



Janet P. Kennedy
Vice President, Regulatory Affairs & Gas Supply

Pacific Northern Gas (N.E.) Ltd.
2550 - 1066 West Hastings Street
Vancouver, BC V6E 3X2
Tel: (604) 691-5680
Fax: (604) 697-6210
Email: jkennedy@png.ca

Via Web Upload and Courier

April 26, 2018

B.C. Utilities Commission
Suite 410 - 900 Howe Street
Vancouver, BC V6Z 2N3

File No.: 4.2.7 (2018)

Attention: Patrick Wruck
Commission Secretary and Manager, Regulatory Support

Dear Mr. Wruck:

**Re: Pacific Northern Gas (N.E.) Ltd.
Tumbler Ridge Division
2018-2019 Revenue Requirements Application
PNG(NE) Responses to BCUC IR No. 1**

Accompanying, please find responses to the above noted Information Requests uploaded to the Commission's website earlier today.

Printed copies of the responses will be distributed by courier on Friday, April 27, 2018, including 10 copies to the Commission's office and a single copy to each of the parties noted below who registered as interveners into this Application.

Please direct any questions regarding these applications to my attention.

Yours truly,

A handwritten signature in black ink that reads 'Janet Kennedy'.

J.P. Kennedy

cc. Leigha Worth (BCPIAC) – BCOAPO
James Wightman (BCPIAC) – BCOAPO

**Pacific Northern Gas (N.E.) Ltd. – Tumbler Ridge Division
2018–2019 Revenue Requirements Application**

INFORMATION REQUEST NO. 1 TO PNG(NE)

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A. DEMAND FORECAST REVENUES AND MARGIN

**1.0 Reference: DEMAND FORECAST REVENUES AND MARGIN
Exhibit B-1-1 (Amended Application), p. 6
Proposed rate deferral mechanism**

Pacific Northern Gas (N.E.) Ltd. (PNG[NE]) seeks approval in the Amended Application to create a short-term interest bearing rate deferral account in 2018, to levelize the impact of the combined net revenue deficiencies for 2018 and 2019, to be fully amortized in 2019.

1.1 Please explain why PNG(NE) has proposed a short term interest rate for Tumbler Ridge (TR) Division rate deferral account.

Response:

As directed by the Commission Decision on PNG(NE)'s 2013 Revenue Requirements Application (Section 6.4 (c)), PNG(NE) is applying the principle established under the FortisBC Inc. 2012-2013 RRA Decision that states that for deferral accounts of a non-capital nature which are amortized over a period of one year or less, the appropriate return is the utility's short-term interest cost.

1.2 Please describe any alternatives to the proposed rate deferral account that were considered by PNG(NE) for the TR Division in order to address rate volatility between 2018 and 2019.

Response:

During its planning process, PNG(NE) considered several alternatives to address rate volatility, including: maintaining the 2017 rates through Test Year 2018 and Test Year 2019; a review of rate design opportunities; and consideration to the amalgamation of PNG and PNG(NE) divisions. PNG(NE) concluded that the noted alternatives would not be practical at this time. PNG(NE)'s preliminary forecast models indicated that rate increases would be required across all its divisions. PNG(NE) then determined that the proposed rate smoothing mechanism would be most appropriate to address rate volatility between Test Year 2018 and Test Year 2019.

**2.0 Reference: DEMAND FORECAST REVENUES AND MARGIN
Exhibit B-1-1, p. 7
Proposed delivery rate changes**

Table 2 on page 7 of the Amended Application includes a summary of proposed delivery rate changes effective January 1, 2018 and January 1, 2019.

2.1 In PNG(NE)'s view, do the proposed delivery rates for the TR Division effective January 1, 2018 and January 1, 2019 constitute rate shock? Please discuss why or why not.

Response:

PNG(NE) is very cognizant that the proposed delivery rate increases are quite significant and could constitute rate shock for some customers, in particular the low income households. For Test Year 2018, the proposed rate increase would result in an annual delivery rate increase of approximately \$98 to the average residential customer, and for Test Year 2019, the proposed rate increase would result in an annual delivery rate increase of approximately \$113 to the average residential customer.

As shown in Schedule Tab 6, pages 2 and 13 of the Amended Application, the Bill Comparison tables indicate that coupled with the proposed decreases in both the RSAM rate riders and the commodity costs, the average residential customer would see an annual total decrease of \$45 in Test Year 2018, but would then see an annual total increase of \$128 in Test Year 2019.

PNG(NE) does not currently foresee an alternative to its proposed rate increases; however, PNG(NE) does plan to explore some rate design alternatives to mitigate delivery rate increases to Tumbler Ridge customers.

Please also see the response to Question 2.2.

2.1.1 Please discuss any measures that PNG(NE) has undertaken, other than the proposed rate deferral mechanism, to mitigate rate increases for the TR Division while still providing safe and reliable service to its customers.

Response:

Due to the size of Tumbler Ridge, the small number of customers and the recent downturn in the economy of the region, PNG(NE) is very cognizant of operating the processing plant and transmission and distribution system in an efficient manner. PNG(NE) has strived to keep operating costs down and has delayed any non-critical capital work on the Tumbler Ridge plant and system while still providing safe and reliable service to its customers.

On the commodity side, PNG(NE) is also exploring other sources of gas supply to determine if this can be obtained at a lower cost for its customers.

Please also see the responses to Questions 2.1 and 2.2.

- 2.2 Has PNG(NE) considered any rate design alternatives to the current structure between the divisions within PNG(NE) (i.e. FSJ/DC and TR) and with PNG-West that may mitigate rate volatility for the PNG(NE) divisions, in particular TR? For example: postage-stamp rates and amalgamation? Please discuss any alternatives that have been or are being considered and any associated timeframe for pursuing these alternatives.

Response:

PNG(NE) is sensitive to the rate pressures faced by its customers in Tumbler Ridge and has considered alternatives to the current rate structures within the PNG(NE) and PNG-West services areas. PNG(NE) has considered various options for amalgamating PNG(NE)'s FSJ/DC and TR divisions, some of which could result in postage stamp rates. PNG(NE) has also considered similar options for amalgamating PNG-West with the PNG(NE) divisions.

The Tumbler Ridge system is unique amongst PNG and PNG(NE)'s divisions in that it is a natural gas distribution system that is not connected to the Westcoast transmission system and does not benefit from access to marketable gas supply. Therefore, customers in Tumbler Ridge bear the costs associated with the ownership, operation and maintenance of the Tumbler Ridge gas processing plant and the 35 kilometer gas transmission line, both of which serve to provide marketable gas supply to the Tumbler Ridge distribution system.

One option for amalgamation that PNG(NE) has considered would result in the recovery of Tumbler Ridge's processing and transmission costs from all customers of PNG(NE). This would reduce the costs borne by Tumbler Ridge's customers at the expense of customers of FSJ/DC who would not receive additional benefits as a result of the amalgamation.

At this time, PNG(NE) has not identified a reasoned basis, one that is grounded in cost causation and recovery principles, for proceeding with an amalgamation of the divisions of PNG(NE).

PNG(NE) is also in periodic consultations with CNRL on alternatives to the current sources of gas supply, as well as examining the cost impact of converting to other sources of supply such as LNG deliveries to serve the residents and businesses of Tumbler Ridge. Unfortunately, at this time, none of these alternatives have presented a compelling value proposition as compared to the status quo.

PNG(NE) notes that the costs borne by Tumbler Ridge customers that are associated with the processing and transmission facilities may justifiably be considered as attributable to gas supply, rather than delivery. Viewed in this context, gas supply costs at the Tumbler Ridge town gate remain significantly lower than those borne by PNG West's customers connected to the Granisle propane system. For both these isolated systems, customers' rates and energy supply costs do reflect the cost of providing reliable energy supply to small load centres located remote from sources of marketable gas supply. PNG(NE) also notes that for both of these systems, the cost of energy delivered (i.e. at the burner tip) remains significantly lower than the cost of electricity, when calculated on a gigajoule equivalent basis.

2.2.1 Please discuss the pros and cons of these alternative rate structures and the potential directional rate impact for each of the FSJ/DC and TR Divisions.

Response:

Please see the response to Question 2.2.

**3.0 Reference: DEMAND FORECAST REVENUES AND MARGIN
Exhibit B-1-1, Section 2.1.3.1, p.23
Large Commercial Deliveries and Margin**

On page 23 of the Amended Application, PNG(NE) states the following with respect to the large commercial deliveries and margin: “The forecast deliveries are based on discussions with customers and a review of their historical usage. There has been no change in the number of customers and an increased forecast usage of 3,000 GJ for Test Year 2018 and Test Year 2019 compared to Decision 2017.”

3.1 Over which time period does PNG(NE) review customer’s historical usage? Please discuss.

Response:

PNG(NE) reviews customer's historical usage over a 5-year period with greater emphasis given to the most recent two years of use as an indicator of future use.

**4.0 Reference: DEMAND FORECAST REVENUES AND MARGIN
Exhibit B-1-1, Section 2.1.3.2, p.23
Industrial Transport Deliveries and Margin**

On page 23 of the Amended Application, PNG (NE) states:

PNG(NE) has one industrial customer, CNRL, that receives transportation service. Forecast 2018 and 2019 deliveries are 450,000 GJ annually which is much lower than the Decision 2017 deliveries of 815,000 GJ but consistent with recent usage. Discussions with CNRL have also confirmed the shutdown of their low-pressure wells due to the low commodity price environment, resulting in the lower forecast deliveries.

- 4.1 Please explain why CNRL forecast gas deliveries between actual 2017 deliveries and decision 2017 deliveries increased by approximately 352,000 GJ.

Response:

The forecast deliveries underpinning the Decision 2017 figures were obtained in the fall of 2015 and updated in early 2016. At that time, PNG(NE) did not have any knowledge that CNRL would be shutting in some of their wells.

- 4.2 Please discuss the reasons why CNRL forecast gas deliveries in Test Year 2018 and Test Year 2019 have returned to levels consistent with recent usage.

Response:

The CNRL forecast deliveries in Test Years 2018 and 2019 have returned to levels consistent with recent usage as CNRL has reduced production into Enbridge's Pine River Plant over time starting in 2016 and shut in production from their Babcock operations. CNRL has indicated that unless gas prices experience a marked increase, Babcock is considered to be shut in permanently resulting in approximately 180,000 GJ in annual demand reduction. CNRL has also shut in its low pressure wells at their Murray River operations to reduce its compression requirements as a means to reduce their operating costs. Fuel gas requirements for Murray River are forecast at approximately 190,000 GJ less than 2015 levels.

- 4.2.1 Please provide data indicating the volume of demand reduction attributed to the effects of the shutdown of the low pressure wells.

Response:

Please see the response to Question 4.2.

- 4.3 Could demand increase to levels seen in decision 2017 deliveries and actual 2015 deliveries? If so, under which conditions would this occur? Please elaborate.

Response:

PNG(NE) is unable to speculate on whether fuel gas demand will increase to levels as per Decision 2017 or Actual 2015 deliveries as PNG(NE) is not privy to CNRL's operational decisions other than what has been shared to date regarding the current shut in of the Babcock operations and the shut in of low pressure wells at their Murray River operations.

- 4.3.1 How is demand correlated to the commodity price environment? Please discuss.

Response:

Please see the response to Question 4.3.

**5.0 Reference: DEMAND FORECAST REVENUES AND MARGIN
 Exhibit B-1-1, Section 2.2.2 and Section 2.13.1, pp. 24 and 66
 Company Use Gas Cost**

On page 24 of the Amended Application, PNG (NE) states: “The volume of company use gas forecast for Test Year 2018 and Test Year 2019 are derived using recent historical averages of company use as a proportion of deliveries much like the methodology used to forecast under Decision 2017. The company use requirements consist primarily of process plant fuel and gas for line heaters.”

On page 66 of the Amended Application, PNG(NE) states: “PNG(NE) notes that the transportation service customer supplies its share of Company use gas in kind to PNG(NE).”

- 5.1 Please explain why the company use gas for process plant fuel and lineheaters increases by 21.6 percent between decision 2017 and Test Year 2018.

Response:

The increase of 21.6 percent in company use gas for process plant fuel and lineheaters is a result of the decrease in CNRL deliveries from 815,000 GJ under Decision 2017 to 450,000 GJ in Test Year 2018. The Tumbler Ridge process plant fuel is allocated based on its proportion of deliveries over total deliveries. As CNRL's forecast decreased, PNG(NE)'s portion of deliveries over total deliveries increased.

PNG(NE) submits that overall process plant fuel requirements have decreased when including the CNRL share of process plant fuel which correlates to the decrease in total deliveries as illustrated in table below. For illustrative purposes, lineheater usage, which accounts for a small portion of usage, has been excluded from the figures presented in the table below as this is not included in the allocation to CNRL.

	Allocation (%)	Decision 2017 (GJ)	Allocation (%)	Test Year 2018 (GJ)	Allocation (%)	Test Year 2019 (GJ)
PNG Deliveries	14.2%	134,569	22.8%	133,245	22.6%	131,219
CNRL Deliveries	85.8%	815,000	77.2%	450,000	77.4%	450,000
Total Deliveries	100.0%	949,569	100.0%	583,245	100.0%	581,219
Process Plant Fuel PNG	14.2%	8,610	22.8%	11,201	22.6%	11,031
Process Plant Fuel CNRL	85.8%	52,147	77.2%	37,829	77.4%	37,829
Process Plant Fuel Total	100.0%	60,757	100.0%	49,030	100.0%	48,860

- 5.2 Why does usage for process plant fuel and lineheaters increase between decision 2017 and Test Year 2018 but decrease between Test Year 2018 and 2019 when forecast gas deliveries are decreasing between both periods? Please elaborate.

Response:

Please see the response to Question 5.1.

- 5.2.1 Please explain how this usage is correlated to total gas deliveries.

Response:

Process plant fuel use is dependent on the proportion of gas supply requiring processing. Gas delivered to the Tumbler Ridge processing plant is processed to remove impurities such as hydrogen sulphide, carbon dioxide and water vapor to ensure marketable pipeline quality gas is delivered to PNG(NE)'s customers. If the quality of gas received remains constant, the greater the marketable gas deliveries to the plant, the greater the fuel required by the plant to process it.

**6.0 Reference: DEMAND FORECAST REVENUES AND MARGIN
 Exhibit B-1-1, Tab Schedules, Tab 6 pp 1–6
 Cost of Gas –Delivery Charge**

6.1 Please reconcile the delivery charges effective October 1, 2017 between Tab 6, p 1 and Tab 6, p 6.

Response:

The delivery charges effective October 1, 2017 shown on Tab 6, page 1 is the all-in delivery rate inclusive of all riders. The rates shown on Tab 6, page 6 demonstrate how the gross margin is derived which includes October 1, 2017 delivery rate and the company use at the test year rate as illustrated in table below. Company use is a flow through cost which is included in the gross margin with the offset included in Operating and Maintenance Expense.

