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October 3, 2017

Irrigation Ratepayers Group
c/o Weisberg Law Corporation
2730 Ailsa Crescent
North Vancouver, BC V7K 2B2

Attention: Mr. Fred J. Weisberg

Dear Mr. Weisberg:

Re: FortisBC Inc. (FBC)

Project No. 1598920

Multi-Year Performance Based Ratemaking Plan for 2014 through 2019 approved by British Columbia Utilities Commission (Commission) Order G-139-14 – Annual Review for 2018 Rates (the Application)

Response to the Irrigation Ratepayers Group (IRG) Information Request (IR) No. 1

On August 10, 2017, FBC filed the Application referenced above. In accordance with the British Columbia Utilities Commission Order G-116-17 setting out the Regulatory Timetable for the review of the Application, FBC respectfully submits the attached response to IRG IR No. 1.

If further information is required, please contact Joyce Martin at 250-368-0319.

Sincerely,

FORTISBC INC.

Original signed:

Diane Roy

Attachments

cc (email only): Commission Secretary
Registered Parties

1.0 Reference: Exhibit B-2, 1.4.1 Overview of O&M Savings, PDF 13

Preamble: The Application states (PDF 13):

While some of the savings are one-time in nature, some of the savings are the result of efficiencies which are expected to continue into the future, recognizing that cost pressures in the future may offset such savings. Upcoming costs related to cyber security are an example of such cost pressures.

O&M costs for cyber security are expected to increase in 2018 by approximately $0.2 million, along with additional and related capital expenditures.

1.1 Are costs related to cyber security the largest upcoming cost pressure identified by FBC? If not, please identify any upcoming cost pressures larger than cyber security.

Response:

No. At this time, for 2018 formulaic O&M expenditures, the largest cost pressure identified is an expected increase of approximately $0.3 million in lease costs for the Enterprise and Springfield facilities in Kelowna. The O&M pressures beyond 2018 that FBC has identified are the increases in lease costs, cyber security, and MRS costs which are outside the formula.

FBC used cyber security as an example of cost pressures that may arise in the future and to highlight that the level of Formula O&M savings achieved in recent years may be difficult to sustain in the future. This is due to several factors. First, each year the PIF imposes an annual challenge of approximately $0.6 million of required incremental savings each year. This means that FBC needs to increase the incremental O&M savings each year if it is to maintain the same level of O&M savings compared to the formula. Second, as discussed in the Application and highlighted with the cyber security example, FBC is facing new cost pressures which may offset savings achieved. Third, while the Company continues to investigate additional initiatives and opportunities, it is an increasingly difficult challenge to find new initiatives with incremental savings to offset both the new cost pressures and the productivity challenge embedded in the formula.

1.2 Please identify any other upcoming material cost pressures identified by FBC and provide an indication of the dollar amount of such cost pressures in 2018 and beyond.

Response:

Please refer to the response to IRG IR 1.1.1.

1.3 Is the $0.2 million increase in 2018 O&M costs for cyber security expected to be a recurring cost in 2019 and beyond, or escalate above that amount?

Response:

The $0.2 million increase in 2018 O&M for cyber security is expected to be an annual recurring cost going forward. Due to the ever-changing nature of cyber security and requirements to maintain an adequate level of protection, the need for increases beyond 2018 for cyber security is not known at this time.

1.4 What steps has FBC taken to mitigate rising cyber security costs by coordinating efforts with FEI, BC Hydro or other utilities?

Response:

FBC has mitigated costs by integrating cyber security resources and tools with FEI. One manager and cyber security team is accountable for all cyber security for FBC and FEI. This removes or reduces redundancy of resources, policies, processes, procedures, services and infrastructure.

