FBC Annual Review of 2019 Rates

Workshop

FORTIS BC^{**}

October 10, 2018

Agenda

Approvals Sought & PBR Overview	Diane Roy	Vice President, Regulatory Affairs
Revenue Requirements & Rates	Joyce Martin	Manager, Regulatory Affairs
 Capital Projects Ruckles Station Rebuild Project Upper Bonnington Old Units Refurbishment Project 	Darrin Marshall	Senior Project Manager
Sarvian Quality Indicators (SOIn)	James Wong	Director, Strategic Initiatives and Budgeting
Service Quality Indicators (SQIS)	Dale Ernst	Manager, System Operations
Open Question Period	All	



Approvals Sought

- Rate freeze for 2019 with the 2019 surplus added to the existing 2018 revenue deficiency account
- Six deferral account requests:
 - □ 2018 DSM Expenditures regulatory proceeding new
 - EVDC Charging Station Rate Design and Rates proceeding new
 - □ BC Hydro Waneta 2017 Transaction proceeding new
 - 2019 2022 DSM Expenditures proceeding four-year amortization
 - □ 2017 Rate Design Application proceeding five-year amortization
 - Castlegar Office Disposition deferral account one-year amortization
- Z factors for 2019 Employer Health Tax and 2018/2019 MSP premium reductions, as well as 2019 MRS incremental costs



Summary of PBR Results – O&M*



- O&M has trended favourably both in total and on a per customer basis, with O&M per customer decreasing significantly
- \$6 million in savings shared with customers through earnings sharing mechanism plus \$3 million savings embedded in the formula



Formula Capital Expenditures

		2014			2015			2016	
	Actual	Formula	Variance	Actual	Formula	Variance	Actual	Formula	Variance
Formula Capital	\$ 42.665	\$ 42.193	\$ 0.472	\$ 44.791	\$ 42.384	\$ 2.408	\$ 45.838	\$ 42.874	\$ 2.964
Pension/OPEB	6.396	6.396	-	4.253	4.253	-	3.674	3.674	-
Total	\$ 49.061	\$ 48.589	\$ 0.472	\$ 49.043	\$ 46.637	\$ 2.408	\$ 49.512	\$ 46.548	\$ 2.964
			0.97%			5.16%			6.37%
		2017			2018			Cumulative	
	Actual	Formula	Variance	Forecast	Formula	Variance	Actual	Formula	Variance
Formula Capital	\$ 59.053	\$ 43.254	\$ 15.799	\$ 58.847	\$ 43.818	\$ 15.029	\$ 251.193	\$ 214.523	\$ 36.670
Pension/OPEB	3.539	3.539	-	3.630	3.630	-	21.492	21.492	-
Total	\$ 62.592	\$ 46.793	\$ 15.799	\$ 62.477	\$ 47.448	\$ 15.029	\$ 272.685	\$ 236.015	\$ 36.670
			33.76%			31.67%			15.54%



Summary of PBR Results – Rates



Note: 2018 rate increase was 0.25 percent before deferral of deficiency; 2019 rate decrease would be 1.55 percent before deferral of surplus



Revenue Requirements & Rates

Joyce Martin, Manager, Regulatory Affairs



Evidentiary Update October 3, 2018

Evidentiary Update - 2019 Rates						
Line Item	Reference	Revenue Surplus Impact (\$ millions)	Rate Impact			
August 10, 2018 Filing		\$ 5.759	1.55 %			
May/June AWE Update	Application, Page 15	(0.003)	(0.00)%			
Formula Capital / CIAC	BCUC IRs 1.7.4, BCUC IR 1.7.8	(0.160)	(0.04)%			
Ruckles Substation Project	BCUC IR 1.44.3, CEC 1.23.3	0.040	0.01 %			
Deferral Account Updates	BCUC IR 1.27.1, BCUC IR 1.32.1	0.100	0.03 %			
October 3, 2018 Evidentiary Update		\$ 5.736	1.55 %			



