 215.8 PJs in 2017, up approximately 3.7 PJs compared to the new 2016 projected demand. Of the 3.7 PJ increase, approximately half is from higher industrial volumes and half is from increased LNG volumes. Compared to the 2016 Approved demand of 207.6 PJs[17], the 215.8 PJs forecast for 2017 is up approximately 8.2 PJs with the main increases being 2.0 PJs for Rate Schedule 22 demand, 1.8 PJs for residential demand, 1.6 PJs for Rate Schedule 46, 1.5 PJs in additional BC Hydro Island Cogeneration Project contract demand and 1.2 PJs in additional commercial customer demand. Based on the 2016 rates for each customer class, FEI's 2017 revenue forecast at existing rates is $1,088.812 million and FEI's 2017 gross margin forecast is $789.518 million. FEI has provided extensive supplementary information on its demand forecast in Appendix A of the Application.

9.1 Has the Commission ever specified the methodology that is to be used in generating the demand forecast during the PBR period?

Response:

No, the Commission has not specified the method to be used in generating the demand forecast during the PBR period.

9.1.1 If yes, please provide the appropriate reference.

Response:

Please refer to the response to CEC IR 1.9.1.

9.1.2 If yes, please confirm that the FEI forecasting methodology is consistent with that specified for the PBR period.

Response:

Please refer to the response to CEC IR 1.9.1.

9.1.2.1 If not confirmed, please identify any areas that do not conform to the Commission determination with respect to forecasting during the PBR period.

Response:

As stated in the response to CEC IR 1.9.1, there was no such Commission determination.

10. Reference: Exhibit B-2, Page 23

- Appendix A2 – Historical Forecast and Consolidated Tables

  Provides historical forecast and actual data broken down by customer classes and service areas, as well as consolidated totals, including variance analysis and the results of the Industrial Survey. FEI's demand forecast method has performed well. Based on the 10 years of data shown in section 3.5 of Appendix A2, the 10-year mean average percentage error of the aggregate demand forecast is 2.7 percent, which includes a residential demand forecast error of 2.1 percent and a commercial demand forecast error of 2.0 percent. Most recently, the aggregate demand forecast error for 2015 was 2.1 percent which includes a residential demand forecast error of 1.3 percent and a commercial demand forecast error of 0.3 percent.

10.1 Has FEI made any alterations to its forecasting that has resulted in improvements in the demand forecast error?

Response:

FEI has made two changes to the Industrial Demand forecast method as follows:

1. The Industrial Demand Survey is now conducted as close as possible to the filing date and test period. This is not a method change per se, but simply a change in timing.

2. Returned Industrial Demand surveys are now reviewed with key account managers in Industrial Marketing to make sure the results are reasonable. Where the results appear unreasonable, the key account manager follows up with the customer to confirm or correct the survey.

No method changes have been made to any component of the use rate or customer count forecast.

10.1.1 If so, please explain.

Response:

Please refer to the response to CEC IR 1.10.1.

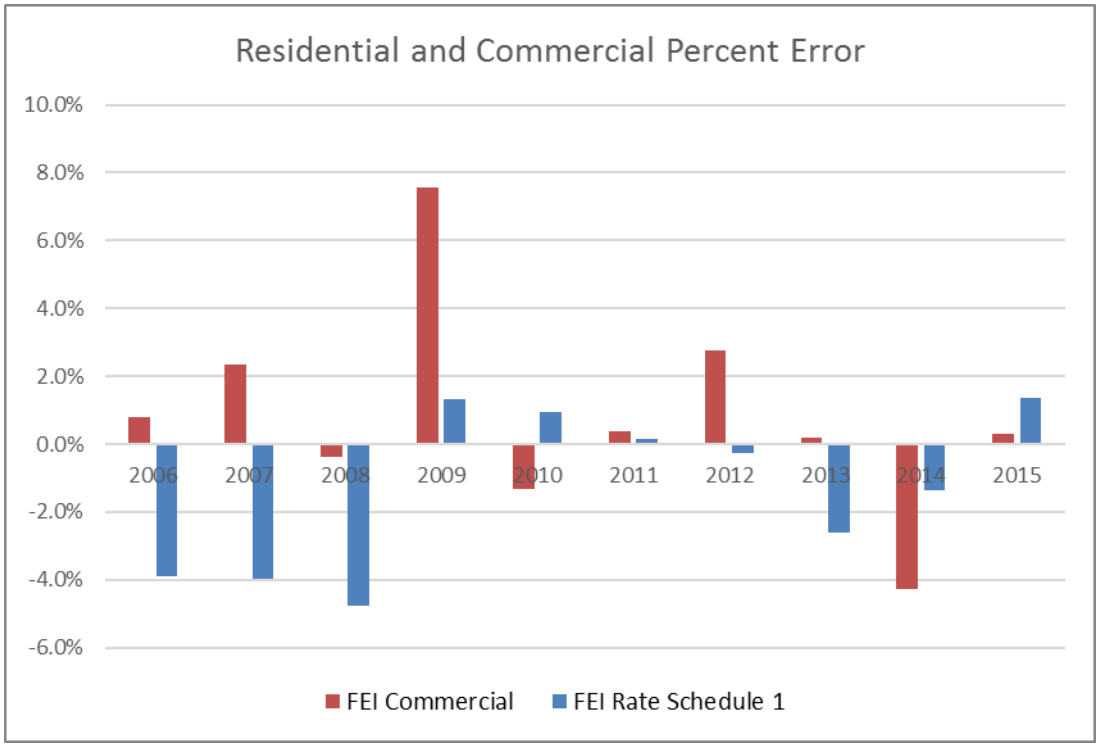
10.1.2 If not, to what does FEI attribute the reduction in the forecast error?

Response:

The chart below shows the annual absolute percent error (APE) for the commercial and residential demand forecasts.

With respect to the residential and commercial demand, the forecast methods are generally consistent year over year, although in some years the forecast has been prepared further in advance of the year, depending on when the relevant application has been filed.

FEI does not expect the forecast methods to achieve the same results each year, so variations in the accuracy are expected. The one year reduction in forecast error realized in 2015 cannot be attributed to any specific factor.



Over the 10 year period, the mean absolute percent error (MAPE) is near 2% for both the residential and commercial rate classes, indicating the use of appropriate modeling techniques for these classes.

11. Reference: Exhibit B-2, Page 23

- Appendix A4 – FEI's Response to the Commission's Forecasting Directives

  Provides an analysis of alternatives to FEI's existing forecast method and FEI's recommendations for residential and commercial UPC forecasts and commercial net customer additions forecasts for the remainder of the PBR term. Based on surveys conducted by ITRON Inc. and Boreas Consulting, FEI's demand forecast method consistently outperformed the average performance of forecasts from other gas utilities of 4 percent. FEI has identified and tested alternative forecast methods and found one that offers the potential to improve on the accuracy of FEI's existing method. FEI will continue testing this alternative over the remainder of the PBR term to determine if it is preferable to the existing method.

11.1 Will FEI utilize the improved methodology during the PBR term if turns out to be successful in further testing, or will FEI wait until the end of the PBR term to introduce this method? Please explain and provide reasons.

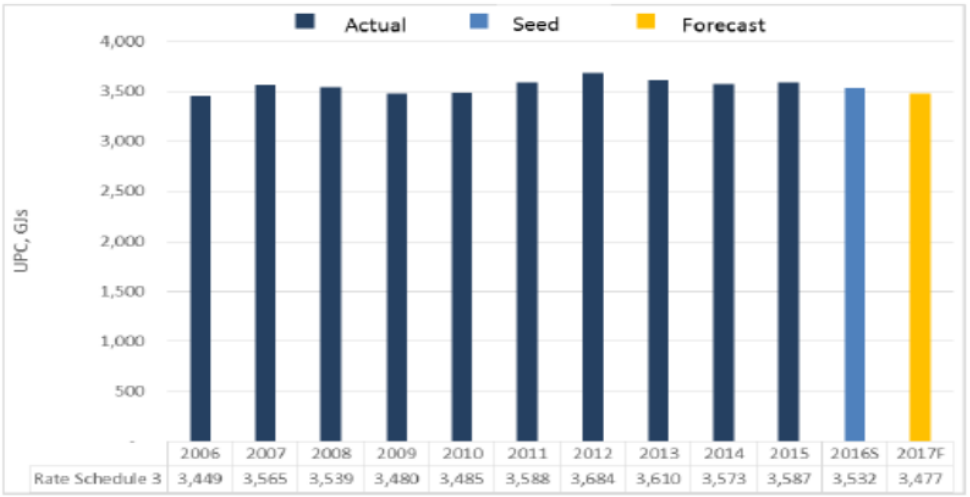
Response:

Please refer to the response to BCUC IR 1.21.6.

12. Reference: Exhibit B-2, Pages 26 and 27

As shown in Figure 3-3, a recent downward trend in Large Commercial (Rate Schedule 3) UPC is forecast to continue. The Rate Schedule 3 UPC is forecast to decrease slightly by 55 GJs (1.6 percent) in 2017.

Figure 3-3: Rate Schedule 3 UPC



	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016S	2017F
Rate Schedule 3	3,449	3,565	3,539	3,480	3,485	3,588	3,684	3,610	3,573	3,587	3,532	3,477

12.1 Is FEI aware of any circumstances that have prompted the recent downward trend in Large Commercial?

Response:

There are 154 industry sectors in Large Commercial Rate Schedule 3. These sectors, and individual customers within, collectively consume an average of approximately 3,500GJ/yr. There are many factors that could contribute to the relatively small change in average use per customer in this rate class. As such it is not possible to ascertain the reasons why the overall trend is down. Additionally, as there are so many different heterogeneous sectors represented in the rate class, use per customer does not provide insight into the drivers for the consumption trend.

12.1.1 If so, please explain.

Response:

Please refer to the response to CEC IR 1.12.1

12.1.2 If so, does FEI have any predictions as to whether or not these circumstances are likely to continue or possibly reverse? Please explain.

Response:

It is difficult for FEI to make predictions due to the number and diversity of industry sectors in this rate class as noted in the response to CEC IR 1.12.1.

12.2 Is this really a downward trend or simply an oscillation about a relatively flat norm? Please explain.

Response:

FEI's reference to "a recent downward trend" was referring to recent years. Since FEI forecasts commercial use rates based upon the past three years, if there is a slight downward (or upward) trend in recent years this will be reflected in the forecast.

Over the entire time frame shown in Figure 3-3, the variations are relatively small. Given that there are both increases and decreases, and the changes are small, FEI sees this as minor variations around a relatively flat norm.

12.3 Does FEI have any specific evidence supporting a downward trend theory?

Response:

Although Figure 3-3 shows a decrease in UPC after 2015, FEI has no specific evidence that this trend will continue. The UPC since 2006 has been variable. Please also refer to the response to CEC IR 1.12.1.