	Example of Residential Rates Class (\$/GJ)		
	Oct. 1'17 Delivery Rate Tab 6, page 1	Company Use Change	Gross Margin Tab 6, page 6
Delivery Charge	\$ 7.152		\$ 7.152
Company Use	\$ 0.385	\$ 0.010	\$ 0.395
GCV A Co. Use Rider	\$ (0.034)		n/a
RSAM Rider	\$ 1.256		n/a
Total Delivery	\$ 8.759		\$ 7.547

6.2 Please reconcile the change in the delivery charge between January 1, 2018 and January 1, 2019 on Tab 6, p 13 and Tab 6, p 14.

Response:

The change in the delivery charge shown between January 1, 2018 and January 1, 2019 on Tab 6, page 13 is the delivery rate change including company use. On Tab 6, page 14, the rate change shown is purely the delivery charge rate change excluding company use and demonstrates the impact of the revenue deficiency to each rate class as shown in table below.

	Example of Residential Rates Class (\$/GJ)		
	Delivery Charge Proposed Jan. 1'18 Tab 6, page 13	Delivery Rate Change and Company Use Change	Delivery Charge Proposed Jan. 1'19, Tab 6 page 13
Delivery Charge Proposed Jan. 1, 2018	\$ 8.516	\$ 1.543	\$ 10.059
Company Use Proposed Jan. 1, 2019	\$ 0.395	\$ 0.065	\$ 0.460
Total Proposed Delivery Rate	\$ 8.911	\$ 1.608	\$ 10.519

B. OPERATING AND MAINTENANCE EXPENSES

**7.0 Reference: OPERATING AND MAINTENANCE EXPENSES
 Exhibit B-1-1, Amended Schedules, Tab 1, p. 2
 Operating wages**

Tab 1, page 2 of the Amended Schedules shows the following for Operating Wages:

- Test Year 2019 - \$305,000
- Test Year 2018 - \$299,000
- Decision 2017 - \$281,000
- Actual 2017 - \$292,000
- Actual 2016 - \$350,000

7.1 Please provide a breakdown of the labour cost recorded in each applicable operating expense account for each of the following years: Test Years 2018 and 2019, Decision 2017 and Actuals 2016 and 2017.

Response:

In preparing the response to this question, PNG(NE) noted an error in amounts reported for the Actual 2017 and Actual 2016 amounts on Tab 1, Page 2, Line 2 – wages and Line 5 – other of the Amended Application regulatory schedules. For Actual 2017, the amount reported on Line 2 was overstated by \$32,000 and the amount reported on Line 5 was understated by this same amount. For Actual 2016, the amount reported on Line 2 was overstated by \$36,000 and the amount reported on Line 5 was understated by this same amount.

These presentation errors arose due to a misclassification of capitalized labour costs, STIP payments and Maintenance Labour, as summarized below:

Actual 2016

	Amended Application	Capitalized Labour	STIP Expense	Restated
Tab 1, Page 2, Line 2 - wages	350	(40.770)	4.359	314
Tab 1, Page 2, Line 5 - other	326	40.770	(4.359)	362
	676	-	-	676

Actual 2017

	Amended Application	Capitalized Labour	STIP Expense	Maintenance Labour	Restated
Tab 1, Page 2, Line 2 - wages	292	(33.411)	4.503	(2.616)	260
Tab 1, Page 2, Line 5 - other	363	33.411	(4.503)	2.616	395
	655	-	-	-	655

Please see the table that follows for an analysis of labour cost breakdown reflecting the correction noted on the prior page.

Account and Description (\$'s)	Test Year	Change		Test Year	Change		Actual	Change		Decision	Change		Actual
	2019	\$	%	2018	\$	%	2017	\$	%	2017	\$	%	2016
621 Extracting & Refining	137,236	2,691	2%	134,545	(27,145)	-17%	161,690	31,656	24%	130,034	(72,980)	-36%	203,014
Total processing	137,236	2,691		134,545	(27,145)		161,690	31,656		130,034	(72,980)		203,014
660 Supervision	-	-		-	(338)	-100%	338	338		-	(260)	-100%	260
664 Communications	-	-		-	(208)	-100%	208	208		-	-		-
665 Pipelines	4,500	88	2%	4,412	3,465	366%	947	(2,749)	-74%	3,696	791	27%	2,905
667 Regulating stations	18,009	353	2%	17,656	12,149	221%	5,507	(11,745)	-68%	17,252	6,746	64%	10,506
Total transmission	22,509	441		22,068	15,068		7,000	(13,948)		20,948	7,277		13,671
670 Supervision	3,516	69	2%	3,447	2,442	243%	1,005	(2,361)	-70%	3,366	(1,577)	-32%	4,943
673 Removing & resetting meters	27,437	538	2%	26,899	15,414	134%	11,485	(14,799)	-56%	26,284	10,983	72%	15,301
674 Service on customer premises	2,343	45	2%	2,298	2,298		-	(2,245)	-100%	2,245	2,129	1835%	116
675 Mains and services	8,496	167	2%	8,329	3,855	86%	4,474	(3,665)	-45%	8,139	1,067	15%	7,072
Total distribution	41,792	819		40,973	24,009		16,964	(23,070)		40,034	12,602		27,432
685 General systems operations	37,980	1,106	3%	36,874	11,310	44%	25,564	(4,338)	-15%	29,902	19,022	175%	10,880
688 Other general operations	50,372	986	2%	49,386	5,309	12%	44,077	(1,337)	-3%	45,414	(5,997)	-12%	51,411
Total general	88,352	2,092		86,260	16,619		69,641	(5,675)		75,316	13,025		62,291
701 Advertising	-	-		-	-		-	-		-	-		-
Total sales	-	-		-	-		-	-		-	-		-
711 Customer contracts	-	-		-	-		-	-		-	-		-
712 Meter reading	15,234	299	2%	14,935	9,731	187%	5,204	(9,390)	-64%	14,594	7,103	95%	7,491
713 Customer billing	-	-		-	-		-	-		-	-		-
714 Credit and collections	-	-		-	-		-	-		-	-		-
Total customer accounting	15,234	299		14,935	9,731		5,204	(9,390)		14,594	7,103		7,491
Total operating labour	305,123	6,342		298,781	38,282		260,499	(20,427)		280,926	(32,973)		313,899

7.1.1 For each account identified in the response above, please provide explanations for variances greater than \$15,000 or 10 percent compared to the previous test year or previous year actual and between Decision 2017 and Actual 2017.

Response:

Overall TR operating labour in 2017 was budgeted at \$280,900 and actual was \$260,500 or \$20,400 (7.3%) under budget mainly due to a vacant position for a three-month period as a result of a resignation, as well as a 6-week medical leave of absence for the senior gas plant operator.

The 2018 budget is \$298,800 versus 2017 actual of \$260,500, or an increase of 12.8%, as PNG(NE) expects a full complement of staff throughout 2018. The Test Year 2018 amount also reflects a contractual labour rate increase for 2018.

The variance between BCUC Accounts in 2017 is primarily the result of the new operator allocating working hours to incorrect cost centers, however this has been corrected for 2018.

**8.0 Reference: OPERATING AND MAINTENANCE EXPENSES
 PNG(NE) 2016–2017 Revenue Requirements Application (RRA) proceeding,
 Exhibit B-6, British Columbia Utilities Commission (BCUC) Information
 Request (IR) 1.5.1
 Operating expenses - other**

In response to BCUC IR 1.5.1 in the PNG(NE) 2016–2017 proceeding, PNG(NE) provided the following table:

Operations - Other Operating (\$'000's)	Test Year 2017	Test Year 2016	NSP 2014	Actual 2015	Actual 2014	Actual 2013	Actual 2012	Actual 2011
Contractors & Consulting	120	96	97	83	106	77	147	113
Data Lines	10	9	9	9	9	5	12	11
Employee Travel & Subsistence	6	6	5	5	4	5	9	6
Licenses & Permits	7	7	7	7	7	6	7	7
Materials	55	54	89	53	15	45	75	87
Miscellaneous (office, courier, etc.)	9	9	3	8	15	1	3	10
Phone	14	14	16	12	13	17	11	9
Vehicle/Equipment	36	36	39	16	19	31	19	26
Utilities	49	48	46	45	44	44	44	44
	305	279	312	238	234	231	329	313
Shared Service Cost Allocation - 685	44	44	39	42	39	39	44	39
Shared Service Cost Allocation - 711/713/714	51	51	52	51	52	54	50	46
	400	374	403	331	325	324	423	399

8.1 Please update the above table for Test Years 2018 and 2019, Decision 2017 and Actuals 2016 and 2017. Please include additional line item categories as necessary.

Response:

Please see the table that follows.

Operating Expenses - Other	Test Year 2019	Test Year 2019 vrs Test Year 2018		Test Year 2018	Test Year 2018 vrs 2017 Actual		Actual 2017	Actual 2017 vs Decision 2017		Decision 2017	Actual 2016	Actual 2016 vs Decision 2016		Decision 2016
		\$	%		\$	%		\$	%			\$	%	
Automotive	52,608	3,957	8%	48,651	26,520	120%	22,131	(14,839)	-40%	36,970	14,580	(24,102)	-62%	38,682
Bad Debt Expense	8,160	160	2%	8,000	(10,963)	-58%	18,963	12,721	204%	6,242	6,120	0	0%	6,120
Contractor	129,088	2,278	2%	126,810	24,170	24%	102,640	(17,069)	-14%	119,709	112,192	16,056	17%	96,136
Data Lines	9,405	184	2%	9,221	99	1%	9,122	(514)	-5%	9,636	9,073	(374)	-4%	9,447
Employee Expenses	2,053	41	2%	2,012	(1,630)	-45%	3,642	912	33%	2,730	6,106	3,430	128%	2,676
Licences & Permits	6,955	136	2%	6,819	(1,315)	-16%	8,134	1,449	22%	6,685	7,613	1,058	16%	6,555
Materials	65,814	1,290	2%	64,524	7,134	12%	57,390	2,559	5%	54,831	25,015	(28,742)	-53%	53,757
Misc (office supplies, postage, etc)	3,071	61	2%	3,010	(485)	-14%	3,495	544	18%	2,951	1,698	(1,195)	-41%	2,893
Phone	10,384	203	2%	10,181	1,937	23%	8,244	(5,742)	-41%	13,986	5,872	(7,840)	-57%	13,712
Training and Union Dues	3,446	68	2%	3,378	1,000	83%	1,203	(2,109)	-64%	3,312	18,906	15,659	482%	3,247
Utilities	50,677	994	2%	49,683	8,780	21%	40,903	(7,806)	-16%	48,709	47,825	71	0%	47,754
Subtotal	341,661	9,372		332,289			275,867	(29,894)		305,761	255,000	(25,979)		280,979
Add: Transfers to Capital							26,270				17,557			
Add: Shared Service Cost Allocation	99,254			96,517			93,558			93,558	92,800			92,800
	440,915	9,372		428,806			395,695	(29,894)		399,319	365,357	(25,979)		373,779
Less Vehicle R&M Capitalized	(307)			(77)			(1,071)			(400)	(3,482)			(2,746)
Total Expenses	440,608			428,729			394,624			398,919	361,875			371,033

- 8.1.1 Please provide explanations for variances greater than \$15,000 or 10 percent between Test Year 2019 and Test Year 2018, Test Year 2018 and Actual 2017, and Actual 2017 and Decision 2017.

Response:

Explanations of significant variances in the table provided in response to Question 8.1 are as follows:

Automotive

PNG generates its Automotive cost forecast on a consolidated basis and allocates amounts to PNG-West and the PNG(NE) divisions on a prorata basis on O&M and Capital labour costs. Consequently, given variability in Capital and O&M activity in each division, there is variability in the actual costs recorded as an operating expenditure. Please also see the response to Question 12.2.

On a consolidated basis PNG had looked at the average spend on vehicles due to positive budget variances in 2016 and 2017 and has made use of the 2016 Actual costs inflated by 2% as the consolidated forecast for Test Year 2018. Actual overall Automotive costs have decreased from Decision 2017 mainly from reduced maintenance costs by performing equipment service on the vehicles internally as opposed to outsourcing it.

Bad Debt Expense

Please see the discussion of Bad Debt Expense in the responses to the Question 15 series of information requests.

Contractors

The Actual 2017 vs Decision 2017 positive variance was primarily due to lower than anticipated slashing and inspection costs (refer to Question 10.1) and savings from PNG(NE) participating in a joint emergency exercise with PNG-West. These positive variances were partially offset by extra contracted services required to facilitate plant operation until a replacement operator was hired. The Test Year 2018 increase can be attributed to additional costs forecast for the GIS project.

**9.0 Reference: OPERATING AND MAINTENANCE EXPENSES
Exhibit B-1-1, Sections 2.3.1 and 3.2.2.1 pp. 26 and 81
Account 621 – Processing**

On page 26 of the Amended Application, PNG(NE) states:

Forecast expenses in this account are expected to increase by \$18,000 or 7.5% from Decision 2017 to Test Year 2018. This increase primarily reflects higher than forecast amine and emissions monitoring costs, as well as inflationary adjustments. Test Year 2019 costs are consistent with those of 2018, with the adjustment being due to inflation.

9.1 Please provide a breakdown of the variance resulting from amine and emissions monitoring costs versus inflation for Test Year 2018.

Response:

The breakdown of the increase for Test Year 2018 is as follows:

- Inflation \$5,000;
- Cost of amine \$8,000; and
- Emissions monitoring costs \$3,000.

9.2 Please provide the amine and emissions monitoring costs for Test Years 2018 and 2019, Decision 2017 and Actuals 2016 and 2017.

Response:

Please see the table that follows.

	Test Year 2019	Test Year 2018	Decision 2017	Actuals 2017	Actuals 2016
Amine	28,000	27,000	19,000	29,000	-
Emissions Monitoring	6,000	6,000	3,000	10,000	7,000

9.3 Please explain why more amine and emissions monitoring is forecast for Test Year 2018 compared to Decision 2017.

Response:

The requirements for reporting and tracking of emissions change and evolve over time. PNG(NE) has experienced an increase in the amount, frequency, and cost of samples. Increased monitoring will ensure ongoing compliance.

On page 81, PNG(NE) states:

The actual costs for 2017 included in this account are \$96,000 or 41.0% greater than those approved under Decision 2017. This is primarily due to higher than anticipated operating costs to maintain the amine process and the waste water disposal system, and to address a leaking cooler. In addition, there were unplanned contracted services to provide relief during the recruitment process for a plant operator to replace a retiree. Also noted was a \$10,000 charge to this account in error for gas analysis that was budgeted under Account 665.

- 9.4 Please confirm, or explain otherwise, that the contracted services were to perform the activities of the retired plant operator.

