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September 26, 2017

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. 1598919

Multi-Year Performance Based Ratemaking Plan for 2014 through 2019 approved by the British Columbia Utilities Commission (Commission) Order G-138-14 – Annual Review for 2018 Rates (the Application)

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

On August 4, 2017, FEI filed the Application referenced above. In accordance with the Commission Order G-115-17 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 5

Table 1-2: Formula O&M Savings 2014 to 2017 ($ millions)

		Actual	Formula	Variance	1.1% PIF
	2014	$ 191.0	$ 198.5	$ 7.5	$ 2.2
	2015	$ 225.4	$ 235.6	$ 10.2	$ 2.6
	2016	$ 225.9	$ 238.1	$ 12.1	$ 2.6
*	2017	$ 232.9	$ 240.4	$ 7.5	$ 2.6
	Cumulative Savings			$ 37.4	$ 10.0

In 2017, which is past the mid-point of the PBR Plan which has achieved close to $50 million in O&M savings to date, FEI is faced with the increasingly difficult challenge of finding new productivity opportunities to meet the annual savings embedded in the formula, and to sustain the level of incremental O&M savings achieved in recent years. Contributing to the productivity challenge are new cost pressures the Company is experiencing. Following is discussion of two of the more significant cost pressures related to integrity digs and to cyber security.

1.1 Please confirm that FEI's statement relating to achieving $50 million in O&M savings to date includes the Productivity Improvement Factor or $10 million.

Response:

Confirmed. The reference to $50 million in O&M savings includes the $37.4 million of Formula O&M Savings and the $10 million of Productivity Improvement Factor savings.

1.2 If not confirmed, please explain the $50 million in O&M savings.

Response:

Please refer to the response to CEC IR 1.1.1.

2. Reference: Exhibit B-2, page 5 and 6

> **Integrity Digs**
>
> FEI is experiencing incremental cost pressures related to integrity digs as the Company continues to improve its Integrity Management Program to manage aging infrastructure and meet the CSA Z662-15 standard and adopt industry practices deemed appropriate to FEI's system. A new defect assessment criterion for dents has resulted in incremental digs required to repair and manage these features. Additionally, increases to the number of integrity digs have resulted from running circumferential magnetic flux leakage in-line inspection (ILI) technology which has required excavations of imperfections and defects that were either not previously identified or were not previously identified as significant. In 2017, approximately $1.5 million of incremental O&M is projected to complete more integrity digs and to complete more complicated and higher cost digs, such as at water crossing sites. In future years, FEI is forecasting increasing numbers of integrity digs to manage its system in alignment with regulations, standards and industry practice.
>
> The use of technology, and particularly mobile technology, in every business area is increasing. This drives the need to continually review and update security practices and procedures. The cyber security environment is changing at a rapid pace and it is unknown what the next big vulnerability will be. Ransomware has become a billion-dollar industry which requires awareness training to be constantly updated to match this trend and the techniques used by criminals seeking to take advantage of IT system vulnerabilities. New tools, training and tests need to be built and executed to keep our employees informed and aware.
>
> FEI uses a risk based approach to cyber security using industry proven methodologies and technologies to ensure an appropriate balance between cost and effective protection.

2.1 Please confirm or otherwise explain that FEI does not anticipate including either Integrity Digs or Cyber Security as an Exogenous Factors in future Annual Reviews.

Response:

Confirmed.

In accordance with the Exogenous Factor criteria outlined in Section 12 of the Application and based on the current information available, FEI does not anticipate including either Integrity Digs or Cyber Security as an Exogenous Factor in the next Annual Review.

2.2 Please supply the FEI forecast of integrity digs and five-year history.

Response:

Please refer to the response to BCUC IR 1.1.7.

2.3 Please provide FEI's documentation of its analysis for making choices between cost and effective protection, as well as FEI's methodology for measuring effective protection.

Response:

In regards to cyber security, FEI uses a standard heat map that considers likelihood and impact to determine the areas of cyber security risk requiring the most attention. Third parties, such as Gartner, are consulted to help ensure FEI is considering the appropriate areas in regards to its cyber security risks, as well as appropriate ratings of likelihood and impact.

To ensure the risk levels determined by FEI are reasonable, both internal and external assessments are completed. FEI is currently using the Cybersecurity Capability Maturity Model (C2M2) program, which incorporates National Institute of Standards and Technology (NIST), SysAdmin Audit Network and Security (SANS) 20, NERC Critical Infrastructure Protection (CIP) and International Organization for Standards (ISO) into its assessment design, which helps ensure an organization's cyber security is appropriately designed and operated. The C2M2 program also tests organizational design, cyber security protection device design, third-party support and other components considered required for appropriate overall cyber security.

Annual assessments and tests are completed internally and by third parties to determine if appropriate levels of cyber security are being maintained based on industry standards. The assessments and tests also include FEI's risk registry in regards to cyber security to help ensure the registry is reasonable and the appropriate amount of effort is being applied to the right areas in regards to cyber security. These efforts help ensure reasonable expenditures for cyber security by focusing systems on areas of greatest importance, such as private information and sensitive data.

3. Reference: Exhibit B-2, page 6 and page 7 and Appendix C-3, page 1

1.4.2 Staffing Levels

Staffing levels have declined from 2013 to 2015, and remained relatively stable between 2015 and 2016. Staffing levels are expected to increase in 2017. The projected increase of 57 headcount or 69 FTEs from 2016 to 2017 is comprised primarily of higher staffing for the following areas: approximately 50 FTEs in Operations and Engineering to meet operational and capital work requirements including approximately 5 FTEs for the start-up of the Tilbury LNG Expansion Facility; and approximately 10 FTEs in the Customer Service department to fill vacancies to meet call volume[3] expectations.

Table 1-3: Employees at Year-End[4]

	Headcount	FTE
2013 Actual	1,764	1,679
2014 Actual	1,704	1,650
2015 Actual	1,656	1,573
2016 Actual	1,667	1,581
2017 Projected	1,724	1,650

As directed by the Commission, FEI provides below Table C3-1 with the headcount information and Table C3-2 with the FTE information by the various categories outlined by the Commission in Appendix A.

Table C3-1: Headcount

	2013 Actual	2014 Actual	2015 Actual	2016 Actual	2016 Projected	2017 Projected
Total Annual Headcount	1,764	1,704	1,656	1,667	1,721	1,724
Change in Annual Headcount (year over year)	(1)	(60)	(48)	11	65	57
# of Positions Added Each Year (total) and broken down as follows:						
Regionalization Initiative - Phase 1 and 2	-	31	-	-	-	-
Project Blue Pencil	-	-	-	-	-	-
Other Major Initiatives	-	-	-	-	-	-
Outside of Base O&M	25	(4)	(5)	6	19	28
Inside Base O&M	(26)	(34)	(32)	23	46	28
Total Positions Added	(1)	(8)	(37)	30	65	57
# of Positions Eliminated Each Year (total) and broken down as follows:						
Regionalization Initiative - Phase 1 and 2	-	(52)	-	(19)	-	-
Project Blue Pencil	-	-	(10)	-	-	-
Other Major Initiatives	-	-	-	-	-	-
Outside of Base O&M	-	-	-	-	-	-
Inside Base O&M	-	-	-	-	-	-
Total Positions Eliminated	-	(52)	(10)	(19)	-	-
Net Change in Headcount (year over year)	(1)	(60)	(47)	11	65	57
# of Unfilled Vacancies						
# of Unfilled Vacancies for each year	n/a	n/a	n/a	n/a	n/a	n/a

3.1 Please explain why # of Unfilled Vacancies is Not Applicable (N/A) in each year for Table C-3, when approximately 10 FTEs are required to fill vacancies in expected call volumes.

Response:

As outlined on page 3 of Appendix C3, due to the difficulties in determining specifically for all the job vacancies in a given year how many are related to the different classifications (i.e. O&M, Capital), or whether in the interim the vacancy was filled by use of a contractor or a consultant, or by additional overtime (i.e. unpaid or paid) by existing employees, FEI does not forecast for Unfilled Vacancies overall for the Company as a whole on a FTE or a headcount basis.

For prior years' actuals, using the approximation methodology described in the Appendix C3 (i.e. estimated vacant days converted to a FTE basis), FEI has provided approximate FTEs for Unfilled Vacancies (included related to O&M, Capital and Other) for the years 2013 to 2016 (i.e. Table C3-2). However, for Table 3-1 which is on headcount basis, FEI did not provide the equivalent headcount view for Unfilled Vacancies, recognizing the limitations of deriving headcount information. As stated in Appendix C3:

> Reporting on the classifications requested by headcount and FTEs is inherently difficult. An employee, depending upon their job responsibilities, may perform a number of activities that fall into the different classifications outlined. For example, an employee may spend 80% of their time performing O&M activities with the remaining 20% of their time on capital activities. On an FTE basis, 0.80 FTE would be reported as O&M and 0.20 FTE reported as Capital. However, a headcount cannot be split, so the headcount can be reported as either O&M or Capital, but not partly O&M and partly Capital. As a result, the headcount information provided in Table C3-1 above has been completed in a similar manner to that reported on a FTE basis in Table C3-2 (i.e. one FTE equals one headcount). Where there are differences between the headcount and FTE information (which are typically caused by vacancies within a given period and the use of part-time and temporary employees), for the purpose of the information requested, the differences are reported as part of the Inside Base O&M classification, recognizing that the Inside Base O&M classification accounts for the majority of the headcount and FTE at FEI.

3.2 Would FEI expect to reduce FTEs in a future PBR if a future PBR were approved? Please explain.

Response:

FEI cannot speculate on whether it would expect to reduce FTEs in a future PBR if a future PBR were approved.

4. Reference: Exhibit B-2, page 8

> 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, these operational savings have been sustained at approximately $1 million and are expected to continue into future years.

4.1 Over how many years does FEI anticipate Project Blue Pencil savings to continue? Please explain and provide any quantification of the savings that FEI has available.

Response:

FEI expects the Project Blue Pencil savings to continue into the foreseeable future as sustainable savings. Quantification of the savings was described in Table C2-3 Project Blue Pencil in Appendix C2 of the Annual Review of 2018 Rates Application as follows:

	2014	2015	2016+
Processes Reviewed	High Bill Inquiry Emergency Collections Meter Exchange New Construction		
Organizational Changes	Contact center and billing operations will experience a FTE reduction as a result.	Contact center and billing operations will experience a FTE reduction as a result.	Contact center and billing operations will experience a FTE reduction as a result.
O&M expenditures expected to be incurred	$0 Incremental O&M costs	$0 Incremental O&M costs	$0 Incremental O&M costs
Capital expenditures expected to be incurred	<$100 thousand	<$200 thousand	$0
Annual Savings - Labour	< $100 thousand	Approximately $1 million annual contact centre and billing operations O&M savings.	Approximately $1 million annual contact center and billing operations O&M savings.
Annual Savings – non-Labour	$0	$0	$0

Additionally, Tables C3-1 Headcount and C3-2 FTE of Appendix C3 of the Annual Review of 2018 Rates Application show that the Blue Pencil Project reduced the FTE and Headcount by approximately 10 in 2015.