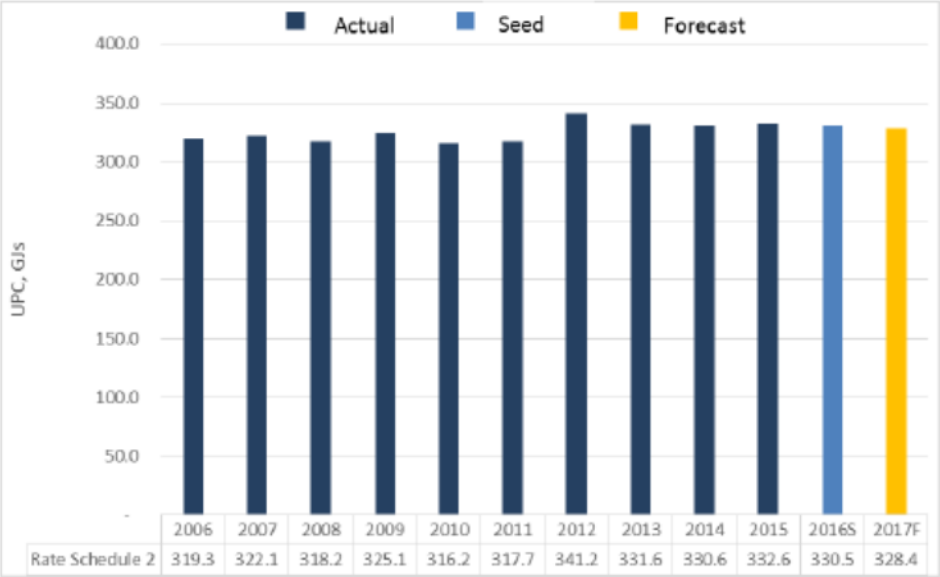
12.3.1 If yes, please explain.

Response:

Please refer to the response to CEC IR 1.12.3.

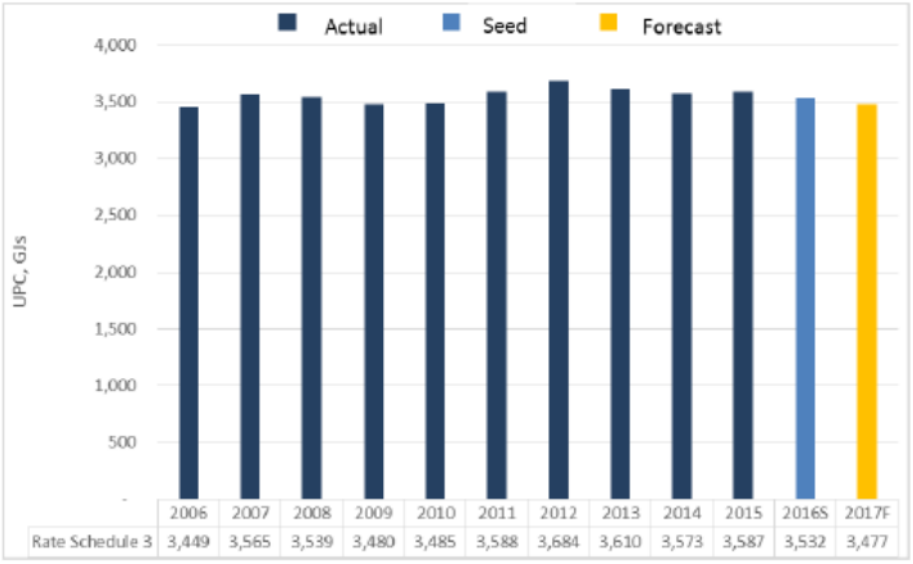
13. Reference: Exhibit B-2, Pages 26, 27 and 28

Figure 3-2: Rate Schedule 2 UPC



	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016S	2017F
Rate Schedule 2	319.3	322.1	318.2	325.1	316.2	317.7	341.2	331.6	330.6	332.6	330.5	328.4

Figure 3-3: Rate Schedule 3 UPC



	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016S	2017F
Rate Schedule 3	3,449	3,565	3,539	3,480	3,485	3,588	3,684	3,610	3,573	3,587	3,532	3,477

13.1 What types of marketing or other activities does FEI undertake to increase the UPC for its commercial customers? Please explain.

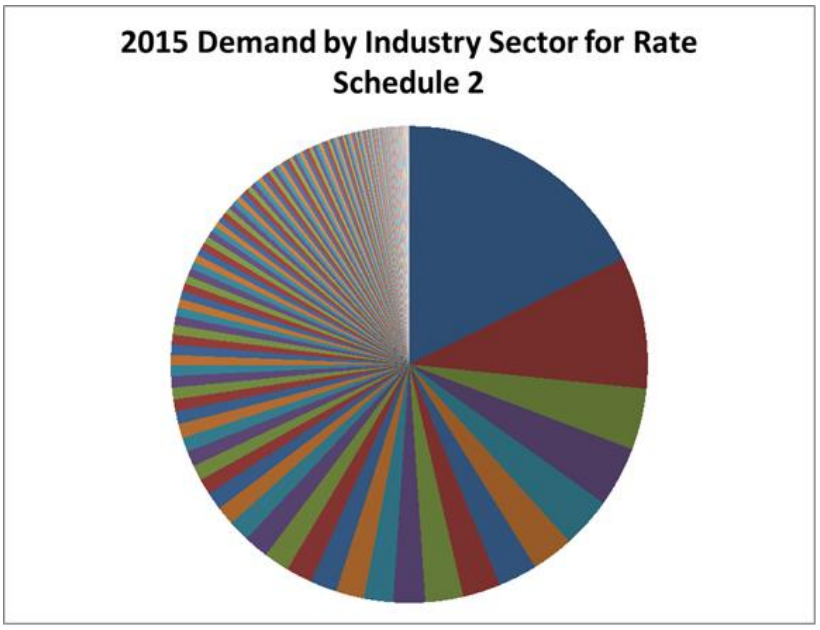
Response:

FEI undertakes marketing efforts to increase commercial customer demand. FEI's activities are primarily aimed at attracting new customers, retaining current customers and promoting the general use of natural gas through marketing campaigns such as "Gas is Good". FEI's account managers also work with larger commercial customers to increase their understanding of how natural gas can benefit their businesses. As there are so many diverse sectors in the commercial rate class as noted in the response to CEC IR 1.12.1, FEI would need to invest significant additional resources to conduct additional marketing related activities targeted to each type of customer.

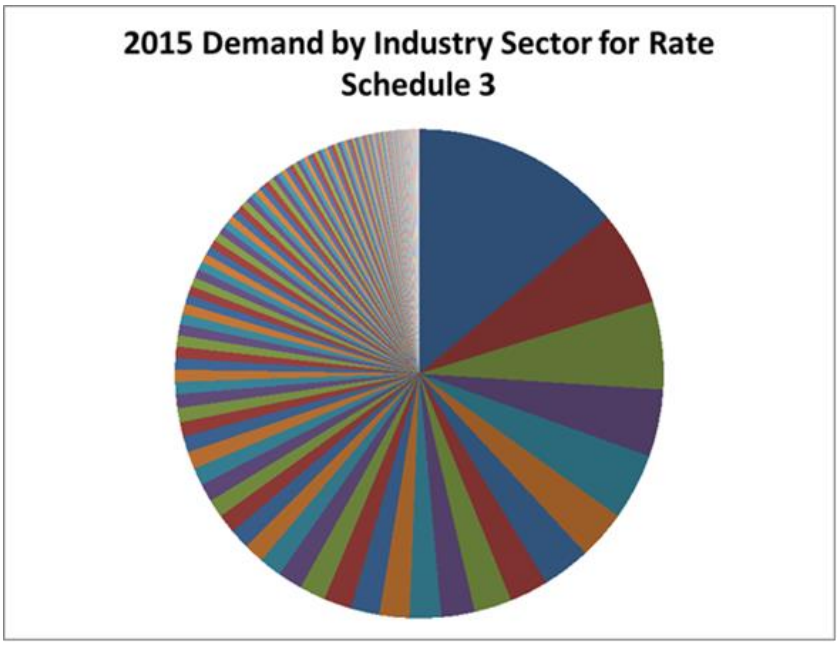
13.2 What types of analysis has FEI undertaken to understand what its customers' requirements are and will be in the future? Please explain.

Response:

There are 177 industry sectors in Small Commercial Rate Schedule 2 and 154 industry sectors in Large Commercial Rate Schedule 3 as depicted in the pie charts below. These industry sectors and the customers within them have heterogeneous requirements. FEI's account managers work with larger commercial customers to understand their needs. However, the number of industry sectors that would require market research to ascertain current and future customer requirements would make the required analysis cost prohibitive, and FEI is not certain that there would be any additional value from such an approach. FEI believes that its current forecast methodology is reasonable and appropriate.


2015 Demand by Industry Sector for Rate Schedule 2

1


2015 Demand by Industry Sector for Rate Schedule 3

2

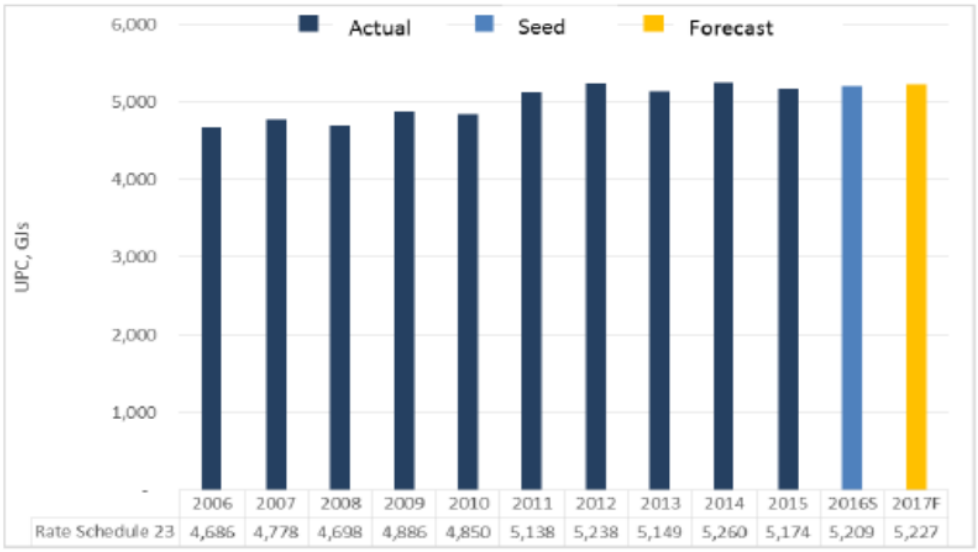
3

4

14. Reference: Exhibit B-2, Pages 27 and 28

As shown in Figure 3-4, the Large Commercial Transportation (Rate Schedule 23) UPC is forecast to continue the recent upward trend and grow by 18 GJs (0.3 percent) in 2017.

Figure 3-4: Rate Schedule 23 UPC



	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016S	2017F
Rate Schedule 23	4,686	4,778	4,698	4,886	4,850	5,138	5,238	5,149	5,260	5,174	5,209	5,227

14.1 Does FEI undertake marketing activities to increase its Large Commercial Transportation UPC?

Response:

FEI undertakes marketing activities as outlined in the response to CEC IR 1.13.1. FEI's account managers also work with large commercial transportation customers to look for ways to utilize gas in additional processes within their facilities.

14.1.1 If yes, please provide a brief description of these activities.

Response:

Please refer to the response to CEC IR 1.14.1.

14.2 If yes, does FEI believe these marketing activities are being influential in maintaining and raising the UPC?

Response:

Please refer to the response to CEC IR 1.14.1.

14.2.1 If yes, could such marketing activities be successfully undertaken for other rate schedules to improve their UPC? Please explain why or why not.