Response:

Contract services were required to facilitate plant operation until a replacement was hired. Due to equipment operational issues, some extra contractor costs were required for repairs to ensure plant stability.

- 9.5 When did the plant operator retire and when was the replacement hired?

Response:

The last day worked by the plant operator who resigned was September 28, 2017. The replacement was hired on January 22, 2018.

- 9.6 Please provide the contracted services costs for Test Years 2018 and 2019, Decision 2017 and Actuals 2016 and 2017.

Response:

Please see the table below.

Test Year 2019	Test Year 2018	Actual 2017	Actual 2016
\$11,000	\$11,000	\$62,000	\$59,000

**10.0 Reference: OPERATING AND MAINTENANCE EXPENSES
Exhibit B-1-1, Sections 3.2.1.1 and 3.2.2.1 pp. 75 and 81
Account 665 - Pipelines**

On page 75 of the Amended Application, PNG(NE) states:

The actual costs for 2016 included in this account are \$13,000 or 56.2% less than those approved under Decision 2016. This is primarily due to the loss of a technician in this service area during 2016, resulting in some planned work activities being rescheduled to 2017.

10.1 Please confirm, or explain otherwise, that the planned activities rescheduled from 2016 were performed in 2017.

Response:

There was no need to reschedule the planned activities as coincidentally, there was a capital project that required right of way slashing for access to the site, and as a result, the budgeted O&M funds for the slashing were not required.

10.1.1 If confirmed, please explain why the total actual pipeline costs in 2017 were only \$2,000.

Response:

Please see the response to Question 10.1.

On page 81, PNG(NE) states:

The actual costs for 2017 included in this account are \$22,000 or 91.6% less than those approved under Decision 2017. This variance is primarily due to the gas analysis costs charged to Account 621 in error noted previously. Favourable cost variances were also realized from performing leak surveys with internal resources rather than by aerial survey, and from lower than planned slashing activity due to extensive work done in 2016.

- 10.2 Please discuss why the forecast for Test Years 2018 and 2019 should not be similar to Actual 2017 costs adjusted for the gas analysis costs charged to Account 621 in error.

Response:

PNG(NE) is required to have natural gas samples analysed on a monthly basis from several points throughout the distribution system in the service areas. The Test Year 2018 and 2019 amounts also reflect a planned increase in the cost for gas analysis and reporting by PNG(NE)'s service provider.

- 10.3 Please provide a table with a detailed breakdown of the costs in Account 665 – Pipelines for Test Years 2018 and 2019, Decision 2017 and Actuals 2016 and 2017.

Response:

Please see the table that follows.

Operating Expenses - 665	Test Year 2019	Test Year 2018	Actual 2017	Decision 2017	Actual 2016
Employee Expenses	687	673		1,418	-
Contractor	20,053	19,659	111	19,274	6,812
Labour	4,500	4,412	947	3,696	2,905
Permits	-	-	1,000		500
Equipment Rentals					241
	25,240	24,745	2,058	24,388	10,458

10.3.1 If not already included in the above requested table, please provide a breakdown of the variance resulting from performing leak surveys with internal resources and the lower than planned slashing activity.

Response:

Although PNG(NE) budgets and forecasts costs down to the level of individual activities, it does not track actual costs down to this level of detail. Please see the table below for forecast activities.

Operating Expenses - 665	Test Year 2019	Test Year 2018	Decision 2017	Decision 2016
Air Survey	6,145	6,024	5,907	5,787
CP Testing - HP Systems Steel Pipe	1,712	1,678	1,782	1,746
Gas Analysis	6,246	6,123	6,003	5,885
General Operations	755	740	723	706
Leak Survey	1,342	1,316	1,286	1,257
Odourization	818	802	784	766
Remote Monitor Data Collection & Storage	1,468	1,439	1,411	1,384
Slashing - ROW	6,754	6,622	6,492	6,365
	25,240	24,745	24,388	23,896

10.4 How often are leak surveys and slashing activities normally done?

Response:

Leak surveys and slashing are both completed annually as part of PNG(NE)'s Integrity Management Plan, or as necessary to accommodate other pipeline work activities on an as needed basis.

10.4.1 Please discuss if the extensive slashing activity performed in 2016 would also result in a reduction of such activity in Test Years 2018 and 2019. If not, please explain why not.

Response:

The referenced pipeline where the slashing activity took place runs through a highly wooded environment. The growth rate for small poplar and other vegetation is rapid and requires continuous remediation along the entire length of the pipeline. Slashing is done in sections on a cyclical basis, for example sections 1,2,3,4 and 5. When PNG(NE) has completed slashing on section 5, section 1 has experienced enough growth to require slashing once again.

- 10.5 Please discuss if the company plans to continue to perform leak surveys with internal resources rather than by aerial survey in Test Years 2018 and 2019. If not, please explain why not.

Response:

Leak surveys will continue to be conducted by whichever means are operationally suitable and effective given the environment and operational availability.

- 10.5.1 Please discuss if there are any differences in the quality or ability of the surveys in detecting leaks when done with internal resources versus by aerial.

Response:

Both methods of inspection bring similar end results. Due to the geographical and environmental complexity of the area, both methods bring advantages. Aerial surveys are still completed with internal resources by contracting the use of helicopter/pilot in conjunction with internal staff.

**11.0 Reference: OPERATING AND MAINTENANCE EXPENSES
Exhibit B-1-1, Sections 3.2.1.1 and 3.2.2.1 pp. 75 and 81
Account 670 - Supervision**

On page 81 of the Amended Application, PNG(NE) states:

The actual costs for 2017 included in this account are \$13,000 or 74.5% less than those approved under Decision 2017 primarily due to reduced internal resources available to plan, organize and perform general activities.

- 11.1 Please discuss the reasons why there were reduced internal resources available in 2017.

Response:

Reduced internal resources were due to resignation of an operator and the lead time required in hiring the replacement operator. There was also a medical leave taken by another operator during the year.

- 11.2 Please confirm, or explain otherwise, if the level of internal resources forecast for Test Years 2018 and 2019 is expected to be at planned 2017 levels. If confirmed, please explain why.

Response:

Internal resource levels are expected to remain at the planned level of two plant operators, pending any medical or unanticipated staff leaves.

- 11.3 Did the non-performance of certain planned activities also result in a reduction in actual costs compared to forecast for 2017 in other cost categories? Please quantify and identify the BCUC account code impacted.

Response:

No, the non-performance of certain planned activities did not result in a reduction in actual costs compared to forecast for 2017 in other cost categories. While there may be some interrelationships between planned activities, most are independent of one another.

- 11.4 Will the non-performance of certain planned activities in 2017 have a negative impact on the company's operations? Please explain why or why not.

Response:

PNG(NE) does not believe that non-performance of certain planned activities in 2017 would have a negative impact on the company's operations as PNG(NE) has some flexibility in the timing of such activities and depending on the availability of resources, PNG(NE) will first address activities that are more critical. PNG(NE) endeavours to maintain operational stability of the assets through continued best practice monitoring and controlling.

On page 75, PNG(NE) states:

The actual costs for 2016 included in this account are \$4,000 or 21.5% less than those approved under Decision 2016 primarily due to lower costs for operating supplies than forecast.

- 11.5 Please explain why lower costs for operating supplies would reduce costs categorized as "supervision."

Response:

Account 670 – Supervision costs are comprised of a number of cost elements, including supplies, materials, contractor costs, employee costs and others. The preamble to this question simply indicates that the primary reason for the favourable variance in 2016 was due to lower operating supplies included in this account.

- 11.6 Please discuss if there are any costs incurred directly by PNG(NE) (i.e. costs that are not incurred through shared service costs) that are shared between the FSJ/DC and TR divisions.

Response:

Certain PNG(NE) employee costs are allocated amongst the three divisions. For example, the Manager of Operations costs are split 60% to FSJ, 30% to DC and 10% to TR, which is a prorata basis to each division based on the number of customers for each division. The NE Project Engineer position will provide engineering support for all PNG(NE) divisions, and while the position will be based in FSJ, the associated costs will be allocated on a prorata basis similar to the allocation of the NE Manager of Operations.

11.6.1 If so, please explain how these costs are allocated between the two divisions and identify any differences in the allocation methodology compared to the 2016–2017 RRA proceeding.

Response:

Please see the response to Question 11.6. The allocation methodology for Test Years 2018 and 2019 is consistent to that applied for Decision 2016 and Decision 2017 amounts.

**12.0 Reference: OPERATING AND MAINTENANCE EXPENSES
 Exhibit B-1-1, Sections 2.3.5 and 3.2.1.1, pp. 27-28 and 75
 Account 685 – General Operations**

12.1 Please provide a table with a detailed breakdown of the costs in Account 685 for Test Years 2018 and 2019, Decision 2017 and Actuals 2016 and 2017.

Response:

Please see the table that follows.

Account 685 - General Operations	Test Year 2019	Test Year 2019 vrs Test Year 2018		Test Year 2018	Test Year 2018 vrs 2017 Actual		Actual 2017	Actual 2017 vs Decision 2017		Decision 2017	Actual 2016	Actual 2016 vs Decision 2016		Decision 2016
		\$	%		\$	%		\$	%			\$	%	
Labour	37,981	1,107	3%	36,874	(14,960)	-29%	51,834	21,932	73%	29,902	28,437	(644)	-2%	29,081
Contractor	4,328	0	0%	4,328	4,328	n/a	0	(1,059)	-100%	1,059	0	0	n/a	0
Telephone	10,384	203	2%	10,181	1,937	23%	8,244	(5,742)	-41%	13,986	5,872	(7,840)	-57%	13,712
Employee Expenses	240	4	2%	236	236	n/a	0	(231)	-100%	231	21	(205)	-91%	226
Automotive	52,301	3,727	8%	48,574	27,657	132%	20,917	(15,654)	-43%	36,571	11,028	(24,909)	-69%	35,937
Utilities	1,126	22	2%	1,104	457	71%	647	(435)	-40%	1,082	769	(292)	-28%	1,061
Subtotal	106,360	5,063	5%	101,297	19,655	24%	81,642	(1,189)	-1%	82,831	46,127	(33,890)	-42%	80,017
Add: Shared Service Cost	50,000			47,845			42,894			42,888	42,900			42,900
Total Expenses	156,360			149,142			124,536			125,719	89,027			122,917

12.1.1 Please provide explanations for variances greater than \$15,000 or 10 percent between Test Year 2019 and Test Year 2018, Test Year 2018 and Actual 2017, and Actual 2017 and Decision 2017.

Response:

Explanations of significant variances in the table provided in response to Question 12.1 are as follows:

Labour

PNG(NE) has provided an analysis of the labour cost variances for Decision 2017 to Actual 2017, and Actual 2017 to Test Year 2018 on a confidential basis. The Actual 2017 to Decision 2017 unfavourable variance is net of cost savings from a position vacancy. The Test Year 2018 to Actual 2017 positive variance is net of added costs for the NE Engineer position planned to be hired mid-2018.

Contractors

The Test Year 2018 increase can be attributed to additional costs forecast for the GIS project.

Telephone

The favourable cost variance for 2016 is primarily the result of receiving a one-time credit from Telus in 2016 during re-negotiation of the services contract. The contract renewal included a reduction in rates which created a favorable variance for 2017 in telephone. Test Year 2018 vs Decision 2017 forecast amounts represent normalized communications costs.

Automotive

PNG generates its Automotive cost forecast on a consolidated basis and allocates amounts to PNG-West and the PNG(NE) divisions on a prorata basis on O&M and Capital labour costs. Consequently, given variability in Capital and O&M activity in each division, there is variability in the actual costs recorded as an operating expenditure. Please also see the response to Question 12.2.

On a consolidated basis PNG had looked at the average spend on vehicles due to positive budget variances in 2016 and 2017 and has made use of the 2016 Actual costs inflated by 2% as the consolidated forecast for Test Year 2018. Actual overall Automotive costs have decreased from Decision 2017 mainly from reduced maintenance costs by performing equipment service on the vehicles internally as opposed to outsourcing it.

On page 28, of the Amended Application, PNG(NE) states:

Test Year 2019 costs are forecast to increase by \$5,000 or 5.0% from Test Year 2018 due to a greater auto expense allocation to operating costs due to lower planned capital expenditures.

On page 75, PNG(NE) states:

The actual costs for 2016 included in this account are \$30,000 or 38.0% less than those approved under Decision 2016. This is primarily due to a greater proportionate allocation of automotive costs to operations than forecast due to lower actual capital expenditures than planned, and to higher communications costs.

12.2 Please confirm, or explain otherwise, that there is greater auto expense forecast for operating costs because less auto expense is forecast to transfer to capital in Test Year 2019.

Response:

As noted in response to Question 12.1, PNG generates its Automotive cost forecast on a consolidated basis and allocates amounts to PNG-West and the PNG(NE) divisions on a prorata basis on O&M and Capital labour costs. Consequently, given variability in Capital and O&M activity in each division, there is variability in the actual costs recorded as an operating expenditure.

On a consolidated basis PNG had looked at the average spend on vehicles due to positive budget variances in 2016 and 2017 and has made use of the Actual 2016 costs inflated by 2% as the consolidated forecast for Test Year 2018. Actual overall Automotive costs have decreased from Decision 2017 mainly from reduced maintenance costs by performing equipment service on the vehicles internally as opposed to outsourcing it.

Please see the response to Question 12.2.1

12.2.1 If confirmed, please explain how the amount of auto expenses to transfer to capital is determined. Please provide a detailed calculation for Test Years 2018 and 2019 and for Actuals 2016 and 2017.

Response:

Please consider the following discussion of PNG's consolidated Automotive cost forecasting and recording of actual Automotive costs.

Automotive Cost Forecast

PNG generates its Automotive cost forecast on a consolidated basis in consideration of recent cost experience and anticipated changes in underlying costs (i.e. trend in fuel costs, etc.). As a budgeting convention, the consolidated Automotive costs forecast are allocated to PNG-West and the PNG(NE) divisions on a prorata basis based on forecast O&M and Capital labour costs.

As a simplified example, consider the following:

If:

- PNG consolidated automotive costs = \$1,000,000
- PNG consolidated capital and operating labour costs = \$7,000,000

And:

- TR forecast capital labour costs = \$7,000 or 0.1% of consolidated ($\$7,000/\$7,000,000$)
- TR forecast operating labour costs = \$350,000 or 5% of consolidated ($\$350,000/\$7,000,000$)

Then:

- TR allocated automotive – Capital = $\$1,000,000 \times 0.1\% = \$1,000$
- TR allocated automotive – Operating = $\$1,000,000 \times 5.0\% = \$50,000$

Actual Automotive Costs

PNG-West and the PNG(NE) divisions each record the actual automotive costs incurred in each period. As an accounting convention, automotive costs are allocated to capital projects using a rate of 15% applied to actual capital labour hours. The difference between the actual automotive costs and what is capitalized based on this convention is what is recorded as operating automotive costs.

