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Verlon G. Otto
Director, Regulatory Affairs

Via E-file

June 3, 2020

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

File No.: 4.2.7(2020)

Attention: Marija Tresoglavic
Acting Commission Secretary

Dear Ms. Tresoglavic:

Re: Pacific Northern Gas (N.E.) Ltd.
Fort St. John/Dawson Creek and Tumbler Ridge Divisions
2020-2021 Revenue Requirements Application
Response to BCUC Information Request No. 2

Accompanying, please find the response of Pacific Northern Gas (N.E.) Ltd. (PNG(NE)) to the referenced information request.

At this time, as an evidentiary update, PNG(NE) would also like to advise the British Columbia Utilities Commission (BCUC) of a budgetary error identified that did not pertain to any of the specific questions included in the information request.

On page 61 of the TR Amended Application, PNG(NE) noted that Test Year 2020 processing plant improvements included the purchase and install of a dehydration burner at a cost of $174,000. This matter was addressed in BCUC TR IR 7.1. It has subsequently come to PNG(NE)'s attention that the capital cost estimate included a duplicate amount of $60,000 for materials. The correct capital cost estimate for the dehydration burner is $114,000. PNG(NE) apologizes for any inconvenience arising from this error and will reflect the correct cost estimate in the final regulatory schedules.

Please direct any questions regarding the application to my attention.

Yours truly,

Verlon G. Otto

Enclosure

Pacific Northern Gas (N.E.) Ltd.
Fort St. John / Dawson Creek Division and Tumbler Ridge Division
2020-2021 Revenue Requirements Application

INFORMATION REQUEST NO. 2
TO PACIFIC NORTHERN GAS (N.E.) LTD.

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A. GENERAL

65.0 REFERENCE: GENERAL
Exhibit B-5, British Columbia Old Age Pensioners' Organization et al. (BCOAPO) IR Series 1.0
COIVD-19 Pandemic

In its responses to BCOAPO information request (IR) series 1.0, Pacific Northern Gas (N.E.) Ltd. (PNG(NE)) provided information regarding the impact of the COVID-19 pandemic on PNG(NE)'s forecast cost of service and operations. PNG(NE) also noted that "… the BCUC approved PNG(NE)'s request, on an interim basis, for the creation of a COVID-19 deferral account to capture unrecovered revenues and unplanned costs arising from the COVID-19 pandemic."

65.1 Please provide an update on the impact to-date and the expected future impact of the COVID-19 pandemic on PNG(NE) and its operations.

Response:

As of June 1, 2020, PNG(NE) has observed a total of 60 customers who have indicated an inability to pay their bill as a result of COVID-19. The total value of these customers' account balances is $76,027. Of the 60 customers, 18 customers have applied for the COVID-19 Bill Deferral program. The table below provides a breakdown by rate class of accounts who have indicated an inability to pay their bills as a result of the COVID-19 pandemic.

Total Pay Arrangements Related to COVID-19

Division	Residential			Small Commercial			Large Commercial			Total
	Count	Past Due	Account Balance	Count	Past Due	Account Balance	Count	Past Due	Account Balance	
FSJ	43	$ 10,718	$ 15,729	10	$ 14,540	$ 18,649		$ -	$ -	$ 34,379
DC	14	$ 4,996	$ 7,132	5	$ 3,064	$ 3,686	1	$ 28,703	$ 29,000	$ 39,817
TR	3	$ 800	$ 1,200	2	$ 450	$ 632		$ -	$ -	$ -
Total	60	$ 16,515	$ 24,060	17	$ 18,054	$ 22,967	1	$ 28,703	$ 29,000	$ 76,027

COVID-19 - Deferral Program

Division	Residential			Small Commercial			Total
	Count	Past Due	Account Balance	Count	Past Due	Account Balance	
FSJ	14	$ 3,415	$ 4,555	4	$ 9,372	$ 10,709	$ 13,928
DC	3	$ 423	$ 498	4	$ 2,592	$ 3,967	$ 4,465
TR	1	$ 385	$ 385	2	$ 450	$ 632	$ -
Total	18	$ 4,223	$ 5,438	10	$ 12,415	$ 15,308	$ 20,747

Further, as of June 1, 2020, PNG(NE) has identified $5,524 of incremental costs related to the COVID-19 pandemic.

PNG(NE) believes it is still premature to predict the future impact from COVID-19 on PNG(NE) and its operations. There are several unknowns that will ultimately influence the future impacts of the COVID-19 pandemic. These could include potential changes to work practices to limit physical interactions, how PNG(NE)'s customers' businesses are able to continue operations under any new rules implemented in response to COVID-19, bad-debt levels and numerous other factors.

65.1.1 Please provide an update to address whether the COVID-19 pandemic is expected to have an impact on the timing of capital and IT projects, the timing of new staff position start dates and/or forecast costs during the test period.

Response:

At this time, PNG(NE) does not anticipate the COVID-19 pandemic having a material impact on the timing of any IT projects, capital projects or new staff position start dates. PNG(NE) is also not expecting any material impacts to the spend on capital programs.

65.1.2 Please provide an update on the expected impact of the COVID-19 pandemic on forecast demand for all customer classes during the test period.

Response:

PNG(NE) is closely monitoring how the measures being taken with respect to COVID-19 will impact customer demand. With the warmer spring weather, PNG(NE)'s forecast takes into consideration lower demand given that many customers primarily use natural gas for space and hot water heating. On an aggregate basis, for the month of April 2020, PNG(NE) observed a 5.2 per cent increase in demand relative to the April 2020 forecast on a consolidated basis for Fort St. John and Dawson Creek and 27.8 per cent increase for Tumbler Ridge which is primarily attributable to one industrial customer using significantly more gas than forecast who is subject to the Industrial Customers Deliveries Deferral Account (ICDDA). On a customer class basis, PNG(NE) makes the following observations:

(i) Residential: With the warmer spring weather, PNG(NE)'s forecast takes into consideration lower demand given that residential customers primarily use natural gas for space and hot water heating. As such, subject to changes in weather being warmer or colder than normal, PNG(NE) expects minimal impacts to residential consumption over the next few months. For example, in April 2020, residential demand was 2.8 per cent higher than the April 2020 forecast on a consolidated basis for Fort St. John and Dawson Creek mainly due to colder weather and 5.1 per cent lower for Tumbler Ridge despite colder weather and likely arising from unbilled estimates.

(ii) Institutional/Commercial: PNG(NE) is closely monitoring how the measures being taken with respect to COVID-19 will impact institutional and other commercial gas demand from schools, hospitals, and other businesses. With the warmer spring weather, PNG(NE)'s forecast takes into consideration lower demand given that the noted institutional customers and many other commercial businesses primarily use natural gas for space and hot water heating. In April 2020, PNG(NE) observed a 8.7 per cent increase in small commercial demand relative to the April 2020 forecast on a consolidated basis for Fort St. John and Dawson Creek mainly due to colder weather and a 13.3 per cent decrease for Tumbler Ridge. In addition, PNG(NE) observed a 1.8 per cent increase in large commercial demand relative to the April 2020 forecast on a consolidated basis for Fort St. John and Dawson Creek and a 18.9 per cent increase for Tumbler Ridge which is largely attributable to increased consumption by one customer.

(iii) Industrial: PNG(NE) has reached out to its industrial customers to better understand the impacts of COVID-19 on their forecast natural gas consumption. To date, these customers have indicated that even in a scenario whereby COVID-19 related restrictions are prolonged for an additional three to six months, they do not anticipate any substantial impact to their demand. For April 2020, PNG(NE) observed an increase of 5.9 percent in industrial deliveries relative to the April 2020 forecast for Fort St. John and Dawson Creek and a 35.1 per cent increase for Tumbler Ridge which is attributable to significantly greater volumes taken by one customer who is subject to the ICDDA.

PNG(NE) notes that the above discussion only represents the impact on a single month's consumption and factors not related to COVID-19, such as colder than normal April 2020 weather, is primarily responsible for variances in demand. As April 2020 was the first full month in which many of the required government directives such as physical distancing and the closing of certain types of businesses were in place, the impacts to demand may change throughout and following the pandemic as customers adjust their day to-day habits and business requirements.

65.2 Please confirm, or otherwise explain, that the COVID-19 deferral account will capture incremental costs associated with ongoing operations that are the direct result of the COVID-19 pandemic but it will not record any reductions in forecast costs that result from the COVID-19 pandemic.

Response:

The COVID-19 Deferral Account will capture incremental costs associated with the ongoing operations that are a direct result of the COVID-19 pandemic. With respect to potential cost savings, PNG(NE) indicated during the streamline review process video proceeding for the COVID-19 deferral account application that if there were savings as a result of costs not being incurred due to COVID-19 such as travel costs, PNG(NE) would put those costs against the deferral account and only seek to recover the net amount (if any). PNG(NE) would look at cost savings at the end of the year and assess if they were related to COVID-19.

65.3 Considering the responses provided above, please identify and discuss amendments (if any) to the Application that are necessary due to the impacts of the COVID-19 pandemic.

Response:

PNG(NE) does not believe that any significant revision to the Amended Application is warranted at this time as a result of the impacts of COVID-19.

PNG(NE) does not yet have evidence of any substantial impact to gas consumption by its customers as a result of COVID-19. PNG(NE) also notes that mechanisms are in place to capture use per account variances related to residential and small commercial customers and load variances for some industrial customers.

PNG(NE) believes it is premature to predict the outcomes from COVID-19 on PNG(NE) and its operating costs. PNG(NE) further notes that on April 17, 2020 the BCUC granted interim approval through Order G-89-20 of PNG(NE)'s application for the creation of the COVID-19 deferral account to capture unrecovered revenues and unplanned costs resulting from the COVID-19 pandemic.

B. DEMAND FORECAST, REVENUE AND MARGIN

66.0 Reference: DEMAND FORECAST, REVENUE AND MARGIN
Exhibit B-2 (Amended Application), Fort St. John/Dawson Creek (FSJ/DC) Division Section 2.1, pp. 25-26, Exhibit B-3, IR Series 4.0
Other Customer Classes

In response to BCUC IR 4.3 in Exhibit B-3, PNG(NE) stated:

> PNG(NE) submits that Table 11 in the Amended Application should reflect the test year deliveries for this customer based on their contractual demand of 980,000 GJ rather than forecast physical deliveries of 600,000 GJ to alleviate any confusion as the margin shown in Table 11 is also based on their contractual demand.

66.1 Please provide the updated and correct Table 11 as highlighted in the preamble above.

Response:

Please see the table that follows.

Customer Classification	Test Year 2021 Deliveries	2021 to 2020 Change in Forecast Deliveries	2021 to 2020 Change in Forecast Margin	Test Year 2020 Deliveries	2020 to 2019 Change in Forecast Deliveries	2020 to 2019 Change in Forecast Margin	Decision 2019 Deliveries	Actual 2019 Deliveries	Actual 2018 Deliveries	Actual 2017 Deliveries	Actual 2016 Deliveries	Actual 2015 Deliveries
	GJ	GJ	$	GJ	GJ	$	GJ	GJ	GJ	GJ	GJ	GJ
Residential	1,820,987	17,432	92,900	1,803,555	6,954	38,500	1,796,601	1,797,218	1,839,315	1,782,446	1,484,039	1,616,961
Commercial												
Small Commercial Firm (Rate 2)	1,304,085	(13,947)	(52,200)	1,318,032	(73,266)	(233,100)	1,391,298	1,320,084	1,380,995	1,334,735	1,139,705	1,183,845
Large Commercial Firm (Rate 3)	412,500	-	100	412,500	56,600	147,000	355,900	424,758	363,258	321,130	307,510	304,467
Commercial Transport (Rate 23)	60,100	-	-	60,100	(13,250)	(42,100)	73,350	70,995	69,300	75,806	76,229	62,935
Total Commercial	1,776,685	(13,947)	(52,100)	1,790,632	(29,916)	(128,200)	1,820,548	1,815,837	1,813,553	1,731,671	1,523,444	1,551,247
Small Industrial Sales (Rate 4)	308,000	-	100	308,000	(204,950)	(397,100)	512,950	399,491	480,608	470,994	401,939	387,137
Industrial Transport												
Rate 5	-	-	-	-	-	-	-	-	-	-	-	216,413
Rate 6	134,420	-	-	134,420	(102,580)	(196,800)	237,000	146,035	184,487	255,341	208,618	346,385
Rate 7	980,025	(2,685)	(600)	982,710	2,685	600	980,025	386,414	459,919	101,633	404	-
Rate 9		-	-		-	-	-	-	-	-	-	-
Rate 10	157,000	-	-	157,000	(3,000)	(2,400)	160,000	169,121	155,656	170,846	204,264	190,965
Rate 11	-	-	-		-	-	-	-	-	-	11,193	50,122
Total Industrial Transport	1,271,445	(2,685)	(600)	1,274,130	(102,895)	(198,600)	1,377,025	701,570	800,062	527,820	424,479	803,885
Total	5,177,117	800	40,300	5,176,317	(330,807)	(685,400)	5,507,124	4,714,116	4,933,538	4,512,931	3,833,901	4,359,230

On page 26 of the FSJ/DC Amended Application PNG submits: "The bulk of this decrease is attributable to fuel gas deliveries to a liquefied natural gas (LNG) plant in Dawson Creek being less than the contracted demand of 980,000 GJ per year. There is no margin effect as this customer is provided service under a minimum take-or-pay contract."

In its response to BCUC IR 4.2 in Exhibit B-3, PNG submitted that "[t]he customer operating the LNG facility in Dawson Creek is Campus Energy Partners LP. The two gas productions facilities in Fort St. John that declared bankruptcy were owned by Ranch Energy Corporation and had transportation service agreements with PNG(NE)."

66.2 Please describe any credit requirements in the agreement between PNG(NE) and Campus Energy Partners LP and the current status of these requirements.

Response:

The original Firm Transportation Service Agreement dated June 10, 2015 between PNG(NE) and AltaGas Ltd. (approved by the BCUC under Order G-154-15) was subsequently assigned to Campus Energy Partners LP (Campus) effective February 1, 2019. Under this agreement PNG(NE) may require the Shipper (Campus) to post credit if the Shipper is not deemed "Creditworthy", meaning that it does not have a "Minimum Acceptable Rating" for its unenhanced long term senior unsecured debt. In addition, PNG(NE), at its sole discretion, may determine whether the Shipper would meet the relevant ratings if such rating agencies were to publish such a rating for Campus.

Campus is currently not rated. However, at this time, based on an assessment of Campus' financial statements provided to PNG(NE) on a confidential basis, PNG(NE) deems Campus to be creditworthy and therefore has not required Campus to post a letter of credit or other security.