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

> 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. 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. When compared to 2015, savings in 2016 increased by $200 thousand to $2 million. The savings in 2016 were achieved through efficiencies, and so were not subject to sharing with Compugen. The Company is continuing to work with Compugen to identify efficiencies and expects the 2017 savings to be comparable to 2016.

5.1 Please elaborate on 'dedicated support resources' rather than a distributed support service.

Response:

"Dedicated support resources" refers to Compugen resources that are dedicated and onsite at FEI's office locations to support the FEI account. This improves service quality and first call resolution due to the consistency and familiarity of the dedicated Compugen resources with FEI's systems and employees.

Compugen was able to provide this service model at a lower cost than the previous contract, which did not have dedicated support resources and instead drew from a broader resource support pool.

5.2 Please elaborate on the savings that were achieved 'through efficiencies' and why these were not subject to sharing with Compugen.

Response:

The sentence in the Application which says "The savings in 2016 were achieved through efficiencies, and so were not subject to sharing with Compugen", should have read "The savings in 2016 were not due to a permanent reduction in Compugen's costs to support FEI, and so were not subject to sharing with Compugen".

The $200 thousand savings in 2016 was due to a full year of the lower cost Compugen contract as compared to 2015.

There have been no savings realized to date that have been subject to sharing with Compugen. The initial annual reduction of $2 million was included in the contract and not subject to sharing with Compugen.

6. Reference: Exhibit B-2, page 9

> 4. ***The Online Service Application (OSA) initiative,*** which enables customers to make a self-serve online request for a new service line installation, has been proceeding as planned. The Company launched the OSA to a select group of builder/developers for field trials in July 2016. After garnering feedback and suggested improvements, a full launch of the application proceeded on the Company's external website in September 2016. In March 2017, the additional functionality of requesting a service line abandonment was added to the tool. Customers can go to the Company's website and use the tool to determine if gas service is available for their property, and, for simple service lines, obtain an estimate to install the service and proceed to scheduling the installation online. The tool offers additional functionality for the builder/developer community to manage their projects by tracking their multiple service line orders. To date, approximately 2,600 orders have been processed via the application producing savings of approximately $0.05 million in 2017.[6]

6.1 Do the savings on $0.05 million include savings related to FTE's? Please explain and quantify if so.

Response:

Yes, the $0.050 million savings relate to approximately 1 FTE in 2017.

6.2 Does FEI anticipate additional savings beyond 2017 as a result of the OSA initiative?

Response:

Yes, the annual sustainable savings of $0.050 million attributable to the OSA initiative will continue beyond 2017. To the extent that customer adoption rates increase and future enhancements of the tool provide further automation of the process, additional incremental sustainable savings may occur.

6.3 If yes, please provide quantification of anticipated savings for the next 5 years and identify whether these are related to FTEs.

Response:

Please refer to the response to CEC IR 1.6.2. The anticipated savings are approximately $0.050 million per year, for a total of $0.250 million over the five year period, which equates to approximately 1 FTE per year.

7. Reference: Exhibit B-2, page 9

> 5. ***SAP Integration*** is an initiative to integrate the FEI and FortisBC Inc. (FBC) SAP systems, moving towards a common SAP platform for both companies. It will primarily include the integration of the Human Resources, Supply Chain and Finance systems in SAP. The benefits will include a simplified support model, alignment of processes, simpler business processes (i.e. employee expense processing and single sign-on), reduced licensing costs and integrated payroll. Reduction in support costs will be achieved through reduced annual contractor costs because internal resources will be able to displace the contractor support due to the simplified support requirements.
>
> The project has started with completion expected in the third quarter of 2018. The total cost of the project is estimated at $4.5 million. Based on the number of employees between the two companies (75% FEI, 25% FBC), approximately $3.4 million of the implementation costs will be allocated to FEI with the remaining $1.1 million to FBC. Total O&M savings for the project are expected to be approximately $0.9 million annually, with $0.6 million expected in FEI and $0.3 million FBC. The savings will start being realized in 2019.

7.1 Is the integration of the common SAP platform for Supply Chain dependent upon Commission approval of the Supply Chain application currently before the Commission? Please explain.

Response:

No. The Supply Chain application currently before the Commission is Project No. 3698901 "BC Hydro Supply Chain Applications Project". FEI's SAP Integration project is not dependent on BC Hydro's Supply Chain Applications Project.

8. Reference: Exhibit B-2. Page 26 and page 27

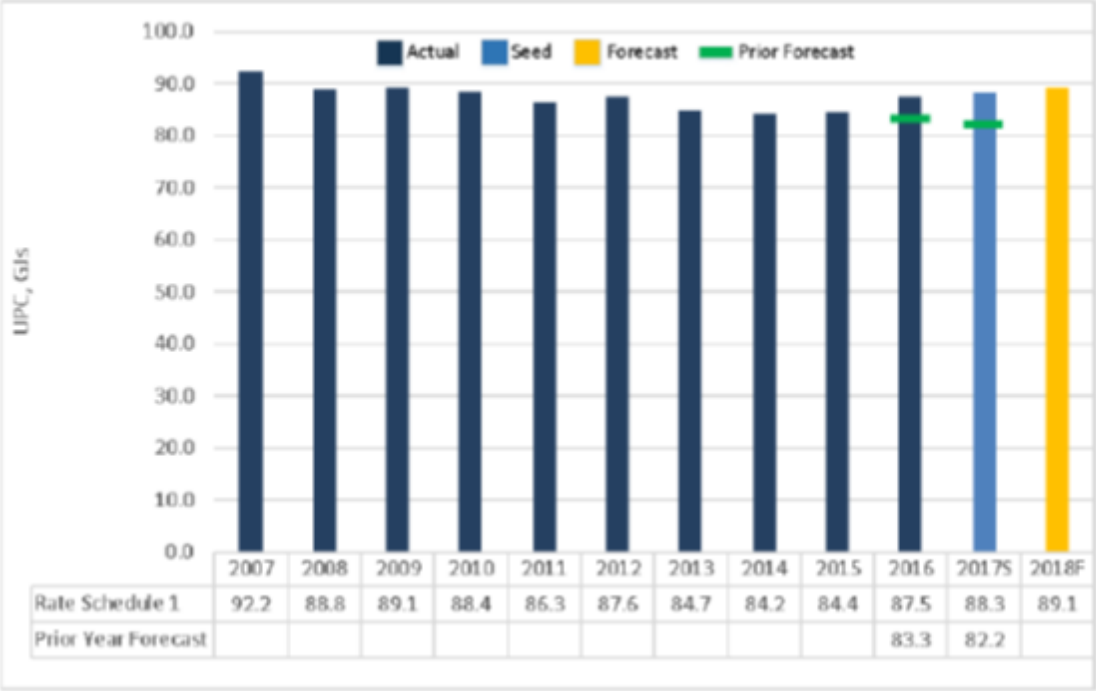
3.3 RESIDENTIAL AND COMMERCIAL USE PER CUSTOMER FORECAST

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

As shown in Figure 3-1, the Residential (Rate Schedule 1) UPC is forecast to increase by approximately 0.8 GJs (0.9 percent) in 2018.

FEI notes that the 2016 normalized Rate Schedule 1 consumption was 4.2 PJs higher than forecast. As the previous years' history did not indicate that UPC would increase in 2016, FEI has re-confirmed all of its normalization routines and billing data, and continues to investigate the reasons for the increase. At this time, FEI believes it is prudent to continue to use the existing forecast method. As a result, the Rate Schedule 1 normalized UPC is forecast to increase over the forecast period.

Figure 3-1: Rate Schedule 1 UPC

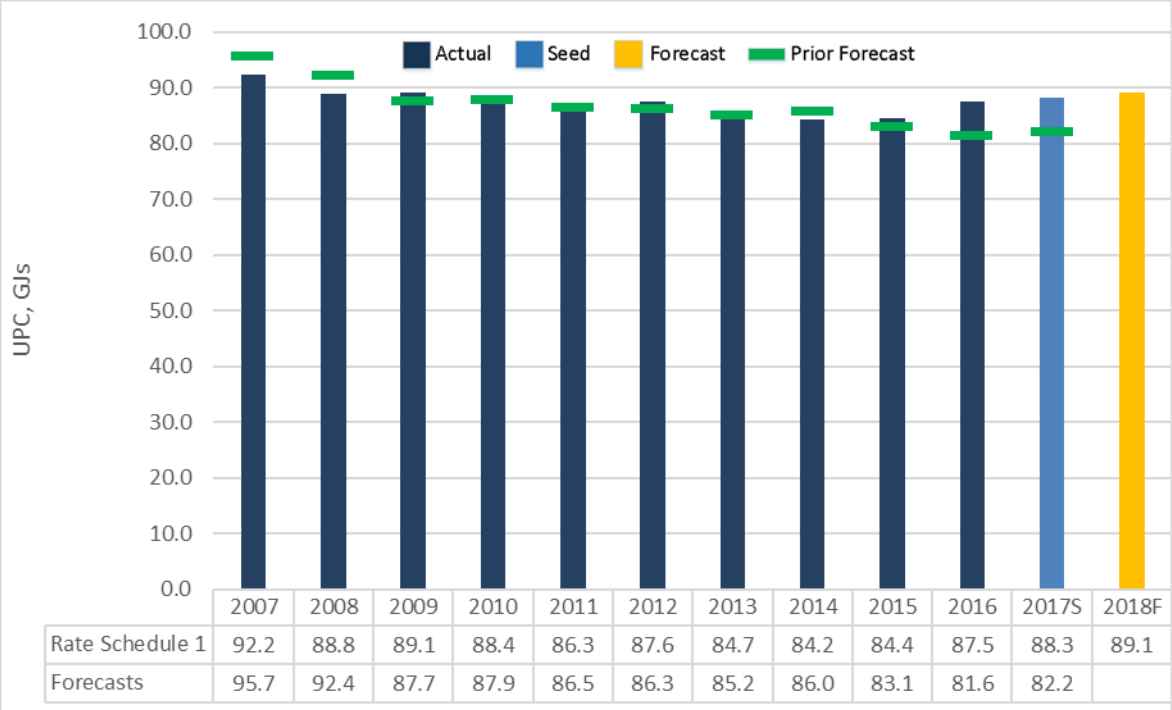


	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017S	2018F
Rate Schedule 1	92.2	88.8	89.1	88.4	86.3	87.6	84.7	84.2	84.4	87.5	88.3	89.1
Prior Year Forecast										83.3	82.2	

8.1 Please provide all the Prior Year Forecast numbers in Figure 3-1, and place the green band on the chart accordingly.

Response:

The requested chart is provided below.