Carrying on from the example above, consider:

If:

- TR's actual automotive costs = \$40,000
- TR's actual capital labour costs = \$7,000

Then:

- Capitalized automotive costs = $\$7,000 \times 15\% = \$1,050$
- Operating automotive costs = $\$40,000 - \$1,050 = \$38,950$

This methodology is illustrated in the tables below.

		Test Year 2019			Test Year 2018		
		\$	Allocation %	Allocated \$	\$	Allocation %	Allocated \$
Consolidated Auto Budget		1,054,502			1,033,825		
		-2.0%			-12.9%		
Allocate Based on Labour							
Capital \$	PNG(W)	568,199	8.5%	89,481	949,658	13.7%	141,849
	FSJ	193,045	2.9%	30,401	143,271	2.1%	21,400
	DC	439,845	6.6%	69,268	283,427	4.1%	42,335
	TR	2,047	0.0%	322	512	0.0%	76
		1,203,136	18.0%	189,473	1,376,867	19.9%	205,661
Operating \$	PNG(W)	2,953,986	44.1%	465,201	2,895,837	41.8%	432,547
	FSJ	1,131,095	16.9%	178,128	1,269,802	18.3%	189,669
	DC	1,075,765	16.1%	169,414	1,053,603	15.2%	157,375
	TR	332,009	5.0%	52,286	325,194	4.7%	48,574
		5,492,855	82.0%	865,029	5,544,437	80.1%	828,164
		6,695,992	100.0%	1,054,502	6,921,304	100.0%	1,033,825

		Decision 2017			Actual 2017		
		\$	Allocation %	Allocated \$	\$	Allocation %	Allocated \$
Consolidated Auto Budget		1,097,363			900,724		
Allocate Based on Labour							
Capital \$	PNG(W)	853,663	11.7%	128,392	728,173	15.0%	109,226
	FSJ	158,845	2.2%	23,890	204,360	15.0%	30,654
	DC	298,164	4.1%	44,844	152,807	15.0%	22,921
	TR	3,038	0.0%	457	7,140	15.0%	1,071
		1,313,710	18.0%	197,583	1,092,480	15.0%	163,872
Operating \$	PNG(W)	3,466,807	47.5%	521,411		50.5%	455,097
	FSJ	1,246,996	17.1%	187,549		11.7%	105,188
	DC	961,034	13.2%	144,540		17.2%	155,353
	TR	307,709	4.2%	46,280		2.4%	21,214
		5,982,546	82.0%	899,780	-		736,852
		7,296,256	100.0%	1,097,363	1,092,480		900,724

		Decision 2016			Actual 2016		
		\$	Allocation %	Allocated \$	\$	Allocation %	Allocated \$
Consolidated Auto Budget		1,075,848			961,660		
Allocate Based on Labour							
Capital \$	PNG(W)	774,172	10.7%	115,548	519,567	15.0%	77,935
	FSJ	174,512	2.4%	26,047	171,927	15.0%	25,789
	DC	371,768	5.2%	55,488	148,467	15.0%	22,270
	TR	20,968	0.3%	3,130	23,213	15.0%	3,482
		1,341,420	18.6%	200,212	863,173	15.0%	129,476
Operating \$	PNG(W)	3,506,738	48.6%	523,394		58.5%	562,444
	FSJ	1,104,635	15.3%	164,871		10.7%	103,259
	DC	951,593	13.2%	142,029		16.2%	155,453
	TR	303,792	4.2%	45,342		1.1%	11,028
		5,866,758	81.4%	875,636	-		832,184
		7,208,178	100.0%	1,075,848	863,173		961,660

12.2.2 If not confirmed, please explain why lower planned capital expenditures would result in higher auto expense in operating costs.

Response:

Please see the response to Question 12.2.1.

13.0 Reference: OPERATING AND MAINTENANCE EXPENSES
Exhibit B-1-1, Sections 2.3.6 and 3.2.2.1, pp. 28 and 81; PNG(NE) 2016-2017
RRA Proceeding, Exhibit B-6, BCUC IR 1.9.2 and 1.9.3
Account 688 – Other General Operations

Section 2.3.6 on page 28 of the Amended Application describes the costs in Account 688 – Other General Operations.

13.1 Please provide a table with a detailed breakdown of the costs in Account 688 for Test Years 2018 and 2019, Decision 2017 and Actuals 2016 and 2017.

Response:

Please see the table that follows.

Other General Operations - 688	Test Year 2019	Test Year 2019 vrs Test Year 2018		Test Year 2018	Test Year 2018 vrs 2017 Actual		Actual 2017	Actual 2017 vs Decision 2017		Decision 2017	Actual 2016	Actual 2016 vs Decision 2016		Decision 2016
		\$	%		\$	%		\$	%			\$	%	
Labour	50,372	986	2%	49,386	5,307	12%	44,079	(1,335)	-3%	45,414	51,411	7,035	16%	44,376
Contractor	39,957	784	2%	39,173	39,173	n/a	0	(38,405)	-100%	38,405	214	(18,128)	-99%	18,342
Materials	1,209	24	2%	1,185	1,185	n/a	0	(1,162)	-100%	1,162	1,156	17	1%	1,139
Training and Development	3,446	68	2%	3,378	2,268	204%	1,110	(2,202)	-66%	3,312	18,906	15,659	482%	3,247
Employee expenses	0	0	n/a	0	0	n/a	0	0	n/a	0	233	233	n/a	0
Total	94,984	1,862	2%	93,122	47,933	106%	45,189	(43,104)	-49%	88,293	71,920	4,816	7%	67,104

13.1.1 Please provide explanations for variances greater than \$15,000 or 10 percent between Test Year 2019 and Test Year 2018, Test Year 2018 and Actual 2017, and Actual 2017 and Decision 2017.

Response:

The variances in Account 685 arising from Actual 2017 Contractor costs being nil are primarily due to PNG-West absorbing the cost of the 2017 company-wide safety and functional table top training exercises. The costs of the consolidated exercise will be shared among divisions going forward. The 2016 variances for Contractor and Training and Development reflects an error in recording Actual 2016 Contractor costs in the Training and Development line item.

On page 81, PNG(NE) stated:

The actual costs for 2017 included in this account are \$43,000 or 48.8% less than those approved under Decision 2017. This is primarily due to savings from involving both PNG West and PNG(NE) employees in the safety and the functional table top exercises training.

- 13.2 Please confirm, or explain otherwise, that PNG plans to involve both PNG-West and PNG(NE) employees in safety and functional table top exercises training in Test Years 2018 and 2019.

Response:

Confirmed.

- 13.2.1 If confirmed, please explain why similar savings are not forecast for Test Years 2018 and 2019.

Response:

As noted in response to Question 13.1.1, PNG-West absorbed the cost of the 2017 company-wide safety and functional table top training exercises. The costs of the consolidated exercise will be shared among divisions going forward. In addition, the level of exercise has changed as per regulations, a full scale exercise is required in 2018 and a functional exercise in 2019, as opposed to basic table top exercises as in the past.

In response to BCUC IR 1.9.2 in the PNG(NE) 2016-2017 RRA proceeding, PNG(NE) stated:

During the 2015 tabletop exercise, the OGC requested that a full mock exercise be performed every second year and PNG(NE) has now added a provision for that requirement to its Test Year 2017 forecast costs for Account 688.

In response to BCUC IR 1.9.3 in the PNG(NE) 2016-2017 RRA proceeding, PNG(NE) stated:

[T]he OGC requested that PNG(NE) commence performing full mock exercises at the Tumbler Ridge Gas Plant every second year, while continuing with the table top exercises in the off years...The full details of the 2017 exercise have not yet been determined, however, based on the experience with other mock exercises performed by PNG, a forecast cost of \$20,000 over and above the costs of the table top exercise has been developed for this activity.

- 13.3 Please confirm, or explain otherwise, that a full mock exercise is planned for Test Year 2019 and not 2018.

Response:

While a full-scale exercise (mock) is required by the BCOGC every 3 years. As noted in response to Question 13.2.1, the level of exercises has changed as per regulations. To meet these requirements a full scale exercise is planned for 2018 and a functional exercise is planned for 2019.

- 13.4 Please confirm, or explain otherwise, that table top exercises are planned for Test Year 2018 and not 2019.

Response:

An emergency exercise (tabletop) is required by the BCOGC each year, except each third year when a full-scale exercise must be held (BCOGC Emergency Management Manual, pp. 15-16.) As noted in response to Question 13.2.1, the level of exercises has changed as per regulations. To meet these requirements a full scale exercise is planned for 2018 and a functional exercise is planned for 2019.

- 13.5 Please provide the actual cost of the table top exercises and full mock exercises in 2016 and 2017.

Response:

The cost of the TR 2016 tabletop exercise was \$19,799.

The cost of TR participating in the corporate-wide full mock exercise in 2017 was \$24,805.

**14.0 Reference: OPERATING AND MAINTENANCE EXPENSES
Exhibit B-1-1, Sections 3.2.1.1 and 3.2.2.1, pp. 75 and 82; Amended
Schedules, Tab 1, p. 3
Account 673/667/712/718 – Other**

Tab 1, page 3 of the Amended Schedules shows the following:

Account 673 – Removing & resetting meters

- Test Year 2019 - \$27,000
- Test Year 2018 - \$27,000
- Decision 2017 - \$26,000
- Actual 2017 - \$12,000
- Actual 2016 - \$15,000

Account 712 – Meter reading

- Test Year 2019 - \$17,000
- Test Year 2018 - \$17,000
- Decision 2017 - \$16,000
- Actual 2017 - \$5,000
- Actual 2016 - \$7,000

On page 75, PNG(NE) states:

The actual costs for 2016 included in this account are \$24,000 or 20.2% less than those approved under Decision 2016. This is primarily due to savings on labour for meter recalls and removals compared to plan, and to lower meter reading and contractor costs than forecast.

On page 82, PNG(NE) states:

The actual costs for 2017 included in this account are \$13,000 or 10.4% less than those approved under Decision 2017. This variance is primarily due to fewer meter recalls than budgeted, with actual recalls varying depending on the sample groups chosen by Measurement Canada.

- 14.1 Please explain why forecast costs in Accounts 673 and 712 for Test Years 2018 and 2019 are not expected to be similar to the actual costs incurred for 2016 and 2017.

Response:

Meter recalls are established by Measurement Canada. The amount of meters to be sampled annually can vary significantly from year to year based on the sample group sizes that are selected for testing. If larger, homogenous groups are selected for sampling, requirements for the number of recalls may vary greatly.

Tab 1, page 3 of the Amended Schedules shows the following:

Account 667 – Regulating stations

- Test Year 2019 - \$22,000
- Test Year 2018 - \$21,000
- Decision 2017 - \$21,000
- Actual 2017 - \$6,000
- Actual 2016 - \$16,000

14.2 Please explain why Actual 2017 costs were \$15,000 lower than Decision 2017.

Response:

The variance noted for 2017 can be attributed to the fact that the field technician responsible for maintaining these assets experienced a 5-month medical leave in 2017. This resulted in certain operational maintenance items not occurring.

14.3 Please explain why forecast costs in Account 667 for Test Years 2018 and 2019 are not expected to be similar to the actual costs incurred for 2017.

Response:

Please see the response to Question 14.2. The field technician is now back to full duties and activity levels for 2018 and 2019 are forecast to be at normal levels.

**15.0 Reference: OPERATING AND MAINTENANCE EXPENSES
 Exhibit B-1-1, Tab Schedules, Tab 1, p. 3
 Account 718 – Uncollectible accounts**

Line 34 of Tab 1, page 3 includes the amounts for Uncollectible Accounts.

15.1 Please confirm, or explain otherwise, that PNG(NE)'s method for calculating its bad debt provision for the Tumbler Ridge division continues to be the same as the method used for the Fort St. John/Dawson Creek division.

Response:

Confirmed. The methodology used to forecast the bad debt provision for the Tumbler Ridge division is consistent with the methodology used for the Fort St. John/Dawson Creek division. As noted in the Amended Application, PNG(NE) calculates a bad debt provision based on PNG(NE)'s bad debt write-offs over the past 5 years and applies the average ratio to the forecast period revenues.

However, PNG(NE) acknowledges that it followed this principle using the latest available figures at the time of the submission of the Original Application (November 2017) and inadvertently did not update the bad debt provisions for Test Years 2018 and 2019 to reflect the Actual 2017 results. As a result, the provision rate used in Test Years 2018 and 2019 to calculate the bad debt provision is lower than the average bad debt provision rate over the past 5 years. PNG(NE) is not proposing to change this provision as it recognizes that the provision is an estimate only.

15.1.1 If confirmed, please provide a table showing the actual bad debt write-offs compared to actual revenues for the past 5 years, and provide the calculation for the average ratio used.

Response:

Please see the table that follows.

	Test Year 2019	Test Year 2018	Actual 2017	Actual 2016	Actual 2015	Actual 2014	Actual 2013
(i) Actual Bad Debt Write-offs	N/A	N/A	15,700	5,800	14,100	9,100	5,500
(ii) Forecast/Actual Revenues	2,200,000	1,900,000	2,000,000	1,700,000	2,000,000	2,600,000	2,200,000
Actual Bad debts/Actual Revenues			0.79%	0.34%	0.71%	0.35%	0.25%
Bad Debt Provision	8,000	8,000	19,000	6,000	5,000	nil	nil
Provision Rate	0.364%	0.421%					

15.1.2 If not confirmed, please explain how the Test Year 2018 and 2019 amounts of \$8,000 were calculated.

Response:

Please see the response to Question 15.1.

C. ADMINISTRATIVE AND GENERAL EXPENSES

**16.0 Reference: ADMINISTRATIVE AND GENERAL EXPENSES
Exhibit B-1-1, Section 2.5.4, pp. 33-35
Account 725 – Employee Benefits**

On page 33 of the Amended Application, PNG(NE) states:

The majority of the increase in employee benefits costs for 2018 can be attributed to higher defined benefit pension (DB) and non-pension post-retirement benefit (NPPRB) program costs. [Emphasis added]

16.1 Please confirm, or explain otherwise, that the preamble above should say the majority of the decrease in employee benefits costs for Test Year 2018 can be attributed to lower DB and NPPRB program costs.

Response:

Confirmed. The preamble should say the majority of the decrease in employee benefit costs for Test Year 2018 can be attributed to lower DB and NPPRB program costs.

16.2 Please confirm, or explain otherwise, that both divisions of PNG(NE) have the same employee benefit load rates.

Response:

Confirmed.

16.2.1 If not confirmed, please update Table 19 on page 35 of the Amended Application to include the Actual 2016 and 2017 load rates and provide explanations for any significant variances from the Decision 2016 and 2017 rates.