66.3 Please discuss if there are any termination clauses in the TSA between PNG(NE) and Ranch Energy Corporation that provide for any amounts owing to PNG(NE) as a result of the contract termination due to bankruptcy. If yes, please provide the amounts owing to PNG(NE) and any efforts to recover these amounts to date.

Response:

Per the terms of the TSA, the agreement is automatically terminated upon insolvency or bankruptcy of the Shipper. No termination clauses exist in the TSA between PNG(NE) and Ranch Energy that provide for amounts owing as a result of the contract termination due to bankruptcy.

C. COST OF GAS

67.0 Reference: COST OF GAS
Exhibit B-2 FSJ/DC, Section 2.2, p. 28; Tumbler Ridge (TR), Section 2.2, p. 27; PNG-West Division 2020-2021 RRA proceeding, Exhibit B-2, Section 2.2.3, pp. 30, 32, Exhibit B-3, IR 5.0 series
Unaccounted for Gas

In response to BCUC IR 5.1 in Exhibit B-3, PNG(NE) provided the following tables:

FORT ST. JOHN/DAWSON CREEK		2015	2016	2017	2018	2019
Deliveries	GJ	4,359,230	3,833,902	4,512,931	4,933,538	4,714,116
UAF gains/(losses)	GJ	(44,957)	(203,081)	5,788	(69,555)	(102,288)
UAF as a portion of deliveries	%	-1.03%	-5.30%	0.13%	-1.41%	-2.17%
Commodity Cost of Gas	$/GJ	$ 3.32	$ 1.90	$ 2.38	$ 1.45	$ 1.28
Value of UAF gains/(losses)	$	$ (149,078)	$ (385,447)	$ 13,788	$ (100,576)	$ (130,724)

TUMBLER RIDGE		2015	2016	2017	2018	2019
Deliveries	GJ	945,455	712,865	601,701	422,104	687,392
UAF gains/(losses)	GJ	7,090	(4,983)	10,194	9,228	8,583
UAF as a portion of deliveries	%	0.75%	-0.70%	1.69%	2.19%	1.25%
Commodity Cost of Gas	$/GJ	$ 4.77	$ 3.14	$ 3.69	$ 2.69	$ 2.46
Value of UAF gains/(losses)	$	$ 33,838	$ (15,626)	$ 37,647	$ 24,815	$ 21,148

67.1 Please discuss whether PNG(NE) has identified why there are mostly unaccounted for gas (UAF) gains in the TR division as compared to PNG(West) and PNG(NE) FSJ/DC division. If yes, please provide details of the same.

Response:

PNG(NE) has not identified the cause of UAF gains occurring on the Tumbler Ridge system in four of the past five years. PNG notes that the commodity cost of gas associated with UAF gains on all PNG and PN(NE) distribution systems are credited to the UAF deferral account to the benefit of PNG(NE)'s Tumbler Ridge customers. UAF gains, while not desirable from a system management perspective when they become significant, do benefit customers by reducing the Company Use gas costs recovered from customers.

In response to BCUC IR 5.5 in Exhibit B-3, PNG(NE) stated:

> The UAF component in the Company Use gas cost refers to the budgeted percentage of UAF embedded in the calculation of Company Use gas expense for each of the PNG-West, FSJ/DC and TR Divisions. The UAF component in the Company Use gas cost is set at 1% for FSJ/DC and 0% for TR. For PNG-West, this had been set at 0% in prior years, however, in the 2020-2021 RRA, PNG-West is seeking BCUC approval to set the UAF component in the Company Use gas cost at 1%.
>
> The UAF loss cap is the maximum UAF loss percentage that can be recorded in the UAF deferral account without seeking further approval from the BCUC. The UAF loss cap is set at 1.5% for FSJ/DC and 1.0% for TR. For PNG-West, the UAF loss cap had been set at 1.0% in prior years; however, as noted previously, PNG-West is seeking approval to set the UAF loss cap at 1.5% in the 2020-2021 RRA.

67.2 Please explain why there are differences in the budgeted percentage of UAF embedded in the calculation of Company Use gas expense and UAF loss caps for each of the PNG-West, FSJ/DC and TR Divisions on the PNG system.

Response:

As noted in the last paragraph of the response to BCUC IR 5.5, PNG(NE) stated that the existing UAF component rates in the Company Use gas cost have been in place since 2004 for PNG-West and since 2008 for PNG(NE). Prior to these years, varying percentages were approved annually for each division based on a respective historical review of UAF. Due to fluctuations experienced in UAF of both gains and losses over the years, the UAF deferral accounts were subsequently applied for and approved by the BCUC and the UAF Loss Caps were also established at that time.

PNG-West and PNG(NE) continue to review these amounts and as noted in PNG-West's 2020-2021 RRA a change is being sought for PNG-West's UAF component in the Company Use gas cost and the UAF loss cap for Test Years 2020 and 2021.

D. OPERATING EXPENSES

68.0 Reference: OPERATING EXPENSES
Exhibit B-3, BCUC IR 6.1, 6.2
System Integrity Focus

In response to BCUC IR 6.1 in Exhibit B-3, PNG(NE) stated:

> As the age of PNG(NE)'s infrastructure increases, there is an increasing likelihood of investigative digs and cutouts resulting from inspection works, such as DCVG surveys. As work is executed, more information on the condition of the system is gathered, often resulting in a compounding effect of additional scope. …
>
> PNG(NE) has an increased focus on other regular interval maintenance activities, such as pipeline inspections (air surveys), aerial crossing, watercourse crossing and documentation of change surveys, right of way vegetation management and signage.

68.1 Please discuss whether PNG(NE) is increasing the number of direct current voltage gradient (DCVG) surveys completed each year. If so, please elaborate on whether this increased frequency is as a result of compliance with PNG's Integrity Management Plans, a result of compliance with related codes, standards and regulations or a result of other factors.

Response:

PNG(NE) is not changing, nor proposing to change, the number of DCVG surveys completed each year based on currently known information. PNG(NE) will continue to manage and perform DCVG, CIS, and other forms of over-the-line surveys in alignment with existing survey plans that formulate part of the existing PNG(NE) IMP and establish both schedule within current and future test periods as well as repeat frequency.

68.2 Please clarify the meaning of "increased focus" on other maintenance activities. Please discuss whether increased focus results in conducting the listed activities more frequently, conducting some of the listed activities for the first time, expanding the use of the listed activities to new segments of PNG(NE)'s system or some other meaning.

Response:

"Increased focus" as it pertains to other integrity management related maintenance activities such as air surveys, aerial crossing inspections, watercourse crossing surveys, right of way vegetation management, and right of way signage is intended to mean:

- Increased frequency and/or quantity of inspections and surveys as perceived risk and/or threat or other specific conditions warrant;
- Increased resource allocation applied to response efforts where specific conditions, such as increased third-party activity in proximity of or across PNG(NE) rights of way, warrant; and
- Extending programs to new and/or amended pipeline segments.

None of the listed other maintenance activities are proposed to be conducted for the first time, except for those that may be applied to new pipeline segments.

In response to BCUC IR 6.2 in Exhibit B-3, PNG(NE) stated:

> These noted changes have resulted in direct and appreciable focus and mandated requirements by the BCOGC pertaining to pipeline segment by segment risk management and the implementation of a new assessment and audit program directed at pipeline and facility assets 50 years of age or older, thereby encompassing many of PNG(NE)'s transmission and distribution system assets. …
>
> …
>
> Given all of this, PNG(NE)'s overall understanding and appreciation for integrity management-based requirements continues to mature and broaden and with this comes changes to operational practice and associated expense to ensure compliance and continued responsible operation as it pertains to pipeline safety and reliability…
>
> The BCOGC has also drawn focus to "aged pipelines" and recognized the elevated risk by undertaking specific assessments on aging pipelines in BC.

68.3 Please provide any directives, letters or documents from the BC Oil and Gas Commission (BCOGC) referencing the aged pipeline assessment and audit program.

Response:

Please find appended copies of the following correspondence between the BCOGC and PNG/PNG(NE) on the referenced matters:

- Attachment BCUC 68.3a – Jul 29'19 BCOGC Email to PNG re Request for CAP
- Attachment BCUC 68.3b – Aug 27'19 PNG Letter to BCOGC re Update to Request for CAP
- Attachment BCUC 68.3c – Feb 11'20 BCOGC Email to PNG re IMP Audit Notification
- Attachment BCUC 68.3d – Mar 2'20 BCOGC Email to PNG re Aged Pipeline Condition

PNG(NE) notes that the BCOGC Aged Pipeline Condition Assessment Program only applies to pipelines of NPS 8 or greater, none of which exist in the north east. However, the risk assessment mandate does apply to PNG(NE), as does the overall IMP audit.

68.4 Please provide an estimate of the costs included within this Test Period associated with responding to BCOGC mandated requirements, including costs associated with responding to requirements of a pipeline segment-by-segment risk assessment and aged pipeline assessment, as well as other BCOGC mandated requirements.

Response:

Aside from work that commenced in December 2019 in relation to the BCOGC mandated development of a segment-by-segment risk assessment for which an action plan is in place and a roadmap developed, PNG(NE) notes that the associated response plans and activities for the IMP audit and aged pipeline condition assessments are still in the developmental stage, with current cost estimates limited to activities associated with providing existing PNG(NE) data and conducting meetings with the BCOGC. Therefore, current estimates in the Amended Application do not include costs associated with future efforts stemming from the BCOGC assessment audit outcome-related directives or corrective actions.

PNG(NE) also notes that given the date of emergence of these BCOGC requests, the associated costs were not incorporated in the Amended Application to date. Forecast costs of these activities on a PNG/PNG(NE) consolidated basis, are summarized in the table below.

BCOGC Initiative	Forecasted Costs			
	2020		2021	
	Capital	Expense	Capital	Expense
Pipeline Segment by Segment Risk Assessment	$ 225,000		$ 25,000	$ 150,000
Aged Pipeline Condition Assessment		$ 10,000		
IMP(F) Audits		$ 60,000		
Total	$ 225,000	$ 70,000	$ 25,000	$ 150,000

These costs are to be allocated to the divisions as below:

BCOGC Initiative / Division	Capital Expense		Operating Expense	
	2020	2021	2020	2021
Pipeline Segment-by-Segment Risk Assessment				
PNG-West	141,179	15,946	-	95,675
FSJ/DC	78,707	8,487	-	50,923
TR	5,114	567	-	3,402
	225,000	25,000	-	150,000
Aged Pipeline Condition Assessment				
PNG-West	-	-	10,000	-
IMP(F) Audits				
PNG-West	-	-	37,648	-
FSJ/DC	-	-	20,988	-
TR	-	-	1,364	-
	-	-	60,000	-
Total	225,000	25,000	70,000	150,000

PNG(NE) proposes to incorporate these costs into the final regulatory schedules.

69.0 Reference: OPERATING EXPENSES
Exhibit B-2 TR, Section 2.3.2, p. 29; Exhibit B-3, BCUC IR 13.3; Exhibit B-4 BCUC IR 2.4; PNG-West Division, 2016-2017 RRA proceeding, Order G-131-16 with reasons for decision dated August 10, 2016, Section 4.1, p. 18
Accounting Treatment of ILI and Investigative Dig Costs

In response to BCUC IR 13.3 in Exhibit B-3, PNG(NE) stated:

> PNG(NE) submits it is aligned with response from industry to have previously 'unpiggable' pipelines become 'piggable', as previously outlined in the Amended Application. The ability to run ILI tools creates opportunity to more completely align and comply with the CSA Z662 standard and the related intent of the PNG(NE) Integrity Management Plan. As improved technology becomes available for integrity management, PNG(NE) believes it has a responsibility to assess and implement it, if it is practicable to do so.

In response to BCUC IR 2.4 in Exhibit B-4, PNG(NE) stated:

> There are no in line inspection (ILI) related activities in scope for Tumbler Ridge and no costs have been included in BCUC Account 665 for Test Years 2020 and 2021 as the pipelines are not currently inspectable by ILI. PNG(NE) has planned investigative digs for the purposes of ECDA and their costs are included under BCUC Account 655 for Test Years 2020 and 2021. PNG(NE) notes that the accounting treatment for all the activities and costs related to ILI tool runs and investigative digs have been addressed in prior revenue requirements application decisions as follows:
>
> - ILI runs are normally expensed in the year incurred in accordance with US GAAP. Close interval surveys (CIS) are similar to ILI runs except that they are above ground and will typically result in investigative digs, therefore, they would follow a similar accounting treatment.
> - Investigative Digs - this was specifically addressed in the decision on the PNG(NE) 2013 Revenue Requirements Application under BCUC Order G-131-13 where PNG(NE) was directed to record its forecast for investigative digs in its cost of service starting in 2013 and create a new deferral account to capture any variances to be amortized the following year.

On pages 29 and 30 of the TR Amended Application, PNG(NE) states:

> The costs in this account cover the routine operating costs of the pipelines that PNG(NE) operates. Typical activities include: inspecting and operating above ground structures, as well as other facilities for safety and reliability; <u>performing in-line inspections</u> and close interval surveys and follow-up investigative digs; operating and monitoring the Supervisory Control and Data Acquisition (SCADA) system; maintenance of vegetation on the rights of way (ROW) and operation of the cathodic protection system. [*Emphasis*

added]

In addition, PNG(NE) will further reinforce its integrity management plan by working toward upgrading the TR Division transmission line to be compatible with new in-line inspection tooling that is available to the industry.

69.1 Please clarify which PNG(NE) pipeline system segments are currently inspectable by ILI. Please distinguish which segments are capable of performing in-line cleaning and which segments are capable of performing in-line inspection.

Response:

At present, no PNG(NE) pipelines are inspectable by ILI. This applies to both in-line cleaning and in-line inspection.

69.2 Please explain whether PNG(NE) completes or is expected to complete any EMAT ILI or ILI runs on the FSJ/DC system during the 2020/2021 Test Period.

Response:

In line with the response to Question 68.1, PNG(NE) does not expect to complete any ILI runs on the FSJ/DC system in the 2020/2021 Test Period.

While PNG(NE) continues to contemplate and explore opportunities for FSJ/DC pipeline system modifications to accommodate future ILI runs, PNG(NE) notes that pipeline sizes in the FSJ/DC system are predominantly NPS 4 or smaller and there is no expected market emergence of EMAT tools down to those pipeline sizes in the immediate future.

69.2.1 If yes, please provide the cost breakdown by year and discuss if PNG(NE) accounts for EMAT ILI and other ILI runs for regulatory purposes in the same manner as PNG-West. Please comment on any differences.

Response:

As noted in response to Question 69.1 and Question 69.2, PNG(NE) does not have any pipelines that are currently inspectable by ILI runs, including EMAT ILI runs, and therefore there are no ILI runs planned for 2020 nor 2021, except for Closed Interval Surveys (CIS).