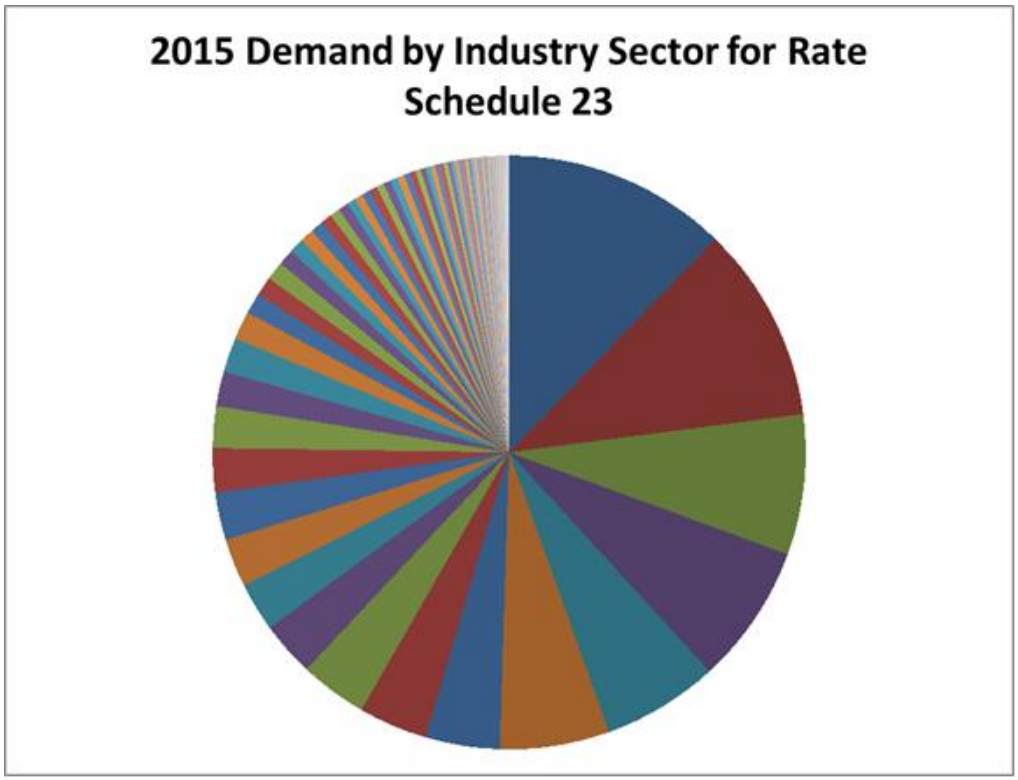
Response:

Please refer to the response to CEC IR 1.14.1.

14.3 What type of analysis has FEI done to determine what its customers' requirements would be? Please explain.

Response:

There are 82 diverse industry sectors in Rate Schedule 23 as illustrated in the pie chart below. FEI's account managers work with larger customers to understand their requirements. However, analysis of the requirements of customers across the entire spectrum of industry sectors would require FEI to invest in additional resources.



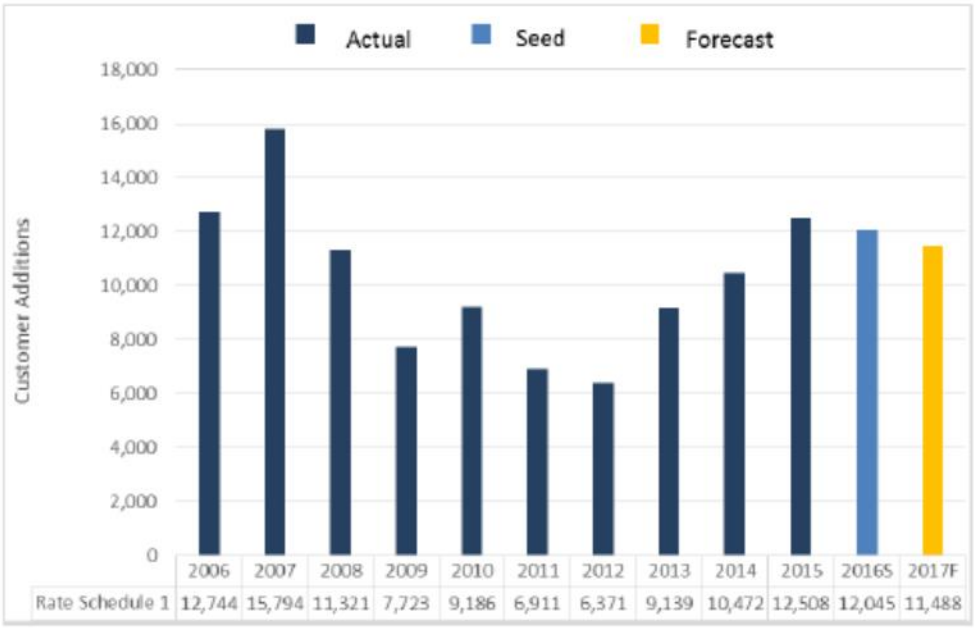
1

2

3

15. Reference: Exhibit B-2, Page 29

Figure 3-6: Residential Net Customer Additions



	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016S	2017F
Rate Schedule 1	12,744	15,794	11,321	7,723	9,186	6,911	6,371	9,139	10,472	12,508	12,045	11,488

As shown in the preceding figure, residential net customer additions started to recover in 2013 and have been fairly consistent in the years since then. The 2016 and 2017 forecast of 12,045 and 11,488, respectively, is consistent with the past two years of actual experience.

15.1 Please provide FEI's view of the circumstances that are contributing to the declining number of customer additions.

Response:

FEI understands the question to be referring to FEI's residential net customer additions forecast for 2016 and 2017. Consistent with past practice and the method described in Appendix A3, FEI forecasts residential customer additions based on the prior year's actual additions and the single and multi-family dwelling forecasts from the Conference Board of Canada (CBOC). The forecast of net additions is declining because the CBOC forecast is declining. The CBOC forecast can be found in Appendix A. FEI also notes that there is some uncertainty in the market with the recent introduction of the 15% tax on foreign ownership which may factor into future CBOC forecasts.

15.2 Please relate the FEI customer additions to BC population growth and household formation.

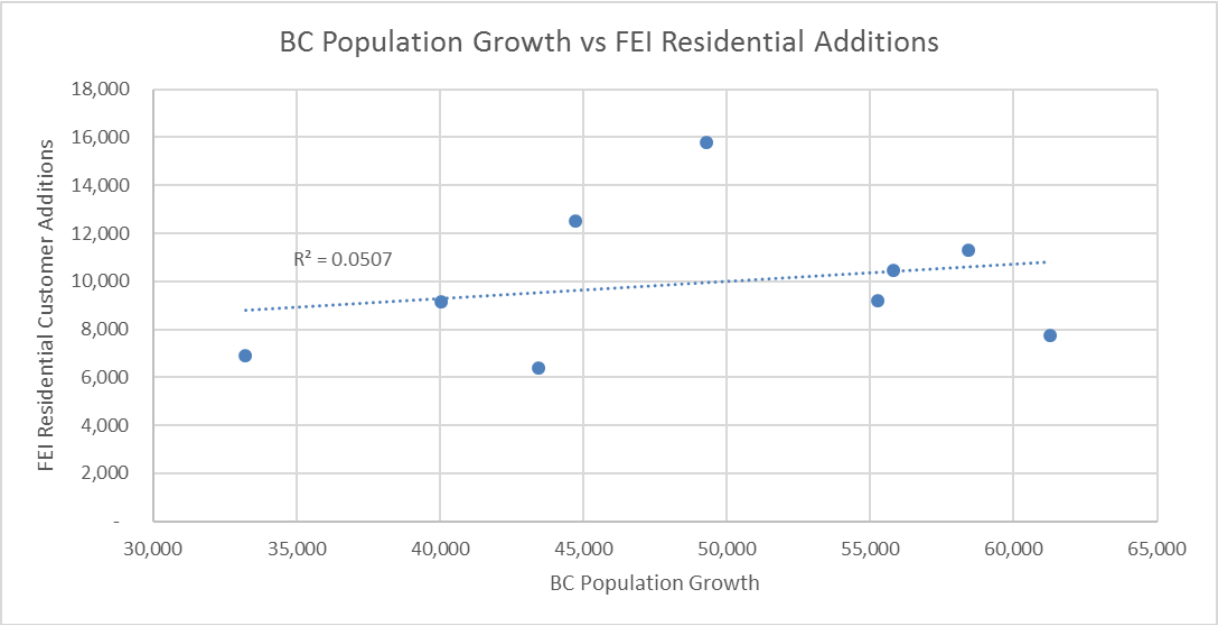
Response:

FEI understands the question to be referring to FEI residential net customer additions, and not total net customer additions.

The relationship between BC population growth and FEI customer additions and between household formation and FEI customer additions is shown in the two graphs below. Both graphs show a very weak correlation.

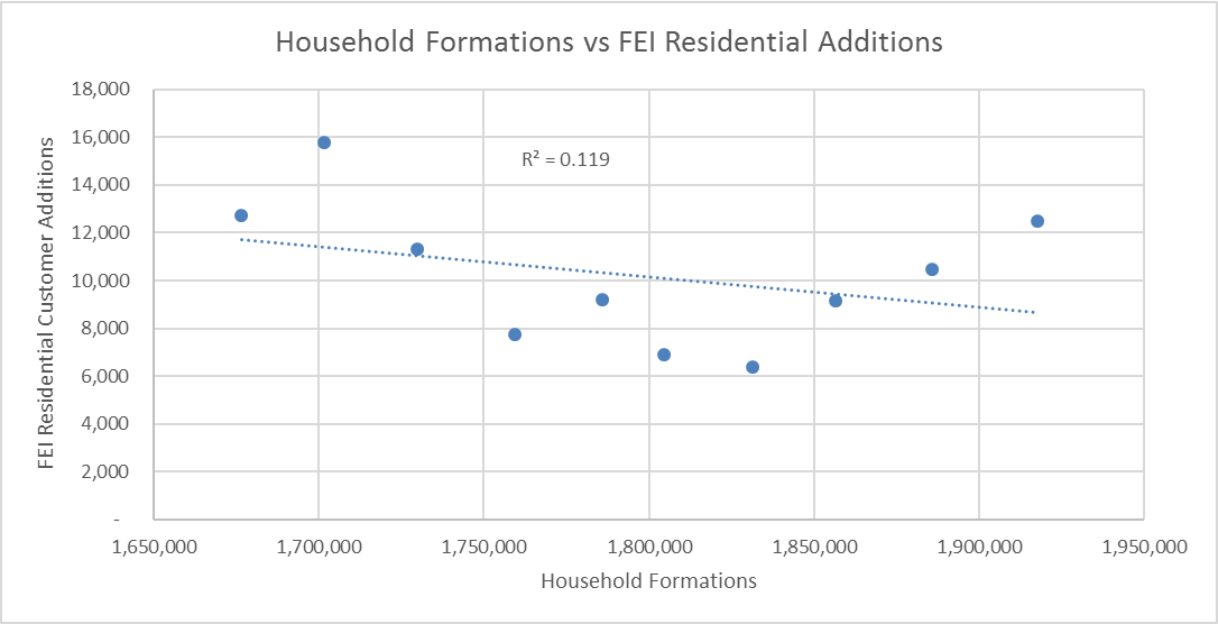
FEI has also provided a graph plotting the relationship between housing starts from the Conference Board of Canada (CBOC) Housing Starts forecast and FEI net customer additions, with the relationship being much stronger at 63%.

The relationship between population growth and FEI residential additions is as follows:



As shown above, the R^2 result for the correlation is very weak at approximately 5%. This result indicates that there is a very weak relationship between BC population growth and FEI residential net customer additions.