Response:

Not applicable. Please see the response to Question 16.2.

D. SHARED SERVICES COST ALLOCATION TO PNG(NE) TR DIVISION

**17.0 Reference: SHARED SERVICES COST ALLOCATION TO PNG(NE) TR DIVISION
PNG-West 2018-2019 RRA Proceeding, Exhibit B-1-1, Amended Application,
Table 20, p. 44; Amended Schedules, Tab 1, p. 9
Account 728 – Corporate**

Table 20 on page 44 of the Amended Application in the PNG-West 2018-2019 RRA proceeding shows the AltaGas Management Fee forecast to be received from PNG to AltaGas, before cost adjustments, to be \$1,640,000 and \$1,159,000 for Test Years 2018 and 2019, respectively. It further shows the AltaGas Management Fees proposed by PNG to be recovered from ratepayers (i.e. net of cost adjustments) to be \$730,000 and \$743,000 for Test Years 2018 and 2019, respectively.

Tab 1, page 9 of the Amended Schedules in the PNG-West 2018-2019 Amended Application shows the Test Years 2018 and 2019 recoveries from the PNG(NE) TR division related to the AltaGas Management Fee as \$16,000 for each test year.

17.1 Please provide the incremental revenue deficiency and rate impact for the PNG(NE) TR division for Test Years 2018 and 2019 based on a scenario where PNG was approved to recover the full AltaGas Inter-Affiliate charges in each of the Test Years. Please show all supporting calculations.

Response:

Based on a scenario where PNG(NE) was approved to recover the full AltaGas inter-affiliate charges in each of the Test Years, PNG, on a consolidated basis with PNG(NE), would recover the disallowed inter-affiliate amounts of \$910,000 for Test Year 2018 and \$416,000 for Test Year 2019.

For Test Year 2018, this would result in an incremental revenue requirement impact of \$19,000 for PNG(NE). Based on the pro-rata allocation to residential customers based on margin and forecast Test Year 2018 deliveries, the resultant rate increase to residential customers would be approximately 1.8%.

- $(19,000 * 727,317 / 1,357,181) / 81,021 \text{ GJs} = \$0.126/\text{GJ}$ increase in residential rates
- $\$0.126/\text{GJ} / \$7.152/\text{GJ} \{2017 \text{ rates}\} = 1.8\%$ residential rate increase

For Test Year 2019, this would result in an incremental revenue requirement impact of \$10,000 for PNG(NE). Based on the pro-rata allocation to residential customers based on margin and forecast Test Year 2019 deliveries, the resultant rate increase to residential customers would be approximately 0.9%.

- $(10,000 * 834,530 / 1,555,689) / 80,063 \text{ GJs} = \$0.067/\text{GJ}$ increase in residential rates
- $\$0.067/\text{GJ} / \$7.152/\text{GJ} \{2017 \text{ rates}\} = 0.9\%$ residential rate increase

E. TRANSFERS TO CAPITAL

18.0 Reference: TRANSFERS TO CAPITAL
 Exhibit B-1-1, Section 2.7, p. 43; PNG(NE) 2016-2017 RRA Proceeding,
 Exhibit B-6, BCUC IR 1.12.1 and 1.12.4.1
 Capitalized overhead

In response to BCUC IR 1.12.1 in the PNG(NE) 2016-2017 RRA proceeding, PNG(NE) provided the following table:

(\$000s)	Test Year 2017	Test Year 2016	Actual 2016	Actual 2014	NSP 2014	Actual 2013	Decision 2013	Actual 2012	Decision 2012	Actual 2011	NSP 2011
Overhead Capitalization Rate [(A)/(B)]	2.9%	6.8%	2.2%	3.3%	2.2%	2.5%	1.8%	1.8%	2.5%	0.9%	1.7%
(A) Transfers to Capital											
Operating	\$ 13	\$ 20	\$ 13	\$ 23	\$ 13	\$ 9	\$ 9	\$ 9	\$ 9	\$ 3	\$ 17
Administrative and General	15	52	9	11	13	18	13	9	19	6	-
	\$ 28	\$ 72	\$ 22	\$ 34	\$ 26	\$ 27	\$ 22	\$ 18	\$ 28	\$ 9	\$ 17
(B) Expenses											
Operating Expenses	\$ 723	\$ 677	\$ 620	\$ 636	\$ 733	\$ 620	\$ 802	\$ 702	\$ 777	\$ 735	\$ 691
Maintenance Expenses	80	78	70	124	145	164	173	120	145	118	98
Admin & General Expenses	279	238	303	252	252	284	257	168	165	175	175
Total Expenses - Net of Transfers to Capital	1,082	993	993	1,012	1,130	1,068	1,232	990	1,087	1,028	965
Plus: Transfers to Capital	28	72	22	34	26	27	22	18	28	9	17
Total Expenses - Gross	\$ 1,110	\$ 1,065	\$ 1,015	\$ 1,046	\$ 1,156	\$ 1,095	\$ 1,254	\$ 1,008	\$ 1,115	\$ 1,037	\$ 982
Capital Additions (before O/H)	\$ 161	\$ 2,129	\$ 161	\$ 161	\$ 161	\$ 286	\$ 257	\$ 186	\$ 190	\$ 415	\$ 384

18.1 Please update the above table for Test Years 2018 and 2019, Decision 2017 and Actuals 2016 and 2017.

Response:

In the course of responding to information requests, PNG(NE) noted an error in the regulatory schedules related to amounts reported for Operating Expense transfers to capital pertaining to the reclassification of capitalized vehicle costs aggregated for financial reporting purposes. The error is “reclassification” in nature between BCUC 689 Transfers to Capital and BCUC 685 General System Operations and does not impact Operating Expenses on an overall basis.

The error noted was that the amount of the adjustment to reclassify capitalized vehicle costs for Actual 2017 was incorrect. The reclassification adjustment should have been \$7,600 rather than \$1,100. The correction of this reclassification error results in a decrease to Tab 1, Page 3, Line 17 by \$7,000, from \$82,000 to \$75,000, and an decrease to Tab 1, Page 3, Line 20 by \$(7,000), from \$(26,000) to \$(19,000) for Actual 2017.

The correction of this reclassification error will be reflected in the final regulatory schedules.

The table that follows provides the requested information and incorporates the correction of the error noted in the preceding discussion.

(\$000s)	Test Year 2019	Test Year 2018	Actual 2017	Decision 2017	Actual 2016	Decision 2016	Actual 2015	Actual 2014	NSP 2014	Actual 2013	Decision 2013
Overhead Capitalization Rate [(A)/(B)]	3.1%	3.9%	7.6%	5.3%	3.4%	4.4%	2.2%	3.3%	2.2%	2.5%	1.8%
(A) Transfers to Capital											
Operating	\$ 23	\$ 26	\$ 19	\$ 19	\$ 18	\$ 18	\$ 13	\$ 23	\$ 13	\$ 9	\$ 9
Administrative and General	12	17	65	40	21	29	9	11	13	18	13
	\$ 35	\$ 43	\$ 84	\$ 59	\$ 39	\$ 47	\$ 22	\$ 34	\$ 26	\$ 27	\$ 22
(B) Expenses											
Operating Expenses	\$ 746	\$ 728	\$ 655	\$ 680	\$ 680	\$ 649	\$ 620	\$ 636	\$ 733	\$ 620	\$ 802
Maintenance Expenses	84	82	56	80	138	78	70	124	145	164	173
Admin & General Expenses	255	250	311	292	293	287	303	252	252	284	257
Total Expenses - Net of Transfers to Capital	1,085	1,060	1,022	1,052	1,111	1,014	993	1,012	1,130	1,068	1,232
Plus: Transfers to Capital	35	43	84	59	39	47	22	34	26	27	22
Total Expenses - Gross	\$ 1,120	\$ 1,103	\$ 1,106	\$ 1,111	\$ 1,150	\$ 1,061	\$ 1,015	\$ 1,046	\$ 1,156	\$ 1,095	\$ 1,254
Capital Additions (before O/H)	\$ 198	\$ 1,022	\$ 322	\$ 491	\$ 286	\$ 534	\$ 169	\$ 177	\$ 161	\$ 286	\$ 257

In response to BCUC IR 1.12.4.1 in the PNG(NE) 2016-2017 RRA proceeding, PNG(NE) provided the following table:

Factors Contributing to Changes in Capitalization (\$'s)	Test Year 2017	Test Year 2016
(i) Change in Proportion of Capital Expenditures	(40,000)	41,000
(ii) Increased Corporate Executive Allocation	-	24,000
(iii) Increased Field Management Allocation	-	2,000
(iv) Change in Direct Capital Labour	(4,000)	(21,000)
Increase (Decrease) in Capitalization over Prior Period	(44,000)	46,000

18.2 Please update the above table for Test Years 2018 and 2019.

Response:

Please see the table that follows.

Table 18.2 - Changes in Transfers to Capital

Factors Contributing to Change in Capitalization (\$'s)	Test Year 2019	Test Year 2018
(i) Change in Proportion of Capital Expenditures	(8,000)	(8,000)
(ii) Change in Corporate/Field Management Allocation	1,000	(11,000)
(iii) Change in Support Staff Allocation	-	(1,000)
(iv) Change in Direct Capital Labour Benefit Load	-	4,000
Increase (Decrease) in Capitalization over Prior Period	(7,000)	(16,000)
Change in Transfers to Capital per Table 22	(7,000)	(16,000)
Difference	-	-

- 18.3 Are there any amounts in Test Years 2018 and 2019 being transferred to capital in relation to the Geotechnical Information System? If yes, please provide the amounts for each of Test Years 2018 and 2019 and explain the rationale for this treatment.

Response:

No amounts are being transferred to capital in relation to the GIS Project. The GIS Project is a General Plant asset captured in BCUC 487 – Computer Equipment as it primarily relates to electronic data capture and the systems to manage and use this data. General Plant assets are typically purchased from third parties and do not attract overhead costs as per PNG(NE)'s capital overhead allocation methodology.

F. PROPERTY TAXES

**19.0 Reference: PROPERTY TAXES
 Exhibit B-1-1, Section 2.8, p. 44
 Property taxes breakdown**

On page 44 of the Amended Application, PNG(NE) provides the following table:

Table 23: Property Taxes

Expense Item	Test Year 2019	2019 to 2018 Change		Test Year 2018	2018 to Decision 2017 Change		Decision 2017	Actual 2017	Actual 2016	Actual 2015	Actual 2014	Actual 2013
		\$	%		\$	%						
		(\$000's)										
Property taxes	63	8	2.0%	62	(7)	(9.8)%	69	69	68	66	64	61
1% in lieu	20	4	24.0%	16	(10)	(37.5)%	25	25	25	22	21	15
Total	83	3	6.5%	78	(16)	(17.3)%	94	94	93	88	85	76

Source: Tab Schedules, Tab 1, Page 7

Further on page 44, PNG(NE) states:

Total property taxes were \$80,000 in 2017 resulting in a \$14,000 property tax credit deferral which will be amortized in 2018.

19.1 Please update the above table for Actual 2017 to agree with the \$80,000 quoted in the above preamble.

Response:

The Actual 2017 amount for total property taxes (property taxes and 1% in lieu of tax) presented in the table above includes the amount recorded to the property tax deferral account of \$14,000.

	<u>TR</u>
Budgeted Property Tax - Decision 2017	\$ 94,000
Actual Property Tax	\$ 80,000
<u>Deferral Account Addition</u>	<u>\$ 14,000</u>

G. DEPRECIATION

- 20.0 Reference: DEPRECIATION
Exhibit B-1-1, pp. 45-47, and Appendix B 2017 Depreciation Study, p. I-4
and I-5
Net salvage - rate impact**

On page 45 of its Amended Application, PNG(NE) states that the result of the Depreciation Study is:

... a reduction in depreciation expense compared to that which would have been calculated under the rate previously in place based on the parameters of a prior study, with Test Year 2018 depreciation expense decreasing to \$125,000 from \$152,000 for Decision 2017. Test Year 2019 depreciation expense is forecast to be \$159,000.

On page 46, PNG(NE) states that:

If PNG(NE) were to record a provision for negative salvage in its depreciation for the applicable accounts, depreciation expense for Test Year 2018 and Test Year 2019, would be greater by \$190,000 and \$194,000, respectively.

Further, on page 47, PNG(NE) states that:

PNG's basis for not incorporating negative salvage is the materiality of the negative salvage estimates and the significant adverse rate impacts that will result from incorporating these estimates into depreciation expense at this time.

- 20.1 Please provide the Test Years 2018 and 2019 rate impact for the TR Division of incorporating the negative salvage values recommended in the Depreciation Study, which results in depreciation expense for Test Years 2018 and 2019 being greater by \$190,000 and \$194,000, respectively.

Response:

Incorporating the negative salvage values recommended in the Depreciation Study and recording incremental depreciation expense of \$190,000 in Test Year 2018 and \$194,000 in Test Year 2019 would result in a very significant rate increase to residential customer delivery rates of approximately 21.4% in Test Year 2018 and a very minor decrease in rates of approximately 0.1% in Test Year 2019 compared to the rates for these test periods presented in the Amended Application.

- 20.2 Please provide the net impact for PNG(NE) TR Division of incorporating all of the recommendations made by Concentric in the Depreciation Study, including the change in both depreciation rates and *net* salvage values. Please provide the impact on both depreciation expense and rates for each of Test Years 2018 and 2019.

Response:

PNG(NE) submits that it has incorporated all of the recommendations made by Concentric in the Depreciation Study except for the following deviations: positive salvage values on BCUC Account 485, negative salvage values and depreciation of land rights. As noted in the Amended Application, the inclusion of negative salvage values would result in an increase in depreciation expense of \$190,000 in Test Year 2018 and \$194,000 in Test Year 2019. The inclusion of the positive salvage values on BCUC Account 485 would result in a reduction of depreciation expense of \$300 in each of Test Year 2018 and Test Year 2019. The inclusion of the depreciation of land rights would result in an increase of depreciation expense of \$100 in both Test Years 2018 and 2019.

PNG(NE) notes that the impact of the positive salvage values on depreciation of BCUC Account 485 can be seen to offset the impact of the depreciation of land rights. Therefore, incorporating all of the recommendations made by Concentric in the Depreciation Study would essentially have the same financial impact as presented in response to Question 20.1 arising from recording of negative salvage values.

- 20.3 Please confirm that if PNG(NE) adopted Concentric's recommendation regarding negative salvage values for the TR Division, it would have a one-time rate impact for customers during the year of transition (i.e. Test Year 2018). If not confirmed, please explain and provide a numerical example for illustration.

Response:

Confirmed. If PNG(NE) adopted Concentric's recommendation regarding negative salvage values, it would have a one-time rate impact for customers during the year of transition and would result in permanent rate increases to customers.