PNG(NE) submits that its ILI and CIS runs are expensed for regulatory purposes and financial statement purposes for both PNG(NE) and PNG-West. However, PNG-West has approval to record any variances in ILI runs to a deferral account to be amortized the following year. There is no such deferral account available for ILI/CIS cost forecast variances in PNG(NE).

PNG(NE) further notes that PNG-West capitalizes EMAT ILI runs and amortizes them over a period of 10 years. In the PNG-West 2020-2021 RRA proceeding, in response to BCUC IR 102.1, PNG-West is seeking capitalization treatment for significant ILI runs in order to be consistent with the accounting treatment accorded to EMAT ILI runs.

On page 18 in Order G-131-16, the BCUC states that "[i]n the Panel's view, it is more appropriate to use regulatory accounts in circumstances where financial accounting principles do not allow for capitalization of costs and where the recording of such costs as operational expenses would result in large and volatile rate impacts."

69.3 Please clarify whether US GAAP allows for either capitalizing or expensing investigative digs costs, with reference to the applicable US GAAP section.

Response:

PNG(NE) submits that investigative digs are planned maintenance activities incurred during a pipeline repair project preliminary stage and depending on the findings, may result in subsequent capital cut-out activities. Not all investigative digs lead to capital repairs.

Per US GAAP ASU 2014-09, Revenue from Contracts with Customers, section 340-40-25-8:

"An entity shall recognize the following costs as expenses when incurred:

a) General and administrative costs (unless those costs are explicitly chargeable to the customer under the contract, in which case an entity shall evaluate those costs in accordance with paragraph 340-40-25-7)
b) Costs of wasted materials, labor, or other resources to fulfill the contract that were not reflected in the price of the contract
c) Costs that relate to satisfied performance obligations (or partially satisfied performance obligations) in the contract (that is, costs that relate to past performance)
d) Costs for which an entity cannot distinguish whether the costs relate to unsatisfied performance obligations or to satisfied performance obligations (or partially satisfied performance obligations)."

Investigative digs costs, which are resources required to fulfill contracts with customers, and relate to both satisfied performance obligations (i.e. gas delivered) and unsatisfied performance obligations (i.e. gas to be delivered) match at least one category of costs described above. Therefore, US GAAP allows for expensing these costs as they are incurred.

Costs incurred for investigative digs do not satisfy the criteria in ASC 360-10-30-1 (Property, Plant and Equipment) for recognition of costs incurred to acquire an asset and should be treated as an expense in the period that the costs are incurred. Given the high degree of uncertainty about any future economic benefit of these costs, PNG(NE) submits that US GAAP does not allow for capitalization of investigative digs costs.

69.3.1 Please identify the relevant factors from PNG(NE)'s perspective that should be considered in determining the accounting treatment for investigative dig costs in accordance with US GAAP.

Response:

As capital expenditures are not probable at the time of the investigative digs, it would not be appropriate to capitalize this investigative work. Costs incurred during a project preliminary phase prior to the construction of any project being "probable" are not able to be capitalized. All costs incurred at this stage are expensed, irrespective of whether a project is later identified by way of the investigative work. Costs that are direct and clearly incremental to extend the life of an asset would be capitalized once the project is probable and during the construction phase. Costs related to the evaluation of potential projects or locations, such as costs incurred for investigative digs, should be expensed.

70.0 Reference: OPERATING EXPENSES
Exhibit B-4, BCUC IR 2.1
Account 665 - Pipelines

In response to BCUC IR 2.1 in Exhibit B-4, PNG(NE) stated:

> PNG(NE) further notes that while the 2020 forecasted costs have been reduced due to more favorable contractor pricing for survey work, the 2021 forecast provided in the Amended Application remains consistent with current expectations for the cost of ECDA and necessary resulting repairs. PNG(NE) will reflect a $35,000 reduction to contractor costs for Test Year 2020 in the final regulatory schedules.

70.1 Please discuss the rate impact of the $35,000 reduction in contractor cots referenced in the preamble for each year of the Test Period.

Response:

The $35,000 reduction in contractor costs referenced for TR would result in an approximate rate decrease of 2% to customers in Test Year 2020 and a subsequent rate increase of approximately 2% in Test Year 2021.

71.0 Reference: OPERATING EXPENSES
Exhibit B-3, BCUC IR 7.1, 7.4
Operation Field Staff Positions – New

In response to BCUC IR 7.1 in Exhibit B-3, PNG(NE) stated:

> The costs associated with the two new utility person full-time equivalent positions are allocated to the various operating and maintenance expense and capital expenditure accounts where the labour activities are being performed, similar to other bargaining unit positions. PNG(NE) notes that bargaining unit employees complete time sheets to track the type and the location of activities they are working on. The labor costs are allocated according to specifically identifiable projects as per the time sheet details.

In response to BCUC IR 7.4 in Exhibit B-3, PNG(NE) stated:

> In terms of cost savings, by reducing reliance on temporary employees, PNG(NE) will save $115,000 (between O&M and capital). PNG(NE) notes that the cost for the two FTE bargaining unit positions is approximately $194,000, and while on a net basis there are not significant savings as this change results in a reallocation of costs from contractors to employee labour, there are additional qualitative benefits…

71.1 Please provide a breakdown of the forecast costs and cost savings associated with the two new positions by account (O&M and Capital) for Test Year 2020 and 2021. Please include the following cost categories in the breakdown of cost savings; (i) temporary employees, (ii) summer students, and (iii) contractors.

Response:

PNG(NE) apologizes in advance for an error in budgeting and choice in words with regards to temporary employees in its response to BCUC IR 7.4. First, PNG(NE) notes that O&M costs of $23,000 and $23,538 associated with the temporary employees were inadvertently included in Test Years 2020 and 2021, respectively. PNG(NE) proposes to remove these costs and will reduce BCUC Account 675 labour costs by $23,000 in the final regulatory schedules for Test Year 2020 and $23,538 for Test Year 2021. Secondly, PNG(NE) should have used the following wording in its response to BCUC IR 7.4: "In terms of costs, by reducing reliance on temporary employees, PNG(NE) will not incur $115,000 (between O&M and capital).

Taking the foregoing into account, PNG(NE) provides the following response to this question.

The costs of the two FTE bargaining unit positions of $194,000 is allocated approximately 20% to O&M and 80% to capital expenditures. The $38,000 of O&M expenditures and the $156,000 of capital expenditures is spread over multiple BCUC accounts (including Operating Accounts 670, 675 and 688; and Capital Accounts 465, 473 and 475) based on the requirements for the various operating and capital activities planned for Test Years 2020 and 2021.

In terms of cost savings from temporary employees and contractors, PNG(NE) notes that this cannot be easily determined as temporary employees and contractors are primarily used for required capital projects which vary from year to year. Temporary employee costs were historically allocated 20% to O&M activities and 80% to capital project activities and PNG(NE) will reflect the O&M savings of $23,000 in BCUC Account 675. When preparing its operating and capital plans and related budgets, PNG(NE) allocates its internal manpower labour to the various planned operating and capital projects and utilizes contractors for any labour shortfalls identified.

As noted in the Amended Application and in responses to information requests (including BCUC IR 7.4 and BCUC IR 7.5), PNG(NE) is establishing more full-time resources to help with emergency response and construction maintenance activities and is reducing its reliance on temporary employees and contractors to more effectively manage its operations. PNG(NE) must continue to address heightened pipeline integrity programs, which lends itself to building institutional knowledge and training within the company. The new full-time employees, with training and knowledge of regulations, policies and procedures, will assist in completing critical work necessary to maintain safe and reliable service.

In previous years, PNG(NE) notes that it had developed a trusting working relationship whereby the contractor at times assisted PNG(NE) with emergency response activities such has hit lines, which is not typical for a gas utility in British Columbia. With the termination of the service arrangement, it became apparent that PNG(NE) needed to supplement its resources and form its own internal crew in Fort St. John in order to effectively operate and maintain the natural gas system in the area, recognizing that it could supplement with contractors for project work as required. PNG(NE) also notes that as its aging infrastructure becomes a more heightened risk, with an estimated 50% of its assets being greater than 50 years old, it is imperative that PNG(NE) have its own internal emergency response capability and not be too reliant on contractors. The hiring of the two full-time employees also addresses demographic and work force challenges and are an element of PNG(NE)'s succession planning. Currently, PNG(NE) has an employee in the construction and maintenance department that is able to retire with an unreduced pension at any time. By hiring these full-time employees, PNG(NE) can ensure there is a transfer of knowledge and better succession planning.

PNG(NE) has already hired these positions to address the aforementioned emergency response, operational, construction and demographic challenges. PNG(NE) felt it was reasonable to not hire the traditional temporary worker to partially offset the incremental costs of the new employees.

PNG(NE) also notes that there are no cost savings associated with summer students, as PNG(NE) plans to hire two summer students in each of Test Year 2020 and 2021, similar to prior years.

72.0 Reference: OPERATING EXPENSES
Exhibit B-2 FSJ/DC, Section 2.6, p. 51; Exhibit B-3, BCUC IR 10.1, 10.2, 10.2.1.1, 10.5
Account 711/713/714 – New CIS System

In response to BCUC IR 10.1 in Exhibit B-3, PNG(NE) stated:

The new CIS system costs are composed of the following:

1. BCUC 713 - Shared Services Allocation for Implementation Costs – as noted in the Amended Application and the preamble above, the total shared implementation costs of $16.5 million will be capitalized by AUI and amortized over ten years and the related costs will be allocated to PNG on a cost recovery basis using customer count. For Test Year 2021, the total costs to AUI, HGL and PNG will be $1.74 million of which PNG will be allocated $0.51 million. PST will be required to be added to these shared services charges to PNG which will result in a total of $0.55 million and will be allocated to PNG-West and the PNG(NE) divisions based on customer count as noted in the table below:

			PNG Consol	[---------- Allocation	----------	]
Year	ACI Utilitites	PNG Consol	+PST	PNG West	FSJ/DC	TR
2021	1,738,999	510,785	546,540	267,313	263,269	15,959

2. BCUC 713 - Shared Allocation of CIS Support Costs – these include costs required to support the new CIS system and include the costs to operate the HelpDesk and other IT related costs. The total costs for Test Year 2021 are forecast to be $1.4 million of which PNG will be allocated $0.26 million based on customer count. PST will also be required to be added to this amount and result in total costs of $0.28 million to be allocated to PNG-West and the PNG(NE) divisions as follows:

			PNG Consol	[---------- Allocation	----------	]
Year	ACI Utilitites	PNG Consol	+PST	PNG West	FSJ/DC	TR
2021	1,430,865	257,613	275,646	134,818	132,778	8,049

3. BCUC 713 - Direct Operating Costs – this refers to the annual license maintenance fees to be paid by PNG forecast to be $20,415 for Test Year 2021 to be allocated to all the PNG divisions based on customer count and result in an allocation of $9,985 to PNG-West, $9,834 to PNG(NE) FSJ/DC and $596 to PNG(NE) TR division.

Further, on page 51 of the PNG(NE) FSJ/DC Amended Application, PNG(NE) states that there is an "[i]ncreased cost allocation of approximately $195,000" in Test Year 2021 over Test Year 2020, regarding Account 713 – Vancouver Vertex Billing Services.

72.1 Considering costs will be allocated to PNG(NE) divisions based on customer count, please explain whether and how often the allocation methodology will be updated based on changes in customer count.

Response:

PNG(NE) submits that PNG-West would review customers counts for each division and update these numbers in each revenue requirements application as has been historically done. PNG(NE) notes that customer count is one of the cost allocators in determining shared services cost charges from PNG-West to PNG(NE).

72.2 Please reconcile the 2021 forecast operating costs allocated to FSJ/DC in response to BCUC IR 10.1, as outlined in red above, to the increased cost allocation in Account 713 of approximately $195,000 in Test Year 2021. As part of the reconciliation, please delineate the expected cost increases.

Response:

Please see the table that follows for the breakdown of costs under BCUC Account 713 for both Test Year 2020 and Test Year 2021 as provided in the response to a similar question in the PNG-West 202-2021 RRA proceeding. PNG(NE) notes that the increase of $195,000 referred to in the Amended Application, and as reproduced in the preamble to this question, should have referred to an increase of $186,000, and is represented by the first line item in the table. The sum of the new CIS shared services costs included in BCUC Account 713 and outlined in red in the preamble of $405,881 ($263,269 + $132,778 + $9,834) is represented by the second line item in the table.

BCUC Account 713 PNG(NE) FSJ/DC	Test Year 2021	Test Year 2020	Difference
CIS old outsourcing contract	95,859	281,801	(185,942)
CIS new shared services and licenses	405,881	-	405,881
Bill Presentment and Remittances	140,462	177,588	(37,126)
Postage and other	168,458	166,630	1,828
Sub-total External costs	810,660	626,019	184,641
Other costs - data lines/AGAT sampling	35,180	34,465	715
	845,840	660,484	185,356
Shared Services from Parent	511,000	502,000	9,000
	1,356,840	**1,162,484**	**194,356**

In response to BCUC IR 10.2 in Exhibit B-3, PNG(NE) stated:

> …PNG Consolidated expects to realize savings of approximately $100,000 on an annual basis and has reflected the proportionate savings in Test Year 2021.
>
> PNG Consolidated also expects to realize further financial benefits from the new CIS system commencing in Year 2022 after the new CIS system has been fully implemented. PNG Consolidated expects that less internal resources will be required with the new system and plans to reduce the CIS technical support group by one headcount. PNG Consolidated is also assessing redeploying the Customer Care resource to other work. The CIS technical support group headcount will coincide with the anticipated employee retirement. [*Emphasis Added*]

In response to BCUC IR 10.2.1.1 in Exhibit B-3, PNG(NE) stated:

> PNG(NE) notes that there are no estimated cost savings from the CIS solution reflected in the financial schedules… PNG(NE) determined that the joint CIS project with its sister utilities was the best path forward in view of current circumstances and the need to for a new CIS solution. This enables PNG(NE) to achieve lower implementation costs and will also result in further financial benefits commencing in Year 2022 from lower resources required n the CIS technical support group and redeployment of customer care resources. [*Emphasis Added*]

72.3 Please provide a breakdown of the expected cost savings to be realized from the new CIS system by each of the divisions (PNG West, PNG(NE) FSJ/DC and TR) commencing in Year 2022 and onwards.

Response:

PNG(NE)'s analysis of the new CIS system indicates that for the 15-year expected life of the new asset, PNG consolidated would see an overall net reduction in its cost of service as a result of the following: expected savings to be realized from lower bill presentment costs due to the consolidation of these services with its sister utilities under a common provider; planned reduction of one CIS technical support staff; and the potential reduction of one customer service staff in field operations.

PNG(NE) anticipates that higher costs for the new CIS system for the first 10 years will be significantly reduced in the remaining 5 years due to the full depreciation of the asset resulting in nil charges from TriSummit Utilities Inc. (TSU, formerly ACI) for the capitalized implementation costs in these final years.