	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017S	2018F
Rate Schedule 1	92.2	88.8	89.1	88.4	86.3	87.6	84.7	84.2	84.4	87.5	88.3	89.1
Forecasts	95.7	92.4	87.7	87.9	86.5	86.3	85.2	86.0	83.1	81.6	82.2	

8.2 Please elaborate on the types of investigations that FEI is undertaking to understand why RS 1 consumption was 4.2 PJs higher than forecast in 2016.

Response:

Please refer to the response to BCUC IR 1.12.2.

8.3 Please provide any preliminary or established views FEI has as to why the RS 1 consumption was 4.2 PJs higher than forecast in 2016.

1 **Response:**

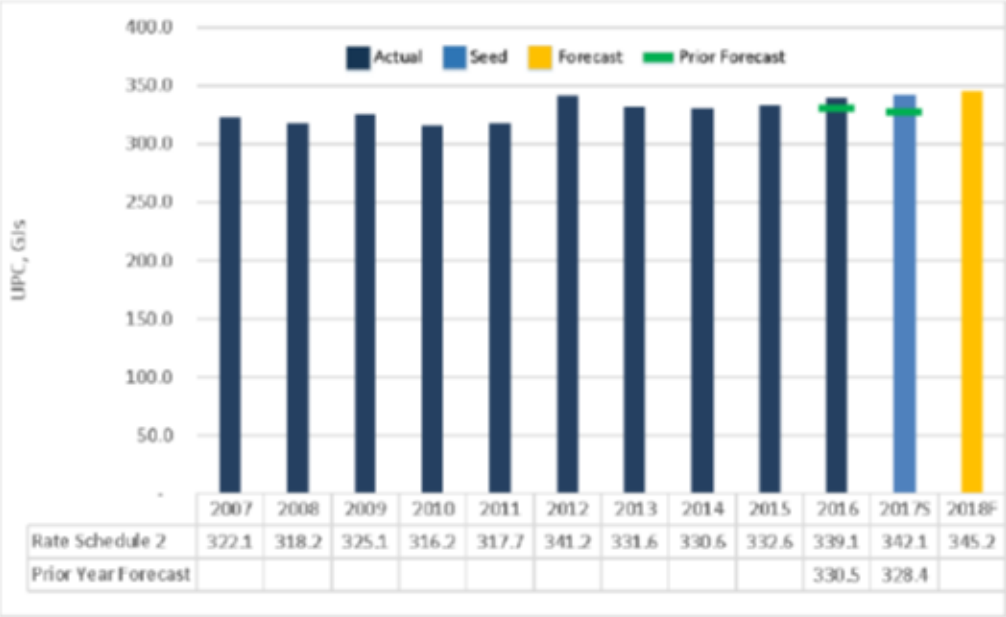
2 Please refer to the response to BCUC IR 1.12.2.

3

9. Reference: Exhibit B-2, page 28

As shown in Figure 3-2, the Small Commercial (Rate Schedule 2) UPC is forecast to increase by 3.1 GJs (0.9 percent) in 2018.

Figure 3-2: Rate Schedule 2 UPC

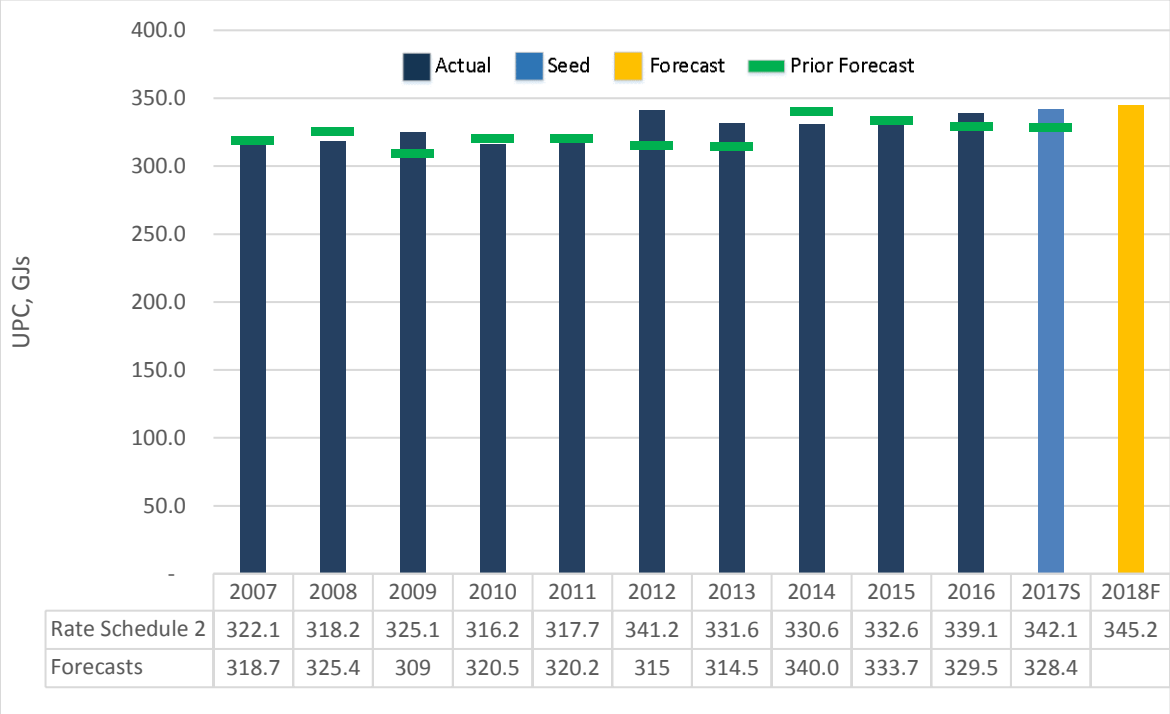


	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017S	2018F
Rate Schedule 2	322.1	318.2	325.1	316.2	317.7	341.2	331.6	330.6	332.6	339.1	342.1	345.2
Prior Year Forecast										330.5	328.4	

9.1 Please provide all the Prior Year Forecast numbers in Figure 3-2, and place the green band on the chart accordingly.

Response:

The requested chart is provided below.



	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017S	2018F
Rate Schedule 2	322.1	318.2	325.1	316.2	317.7	341.2	331.6	330.6	332.6	339.1	342.1	345.2
Forecasts	318.7	325.4	309	320.5	320.2	315	314.5	340.0	333.7	329.5	328.4	

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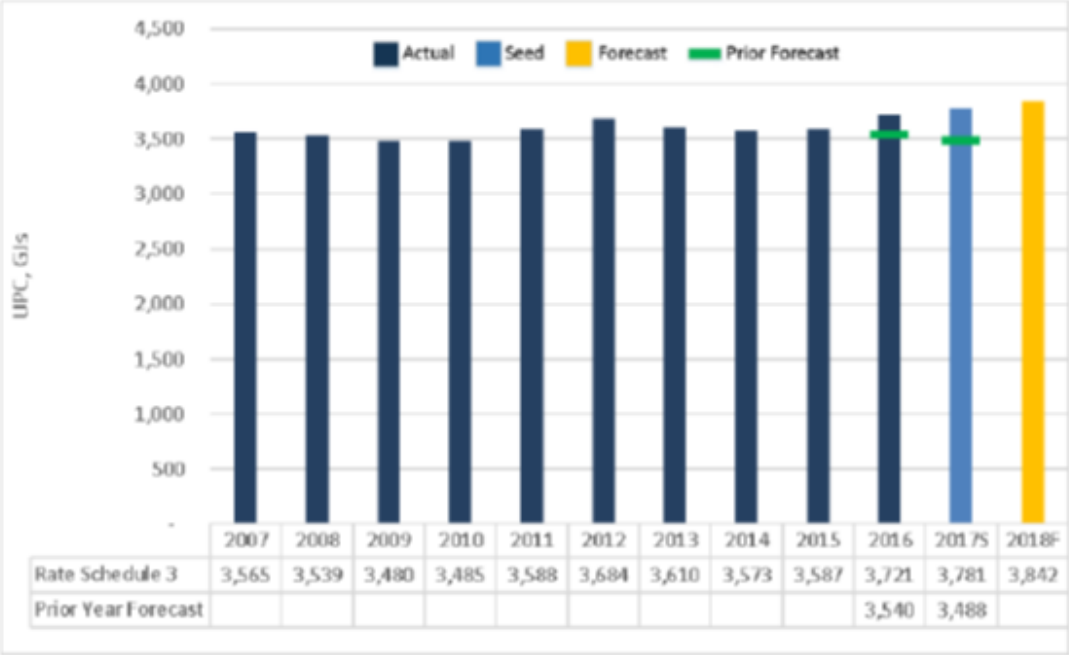
10. Reference: Exhibit B-2, page 29

As shown in Figure 3-3, the Large Commercial (Rate Schedule 3) UPC is forecast to increase by 61 GJs (1.6 percent) in 2018.

Figure 3-3: Rate Schedule 3 UPC

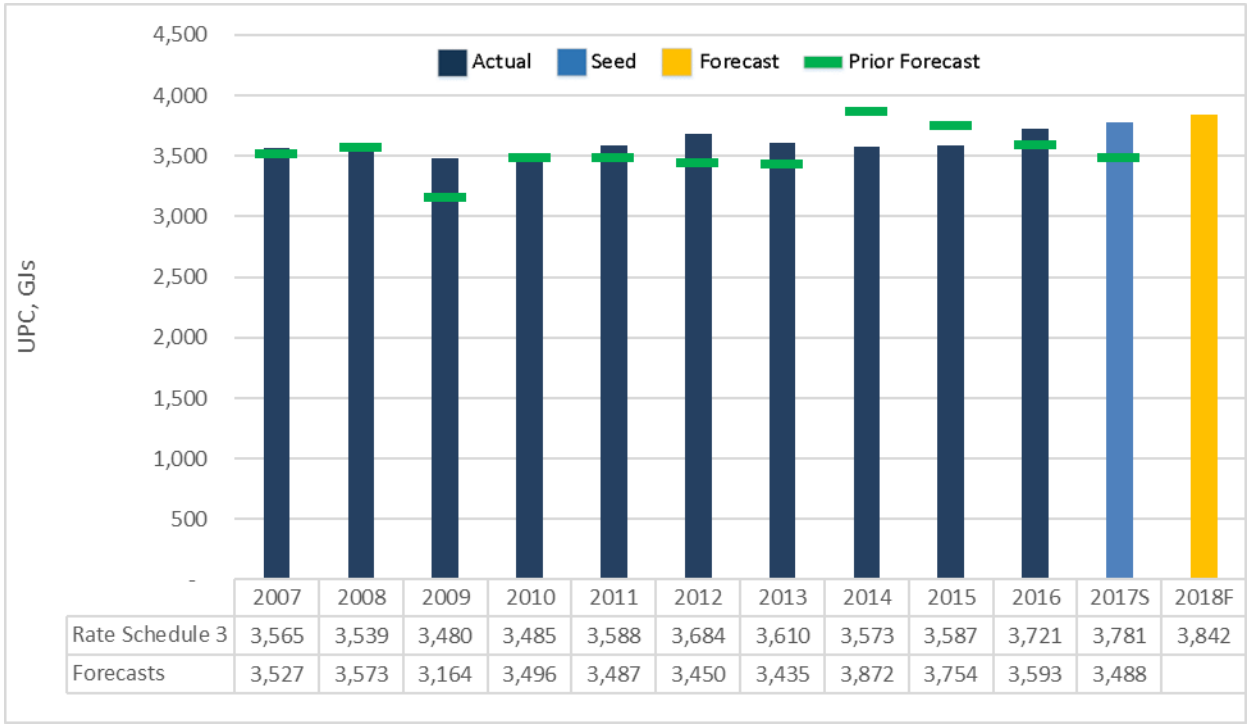


	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017S	2018F
Rate Schedule 3	3,565	3,539	3,480	3,485	3,588	3,684	3,610	3,573	3,587	3,721	3,781	3,842
Prior Year Forecast										3,540	3,488	

10.1 Please provide all the Prior Year Forecast numbers in Figure 3-3, and place the green band on the chart accordingly.