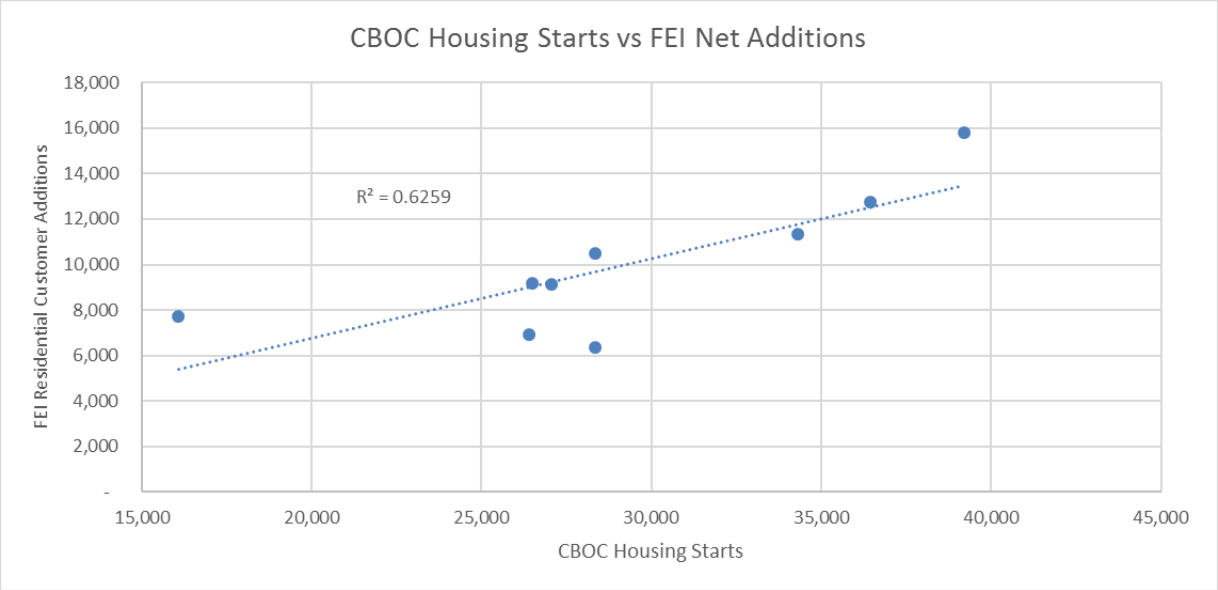
The relationship between household formations and FEI residential additions is as follows:



As shown above, the R^2 result for the correlation is very weak at approximately 12%. This result indicates that the relationship between household formations and FEI residential net customer additions is also weak.

FEI also notes that neither household formations data nor the population data provide the single family and multi-family proportions required by the residential customer forecast method, that are provided in the Conference Board of Canada (CBOC) Housing Starts forecast.

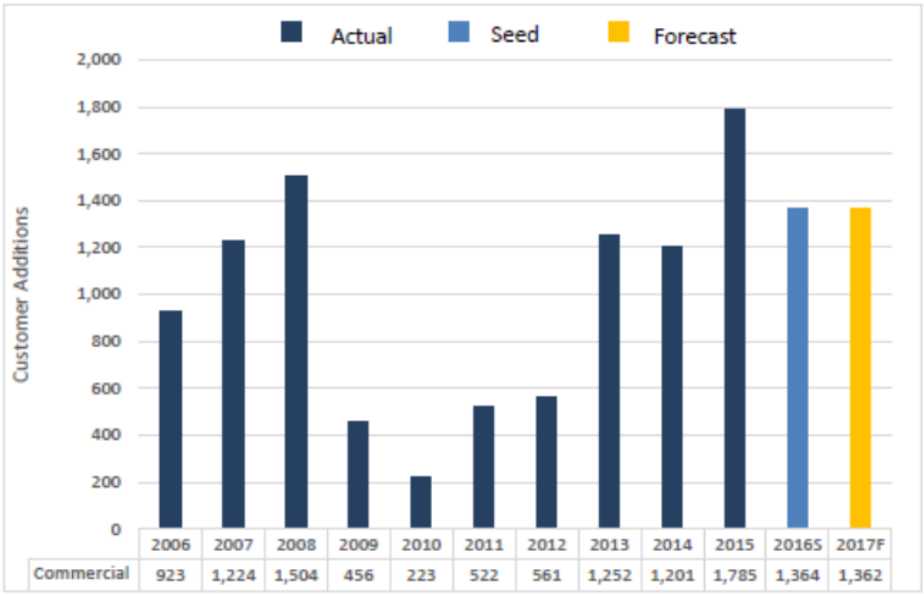
The correlation between the CBOC forecast and the FEI Residential Net Additions is shown below.



The relationship between CBOC Housing Starts and FEI Residential Net Customer additions is strong and the R^2 value is approximately 63%.

16. Reference: Exhibit B-2, Page 31

Figure 3-7: Commercial Net Customers Additions



	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016S	2017F
Commercial	923	1,224	1,504	456	223	522	561	1,252	1,201	1,785	1,364	1,362

As shown above, the Company is forecasting over 1,300 commercial net customer additions for 2017 based on three years of history (2013 to 2015).

4. COMMERCIAL CUSTOMER ADDITIONS

Commercial customer additions are calculated using a three-year average of prior actuals additions at the region and rate class level.

The starting point for the customer additions forecast is the actual month-end customer counts as recorded in FEI's billing system for each region and commercial rate schedule.

The month-end customer totals are used to determine the monthly net additions for three years by calculating the difference between consecutive months.

Once the regional and monthly additions have been calculated, three-year average seasonality factors can be calculated.

The actual customer additions are used to develop three-year average customer additions by sub-region.

The three-year average is used as the annual forecast commercial customer additions for both the seed and forecast years.

The three-year average annual forecast is then converted into a monthly forecast using seasonality factors.

The month end forecast as entered into FIS starts with the December actual customer count and adds the monthly additions.

16.1 To what circumstances does FEI attribute the significant increase in commercial customer additions in 2015?

Response:

It is difficult for FEI to ascertain the specific trends or circumstances that led to increased additions in 2015. However, some growth in commercial services is generally associated with residential growth. As residential growth occurs, various commercial services are required to meet the needs of the new community development. In addition, the recent lower cost of gas as compared to other fuel choices as well as the decrease in natural gas rates in Vancouver Island due to the phased in adoption of common rates could be contributing factors. As noted in response to CEC IR 1.12.1, FEI's commercial customers are from a variety of industry sectors and have different drivers for the changes in their consumption.

16.2 Please confirm that a simple three year average using 2013 to 2015 actuals would result in a forecast of 1413 for the 2016 seed year.

Response:

Confirmed. A simple three year average using 2013-2015 customer additions for Rate Schedules 2, 3 and 23 would result in a forecast of 1,413.

However, the forecast value is lower due to the way that Rate Schedule 23 was forecast for Vancouver Island and Whistler. Rate Schedule 23 on Vancouver Island and Whistler was opened in 2015 and as a result FEI is not able to develop a three year average of customer additions. For the current forecast, FEI assumed that all 151 customers in Rate Schedule 23 migrated to this rate schedule from other rate schedules and the level of growth will not be repeated in the future. As a result no further Vancouver Island or Whistler additions to Rate Schedule 23 were forecast for the 2016 seed and 2017 forecast years.

Please refer to the tables below for the calculation of the 2016 Seed customer additions for the respective rate schedules which total to 1,364.

Customer Additions

Rate Schedule 2	2013	2014	2015	2016S 3 Yr-Avg
Lower Mainland	869	674	701	748
Inland	335	295	271	300
Columbia	39	18	9	22
Revelstoke				4
Vancouver Island	77	184	455	239
Whistler	7	4	10	7
Total				**1,320**

Customer Additions

Rate Schedule 3	2013	2014	2015	2016S 3 Yr-Avg
Lower Mainland	-43	32	64	18
Inland	-33	-6	-14	-18
Columbia	-2	1	-4	-2
Revelstoke				0
Vancouver Island	-9	8	98	32
Whistler	-1	0	-12	-4
Total				**26**

Customer Additions

Rate Schedule 23**	2013	2014	2015	2016S 3 Yr-Avg
Lower Mainland	4	(13)	30	7
Inland	4	6	14	8
Columbia	1	-	7	3
Revelstoke				
Vancouver Island			141	None assumed
Whistler			10	None assumed
Total				**18**

16.2.1 Please provide a brief explanation for the discrepancy between the simple average and FEI's more complex calculations.

Response:

Please refer to the response to CEC IR 1.16.2.

16.2.2 Please confirm that a continued rising trend of net additions would be under-forecast using the methodology of averaging the past three years, while a declining trend would be over-forecast.

Response:

Confirmed. Please also refer to Appendix A4 of the Application where FEI reviews and discusses various forecasting alternatives for forecasting demand.

16.2.2.1 If not confirmed, please explain why not.

Response:

Please refer to the response CEC IR 1.16.2.2.

16.2.3 Has FEI ever considered using weighted averages to enable the most recent history to be considered more heavily than that earlier? Please explain why or why not.

Response:

Yes. The Holt's Linear exponential smoothing method discussed in Appendix A4 is based on weighting recent data more heavily than older data. The early test results look promising and as a result FEI is recommending additional testing of this method during the remainder of the PBR term with the intention of making a final recommendation at the conclusion of the PBR term.

In Holt's Linear exponential smoothing method, optimal and unique weighting values are determined for each forecast through an initialization and optimization process. All weighting values decline exponentially with time, but do so at different rates for different forecasts. In all cases the full historical data record is used.

17. Reference: Exhibit B-2, Page 35

> As shown in Table 3-1 below, the response rate achieved in 2016 was 51 percent of industrial customers, representing approximately 89 percent of industrial volumes. Of the remaining industrial customers, 34 percent received the survey and three reminder letters but did not reply. This group represents 9 percent of the industrial demand. Surveys could not be delivered to 15 percent of the industrial customers due to issues such as incorrect email addresses. This group represents just 2 percent of the total industrial load.

Table 3-1: Industrial Survey Response Rates

2016 Industrial Survey	Description	Customers	Demand
Survey completed	The survey was delivered and completed.	51%	89%
Survey delivered but not completed	The survey was delivered, but after three follow-up emails was not completed.	34%	9%
Survey undeliverable	The survey was not deliverable. This can be a result of invalid email addresses, faulty email servers etc.	15%	2%
Total		100%	100%

17.1 Does FEI undertake any actions other than emails, such as phone calls or physical mail to follow up with the survey participants who do not respond?

Response:

FEI uses phone calls and site visits in addition to emails to ensure that as many customers as possible respond to the industrial survey. Emphasis is placed on the larger volume customers, as evidenced by the 100% response rate from Rate Schedule 22 (please refer to the response to BCUC IR 1.16.1 for details of response rates by rate schedule).

Physical mail is not used due to the increased costs (printing, postage) and staff time that would be required to prepare and send out such mailings. The survey runs for six weeks, in an effort to keep it as close as possible to the filing date and test period. A mailed reminder would not be sent until other more efficient alternatives were exhausted, likely in the third week. By that time most of the large volume surveys have been received, so the mail campaign would apply to mostly smaller volume customers (for example in Rate Schedule 5). The short turn around would give respondents very little time to complete the survey and mail it back to FEI. In addition, once surveys were received, FEI staff would need to rekey the data into the Survey database, a step currently completed by the customer. FEI does not believe that the high costs

of a mailed reminder letter are justified based on the expected response rate and demand volumes potentially affected by such a mail campaign.

17.1.1 If no, please explain why not.

Response:

Please refer to the response to CEC IR 1.17.1.

17.1.2 If yes, please describe these actions.

Response:

Please refer to the response to CEC IR 1.17.1.