- 20.3.1 In the event that Concentric's recommendation regarding negative salvage values were adopted by PNG(NE) for the TR Division, please discuss if PNG(NE) would consider a transition period to smooth out the immediate impact on customer rates.

Response:

In the event that Concentric's recommendation regarding negative salvage values were adopted, PNG(NE) would consider a long transition period given the very significant rate impact from making this change. However, PNG(NE) is very reluctant to implement this recommendation at this time in view of the already significant rate increases currently being sought by PNG(NE) in the 2018/19 rate application.

- 20.4 If Concentric's recommendations regarding negative salvage accounting were adopted for the TR Division, how would the annual negative salvage accrual collected from customers get recorded for regulatory accounting purposes? For example, would the amount collected be recorded as a rate base credit account? Please explain and provide an illustrative example.

Response:

If Concentric's recommendations regarding negative salvage accounting were adopted, PNG(NE) submits that it would likely record the negative salvage accrual collected from customers in a rate base credit deferral account. Any actual costs incurred in the future for asset retirements and abandonments would then be recorded in the same deferral account.

PNG(NE) anticipates segregating the depreciation provision into two aspects based on the recommendations of the Depreciation Study: (i) Life and (ii) Net Salvage. The accounting for depreciation expense would be as follows:

- (i) Life Aspect Depreciation Provision

Dr	Depreciation Expense
Cr	Accumulated Depreciation

- (ii) Net Salvage Depreciation Provision

Dr	Depreciation Expense
Cr	Rate Base Deferral

As noted, any actual costs incurred for asset retirements and abandonments would then be recorded in the rate base deferral account.

- 20.5 Please explain if PNG(NE) agrees with the following statements on pages I-4 and I-5 of the Depreciation Study as it relates specifically to PNG(NE) TR Division. Please discuss why or why not.

The longer the delay in recognizing net negative salvage, the higher future depreciation rate will be as PNG's depreciation rates are based on its net book value amortized over a remaining life basis. Each year of delay will increase the differential between booked net book value and calculated net book value. As such, the resultant depreciation rates will increase proportionately.

...

Although a comparison of the current revenue requirements related to a net salvage accrual and the current revenue requirements related to expensing of net salvage may indicate that the accrual is higher at a single point in time, over time the revenue requirements and the present value of those revenue requirements will be less if the net salvage cost is accrued over the life of the asset. The reason for the lower revenue requirements with the accrual of net salvage is the impact of the accruals on rate base. That is, as net salvage accruals are recorded to the depreciation reserve, the accumulated depreciation balance in the reserve increases and reduces subsequent determinations of rate base in future periods.

Response:

PNG(NE) agrees with the noted statement above, however, PNG(NE) reiterates that recognizing negative salvage in depreciation rates at this time would result in significant adverse rate impacts which could negatively affect future economic development in its service territory.

**21.0 Reference: DEPRECIATION
Exhibit B-1-1, pp. 45-47 and Appendix B
Plant Gains and Losses deferral account**

21.1 Please provide the actual additions and amortization expense for the TR Division Plant Gains and Losses deferral account for each year between 2012 and 2017, and forecast 2018 and 2019, broken down into the following categories:

- Ordinary;
- Salvage Value;
- Retirement Costs.

Response:

The information requested is provided in the table below.

\$s	Test Year 2019		Test Year 2018		Actual 2017		Actual 2016		Actual 2015		Actual 2014		Actual 2013		Actual 2012	
	Additions	Amortization	Additions	Amortization	Additions	Amortization	Additions	Amortization	Additions	Amortization	Additions	Amortization	Additions	Amortization	Additions	Amortization
Plant gains and losses - extraordinary	-	-	-	-	-	-	-	(2,500)	-	(2,508)	-	(2,496)	-	(2,501)	-	-
Plant gains and losses - ordinary	-	6,671	-	9,580	3,313	11,125	245	11,369	30,050	5,124	202	5,326	14,501	2,220	11,102	(2,502)
Plant gains and losses - salvage value	-	(300)	-	(300)	-	(300)	-	(300)	(1,500)	-	-	-	-	-	-	-
Plant gains and losses - retirement costs	-	553	-	5,015	-	5,016	-	5,016	-	5,004	2,786	4,452	22,270	-	-	-
Total	-	6,924	-	14,295	3,313	15,841	245	13,585	28,550	7,620	2,988	7,282	36,771	(281)	11,102	(2,502)

* Classification of 'extraordinary plant losses' started in 2013 and fully amortized at YE 2016.

21.1.1 Please explain if any of the above three categories for the TR Division Plant Gains and Losses deferral account would no longer be required in the event that all of the net salvage values recommended in the Depreciation Study were adopted by PNG(NE).

Response:

PNG(NE) believes that the plant gain losses deferral accounts for salvage values and retirement costs would no longer be required in the event that all of the net salvage values recommended in the Depreciation Study were adopted by PNG(NE).

- 22.0 Reference: **DEPRECIATION**
PNG-West 2013 RRA proceeding, Decision and Order G-114-13 dated August 1, 2013, p. 53; Exhibit B-1-1, pp. 45-47 and Appendix B; FortisBC Energy Utilities (FEU) 2012-2013 Revenue Requirements and Natural Gas Rates Application, Exhibit B-1, Appendix E-2 Negative Salvage

On page 53 of the BCUC's Decision in the PNG 2013 RRA proceeding, the BCUC states:

...the Panel is supportive of PNG's decision to include an evaluation of the potential of using negative salvage accounting in its next Depreciation Study. Our expectation is that this evaluation will include a **thorough examination of the pros and cons of utilizing negative salvage accounting and the costs of its implementation.** [Emphasis added]¹

In the FortisBC Energy Utilities (FEU) 2012-2013 Revenue Requirements and Natural Gas Rates Application, FEU's Application includes an Asset Retirement Obligation Report filed as Appendix E-2. The Report outlines 4 options for negative salvage accounting on pages 9-12, as follows:

- Pay as You Go;
- Traditional Approach;
- Asset Retirement Obligation (ARO) Approach;
- Hybrid Approach.

- 22.1 Please provide an analysis of the full costs of implementing the recommendation by Centric to incorporate negative salvage values into depreciation rates for the TR Division.

Response:

As detailed in the Centric Advisors ULC (Centric) Depreciation Study (shown as Appendix D, pages I-3 to I-10), the recommendation by Centric to include net negative salvage into PNG's recommended depreciation rate notes that: *"Centric Advisors recognizes the magnitude of including net negative salvage in depreciation rates"*. Through PNG(NE)'s discussions with Centric on the issue of net negative salvage, PNG(NE) understands that the inclusion of net negative salvage is a current issue throughout Canadian jurisdictions.

As detailed on page I-6 of the Depreciation Study, Centric indicates the Canadian regulatory bodies that currently have incorporated net salvage into depreciation. PNG(NE) is aware that ATCO Electric Yukon (formally Yukon Electrical Company Limited), in their most recent rate application had their previous inclusion of net negative salvage declined and their current rates do not include a provision for net negative salvage. PNG(NE) is also aware that Manitoba Hydro is currently not including net negative salvage in their depreciation rates. Newfoundland and Labrador Hydro, have filed a current proposal where they have included a gradual phase in of net negative salvage into their proposed depreciation rates.

¹ Pacific Northern Gas Ltd. (PNG) 2013 Revenue Requirements Application (RRA) Decision, p. 53.

PNG(NE) agrees with the advantages as noted by Concentric in the Depreciation Study. However, PNG(NE) has a concern related to the rate impact as stated in the Amended Application (page 52). While PNG(NE) recognizes that incorporation of negative salvage in depreciation rates matches with the consumption of the service value of the assets providing utility service and preserves intergenerational equity, PNG(NE) has made the decision to not make provision for negative salvage on any of the applicable accounts identified in the Depreciation Study. PNG(NE)'s basis for not incorporating negative salvage at this time is the materiality on the toll to customers of the negative salvage estimates and the significant adverse rate impacts that will result from incorporating these estimates into depreciation expense. If PNG(NE) were to record a provision for negative salvage in its depreciation for the applicable accounts, depreciation expense for Test Year 2018 and Test Year 2019, would be greater by \$190,000 and \$194,000, respectively.

H. DEFERRAL ACCOUNTS AND AMORTIZATION

**23.0 Reference: DEFERRAL ACCOUNTS
Exhibit B-1-1, p. 49
Demand Side Management Deferral Account**

On page 49 of the Application, PNG(NE) states that:

In June 2015, PNG and PNG(NE) submitted a Consolidated Energy Management and Efficiency Program Funding Application (Demand Side Management (DSM) Funding Application) seeking approval for funding of various DSM programs and proposed that the DSM expenditures (For PNG(NE): \$4,000 in 2015; \$9,000 in 2016; and \$8,000 in 2017) be included in a rate base deferral account. Under Commission Order G-203-15A, PNG(NE) was directed to amortize these DSM expenditures over a 5-year period.

The amortization in Test Year 2018 and Test Year 2019 reflect actual DSM expenditures incurred of \$4,000 in 2015 and \$1,000 in 2016, and also actual DSM expenditures of \$1,000 in 2017 and \$8,000 in Test Year 2018.

- 23.1 Please provide the 2018 DSM expenditures approved under Order G-203-15A for the TR Division.

Response:

DSM expenditures approved for 2018 under Order G-203-15A are \$410 thousand, of which \$9 thousand are allocated to the PNG(NE) – TR division.

- 23.2 Please provide the Decision 2016 and Decision 2017 additions to the DSM deferral account for the TR Division and provide an explanation for any variance between the 2016 and 2017 Actuals.

Response:

The 2016 and 2017 test year additions to the DSM deferral for the TR division were \$9 and \$8 thousand, respectively. Actual expenditures allocated to the TR division were considerably lower, at \$1 thousand in each of 2016 and 2017. Program spending has been lower than forecast due to a delay in launching some of the programs originally proposed in the DSM Funding Application, as well as due to lower than expected uptake in PNG(NE)'s commercial incentive programs. In addition, PNG(NE) has not hired or contracted for a manager for the DSM program and has utilized existing, internal resources whose costs have not been allocated specifically to the DSM program.

PNG and PNG(NE) are currently finalizing their annual report on the activities completed under the DSM program in 2017. PNG(NE) recognizes that customer uptake on some of its programs has been less than forecast and PNG(NE) is undertaking activities that are expected to improve the impact of its current DSM programs. PNG(NE) will also be launching additional programs in 2018. The 2017 DSM Annual Report will include a description of activities currently in progress. PNG(NE) will file its 2017 DSM Annual Report on or before April 30, 2018.

- 23.3 Given the historic underspending in 2016 and 2017, please provide a program spending schedule for 2018 and explain if PNG(NE) TR Division is on track so far in 2018.

Response:

Please see the response to Question 23.2.

- 24.0 Reference: DEFERRAL ACCOUNTS**
Exhibit B-1-1, p. 50, PNG(NE) 2013 Revenue Requirements proceeding,
Decision and Order G-131-13, dated August 23, 2013, p. 30
Legacy Deferred Income Taxes

On page 50 of the Amended Application, PNG(NE) states that:

For Test Year 2018, PNG(NE) is requesting Commission approval for the full amortization of the remaining credit balance of the Legacy Deferred Income Taxes which amounts to \$106,000 including accrued interest. PNG(NE) is requesting this approval in order to help mitigate the impact of the significant increase in its cost of service as addressed in this Amended Application.

Page 30 of the BCUC's Decision in the PNG(NE) Revenue Requirements proceeding, reads as follows regarding the deferred income tax drawdown:

... the Panel directs PNG (N.E.) to amortize the remaining deferred income tax balance over a period of 7 years commencing January 1, 2014. This is consistent with the 10 year straight-line amortization agreed to in Decision 2011. The set amortization amount will create certainty regarding the timing of the refund of the deferred income taxes to ratepayers.

- 24.1 Please confirm, or explain otherwise, that in the absence of PNG(NE)'s proposal to fully amortize the remainder of the credit balance of the Legacy Deferred Income Taxes deferral account in Test Year 2018, the credit balance would be fully amortized by the end of 2020, pursuant to Order G-131-13.

Response:

Confirmed.

- 24.2 For each of Test Year 2018 and 2019, please provide the incremental rate impact of PNG(NE)'s proposal to fully amortize the remainder of the credit balance of the Legacy Deferred Income Taxes deferral account in Test Year 2018, as compared to amortizing the balance in accordance with Order G-131-13.

Response:

PNG(NE)'s proposal to fully amortize the Legacy Deferred Income Taxes deferral account in Test Year 2018 as compared to amortizing over an additional 3 years in accordance with Order G-131-13 results in a higher delivery rate decrease of approximately 8.5% for residential customers in Test Year 2018.

Without PNG(NE)'s proposal to fully amortize the Legacy DIT deferral account and instead amortize the deferral account over the remaining 3 years in accordance with Order G-131-13, would result in an increase in delivery rates of approximately 8.5% for residential customers in Test Year 2018 and a decrease in delivery rates of approximately 4.7% in Test Year 2019.

I. RATE BASE

25.0 Reference: RATE BASE
Exhibit B-1-1, Section 2.13.1, p. 55
Capital Expenditures 2018

PNG(NE) forecasts Total Capital Expenditures excluding overhead of \$1,021,573 for Test Year 2018 and \$197,625 for Test Year 2019.

25.1 Please confirm that all the Capital expenditures planned for 2018 are still expected to be completed in 2018.

Response:

Confirmed. All projects planned for Test Year 2018 are expected to be completed in 2018.

25.1.1 For each of the projects identified that is expected to extend beyond Test Year 2018, please provide the full project schedule and the total project cost, including a breakdown of the expenditures by year.

Response:

Not applicable. See the response to Question 25.1.

**26.0 Reference: RATE BASE
Exhibit B-1-1, Section 2.13.1, p. 56
Carry-forward Projects – Transmission Pipe Repair**

PNG(NE) states on page 56 of the Amended Application:

This project will rehabilitate an exposed section of the 114mm high pressure pipeline that runs from the Tumbler Ridge area gas plant to the Tumbler Ridge community. This exposed pipeline is the lone natural gas supply to residential, commercial, and industrial development in the area of Tumbler Ridge. To date, PNG (NE) has received outside geotechnical and engineering support to help evaluate the risk to the pipeline, as well as potential rehabilitation options. A horizontal directional drilling (HDD) solution has been determined to be the best solution from a cost/benefit basis given the ongoing geotechnical activity in the immediate vicinity. To date, incurred costs for engineering, project development, and permitting associated works are \$298,000.

26.1 Please confirm the length of the exposed section of pipeline.

Response:

The exposed length of pipeline varies between 5-10m depending on seasonal stream flows and the associated amount of active stream bed scour or accretion over the pipeline. The stream channel width (top of bank to top of bank) is 13m and the pipeline has been exposed for nearly this entire width. The active geotechnical failure activity to which the pipeline is subject, however, extends a horizontal distance of at least 50m either side of stream centre line.