Response:

The requested chart is provided below.



	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017S	2018F
Rate Schedule 3	3,565	3,539	3,480	3,485	3,588	3,684	3,610	3,573	3,587	3,721	3,781	3,842
Forecasts	3,527	3,573	3,164	3,496	3,487	3,450	3,435	3,872	3,754	3,593	3,488	

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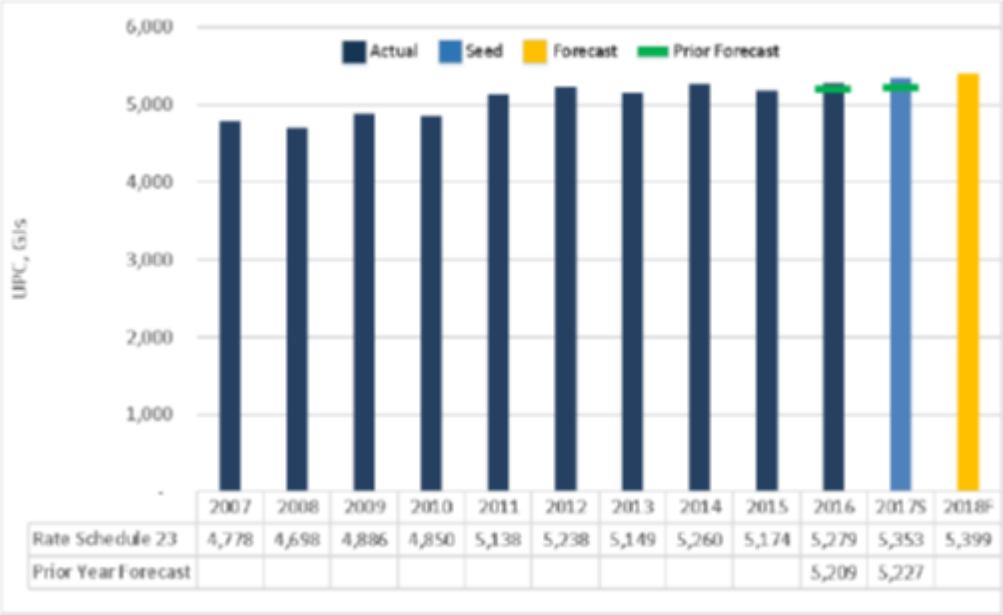
11. Reference: Exhibit B-2, page 30

As shown in Figure 3-4, the Large Commercial Transportation (Rate Schedule 23) UPC is forecast to increase by 46 GJs (0.9 percent) in 2018.

Figure 3-4: Rate Schedule 23 UPC

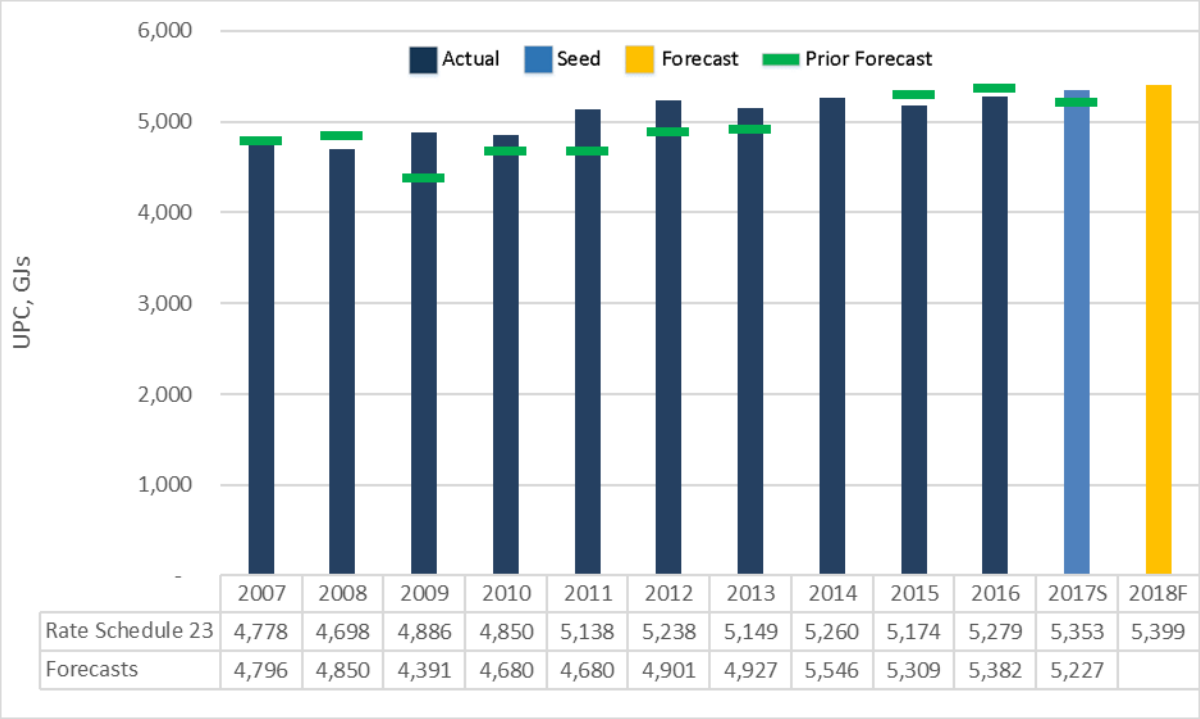


	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017S	2018F
Rate Schedule 23	4,778	4,698	4,886	4,850	5,138	5,238	5,149	5,260	5,174	5,279	5,353	5,399
Prior Year Forecast										5,209	5,227	

11.1 Please provide all the Prior Year Forecast numbers in Figure 3-3, and place the green band on the chart accordingly.

Response:

The requested chart is provided below.



	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017S	2018F
Rate Schedule 23	4,778	4,698	4,886	4,850	5,138	5,238	5,149	5,260	5,174	5,279	5,353	5,399
Forecasts	4,796	4,850	4,391	4,680	4,680	4,901	4,927	5,546	5,309	5,382	5,227	

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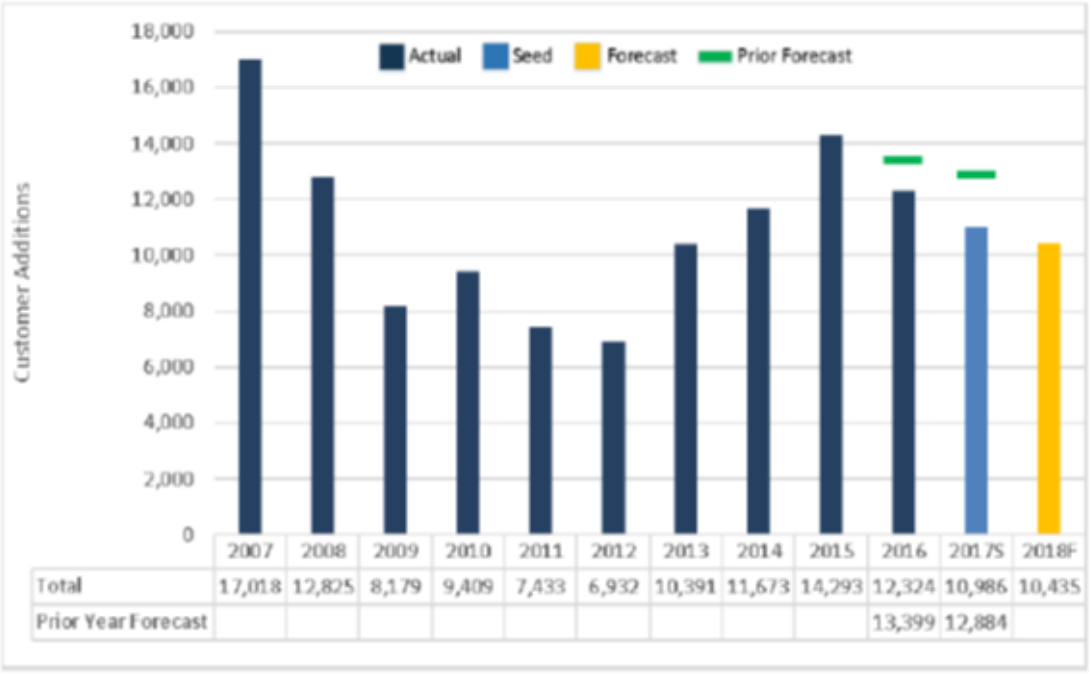
12. Reference: Exhibit B-2, page 30

3.4 RESIDENTIAL AND COMMERCIAL NET CUSTOMER ADDITIONS FORECAST

The forecast of net customer additions is the next component in determining the total energy demand for residential and commercial customers.

As shown in Figure 3-5, the rate of growth seen in FEI's customer base (residential, commercial and industrial) reached a high in 2007 of roughly 17,000 net customer additions then declined to below 10,000 annual net customer additions for the period from 2009 through 2012. Net customer additions in 2013 and 2014 were stronger, above 10,000 per year, with an additional large increase in 2015 up to above 14,000 net customer additions followed by a decrease of approximately 2,000 net customer additions in 2016. The Company is forecasting customer additions at 10,986 in 2017 and 10,435 in 2018.

