

**Fred James**

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March 3, 2020

Mr. Patrick Wruck  
Commission Secretary and Manager  
Regulatory Support  
British Columbia Utilities Commission  
Suite 410, 900 Howe Street  
Vancouver, BC V6Z 2N3

Dear Mr. Wruck:

**RE: British Columbia Utilities Commission (BCUC or Commission)  
British Columbia Hydro and Power Authority (BC Hydro)  
F2018 Fully Allocated Cost of Service (FACOS) Study**

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BC Hydro writes to file, attached as Appendix A to this letter, its F2018 FACOS study reflecting fiscal 2018 actual results pursuant to Commission Directive No. 2 of the 2007 Rate Design Application (**2007 RDA**) Decision.<sup>1</sup>

BC Hydro filed our last annual FACOS study on February 14, 2019, based on fiscal 2017 actual revenue and load data. BC Hydro also filed, on March 29, 2019, its F2019 Cost of Service Study (**COSS**) in compliance with its commitment made in the Negotiated Settlement Agreement Regarding BC Hydro's F2016 Cost of Service Study (**2016 NSA**) approved pursuant to Commission Order No. G-47-16. The COSS included a review of cost of service methodologies based on fiscal 2017 actual revenue and load data.

BC Hydro is now filing our F2018 FACOS study based on actual fiscal 2018 revenue and load data. This filing is being made for information only.

The table below shows Revenue-to-Cost (**R/C**) ratios for all rate classes in fiscal 2018 as compared to prior results, and the percentages of energy consumption of individual rate classes in fiscal 2018. The F2015 FACOS was not completed due to BC Hydro's 2015 Rate Design Application being underway. Except for the fiscal 2016 forecast study, the FACOS studies shown in table below were based on actual revenue and customer load data in fiscal 2014, fiscal 2016, fiscal 2017 and fiscal 2018. The methodologies in all four studies conducted after fiscal 2014 are the same and incorporate the changes to BC Hydro's methodology described in the 2016 NSA referenced above.

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<sup>1</sup> [https://www.bcuc.com/Documents/Proceedings/2007/DOC\\_17004\\_10-26\\_BCHydro-Rate-Design-Phase-1-Decision.pdf](https://www.bcuc.com/Documents/Proceedings/2007/DOC_17004_10-26_BCHydro-Rate-Design-Phase-1-Decision.pdf)

Rate Class	Revenue to Cost Ratios						Percentage of Energy at Customer Meter in F2018 (%)
	F2014 Actual (%)	F2016 Forecast (%)	F2016 Actual (%)	F2017 Actual (%)	F2018 Actual (%)	Percentage Point Change (F2017 Actual to F2018 Actual) (%)	
Residential	92.9	93.3	90.8	93.2	93.8	0.6	35.1
GS < 35 Kw	123.5	111.9	122.6	123.6	121.3	-2.3	7.9
MGS	119.5	117.2	123.5	115.1	114.3	-0.8	6.6
LGS	101.5	101.3	103.9	103.9	102.9	-1.0	21.9
Irrigation	90.3	87.6	95.1	89.5	72.0	-17.5	0.2
Street Lighting – BC Hydro Owned	129.4	173.6	183.6	198.4	210.5	12.1	0.1
Street Lighting – Customer Owned		104.8	101.8	95.1	92.8	-2.3	0.3
Transmission	97.3	102.6	98.8	95.4	96.1	0.7	27.9
<b>Total BC Hydro</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>0</b>	<b>100.0</b>

BC Hydro notes the following when comparing the fiscal 2018 actual results and results of prior years:

- Compared to results in fiscal 2017, R/C ratios for the Residential, MGS, LGS and Transmission Classes were relatively stable in fiscal 2018;
- R/C ratios of SGS (i.e., GS < 35 kW) and Street Lighting - Customer Owned Rate classes in fiscal 2018 decreased about 2 per cent relative to fiscal 2017; and
- Similar to the FACOS for fiscal 2017, continuous improvements to the quality of load data collection resulted in an increase in demand related costs being assigned to the Irrigation Rate Classes, and a decrease in demand related cost allocated to the Street Lighting - BC Hydro Owned Rate Class. Although these changes in demand related costs were small in absolute value, they resulted in meaningful changes to the R/C ratios for these two rate classes. Variability in the R/C ratios is to be expected for smaller rate classes. The decrease of R/C ratio of the Street Lighting - Customer Owned Rate Class was also due to the continuous improvement to the quality of load data collection.

March 3, 2020  
Mr. Patrick Wruck  
Commission Secretary and Manager  
Regulatory Support  
British Columbia Utilities Commission  
F2018 Fully Allocated Cost of Service (FACOS) Study

For further information, please contact Anthea Jubb at 604-623-3545 or by email at [bchydroregulatorygroup@bchydro.com](mailto:bchydroregulatorygroup@bchydro.com).

Yours sincerely,



Fred James  
Chief Regulatory Officer

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Enclosure

Copy to: BCUC Project No. 3698781 (2015 RDA) Registered Intervener Distribution List.

## F2018 Cost of Service - Actual Cost

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Note: All costs are in \$ X 1 million unless otherwise noted.