18. Reference: Exhibit B-2, Page 35

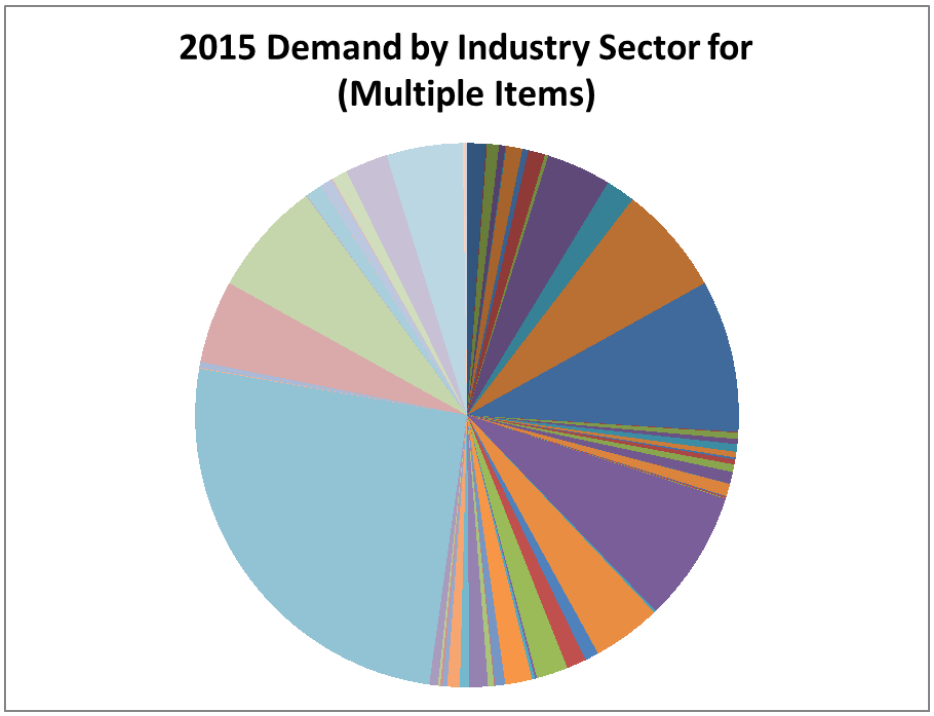
> The forecast of demand for all customers that either chose not to reply to the survey or could not be contacted (representing 11 percent of the total industrial demand) was set to 2015 actual consumption in preparing the 2017 forecast.
>
> As seen in Figure 3-12 below, the demand from the industrial rate schedules is forecast to increase to 82.1 PJs/yr (an increase of 1.8 PJs from 2016).

18.1 Why does FEI not apply the average change from the forecast demand that did reply to the forecast demand that did not reply or could not be contacted?

Response:

Customers in the rates classes that participate in the industrial survey represent approximately 63 unique sectors as shown in the chart below. The drivers causing changes in demand are different for each sector. The response rate also varies by industrial sector (more customers in coal mining reply than do condominium stratas, for example). As a result of these differences, FEI does not believe it would be prudent to apply the results from customers that respond to the survey to those that do not.

The following figure shows the 2015 industrial demand by industry sector:

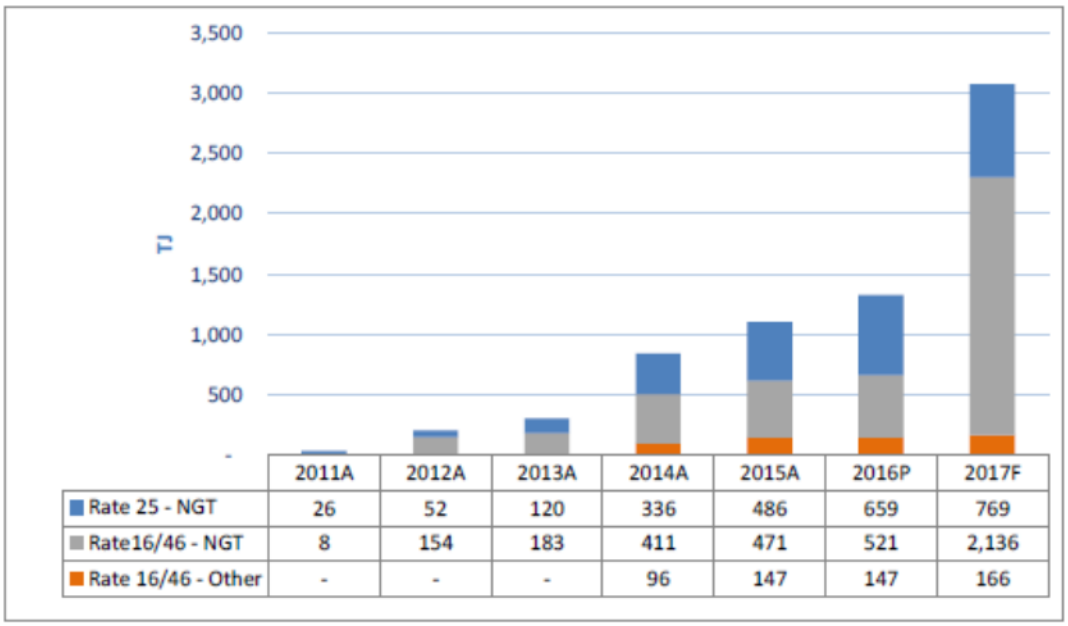


A list of industry sectors is provided below:

Industry Sectors	
Accommodation and Casino Services	Miscellaneous Manufacturing
Alumina and Aluminum Production and Proc	Miscellaneous Store Retailers
Amusement, Recreation Industries	Natural Gas Distribution
Animal Food Manufacturing	Non-Metallic Mineral Prod Mfg (ex Cement)
Animal Production	Nursing and Residential Care Facilities
Ashphalt	Other Chemical Product Manufacturing
Bakeries and Tortilla Manufacturing	Other Food Manufacturing
Beverage and Tobacco Product Manufacturing	Other Wood Product, Furniture Manufacturing
Cement and Concrete Product Manufacturing	Paper Mills
Cement Manufacturing	Personal and Laundry Services
Chemical Manufacturing	Plastics and Rubber Products Manufacturing
Coal Mining	Printing and Related Support Activities
Commerical Customer	Professional, Scientific, and Technical
Computer, Electronic & Electrical Product Manufact	Provincial and Territorial
Converted Paper Product Manufacturing	Pulp Mills
Crop Production - Mushrooms and Sprouts	Rail Transportation
Dairy Product Manufacturing	Real Estate (office)
Electric Power Generation, Transmission	Real Estate (residential)
Elementary and Secondary Schools	Refineries and Petroleum Manufacturing
Fabricated Metal Product & Machinery Manufacturing	Sawmills and Wood Preservation
Federal Government	Seafood Product Preparation and Packaging
Food Manufacturing	Social Assistance
Food Wholesaler-Distributors	Sugar and Confectionery Product Manufacture
Foundries	Support Activities for Agric, Forestry
Fruit and Veg. Preserving, Specialty Foods	Transportation
Full-Service Restaurants	Transportation Equipment Manufacturing
Funeral Services	Truck Transportation
Greenhouse/Nursery and Floriculture Production	Universities
Grocery Stores	Veneer, Plywood and Engineered Wood Prod
Hospitals	Waste Management and Remediation Service
Local, Municipal and Regional	Water Transportation
Meat Product Manufacturing	

19. Reference: Exhibit B-2, Page 37

Figure 3-13: Actual (A) Projected (P) and Forecast (F) Demand for CNG & LNG[22]



	2011A	2012A	2013A	2014A	2015A	2016P	2017F
Rate 25 - NGT	26	52	120	336	486	659	769
Rate16/46 - NGT	8	154	183	411	471	521	2,136
Rate 16/46 - Other	-	-	-	96	147	147	166

The forecast increase in demand in Rate Schedule 25 – CNG is primarily attributable to incremental load from existing customers including Smithrite Disposal Ltd. and Waste Management, as well as new load from Coast Mountain Bus Company and United Parcel Service Canada (UPS). UPS will begin fuelling approximately 47 package courier service vehicles in 2017.

The forecast increase in demand in Rate Schedule 46 – NGT is primarily attributable to new incremental load related to LNG for marine customers such as Puget Sound Energy (PSE)[23], BC Ferries and Seaspan. Of the 1,615 TJs of growth in NGT demand in this rate schedule, 1,546 TJs is related to new incremental load from these customers.

[22] Forecast includes all NGT related and other LNG demand inclusive of contract and excess demand flowing through stations as well as 3rd party station CNG/LNG volume.

[23] FEI has entered into an agreement with PSE to provide LNG to one Shipping vessel that will be operated by Totem Ocean Trailer (TOTE). The Rate Schedule 46 agreement is between FEI and PSE, with PSE providing the LNG to TOTE in the Port of Tacoma. Please refer to Appendix B, Section 4.1 for more information.

19.1 Is there any uncertainty associated with the increase in the Rate 16/46 NGT load?

Response:

As with any forecast of future demand, there is inherent uncertainty on what the actual level of demand will ultimately be. FEI took a number of variables into consideration when formulating

the NGT and LNG demand forecast at the time the Annual Review was prepared. These variables included the level of customer commitment indicated through discussions, actual contracted demand, and projected growth of demand from existing customers adding more natural gas vehicles to their fleets.

Since the filing of the Application, FEI has been informed by TOTE that their LNG adoption plans have been delayed by at least one year. This customer was initially projected to begin taking LNG from FEI under Rate Schedule 46 beginning in May 2017. However, this customer is now not expected to begin taking LNG from FEI under Rate Schedule 46 until April 2018. FEI will file an updated LNG NGT demand and revenue and O&M forecast reflecting this volume change for 2017 as part of its Evidentiary Update.

19.1.1 If so, please explain and provide the possible variation that could occur and any measures of risk that FEI has established with respect to this load.

Response:

The possible variation that could occur would be with respect to the portion of the forecast demand that is related to new customers that have indicated they would adopt natural gas as a transport fuel. If any of these intended new customers either delay adoption of natural gas or decide to continue to consume diesel fuel, this will impact the forecast NGT and LNG demand. Conversely, if additional customers adopt natural gas, this will also impact the forecasted NGT and LNG demand.

Please refer to the response to CEC IR 1.19.1.

19.2 Is FEI aware of any other significant loads that could potentially come on in 2017?

Response:

No. At this time, FEI is not aware of any other significant loads that could potentially come on in 2017.

19.2.1 If yes, please provide the potential load and the earliest it could be established.

Response:

Please refer to the response to CEC IR 1.19.2.

19.3 Please provide the expected benefit to all non-bypass customers created by this expanded use.

Response:

Expansion of the NGT program continues to provide benefits to non-bypass customers by way of delivery margin collected from Rate Schedule 46 customers. For example, the 2017 revised forecast of LNG volume to be filed in FEI's Evidentiary Update is 1,098 TJ, of which 379 TJ (approximately 34%) is from expansion of the NGT program into the marine market. The delivery margin associated with the 379 TJ from the marine market is approximately $1.8 million.

20. Reference: Exhibit B-2, Page 41

> UAF refers to gas that is not specifically accounted for in gas energy balance of receipts, deliveries, and operations use. UAF includes measurement variances and line loss of gas that is flowing in the transmission and distribution systems. Sources of UAF comprise, but are not limited to, system leakage, lost gas (gas lost as a result of utility and third party activities, including gas theft), and measurement inaccuracies. The cost of UAF related to the Sales rate classes is included in the cost of gas and recovered from core customers[26] via the gas cost rates, whereas the cost of UAF related to the Transportation Service rate classes is included in the determination of the delivery rates to facilitate recovery of UAF costs from Transportation Service customers, as they do not pay midstream charges.