Figure 3-5: Total Net Customer Additions

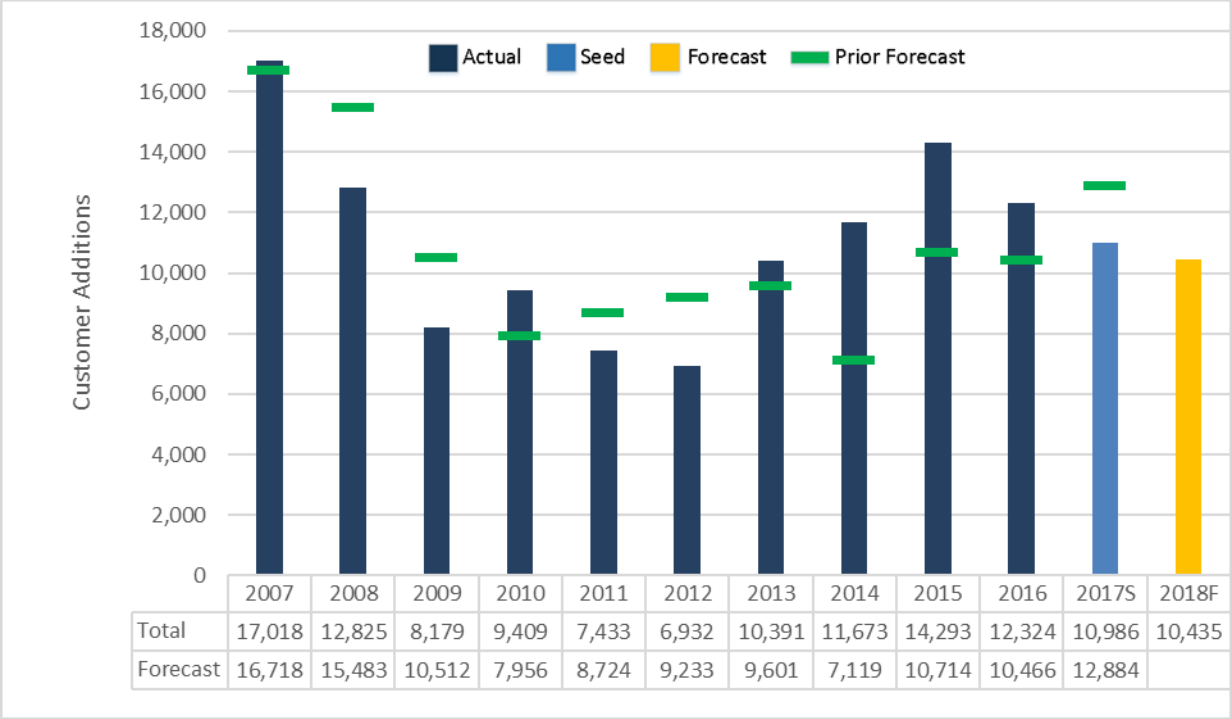


	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017S	2018F
Total	17,018	12,825	8,179	9,409	7,433	6,932	10,391	11,673	14,293	12,324	10,986	10,435
Prior Year Forecast										13,399	12,884	

12.1 Please provide the prior year forecasts for Figure 3-5 and fill in the green line accordingly.

Response:

The requested chart is provided below.



	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017S	2018F
Total	17,018	12,825	8,179	9,409	7,433	6,932	10,391	11,673	14,293	12,324	10,986	10,435
Forecast	16,718	15,483	10,512	7,956	8,724	9,233	9,601	7,119	10,714	10,466	12,884	

12.2 Please provide FEI's views as to why the net customer additions declined for the period between 2007 and 2012.

Response:

FEI believes the recession of 2008 had the greatest impact on net customer additions starting in 2008 and lasting for several years.

FEI notes that the data from 2007 through 2012 is provided for context only and is not used to prepare any portion of the net customer additions forecast for the period of 2017S or 2018F.

12.3 Please provide FEI's views as to why customer additions have been experiencing significant swings over the last 10 years.

Response:

FEI believes that the recession of 2008 caused a decline in net customer additions through 2012, but that there are likely many additional factors affecting the regions, rate schedules and industry sectors served by FEI.

FEI notes that the residential customer additions forecast for 2017S and 2018F relies on the housing starts data from CBOC to calculate a growth rate which is applied to the 2016 actual value only; the residential customer additions data from 2007-2015 are not used in the preparation of the forecast. Further, the commercial and industrial customer additions cover many industry sectors each with their own drivers. In 2016, FEI commercial and industrial customers represented 179 different industry sectors. FEI does not believe it is feasible or necessary to understand the drivers affecting all industrial sectors.

13. Reference: Exhibit B-2, Appendix A3, page 6

3. RESIDENTIAL CUSTOMER ADDITIONS

The residential net customer additions forecast was developed based on housing starts data from CBOC forecast of November 10, 2016 Provincial Medium Term Forecast: 20163 Run: 17, Table LTPF156 and LTPF157. The housing starts data was as follows:

Table A3-3: Housing Starts Data

Housing Type	2015	2016	2017S	2018F
SFD	10,152	12,676	10,689	9,963
MFD	21,294	29,466	25,865	25,001
Total	31,446	42,143	36,554	34,964

From the above housing starts forecast, the 2017S SFD growth rate is calculated as follows:

$$2017S\ SFD\ Growth\ Rate = \left(\frac{10{,}689}{12{,}676}\right) - 1 = -15.7\%$$

13.1 For how many years has FEI relied on the CBOC forecast in its forecast of net customer additions?

Response:

FEI has used the CBOC SFD/MFD method for seven years, since the preparation of the 2012-13 RRA.

14. Reference: Exhibit B-2, Appendix A2, page 5

3.2 AMALGAMATED NET CUSTOMER ADDITIONS

Customer Additions	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Rate Schedule 1										
Forecast	16,267	14,603	9,827	7,012	7,724	8,984	9,352	6,647	9,710	9,461
Actual	15,794	11,321	7,723	9,186	6,911	6,371	9,139	10,472	12,508	11,359
Error = (ACT-FCST)	-473	-3,282	-2,104	2,174	-813	-2,613	-213	3,825	2,798	1,898
Percent Error = (Error/ACT)	-3.0%	-29.0%	-27.2%	23.7%	-11.8%	-41.0%	-2.3%	36.5%	22.4%	16.7%

Customer Additions	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Rate Schedule 2										
Forecast	588	796	618	830	877	145	145	411	1,026	1,026
Actual	1,198	1,330	446	128	511	577	1,329	1,173	1,450	998
Error = (ACT-FCST)	610	534	-172	-702	-366	432	1,184	762	424	-28
Percent Error = (Error/ACT)	50.9%	40.2%	-38.6%	-548.4%	-71.6%	74.9%	89.1%	65.0%	29.2%	-2.8%

Customer Additions	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Rate Schedule 3										
Forecast	-284	14	14	105	114	44	44	4	-52	-51
Actual	-71	171	-31	37	-16	-104	-86	35	132	-112
Error = (ACT-FCST)	213	157	-45	-68	-130	-148	-130	31	184	-61
Percent Error = (Error/ACT)	-300.0%	91.8%	145.2%	-183.8%	812.5%	142.3%	151.2%	88.6%	139.4%	54.5%

Customer Additions	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Rate Schedule 23										
Forecast	147	70	53	9	9	60	60	57	30	30
Actual	97	3	42	58	27	88	9	-7	202	79
Error = (ACT-FCST)	-50	-67	-11	49	18	28	-51	-64	172	49
Percent Error = (Error/ACT)	-51.5%	-2233.3%	-26.2%	84.5%	66.7%	31.8%	-566.7%	914.3%	85.1%	62.0%

14.1 Please provide FEI's views as to the cause of the significant forecast error occurring in the forecast net customer additions.

Response:

This response also addresses CEC IR 1.14.2

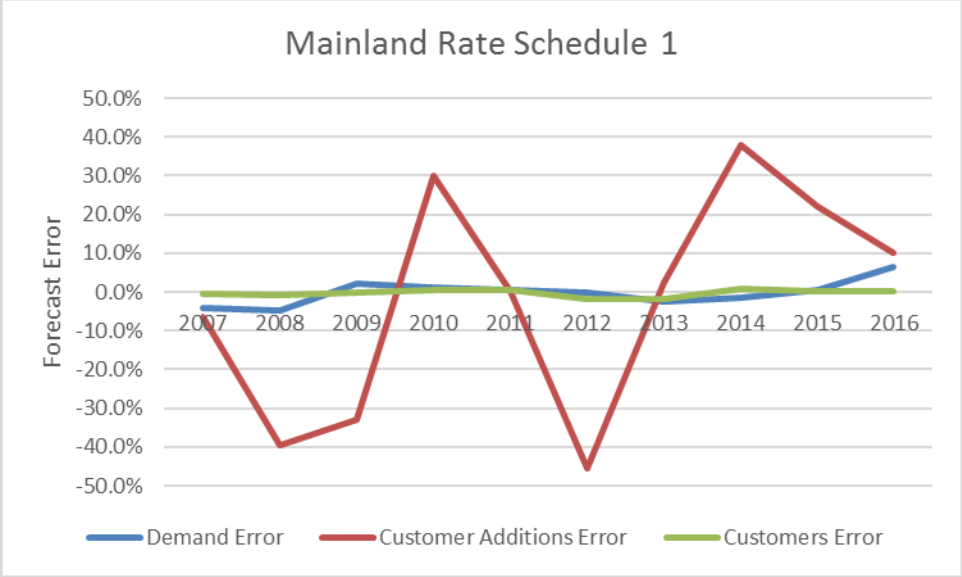
Forecast errors in net residential customer additions are due to errors in the CBOC SFD/MFD housing starts forecast. The forecast error in net commercial customer additions is caused by the volatility in the historic customer additions data used to prepare the forecast. When the input data is volatile the forecast can also be expected to be volatile.

However, the demand forecasts are relatively insensitive to errors in the customer additions forecasts. Customer additions are a small portion of the total customer counts, and it is the product of the total customer count and use rates that determines the demand forecast.