**F2018 Cost of Service - Actual Cost  
Functionalization Details**

Revenue Requirement Schedule (F2018 Actual) <sup>1</sup>

		F2018 Revenue Requirement	Generation	Transmission	Distribution	Customer Care
<b>Cost of Energy</b>						
Sched 4, L32 + L88	IPPs and Long-term Purchases commitment	1,453.4	1,453.4	0.0	0.0	0.0
	Domestic Transmission (Non-Heritage)	0.0	0.0	0.0	0.0	0.0
Sched 4, L 33	NIA Generation	26.5	26.5	0.0	0.0	0.0
Sched 4, L 34	Gas Transportation	13.1	13.1	0.0	0.0	0.0
Sched 4, L 25+L26	Water Rentals	361.6	361.6	0.0	0.0	0.0
Sched 4, L 36	Market Purchases	3.7	3.7	0.0	0.0	0.0
Sched 4, L 27	Natural gas for thermal generation	3.4	3.4	0.0	0.0	0.0
Sched 4, L 28	Domestic Transmission (Heritage)	47.7	0.0	47.7	0.0	0.0
Sched 4, L 29	Non-treaty storage agreement	-40.6	-40.6	0.0	0.0	0.0
Sched 4, L 30 +L 37	Other and Surplus Sales	-177.3	-177.3	0.0	0.0	0.0
Sched 4, L38	Net purchases (sales) from Powerex	-10.9	-10.9	0.0	0.0	0.0
Sched 4, L 43	HDA Additions	60.4	60.4	0.0	0.0	0.0
Sched 4, L 44	NHDA Additions	122.0	122.0	0.0	0.0	0.0
Sched 4, L 45	Deferred Operating HDA	0.3	0.3	0.0	0.0	0.0
Sched 4, L 46	Deferred Operating NHDA	-35.6	-35.6	0.0	0.0	0.0
Sched 4, L 47	Deferred Amortization NHDA	-14.0	-14.0	0.0	0.0	0.0
Sched 4, L 48	Deferred Taxes NHDA	-1.9	-1.9	0.0	0.0	0.0
Sched 4, L 49	Deferred Provision NHDA	1.6	1.6	0.0	0.0	0.0
Sched 4, L 50	Deferred Waneta 1/3 Costs	0.0	0.0	0.0	0.0	0.0
Sched 4, L 51	Heritage Deferral Account Recoveries	-13.8	-13.8	0.0	0.0	0.0
Sched 4, L 52	Non-Heritage Deferral Account Recoveries	196.5	196.5	0.0	0.0	0.0
<b>Total</b>		<b>1,996.0</b>	<b>1,948.3</b>	<b>47.7</b>	<b>0.0</b>	<b>0.0</b>
<b>O M &amp; A Expenses</b>						
Sched5.0, 5.2	Training, Development and Generation	158.0	136.8	9.2	10.5	1.5
Sched 5.0, 5.4	Transmission, Distribution and Customer Services	685.5	14.2	269.2	282.2	119.9
Sched 3.6, L46-52	Capital Infrastructure Project Delivery	90.1	67.6	44.9	-25.1	2.6
Sched 3.1, 5.0, 5.1	Operations Support	-34.3	-127.4	36.1	43.1	13.9
Sched5.0, L41	PEB Current Pension Cost	5.7	1.7	1.7	1.8	0.5
Sched5.0, L42	PEB CPC - F17-F19 RRA Adjustment	4.3	1.3	1.3	1.3	0.4
<b>Total</b>		<b>909.2</b>	<b>94.2</b>	<b>362.4</b>	<b>313.8</b>	<b>138.7</b>
<b>Depreciation &amp; Amortization</b>						
Sched 12.2, L8-9, Sched7, L18	Generation	284.8	284.8	0.0	0.0	0.0
Sched 12.2, L8-9, Sched7, L18	Transmission	221.1	0.0	221.1	0.0	0.0
Sched 12.5, L8-9, Sched7, L18	Distribution	199.4	0.0	0.0	199.4	0.0
Sched 7.0, L 12 - L 11	Customer Care	0.0	0.0	0.0	0.0	0.0
Sched 7, L33	Business Support	181.7	38.2	118.1	25.4	0.0
<b>Total</b>		<b>887.0</b>	<b>322.9</b>	<b>339.1</b>	<b>224.9</b>	<b>0.0</b>
<b>Taxes</b>						
Sched 6, L 23	Generation	40.9	40.9	0.0	0.0	0.0
Sched 6, L 24	Transmission	143.8	0.0	143.8	0.0	0.0
Sched 6, L 25	Distribution	27.5	0.0	0.0	27.5	0.0
Sched 6, L 26 less L10	Customer Care	0.0	0.0	0.0	0.0	0.0
Sched 6, L 27	Business Support	16.5	3.2	11.2	2.1	0.0
<b>Total</b>		<b>228.8</b>	<b>44.1</b>	<b>155.0</b>	<b>29.7</b>	<b>0.0</b>
<b>Finance Charges</b>						
Sched8, L19 less L15	Total Before Regulatory Accounts	740.8	306.0	263.4	171.4	0.0
Sched 8.0, L22	Interest on Regulatory Accounts	-61.6	-44.4	-4.3	-12.9	0.0
Sched 8.0, L27	Regulatory Account Recoveries	-210.8	-87.1	-74.9	-48.8	0.0
<b>Total</b>		<b>468.4</b>	<b>174.6</b>	<b>184.2</b>	<b>109.7</b>	<b>0.0</b>
<b>Allowed Net Income (return on equity)</b>						
Sched 9, L39	Generation	282.5	282.5	0.0	0.0	0.0
Sched 9, L 40	Transmission	243.2	0.0	243.2	0.0	0.0
Sched 9, L 41	Distribution	158.2	0.0	0.0	158.2	0.0
<b>Total</b>		<b>684.0</b>	<b>282.5</b>	<b>243.2</b>	<b>158.2</b>	<b>0.0</b>
<b>Miscellaneous Revenues</b>						
Sched 15, L3, 17, 20, 26	Non Tariff Revenue (Functionalized)	-124.3	-1.9	-43.3	-55.7	-23.4
Sched 15, L 31	Corporate Miscellaneous Revenue	-19.4	-0.3	-6.8	-8.7	-3.7
Sched 15, L34	Regulatory Account Additions	0.0	0.0	0.0	0.0	0.0
<b>Total</b>		<b>-143.7</b>	<b>-2.2</b>	<b>-50.1</b>	<b>-64.4</b>	<b>-27.0</b>
<b>Revenue Offsets &amp; Other</b>						
Sched 3, L49, L 50	Subsidiary Net Income	-67.7	-67.7	0.0	0.0	0.0
Sched 3.0, L51	Other Utility Revenue	-11.9	-11.9	0.0	0.0	0.0
Sched 3.0, L52	liquefied Natural Gas Revenue	-1.3	-1.3	0.0	0.0	0.0
Sched 3.0, L53	Deferral Rider Revenue	-233.2	-233.2	0.0	0.0	0.0
Sched 3.0, L45	Intersegment revenues	-66.4	-3.8	-62.6	0.0	0.0
Sched 3.4, L8, L9	Internal Allocations (GRTA, SDA)	0.0	43.3	-170.9	127.6	0.0
Sched 3.4, L10	Generation Real Time Dispatch	0.0	1.6	-1.6	0.0	0.0
Sched 3.4, L11	Distribution Real Time Dispatch	0.0	0.0	-16.4	16.4	0.0
Sched 3.4, L12	PTP Allocation to Distribution	0.0	0.0	-28.3	28.3	0.0
Sched 3.4, L13	Aboriginal Relations	0.0	0.0	0.0	0.0	0.0
Sched 3.4, L14	Generation Ancillary Services	0.0	-2.7	2.7	0.0	0.0
Sched 3.3, L7	Energy Planning, Econ. Development & SVP Corp. Affairs	0.0	-3.1	-3.1	-3.2	9.4
Sched 3.3, L8	Conservation & Energy Management	0.0	-0.2	-0.2	-0.2	0.5
<b>Total</b>		<b>-380.5</b>	<b>-279.1</b>	<b>-280.2</b>	<b>168.9</b>	<b>9.9</b>
<b>Total Revenue Requirement</b>		<b>4,649.1</b>	<b>2,585.4</b>	<b>1,001.4</b>	<b>940.8</b>	<b>121.6</b>