FBC participates in utility-specific organizations, such as the Western Energy Institute (WEI) and the Canadian Electricity Association (CEA), on committees specific to technology and cyber security. FBC participates with utilities from across Canada in the CEA Technology Committee and the CEA Security & Infrastructure Protection Committee, and at the WEI in the Chief Information Officer working group. Participation in these organizations and committees helps ensure FBC is focusing on the right areas of cyber security specific to utilities. This in turn helps determine and manage the costs to maintain an appropriate level of cyber security for FBC.

1.5 In focusing "… on securing its systems and educating users on identifying different types of cyber-attacks" who are the "users" FBC refers to? If "users" include FBC customers, please provide examples of how such education is carried out across different customer classes.

Response:

An FBC user is anyone that has an Active Directory (i.e. user) account on FBC's network. This does not include FBC customers. It does include employees and some contractors.

The training for users includes policy reviews regarding the proper handling of FBC data and equipment, as well as annual cyber security training to recognize and avoid phishing and other social engineering attacks that could compromise FBC's systems and data.

NOTE: Due to the nature of this series of IRs, the IRG encourages FBC to consider providing confidential responses if appropriate.

2.0 Reference: Exhibit B-2, 1.4.2 Initiatives Undertaken, SAP Integration, PDF 14

Preamble: The Application states (PDF 15):

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 in FBC. The savings will be realized beginning in 2019.

2.1 Assuming that the SAP Integration project is completed as expected in the third quarter of 2018 would a pro-rated O&M savings (e.g. $0.3 million annual savings X 4 months = $0.1 million savings) be realized in 2018?

Response:

A pro-rated savings would not be fully recognized in 2018 due primarily to the annual licensing model. Licenses can only be cancelled at the end of the year. There may be some savings in 2018 due to reduced requirements for contracted support, but it is difficult to determine for that short period of time.

2.2 Will FBC be able to realize some savings from the SAP Integration project on a phased-in basis or is it necessary to have the project 100% completed before *any* O&M savings may be realized?

Response:

There is no practical way to phase in the project that would yield any benefits. Due to the nature of licensing and contracts, it is necessary to have the project 100 percent complete to realize any benefits.

3.0 Reference: Exhibit B-2, 3.2 Overview of Forecast Methods, PDF 30

Preamble: The Application states (PDF 30):

The load forecast for residential customers is based on forecasts for customer count and UPC, consistent with past practice. Specifically, the UPC is forecast and is then multiplied by the corresponding forecast of the number of customers to derive the load forecast. The commercial load forecast is based on a regression against the Conference Board of Canada (CBOC) Gross Domestic Product (GDP) forecast, while the lighting and irrigation forecasts are based on trend analysis and a 5-year average, respectively. Wholesale and industrial forecasts are primarily based on customer-specific survey results.

3.1 Please explain why a 5-year average is a more appropriate basis for irrigation load forecasts than the approaches used for other customer classes (e.g. customer count and Use Per Customer (UPC), or customer-specific survey results)?

<u>Response:</u>

FBC reviews its forecast method for each customer class on an annual basis to check for trends and suitability. A five-year average is an appropriate basis for the irrigation forecast since the historic data does not show any statistically significant trends. A customer-specific survey would not be a reasonable approach since this class has over one thousand customers with an aggregate load of less than 50 GWh annually.

3.2 Please confirm that although "…no statistically significant trend was found…"[1] for the Irrigation class, in the remaining years of PBR FBC will continue with its past practice of checking for trends in the historical load data for the Irrigation class.

<u>Response:</u>

Confirmed.

[1] Application, Section 3.5.6 Irrigation, PDF 38.

4.0 Reference: Exhibit B-2, 3.5.7.1 Advanced Metering Infrastructure (AMI) Impact on Losses, PDF 40

Preamble: The Application states (PDF 40):

Consistent with past practice FBC assumed a loss rate of 8 percent of gross load, before the AMI impact. The 8 percent loss rate was based on a loss study that was conducted in 2012, which is still in line with the loss rate that FBC is seeing on an annual basis (averaging 7.88 percent over the previous three years, after DSM and AMI impacts). AMI loss reduction is expected to further reduce the losses in the future. As shown in Figure 3-9 below, after-savings energy losses are forecast to decrease by 3 GWh in 2018.