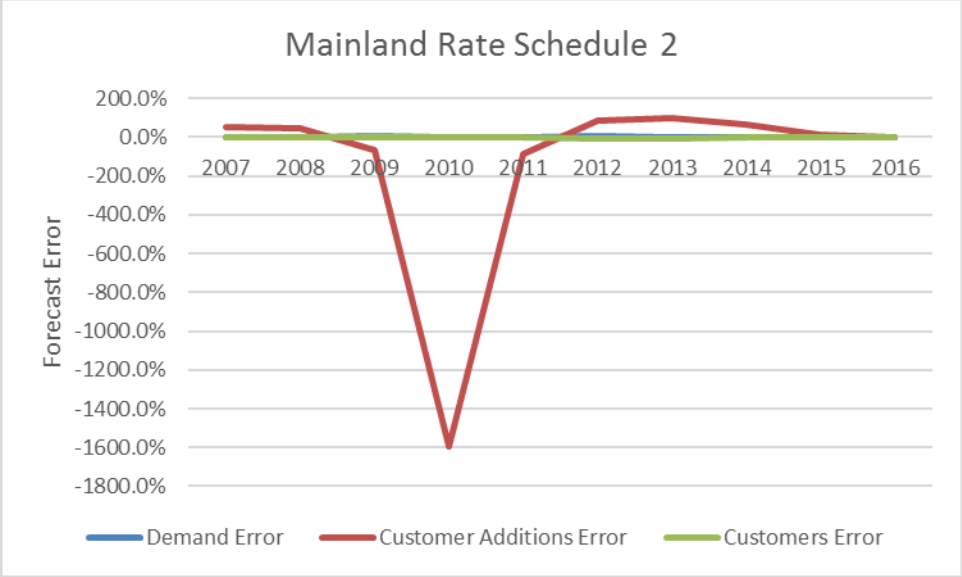
The following table compares the Rate Schedule 1 forecast errors from the demand, customer additions and customer forecasts:

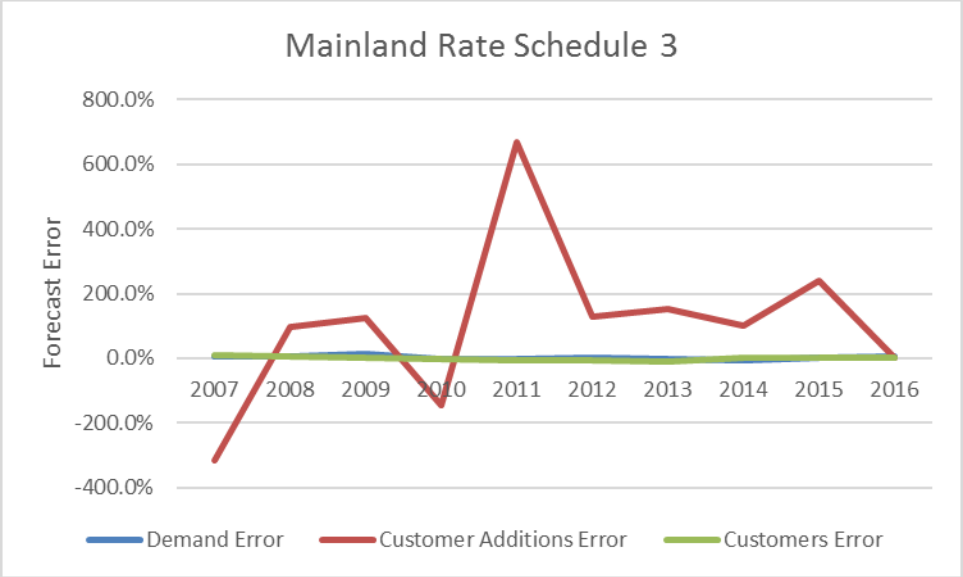
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Rate Schedule 1										
Demand Error	-4.1%	-4.6%	2.1%	1.2%	0.5%	-0.2%	-2.5%	-1.5%	0.5%	6.4%
Customer Additions Error	-6.3%	-39.4%	-32.9%	30.0%	0.2%	-45.4%	2.6%	38.0%	22.0%	10.3%
Customers Error	-0.5%	-0.9%	-0.3%	0.4%	0.4%	-1.8%	-1.7%	0.7%	0.2%	0.3%

When these errors are plotted together it is apparent that large errors in the customer additions forecast do not result in large errors in the demand forecast:

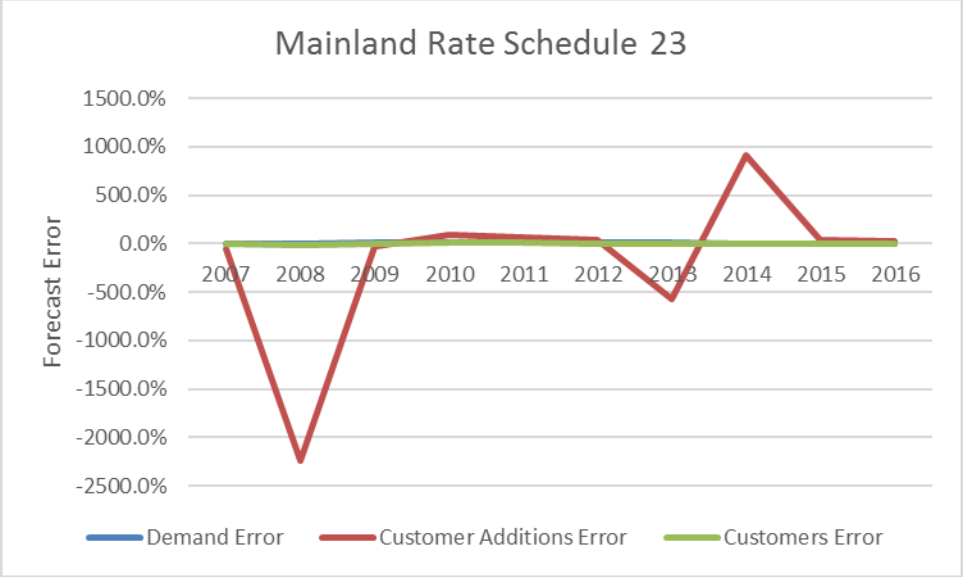


Results for the commercial rate schedules show the same result:





1



2

3 The seven-year mean absolute percent error (MAPE) for both the residential and commercial
4 demand forecasts remains at 2%, which is half the industry average of 4%.

5 FEI believes that the customer additions forecast errors are reasonable given the volatility of the
6 historical actuals used to prepare the forecasts. As demonstrated, the demand forecasts are
7 relatively insensitive to errors in the customer additions forecasts. Therefore, FEI is not
8 undertaking any activities to change the forecast method.

9

10

14.2 What activities is FEI undertaking to correct the forecast in Net Customer Additions? Please explain.

Response:

Please refer to the response to CEC IR 1.14.1.

15. Reference: Exhibit B-2, Appendix A2, page 9

3.6 MAINLAND NET CUSTOMER ADDITIONS

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	
Rate Schedule 1											
Forecast	12,764	11,094	6,410	4,777	4,983	6,507	6,774	4,594	6,889	6,863	
Actual	12,003	7,959	4,822	6,824	4,994	4,475	6,956	7,415	8,831	7,648	
Error = (ACT-FCST)	(761)	(3,135)	(1,588)	2,047	11	(2,032)	182	2,821	1,942	785	
Percent Error = (Error/ACT)	-6.3%	-39.4%	-32.9%	30.0%	0.2%	-45.4%	2.6%	38.0%	22.0%	10.3%	

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	ETS 2016
Rate Schedule 2											
Forecast	523	626	480	713	750	49	49	331	851	851	830
Actual	1,064	1,122	285	42	409	325	1,245	984	987	875	875
Error = (ACT-FCST)	541	496	(195)	(671)	(341)	276	1,196	653	136	24	45
Percent Error = (Error/ACT)	50.8%	44.2%	-68.4%	-1597.6%	-83.4%	84.9%	96.1%	66.4%	13.7%	2.7%	5.1%

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	ETS 2016
Rate Schedule 3											
Forecast	(288)	8	7	101	108	40	40	-	(65)	(64)	35
Actual	(69)	169	(28)	41	(19)	(144)	(77)	27	46	(66)	(66)
Error = (ACT-FCST)	219	161	(35)	(60)	(127)	(184)	(117)	27	111	(2)	(101)
Percent Error = (Error/ACT)	-317.4%	95.3%	125.0%	-146.3%	668.4%	127.8%	151.9%	100.0%	241.3%	3.0%	153.0%

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	ETS 2016
Rate Schedule 23											
Forecast	147	70	53	9	9	60	60	57	30	30	(12)
Actual	97	3	42	58	27	88	9	(7)	51	41	41
Error = (ACT-FCST)	(50)	(67)	(11)	49	18	28	(51)	(64)	21	11	53
Percent Error = (Error/ACT)	-51.5%	-2233.3%	-26.2%	84.5%	66.7%	31.8%	-566.7%	914.3%	41.2%	26.8%	129.3%

15.1 Please provide a brief explanation for the significant under and over forecasting that has occurred for each Rate Schedule in the Mainland Net Customer Additions since 2007.

Response:

Please refer to the response to CEC IR 1.14.1. The explanation is the same for FEI as a whole and the Mainland region.

15.2 Please provide FEI's views as to any appropriate thresholds that might be established for a reasonable range of 'forecast error' for both Amalgamated Net Customer Additions and Mainland Net Customer Additions. Please explain why.

Response:

Please refer to the response to CEC IR 1.14.1.

16. Reference: Exhibit B-2, page 48

> **5.3.3 Net Other Mitigation Revenue**
>
> The mitigation revenue associated with the west to east capacity on SCP during the initial years of the PBR term was the result of the T-South Enhanced Service agreement between Spectra and FEI. The T-South Enhanced Service agreement expired on October 31, 2016.
>
> In light of the expiry of the agreement with Spectra, the Company has been, and will continue, to seek opportunities to contract the west to east capacity. The forecast mitigation revenue for the SCP west to east capacity for 2018 is based on the current forward market price differentials for summer 2018 and reflect the existing pipeline capacity constraints within the region. These market conditions will change over time and mitigation revenues are expected to moderate as regional constraints are addressed. FEI forecasts generating net mitigation revenue in the amount of $6.894 million in 2018.
>
> The mitigation revenue forecast is net of the cost of using FEI gas supply resources, such as Spectra Kingsvale South transportation capacity held in the midstream portfolio, to connect with the SCP system. The mitigation revenue net of the gas supply resource costs will be allocated to Other Revenue.

16.1 How did FEI arrive at the $6.894 million figure for Net Other Mitigation Revenues?

Response:

Approximately 10 percent of the SCP 2018 Net Other Mitigation Revenues forecast amount of $6.894 million is comprised of revenues related to short-term agreements that FEI has secured for 2018. The remaining approximately 90 percent of the revenues are associated with additional short-term mitigation that FEI anticipates it will achieve. FEI's forecast of additional, yet to be secured, short-term mitigation is based on an estimate of the uncontracted west to east capacity that can be transacted in the market during summer 2018 and the forward market price differentials in place at the time the forecast was developed.

The higher mitigation revenues achieved over the past couple of summers, and embedded in the 2018 forecast, reflect the existing pipeline capacity constraints within the region.

FEI continually seeks opportunities to maximize SCP value for the benefit of its customers. However, the current market conditions will change over time and the SCP mitigation revenues associated with west to east capacity are expected to moderate as regional constraints are addressed.

16.2 Please confirm that the Net Mitigation revenues are based on the Commission approved assessment methodology.

Response:

The valuation of the forecast SCP mitigation revenues is consistent with the valuation methods used for prior SCP mitigation revenues, and the valuation methods used for gas supply portfolio costs and mitigation revenues utilized by FEI in other Commission submissions. The valuation of the forecast SCP mitigation revenues is also consistent with how the wholesale gas industry would forecast the net mitigation.

Further, FEI confirms that the method used for allocating SCP costs and revenues between the delivery margin and the MCRA (Midstream Cost Reconciliation Account) is consistent with the allocation methodology the Commission approved effective January 1, 2012.