Therefore, PNG(NE) anticipates that net expected cost savings from the new CIS system will not be realized until 2032 onwards.

PNG(NE) reiterates that the new CIS system is not being pursued as a cost-saving measure, but rather out of necessity. As noted in Section 2.3.5 Account 711/713/714 – Customer Care of the Amended Application, PNG has made use of the legacy Banner CIS system, hosted by Vertex (formerly Enlogix), since 1998 and has been reliant on the fact that Union Gas also uses the Banner CIS system. With the amalgamation of Enbridge Gas Distribution and Union Gas, Union Gas has made the decision to migrate to an SAP billing system. Aware of Union Gas' plan to leave the Banner CIS system, PNG has been exploring alternatives in anticipation of Vertex no longer supporting the product.

72.4 Please provide the anticipated cost saving for PNG(NE) divisions, if any, as a result of one less CIS support technician.

Response:

PNG(NE) expects to reduce its cost of service by approximately $46,000 to $64,000 for the FSJ/DC division and $3,000 to $4,200 for the TR division from having one less CIS support technician.

In response to BCUC IR 10.1 in Exhibit B-3, PNG(NE) stated:

4. BCUC 487 - Direct Capital Costs – as noted in the Amended Application and the preamble, PNG will incur direct capital costs for SAP licenses and data extraction from Banner to VertexOne to be allocated to PNG-West and the PNG(NE) divisions as follows:

			PNG Consol	[---------- Allocation	----------	]
Year	ACI Utilitites	PNG Consol	+PST	PNG West	FSJ/DC	TR
2019		137,242	146,849	71,662	70,781	4,406
2020		207,494	222,019	108,345	107,013	6,661
2021		188,415	201,604	98,383	97,173	6,048

In response to BCUC IR 10.5 in Exhibit B-3, PNG(NE) stated:

PNG(NE) confirms that the data extraction costs totalling approximately $12,000 have been allocated to the TR division and are capitalized. These costs are reflected as a plant addition under BCUC account 489 in Test Year 2021.

72.5 Please confirm, or explain otherwise, that the response to BCUC IR 10.5 should read "these costs are reflected as a plant addition under BCUC account 487" rather than "489".

Response:

Confirmed. PNG(NE) apologizes for any inconvenience arising from this typographical error.

72.5.1 If confirmed, please reconcile the amount allocated to TR of $6,048 in Test Year 2021, in response to IR 10.1, to the approximate $12,000 data extraction costs allocated to the TR division, in response to IR 10.5.

Response:

PNG(NE) notes that the response to BCUC IR 10.5 should have stated that the approximate $12,000 data extraction cost allocated to TR are reflected in plant additions under BCUC 487 for both Test Years 2020 and 2021. In the response to BCUC IR 10.1 (item 4 BCUC 487), PNG(NE) noted that the TR division will be allocated a total of $17,115 of direct capital costs for the new CIS project for the years 2019, 2020 and 2021, which includes the approximate $12,000 of data extraction costs. The $6,048 is the portion of the $17,115 total capital cost that is allocated to TR for Test Year 2021.

72.5.2 If not confirmed, please provide the methodology for allocating data extraction costs between Account 487 and 489.

Response:

Not applicable. Please see the response to Question 72.5.1.

73.0 Reference: OPERATING EXPENSES
Exhibit B-3, BCUC IR 11.2
Account 688 – Other General Operations

In response to BCUC IR 11.2 in Exhibit B-3, PNG(NE) stated:

> The cost for third party welders was $397,621 for 2018 and $188,008 for 2019. A large part of the reliance on third parties relates to unanticipated events, such as leaks and emergencies, which are difficult to forecast into a cost savings. However, PNG(NE) notes that with properly trained and qualified personnel, the internal welders will be utilized when possible. An in-service weld performed by a third party can cost between $20,000-$100,000 and is dependent upon the nature of the requirements.

73.1 Please clarify whether any reduction in forecast welding costs is reflected in the Test Period as a result of utilizing internal welders rather than third-party welders. If not, please explain why not.

Response:

When considering the scope, quantity, and cost variability of unplanned, emergent work such as leaks requiring in-service welding, forecast costs are not easily quantified. As a result, no reductions relative to 2019 actuals have been applied within the Test Period. Where possible, PNG(NE) welders will be used, reducing the cost of the in-service welding aspect of repairs.

73.2 Please quantify the expected savings and provide the expected timing of when these savings will be achieved.

Response:

Please see the response to Question 73.1.

74.0 Reference: OPERATING EXPENSES
Exhibit B-2 TR, Section 3.2.2.1, p. 85; Exhibit B-4, BCUC IR 3.1; Exhibit B-5, BCOAPO IR 6.1
Other – Including Account 673

In response to BCUC IR 3.1 in Exhibit B-4, PNG(NE) provided the following breakdown of expenditures for "Other – Including Account 673" for Actual and Decision 2019 and Test Year 2020 and 2021:

Cost Element	Test Year 2021	Test Year 2020	Actual 2019	Decision 2019
Labour	$ 50,000	$ 65,000	$ 14,000	$ 63,000
Severance -AMR	-	2,000	-	-
Contractor	23,000	2,000	-	3,000
Materials	4,000	4,000	1,000	4,000
Advertising	1,000	1,000	-	1,000
Bad Debt	8,000	10,000	8,000	8,000
Company use gas	80,000	73,000	44,000	62,000
	$ 166,000	**$ 157,000**	**$ 67,000**	**$ 141,000**

74.1 Please explain the methodology used to forecast the Test Year 2020 and 2021 labour costs of $65,000 and $50,000 respectively.

Response:

PNG(NE) used historical budgets to develop the forecast for Test Year 2020 labour costs of $65,000, as it is anticipated that theses costs will be similar in 2020. For Test Year 2021 labour costs were reduced in the meter reading element of this account to make allowances for the impact of the deployment of AMR in Tumbler Ridge.

74.2 Please explain why the Test Year 2020 labour forecast is expected to be in line with the Decision 2019 amount of $63,000 rather than Actual 2019 of $14,000.

Response:

PNG(NE) expects the labour forecast for Test Year 2020 to be in line with the Decision 2019 rather than Actual 2019. The main reason for the differential in 2019 between Actual and Decision is primarily associated with a Dawson Creek Measurement Technician being ill and then retiring, resulting in no Measurement Technician being available during 2019 to undertake non-priority maintenance activities in Tumbler Ridge. The Dawson Creek Measurement Technician position has now been filled and normal service is expected in 2020.

A further factor that was considered in the development of the 2020 forecast is the number of meter recalls that are anticipated in the town of Tumbler Ridge, which are expected to increase from 54 in 2019 to 100 in 2020.

For these reasons PNG(NE) believes that the Test Year forecast should remain as presented.

In relation to Account 673/675/712/718 – Other, on page 85 of the TR Amended Application, PNG(NE) states:

> The actual costs for 2019 included in this account are $74,000 or 52.7% lower than those approved under Decision 2019. This is primarily due to lower labour costs incurred during the year as a result of a decline in customer activity due to the downturn in the economy, particularly impacting housing developments in the Tumbler Ridge area.

In response to BCOAPO IR 6.1, PNG(NE) stated:

> Within the TR Division, PNG(NE) is forecasting little or no organic growth during the test years, however, PNG(NE) is projecting an increase in the CNRL load in 2020, as compared to 2019, of approximately 70 TJ or 10 percent.

74.3 Please confirm whether the expected increase in the CNRL load in 2020 was considered in the development of the labour forecast of $65,000 included in "Other – Including Account 673" for Test Year 2020.

Response:

PNG(NE) can confirm that the expected increase in CNRL load in 2020 was considered in the development of the labour forecast. However, it was deemed not to have any material impact upon labour forecast.

E. MAINTENANCE EXPENSES

75.0 Reference: MAINTENANCE EXPENSES
Exhibit B-2 FSJ/DC, Section 2.4.4, p. 37; Exhibit B-3, BCUC IR 13.1, 13.1.1, 13.2;
Leak Repair Activities

In response to BCUC IR 13.1 in Exhibit B-3, PNG(NE) stated:

> The increase is comprised of greater internal labour and contractor costs, both of which are attributed to an anticipated increase in the quantity of leak instances requiring intervention. The anticipated leaks are primarily the result of leaking dresser fittings and flanges.

75.1 Please clarify whether the anticipated increase in the quantity of leak instances requiring intervention is as a result of dresser fittings and flanges leaking at a greater frequency than in previous years. If so, please explain. If not, please discuss other reasons for the anticipated increase in number of leaks.

Response:

PNG(NE) confirms that the anticipated increase in the quantity of leak instances requiring intervention is a result of fittings and flanges leaking at a greater frequency than in previous years. The increased quantity and frequency are due to the continued aging of the infrastructure. As the fittings age, the seals deteriorate and it takes less ground movement to cause a failure.

Further, in response to BCUC IR 13.1 in Exhibit B-3, PNG(NE) stated:

> PNG(NE) further notes an anticipated increase in leak prevention activity by way of integrity dig and coating and corrosion repair response via ECDA that follow DCVG or other over-the-line assessments. The leak repair cost table, and cost growth, is a result of recent under ground and above ground leak trends, independent of cost growth associated with investigative digs.

In response to BCUC IR 13.1.1 in Exhibit B-3, PNG(NE) stated:

> PNG(NE) submits that there is a necessary distinction between leak repairs (unplanned reactive response to a leak related gas release) and leak prevention provided by integrity digs and subsequent coating and corrosion repairs that result from DCVG surveys.

In response to BCUC IR 13.2 in Exhibit B-3, PNG(NE) stated: "Given that leak repairs result primarily from leaking dresser fittings, flanges, and to a lesser extent, undetected coating failure related corrosion leaks, costs will continue as long as these conditions exist in the PNG(NE) system."

On page 37 of the Amended Application, PNG(NE) states:

> The costs in this line include all other accounts not otherwise listed in the table…Test Year 2020 costs of $191,000 are forecast to increase by $73,000 or 61.4% over Decision 2019 costs of $118,000…Test Year 2021 costs of $195,000 are considered comparable to Test Year 2020 and reflect inflationary pressures on underlying costs.

75.2 Please clarify whether leak prevention activities, which are planned and involve integrity digs as well as coating and corrosion repair response, are accounted for in the same maintenance expense account as leak repair activity, which are unplanned and primarily result from leaking dresser fittings and flanges. If not, please explain why not, and specify the account.

Response:

PNG(NE) notes that the activities are different. Leak prevention is a preventative measure as outlined in PNG(NE)'s Integrity Management Plan (IMP). Leak repair is the reactive repair once a leak has been identified. Integrity dig, leak prevention, and leak repair related account codes are as follows:

- Integrity Digs – Account 665
- Leak Prevention via CIS and other Surveys – Transmission - Account 665
- Leak Prevention via Surveys – Distribution – Account 675
- Leak Repairs – Transmission – Account 865
- Leak repairs – Distribution – Account 875
- Proactive Dresser Removal Program – Account 475

75.3 Please provide a breakdown of the cost forecast for "All Other" maintenance expense line item for both Test Year 2020 and 2021.

Response:

Please see the table that follows.

Accounts 865-872-877	Test Year	Test Year 2021 vs Test Year 2020		Test Year
FSJ/DC	2021	$	%	2020
Labour	84,400	2,000	2%	82,400
Overtime	7,200	200	3%	7,000
Contractors	83,200	1,600	2%	81,600
Materials	20,300	400	2%	19,900
Total	**195,100**	**4,200**	**2%**	**190,900**

F. ADMINISTRATIVE & GENERAL EXPENSES

76.0 Reference: ADMINISTRATIVE & GENERAL EXPENSES
Exhibit B-2 FSJ/DC, Section 2.5.8, p. 43; Exhibit B-2 TR, Section 2.5.8, p. 41
Exhibit B-3, BCUC IR 15.3, 15.5
Shared Corporate Services Costs – Deferral Account – Amortization

On page 43 of the FSJ/DC Amended Application and page 41 of the TR Amended Application, PNG(NE) states: "PNG(NE) will seek approval for the amortization of this deferral account in future years as PNG(NE) attaches more customer volumes in the system."

In response to BCUC IR 15.3 in Exhibit B-3, PNG(NE) stated:

> PNG(NE) is forecasting low or near zero growth in load in the FSJ/DC Division, with residential and small commercial customer additions offset by a continuing decline in use-per-account
>
> Within the TR Division, PNG(NE) is forecasting little or no organic growth during the test years, however, PNG(NE) is projecting an increase in the CNRL load in 2020, as compared to 2019, of approximately 70 TJ or 10 percent

In response to BCUC IR 15.5 in Exhibit B-3, PNG(NE) stated: "…PNG(NE) proposes to commence amortization of the deferral account when the economic circumstances improve and will revisit this matter in the 2022-2023 RRA submission."

76.1 Under a scenario whereby additional customer volumes on the PNG(NE) system do not materialize over the next few years, please discuss PNG(NE)'s proposed treatment of the deferral account.

Response:

At this time, PNG(NE) does not have a proposal for the disposition of the deferral account should additional customer volumes on the PNG(NE) system not materialize over the next few years. As noted in response to BCUC IR 15.5, PNG(NE) will revisit this matter in the 2022-2023 RRA.

76.1.1 Specifically, please discuss whether PNG(NE) would propose to amortize the deferral account in the absence of additional customer volumes on the PNG(NE) system. If yes, please discuss the circumstances under which this would be proposed. If not, please discuss why not.

Response:

PNG(NE) may consider the amortization of the deferral account in the absence of additional customer volumes on its system and notes that one of its priorities in recent years has been to attract new customers in all service areas. However, given the current economic conditions for certain industries in the region, this objective has not been met. PNG(NE) will continue to work towards growing its customer base and, as noted in response to Question 76.1, will revisit this matter in the 2022-2023 RRA submission where it will seek BCUC approval for its amortization proposal.

76.2 Please explain the pros and cons of establishing a new deferral account without a set amortization start date nor amortization period.

Response:

Although this is not a preferred alternative, PNG(NE) notes that there have been circumstances in the past where deferral accounts have been established without a set amortization start date nor amortization period. As noted, this is not a preferred approach, however it provides flexibility on determining the appropriate time and period of amortization in the future to mitigate the impacts on customer rates, although it does raise the matter of intergenerational equity for customers.

77.0 Reference: ADMINISTRATIVE & GENERAL EXPENSES
Exhibit B-2 FSJ/DC, Tab 2, pp. 19-20; Exhibit B-2 TR, Tab 2, pp. 14-15; Exhibit B-4, BCUC IR 6.1; PNG-West Division 2013 RRA proceeding, Order G-114-13 with reasons for decision dated August 1, 2013, Section 6.4, pp. 44-45
Shared Corporate Services Costs – Deferral Account – Interest Expense

On pages 19 and 20, Tab 2, of the Amended Application for the FSJ/DC Division, PNG(NE) presents the continuity of deferred charges for the Test Years 2020 and 2021. Line 28 of each page is the Shared Corporate Services Deferral, and it states the interest rate is "STI".