26.2 Please detail what the rehabilitation needs are for the exposed section of pipeline.

Response:

The exposed pipeline is located in a remote location within a very tight and steep drainage. Access constraints and the presence of active geotechnical failure prevents the mobilizing of earth moving equipment and conventional pipeline section replacement and lowering. The exposed section of pipeline will be replaced via horizontal directional drilling (HDD) and tie-ins to PNG(NE)'s unaffected pipeline both upstream and downstream of the stream crossing. The HDD will not only allow for replacement of the exposed section of pipeline, but will also alleviate concern related to the active geotechnical failures in the area and will lower the pipeline at the stream crossing below the depth of scour.

26.2.1 Please detail the risks associated with the current status of the pipeline.

Response:

The pipeline, in its current state, is subject to impact damage from stream bed material transport, as well as the potential for added stress and strain resulting from stream bed materials being forced up against the pipeline. Furthermore, the pipeline coating has been lost at the exposure location. This results in the loss of corrosion protection at this location and a reduction in cathodic protection along the length of the remainder of the pipeline. There are risks associated with public and employee safety, system reliability, and on-going compliance with codes, standards, and regulations.

26.3 Please explain the horizontal directional drilling (HDD) solution and how it will resolve the issue of the exposed pipeline

Response:

As discussed in response to Question 26.2, the HDD will lower the pipeline to well below the depth of scour of the very steep and dynamic drainage that the pipeline crosses. Additionally, the HDD solution will remove the pipeline on both the upstream and downstream sides of the stream crossing from the effects of the localized active geotechnical failures. This will eliminate the site risk associated with public and employee safety and system reliability. PNG will be in full compliance with codes, standards, and regulations.

26.4 Please provide a breakdown of the cost/benefit analysis that was conducted for the HDD solution with a comparison of the alternatives that PNG (NE) considered.

Response:

In the 2016-2017 RRA, PNG(NE) provided evidence that the HDD was the selected option. Previously, PNG(NE) had assessed a deep horizontal directional drill (HDD) to lower the line, a replacement via aerial crossing, or a possibly a replacement in-situ with engineered in-stream armouring to prevent exposure reoccurrence. The latter were later discounted for technical reasons.

Since this time, PNG(NE) has been working exclusively on the HDD option, and it has been determined that for geotechnical stability reasons, the other options are not practical or feasible.

In any event, the following tables provide a summary of the comparative analysis of two leading alternatives.

Original Capital Outlay / Maintenance Costs / NPV

	Aerial Crossing	HDD
Original Capital	\$1-\$2 million ⁽¹⁾	\$ 1,200,000
Life Span (years)	30	30
Maintenance	\$ 70,000	\$ -
NPV	n/a	\$ 1,200,000

(1) No engineering cost estimate, once PNG determined unacceptable geotechnical risk and unfeasible

Non-Financial Factors

Criteria	Weight	Score ⁽¹⁾	Weighted Score ⁽²⁾	Score ⁽¹⁾	Weighted Score ⁽²⁾
Natural Hazard Vulnerability	25	5	125	2	50
Safety Risks	15	5	75	1	15
Environmental Risks	20	3	60	2	40
Land Issues	10	3	30	1	10
First Nations Issues	15	1	15	1	15
Operational Impact Risk	5	4	20	3	15
System Capacity Risk	5	0	0	0	0
Aesthetics	5	3	15	0	0
Total Weight	100		340		145

(1) All criteria are scored between 0 and 5, with 0 representing the lowest potential risk and 5 representing the greatest potential risk.

(2) A lower total weighted score represents a lower overall risk assessment.

The feasibility of a successful HDD was determined via a geotechnical borehole program (2016) and follow up report (2017). As discussed through the Information Request process on the 2016-2017 RRA, favorable results from a geotechnical borehole program would solidify PNG(NE)'s preference for the HDD solution given the permanence, lack of residual and non-financial specific risk, and lower annual maintenance costs and effort allocation relative to the aerial crossing alternative.

The aerial crossing alternative presents residual and non-financial business risks far greater than those of the HDD option. PNG(NE)'s greatest concern would be the inability to construct the aerial crossing clear of the active geotechnical failures at the crossing location, potentially resulting in the need to conduct additional remediation work inside of the assumed asset life.

26.4.1 Please discuss why the current proposal was considered to be the best alternative.

Response:

As best case, the initial total installed cost associated with the two feasible options (HDD and aerial crossing) were determined to be cost neutral. The HDD removes the pipeline from the risk associated with the ongoing geotechnical failures in the immediate area. An aerial crossing of practical and reasonable length would not. Furthermore, an aerial crossing results in much added risk associated with third party damage, vandalism, and liability, and added cost associated with routine maintenance of external coatings and access prevention and would ultimately be a solution of shorter overall design life. Given the relative neutral nature of the original capital outlay for the two considered options, and the added business risk for an aerial crossing solution, a determination was made to proceed with an HDD. Please also see the response to Question 26.4.

26.5 Please provide the project schedule, including the commencement date, and how it is currently tracking against the schedule. Specifically, please address if the project is on track to be completed in 2018.

Response:

The project is on track for completion in 2018. The HDD detailed design was completed in 2017 as was all pipeline system data reconciliation work to fulfill the technical and geospatial detail requirements of the OGC's Application Management System (AMS). The construction contract has been previously awarded and the planned construction window is August 2018. Site work is planned for two week duration.

26.6 Please provide a breakdown of the total project costs by year, including those project costs that have already been incurred in prior test years.

Response:

Please see the table that follows.

Activity				
Eng/Permit/Plan	2016	2017	2018	
Labour	\$ 10,300	\$ 800	\$ 1,000	
Materials	\$ 4,500	\$ 19,000	n/a	
Contractor	\$ 180,000	\$ 65,000	\$ 5,000	
Construction				
Labour			\$ 20,000	
Materials			n/a	
Contractor			\$ 874,000	Total
Totals	\$ 194,800	\$ 84,800	\$ 900,000	\$ 1,179,600

27.0 Reference: RATE BASE
Exhibit B-1-1, Section 2.13.2, pp. 58–59; Amended Schedule, Tab 2, p. 32
Post-retirement benefit plans

The following is an extract from Tab 2, page 32 of the Amended Application:

Line No.	Description	Test Year 2019	Test Year 2018	Decision 2017	Actual 2017	Actual 2016	Actual 2015	Actual 2014	Actual 2013
1	Cash contributions to RCA/tax account	\$4	\$17	\$53	\$60	\$54	\$54	\$44	\$46
2	Cash cost of retiree benefits	1	1	2	1	1	1	2	2
3	Expense (recovered in rates)	(4)	(4)	(42)	(48)	(42)	(42)	(34)	(43)
4	Amortization of regulatory assets (recovered in rates)		(14)	(14)	(14)	(14)	(14)	(14)	(14)
5	Change in unfunded status of NPPRB plans	0			0	(1)		(1)	(9)
6	Current income taxes								2
7	Related future income taxes	0				0		0	(2)
8									

On page 59, PNG(NE) states:

PNG(NE) expects to make cash contributions of \$17,000 to its RCA in Test Year 2018, down from \$53,000 in Decision 2017. However, the cash contributions are expected to increase to \$51,000 in Test Year 2019 as Test Year 2018 represents the sixth and final year of amortization of regulatory assets associated with historical NPPRB expense.

27.1 Please reconcile the statement in the above preamble that “cash contributions are expected to increase to \$51,000 in Test Year 2019” with line 1 in the above schedule.

Response:

PNG(NE) apologizes for the confusion caused by the narrative conflicting with the referenced schedule; the narrative did not get fully updated from the original revenue requirement application. The narrative should have read as follows:

“As shown in the referenced schedule, PNG(NE) expects to make cash contributions of \$17,000 to its RCA in Test Year 2018, down from \$53,000 in Decision 2017. This is due to the higher discount rate that prevailed at the end of 2017 and is used for determining non-pension post-retirement benefits expense in 2018 relative to that used for the 2017 expense. The cash contributions are expected to drop further to \$4,000 in Test Year 2019 as Test Year 2018 represents the sixth and final year of amortization of regulatory assets associated with historical NPPRB expense.”

PNG(NE) notes that the schedule reference in the narrative is correct.

28.0 Reference: RATE BASE
Exhibit B-1-1, Section 2.13.4, pp. 59–60
Working capital

On page 59 of the Amended Application, PNG(NE) provides the following table:

Table 29: Cash Working Capital

	Test Year 2019	2019 to 2018 Change		Test Year 2018	2018 to Decision 2017 Change		Decision 2017	Actual 2017	Actual 2016	Actual 2015	Actual 2014	Actual 2013
		\$	%		\$	%						
Revenue lag days	56.0	0.1	0.0	55.9	(1.0)	(0.0)	56.9	57.1	57.7	55.9	52.9	53.3
Expense lead days	25.2	0.4	0.0	24.8	(1.6)	(0.1)	26.4	25.9	22.3	25.5	29.1	27.1
Net lag days	30.8	(0.3)	(0.0)	31.1	0.6	0.0	30.5	31.2	35.4	30.4	23.8	26.2
(\$000's)												
Annual expenses	\$ 1,657	\$ 100	6.4%	\$ 1,556	\$ (108)	(6.5)%	\$ 1,664	\$ 1,495	\$ 1,404	\$ 1,565	\$ 2,104	\$ 1,716
Operating working capital requirement	140	\$ 7	5.3%	133	\$ (7)	(4.8)%	139	128	136	130	137	123
Adjustments:												
Budget Billing Plan	(31)	(4)	13.2%	(28)	0	(1.3)%	(28)	(4)	(6)	(63)	(17)	(14)
Allowance for Doubtful Accounts	(5)	(2)	77.4%	(3)	2	(40.2)%	(5)	7	(28)	(5)	(5)	-
Carbon Tax	0	0	22.9%	0	0	529.0%	0	-	0	0	2	3
GST	2	(4)	(64.5)%	7	2	49.1%	5	3	2	2	4	3
PST & ICEF Levy	0	0	n/a	0	0	n/a	-	-	0	0	1	-
HST	-	-	n/a	-	-	n/a	-	-	-	-	-	4
Cash working capital	\$ 106	\$ (3)	(2.8)%	\$ 109	\$ (2)	(1.7)%	\$ 111	\$ 134	\$ 104	\$ 64	\$ 122	\$ 119

Source: Tab Schedules, Tab 2, Page 16 and 23

Further, on page 60, PNG(NE) states:

The cash working capital provision increases in Test Year 2018, relative to Decision 2017, before declining in Test Year 2019. In 2018, long payment lag expense items, such as gas purchases, have declined relative to other expenses reducing the average days for payment of expenses. The GST driven working capital requirement also increases in Test Year 2018 due to the large capital program in Tumbler Ridge. [Emphasis added]

28.1 Please confirm, or explain otherwise, that the cash working capital provision decreases in Test Year 2018, relative to Decision 2017.

Response:

PNG(NE) confirms that the cash working capital provision decreases in Test Year 2018, relative to Decision 2017. This section of the Amended Application narrative did not get updated from the Original Application narrative.

28.1.1 If confirmed, please explain why the cash working capital provision decreases in Test Year 2018, relative to Decision 2017.

Response:

The cash working capital provision for the Tumbler Ridge division of PNG(NE) decreases mainly as a result of materially lower gas purchase costs which have a longer than average payment lag, as well as reduced industrial gas transportation revenues which have a long receipt lag. These factors more than offset other impacts which increase cash working capital requirements in 2018 relative to Decision 2017, such as higher working capital requirements for GST and a reduction in the credit for the allowance for doubtful account.

28.2 Please explain why the cash working capital provision decreases in Test Year 2018, relative to Actual 2017.

Response:

The substantial majority of the decreased provision for working capital in Test Year 2018 relative to Actual 2017 is due to the working capital impact of PNG(NE)'s budget billing plan. For Actual 2017, PNG(NE)'s budget billing plan was a net consumer of working capital whereas historically it has been a credit to working capital. PNG(NE)'s provision for the budget billing plan in 2018 is based on the plan returning to normal historical levels of credit to the working capital requirements of PNG(NE).

J. CAPITAL STRUCTURE AND RETURN ON CAPITAL

**29.0 Reference: CAPITAL STRUCTURE AND RETURN ON CAPITAL
Exhibit B-1-1, p. 72 and 76
Credit rating assessment**

On page 76 of the Amended Application for Tumbler Ridge, PNG(NE) states:

For the purposes of this Amended Application for both Test Year 2018 and Test Year 2019, PNG(NE) has used the Decision 2017 approved rate of return on common equity (ROE) of 9.50% and common equity thickness of 46.50% following the issuance of the Stage 2 GCOC Decision in 2014 and the Decision on the Fortis BC Energy Inc.'s (the Benchmark Utility) Application for its Common Equity Component and Return on Equity for 2016.

- 29.1 In Table 32, PNG(NE) for Tumbler Ridge shows the actual rate of return on equity from 2013 to 2017. The actual rate of return on equity ranged from 4.10% to 27.31%. Please briefly discuss what events led to the fluctuations in actual ROEs in recent years.

Response:

Fluctuations in actual ROEs in recent years primarily reflect the following:

- Actual deliveries to customers being higher or lower than forecast
- Actual operating, maintenance and general and administrative costs being higher or lower than forecast
- Actual capital additions being higher or lower than forecast
- Actual common equity component being higher or lower than forecast

Specifically in 2013, the actual achieved ROE of 27.31% was higher than the allowed ROE mainly due to a combination of higher than forecast deliveries to one large commercial customer and lower than anticipated operating costs mainly due to a change in the chemical product used at the gas processing plant. This was addressed in the 2014 Revenue Requirement Application.

As noted in the current rate Application, for 2016, the actual achieved ROE of 4.16% was lower than the allowed ROE mainly due to higher than forecast operating and maintenance expenses as there was a staff turnover which resulted in an increase in contractor costs as well as unplanned maintenance repairs to the shell and tube heating exchanger.

**30.0 Reference: BUSINESS RISK ASSESSMENT
Exhibit B-1-1, Appendix E
Business Risk Assessment – 2018 Update**

In Appendix E of the Amended Application, in compliance with Order G-77-13, PNG-West and PNG(NE) (collectively, PNG) filed a Business Risk Assessment update for 2018 based on a consolidated entity level for. PNG's assessment of business risks are in the following areas: Aboriginal Rights, competitive position of natural gas, customer growth, market demand and throughput, regulatory risk, supply risk, and other risks.

On page 6 of Appendix E, PNG concludes that it does not propose any changes to its cost of capital to compensate for the increasing risk as the change has not been overly substantive at this time.