17. Reference: Exhibit B-2, page 52

> **6.3.2 Insurance**
>
> The insurance expense relates to insurance premium expense allocated to FEI by Fortis Inc.
>
> The 2018 insurance expense is forecast at $5.360 million, a decrease of $0.169 million or 3 percent from what was approved for 2017. The 2018 Forecast is calculated by taking the known annual insurance premium of $5.229 million which is applicable to the first six months of 2018 and escalating that amount by five percent for the remaining six months[31]. The five percent escalation is based on a combination of historical increases in premiums, increases in the value of assets year over year and the expectations of Fortis Inc.'s insurance broker on future premiums.

[31] $5.229 million/2 = $2.615 million x 1.05 = $2.745 million. $2.615 million + $2.745 million = $5.360 million.

17.1 Why was the cost of insurance lower than anticipated for 2017?

Response:

The cost of insurance was lower than anticipated as a result of the following factors:

- The insurance market remained competitive for 2017 renewals.
- A clean loss history for FEI and the Fortis Inc. group of companies.
- The replacement cost of assets reduced slightly compared to 2016 renewals.

17.2 Please provide the insurance costs for 2013-2017.

Response:

Insurance renewals are completed on July 1 of each year. The following are the calendar year insurance costs from 2013 – 2017:

2013 $5.977 million
2014 $6.272 million
2015 $6.184 million
2016 $5.744 million
2017 $5.301 million

17.3 What was the anticipated increase in insurance costs between 2016 and 2017?

Response:

A 5 percent escalation was the anticipated increase in insurance costs between 2016 and 2017.

18. Reference: Exhibit B-2, page 22 and page 58

Table 2-3: Service Line Additions (SLA) Growth Factor Calculation

	Total Service Line Additions	12 Month Sum	SLA Factor @ 50%	PBR Year
Jul-15	1,024			
Aug-15	685			
Sep-15	1,521			
Oct-15	1,327			
Nov-15	1,397			
Dec-15	1,127			
Jan-16	836			
Feb-16	707			
Mar-16	517			
Apr-16	994			
May-16	1,144			
Jun-16	843	12,122		
Jul-16	716			
Aug-16	895			
Sep-16	984			
Oct-16	1,407			
Nov-16	1,707			
Dec-16	1,552			
Jan-17	1,407			
Feb-17	1,152			
Mar-17	1,583			
Apr-17	981			
May-17	1,188			
Jun-17	1,290	14,862	11.302%	2018

Unlike the O&M formula, the capital expenditure formula has two growth components in addition to formula inflation, resulting in separate calculations of Growth Capital and Other Capital. For 2018, the annual capital expenditures under the formula are calculated as:

> 2018 Growth Capital = 2017 Growth capital x [(1 + (I Factor – X Factor)] x [1 + SLA customer growth][39]
>
> 2018 Other Capital = 2017 Other Capital x [(1 + (I Factor – X Factor)] x [1 + customer growth][40]

Tables 7-2 and 7-3 below show the calculation of the resulting 2018 formula capital expenditures.

18.1 Please confirm that Service Line Additions are Net Service Line Additions.

Response:

Not confirmed.

Service Line Additions counts the number of risers that are installed for new customer attachments and is always counted on a gross basis.

When referring to a net count of customers, there can be a distinction between gross and net customer additions. Gross customer additions only includes the total new customer attachments; net customer additions also includes move-ins, move-outs and vacancies (disconnects and non-disconnects) in the calculation.

19. Reference: Exhibit B-2, page 61 and page 135

In March of 2017, and after the completion of FEI's Annual Review for 2017 Rates proceeding, section 4(2)(a) of Direction No. 5 was amended by OIC No. 749, to remove the requirement that the Tilbury Expansion Project be added to rate base "*on January 1 of the year immediately following the year in which phase 1A facilities are completed*". This change to Direction No. 5 now gives the Commission flexibility on when the Tilbury Expansion Project can be added to rate base.

Given the change to Direction No. 5, FEI is now proposing to include the Tilbury Expansion Project in rate base upon its completion in 2017. In lieu of collecting AFUDC after project completion in 2017, FEI proposes that its equity return be captured as a reduction to its existing 2017 Revenue Surplus deferral account as described in Section 12.4.1.1.

As explained above, adding the Tilbury Expansion Project to rate base immediately after completion in 2017 was not forecast when 2017 rates were set, which followed the requirements of Direction No. 5 at the time. The unforecast addition of the Tilbury Expansion Project to rate base in 2017 would create differences in interest expense, income taxes, and equity return compared to the forecast of the same items included in 2017 rates. FEI's Flow-through deferral account would capture the differences between actual and forecast[41] interest expense and income tax expense, but not the difference in equity return. As FEI must have an opportunity to earn a fair return on its investment in the project,[42] the difference in the equity return under the proposed treatment must be captured and credited to FEI. FEI's proposal is that the equity return be captured as a reduction to FEI's 2017 Revenue Surplus deferral account as described in Section 12.4.1.1.

In summary, FEI's is proposing to add the Tilbury Expansion Project to rate base after completion in 2017. However, to provide the utility with an opportunity to earn a fair return on its investment, FEI must be provided with an equity return in lieu of AFUDC. FEI's proposal that the equity return be captured as a reduction to FEI's 2017 Revenue Surplus deferral account achieves this and results in an overall beneficial result that is fair to both FEI and its customers.

As discussed in Section 7.2.2.1, FEI's proposal to include the Tilbury Expansion Project in rate base for a portion of 2017 requires FEI to recover a rate base equity return on the project for that period of time, in lieu of collecting AFUDC. FEI believes the simplest way to recover the equity return is through a reduction to the credit recorded in the existing 2017 Revenue Surplus account. The example below is a calculation of FEI's required 2017 equity return for the Tilbury Expansion Project, using a September 1, 2017 in-service date for rate base purposes and $461 million in total capital transferred to rate base:

$461 million x 38.5% equity x 8.75% ROE x 4/12 = $5.177 million

While the $5.177 million amount assumes a September 1, 2017 in-service date, the actual addition to the 2017 Revenue Surplus account could vary if the project's in-service date is delayed to a future month in 2017.

19.1 Is there a standard protocol or typical expectation as to when projects are added to ratebase relative to the project's completion, or any other protocol? Please explain.

Response:

FEI's current practice is to add CPCN projects to Rate Base on January 1 of the year following when the project goes into service. This treatment addresses concerns about forecasting the exact month that these large projects should enter rate base.

Under some regulatory plans in the past, FEI has instead added CPCN projects to Rate Base the month after the project goes into service. In this case, in the revenue requirement, a forecast of the in-service date and a consequent 13-month adjustment is made.

Smaller projects that are not CPCNs are added to Rate Base in the month after the project goes into service. For the revenue requirement, these projects are assumed to enter rate base mid-year.

In all cases, AFUDC is calculated until the project enters rate base, such that FEI receives the same rate base return both while the project is outside of rate base, and while it is in rate base.

Please also refer to the response to CEC IR 1.19.4 where FEI sets out considerations that are specific to the Tilbury Expansion Project.

19.2 Does FEI still anticipate completing the project by September 1, 2017? If no, please provide FEI's current expectation.

Response:

No. The completion of the Tilbury Expansion Project has been delayed due to an incident that occurred on August 19, 2017. The Contractor conducting the start-up/commissioning of the plant reported a brief ignition from a refrigerant line, which was extinguished shortly thereafter. Fire detection and suppression equipment on site was activated and functioned as designed, containing the incident. Emergency response procedures were also activated and worked as planned. However, the investigation into the cause of the fire and any necessary repairs will delay the completion of the project at least until the end of 2017. As a consequence, FEI has revised the date for the Tilbury Expansion to be included in rate base to January 1, 2018. An Evidentiary Update reflecting this change is being filed concurrently with these IR responses on September 26, 2017.

19.3 Based on FEI's completion date expectation, please provide an estimate of the cost to ratepayers (in $) of FEI's proposed change to include the Tilbury Expansion Project in ratebase upon completion and collecting a return on equity versus collecting AFUDC after project completion.

Response:

FEI has now revised its forecast to include Tilbury Expansion in rate base on January 1, 2018 such that this question is no longer relevant (i.e. there is no longer a comparison to be made between including in rate base or calculating an AFUDC return).

19.4 Does the Commission have full flexibility to determine when to include the Tilbury Expansion project into ratebase given the change to Direction 5? Please explain why or why not.

Response:

Direction No. 5 requires the Commission to allow FEI to include the Tilbury Expansion project in utility rate base, but the Direction No. 5 amendments cited in the preamble provide flexibility for the Commission to determine when the project is included in rate base. However, FEI believes that the Tilbury Expansion should be added to rate base when it is in service. As soon as the Tilbury Expansion facility is complete and operating it will be employed in providing utility service, meaning the facility belongs properly in rate base at that point, attracting the allowed return on rate base (debt interest and ROE) and being depreciated at approved depreciation rates.

If the Tilbury Expansion project were artificially kept out of rate base (an approach which FEI does not agree with), the rate base-related cost of service (i.e., the cost side, mainly the rate base return and depreciation expense) would not be included in the revenue requirement calculations while at the same time the revenues from LNG sales (i.e. the revenue or benefit side) from the Tilbury Expansion facility would be providing an offset to revenue requirements to be collected from non-bypass customers. AFUDC would continue to be recorded on the capital costs until the project was added to rate base. If this approach was taken, rate volatility would result. There would be rate reductions while the facility was not in rate base, but was generating revenues, followed by a large rate increase when the facility was added to rate base (inclusive of the additional accumulated AFUDC). FEI's aim in bringing the Tilbury Expansion project into rate base has been to try to match as much as possible the benefits and costs of the project to avoid rate volatility of this nature.

19.4.1. If yes, please provide a comparison of the costs to ratepayers of deferring the inclusion of Tilbury expansion to ratebase To January 1, 2018; June 30, 2018 and January 1, 2019.

Response:

Please refer to FEI's Evidentiary Update filed concurrently with these IR responses on September 26, 2017, for the effects of adding the Tilbury Expansion Project to rate base on January 1, 2018.

In addition to the concerns about rate volatility described in the response to CEC IR 1.19.4, a deferral of the addition of the Tilbury Expansion project to rate base to January 1, 2019 would cause an additional $27 million of AFUDC to accrue on the project. The additional $27 million of AFUDC would be collected from FEI rate payers through depreciation expense and other rate base carrying costs over the life of the assets. The total effect of the accrued AFUDC in 2019 would be to add $2.7 million to the annual revenue requirements.

If FEI deferred the addition of the Tilbury Expansion project to rate base to July 1, 2018 the effect would be approximately half of what is described above.

19.5. Does the Revenue Surplus deferral account attract interest? Please explain.

Response:

The Revenue Surplus deferral account attracts a weighted average cost of capital return, which includes interest, as approved by Commission Order G-182-16.

19.6. Please provide a forecast for 5 years of the utilization of the LNG production capacity for the Tilbury Expansion project.

Response:

The table below provides a 5 year forecast of the utilization of the LNG production capacity for the Tilbury Expansion project.