4.1 Does FBC believe that the "Commission's determination to limit the number of assumed marijuana grow cycles to three per year" remains appropriate or is there reason to revisit that conclusion?

Response:

FBC has no information to indicate that revisiting the Commission's determination is warranted at this time.

4.2 What actions other than AMI has FBC taken to identify and prevent theft or fraud on the distribution system?

Response:

In addition to AMI, FBC undertakes the following activities:

- active monitoring of known high-load sites to help deter possible theft and/or fraud;
- running periodic reports to identify any anomalous drops in consumption;
- reviewing security deposit amounts collected for high-load sites to ensure sufficient security has been collected for the consumption being recorded;
- reviewing all dispatches related to FBC equipment failures to determine whether the failure of any assets could potentially be related to overloaded customer equipment and/or theft;

- leveraging existing power quality metering installed on distribution feeders for the purpose of prioritizing the analysis of FBC feeders for non-technical loss identification through energy balancing; and
- FBC is currently exploring the application of voltage analytics for the purposes of loss identification.

FBC continually dialogues with other utilities throughout North America regarding current practices and trends around theft detection and deterrence, including reviewing the best practices of other electric utilities both through direct conversations with BC Hydro as well as through participation in annual conferences through both the Western States Utility Theft Association as well as the International Utilities Revenue Protection Association.

With respect to identification by third parties, FBC provides various avenues through both the external FBC website[2] as well as through a partnership with Crime Stoppers to enable customers and/or members of the public to anonymously report suspected energy theft.

4.3 Has FBC reviewed best practices of other electric utilities regarding detection and deterrence of theft or fraud on distribution systems? If not, does FBC believe that would be a worthwhile initiative?

Response:

Please refer to the response to IRG IR 1.4.2.

[2] https://www.fortisbc.com/Safety/PreventingEnergyTheft/Pages/default.aspx

5.0 Reference: Exhibit B-2, 5 Other Revenue, PDF 51

Preamble: The Application states (PDF 51):

As shown in the table below, FBC is forecasting other revenue for 2018 to be $0.360 million higher than the amounts approved for 2017. The main driver of this increase is Other Recoveries, which reflects income earned on construction work performed for a third party that will be recognized in 2017 and 2018. This income, which is expected to be $1.072 million with approximately 80% earned in 2017 and the remaining 20% earned in 2018, is also responsible for the increase in the 2017 Projected compared to the approved value.

5.1 Will FBC's "escalations in unit rental rates", primarily for pole contact revenue, keep pace with such rates charged by BC Hydro or other utilities in comparable jurisdictions?

Response:

The agreements between a utility and a third party using their infrastructure are generally confidential, and FBC has limited visibility into the rates of other utilities. Some examples of information that is available in the public domain includes the generic rate cards BC Hydro publishes for pole attachment requests,[3] or the Ontario Energy Board decisions on attachment rates at Ottawa Hydro[4] which set escalation rates for pole contact fees at 2.1 percent from 2017 to 2020. Outside of the few public record disclosures, FBC has no visibility over how rates may escalate over time.

5.2 Given the material amount of Other Revenue (i.e. equivalent to approximately 43% of FBC's proposed distribution of $0.831 million in earnings sharing to customers in 2018), does FBC plan to actively pursue similar or increased construction work and rentals in 2018 and beyond?

Response:

FBC primarily earns contract revenue on its agreements for third-party generating facilities and on occasion by performing system work for other utilities. Both of these revenue streams are dependent on the third parties' own requirements.

[3] https://www.bchydro.com/accounts-billing/moving-electrical-connections/electrical-connections/attaching-poles-towers-ducts.html.

[4] http://static.hydroottawa.com/documents/corporate/regulatory-affairs/EB-2015-0004_2016-02-25.pdf.