30.1 With respect to Aboriginal Rights, PNG submits that there are numerous requirements for dealing with various aspects of Aboriginal Rights which require a much more resource intensive effort, and cites recent court cases. If applicable, please discuss how these court cases will affect PNG(NE)'s business risk related to Aboriginal Rights, and in terms of more investments in resources and efforts, specifically for the Tumbler Ridge division.

Response:

PNG made reference to recent court cases regarding aboriginal title only in general terms, however, PNG notes that the overarching most recent ruling by the Supreme Court of Canada with respect to aboriginal rights and title is the *Tsilhqot'in Nation v. British Columbia* case (generally known as the *Roger William* case). The ruling essentially upheld the First Nations claim to aboriginal title and rights over a portion of its traditional territory. This case is notable as it is the first time that the Supreme Court of Canada has confirmed aboriginal rights and title and the governments' ability to determine and regulate the use of the lands subject to asserted and proven aboriginal title. While long term implications remain unclear until further claims are tested, it is expected that in the short term, there will be increased focus on the Provincial and Federal Governments' duty to consult with First Nations.

The Roger William case has created a heightened awareness of PNG's stakeholders and especially our First Nations partners as PNG's distribution pipelines traverse on First Nations land. From that perspective, PNG has made a concerted effort to engage more frequently with the First Nations groups in PNG's service areas to create greater awareness of our regular operations, in particular when there is planned construction or notifications about outages and emergencies.

PNG is committed to ensuring First Nations participation in environmental oversight on our job sites, when necessary, and consultation to avoid encroaching on areas of significance to First Nations. PNG submits that increased stakeholder engagement is positive to its operations but will result in increased costs as regional staff engage more frequently and/or use aboriginal consultants to observe or participate in oversight activities. There may also be increased risk to PNG due to uncertainty stemming from the lack of definition of what the "duty to consult" entails which may result in uncertainty on project timelines and potentially jeopardize the viability of PNG's projects.

30.2 With respect to the competitive position of natural gas, PNG states: “[c]ommodity prices continue to be lower than 2016 and 2012, and market prices have shown less volatility in recent years. Please provide the PNG(NE) Tumbler Ridge commodity rates from 2011 to present.

Response:

Tumbler Ridge commodity rates for the residential class for the period 2011 to present are shown in table below.

Tumbler Ridge	
Effective Date	Residential Commodity Rate \$/GJ
Jan-11	1.841
Apr-11	1.262
Jul-11	1.605
Oct-11	1.605
Jan-12	2.631
Apr-12	2.631
Jul-12	1.940
Oct-12	1.940
Jan-13	2.596
Apr-13	2.596
Jul-13	3.399
Oct-13	3.399
Jan-14	4.256
Apr-14	6.550
Jul-14	6.550
Oct-14	5.636
Jan-15	3.428
Apr-15	3.428
Jul-15	3.428
Oct-15	3.428
Jan-16	2.533
Apr-16	2.533
Jul-16	2.533
Oct-16	2.533
Jan-17	3.263
Apr-17	3.263
Jul-17	3.559
Oct-17	3.056
Jan-18	2.048
Apr-18	2.048

30.3 With respect to customer growth, PNG(NE) submits that the Tumbler Ridge service area had experienced small growth of less than 1% over the 2003-2012 period but a slight decrease in customer base from 2013 to 2017. Please provide supporting customer growth data for the last 15 years and by rate class if possible.

Response:

Please see the information provided in the table that follows.

Customer Growth Rates by Class															
	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003
Residential	(0.2%)	0.4%	(1.0%)	(0.2%)	3.8%	1.6%	0.7%	0.6%	0.4%	(1.7%)	(0.9%)	4.0%	0.0%	1.0%	(1.0%)
Small Commercial	1.0%	(3.8%)	1.0%	1.9%	0.0%	1.0%	6.3%	21.5%	3.9%	10.1%	3.0%	6.3%	1.6%	(12.7%)	4.4%
Large Commercial	0.0%	(33.3%)	0.0%	0.0%	0.0%	0.0%	0.0%	(25.0%)	33.3%	0.0%	50.0%	0.0%	(50.0%)	0.0%	100.0%
Industrial Transport	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	(0.1%)	(0.1%)	(0.9%)	0.0%	3.5%	1.5%	1.2%	2.0%	0.7%	(1.0%)	(0.6%)	4.1%	(0.1%)	0.2%	(0.5%)

**31.0 Reference: CAPITAL STRUCTURE AND RETURN ON CAPITAL
Exhibit B-1-1, Amended Schedules, Tab 5, pp. 2 and 3
Financing costs**

Tab 5, page 2 of the Amended Application shows the following:

	Test Year 2019	Test Year 2018	Decision 2017	Actual 2017	Actual 2016	Actual 2015	Actual 2014	Actual 2013
1 Customer Security Deposits								
2 Average annual balance	\$43	\$43	\$43	\$49	\$42	\$41	\$56	\$65
3 Interest rate applicable to deposits	2.25%	1.73%	1.04%	1.01%	0.70%	1.08%	1.06%	1.04%
4 Annual Interest Expense	\$1	\$1	\$0	\$0	\$0	\$0	\$1	\$1
5								
6 Operating Line / Other								
7 Average annual draw	\$199	\$160	\$151	(\$192)	(\$19)	(\$0)	\$113	\$162
8 Interest rate	4.45%	3.93%	3.54%	3.39%	2.22%	3.54%	3.68%	3.74%
9 Annual Interest Expense	\$9	\$6	\$5	(\$6)	(\$0)	(\$0)	\$4	\$6
10 Other expenses*	\$2	\$2	\$2	\$2	\$2	\$1	\$2	\$3
11								
12 Average short term interest rate	4.91%	4.31%	3.93%	2.66%	9.53%	2.05%	4.11%	4.26%

* service fees, standby fees, renewal expenses

The following is an extract from Tab 5, page 3 of the Amended Application:

Line No.	Description	Test Year 2019	Test Year 2018	Decision 2017	Actual 2017	Actual 2016	Actual 2015	Actual 2014	Actual 2013
23	5-year Revolving Loan								
24	Liability beginning of year	\$775	\$1,250	\$1,300	\$1,250	\$1,000	\$1,060	\$1,100	\$0
25	Issue during year	325		200		250	(60)	(40)	1,100
26	Sinking fund payments		(475)						
27	Average Capitalization	944	694	1,400	1,250	1,000	1,022	1,078	560
28	Annual Interest Expense	21	23	38	37	29	34	35	18
29	Stand-by Fees	1	1			1	1	2	1
30	Issue costs beginning of year	3	1	2	2	3	4	5	6
31	Amortization of Issue Costs		1	1	1	1	1	1	1
32									
33	Effective Cost Rate	4.23%	3.63%	3.03%	3.10%	3.11%	3.49%	3.46%	3.68%

31.1 Please confirm, or explain otherwise, that PNG(NE)'s divisions share the same operating line and 5-year revolving loan.

Response:

PNG(NE) confirms that the PNG(NE) divisions share the same operating line and 5-year revolving loan.

- 31.1.1 If confirmed, please explain why the interest rates on the operating line and the effective cost rates on the 5-year revolving loan are not the same as the rates in the PNG(NE) FSJ/DC division (PNG(NE) FSJ/DC – Amended Schedules, Tab 5, pages 2 and 3).

Response:

PNG(NE) believes that the referenced schedules show that the interest rate on the operating line, 3.93% in 2018 and 4.45% in 2019, is the same for all PNG(NE) divisions. The average short-term interest rate for each division may vary due to the mix of operating line debt and customer security deposits, as well as the allocation of fees and expense on the operating line. The allocation of fees and expenses on the operating line varies due to the cost drivers used for the allocations, including expected average and peak demand on the line as well as estimated transactional volumes.

The effective interest rates on the 5-year revolving term loan vary between PNG(NE) divisions solely due to the allocation of stand-by fees. PNG(NE) has allocated 4% of the \$24.75 million revolving term loan to Tumbler Ridge and 96% to the FSJ/DC division based on expected requirements over the term of the loan. With the FSJ/DC division growing more rapidly than the Tumbler Ridge division, relatively more of the capacity of the revolving term loan has been reserved for future FSJ/DC requirements resulting in FSJ/DC being allocated a higher proportion of stand-by fees which give rise to the higher effective interest rates in that division relative to the Tumbler Ridge division.

- 31.2 Please explain why the interest rates on customer deposits are not the same as the rates in PNG(NE) FSJ/DC for Decision 2017 and Actual 2017 (PNG(NE) FSJ/DC – Amended Schedules, Tab 5, page 2).

Response:

PNG(NE) agrees that interest rates in customer deposits for Decision 2017 would be expected to be the same given that PNG(NE)'s tariff requires that the interest rate be determined in the same manner for both divisions. Upon investigation, PNG(NE) found an error in its Decision 2017 model for FSJ/DC where the interest rate was incorrectly hard coded at a rate below the estimated rate that was expected to apply to customer deposits.

With respect to the Actual 2017 customer deposit interest rates, which differ by one basis point between the divisions, the variance arises due to the operation of the interest rate deferral account. The actual interest rate in each year is calculated by adding/subtracting the credit/debit deferral additions to the actual interest paid to customers and dividing the result by the average actual balance of customer security deposits. PNG(NE) notes that its interest rate deferral account applies only to the interest rate variance between actual and approved and not to the differences between the actual and approved amounts of customer deposits. As a result of actual customer deposits being greater than forecast in Tumbler Ridge, while the opposite was true in FSJ/DC, the operation of the interest rate deferral account resulted in the calculated actual interest rate being very slightly lower in Tumbler Ridge relative to FSJ/DC.

K. CAPITAL EXPENDITURE REPORTING

**32.0 Reference: OTHER MATTERS
Exhibit B-1-1, Section 3.1.1, p. 69, 71
Capital Expenditures Variance Analysis-Transmission pipeline repair**

On page 71 of the Amended Application, PNG(NE) shows the 2017 capital expenditure excluding overhead for Transmission Pipe repair as \$84,562.

Further on page 71, PNG(NE) states:

In terms of delays in spend for 2017 on this project, a significant change to the BC Oil and Gas Commission (OGC) permit application process resulted in an unforeseen delay in the completion of permitting activities. Documentation and procedures necessary to fulfil the OGC application requirements are now complete. The remaining cost to complete forecast for Test Year 2018 of \$900,000 includes obtaining required permitting and physical construction.

32.1 Please provide details of the change in the permitting application process that resulted in delays to this project.

Response:

The BC Oil and Gas Commission (BC OGC) recently transitioned their application process to an electronic Application Management System (AMS). This system requires all pipeline system information to be technically complete and geospatially correct and true in the BC OGC pipeline and facility database (Kermit) prior to submission of permit amendment applications. Historically, however, legacy pipeline and facility data for PNG assets was uploaded into Kermit incompletely or not at all, resulting in the need for a significant data reconciliation exercise prior to an amendment application. The time and effort required to complete this was compounded by the fact that associated PNG assets were found to be lacking in data and records completeness and the assets were not geospatially referenced. As a result, a lengthy survey and data reconciliation process was required just to get to the eventual first step in the true application process.

In Table 33 on page 69 of the Amended Application, PNG(NE) shows that the 2016 approved expenditures excluding overhead was \$534,455 of which only \$286,269 was spent.

In Table 35 on page 71 of the Amended Application, PNG(NE) shows that the 2017 approved expenditure excluding overhead was \$491,001 of which \$321,705 was spent.

32.2 Please discuss if PNG has considered the capital variances in 2016 and 2017 and applied the necessary adjustment when budgeting for the 2018/2019 capital projects.

Response:

While the projects for and programs associated with the 2018/2019 capital expenditure programs have been justified on their own merit, PNG(NE) has considered the level of activity, or lack thereof, in the area, as well as timing and cost of planned projects in the development of the 2018 /2019 forecasts.

**33.0 Reference: OTHER MATTERS
Exhibit B-1-1, Section 3.1.1, p. 77
Capital Expenditures Variance Analysis**

On page 77 of the Amended Application, PNG(NE) states that the underground fitting removal expenditures were \$108,000 greater than approved in 2017 for the following reason:

This expenditure relates to electrofusion tee replacement activity that was not planned for the year. In conjunction with the reassessment of this work for Fort St. John/Dawson Creek as high risk and necessary activity to ensure system safety and reliability, replacements in Tumbler Ridge were also carried out in 2017. PNG(NE) notes that the cost of this initiative were offset in part by a CIAC of \$40,000 from the contractor who undertook the original installation.

- 33.1 Please discuss the assessed risks associated with the electrofusion tee replacement for the TR Division.

Response:

Risks to system safety and reliability were caused by the presence of electrofusion tees installed. To ensure public safety and system reliability, they were replaced.

- 33.2 Please elaborate on why a CIAC was associated with this expenditure and how the amount of \$40,000 was determined.

Response:

PNG(NE) entered into discussions with its contractor that originally installed the electrofusion tees, and settled on an amount where PNG(NE) and the contractor effectively shared the costs of addressing the electrofusion tees installations. In the end, PNG(NE)'s contractor reimbursed PNG(NE) an amount of \$325,000, of which \$40,000 was allocated to TR, and completed the remaining replacements for an agreed upon price.

L. COST OF SERVICE VARIANCE REPORTING

**34.0 Reference: COST OF SERVICE VARIANCE REPORTING
Exhibit B-1-1, Section 3.2.2.3, p. 84
Account 722 – Special Services – Audit/Legal**

On page 84 of the Amended Application, PNG(NE) states:

The actual costs for 2017 included in this account are \$17,000 or 244.1% greater than those approved under Decision 2017. This is primarily due to costs incurred for a technical plant assessment study undertaken in September 2017, to identify, at a high level, requirements for upgrades necessary to maintain the plant's continued safe and reliable operation.

34.1 Please discuss, at a high level, the findings of the assessment study.

Response:

In September 2017, PNG(NE) engaged process engineers from AltaGas to complete a technical assessment of PNG(NE)'s Tumbler Ridge gas processing facility. The purpose of the assessment was to identify what areas of cost or risk exist to continue operating the facility over the next 10 years.

The assessment team determined that the facility does not appear to require significant capital to continue operation for the next decade. Risks related to internal corrosion which can be expected in sour gas service appear to be low. The rate of wall losses in vessels does not generally appear to be a concern over at least the next 10 years. Overall, the facility has been kept in good order with few opportunities for improvement.

34.2 Please discuss the impact the findings of the assessment study are expected to have on operating, maintenance, administrative and general, and capital expenditures in Test Years 2018 and 2019 and beyond.

Response:

PNG(NE) has replaced a Gas Plant Operator with a qualified operator with trade (industrial mechanic) experience that allows for improved maintenance and plant operation. There are no major capital or operating expenses expected as a result of the report findings. Any changes to process as a result of the assessment study were minor in nature and the plant is currently running very reliably.