1. As included in Attachment 2 to Section 6 Financial Schedules of BC Hydro Fiscal 2018 Annual Report to BCUC - April 1, 2017 to March 31, 2018 dated September 13, 2018.

**Classification of Generation Function**  
(Functionalized Costs from Schedule 1.0)

	Functionalized Costs	Demand Related	Energy Related	Demand Costs	Energy Costs
<b>Cost of Energy</b>					
IPPs and Long-term Purchases commitment	1,453.4	7.0%	93.0%	101.7	1351.7
Domestic Transmission (Non-Heritage)	-	0.0%	100.0%	0.0	0.0
NIA Generation	26.5	0.0%	100.0%	0.0	26.5
Gas Transportation	13.1	0.0%	100.0%	0.0	13.1
Water Rentals	361.6	10.0%	90.0%	36.2	325.4
Market Purchases	3.7	0.0%	100.0%	0.0	3.7
Natural gas for thermal generation	3.4	0.0%	100.0%	0.0	3.4
Domestic Transmission (Heritage)	-	100.0%	0.0%	0.0	0.0
Non-treaty storage agreement	(40.6)	0.0%	100.0%	0.0	-40.6
Other and Surplus Sales	(177.3)	0.0%	100.0%	0.0	-177.3
Net purchases (sales) from Powerex	(10.9)	0.0%	100.0%	0.0	-10.9
HDA Additions	60.4	8.4%	91.6%	5.1	55.3
NHDA Additions	122.0	8.4%	91.6%	10.3	111.7
Deferred Operating HDA	0.3	8.4%	91.6%	0.0	0.3
Deferred Operating NHDA	(35.6)	8.4%	91.6%	-3.0	-32.6
Deferred Operating NHDA	(14.0)	8.4%	91.6%	-1.2	-12.8
Deferred Amortization NHDA	(1.9)	8.4%	91.6%	-0.2	-1.7
Deferred Provision NHDA	1.6	8.4%	91.6%	0.1	1.5
Heritage Deferral Account Recoveries	(13.8)	8.4%	91.6%	-1.2	-12.6
Non-Heritage Deferral Account Recoveries	196.5	8.4%	91.6%	16.6	179.9
<b>Total</b>	<b>1,948.3</b>	<b>8.4%</b>	<b>91.6%</b>	<b>164.5</b>	<b>1783.8</b>
<b>O M &amp; A Expenses</b>					
Training, Development and Generation	123.4	55.0%	45.0%	67.9	55.5
Burrard	7.0	100.0%	0.0%	7.0	0.0
Fort Nelson	5.6	26.0%	74.0%	1.5	4.1
Prince Rupert	0.8	40.0%	60.0%	0.3	0.5
Thermal Generation	13.4	65.6%	34.4%	8.8	4.6
Transmission, Distribution and Customer Services	14.2	55.0%	45.0%	7.8	6.4
Capital Infrastructure Project Delivery	67.6	55.0%	45.0%	37.2	30.4
Operations Support	(127.4)	55.0%	45.0%	-70.1	-57.3
PEB Current Pension Cost	1.7	55.0%	45.0%	0.9	0.8
PEB CPC - F17-F19 RRA Adjustment	1.3	55.0%	45.0%	0.7	0.6
<b>Total</b>	<b>94.2</b>			<b>53.2</b>	<b>41.0</b>
<b>Depreciation &amp; Amortization</b>					
Amort on March 2016 Assets	182.6	55.0%	45.0%	100.4	82.2
Amortization on Additions	16.2	55.0%	45.0%	8.9	7.3
DSM Amortization	86.0	24.4%	75.6%	21.0	65.1
Generation	284.8	45.7%	54.3%	130.3	154.5
Transmission	-	55.0%	45.0%	0.0	0.0
Distribution	-	55.0%	45.0%	0.0	0.0
Customer Care	-	55.0%	45.0%	0.0	0.0
Business Support	38.2	55.0%	45.0%	21.0	17.2
<b>Total</b>	<b>322.9</b>			<b>151.3</b>	<b>171.7</b>
<b>Taxes</b>					
Generation	40.9	55.0%	45.0%	22.5	18.4
Transmission	-	55.0%	45.0%	0.0	0.0
Distribution	-	55.0%	45.0%	0.0	0.0
Customer Care	-	55.0%	45.0%	0.0	0.0
Business Support	3.2	55.0%	45.0%	1.8	1.4
<b>Total</b>	<b>44.1</b>			<b>24.2</b>	<b>19.8</b>
<b>Finance Charges</b>					
Generation	306.0	55.0%	45.0%	168.3	137.7
Transmission	-	55.0%	45.0%	0.0	0.0
Distribution	-	55.0%	45.0%	0.0	0.0
Customer Care	-	55.0%	45.0%	0.0	0.0
Interest on Deferral Accounts	(19.1)	8.4%	91.6%	-1.6	-17.5
Interest on Regulatory Accounts	(25.3)	55.0%	45.0%	-13.9	-11.4
Regulatory Account Recoveries	(87.1)	55.0%	45.0%	-47.9	-39.2
<b>Total</b>	<b>174.6</b>			<b>104.9</b>	<b>69.7</b>
<b>Allowed Net Income</b>					
Generation	282.5	55.0%	45.0%	155.4	127.1
Transmission	-	55.0%	45.0%	0.0	0.0
Distribution	-	55.0%	45.0%	0.0	0.0
<b>Total</b>	<b>282.5</b>			<b>155.4</b>	<b>127.1</b>
<b>Miscellaneous Revenues</b>					
Non Tariff Revenue (Functionalized)	(1.9)	55.0%	45.0%	-1.0	-0.9
Corporate Miscellaneous Revenue	(0.30)	55.0%	45.0%	-0.2	-0.1
Regulatory Account Additions	-	55.0%	45.0%	0.0	0.0
<b>Total</b>	<b>(2.2)</b>			<b>-1.2</b>	<b>-1.0</b>
<b>Revenue Offsets &amp; Other</b>					
Subsidiary Net Income	(67.7)	24.4%	75.6%	-16.5	-51.2
Other Utility Revenue	(11.9)	55.0%	45.0%	-6.6	-5.4
liquefied Natural Gas Revenue	(1.3)	0.0%	100.0%	0.0	-1.3
Deferral Rider Revenue	(233.2)	8.4%	91.6%	-19.7	-213.5
Intersegment revenues	(3.8)	55.0%	45.0%	-2.1	-1.7
Internal Allocations (GRTA, SDA)	43.3	55.0%	45.0%	23.8	19.5
Generation Real Time Dispatch	1.6	55.0%	45.0%	0.9	0.7
Distribution Real Time Dispatch	0.0	55.0%	45.0%	0.0	0.0
PTP Allocation to Distribution	0.0	55.0%	45.0%	0.0	0.0
Aboriginal Relations	0.0	55.0%	45.0%	0.0	0.0
Generation Ancillary Services	-2.7	55.0%	45.0%	-1.5	-1.2
Energy Planning, Econ. Development & SVP					
Corp. Affairs	-3.1	55.0%	45.0%	-1.7	-1.4
Conservation & Energy Management	-0.2	55.0%	45.0%	-0.1	-0.1
<b>Total</b>	<b>(279.1)</b>			<b>-23.5</b>	<b>-255.6</b>
<b>Total Generation Costs</b>	<b>2,585.4</b>	<b>24.3%</b>	<b>75.7%</b>	<b>628.9</b>	<b>1956.5</b>