Further on pages 14 and 15, Tab 2, of the Amended Application for the TR Division, PNG(NE) presents the continuity of deferred charges for the Test Years 2020 and 2021. Line 31 on page 14 and line 30 on page 15 is the Management Fee Adjustment deferral account, and it states the interest rate is "STI".

In response to BCUC IR 6.1 in Exhibit B-4, PNG(NE) clarified:

> PNG(NE) submits that the description of this [Management Fee Adjustment] deferral account is in error. The description should be "Shared Corporate Service Costs Deferral."

On pages 44 and 45 of the 2013 PNG-West RRA Decision, it stated:

> For deferral accounts for non-capital items which are amortized beyond one year, the appropriate return is the utility's Weighted Average Cost of Debt (WACD). For deferral accounts for non-capital items which are amortized over a period of one year or less, the appropriate return is the utility's short term interest cost.

77.1 Please confirm, or explain otherwise, that PNG's short-term interest cost is the rate applied to the Shared Corporate Service Costs Deferral account and provide a justification for the proposed interest rate.

Response:

PNG(NE) confirms that the short-term interest cost is the rate that was applied to the Shared Corporate Service Costs Deferral account in the Amended Application. PNG(NE) had anticipated that this deferral would be amortized commencing in 2022 but had incorrectly applied the short-term interest rate. PNG(NE) considers that applying the WACD rate would be more appropriate as it anticipates a longer amortization period, as noted in response to Question 77.2. PNG(NE) proposes to amend its final regulatory schedules to reflect this change.

77.2 Please discuss the likelihood that the amortization period for the Shared Corporate Service Costs Deferral account will be greater than one year.

Response:

PNG(NE) considers that the amortization period for the Shared Corporate Service Costs Deferral account will be greater than one year. Please see the response to Question 77.1.

G. DEFERRAL ACCOUNTS

78.0 Reference: DEFERRAL ACCOUNTS
Exhibit B-3, BCUC IR 22.1; Exhibit B-4, BCUC IR 5.1
Plant Gains and Losses

In response to BCUC IR 22.1 in Exhibit B-3, PNG(NE) provided a list of the assets that were disposed of or retired in 2018 and 2019 for the Fort St John's and Dawson City Division that resulted in additions to the Plan Gains and Losses – deferral account.

And in response to BCUC IR 5.1 in Exhibit B-4, PNG(NE) provided a list of the assets that were disposed of or retired in 2018 and 2019 for the Tumbler Ridge Division that resulted in additions to the Plan Gains and Losses – deferral account. Extracts of the tables are included below.

78.1 Please comment on why the following assets were disposed of or retired prior to the end of their useful life with no salvage value:

Division and Year	Asset	Estimated Useful Life	Acquisition Year	NBV December 31, 2019
FSJ 2019	Service Line Disposals - 1996 Pool	50	1996	18,220.92
FSJ 2018	Service Line Disposals - 1996 Pool	50	1996	9,719.98
DC 2018	1220m 60.3mm St Pipe - Bessborough	60	1986	43,575.38
TR 2019	600m 114mm Y J Coaled Pipe - MP 8.15 Flatbed Creek	60	1975	20,259.08

Response:

There was no salvage value related to the disposals as the assets were retired in place and there was no scrap metal that could be recovered and sold.

FSJ 2018/2019 – Service Line Disposals – 1996 Pool
These lines were disposed of as they were no longer required.

DC 2018 – 1220m 60.3m St Pipe – Bessborough
This asset was subject to geotechnical failure related displacement and a requirement to relocate in order to accommodate a highway reconstruction project resulting from the ongoing and severe geotechnical instability. Following the relocation, the pre-existing asset was retired in place.

TR 2019 – 600m 114mm YJ Coated Pipe – MP 8.15 Flatbed Creek
This asset was subject to ongoing geotechnical failure of the slopes on either side of the creek crossing and pipeline exposure, external coating damage, and pipeline deformation as a result of high gradient stream seasonal erosion and material transport. The pipeline was replaced via horizontal directional drill at significantly greater depth and the pre-existing asset retired in place.

78.2 Please comment on whether these asset categories are being under depreciated, and if the estimated useful lives should be re-visited and/or revised.

Response:

PNG(NE) notes that, on the average, these asset categories are not being under depreciated as there will be assets that are retired prior to or after their estimated useful lives. PNG(NE) also notes that the useful lives of all assets are the subject of periodic depreciation studies and subsequent adjustments that result from these studies. PNG(NE) notes that depreciation studies are performed approximately every five years, with the most recent study completed in 2017, with updated rates implemented effective 2018.

H. SHARED SERVICES RECOVERY FROM PNG(NE)

79.0 Reference: SHARED SERVICES COST ALLOCATION TO PNG(NE) FSJ/DC DIVISION AND TR DIVISION
PNG-West Division 2020-2021 RRA proceeding, Exhibit B-3, BCUC IR 10.1.1;
PNG-West Division 2018-2019 RRA proceeding, Exhibit B-3, BCUC IR 46 Series, Attachment BCUC 1.46a, pp. 12, 24
Maximo Sustainment Costs

In response to the BCUC IR 46 series in the PNG-West 2018-2019 RRA proceeding, PNG provided Attachment BCUC 1.46a which included the PNG GIS Implementation Business Case, and on page 12 of the attachment it stated:

> **Experience with Maximo integration** — PNG is undertaking an implementation of a Computerised Maintenance Management System (CMMS) based on the IBM Maximo software application. AUI has a mature implementation of Maximo and experience in developing and supporting its interface with its GIS. AUI can provide directly applicable and cost effective expertise in integrating GIS with Maximo.

Further in response to BCUC IR 10.1.1 in the PNG-West 2020-2021 RRA proceeding, PNG stated:

> Computerized Maintenance Management Systems (CMMS): PNG is implementing the Maximo system to support the planning and scheduling of all associated preventative maintenance and capital work. Maximo provides comprehensive support of PNG assets, maintenance, resource, and parts supply chain management needs. The CMMS provides enterprise asset management software for long and short-term planning, preventive, reactive and condition-based maintenance, schedule management, resource optimization and key performance indicators.

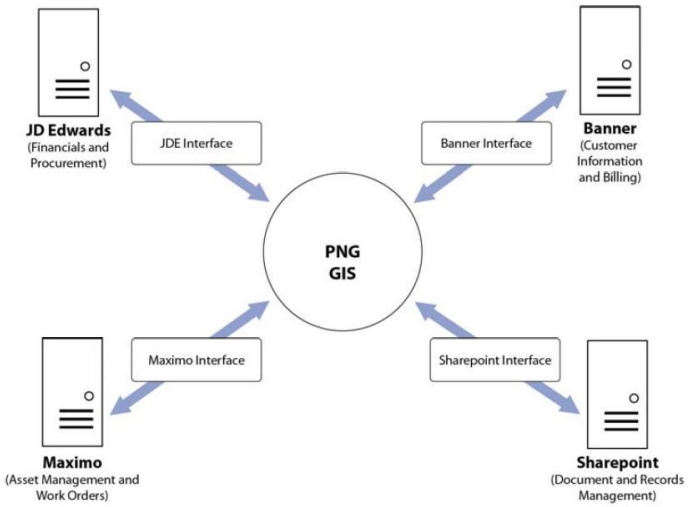
79.1 Please clarify whether "CMMS" and "Maximo" are references the same PNG system. If not, please discuss the differences between the two systems.

Response:

PNG(NE) confirms that CMMS and Maximo refer to the same asset management system to be implemented for both PNG(NE) and PNG-West.

In response to the BCUC IR 46 series in the PNG-West 2018-2019 RRA proceeding, and as stated above, PNG provided Attachment BCUC 1.46a. On page 24 of the attachment Figure 2 illustrates the Network Architecture Diagram, reproduced below.

Figure 2 – Network Architecture Diagram



79.2 Considering the recent system upgrades, please confirm, or explain otherwise, that the Maximo system only interfaces with the GIS system.

Response:

Not confirmed. In addition to an interface with the GIS system, the Maximo system will also be configured to directly interface with the new CIS system. The interface with the CIS will allow work orders generated in the new CIS system to be managed through the Maximo work management system. In addition, the CIS interface to Maximo will also enable better tracking and management of meters.

79.2.1 If not confirmed, please list the other system(s) Maximo is connected to or interfaces with, and if not provided in the Amended Application, please describe the system(s).

Response:

Please see the response to Question 79.2.

79.3 Please update the above network architecture diagram to reflect the recent system upgrades and include any other systems the GIS project will connect to, or interface with.

Response:

The network architecture diagram presented in the preamble to Question 79.1 remains current. PNG(NE) is developing an interim interface between the existing Banner Customer Information and Billing System (CIS) and GIS. The project to install and commission a new CIS includes within its scope the creation of an interface to GIS.

79.4 Please provide a similar network architecture diagram for (1) the Asset Record Modernization (ARM) project, and (2) the hydraulic modeling software (i.e. Synergi Gas software).

Response:

The Asset Records Modernization (ARM) project is comprised of the digitization and updating of PNG(NE)'s physical asset records, culminating with the hosting of these digital records in an online/ electronic platform. This project is not expected to have any significant network architecture and/or interfaces of similar nature to those presented in the preamble to this series of questions or as noted in response to Question 79.3.

Given that the hydraulic modelling software upgrade/supplement project has not yet commenced, PNG(NE) is not in a position to speak to eventual solution-related network architecture.

80.0 Reference: SHARED SERVICES COST ALLOCATION TO PNG(NE) FSJ/DC DIVISION AND TR DIVISION
Exhibit B-2 FSJ/DC, Section 2.6, pp. 47, 49; TR, Section 2.6, p. 47; Exhibit B-3, BCUC IR 18.1, 18.1.1 and 18.2; PNG-West 2020-2021 RRA proceeding, Exhibit B-2, Section 2.5.1, p. 53; Exhibit B-3 PNG-West, BCUC IR 21.2, 23.2 and 24.1
721 – Administration

On page 49 of the FSJ/DC Amended Application, regarding Test Year 2020 costs in Account 721 – Administration, PNG(NE) states:

> Increased cost allocation of approximately $253,000 due to:
>
> Overall cost pool increase of approximately $857,000 due to a number of factors, including: JDE sustainment costs; higher Vancouver office rent; costs associated with transitioning to Microsoft 365; costs related to the HRIS; and general inflationary costs increases on all costs in this cost pool over Decision 2019 amounts.

On page 47 of the TR Amended Application, increases in Account 721 for Test Year 2020 are noted by PNG(NE), and this increase is supported with a similar explanation.

In response to BCUC IR 24.1 in the PNG-West 2020-21 RRA proceeding, PNG stated:

> The annual base rent (including operating cost recoveries) for PNG's previous Vancouver office was $332,000, or $43 per square foot. The base rent for the new office space is $450,000, or $52 per square foot.

80.1 Please provide the rent cost allocated to each of the PNG(NE) Divisions (FSJ/DC and TR) for the Test Year 2020 and 2021.

Response:

Please see the table that follows.

Allocation of Vancouver Office Base Rent

Test Period	Total Rent	FSJ/DC	TR	Total PNG(NE)
		30.8%	*2.0%*	*32.8%*
2020	$ 450,000	$ 138,600	$ 9,000	$ 147,600
		30.2%	*2.0%*	*32.2%*
2021	$ 462,910	$ 139,799	$ 9,258	$ 149,057

On page 53 of the PNG-West Amended Application, PNG provides the following table showing the allocation of JDE system costs between the divisions:

Table 21: Summary of Consolidated JDE System Costs

Expense Item	BCUC Account	Test Year 2020				Test Year 2021			
		PNG-West	FSJ/DC	TR	Total	PNG-West	FSJ/DC	TR	Total
AUI Shared Services Agreement									-
Capital Cost Recovery	721	120,370	66,651	3,979	191,000	162,290	89,988	5,722	258,000
IT Maintenance Cost Recovery	721	71,214	39,432	2,354	113,000	88,065	48,831	3,105	140,000
		191,583	106,083	6,333	304,000	250,355	138,819	8,827	398,000
Annual Software Maintenance Fee	721	50,417	27,917	1,667	80,000	61,645	34,181	2,173	98,000
General & Administrative Cost	721	242,000	134,000	8,000	384,000	312,000	173,000	11,000	496,000
Depreciation Expense	303	-	-	-	-	33,400	18,400	1,200	53,000
JDE Licenses Capitalized	490	333,700	184,600	11,700	530,000				

In response to BCUC IR 18.1 in Exhibit B-3, PNG(NE) stated:

> Please see the table that follows which summarizes the operating costs recorded in BCUC Account 721 for the noted systems. There are no capital costs associated with the JDE system, the HRIS system or the Microsoft 365 transition for Test Year 2020 as they were incurred in 2019.

		PNG - Consolidated	PNG-West	FSJ/DC	TR
TEST YEAR 2020	Account 721				
JDE system		384,400	258,400	118,300	7,700
HRIS system		76,600	57,300	18,100	1,200
Microsoft 365 transition		35,000	23,500	10,800	700
		496,000	**339,200**	**147,200**	**9,600**

80.2 Please confirm, or explain otherwise, that the revised allocation of JDE system costs between PNG-West and FSJ/DC for Test Year 2020 as provided in response to BCUC IR 18.1 are the final forecast allocated costs and that the forecast costs for Test Year 2021 continue to be consistent with Table 21 in the preamble.

Response:

PNG(NE) notes that Table 21 included in the PNG-West Amended Application was based on initial amounts allocated to each division, and that a decision was subsequently made to allocate costs as an element of the Shared Services Cost allocation. This resulted in some presentation errors in the referenced PNG-West Amended Application Table 21. A revised Table 21 is presented as follows:

PNG-West Amended Application Table 21 - Revised

Expense Item	BCUC Account	Test Year 2020				Test Year 2021			
		PNG-West	FSJ/DC	TR	Total	PNG-West	FSJ/DC	TR	Total
AUI Shared Services Agreement									-
Capital Cost Recovery	721	128,390	58,790	3,820	191,000	174,769	78,019	5,212	258,000
IT Maintenance Cost Recovery	721	75,959	34,781	2,260	113,000	94,836	42,336	2,828	140,000
		204,349	93,571	6,080	304,000	269,605	120,355	8,040	398,000
Annual Software Maintenance Fee	721	53,776	24,624	1,600	80,000	66,385	29,635	1,980	98,000
General & Administrative Cost	721	258,125	118,195	7,680	384,000	335,990	149,990	10,019	496,000
Per Amended Application		**242,000**	**134,000**	**8,000**	**384,000**	**312,000**	**173,000**	**11,000**	**496,000**
Variance		**16,125**	**(15,805)**	**(320)**	**-**	**23,990**	**(23,010)**	**(981)**	**-**

80.3 Please reconcile the 2020 forecast operating costs allocated to FSJ/DC in response to BCUC IR 18.1 ($147,200) to the increased cost allocation attributable to FSJ/DC for account 721 (approximately $253,000). Please also reconcile the total operating costs in response to BCUC IR 18.1 ($496,000) to the overall cost pool increase for Account 721 (approximately $875,000).