20.1 What is the proportion of unaccounted for gas in the total cost of gas?

Response:

Consistent with past practice, the forecast UAF percentage is calculated based on the five-year rolling average recorded UAF – the forecast cost of gas used in the Application includes a forecast 0.6% UAF.

20.2 Is unaccounted for gas assessed to customers in the Customer Choice program?

Response:

The cost of UAF related to Sales customers is included in the midstream costs and recovered via the Storage and Transport Charge. The Storage and Transport Charge applies to all Sales customers, including customers in the Customer Choice Program.

21. Reference: Exhibit B-2, Page 42

As shown in the table below, FEI is forecasting other revenues to increase from the amounts approved for 2016.

Table 5-1: Other Revenue Components

Other Operating Revenue, ($ millions)	Approved 2016	Projected 2016	Forecast 2017
Late Payment Charge	2.314	2.242	2.178
Connection Charge	3.060	3.082	3.118
Other Recoveries	0.290	0.319	0.319
NGT Related Recoveries	2.898	2.947	4.507
Biomethane Other Revenue	0.294	0.263	0.448
SCP Third Party Revenue	14.957	14.957	14.347
LNG Capacity Assignment	18.039	18.039	18.039
Total Other Operating Revenue	**41.852**	**41.848**	**42.956**

21.1 Are Other Revenues included in the formulaic spending under PBR or are they excluded?

Response:

Other Revenues are excluded from the formulaic spending under the PBR Plan. The PBR formula is applicable to regular O&M and capital expenditures as discussed in sections 6 and 7 of the Application

21.2 Does FEI undertake any activities to increase other revenues for the benefit of ratepayers?

Response:

FEI discusses the initiatives, where relevant, to increase other revenues below.

Late Payment Charges – FEI does not undertake to increase these charges as these charges are detrimental to FEI's customers.

Connection Charges – Through FEI's marketing initiatives to add customers to the FEI system, revenue from connection charges will increase.

Other Recoveries – FEI does not undertake to increase the NSF returned cheque charges embedded in Other Recoveries as these charges are detrimental to FEI's customers.

NGT Related Recoveries – These recoveries are a function of the capital expenditures and marketing initiatives included in FEI's NGT program. Thus, through the NGT program initiatives FEI undertakes to increase these recoveries.

Biomethane Other Revenue – These revenues are a function of the capital expenditures and marketing initiatives included in FEI's Biomethane program. Thus, through the Biomethane program initiatives FEI undertakes to increase these revenues.

SCP Third Party Revenue – This revenue is primarily a function of various shippers contracting capacity on the SCP pipeline. The east to west capacity related revenue has generally been contracted under Fixed Transportation Service Agreements having multiyear terms. Although the west to east capacity related revenue has been the result of the T-South Enhanced Service agreement between Spectra and FEI for the past number of years, historically the west to east capacity has not been contracted under Fixed Transportation Service Agreements and revenue has been generated via short-term mitigation activities. Further, FEI anticipates the west to east capacity related revenue over the next few years to mainly be driven by short-term mitigation activities. FEI continually seeks opportunities to maximize SCP value for the benefit of its customers.

LNG Capacity Assignment – The revenue associated with the LNG capacity assignment simply represents a transfer of Mt. Hayes LNG facility costs from the delivery margin to gas costs. This cost allocation reflects the level of LNG service provided to the gas supply portfolio. As indicated in the Application, the Mt. Hayes cost allocations will be reviewed in the Rate Design Application to be filed later this year.

21.2.1 If yes, please describe the activities FEI undertakes.

Response:

Please refer to the response to CEC IR 1.21.2.

21.2.2 If no, why not.

Response:

Please refer to the response to CEC IR 1.21.2.

22. Reference: Exhibit B-2, Page 49

On page 20 of the Fort Nelson Decision, the Commission Panel discussed FEI's proposal to allocate $24 thousand in communication and line heater fuel costs to the Fort Nelson Service Area that had not been allocated prior to 2013:

> Of concern to the Panel is the movement of communication and line heater fuel costs which were previously centralized in FEI to FEFN. In our view this is very similar to the situation involving intangible plant capital additions which have been denied in Section 4.1.4 of this Decision. These communications and line heater fuel costs already form part of FEI's Base O&M and are being escalated annually in accordance with the PBR Decision. As explained in Section 4.1.4 of this Decision, if the Panel were to accept the transfer of these costs to FEFN as proposed, it would amount to "double dipping." Therefore, the Panel considers moving the communication and line heater fuel costs to FEFN to be inappropriate at this time and denies the inclusion of these costs as part of FEFN's forecast 2015 and 2016 O&M expenses...FEI is directed to identify any other cases where FEI Base Capital or O&M amounts have been allocated to FEFN since approval of the PBR Plan. FEI is further directed to address this issue in its Annual Review of 2016 Delivery Rates Application and to provide a proposal as to how the communication and line heater fuel costs can be most appropriately and equitably handled going forward given the current PBR Plan.

22.1 Did FEI identify any other cases where FEI Base capital or O&M amounts have been allocated to FEFN since the approval of the PBR?

Response:

This response will address CEC IRs 1.22.1, 1.22.1.1., 1.22.2 and 1.22.2.1.

FEI did not identify any other cases where FEI Base capital or O&M amounts have been allocated to FEFN since the approval of the PBR or where costs have been duplicated in the utilities.

22.1.1 If yes, please identify these cases and provide quantification for each situation.

Response:

Please refer to the response to CEC IR 1.22.1.

22.2 Is FEI aware of any other situations in which it could be 'double dipping'?

Response:

Please refer to the response to CEC IR 1.22.1.

22.2.1 If yes, please identify and provide quantification for each situation.

Response:

Please refer to the response to CEC IR 1.22.1.

23. Reference: Exhibit B-2, Page 53

> The O&M costs to support Rate Schedule 46[40] include all incremental costs associated with the liquefaction of natural gas, the dispensing of LNG and the handling and loading of tankers to transport LNG at the Tilbury and Mt. Hayes LNG facilities. These costs are incremental to the regular O&M costs for operating the Tilbury and Mt. Hayes LNG facilities as peaking storage facilities. Specific costs include additional labour, materials, contractors, power, fuel, and fees and administration.

A table breaking out the various components of the Rate Schedule 46 O&M is included below.

Table 6-6: Rate Schedule 46 O&M ($ millions)

Line No.	Description	2016 Approved	2016 Projected	2017 Forecast
1	Tilbury Plant:			
2	Labour	0.280	0.673	2.160
3	Materials	0.040	0.091	0.170
4	Contractor	0.060	0.320	0.420
5	Power	0.448	0.438	4.060
6	Fuel Gas	0.040	0.040	0.260
7	Fees & Administration	-	0.058	0.120
8	Sub-total	0.868	1.620	7.190
9	Mt Hayes Plant:			
10	Labour	0.001	0.012	0.040
11	Materials	0.001	-	0.005
12	Contractor	-	0.002	0.010
13	Power	-	-	0.060
14	Fuel Gas	-	-	0.005
15	Sub-total	0.002	0.014	0.120
16	Forecast O&M	0.870	1.634	7.310

[40] Information on Rate Schedule 46 and associated revenues is provided in Appendix B: NGT.

23.1 Please provide a brief explanation with quantification for variances in the 2016 Approved and Projected in excess of $100 thousand (Tilbury Labour, Contractor).

Response:

As indicated on Page 54 of the Application, the increase in O&M expenses between the 2016 Approved and 2016 Projected amounts are the result of increases in projected Labour and Contractor expenses due to additional resources required for the preparation of operations at the expanded Tilbury LNG facility.

Specifically, the variance of $393 thousand between the 2016 Approved and Projected Tilbury Labour cost is due to hiring additional staff for the start-up of the Tilbury LNG Expansion Facility.

The variance of $260 thousand between the 2016 Approved and Projected Tilbury Contractor cost is due to contractor services required to aid in the preparation of the Safety Loss and Management Program which is a regulatory requirement under the LNG Facility Regulation, to

support the operations and maintenance of the high voltage electrical sub-station, and to provide a supply of liquid nitrogen at the expanded facility.

Please refer to the responses to BCUC IRs 1.23.1 and 1.23.4 for further information.

23.2 Please provide further clarification for line item 7, Fees & Administration.

Response:

The Fees & Administration expense line item includes O&M expenditures for operating permit fees, employee expenses and office supplies which are directly related to Rate Schedule 46 O&M and the employees that support it.

24. Reference: Exhibit B-2, Page 63

> **7.5.2 Existing Deferral Accounts**
>
> FEI is proposing recovery of the two deferral accounts discussed below.
>
> ***7.5.2.1 2016 Cost of Capital Application***
>
> As part of Decision G-75-13 relating to the GCOC Stage 1 Proceeding, FEI was directed to file an application for the review of its common equity component and the ROE. FEI has incurred and will incur further costs related to legal fees, consultant costs, costs for miscellaneous facilities, stationery and supplies, Commission costs and PACA reimbursements related to the proceeding, which have been estimated to be $1.7 million. Commission Order G-86-15 granted approval for FEI to capture the costs related to the 2016 Cost of Capital proceeding in a rate base deferral account.
>
> In this Application, FEI is seeking approval to amortize these costs over three years beginning in 2017. This amortization period is appropriate as it will smooth the rate impact on customers.

24.1 When does FEI expect to file another application reviewing its common equity and ROE?

Response:

At this time, FEI does not have an expected timeline for filing another application reviewing its common equity and ROE.

24.2 Why does FEI believe that 3 years is preferable to another amortization period such as 2 years or 4 years?

Response:

While FEI believes other amortization periods may also be reasonable, a three year amortization period is consistent with other Application costs deferrals of a similar dollar value, such as the Amalgamation and Rate Design Application costs deferral and the LMIPSU Application costs deferral, where FEI also sought to smooth the rate impacts to customers.

Typically, FEI will propose an amortization period for application cost-related deferrals that aligns with the period covered by that application. For example, the 2014-2019 PBR Requirements Application deferral is amortized over six years, which aligns with the PBR period. However, where the application cost period is unknown or indefinite, FEI will suggest a period that considers the annual rate impacts to customers.

24.3 What will be the rate impact if the 3 year amortization period is approved?

Response:

If a three year amortization period is approved, the delivery rate impact to FEI non-bypass customers will be 0.08 percent.

24.4 Please confirm or not, that these costs are outside the PBR.

Response:

Confirmed, these costs are not included in the PBR formula O&M or capital amounts.

25. Reference: Exhibit B-2, Pages 63 and 64

> In 2016, FEI collected pre-tax revenues of $2.4 million ($1.8 million after-tax) from the sale of credits earned under the Renewable Low Carbon Fuel Requirements Regulation (RLCFRR). The RLCFRR was introduced in order to reduce the carbon intensity of transportation fuels. The carbon intensity of both compressed natural gas (CNG) and liquefied natural gas (LNG) fall below the maximum carbon intensity limit set by the RLCFRR; therefore FEI earns credits from the sale of CNG and LNG for use in transportation applications. FEI issues a request for proposal to potential buyers to ensure it maximizes the value of these credits for the benefit of ratepayers. FEI will continue to generate credits in the future as the sale of CNG and LNG for transportation increases.
>
> These revenues, as well as any future credits received under the RLCFRR, are recorded directly in the deferral account. Any costs related to the administration of these sales, not already embedded in formula O&M, will be tracked by charging the costs to an internal order within the deferral account.

25.1 Please provide an estimate of the costs related to the administration of these sales that may be embedded in the formula O&M.

Response:

Please refer to the response to BCUC IR 1.25.2 where FEI clarifies that the internal labour costs to administer this program are embedded in the formula O&M. The costs that may be charged to the deferral account in the future would be the external costs (such as consulting costs) related to RLCFRR sales, which are not included in formula O&M.