Summary of 2019 Revenue Surplus





Amortization of 2018 – 2019 Net Surplus





FBC Annual Review of 2019 Rates

Ruckles Substation Rebuild Project Update Upper Bonnington Old Units Refurbishment Project Update

Darrin Marshall, Senior Project Manager



October 10, 2018

Ruckles Substation Rebuild Project

- Four project drivers:
 - Reliability, environmental and safety risks associated with flooding
 - Safety risks due to arc-flash hazard
 - Obsolete equipment
 - Insufficient distribution backup capacity
- Scope includes:
 - Rebuilding the existing substation on the existing site
 - Reconfiguration of the transmission and distribution lines
- Forecast: \$6.438 million
- Schedule: Completion by Q4 2018



Ruckles Substation Rebuild Project





- Increased water levels resulted in significant flooding in Grand Forks, BC
- Installed the mobile transformer on the new elevated area
- Sandbagged the existing control room and major equipment
- FBC was in the process of commissioning the new station when flooding occurred
- The flooding damaged the old equipment beyond repair















Flood Risk – Equipment Damage





Ruckles Substation Rebuild Project

- Current status:
 - Construction and commissioning complete
 - Old equipment removed
 - Minor cleanup on site
 - Engineering is currently processing as-builts from the project



- Three project drivers:
 - Reliability ensure the availability of reliable supply to FBC's customers at the lowest reasonable cost
 - Safety mitigate the safety risks to FBC's employees that result from the obsolete design and poor condition of the generating units
 - Environment mitigate the environmental risks posed by the increasing likelihood of failure of the aged equipment
- Scope includes:
 - □ Refurbishment of generating Units 1–4 (the Old Units).
- Forecast: \$31.783 million
- Schedule: Completion by Q1 2021











































- Current status:
 - Detailed Engineering substantially complete
 - Engineering largely complete
 - > Update drawings for use on Units 1 and 2
 - Procurement substantially complete
 - > All major equipment procurement completed
 - Procurement for machining and fabrication services complete
 - Construction
 - Unit 3 successfully returned to service in Q4 2017
 - Unit 4 dismantle started in Q1 2018
 - Unit 4 reassembly ongoing, return to service Q4 2018
 - Unit 1 dismantle to start in Q1 2019



Service Quality Indicators

James Wong, Director, Strategic Initiatives & Budgeting



SQI Performance

Service Quality Indicator	2017 (Relative to Benchmark and Threshold)	2018 August YTD (Relative to Benchmark and Threshold)			
Safety SQIs					
Emergency Response Time	Meets	Meets			
All Injury Frequency Rate (AIFR)	Meets	Meets			
Responsiveness to Customer Needs SQIs					
First Contact Resolution	Meets	Meets			
Billing Index	Meets	Meets			
Meter Reading Accuracy	Meets	Meets			
Telephone Service Factor (Non-Emergency)	Meets	Meets			
Customer Satisfaction Index - informational	n/a	n/a			
Telephone Abandon Rate - informational	n/a	n/a			
Reliability SQIs					
System Average Interruption Duration Index (SAIDI) - Normalized	Outside of Threshold	Outside of Threshold			
System Average Interruption Frequency Index (SAIFI) - Normalized	Meets	Meets			
Generator Forced Outage Rate - informational	n/a	n/a			



Responsiveness to Customer Needs

Service Quality Indicator	2017 Results	Status (Relative to Benchmark and Threshold)	2018 August YTD Results	Status (Relative to Benchmark and Threshold)	Benchmark	Threshold
Responsiveness to Customer Needs SQIs						
First Contact Resolution	80%	Meets	81%	Meets	78%	72%
Billing Index	0.15	Meets	0.35	Meets	5.0	<=5.0
Meter Reading Accuracy	99%	Meets	99%	Meets	97%	94%
Telephone Service Factor (Non-Emergency)	70%	Meets	72%	Meets	70%	68%