Response:

Table BCUC 80.3a that follows illustrates the $857,000 increase in the Account 721 – Administration cost pool for Test Year 2020 over Decision 2019, as noted on page 49 of the FSJ/DC Amended Application. The table also highlights the cost pool components for JDE, HRIS and Microsoft 365 totalling $496,000 as noted in response to BCUC IR 18.1.

Table BCUC 80.3a

Administration 721 Shared Services Cost Pool	Cost Element	Decision 2019	Variance	Test Year 2020
Vancouver Labour	Labour	$ 3,376,986	$ 76,674	$ 3,453,660
	Benefit Load	1,095,806	24,771	1,120,577
		4,472,792	101,445	4,574,237
Vancouver - Other				
JDE System	Contractor	-	384,379	384,379
HRIS	Contractor	-	76,554	76,554
Microsoft 365		-	35,000	35,000
		-	495,933	495,933
Microsoft - Other	Contractor	89,995	55,805	145,800
		89,995	551,738	641,733
Other	Miscellaneous	1,123,556	203,367	1,326,923
		1,213,551	755,105	1,968,656
		$ 5,686,343	$ 856,550	$ 6,542,893

Table BCUC 80.3b on the page that follows illustrates the allocation of the Account 721 – Administration cost pool to the FSJ/DC and TR divisions for Test Year 2020 compared to Decision 2019. This table also highlights that the increased cost allocation to FSJ/DC from Decision 2019 to Test Year 2020 of $255,000.

Lastly, Table BCUC 80.3c on the page that follows illustrates the allocation of the JDE, HRIS and Microsoft 365 elements of the Account 721 – Administration cost pool to the FSJ/DC and TR divisions for Test Year 2020. This table also highlights the cost allocation of these amounts to FSJ/DC in Test Year 2020 of $147,000.

Table BCUC 80.3b

Allocation of Administration 721 Cost Pool

Labour:	Decision 2019	Test Year 2020	Decision 2019	Variance	Test Year 2020
FSJ	16.2%	16.2%	$ 724,592	$ 16,434	$ 741,026
DC	10.4%	10.4%	465,170	10,550	475,721
			1,189,763	26,984	1,216,747
TR	1.7%	1.7%	76,037	1,725	77,762
			1,265,800	28,709	1,294,509
HRIS:	Decision 2019	Test Year 2020			
FSJ	n/a	13.0%	-	9,952	9,952
DC	n/a	10.7%	-	8,191	8,191
			-	18,143	18,143
TR	n/a	1.5%	-	1,148	1,148
			-	19,292	19,292
Other:					
FSJ	18.7%	18.8%	226,934	128,781	355,715
DC	12.0%	12.0%	145,626	81,426	227,052
			372,560	210,207	582,767
TR	2.0%	2.0%	24,271	13,571	37,842
			396,831	223,778	620,609
			$ 1,662,631	$ 252,487	$ 1,915,119
Consolidated:					
FSJ	18.7%	18.8%	$ 951,526	$ 155,167	$ 1,106,694
DC	12.0%	12.0%	610,797	100,168	710,964
			1,562,323	255,335	1,817,658
TR	2.0%	2.0%	100,308	16,444	116,752
			1,662,631	271,779	1,934,410
			$ 1,662,631	$ 271,779	$ 1,934,410

Table BCUC 80.3c

Allocation of HRIS/JDE/Microsoft 365 Costs

HRIS:	Decision 2019	Test Year 2020	Decision 2019	Variance	Test Year 2020
FSJ	n/a	13.0%	$ -	$ 9,952	$ 9,952
DC	n/a	10.7%	-	8,191	8,191
			-	18,143	18,143
TR	n/a	1.5%	-	1,148	1,148
			$ -	$ 19,292	$ 19,292
JDE/Microsoft 365:					
FSJ	18.7%	18.8%	$ -	$ 78,843	$ 78,843
DC	12.0%	12.0%	-	50,325	50,325
			-	129,169	129,169
TR	2.0%	2.0%	-	8,388	8,388
			$ -	$ 137,556	$ 137,556
HRIS/JDE/Microsoft 365:					
FSJ	18.7%	18.8%	$ -	$ 88,795	$ 88,795
DC	12.0%	12.0%	-	58,517	58,517
			-	147,312	147,312
TR	2.0%	2.0%	-	9,536	9,536
			$ -	$ 156,848	$ 156,848

In response to BCUC IR 21.2 in the PNG-West 2020-2021 RRA proceeding, PNG stated:

> As the new payroll system is a web-based platform, each entity has paid its own costs for the implementation of the system. PNG paid $72,000 in 2019 for implementation costs associated with Phase One. These costs were set up as a prepaid expense and are being amortized as an expense over an eight-year period. Additional costs of approximately $36,000 are expected to be paid in 2020 to implement Phase Two, and these costs will also be amortized over the remaining term of the licenses.
>
> These costs, together with ongoing subscription costs for Test Years 2020 and 2021, are included in the Amended Application and allocated as follows:

	2020	2021
PNG-West	$ 57,000	$ 70,000
PNG(NE) FSJ/DC	18,000	19,000
PNG(NE) TR	1,000	1,000
Total	$ 76,000	$ 90,000

On page 47 of the FSJ/DC Amended Application, regarding JDE ERP and HRIS sustainment costs respectively, PNG(NE) states:

> PNG's costs are forecast to be $384,000 in 2020 (10 months) and $496,000 for 2021 (full year).
>
> On a consolidated basis for PNG and PNG(NE), these costs have been forecast at $58,000 for Test Year 2020, reflecting the cost of monthly and implementation charges, and $90,000 for Test Year 2021, reflecting the cost of monthly charges for a full year.

80.4 Please provide a table illustrating the total actual to date and forecast implementation costs, including prepaid implementation costs, for the JDE, HRIS systems and Microsoft 365 transition, by account (operating and capital) and all relevant years (i.e. 2019, 2020 and 2021) for each division.

Response:

During the review of the PNG-West IR No. 2 responses, it was identified that PNG-West had made an error in outlining the costs associated with the Microsoft 365 upgrade. As noted in response to BCUC IR 104.1 in the PNG-West 2020-2021 RRA proceeding, incremental contractor costs associated with moving to Microsoft 365 are $115,000. This $115,000 is the net increase for purchasing Microsoft 365 licenses as well as backing up and securing the data. This transition was mandatory as Microsoft is no longer supporting the platform that PNG(NE) (and many other companies that use Microsoft Office products) was on. The $35,000 amount included in Table 18.1 was incorrect.

Based on the foregoing, presented in the following table are the JDE costs, the HRIS costs, and the incremental Microsoft 365 contractor costs.

	BCUC Account	Test Year 2021				Test Year 2020				Actual 2019			
		Total	PNG-West	FSJ/DC	TR	Total	PNG-West	FSJ/DC	TR	Total	PNG-West	FSJ/DC	TR
JDE system -capital	490	-	-	-	-	-	-	-	-	530,000	333,700	184,600	11,700
JDE system -operating	721	496,000	336,000	150,000	10,000	384,000	258,400	118,300	7,700	-	-	-	-
HRIS system -operating	721	90,000	70,000	19,000	1,000	77,000	57,300	18,100	1,200	-	-	-	-
Microsoft 365 transition -operating	721	117,300	79,412	35,542	2,346	115,000	77,280	35,420	2,300	-	-	-	-
		703,300	485,412	204,542	13,346	576,000	392,980	171,820	11,200	530,000	333,700	184,600	11,700

80.5 Please provide a breakdown of the annual ongoing costs for the JDE, HRIS and Microsoft 365 transition by division between ongoing subscription costs, prepaid implementation costs amortized each year, and any other ongoing costs.

Response:

PNG(NE) notes that there are no ongoing subscription and prepaid implementation costs for the JDE and Microsoft 365 transition costs. All of those costs are ongoing and are as presented in the table provided in response to Question 80.4.

For the HRIS system, please see the table that follows.

HRIS Prepaid Implementation and Subscription Costs	2020	2021
PNG-West - Prepaid Implementation	$ 10,000	$ 12,200
PNG-West - Subscriptions	47,000	57,800
PNG(NE) FSJ/DC - Prepaid Implementation	3,200	3,900
PNG(NE) FSJ/DC - Subscriptions	14,800	15,100
PNG(NE) TR - Prepaid Implementation	200	200
PNG(NE) TR - Subscriptions	800	800
Total	$ 76,000	$ 90,000

In response to BCUC IR 18.1.1 in Exhibit B-3, PNG(NE) stated:

> The costs noted are all part of the PNG-West shared services 721 – Administration cost pool and are allocated on the following bases:
>
> - JDE System – allocated based on composite average allocator
> - HRIS System – allocated based on employee count allocator
> - Microsoft 365 – allocated based on composite average allocator

80.6 Please explain why the composite average allocator was selected as the basis for allocating costs associated with the new JDE system and Microsoft 365 to the PNG divisions (West, FSJ/DC and TR).

Response:

Historically, PNG-West has applied the composite average allocator to all non-labour Account 721 – Administration cost pool elements in making its allocations to PNG(NE). For consistency, the JDE and Microsoft 365 costs were allocated on this same basis.

The decision was made to allocate the HRIS costs based on the employee count allocator as all costs associated with the TriSummit Utilities Inc. (TSU, formerly ACI)) new payroll/HRIS system are allocated among four companies in the corporate group (PNG, AUI, HGL and TSU) based on the number of employees and retirees in each entity.

80.6.1 Please discuss any alternatives PNG considered for allocating these costs amongst the divisions, (e.g. based on number of licenses), the pros and cons of each and why these alternatives were rejected.

Response:

PNG(NE) considered allocating these costs between divisions based on license numbers. However, for JDE not every employee needs to have a license since payroll is no longer on JDE, so that option was discarded. HRIS costs are based on employee and retiree counts, so using employee count as an allocator was the most appropriate methodology for HRIS costs. As the Microsoft 365 costs include expenses not directly tied to individual licenses, the shared services composite allocator was determined to be the best methodology to allocate those costs.

In response to BCUC IR 18.2 in Exhibit B-3 regarding the Microsoft 365 transition, PNG(NE) stated: "At this time, PNG(NE) does not anticipate any annual cost savings associated with the new HRIS system."

80.7 Please clarify whether the response to BCUC IR 18.2, as copied in the preamble, relates to Microsoft 365 rather than "the new HRIS system".

Response:

PNG(NE) confirms that the extract from the response to BCUC IR 18.2 reproduced in the preamble should read: "At this time, PNG(NE) does not anticipate any annual cost savings associated with the implementation of Microsoft 365."

In response to BCUC IR 23.2 in the PNG-West 2020-21 RRA proceeding, PNG stated:

> There are no capital costs for the transition to the Microsoft 365 platform for the historic period nor Test Years 2020 and 2021. Operating costs associated with Microsoft 365 were approximately $7,000 for 2019 and estimated at approximately $85,000 for each of Test Years 2020 and 2021.

80.8 Please reconcile the expected operating costs associated with Microsoft 365 of approximately $85,000 for each of Test Years 2020 and 2021 to the forecast cost provided in IR 18.1.

Response:

The expected incremental operating costs associated with Microsoft 365 on a consolidated basis are $115,000 for Test Year 2020, of which $35,420 is allocated to FSJ/DC and $2,300 is allocated to TR. For Test Year 2021, consolidated costs are forecast to be $117,300, of which $35,542 is allocated to FSJ/DC and $2,346 is allocated to TR.

Please also see the response to Question 80.4.

I. RATE BASE

81.0 Reference: RATE BASE
Exhibit B-2 FSJ/DC, Section 2.3, p. 30;
AMR Meter Installations

On page 30 of the FSJ/DC Amended Application, PNG(NE) states:

> PNG(NE) anticipates filing an application to the BCUC in early 2020 for a Certificate of Public Convenience and Necessity (CPCN) to update and replace the current manual meter reading process for residential and commercial customers with automated meter reading (AMR) infrastructure in the communities it serves, including FSJ, DC and TR.

On March 25, 2020, PNG(NE) filed the Application for PNG(NE) CPCN AMR to update and replace the current manual meter reading process for residential and commercial customers with AMR infrastructure in FSJ, DC and TR Divisions.

81.1 Please discuss the rationale for seeking approval to record the cost of service impact of the AMR Project as part of the current RRA, given that a CPCN was expected to be filed for the project in early 2020 (since filed on March 25, 2020) and a CPCN has not yet been granted.

Response:

As noted in the AMR CPCN Application cover letter to the BCUC, PNG(NE) had originally filed the AMR CPCN Application in October 2019 and had anticipated obtaining approval of the AMR Project by the second quarter of 2020. PNG(NE) had also planned to refile the CPCN at the same time as the Amended Application and therefore reflected both the expected capital costs of the AMR Project in Test Year 2020 as well as the anticipated operating cost savings in Test Year 2021 in its Amended Application.

81.1.1 Please discuss whether PNG(NE) considered excluding the cost of service impact of the AMR Project from the current RRA given the expected filing of the CPCN and the fact that a CPCN has not yet been granted. If yes, please discuss why PNG(NE) did not proceed with this approach. If not, please discuss why not.

Response:

PNG(NE) did not consider excluding the cost of service impact of the AMR Project from the current RRA. Even with the later filing date of the CPCN Application, PNG(NE) is hopeful that approval of the AMR Project would be granted in time to enable PNG(NE) to commence the project and install the new AMR infrastructure in 2020 given the benefits of the project to ratepayers, employees, and the environment. PNG(NE) therefore reflected both the capital costs in Test Year 2020 and a full year of operational savings in Test Year 2021 in the Amended Application.

Given the historical timing of previous RRA decisions and final regulatory compliance filings, PNG(NE) remains hopeful that a BCUC decision on the AMR CPCN Application may be granted within the noted time frame and therefore incorporated the project in permanent rates for both Test Year 2020 and Test Year 2021. However, PNG(NE) is cognizant that approval for the AMR CPCN Application may be received after July 31, 2020 but before the fourth quarter of 2020. This would result in a delay in completing the implementation of the AMR Project to the second quarter of 2021 rather than the fourth quarter of 2020, and to only realize a half-year of operational savings in Test Year 2021 instead of a full-year of savings. In such an event, PNG(NE) would request these changes to be reflected and incorporated in the final regulatory RRA schedules.