It is not possible to estimate how much of the labour costs are included in the formula O&M as the amount will consist of hours of various employee's time and will vary by year. Regardless, it is not necessary to calculate this amount, as it is only external incremental costs that are captured in the deferral account.

25.2 Should such costs be removed from the O&M base in order to match costs with revenues? Please explain why or why not.

Response:

No. Please refer to the response to CEC IR 1.25.2.

25.3 Please confirm, or not, that these costs are outside the PBR.

Response:

Please refer to the response to CEC IR 1.25.2.

26. Reference: Exhibit B-2, Pages 67 and 68

> **8.3.1 Long-Term Debt**
>
> FEI is a public issuer of long-term debt. During April 2016, FEI issued long term debt of $150 million[53] at a rate of 2.58 percent for a term of 10 years, and $150 million at a rate of 3.67 percent for a term of 30 years. The net proceeds were used to repay existing indebtedness and finance the Corporation's capital expenditure program. In 2016, FEI plans to issue additional long-term debt of up to $200 million, which will be used to refinance a $200 million PMM with a coupon rate of 10.3 percent maturing on September 30, 2016. This debt issuance is reflected in the financial schedules in November 2016 at a rate of 3.90 percent. No long-term debt issues are planned for 2017. The exact timing, amount and rate of the issuance will depend on future market conditions and capital expenditure requirements. Variances in interest expense related to the timing and amount of the issuances of the debt or the rates at which they are issued will be captured in the Flow-through deferral account.

26.1 Does FEI plan to make any transactions such as BC Hydro proposes to lock in future low debt rates now? Please explain why or why not.

Response:

FEI does not plan to implement a strategy similar to that of BC Hydro's proposed Debt Management Strategy (DMS) as addressed in Commission Order G-42-16. BC Hydro's DMS involves entering into hedges related to future debt in order to mitigate potential interest rate risk for future debt issuances.

FEI's current forecasts include a $200 million debt issuance in 2016, no issuances in 2017, and with the exception of the upcoming maturity in 2016, no other maturities until 2026. Although additional debt issuances may be required in future years, FEI's current expectation for debt issuances are well below that of BC Hydro's during their 10 year forecast period. FEI does not believe that its current forecasted debt requirements would create a significant exposure of interest rate risk to ratepayers, and would therefore not warrant the potential costs associated with hedging long term debt.

27. Reference: Exhibit B-2, Page 68

> **8.3.4 Interest Expense Forecast**
>
> The interest expense forecast reflects FEI's existing and forecast borrowing costs on long-term debt and short-term debt.
>
> Short-term interest expense is determined by applying the forecast short-term debt rate to the estimated short-term debt balance. Long-term debt interest expense is determined using the effective interest method. For each long-term debt issue, the effective rate (forecast effective rate if it is a new issue) is multiplied by the average balance of that long-term debt for the year. The 2017 long-term debt schedule for FEI can be found in Section 11, Schedule 27.
>
> FEI's Flow-through deferral account captures the variances in interest expense for return to or recovery from customers in the following year.

27.1 How does FEI determine the 'effective' interest rate?

Response:

The effective interest rate is calculated using the Internal Rate of Return (IRR) method for long-term debt issues. It gives recognition to the fact that the actual rate of interest is higher than the coupon rate due to deducting discounts and issue costs from the proceeds of long-term debt. The IRR method calculates an internal rate of return for a series of cash flows. The cash flows include the net proceeds of the issue offset by the annual interest payments as calculated by the coupon rate and the principal repayment upon maturity at the face value of the issue.

The formula is as follows:

$$NPV = 0 = \text{Net Proceeds of Issue} + \frac{\text{Interest Payment Year 1}}{(1+IRR)^1} + \ldots + \frac{\text{Interest Payment Year n}}{(1+IRR)^n}$$

Where "n" = number of years in the life of the Issue

The calculation of the effective interest rate for the forecast Series 29 debt issuance is provided below.

Issue Date	11/01/16	Issue Amount	200	Million	
Maturity Date	11/01/46	Issue Costs	(2.0)	Million	
Payments	60	Coupon Rate	3.90%		

	Semi-Annual	Annual
IRR (Effective Rate)	1.979%	3.957%

Time Period	Proceeds	Interest	Bond Repayment	Cash Flow	Present Value
0	198			198.00	$198.00
1		(3.90)		(3.90)	($3.82)
2		(3.90)		(3.90)	($3.75)
3		(3.90)		(3.90)	($3.68)
4		(3.90)		(3.90)	($3.61)
5		(3.90)		(3.90)	($3.54)
6		(3.90)		(3.90)	($3.47)
7		(3.90)		(3.90)	($3.40)
8		(3.90)		(3.90)	($3.33)
9		(3.90)		(3.90)	($3.27)
10		(3.90)		(3.90)	($3.21)
11		(3.90)		(3.90)	($3.14)
12		(3.90)		(3.90)	($3.08)
13		(3.90)		(3.90)	($3.02)
14		(3.90)		(3.90)	($2.96)
15		(3.90)		(3.90)	($2.91)
16		(3.90)		(3.90)	($2.85)
17		(3.90)		(3.90)	($2.80)
18		(3.90)		(3.90)	($2.74)
19		(3.90)		(3.90)	($2.69)
20		(3.90)		(3.90)	($2.64)
21		(3.90)		(3.90)	($2.58)
22		(3.90)		(3.90)	($2.53)
23		(3.90)		(3.90)	($2.49)
24		(3.90)		(3.90)	($2.44)
25		(3.90)		(3.90)	($2.39)
26		(3.90)		(3.90)	($2.34)
27		(3.90)		(3.90)	($2.30)
28		(3.90)		(3.90)	($2.25)
29		(3.90)		(3.90)	($2.21)
30		(3.90)		(3.90)	($2.17)
31		(3.90)		(3.90)	($2.12)
32		(3.90)		(3.90)	($2.08)
33		(3.90)		(3.90)	($2.04)
34		(3.90)		(3.90)	($2.00)
35		(3.90)		(3.90)	($1.96)
36		(3.90)		(3.90)	($1.93)
37		(3.90)		(3.90)	($1.89)
38		(3.90)		(3.90)	($1.85)
39		(3.90)		(3.90)	($1.82)
40		(3.90)		(3.90)	($1.78)
41		(3.90)		(3.90)	($1.75)
42		(3.90)		(3.90)	($1.71)
43		(3.90)		(3.90)	($1.68)
44		(3.90)		(3.90)	($1.65)
45		(3.90)		(3.90)	($1.61)
46		(3.90)		(3.90)	($1.58)
47		(3.90)		(3.90)	($1.55)
48		(3.90)		(3.90)	($1.52)
49		(3.90)		(3.90)	($1.49)
50		(3.90)		(3.90)	($1.46)
51		(3.90)		(3.90)	($1.44)
52		(3.90)		(3.90)	($1.41)
53		(3.90)		(3.90)	($1.38)
54		(3.90)		(3.90)	($1.35)
55		(3.90)		(3.90)	($1.33)
56		(3.90)		(3.90)	($1.30)
57		(3.90)		(3.90)	($1.28)
58		(3.90)		(3.90)	($1.25)
59		(3.90)		(3.90)	($1.23)
60		(3.90)	(200.00)	(203.90)	($62.93)
				NPV	**$0.00**

28. Reference: Exhibit B-2, Pages 70 and 71

> 1. ***Changes in Tax Rates***. Tax Rates are based on FEI's average annual change in the tax rate applicable to FEI over the past 3 to 5 years. On average:
>
> a. Municipal rates are expected to decrease by 1.0 percent;
>
> b. School rates are expected to decrease by 0.7 percent;
>
> c. Rural rates are expected to decrease by 0.8 percent; and
>
> d. Other rates are expected to increase by 3.0 percent.

28.1 What are the 'Other rates' that are expected to increase by 3.0%?

Response:

"Other Rates" are for those taxes other than general municipal taxes levied under Part 7 of the *Community Charter*, school taxes levied under the *School Act* and provincial rural taxes (general) under the *Taxation (Rural Area) Act*. "Other Rates" are set by taxing authorities such as regional districts, hospital districts, transit, BC Assessment and the Municipal Finance Authority. Taxes in the "Other Rates" category are collected either by municipalities for services provided on their behalf (e.g., water, sewer, hospitals, transit, etc.) or by the Surveyor of Taxes for services provided in rural areas (e.g., police, fire, garbage, parks, libraries, hospitals, recreation and community centres, etc.).

29. Reference: Exhibit B-2, Page 71

> 3. *Changes in Assessed Values*. Forecast changes in the assessed values of FEI's property are based on the increases that BC Assessment was proposing at the time the forecast was developed. These include:
>
> a. A 0.5 percent increase in assessed values of distribution lines and services plus additional new construction of approximately $25 million;
>
> b. A 0.5 percent increase in assessed values of transmission lines;
>
> c. A 2.0 percent increase in assessed values for LNG assets plus an expected increase of approximately $62 million for new construction at the Tilbury LNG facility; and
>
> d. Land value changes which are expected to range from a 2.0 percent increase in the assessed value for right of ways to a 5.0 percent increase in the market value for properties owned in fee simple.

29.1 Does FEI have any updated information with respect to the assessed values or other inputs to the property tax calculations since the forecast was developed?

Response:

The following updates are available for the 2017 forecast property taxes:

a) Distribution line rate increases have not yet been set by BC Assessment and additions are still being tabulated.

b) BC Assessment indicated it was seeking a 0.5% increase in transmission pipeline rates for the 2017 assessment roll in May 2016 which is consistent with FEI's forecast. No further updates have been received.

c) Major Industrial Property rates used to value LNG assets will increase by 2% for 2017 which is consistent with FEI's forecast. With the exception of the LNG tank, additions for the 2017 roll have not been established yet as legislation requires the plant to be valued based on its state and condition as of October 31. The LNG tank assessment is expected to be approximately $36 million higher than the $62 million forecast.

d) Land values will not be known until the assessment roll is released January 1, 2017. Based on the most recent report from BC Assessment, right of way rates are expected to increase 1.19%, as compared to 2.0% that was forecast by FEI.

In summary, the following are the known forecast changes:

1. Taxes are expected to increase based on the LNG tank assessment by approximately $1.1 million or 1.6% of total forecast property taxes.

2. The update in the projection of Right of Way values from 2% to 1.19% is not expected to result in any change to property taxes because assessment values are all rounded down to the nearest $100 for folios under $10,000 and rounded down to the nearest $1,000 for folios over $10,000.

Since only part of the overall 2017 property tax impact is known, and these changes could be offset by other changes, FEI does not propose to update its forecast at this time. Further, any variances will be returned to or collected from customers in 2018.

29.2 If yes, please provide the updated forecast values, and identify the total and percentage impact it would have on property taxes.

Response:

Please refer to the response to CEC IR 1.29.1.

30. Reference: Exhibit B-2, Page 78

10.1.3 True-Up for 2015 Actual Earnings Sharing

In FEI's 2015 Annual Report to the Commission, FEI calculated the final 2015 earnings sharing based on the final 2015 results. The final amount of earnings sharing for 2015 was $4.194 million, which was $0.108 million higher than the $4.086 million projected for 2015 as shown in Table 10-4 below. As a result, FEI is increasing its 2017 earning sharing by the after-tax amount of $0.108 million as shown in Table 10-1 above.