As well, FBC regularly evaluates new requests for access to FBC infrastructure, particularly transmission and distribution poles. These requests can result in additional third-party revenues for FBC.

6.0 Reference: Exhibit B-2, 7.8.1 Cash Working Capital, PDF 68

Preamble: The Application states (PDF 68):

The revenue lag associated with sales revenue is primarily a function of the frequency of billing. The majority of residential and commercial customers are currently being billed on a bi-monthly basis which corresponds with the bi- monthly manual meter reading schedule. Following the completion of FBC's AMI project, the Company is offering a new billing option to provide customers with monthly billing based on verified meter reads. Depending on the number of customers choosing this option, the revenue lag component of working capital may be reduced. In its Decision and Order G-16-14 approving FBC's proposed AMI-Enabled Billing Options, the Commission directed that FBC must flow through any incremental working capital benefits to customers by way of the Flow-through deferral account approved in Order G-139-14.

6.1 Please confirm that in this context FBC's reference to "bi-monthly" billing means customers are billed once every two months (note: bi-monthly is an ambiguous term also used in some contexts to indicate twice in one month).

Response:

Confirmed.

6.2 What percentage and number of residential and commercial customers does FBC expect to opt for monthly billing in 2018? Please provide support for that expectation.

Response:

FBC expects a monthly billing adoption rate in 2018 similar to that experienced in 2017 (two percent of residential customers and three percent of commercial customers).

6.3 Please quantify the incremental working capital benefits FBC expects to be realized in 2018 as a result of residential and commercial customers opting for monthly billing. If practical, please provide the 2018 Forecast Revenue Lag in a table that enables reasonable comparison to Table 7.6: Calculation of 2016 Revenue Lag.

Response:

The working capital adjustment due to changes in the monthly/bimonthly billing proportions cannot be calculated until after year-end when all billing and revenue data is finalized. The Annual Review for 2018 rates contains the working capital adjustment for 2016, which is the last complete year of data available, therefore the 2018 adjustment will not be known until after December 31, 2018. The potential working capital benefit for 2018 due to residential and commercial customers opting for monthly billing, as calculated below, is approximately $0.023 million.

Assuming a two percent annual increase in residential customers and a three percent annual increase in commercial customers opting for monthly billing as estimated in the response to IRG IR 1.6.2, then the 2018 estimates of monthly billed residential and commercial customers is three percent and 4.5 percent higher, respectively, than the proportions assumed in the 2018 working capital calculation. These values represent the full annual increase during 2017 and, for calculation of the mid-year rate base impact, one half of the annual increase during 2018.

Table 1 below shows the recalculation of the 2018 revenue lag in the format of Table 7-6.

Table 1: Calculation of Estimated 2018 Revenue Lag

Line		Service Period to Meter Read		Annual Review			Estimated			Meter Read to Billing
				Proportion Billed		Consumption	Proportion Billed		Consumption	
No.	Customer Class	Monthly	Bimonthly	Monthly	Bimonthly	Lag	Monthly	Bimonthly	Lag	Processing Lag
		a	b	c	d	e=a*c+b*d	f	g	h=a*f+b*g	i
1	Residential	15.2	30.4	14.6%	85.4%	28.2	16.1%	83.9%	28.0	1.0
2	Commercial	15.2	30.4	19.6%	80.4%	27.4	24.1%	75.9%	26.7	1.0
3	Wholesale	15.2	30.4	100.0%	0.0%	15.2	100.0%	0.0%	15.2	1.0
4	Industrial	15.2	30.4	100.0%	0.0%	15.2	100.0%	0.0%	15.2	1.0
5	Lighting	15.2	30.4	16.2%	83.8%	27.9	16.2%	83.8%	27.9	1.0
6	Irrigation	15.2	30.4	40.3%	59.7%	24.3	40.3%	59.7%	24.3	1.0
7										
8										