### Classification of Transmission Function

(Functionalized Costs from Schedule 1.0)

	Functionalized Costs	Demand Related	Demand Costs
<b>Cost of Energy</b>			
IPPs and Long-term Purchases commitment	-	100%	-
Domestic Transmission (Non-Heritage)	-	100%	-
NIA Generation	-	100%	-
Gas Transportation	-	100%	-
Water Rentals	-	100%	-
Market Purchases	-	100%	-
Natural gas for thermal generation	-	100%	-
Domestic Transmission (Heritage)	47.7	100%	47.7
Other and Surplus Sales	-		-
<b>Total</b>	<b>47.7</b>		<b>47.7</b>
<b>O M &amp; A Expenses</b>			
Training, Development and Generation	9.2	100%	9.18
Transmission, Distribution and Customer Service	269.2	100%	269.22
Capital Infrastructure Project Delivery	44.9	100%	44.89
Operations Support	36.1	100%	36.10
PEB Current Pension Cost	1.7	100%	1.73
PEB CPC - F17-F19 RRA Adjustment	1.3	100%	1.30
<b>Total</b>	<b>362.4</b>		<b>362.4</b>
<b>Depreciation &amp; Amortization</b>			
Generation	-	100%	-
Transmission	221.1	100%	221.1
Distribution	-	100%	-
Customer Care	-	100%	-
Business Support	118.1	100%	118.1
<b>Total</b>	<b>339.1</b>		<b>339.1</b>
<b>Taxes</b>			
Generation	-	100%	-
Transmission	143.8	100%	143.8
Distribution	-	100%	-
Customer Care	-	100%	-
Business Support	11.2	100%	11.2
<b>Total</b>	<b>155.0</b>		<b>155.0</b>
<b>Finance Charges</b>			
Generation	-	100%	-
Transmission	263.4	100%	263.4
Distribution	-	100%	-
Customer Care	-	100%	-
Interest on Regulatory Accounts	(4.3)	100%	(4.3)
Regulatory Account Recoveries	(74.9)	100%	(74.9)
<b>Total</b>	<b>184.2</b>		<b>184.2</b>
<b>Allowed Net Income</b>			
Generation	-	100%	-
Transmission	243.2	100%	243.2
Distribution	-	100%	-
<b>Total</b>	<b>243.2</b>		<b>243.2</b>
<b>Miscellaneous Revenues</b>			
Non Tariff Revenue (Functionalized)	(43.3)	100%	(43.3)
Corporate Miscellaneous Revenue	(6.8)	100%	(6.8)
Regulatory Account Additions	-	100%	-
<b>Total</b>	<b>(50.1)</b>		<b>(50.1)</b>
<b>Revenue Offsets &amp; Other</b>			
Subsidiary Net Income	-	100%	-
Other Utility Revenue	-	100%	-
Deferral Rider Revenue	-	100%	-
Intersegment revenues	(62.6)	100%	(62.6)
Internal Allocations (GRTA, SDA)	(170.9)	100%	(170.9)
Generation Real Time Dispatch	-1.6	100%	(1.6)
Distribution Real Time Dispatch	-16.4	100%	(16.4)
PTP Allocation to Distribution	-28.3	100%	(28.3)
Aboriginal Relations	0.0	100%	-
Generation Ancillary Services	2.7	100%	2.7
Energy Planning, Econ. Development & SVP			
Corp. Affairs	-3.1	100%	(3.1)
Conservation & Energy Management	-0.2	100%	(0.2)
<b>Total</b>	<b>(280.2)</b>		<b>(280.2)</b>
<b>Total Transmission Costs</b>	<b>1,001.4</b>		<b>1,001.4</b>