81.1.2 Please discuss whether PNG(NE) considered including the cost of service impact of the AMR Project in a deferral account, with the disposition of the account to be determined following any BCUC decision regarding the CPCN. If yes, please discuss why PNG(NE) did not proceed with this approach. If not, please discuss why not.

Response:

Please see the response to Question 81.1.1. PNG(NE) did not consider including the cost of service impact of the AMR Project in a deferral account as PNG(NE) continues to be hopeful that a decision on the AMR Project will be granted prior to the filing of the RRA compliance regulatory schedules. However, PNG(NE) is amenable to removing the AMR Project (both the capital costs in 2020 and operating savings in Year 2021) from the current RRA and to address the financial impacts via a deferral account following the approval of the AMR CPCN Application.

82.0 Reference: RATE BASE
Exhibit B-2 FSJ/DC, Section, p. 65; Exhibit B-3, BCUC IR 27.1, 27.2; Exhibit B-5, BCOAPO IR 1.2.
New Services

In response to BCUC IR 27.1 in Exhibit B-3, PNG(NE) stated:

> PNG(NE) has forecast that it will be installing 80 new services each year for 2020 and 2021 for the Dawson Creek service area and has also forecast that it will be installing 90 new services each year for 2020 and 2021 in the Fort St John Service Area.

82.1 Please clarify whether the new forecast service refers to new service lines or new customers.

Response:

PNG(NE) confirms that the new forecast service refers to new service lines.

82.2 Please provide a table with the number of new services installed and new services expenditures for each of the Dawson Creek and Fort St John service areas from 2015 to 2019 (forecast and actual) and 2020 to 2021 (forecast).

Response:

Please see the table that follows.

	2015		2016		2017		2018		2019		2020	2021
New Services Expenditures	**Decision**	**Actual**	**Decision**	**Actual**	**Decision**	**Actual**	**Decision**	**Actual**	**Decision**	**Actual**	**Forecast**	**Forecast**
Fort St. John	647,660	816,991	840,043	713,347	856,969	457,871	334,751	433,247	363,463	415,527	370,582	378,073
Dawson Creek	627,583	427,897	641,970	136,875	655,641	164,923	239,568	238,807	327,878	129,318	327,041	334,090
Total	1,275,243	1,244,888	1,482,013	850,222	1,512,610	622,794	574,319	672,054	691,341	544,846	697,623	712,163
New Services Installed												
Fort St. John	265		158		83		89		95		90	90
Dawson Creek	137		45		32		81		54		80	80
Total	402		203		115		170		149		170	170

In response to BCUC IR 27.2 in Exhibit B-3, PNG(NE) stated:

> The volatile nature of the economics in the oil and gas industry influences the development opportunities in northeastern British Columbia. The markets can turn upwards or downwards at any moment, depending upon the macroeconomics faced by Canada and the world. PNG(NE) submits that its utilization of the five-year average expenditure is considered appropriate, as it allows the company to level the impacts of any economic shift that is experienced by regional markets. A five-year timeframe has historically provided a reasonable timescale for gaining an accurate representation of the average for that market.

In response to BCOAPO IR 1.2, PNG(NE) stated that with respect to the impact of the COVID-19 pandemic and its Forecast Capital Expenditures "PNG(NE) has not revised its forecasted capital expenditures at this time and will be monitoring this closely in the coming weeks."

82.3 With consideration to the impact of COVID-19 on PNG(NE) and its operations, please discuss whether the use of the five-year average expenditure for forecasting new services remains appropriate for the Test Period. If yes, please explain why. If not, please provide any revised forecasts, as applicable.

Response:

PNG(NE) is of the view that the five-year average expenditure forecast remains appropriate for forecasting new services for the Test Period, even considering COVID-19. Health guidelines and protocols for COVID-19 have designated construction workers as an essential service, and continue to allow for developer/construction activities, including home and business builds. PNG(NE) internal protocols will continue to allow for internal and contractor labor to proceed safely with new gas infrastructure installations. PNG(NE) is ensuring the appropriate safety plans and procedures are in place, including the use of PPE (personal protective equipment), frequent hand washing, and physical distancing.

82.3.1 Please discuss whether PNG(NE) has considered revisions to any other capital expenditure forecast methodologies included in the Amended Application.

Response:

As discussed in PNG(NE)'s response to Question 65.1.1, PNG(NE) does not expect any material impact on the timing of any IT projects or other capital projects as a result of COVID-19. As such, PNG(NE) does not consider a revision to its capital expenditure forecast methodology necessary.

On page 65 of the FSJ/DC Amended Application, PNG(NE) states regarding New Services:

> The test year forecast has been made in consideration of the five-year average (2015- 2019) expenditure for this type of work of $759,000 and anticipated activities for the period. [*Emphasis added*]

82.4 Please clarify the scope of the "anticipated activities" referenced in the preamble and their impact on the New Services forecast for both Test Years.

Response:

PNG(NE) submits that the Test Year forecasts has been made in consideration of the five-year average and has used this average as the base and adjusted the average downward in consideration of lower expected demand due to the economic downturn in the region. Consequently, the use of "anticipated activities" meant that consideration had been given and that New Service installations would be below recent levels, and the five-year average has been curved downward to reflect this expectation. PNG(NE) notes that the five-year average for New Services was $759,000, however PNG(NE) has provided for $698,000 in Test Year 2020 and $712,000 in Test Year 2021.

83.0 Reference: RATE BASE
Exhibit B-3, BCUC IR 28.1, 28.4
Mobile/Heavy Equipment

In response to BCUC IR 28.1 in Exhibit B-3, PNG(NE) provided the following table showing decision and actual mobile/heavy equipment costs from 2015 to 2019, as well as forecasts for 2020 and 2021:

	2015		2016		2017		2018		2019		2020	2021
	Decision	Actual	Decision	Actual	Decision	Actual	Decision	Actual	Decision	Actual	Forecast	Forecast
Mobile	174,433	160,359	284,070	485,047	96,200	172,004	123,655	134,130	338,640	355,463	333,540	462,978
Heavy Equipment	120,567	128,834	105,060	93,214	-	-	80,988	89,681	42,969	44,341	195,840	312,120
Total	295,000	289,193	389,130	578,261	96,200	172,004	204,643	223,811	381,609	399,803	529,380	775,098

83.1 Please elaborate on the likelihood of all mobile & heavy equipment purchasing taking place in 2020 and 2021 given the significant increase relative to previous years.

Response:

PNG(NE) has a high degree of confidence that all planned mobile and heavy equipment purchases for 2020 and 2021 will be completed. PNG(NE) notes that it has already placed the majority of purchase orders with relevant suppliers for all equipment identified for purchase in 2020. Further, several pieces of mobile and heavy equipment have already been received, with the latest delivery on the last piece of equipment anticipated for August 2020.

PNG(NE) plans to place the necessary purchase orders for equipment due to be purchased in 2021 with the relevant suppliers during the first quarter of 2021. This early engagement enables the supply chain to delivery the necessary equipment within the 2021 time period.

83.2 Please discuss whether PNG shares mobile/heavy equipment between West and NE divisions. Please elaborate on the pros and cons of any type of vehicle sharing approach between PNG divisions.

Response:

PNG-West and PNG(NE) do not generally share mobile/heavy equipment, but may do so on a rare occasion.

The pros of not sharing equipment include:

- Saving on transportation costs shuttling equipment between the various areas.
- Ensuring the availability of the necessary equipment in the service area during busy construction periods.
- Ensuring the availability of the necessary equipment in emergency situations.
- The requirements of the equipment between the divisions can differ slightly, which results in potential cost savings during procurement activities.

The main argument to not sharing equipment between divisions is the potential for equipment to sit idle. However, this has not been a matter of concern for either PNG-West or PNG(NE).

In response to BCUC IR 28.4 in Exhibit B-3 requesting annual cost savings and incremental costs as a result of the primary contract closing down its operation, PNG(NE) stated:

> Cost savings annually are significant. For example, a contractor working the 6-month construction season will invoice PNG(NE) approximately $12,000/month for use of a backhoe. PNG(NE) submits that a $72,000 annual charge for use of a backhoe is a great stimulus for procurement of its own equipment that can be used for core work and emergency response. As a further example, PNG(NE) notes that the contractor's overtime rate was higher than PNG(NE)'s internal overtime labour rate, making it more reasonable for PNG(NE) to do as much of the work as practicable.

83.3 Please explain whether the cost savings have been factored into the Test Period for all divisions (PNG-West, PNG(NE) FSJ/DC and TR). If yes, please provide the account where the savings are realized.

Response:

PNG(NE) notes that the primary contractor referred to BCUC IR 28.4 closed down its operation at the end of 2018. The primary contractor was only used in PNG(NE) and for the most part worked on capital projects. Costs from the primary contractor coded to operating expense accounts totaled $67,600 and $62,800 in 2017 and 2018, respectively, the majority of which were coded to BCUC accounts 667, 670, 865 and 875. PNG(NE)'s forecast costs for Test Year 2020 and Test Year 2021 take into consideration the operational impacts arising from this change.

84.0 Reference: RATE BASE
Exhibit B-3, BCUC IR 29.1 29.3; PNG(NE) 2018-2019 RRA proceeding, Exhibit B-9, BCUC IR 80.3.
Distribution Main Improvements – Mechanical Couplings

In response to BCUC IR 29.1 in Exhibit B-3, PNG(NE) stated:

> PNG(NE) can confirm that it has approximately 3,250 mechanical couplings, approximately 85% of the population, remaining to replace in Dawson Creek service area. In the Fort St John service area, PNG(NE) has approximately 1,500 mechanical coupling, approximately 35% of the population, remaining to replace.

84.1 Please confirm whether PNG(NE) has determined the location of the mechanical couplings that remain to be replaced in each of the Dawson Creek and Fort St John service areas.

Response:

PNG(NE) has not determined the location of all the mechanical couplings remaining to be replaced, however, it does believe that the majority of the locations have been identified. Deficiencies have been identified with inconsistent recording practices on the legacy as-built drawings that were created during the installation period when mechanical couplings were being utilized.

To identify the locations, and the approximate numbers PNG(NE) utilizes a number of methodologies, including:

- Reviewing of available records.
- Knowledge of the areas and based on a comparison of similar years of development.
- Knowledge from historical repairs or infrastructure abandonments that were found to have utilized the couplings.
- Information gathered while conducting line locating and other system works.
- While undertaking underground leak causation analysis.

84.1.1 Please discuss whether PNG(NE) has assessed the replacement priority ranking for the mechanical couplings that remain to be replaced in its service areas. Please elaborate how PNG(NE) selects the mechanical couplings which are to be replaced each year.

Response:

PNG(NE) continually assesses the replacement priority ranking of the remaining mechanical couplings. The mechanical couplings that are selected for replacement each year are based upon several factors, including:

- Previous underground leaks.
- Known areas of concern.
- Safety or operational considerations.
- Areas that have experienced underground leaks due to previous geological movement.
- Areas where other operational or integrity projects are occurring.

In response to BCUC IR 80.3 in the PNG(NE) 2018-2019 RRA proceeding BCUC IR 80.3, PNG(NE) stated:

> Mechanical couplings were used to join pieces of steel pipe together instead of welded joints. They were originally installed without re-enforcement to prevent them from pulling apart. Couplings are not specifically mentioned in the latest Distribution Integrity Management Plan (DIMP) published December 18, 2017, but are included in the broader category of Natural Forces causing damage to facilities due to ground movement (frost, etc.) or falling debris (ice, snow, etc.). Frost action in some soils can cause movement of the ground with sufficient force and displacement to pull apart unreinforced couplings.

84.2 Please discuss any alternative approaches PNG(NE) considered to addressing the identified issues with mechanical couplings (e.g. reinforcing un-reinforced couplings, etc).

Response:

PNG(NE) has conducted alternative approaches to address the identified issues. This has included reinforcing un-reinforced couplings with welded mechanical strapping to hold the fitting tight.

84.2.1 Please discuss whether any of the assessed alternatives met the objective of the mechanical coupling replacement program.

Response:

Unfortunately, the alternatives considered failed to prevent the mechanical couplings from breaking. This has resulted in the decision to replace, rather than continuing to attempt reinforcement designs. The preferred repair method is for replacement and removal of the couplings that are subject to the geological movement hazard.

84.2.2 Please provide any cost analyses completed on the acceptable alternatives to the mechanical coupling replacement program.

Response:

As noted in response to Question 84.2.1, the alternative of welded mechanical strapping of the couplings was found to not be acceptable. However, PNG(NE) observes that it found that the costs required to conduct the alternative (strapping) of the couplings is comparable to the costs of replacing them outright. Most of the costs for either project is the excavation costs. Excavation is required on both projects (reinforcement and replacement), by removing the couplings when the excavation has already been conducted removes the risk completely the first time around. This results in no further mobilization, excavation and demobilization costs to return to conduct a repair, which would more than likely be a replacement, if the reinforcement alternative was pursued.

In response to BCUC IR 29.3 in Exhibit B-3, PNG(NE) stated: "As identified, PNG(NE) has a replacement program for these mechanical couplings to mitigate these risks; this replacement program is similar in nature to other North American utilities to remove these aging and obsolete couplings."

84.3 Please provide examples of other North American utilities undergoing or which have undergone similar mechanical coupling replacement programs.

Response:

ATCO Gas in Alberta is currently undertaking a similar replacement program. AltaGas Utilities, PNG(NE)'s sister company operating in Alberta also has plans to undertake a similar mechanical coupling replacement program.

85.0 Reference: RATE BASE
Exhibit B-3, BCUC IR 36.1
Block Valve Installation

In response to BCUC IR 36.1 in Exhibit B-3, PNG(NE) stated:

> Due to the complexities associated with this program the number of valves replaced each year under approved and pursued budgets will depend on the specific valve(s) location and if any cost or resource related synergies can be realized with other programs like the Steel Mains replacement project.

85.1 Please elaborate on the cost or resource related synergies that may be realized between the Block Valve installation program and other programs like the Steel Mains replacement project.

Response:

During execution, PNG(NE) will endeavour to replace a section of main and install a block valve in that same location where respective replacement and install criteria warrant doing so concurrently. Any opportunity for such synergies will save considerable cost through elimination of duplicitous expense and efforts related to traffic control, the complexities on open excavations, asphalt repair and surrounding congested infrastructure. By reducing the activities to a single discrete location and undertaking activities concurrently the costs to mitigate the associated asset risks will be minimized.

85.1.1 Please clarify whether PNG(NE) anticipates any cost or resource related synergies between the projects during the current Test Years and whether any cost savings have been accounted for in the Amended Application.