Informational Indicators	2017 Results		2018 August YTD Results		2015 Actuals	2016 Actuals
Customer Satisfaction Index	8.2	n/a	8.2	n/a	8.1	8.2
Telephone Abandon Rate	4.7%	n/a	5.2%	n/a	2.7%	3.9%



Safety and Reliability

Service Quality Indicator	2017 Results	Status (Relative to Benchmark and Threshold)	2018 August YTD Results	Status (Relative to Benchmark and Threshold)	Benchmark	Threshold
Safety SQIs						
Emergency Response Time	93%	Meets	94%	Meets	93.0%	90.6%
All Injury Frequency Rate	1.27	Meets	1.41	Meets	1.64	2.39
Reliability SQIs						
SAIDI - Normalized	2.76	Outside of Threshold	3.13	Outside of Threshold	2.22	2.62
SAIFI - Normalized	1.56	Meets	1.62	Meets	1.64	2.50

Informational Indicators	2017 Results		2018 August YTD Results		2015 Actuals	2016 Actuals
Generator Forced Outage Rate - informational	0.6%	n/a	0.4%	n/a	0.1%	0.9%





Dale Ernst, Manager, System Operations



Summary of 2017 Results

- 2017 SAIDI results were impacted by a number of environmental factors:
 - Wildfires, adverse weather, foreign interference (e.g. vehicles)
- Transmission system which was not impacted by the OMS also saw increase in SAIDI
- Difficult at this time to quantify the impact OMS had on distribution SAIDI reporting
- SAIFI remained relatively stable



Historical SAIDI Results

Voor	Total		Distril	oution	Transmission		
rear	SAIDI	Norm. SAIDI	SAIDI	Norm. SAIDI	SAIDI	Norm. SAIDI	
2017	5.41	4.05	3.58	2.86	1.83	1.19	
2016	2.51	2.10	1.75	1.53	0.76	0.57	
2015	4.53	2.13	3.13	1.55	1.40	0.58	
2014	3.93	2.32	2.67	1.94	1.26	0.38	
2013	2.92	2.01	1.73	1.31	1.19	0.70	



What is ADMS?



Outage Management System

Customers Affected	Outage Case Image Call Records Callbacks Transformers Customers Customers Call Comments Damage Reports Tickets Jobs Materials User not looged in. Case # 7547 Case Status Scheduled	
	Contactor Contactor By dist Description 726(392:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0	JIEW STREET
Outage Location (device)	Note With Region Center Mg/dr Center <th>ALLE</th>	ALLE
	Switch Order Image: Completed at the completed completed at the completed completed at the completed compl	



Internal/External Outage Map





Mobile Workforce Management System





Project Benefits Summary

- Outage management system utilizing AMI meter data to improve outage notification and fault locating
- A customer outage map that displays information related to these outages
- A mobile work management tool that updates outage information related to cause, estimated time of restoration, and completion directly from the field



Distribution Reporting System Comparison

Previous Reporting System





Days with Outages Exceeding 20,000 Customer Hours

Date	Total Customer Hours	Main Cause Code
February 6, 2017	37,264*	Adverse Weather (snow)
February 10, 2017	21,474	Adverse Weather (snow)
March 18, 2017	23,615	Equipment Failure
May 24, 2017	48,559*	Adverse Weather (wind)
July 13, 2017	29,823	Adverse Environment (fire)
August 24, 2017	20,826	Adverse Environment (fire)
October 17, 2017	20,898	Adverse Weather (wind)
November 3, 2017	27,508	Adverse Weather (snow)
December 19, 2017	60,048*	Adverse Weather (snow)
December 20, 2017	34,765	Adverse Weather (snow)

*Qualified for normalization



Severity of Outages - 2017





Storm Damage





Initiatives Undertaken

- Detailed review of monthly reliability statistics to identify trends and opportunities
- Managing impact of scheduled outages
- Engineering studies for problem areas
- Identifying opportunities for further distribution automation to improve restoration
- Continue leveraging the ADMS to improve operational response and restoration during outages



Question Period