**Classification of Distribution Function**  
(Functionalized Costs from Schedule 1.0)

	Functionalized Costs	Demand Related	Customer Related	SMI Energy Related	Streetlighting Costs (Direct Assigned)	Demand Costs	Customer Costs
<b>Cost of Energy</b>							
IPPs and Long-term Purchases commitment	-					-	-
Domestic Transmission (Non-Heritage)	-					-	-
NIA Generation	-					-	-
Gas Transportation	-					-	-
Water Rentals	-					-	-
Market Purchases	-					-	-
Natural gas for thermal generation	-					-	-
Domestic Transmission (Heritage)	-					-	-
Non-treaty storage agreement	-					-	-
Other and Surplus Sales	-					-	-
Net purchases (sales) from Powerex	-					-	-
Heritage Deferral Account Recoveries	-					-	-
Non-Heritage Deferral Account Recoveries	-					-	-
<b>Total</b>	-				-	-	-
<b>O M &amp; A Expenses</b>							
Training, Development and Generation	10.5	80%	20%			8.4	2.1
Transmission, Distribution and Customer Services	282.2	80%	20%		1.3	224.7	56.2
Capital Infrastructure Project Delivery	(25.1)	80%	20%			(20.0)	(5.0)
Operations Support	43.1	80%	20%			34.5	8.6
PEB Current Pension Cost	1.8	80%	20%			1.4	0.4
PEB CPC - F17-F19 RRA Adjustment	1.3	80%	20%			1.1	0.3
<b>Total</b>	313.8				1.3	250.0	62.5
<b>Depreciation &amp; Amortization</b>							
Generation	-	80%	20%			-	-
Transmission	-	80%	20%			-	-
Distribution	199.4	80%	20%		0.9	158.8	39.7
Customer Care	-	80%	20%			-	-
Business Support	25.4	80%	20%			20.3	5.1
<b>Total</b>	224.9				0.9	179.1	44.8
<b>Taxes</b>							
Generation	-	80%	20%			-	-
Transmission	-	80%	20%			-	-
Distribution	27.5	80%	20%		0.13	21.9	5.5
Customer Care	-	80%	20%			-	-
Business Support	2.1	80%	20%			1.7	0.4
<b>Total</b>	29.7				0.13	23.6	5.9
<b>Finance Charges</b>							
Generation	-	80%	20%			-	-
Transmission	-	80%	20%			-	-
Distribution	171.4	80%	20%		0.81	136.5	34.1
Customer Care	-	80%	20%			-	-
Interest on Regulatory Accounts	(12.9)	80%	20%			(10.4)	(2.6)
Regulatory Account Recoveries	(48.8)	80%	20%			(39.0)	(9.8)
<b>Total</b>	109.7				0.81	87.1	21.8
<b>Allowed Net Income</b>							
Generation	-	80%	20%			-	-
Transmission	-	80%	20%			-	-
Distribution	158.2	80%	20%		0.74	126.0	31.5
<b>Total</b>	158.2				0.74	126.0	31.5
<b>Miscellaneous Revenues</b>							
Non Tariff Revenue (Functionalized)	(55.7)	80%	20%			(44.6)	(11.1)
Corporate Miscellaneous Revenue	(8.7)	80%	20%			(7.0)	(1.7)
Regulatory Account Additions	-	80%	20%			-	-
<b>Total</b>	(64.4)				-	(51.6)	(12.9)
<b>Revenue Offsets &amp; Other</b>							
Subsidiary Net Income	-	80%	20%			-	-
Other Utility Revenue	-	80%	20%			-	-
Deferral Rider Revenue	-	80%	20%			-	-
Intersegment revenues	-	80%	20%			-	-
Internal Allocations (GRTA, SDA)	127.6	100%	0%			127.6	-
Generation Real Time Dispatch	0.0					-	-
Distribution Real Time Dispatch	16.4	80%	20%			13.1	3.3
PTP Allocation to Distribution	28.3	80%	20%			22.7	5.7
Aboriginal Relations	0.0	80%	20%			-	-
Generation Ancillary Services	0.0	80%	20%			-	-
Energy Planning, Econ. Development & SVP Corp.							
Affairs	-3.2	80%	20%			(2.5)	(0.6)
Conservation & Energy Management	-0.2	80%	20%			(0.1)	(0.0)
<b>Total</b>	168.9				-	160.6	8.3
<b>Total Distribution Costs</b>	<b>940.8</b>	<b>82.4%</b>	<b>17.2%</b>		<b>3.94</b>	<b>775.0</b>	<b>161.9</b>



### Classification of Customer Care Function

(Functionalized Costs from Schedule 1.0)