Line		Billing to Collection		Annual Review			Estimated			Annual Review	Estimated
10				Proportion Billed		Clearing	Proportion Billed		Clearing		
11		Monthly	Bimonthly	Monthly	Bimonthly	Lag	Monthly	Bimonthly	Lag	Total Lag Days	
12		j	k	l=c	m=d	n=j*l+k*m	o=f	p=g	q=j*o+k*p	r=e+i+n	s=h+i+q
13	Residential	17	22	14.6%	85.4%	21.3	16.1%	83.9%	21.2	50.5	50.1
14	Commercial	17	22	19.6%	80.4%	21.0	24.1%	75.9%	20.8	49.4	48.5
15	Wholesale	17	22	100.0%	0.0%	17.0	100.0%	0.0%	17.0	33.2	33.2
16	Industrial	17	22	100.0%	0.0%	17.0	100.0%	0.0%	17.0	33.2	33.2
17	Lighting	17	22	16.2%	83.8%	21.2	16.2%	83.8%	21.2	50.1	50.1
18	Irrigation	17	22	40.3%	59.7%	20.0	40.3%	59.7%	20.0	45.3	45.3

Table 2 recalculates 2018 cash working capital assuming these estimated revenue lags and compares the cash working capital to that included in the current Application.

Table 2: 2018 Estimated AMI Adjustment to Cash Working Capital ($ million)

Line No.	Description	2018 at Revised Rates	Revised Lag (Lead) Days	Extended	Weighted Average Lag (Lead) Days	Reference
1	**REVENUE**					
2	**Sales Revenue**					
3	Residential Tariff Revenue	$ 179.177	50.1	$ 8.985		
4	Commercial Tariff Revenue	90.771	48.5	4.405		
5	Wholesale Tariff Revenue	48.620	33.2	1.614		
6	Industrial Tariff Revenue	31.748	33.2	1.054		
7	Lighting Tariff Revenue	2.906	50.1	0.146		
8	Irrigation Tariff Revenue	3.519	45.3	0.159		
9						
10	**Other Revenue**	8.416		0.257		Section 11, Schedule 14, Lines 11 - 15
11						
12	Total	$ 365		$ 17	45.5	
13						
14	**EXPENSES**	$ 264.240		$ 10.358	(39.2)	Section 11, Schedule 14, Line 35
15						
16	Net Lag (Lead) Days				6.3	
17						
18	Total Expenses				$ 264.240	
19						
20	Cash Working Capital, Revised Lag Days				$ 4.561	
21						
22	Cash Working Capital, Annual Review				$ 4.850	Section 11, Schedule 14, Line 41
23						
24	Reduction in Cash Working Capital				$ (0.290)	

Finally, the notional revenue requirements impact of the $0.290 million reduction in rate base, multiplied by the pre-tax weighted average cost of capital, is $0.023 million, as shown in Table 3 below.

Table 3: Revenue Requirements Impact of Estimated AMI Adjustment to Cash Working Capital ($ million)

Line No.	Description	Weight	Pre-Tax Rate	Adjustment for Cash Working Capital	Reference
1	Long Term Debt	55.61%	5.20%	$ (0.008)	Section 11, Schedule 26, Line 1
2	Short Term Debt	4.39%	3.45%	(0.000)	Section 11, Schedule 26, Line 2
3	Common Equity	40.00%	12.36%	(0.014)	Note 1
4					
5					
6	Weighted Average	100.00%	7.99%	$ (0.023)	Column 2 x Column 3 x $0.290 million
7					
8	Note 1: Pre-tax value = approved ROE of 9.15%/(1-26%)= 12.36%				

6.4 As the option to switch from bi-monthly billing "beginning in 2016" now has been available for a considerable time, is it reasonable to assume that most customers who intend to switch from bi-monthly to monthly billing have already done so?

Response:

FBC does not believe it is reasonable to assume this. Customer situations and preferences change frequently and customers that prefer bi-monthly billing now may prefer monthly billing in the future. It is also possible that with future customer promotions and education more customers may at a later date decide to switch to monthly billing.