Table 10-4: Calculation of 2015 Actual Earnings Sharing true-up ($millions)

Line No.	Particulars	After-tax Amount	Reference
1	2015 Actual Earnings Sharing account ending balance	(4.194)	2015 FEI BCUC Annual Report
2	2015 Projected Earnings Sharing account ending balance	(4.086)	Annual Review of 2016 Rates Compliance Filing financial schedules, Schedule 12, Line 11, Column 2
3	**2015 Earnings Sharing account true-up**	**(0.108)**	

30.1 Does the Earnings Sharing account true-up bear interest?

Response:

Yes. An extract from Section 10.1.4 of the Application which discusses the earnings sharing mechanism is reproduced below:

> FEI has calculated the financing on the deferral account balances that result from the amounts described above. As the balances are positive, financing consists of credits to customers at FEI's WACC.

Any true-ups to the account attract the same return.

30.1.1 If not, why not?

Response:

Please refer to the response to CEC IR 1.30.1.

31. Reference: Exhibit B-2, Page 124

> therefore able to provide this information in a meaningful way. The main areas where this occurs are:
>
> - Right of Way and TPIP accounts provide additional detail not provided elsewhere.
> - Much greater granularity provided compared to the BCUC "Other General Operations" account where the FEU provide six separate accounts instead of one.
> - Much greater granularity provided compared to the BCUC "Administration Expense" account where the FEU provide 12 separate accounts instead of one.
> - The FEU provide 12 separate accounts in the Resource View that provide information over and above the requirements of the BCUC USoA; the BCUC USoA is more similar to an activity view of operations.

31.1 What are the six separate accounts that would otherwise be included in the "Other General Operations?"

Response:

The six separate accounts that would otherwise be included in the BCUC Uniform System of Accounts "Other General Operations" account, that were identified in the BCUC Uniform System of Accounts Report filed October 10, 2012, were:

- 500-10 Facilities Management
- 500-20 Shops and Stores
- 500-40 Property Services
- 500-50 System Integrity
- 500-60 Environmental Health and Safety
- 500-70 Operations Governance

31.2 What are the 12 separate accounts that would otherwise be included in "Administration Expense?"

Response:

The twelve separate accounts that would otherwise be included in BCUC Uniform System of Accounts "Administration Expense" account, and that were identified in the BCUC Uniform System of Accounts Report filed October 10, 2012, were:

- 900-13 Finance and Regulatory Affairs
- 900-14 Corporate Centre and Shared Services Fees
- 900-31 Community Relations
- 900-40 Business Development
- 900-50 Human Resources
- 600-10 Marketing - Supervision
- 600-30 Corporate & Marketing Communications
- 900-20 Forecasting
- 800-10 Business & IT Services - Supervision
- 800-20 Application Management
- 800-30 Infrastructure Management
- 800-40 Procurement Services

31.3 What are the 12 separate accounts in the Resource View that provide information over and above the requirements of the USoA?

Response:

The 12 separate accounts in the Resource View at the time of filing the BCUC Uniform System of Accounts Report on October 10, 2012 were:

- M&E Costs
- COPE Costs

- IBEW Costs
- Vehicle Costs
- Employee Expenses
- Materials and Supplies
- Office Furnishing & Equipment
- Computer Costs
- Fees and Administration Costs
- Contractor Costs
- Facilities
- Recoveries & Revenue

Since that time, FEI has added a new account in the Resource View for COPE Customer Service Costs.

32. Reference: Exhibit B-2, Pages 125 and 126

> The NCoA is compatible with all approaches and is as compatible as the USoA because the comparison to other utilities or to the industry is not undertaken at such a granular level that the use of specific O&M line items is required. Instead, any analysis must focus on total O&M costs. For instance, under the productivity indexing approach, the total O&M productivity factor is the ratio of an output quantity index to an input quantity index. The decomposition of O&M expenses is required to construct input quantity indexes; however, this is done at a level that can be accommodated under FEI's NCoA. In fact, for O&M benchmarking the use of NCoA should be preferred since, as explained above, the break-down of O&M expenses to labour and non-labour in the resource view is readily apparent.
>
> The NCoA is compatible with benchmarking, and FEI does not foresee issues with benchmarking against other utilities. This is because benchmarking would be undertaken at a higher level than the individual O&M line items that are affected by the use of any particular O&M code of accounts. In light of all of the considerations, FEI submits that it is appropriate to continue to use the NCoA.

32.1 Please confirm that specific O&M line items are relevant for year over year comparisons within the utility.

Response:

Confirmed. This is one of the reasons identified by FEI as to why the NCoA is preferable to the USoA. The NCoA provides a more detailed and more consistent comparison year over year within the utility.

33. Reference: Exhibit B-2, Page 132

> The 2015 result was 97.3 percent which was within the performance range with the benchmark at 97.7 percent and the threshold at 96.2 percent. The June 2016 year-to-date performance is 97.4 percent which is also between the threshold and the benchmark.
>
> The Company's 2009 to 2015 annual and 2016 year-to-date emergency response time results are provided below. The improved response time since 2014 in all operating zones is a reflection of a combination of factors including a decrease in the number emergency events and changes made to technician shift schedules starting January 2015. The changes to shift schedules were made to provide more emergency response capacity in the late afternoon and early evening.

Table 13-2: Historical Emergency Response Time

Description	2009	2010	2011	2012	2013	2014	2015	June 2016 YTD
Results	97.7%	97.7%	97.9%	97.4%	97.4%	96.7%	97.3%	97.4%
Benchmark	n/a	n/a	n/a	n/a	n/a	97.7%	97.7%	97.7%
Threshold	n/a	n/a	n/a	n/a	n/a	96.2%	96.2%	96.2%

33.1 Please confirm that the 'Benchmark' is an indicator of expected service, or target level, and does not represent an upper bound of a 'performance range'.

Response:

FEI believes it is helpful to remain consistent with the wording of the relevant Commission decisions describing the benchmark and threshold. In the PBR Decision, p. 154, the Commission stated: "the Commission Panel determines that the most effective way to manage SQIs is to set a satisfactory performance range. The achievement of performance metrics that fall within this range is acceptable. …Performance benchmarks would continue to be determined which would serve as a target only and failure to reach them would not have consequences." Thus, the performance benchmarks are a target. The satisfactory performance range between the benchmark and the threshold, as outlined in the Consensus Recommendation approved by the Commission in Order G-14-15, is the range within which performance for the SQI is satisfactory.

33.1.1 If not confirmed, please explain why not.

Response:

Please refer to the response to CEC IR 1.33.1.

33.2 Please confirm that the 'Threshold' is an indicator of the bare minimum, before which consideration of punitive measures will be undertaken.

Response:

FEI believes it is helpful to remain consistent with the wording of the relevant Commission decisions describing the benchmark and threshold. As discussed in response to CEC IR 1.33.1, the range between the benchmark and the threshold is the range within which performance for the SQI is satisfactory. As stated in the Consensus Recommendation approved by the Commission in Order G-14-15, performance inferior to a threshold does not necessarily represent a serious degradation of service or warrant adverse financial consequences for FEI, but is a circumstance that warrants examination at an Annual Review to determine whether further action is warranted. Performance inferior to a threshold is a factor that the Commission may consider in determining whether there has been a serious degradation of service and whether adverse financial consequences for FEI are warranted.

33.3 Does FEI expect to meet the Benchmark of 97.7 in 2017? Please explain why or why not.

Response:

The Emergency response times have been trending positively and the 2016 YTD result is very close to the benchmark. FEI is working towards achieving the Benchmark of 97.7 in 2017.

34. Reference: Exhibit B-2, Page 142

Telephone Abandon Rate

The Telephone Abandon Rate is an informational, measures the percent of calls abandoned by the customer before speaking to a customer service representative. Abandon rates can be due to waiting times, or due to customers receiving their required information through informational messages in the Company's Interactive Voice Response (IVR) system such that the customer no longer needs to speak to an agent.

The 2015 result was 2.0 percent and consistent with prior years' results. The June 2016 year-to-date result is 2.4 percent which is slightly higher than the Company's prior and full years' results.

The Company's 2012 to 2015 results, which are reflective of performance since the repatriation of outsourced Customer Service functions, are provided below. Telephone Abandon Rates prior to 2012 were not reported from our third party Customer Service provider.

Table 13-13: Historical Telephone Abandon Rates

Description	2009	2010	2011	2012	2013	2014	2015	June 2016 YTD
Annual Results	n/a	n/a	n/a	2.2%	2.1%	1.8%	2.0%	2.4%
Benchmark	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Threshold	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

34.1 Does FEI consider the increase from 1.8% in 2.4% to be significant? Please explain why or why not.

Response:

This response also addresses CEC IR 1.34.1.1.

The percentages quoted in the question compare an annual percentage for 2014 to a six month year to date percentage for 2016 and as such are not directly comparable due to the seasonality of call volumes.

No, FEI does not consider a difference of 0.6 percent to the abandon rate to be significant because it does not represent a large volume of calls. While abandon rates have fluctuated slightly from year to year, overall the abandon rate has remained within the range of approximately 2 percent. FEI does not have a specific percent change or volume of abandoned calls that it would consider significant; however, FEI continues to monitor this measure and will evaluate it each year based on historical changes and patterns. Due to the nature of this informational measure, a change in the abandon rate may not be an indicator of a change in customer satisfaction or overall level of customer service.

34.1.1 If FEI does not consider the increase to be significant, please provide FEI's views as to what would be considered a significant increase.

Response:

Please refer to the response to CEC IR 1.34.1.

34.2 Is there any way for FEI to determine if the Telephone Abandon rate is caused by negative factors such as wait times rather than positive factors such as having needs met prior to speaking with an agent?

Response:

This response also addresses CEC IRs 1.34.2.1 and 1.34.2.2.

No, FEI does not have a way to determine the cause of a customer disconnecting from a call before speaking with an agent.

While it may be possible for FEI to get this information, resources would be required to acquire this data, analyze calls, etc. FEI does not believe that investments of this nature are warranted or necessary considering the informational nature of this measure, the relatively small percentage of calls that are abandoned and the relative consistency in the abandon rate of 2 percent to date.

34.2.1 If yes, please provide the types of activities that FEI could undertake to determine the drivers behind the change in Telephone Abandon rates.

Response:

Please refer to the response to CEC IR 1.34.2.

34.2.2 If yes, will FEI undertake any actions to determine the reasons why the Telephone Abandon rate is climbing?

Response:

FEI does not interpret the telephone abandon rate to be climbing; the telephone abandon rate has remained in the range of 2 percent since 2012.

Please refer to the response to CEC IR 1.34.2.

34.2.2.1 If no, please explain why not.

Response:

Please refer to the response to CEC IRs 1.34.2 and 1.34.2.2.

34.3 Please provide customer wait times for 2009 through to 2016.

Response:

FEI has defined "customer wait times" to be the average speed of answer for all calls. The average customer is waiting less than a minute to have their call answered by FEI.

Please refer to the table below which provides the average speed of answer for 2012 through August 31, 2016 year to date. Comparable data for 2009 to 2011 is not available.

Average Speed of Answer	2012	2013	2014	2015	2016, August YTD
Emergency	0:00:08	0:00:09	0:00:11	0:00:08	0:00:07
Non-Emergency	0:00:41	0:00:33	0:00:36	0:00:39	0:00:45

It is important to note that the 2016 average is for only part of a year and therefore is not directly comparable to the previous years which are full years.

34.4 Does FEI expect the Telephone Abandon rates to be directionally lower or higher in 2017? Please provide reasons.

Response:

FEI does not have any information that would indicate that the abandon rate for 2017 will be lower or higher than the past experience; thus, FEI expects the Telephone Abandon rate to remain in the range of 2 percent for 2017.

Please also refer to the response to CEC IR 1.34.1.