	Functionalized Costs	Demand Related	Customer Related	Demand Costs	Customer Costs
<b>Cost of Energy</b>					
IPPs and Long-term Purchases commitment	-	0%	100%	-	-
Domestic Transmission (Non-Heritage)	-	0%	100%	-	-
NIA Generation	-	0%	100%	-	-
Gas Transportation	-	0%	100%	-	-
Water Rentals	-	0%	100%	-	-
Market Purchases	-	0%	100%	-	-
Natural gas for thermal generation	-	0%	100%	-	-
Domestic Transmission (Heritage)	-	0%	100%	-	-
Other and Surplus Sales	-	0%	100%	-	-
<b>Total</b>	-			-	-
<b>O M &amp; A Expenses</b>					
Training, Development and Generation	1.5	0%	100%	-	1.5
Transmission, Distribution and Customer Service	119.9	0%	100%	-	119.9
Capital Infrastructure Project Delivery	2.6	0%	100%	-	2.6
Operations Support	13.9	0%	100%	-	13.9
PEB Current Pension Cost	0.5	0%	100%	-	0.5
PEB CPC - F17-F19 RRA Adjustment	0.4	0%	100%	-	0.4
<b>Total</b>	138.7			-	138.7
Generation	-	0%	100%	-	-
Transmission	-	0%	100%	-	-
Distribution	-	0%	100%	-	-
Customer Care	-	0%	100%	-	-
Business Support	-	0%	100%	-	-
<b>Total</b>	-			-	-
<b>Taxes</b>					
Generation	-	0%	100%	-	-
Transmission	-	0%	100%	-	-
Distribution	-	0%	100%	-	-
Customer Care	-	0%	100%	-	-
Business Support	-	0%	100%	-	-
<b>Total</b>	-			-	-
<b>Finance Charges</b>					
Generation	-	0%	100%	-	-
Transmission	-	0%	0%	-	-
Distribution	-	0%	100%	-	-
Customer Care	-	0%	100%	-	-
Interest on Regulatory Accounts	-	0%	100%	-	-
Regulatory Account Recoveries	-	0%	100%	-	-
<b>Total</b>	-			-	-
<b>Allowed Net Income (return on equity)</b>					
Generation	-	0%	100%	-	-
Transmission	-	0%	100%	-	-
Distribution	-	0%	100%	-	-
<b>Total</b>	-			-	-
<b>Miscellaneous Revenues</b>					
Non Tariff Revenue (Functionalized)	(23.4)	0%	100%	-	(23.4)
Corporate Miscellaneous Revenue	(3.7)	0%	100%	-	(3.7)
Regulatory Account Additions	-	0%	100%	-	-
<b>Total</b>	(27.0)			-	(27.0)
<b>Revenue Offsets &amp; Other</b>					
Subsidiary Net Income	-	0%	100%	-	-
Other Utility Revenue	-	0%	100%	-	-
Deferral Rider Revenue	-	0%	100%	-	-
Intersegment revenues	-	0%	100%	-	-
Internal Allocations (GRTA, SDA)	-	0%	100%	-	-
Generation Real Time Dispatch	0.0	0%	100%	-	-
Distribution Real Time Dispatch	0.0	0%	100%	-	-
PTP Allocation to Distribution	0.0	0%	100%	-	-
Aboriginal Relations	0.0	0%	100%	-	-
Generation Ancillary Services	0.0	0%	100%	-	-
Energy Planning, Econ. Development & SVP	-			-	-
Corp. Affairs	9.4	0%	100%	-	9.4
Conservation & Energy Management	0.5	0%	100%	-	0.5
<b>Total</b>	9.9			-	9.9
<b>Total Customer Care Costs</b>	<b>121.6</b>			<b>-</b>	<b>121.6</b>

## Allocation of Generation Costs

(Classified Costs from Schedule 2.0)

<b>Cost Classification</b>	<b>Generation Demand</b>	<b>Generation Demand-Related Costs</b>	<b>Generation Energy</b>	<b>Generation Energy Related Costs</b>
<b>Allocation Basis</b>	4 CP Demand including losses (Sched 5.1)	628.9	Energy Including Loss (Sched 5.0)	1,956.5
Residential	45.99%	289.2	35.74%	699.2
GS Under 35 kW	7.72%	48.6	8.08%	158.0
MGS < 150 kW	6.10%	38.4	6.75%	132.0
LGS > 150 kW	18.61%	117.0	21.99%	430.3
Irrigation	0.01%	0.1	0.16%	3.1
Street Lighting BCH	0.13%	0.8	0.09%	1.8
Street Lighting Cust	0.46%	2.9	0.36%	7.0
Transmission	20.97%	131.9	26.84%	525.1
<b>Total</b>	100.00%	628.9	100.0%	1,956.5

**Allocation of Transmission Costs**  
(Classified Costs from Schedule 2.1)

<b>Cost Classification</b>	Transmission Demand	Demand Related Costs (Sched 2.1)
<b>Allocation Basis</b>	4 CP demand including losses (Sched 5.1)	1,001.4
Residential	45.99%	460.5
GS Under 35 kW	7.72%	77.3
MGS < 150 kW	6.10%	61.1
LGS > 150 kW	18.61%	186.4
Irrigation	0.01%	0.1
Street Lighting BCH	0.13%	1.3
Street Lighting Cust	0.46%	4.6
Transmission	20.97%	210.0
<b>Total</b>	100.0%	1,001.4