	2018	2019	2020	2021	2022
Average Contracted LNG Demand Forecast (GJ per year)	1,111,250*	2,800,000	4,700,000	5,700,000	7,100,000
Production Capacity (GJ per year)	12,500,000	12,500,000	12,500,000	12,500,000	12,500,000
Utilization Percentage (Forecast LNG Demand / Production Capacity)	9%	22%	37%	45%	57%

** As included in FEI's Annual Review for 2018 Rates Application*

20. Reference: Exhibit B-2, page 135

> Additionally, given FEI is forecasting a 2018 revenue surplus of $3.824 million as shown in the financial schedules,[63] FEI is now seeking approval to also add the forecast 2018 revenue surplus to the 2017 Revenue Surplus account and to re-name the account to the 2017-2018 Revenue Surplus account.
>
> In summary, the following amounts are forecast to be added to the deferral account in 2017 and 2018.
>
> **Table 12-3: 2017-2018 Revenue Surplus Account Additions**

($ millions)	Additions
2017 forecast revenue surplus (G-182-16)	$ 32.012
Tilbury Expansion 2017 equity return	(5.177)
2018 forecast revenue surplus	3.824
Total Revenue Surplus to be returned in future years (excluding WACC Return)	**$ 30.659**

20.1 What would be the financial impact, if any, to ratepayers, of returning the surplus to ratepayers immediately and deferring FEI's capture of its return on equity until completion of the Expansion Project? Please explain and provide the calculations.

Response:

To answer this question, FEI first provides a revised Table 12-3 below based on the Evidentiary Update being filed concurrent with these IR responses on September 26, 2017.

($ millions)	Additions
2017 forecast revenue surplus (G-182-16)	$ 32.012
2018 forecast revenue surplus (Sept. 26, 2017 Evidentiary Update)	7.960
Total Revenue Surplus to be returned in future years (excluding WACC Return)	**$ 39.972**

Excluding the impacts of AFUDC on the revenue surplus account and minor impacts on cash working capital, the impact to ratepayers of amortizing the $39.972 million amount in the table above in 2018 rates would be a decrease to delivery rates of 5.0 percent. Given the expected rate increases to FEI customers in 2019 as the result of the LMIPSU project, FEI has requested to maintain rates at 2017 levels to smooth rates for customers.

21. Reference: Exhibit B-2, page 87

When calculating the actual customer growth adjustment for this Application, FEI noted an error in the average customer count used for the 2015 actual customer growth adjustment in the Annual Review for 2017 Rates Application. FEI has corrected the error and included an adjustment to the earnings sharing to be returned in 2018. The error was a transposition of 2 digits in 2015 Average Customers (Line 1, Table 10-3) which resulted in the average customer count for 2015 being 18,000 too high, which caused a greater than required adjustment to the 2016 projected earnings sharing amount of $0.037 million pre-tax ($0.027 million after tax). FEI has included the adjustment in Table 10-1 above and has provided details of the calculation in Table 10-4 below.

Table 10-4: Correction to 2015 Adjustment for Actual Customer Growth

Line No.	Particulars	Corrected	Filed in 2016 Annual Review for 2017 Rates	Difference	Notes
1	Average Customers 2015	968,765	986,765	(18,000)	Transposed 2015 Average Customers
2	Average Customers 2014	959,193	959,193	-	
3	Growth in Average Customers	9,572	27,572	(18,000)	
4	Average Customer Growth	0.998%	2.874%		
5		50%	50%		
6	Average Customer Growth to be recast in Formula	0.499%	1.437%		
7	2015 Net Inflation Factor	0.201%	0.201%		
8	2014 Reforecast Sustainment/Other Capital	$ 111.862	$ 111.862		
9	2015 Reforecast Formulaic Sustainment/Other Capital	$ 112.646	$ 113.698	$ (1.052)	
10	2015 Year Formulaic Sustainment/Other Capital	110.901	110.901		
11	Sustainment/Other Capital Increase from actual growth	$ 1.745	$ 2.797	$ (1.052)	
12	Mid Year	$ 0.873	$ 1.398	$ (0.526)	
13					
14	Equity Cost Component	3.37%	3.37%	3.37%	
15	Debt Cost Component	3.64%	3.64%	3.64%	
16	Earned Return on incremental Capital Requirements (pre-tax)	$ 0.061	$ 0.098	$ (0.037)	
17	Earned Return on incremental Capital Requirements (after-tax)	$ 0.045	$ 0.073	$ (0.027)	Correction included in 2018 ESM

21.1 Please confirm or otherwise explain that there is no impact on the Earnings Sharing in O&M as a result of the transposition of digits in the 2015 Average customers.

Response:

Confirmed. The adjustment for Actual Customer Growth is only applied to Formula CapEx and does not impact Formula O&M.

22. Reference: Exhibit B-2, page 87 and page 88

10.1.3 True-Up for 2016 Actual Earnings Sharing

In FEI's 2016 Annual Report to the Commission, FEI calculated the final 2016 earnings sharing based on the final 2016 results. The final amount of earnings sharing for 2016 was $4.045 million, which was $0.361 million higher than the $3.684 million projected for 2016, as shown in Table 10-5 below. As a result, FEI is increasing its 2018 earning sharing by the after-tax amount of $0.361 million as shown in Table 10-1 above.

Table 10-5: Calculation of 2016 Actual Earnings Sharing true-up ($millions)

Line No.	Particulars	After-tax Amount	Reference
1	2016 Actual Earnings Sharing account ending balance	(4.045)	2016 FEI BCUC Annual Report
2	2016 Projected Earnings Sharing account ending balance	(3.684)	Annual Review of 2017 Rates Compliance Filing financial schedules, Schedule 12, Line 8, Column 2
3	**2016 Earnings Sharing account true-up**	**(0.361)**	

10.1.4 Financing

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. As shown in Table 10-6 below, FEI has calculated a $0.104 million credit to true-up for 2017 projected financing and a forecast $0.070 million credit for 2018 financing. This results in a total after-tax financing adjustment of $0.174 million to be distributed to customers as shown in Table 10-1 above.

Table 10-6: Calculation of Earnings Sharing financing ($millions)

Line No.	Particulars	After-tax Amount	Reference
1	2017 Projected Earnings Sharing financing	(0.205)	
2	Less: 2017 Forecasted Earnings Sharing financing	(0.101)	Annual Review of 2017 Rates Compliance Filing financial schedules, Schedule 12, Line 11, Column 4
3	2017 Earnings Sharing financing true-up	(0.104)	
4	Add: 2018 Forecasted Earnings Sharing financing	(0.070)	Section 11, Schedule 12, Line 20, Column 4
5	**2017/2018 Financing Adjustments**	**(0.174)**	

22.1 Why is financing on the deferral account balances calculated at the Weighted Average Cost of Capital (WACC) the appropriate assessment for credits for customers? Please explain.

Response:

The financing on the Earnings Sharing deferral account was determined by the Commission in Order G-162-14 where the Panel stated: *"Accordingly, the Commission Panel approves the establishment of the Earning Sharing deferral account. This deferral account shall have a one*

year amortization period and shall earn a return based on FEI's Weighted Average Cost of Capital. This treatment is consistent with FEI's other currently approved deferral accounts."

The return for deferral accounts is determined on a case by case basis, based on a number of considerations. Whether the balance is a credit or a debit at a point in time is generally not one of the considerations, since most deferral accounts (including the earnings sharing account) can have either debit or credit balances.

23. Reference: Exhibit B-2, page 143

> The Company's 2009 to 2016 annual and 2017 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	2016	June 2017 YTD
Results	97.7%	97.7%	97.9%	97.4%	97.4%	96.7%	97.3%	97.4%	97.7%
Benchmark	n/a	n/a	n/a	n/a	n/a	97.7%	97.7%	97.7%	97.7%
Threshold	n/a	n/a	n/a	n/a	n/a	96.2%	96.2%	96.2%	96.2%

23.1 Does FEI expect the 2017 annual performance to continue to meet benchmark? Please explain why or not.

Response:

The Emergency response times have been trending positively in the past several years and the 2017 YTD result is at the benchmark. FEI is working towards achieving the Benchmark of 97.7 in 2017.

24. Reference: Exhibit B-2, page 145

> Target Zero is the continual improvement program which was launched in January 2016. This program focuses on a number of key elements designed to enhance the existing safety management system and engage employees at all levels in safety as well as promote an interdependent safety environment. The Company believes this program has contributed to the positive safety trend experienced.
>
> The Company's 2009 to 2016 and 2017 year-to-date AIFR results are provided below.

Table 13-4: Historical All Injury Frequency Rate Results

Description	2009	2010	2011	2012	2013	2014	2015	2016	June 2017 YTD
Annual Results	2.49	2.66	1.66	1.91	3.02	1.73	2.52	2.13	2.13
Three year rolling average	2.55	2.26	2.27	2.08	2.20	2.22	2.42	2.13	2.26
Benchmark	n/a	n/a	n/a	n/a	n/a	2.08	2.08	2.08	2.08
Threshold	n/a	n/a	n/a	n/a	n/a	2.95	2.95	2.95	2.95

24.1 Does FEI have any expectations that its annual results for the AIFR will become better than benchmark during the PBR period? Please explain why or why not.

Response:

The All Injury Frequency Rate (AIFR) has been trending positively and the YTD 2017 annual result is approaching the benchmark. FEI is working towards achieving the benchmark of 2.08 in 2017. Improvements in the AIFR annual results are difficult to predict. The Company will continue to reinforce diligence in all worker safety protocols and look for further opportunities for continual improvement.

25. Reference: Exhibit B-2, page 148

> While the 2017 year-to-date results are above the benchmark, meter reading accuracy results were lower than previous years during the first several months due to challenging winter weather conditions.

Table 13-9: Historical Meter Reading Accuracy Results

Description	2009	2010	2011	2012	2013	2014	2015	2016	June 2017 YTD
Annual Results	n/a	n/a	n/a	n/a	92.5%	97.0%	97.5%	96.9%	95.5%
Benchmark	n/a	n/a	n/a	n/a	n/a	95.0%	95.0%	95.0%	95.0%
Threshold	n/a	n/a	n/a	n/a	n/a	92.0%	92.0%	92.0%	92.0%

25.1 Please elaborate on the challenging weather conditions and why these resulted in a decline in the meter reading accuracy indicator.

Response:

Due to the unusual and sustained winter weather experienced within the Lower Mainland, an unusual amount of snow blanketed the Lower Mainland in the first quarter of 2017. This resulted in a significant challenge for our meter readers to safely access customers' meters and increased the number of meter readings that needed to be estimated.

25.2 Please confirm that FEI expect the Meter Reading Accuracy Indicator to remain at or above benchmark for the remainder of the PBR term.

Response:

FEI's goal is to remain at or above the benchmark for the remainder of PBR term.

25.2.1 If not confirmed, please explain why not.

Response:

Please refer to the response to CEC IR 1.25.2.