**Allocation of Distribution Costs**  
(Classified Costs from Schedule 2.2)

Cost Classification	Distribution Demand Related	Distribution Demand-Related	Distribution Secondary Demand Related	Distribution Secondary Demand-Related	Distribution Transformer Related	Distribution Transformer Related	Distribution Customer Related	Distribution Customer Related	Distribution Metering Related	Distribution Metering Related	Street Light Customer	Street Light Customer Related
<b>Allocation Basis</b>	NCP (Sched 5.1)	628.8	NCP w/o Primary (Sched 5.1)	62.6	Transformer Allocator (Sched 5.4)	167.2	Customer Count (Sched 5.2)	64.2	Metering Allocator (Sched 5.2)	14.0	Street Light Direct Assignment	3.9
Residential	56.79%	357.1	69.12%	43.2	65.51%	109.6	88.94%	57.1	77.41%	10.9	0.00%	0.0
GS Under 35 kW	10.27%	64.6	12.50%	7.8	16.80%	28.1	9.18%	5.9	15.97%	2.2	0.00%	0.0
MGS < 150 kW	8.27%	52.0	8.07%	5.0	10.74%	18.0	0.85%	0.5	4.43%	0.6	0.00%	0.0
LGS > 150 kW	23.52%	147.9	8.91%	5.6	5.41%	9.0	0.36%	0.2	1.90%	0.3	0.00%	0.0
Irrigation	0.44%	2.8	0.54%	0.3	0.54%	0.9	0.16%	0.1	0.28%	0.0	0.00%	0.0
Street Lighting BCH	0.17%	1.1	0.21%	0.1	0.33%	0.6	0.22%	0.1	0.00%	0.0	100.00%	3.9
Street Lighting Cust	0.54%	3.4	0.65%	0.4	0.67%	1.1	0.28%	0.2	0.00%	0.0	0.00%	0.0
Transmission	0.00%	0.0	0.00%	0.0	0.00%	0.0	0.00%	0.0	0.00%	0.0	0.00%	0.0
<b>Total</b>	100.0%	628.8	100.0%	62.6	100.0%	167.2	100.0%	64.2	100.0%	14.0	100.0%	3.9

## Allocation of Customer Care Costs

(Classified Costs from Schedule 2.3)

<b>Cost Classification</b>	<b>Customer Care Demand</b>	<b>Customer Care Demand Related Costs</b>	<b>Customer Care Customer</b>	<b>Customer Care Customer Related Costs</b>
<b>Allocation Basis</b>	NCP Sched 5.1	0.0	Blended Customer Count & Revenue Sched 5.3	121.6
Residential	56.79%	0.0	83.05%	101.0
GS Under 35 kW	10.27%	0.0	9.18%	11.2
MGS < 150 kW	8.27%	0.0	2.26%	2.8
LGS > 150 kW	23.52%	0.0	2.64%	3.2
Irrigation	0.44%	0.0	0.06%	0.1
Street Lighting BCH	0.17%	0.0	0.44%	0.5
Street Lighting Cust	0.54%	0.0	0.54%	0.7
Transmission	0.00%	0.0	1.82%	2.2
<b>Total</b>	100.0%	0.0	100.0%	121.6

## Summary of Costs by Function and Revenue to Cost Ratios

Rate Class	Generation Costs	Transmission Costs	Distribution Costs	Customer Care Costs	Total Cost	Total Revenue	Revenue - Cost (\$ million)	Revenue:Cost Ratios	R/C Ratios last filed (F2017)	R/C Ratio change from last filed
Residential	988.4	460.5	577.8	101.0	2,127.8	1,996.8	-131.0	93.8%	93.2%	0.6%
GS Under 35 kW	206.5	77.3	108.6	11.2	403.6	489.7	86.1	121.3%	123.6%	-2.3%
MGS < 150 kW	170.4	61.1	76.2	2.8	310.5	354.7	44.3	114.3%	115.1%	-0.8%
LGS > 150 kW	547.4	186.4	163.0	3.2	900.0	926.2	26.3	102.9%	103.9%	-1.0%
Irrigation	3.1	0.1	4.1	0.1	7.4	5.4	-2.1	72.0%	89.5%	-17.5%
Street Lighting BCH	2.7	1.3	5.9	0.5	10.4	21.9	11.5	210.5%	198.4%	12.1%
Street Lighting Cust	9.8	4.6	5.1	0.7	20.1	18.7	-1.5	92.8%	95.1%	-2.3%
Transmission	657.1	210.0	0.0	2.2	869.3	835.7	-33.6	96.1%	95.4%	0.7%
<b>Total</b>	<b>2,585.4</b>	<b>1,001.4</b>	<b>940.8</b>	<b>121.6</b>	<b>4,649.1</b>	<b>4,649.1</b>	<b>0.0</b>	<b>100%</b>		

### Summary of Costs by Classification

Rate Class	Energy Related Costs	Generation Demand Related Costs	Transmission Demand Related Costs	Distribution Demand Related Costs	Total Demand Related Costs	Customer Related Costs	Total
Residential	699.2	289.2	460.5	455.1	1,204.9	223.7	2,127.8
GS Under 35 kW	158.0	48.6	77.3	86.4	212.3	33.3	403.6
MGS < 150 kW	132.0	38.4	61.1	66.1	165.6	12.9	310.5
LGS > 150 kW	430.3	117.0	186.4	158.0	461.4	8.2	900.0
Irrigation	3.1	0.1	0.1	3.6	3.7	0.7	7.4
Street Lighting BCH	1.8	0.8	1.3	1.5	3.7	4.9	10.4
Street Lighting Cust	7.0	2.9	4.6	4.3	11.8	1.4	20.1
Transmission	525.1	131.9	210.0	0.0	341.9	2.2	869.3
<b>Total</b>	1,956.5	628.9	1,001.4	775.0	2,405.2	287.4	4,649.1

### Percent of Costs by Allocator

Rate Class	Generation Energy (kWh)	Generation & Transmission Demand (4CP)	Distribution Demand (NCP)	Customer (Various)
Residential	33%	35%	21%	11%
GS Under 35 kW	39%	31%	21%	8%
MGS < 150 kW	43%	32%	21%	4%
LGS > 150 kW	48%	34%	18%	1%
Irrigation	41%	2%	48%	9%
Street Lighting BCH	18%	21%	14%	47%
Street Lighting Cust	35%	37%	22%	7%
Transmission	60%	39%	0%	0%
<b>Total</b>	42%	35%	17%	6%



## Energy Allocators

Rate Class	Energy @ Customer Meter	Distribution Loss Factor	Energy @ Transmission Interface	Transmission Loss Factor	Energy @ Generation Interface	Energy by Rate Class	Energy at Generator Allocation Factor
	(MWh)		(MWh)		(MWh)		
Residential	18,150,480	6.00%	19,239,508	6.00%	20,393,879	20,393,879	35.74%
GS Under 35 kW	4,101,407	6.00%	4,347,491	6.00%	4,608,341	4,608,341	8.08%
MGS < 150 kW Primary	85,726	3.44%	88,675	6.00%	93,996		
MGS < 150 kW Secondary	3,343,326	6.00%	3,543,925	6.00%	3,756,561		
MGS						3,850,556	6.75%
LGS > 150 kW Primary	7,111,009	3.44%	7,355,628	6.00%	7,796,965		
LGS > 150 kW Secondary	4,232,122	6.00%	4,486,050	6.00%	4,755,213		
LGS						12,552,178	21.99%
Irrigation	79,181	6.00%	83,932	6.00%	88,968	88,968	0.16%
Street Lighting BCH	47,880	6.00%	50,752	6.00%	53,798	53,798	0.09%
Street Lighting Cust	180,940	6.00%	191,796	6.00%	203,304	203,304	0.36%
Transmission	14,450,899	0.00%	14,450,899	6.00%	15,317,953	15,317,953	26.84%
<b>Total</b>	<b>51,782,969</b>		<b>53,838,657</b>		<b>57,068,976</b>	<b>57,068,976</b>	<b>100.00%</b>

## Demand Allocators

Rate Class	4 CP	NCP w/o T	NCP w/o Prim
Residential	45.99%	56.79%	69.12%
GS Under 35 kW	7.72%	10.27%	12.50%
MGS < 150 kW	6.10%	8.27%	8.07%
LGS > 150 kW	18.61%	23.52%	8.91%
Irrigation	0.01%	0.44%	0.54%
Street Lighting BCH	0.13%	0.17%	0.21%
Street Lighting Cust	0.46%	0.54%	0.65%
Transmission	20.97%	0.00%	0.00%
<b>Total</b>	100.00%	100.00%	100.00%

F2018 Cost of Service - Actual Cost Allocator by Customer, Bill and Revenue				
Total BC Hydro - F18				
Rate Class	Actual Number of Accounts F18	Annual bills per account	Annual bills per rate class	# of Bills Allocator
Residential	1,803,752	6	10,822,512	87.49%
GS Under 35 kW	186,095	6	1,116,570	9.05%
MGS < 150 kW	17,197	12	206,364	1.66%
LGS > 150 kW	7,381	12	88,572	0.72%
Irrigation	3,320	2	6,640	0.06%
Street Lighting BCH	4,536	12	54,432	0.47%
Street Lighting Cust	5,753	12	69,036	0.53%
Transmission	297	12	3,564	0.03%
<b>Total</b>	<b>2,028,331</b>		<b>12,367,690</b>	<b>100.00%</b>

Rate Class	Actual Number of Accounts F18	Distribution Customer Count	Distribution Customer Allocator
Residential	1,803,752	1,803,752	88.92%
GS Under 35 kW	186,095	186,095	9.20%
MGS < 150 kW	17,197	17,197	0.84%
LGS > 150 kW	7,381	7,381	0.36%
Irrigation	3,320	3,320	0.17%
Street Lighting BCH	4,536	4,536	0.24%
Street Lighting Cust	5,753	5,753	0.27%
Transmission	297	297	0.00%
<b>Total</b>	<b>2,028,331</b>	<b>2,028,331</b>	<b>100.00%</b>

Rate Class	Actual Number of Accounts F18	Distribution Customer Count	Distribution Metering Allocator
Residential	1,803,752	1,803,752	77.40%
GS Under 35 kW	186,095	186,095	16.01%
MGS < 150 kW	17,197	17,197	4.40%
LGS > 150 kW	7,381	7,381	1.90%
Irrigation	3,320	3,320	0.29%
Street Lighting BCH	4,536	4,536	0.00%
Street Lighting Cust	5,753	5,753	0.00%
Transmission	297	297	0.00%
<b>Total</b>	<b>2,028,331</b>	<b>2,028,331</b>	<b>100.00%</b>

Rate Class	Revenue (\$millions)	Revenue Allocator
Residential	\$ 1,997	42.95%
GS Under 35 kW	\$ 490	10.53%
MGS < 150 kW	\$ 355	7.63%
LGS > 150 kW	\$ 926	19.92%
Irrigation	\$ 5	0.12%
Street Lighting BCH	\$ 22	0.47%
Street Lighting Cust	\$ 19	0.40%
Transmission	\$ 836	17.98%
<b>Total</b>	<b>\$ 4,649</b>	<b>100.00%</b>

Rate Class	90% # of Bills Allocator	10% Revenue Allocator	Blended Customer Care Allocator
Residential	78.76%	4.30%	83.05%
GS Under 35 kW	8.13%	1.05%	9.18%
MGS < 150 kW	1.50%	0.76%	2.26%
LGS > 150 kW	0.64%	1.99%	2.64%
Irrigation	0.05%	0.01%	0.06%
Street Lighting BCH	0.40%	0.05%	0.44%
Street Lighting Cust	0.50%	0.04%	0.54%
Transmission	0.03%	1.80%	1.82%
<b>Total</b>			<b>100.00%</b>

## Distribution Classification by Sub-Functionalization

Sub-Function	F18 Year-End Assets (NBV)	% of assets (excluding Substation)	% of assets without Streetlighting	Demand-related %	Customer-related %	Demand % of Total Costs	Customer % of Total Costs	% of total Demand costs	% of total Customer costs
Primary	3,214.3	61.9%	62.2%	100%	0%	62.2%	0.0%	77.5%	0.0%
Secondary/Services	799.6	15.4%	15.5%	50%	50%	7.7%	7.7%	9.6%	39.1%
Meters	88.7	1.7%	1.7%	0%	100%	0.0%	1.7%	0.0%	8.7%
Transformers	1,068.6	20.6%	20.7%	50%	50%	10.3%	10.3%	12.9%	52.2%
Substation	444.5			100%	0%				
Streetlighting	24.4	0.47%							
<b>Total</b>	<b>5,640.2</b>	<b>100%</b>	<b>100%</b>			<b>80.2%</b>	<b>19.8%</b>	<b>100.0%</b>	<b>100.0%</b>