Response:

For Test Year 2020, one of the identified locations will involve installing a block valve and replacing a section of steel main at the same construction zone. This has been factored into the Test Year 2020 forecast and is reflected in the Amended Application.

86.0 Reference: RATE BASE
PNG(NE) 2018-2019 RRA proceeding, Exhibit B-9, BCUC IR 91.1.
Baldonnel Line Lowering

In response to BCUC IR 91.1 in the PNG(NE) 2018-2019 RRA proceeding, PNG(NE) stated:

> A site visit in early 2016 noted the lagoon had grown, was in a state of near breach, had previously breached and was actively seeping on to the right of way. … PNG(NE) has reached out to the Ministry of Environment (MOE), which permits the lagoon and has caused the owner to make repairs but the problems continue.
>
> As of late April 2018, PNG(NE) requested the MOE to cause the permit holder to cease discharging effluent in the lower 3rd of the coulee slope which significantly contributes to the already noted geotechnical issues. The BC OGC has also been kept abreast of this issue. As geotechnical conditions can and are being exacerbated by the lagoon's seepage, continuous state of near failure, and the permitted activity (MOE) of discharging into the coulee, PNG(NE) has determined that the best course of action to ensure the integrity of the pipeline and the security of gas supply is to relocate the pipeline away from the ongoing threat from the lagoon discharge and the present geotechnical risk.

86.1 Please provide an update regarding any responses received from the Ministry of Environment (MOE) regarding this lagoon. Please also provide an update regarding any repair directives issued by the MOE to the lagoon owner and the outcome of any directed repairs.

Response:

The Ministry of Environment (MOE) directed the owner to contract a geotechnical engineering firm to do a stability test on the berm and was required to have an inspection and sign off completed. Repair work was performed and a report was submitted, resulting in the berm being deemed stable. The repair work was done without consent or a crossing / proximity agreement between the owner and PNG(NE) for work adjacent and across the PNG(NE) high pressure pipelines. As a result, the work was done in contravention of the governing acts and regulations. PNG(NE) has maintained contact and has an enforcement expectation with the BC Oil and Gas Commission (BCOGC). To date, the BCOGC has not been willing to act on the violation. The berm is still within the PNG(NE) pipeline legal right of way.

87.0 Reference: RATE BASE
Exhibit B-3, BCUC IR 34.1
Asset Records Modernization Project (ARM)

In response to BCUC IR 34.1 in Exhibit B-3, PNG(NE) provided the following table that breaks down the ARM costs allocated to each division.

Asset Records Modernization Project	2018		2019		2020	2021
Capital Costs ($)	Decision	Actual	Decision	Actual	Forecast	Forecast
PNG-West	270,906	199,373	295,015	249,676	182,029	12,641
PNG(NE) FSJ/DC	15,351	-	-	-	76,500	244,598
PNG(NE) TR	-	-	-	-	-	15,502
Total	286,257	199,373	295,015	249,676	258,529	272,741

87.1 Please provide the basis of allocating project costs to the divisions and explain whether actual costs are allocated differently from forecast costs.

Response:

PNG(NE) advises that project costs are allocated to the divisions based on the estimated schedule and the nature of the work-in-progress that is expected to be completed in the forecast year. All of the work for 2020 forecasted for PNG(NE) is planned for FSJ/DC, hence costs allocated as such. For cost of work forecasted for PNG(NE) for 2021, costs were allocated based on the 2019 composite average cost allocators attributable to PNG(NE) only.

Actual costs for 2018 and 2019 have been allocated based on the location and nature of the work completed.

87.2 Please explain whether there are any ongoing annual maintenance or sustainment costs that will be associated with the project and provide the annual costs by account number.

Response:

Work to date has been limited to the updating, creation, and digitization of existing asset records. Once these efforts are complete the records will be hosted in an electronic platform. Maintenance or sustainment costs are expected to be minimal and will not be incurred until future test periods.

88.0 Reference: RATE BASE
Exhibit B-3, BCUC IR 37.1; PNG-West Division 2018-2019 RRA proceeding, Exhibit B-6, BCUC IR 91.1
Information and Data Management Systems – Geographic Information System (GIS)

In response to BCUC IR 37.1 in Exhibit B-3, PNG(NE) provided the following table that breaks down the consolidated GIS costs allocated to each division.

	Allocation	2018		2019		2020		Total	
	Forecast	Forecast	Actual	Forecast	Actual	Forecast	Projected	Forecast	Projected
PNG-West	62.34%	$ 441,000	$ 449,242	$ 671,000	$ 658,565	$ 399,500	$ 403,694	$ 1,511,500	$ 1,511,500
PNG(NE) - FSJ/DC	36.40%	$ 242,000	$ 212,884	$ 377,000	$ 355,372	$ 233,300	$ 284,044	$ 852,300	$ 852,300
PNG(NE) - TR	1.26%	$ 8,700	$ 7,670	$ 13,500	$ 13,612	$ 8,100	$ 9,017	$ 30,300	$ 30,300
Total	100.00%	$ 691,700	$ 669,796	$ 1,061,500	$ 1,027,549	$ 640,900	$ 696,755	$ 2,394,100	$ 2,394,100

In response to BCUC IR 91.1 in the PNG-West 2018-2019 RRA proceeding, PNG stated: "[t]hese costs will be allocated to each division based on the shared services cost allocation methodology."

88.1 Please explain whether actual costs are allocated differently from forecast costs. If so, please discuss the methodology of allocating actual costs. If not, please clarify why the actual amount allocated does not equal the forecast allocation percentage in the table above.

Response:

PNG(NE) confirms that costs are allocated to each division based on the shared services cost allocation methodology. The actual allocation changes slightly from one year to the next and the actual allocation reflects an average of the actual shared services cost allocation factors for 2018, 2019 and 2020. In addition, PNG draftspersons charge their time spent on the implementation of the GIS to the GIS project. These costs are recorded in the division related to the work done by the draftspersons. PNG(NE) notes that the difference in the actual and forecast allocation amounts to a transfer of $19,000 from PNG-West to PNG(NE). If, at the end of the project, charges from PNG's internal labour alter the allocation of the project to a material degree, PNG would consider reallocating those costs to align with the shared services cost allocation methodology.

89.0 Reference: RATE BASE
Exhibit B-3, BCUC IR 44.5
Information and Data Management Systems – Synergi Gas Software

In response to BCUC IR 44.5 in Exhibit B-3, PNG(NE) provided breakdown of total hydraulic modelling system costs over the Test Period.

Hydraulic modelling system Capital Costs ($)	2021 Forecast
PNG-West	128,369
PNG(NE) FSJ/DC	71,116
PNG(NE) TR	4,515
Total capital costs	204,000

Further in the same response PNG(NE) stated: "All costs for the test period are of a capital nature given that activities are limited to the capitalization of implementation costs and exclude any operating expense related sustainment costs expected to be incurred in future test periods."

89.1 Please discuss the timeline to complete this project. If the timeline extends beyond the Test Period, please expand the above table to breakdown the total hydraulic modelling system costs by year.

Response:

In line with the responses to BCUC IR 125.1 and 125.3 in the PNG-West 2020-2021 RRA proceeding, PNG(NE) submits that the hydraulic modelling system project is forecast to be completed within the 2022 test year. The cost forecast for the current Test Period is an estimation of costs to be incurred within the Test Period. Any additional efforts and costs will be carried forward into the 2022 test year for completion. Total project costs will not be known until a later date, once the exploration phase of the project is completed and the replacement or supplementary modelling system has been selected, which will allow for detailed definition of the implementation phase.

89.2 Please provide the annual sustainment costs associated with the hydraulic modelling system. Please breakdown the estimated costs by account.

Response:

Similar to the response to Question 89.1 on total hydraulic modelling system project costs, annual sustainment costs will not be known until a later date once the exploration phase of the project is completed and the replacement or supplementary modelling system has been selected, which will allow for detailed definition of the implementation phase.

J. CAPITAL STRUCTURE AND RETURN ON CAPITAL

90.0 Reference: CAPITAL STRUCTURE AND RETURN ON CAPITAL
Exhibit B-3, BCUC IR 46.1, 46.4
Financing Costs

In response to BCUC IR 46.1 in Exhibit B-3, PNG(NE) provided an update to the forecast short-term and long-term interest rates and the resulting impact on the 2020 and 2021 cost of service for Fort St John, Dawson Creek and Tumbler Ridge. PNG(NE)'s statements for each region is provided below:

Fort St John

The resulting impact on the 2020 and 2021 cost of service from the updated 90 day treasury bill rate on Fort St John's 2020 and 2021 short term debt costs would result in a decrease in costs of $23,000 and $40,000, respectively.

The resulting impact on the 2020 and 2021 cost of service from the updated 90 day treasury bill rate on Fort St John's 2020 and 2021 long term debt costs would result in a decrease in costs of $98,000 and $134,000, respectively.

Dawson Creek

The resulting impact on the 2020 and 2021 cost of service from the updated 90 day treasury bill rate on Dawson Creek's 2020 and 2021 short term debt costs would result in a decrease in costs of $22,000 and $31,000, respectively.

The resulting impact on the 2020 and 2021 cost of service from the updated 90 day treasury bill rate on Dawson Creek's 2020 and 2021 long term debt costs would result in a decrease in costs of $42,000 and $73,000, respectively.

Tumbler Ridge

The resulting impact on the 2020 and 2021 cost of service from the updated 90 day treasury bill rate on Tumbler Ridge's 2020 and 2021 short term debt costs would result in a decrease in costs of $4,000 and $5,000, respectively.

The resulting impact on the 2020 and 2021 cost of service from the updated 90 day treasury bill rate on Tumbler Ridge's 2020 and 2021 long term debt costs would result in a decrease in costs of $16,000 and $23,000, respectively.

90.1 Please discuss the 2020 and 2021 rate impact of using the revised 90 day treasury bill interest rate forecast.

Response:

Please see the discussion that follows.

Fort St. John

Based on the revised 90 day treasury bill interest rate forecast and the associated impact on Fort St. John's 2020 short term and long term debt costs of $23,000 and $98,000, respectively, PNG(NE) estimates that delivery rates to residential customers would decline by approximately 1.2% or by $6.40 to the average residential annual bill.

Based on the revised 90 day treasury bill interest rate forecast and the associated impact on Fort St. John's 2021 short term and long term debt costs of $40,000 and $134,000, respectively, PNG(NE) estimates that delivery rates to residential customers would decline by approximately 1.6% or by $9.52 to the average residential annual bill.

Dawson Creek

Based on the revised 90 day treasury bill interest rate forecast and the associated impact on Dawson Creek's 2020 short term and long term debt costs of $22,000 and $42,000, respectively, PNG(NE) estimates that delivery rates to residential customers would decline by approximately 1.2% or by $6.04 to the average residential annual bill.

Based on the revised 90 day treasury bill interest rate forecast and the associated impact on Dawson Creek's 2021 short term and long term debt costs of $31,000 and $73,000, respectively, PNG(NE) estimates that delivery rates to residential customers would decline by approximately 1.6% or by $9.12 to the average residential annual bill.

Tumbler Ridge

Based on the revised 90 day treasury bill interest rate forecast and the associated impact on Tumbler Ridge's 2020 short term and long term debt costs of $4,000 and $16,000, respectively, PNG(NE) estimates that delivery rates to residential customers would decline by approximately 1.2% or by $8.78 to the average residential annual bill.

Based on the revised 90 day treasury bill interest rate forecast and the associated impact on Tumbler Ridge's 2021 short term and long term debt costs of $5,000 and $23,000, respectively, PNG(NE) estimates that delivery rates to residential customers would decline by approximately 1.5% or by $12.15 to the average residential annual bill.

K. CAPITAL EXPENDITURE REPORTING – ACTUAL VS DECISION

91.0 Reference: CAPITAL EXPENDITURE REPORTING – ACTUAL VS DECISION
Exhibit B-3, BCUC IR 51.3; PNG(NE) 2018-2019 RRA proceeding, Exhibit B-9, BCUC IR 82.1
Cecil Lake Aluminum Replacement – FSJ

In response to BCUC IR 51.3 in Exhibit B-3, PNG(NE) provided the following table summarizing actual costs for project:

Cecil Lake System Betterment	2018	2019
Labor	$ -	$ 10,035
Materials	-	73,046
Land Rights and Permitting	-	1,530
Contractor	66,663	591,268
Annual Total	$ 66,663	$ 675,879
Total Project Cost	$ 742,542	

Further in response to BCUC IR 51.3 in Exhibit B-3, PNG(NE) stated:

> Final project scope was to enact discrete pipeline and regulating station integrity improvements related to cathodic protection and code compliance from a materials and process design and operation perspective. These activities included, but were not limited to:
>
> - Inspect, repair, and recoat underground (U/G) to aboveground (A/G) piping transitions and improve external coating protection
> - Inspect, repair, and recoat U/G flange sets
> - Improve cathodic protection at the Cecil Lake Purchase station and along the pipeline route to
> - Cecil Lake Station #3
> - Enact operational, integrity and code compliance improvements at Cecil Lake Station #3
> - Line heater replacement including pilings and pipe rack
> - Removal of station yard high pressure to low pressure piping bypass configuration
> - Removal of high risk A/G camelback riser and replace with U/G pipe spool
> - Improve station access approach road Improve operational access within pipe yard
> - Re-pipe station for compliance

91.1 Please provide a breakdown of actual 2018 and 2019 contractor costs for the activities included in the preamble and any other activities that are not included in the preamble.

Response:

Please see the table that follows that presents actual costs for all identified 2018 and 2019 contractor activities.

Contractor Activity	2018	2019
Project Management, Planning, and Engineering	$ 36,470	$ 103,004
Archeology and Environmental (including Soil Sampling)	2,598	3,558
Surveying	27,595	19,611
Inspect, Repair, and Recoat U/G to A/G Transitions, Flange Sets, and Improve Coating Protection		122,463
Improve Cathodic Protection		14,137
Lineheater and Associated Piping Replacement		88,821
HP to DP Bypass Piping Removal, Camelback Removal, and Re-pipe Station for Compliance		145,039
Improve Access / Egress to and within Station Yard		43,741
Quality Inspection and Construction Coordination		50,894
Total	$ 66,663	$ 591,268

In response to BCUC IR 82. 1 in the PNG(NE) 2018-2019 RRA proceeding BCUC IR 82.1, PNG(NE) stated:

> In addition to the change in pipeline materials, the project scope is proposed to include an increase in pipeline diameter and modifications to existing pressure regulating stations as required in order to rectify an existing capacity constraint within the Cecil Lake area distribution system currently supplied by the aluminum pipeline.

91.2 Please discuss whether the project scope in addition to the change in pipeline material described in the preamble has been completed in 2018 and 2019. Please discuss any Cecil Lake System modifications or betterments which have not been completed and are still required.

Response:

Changes to the Cecil Lake System in 2018 and 2019 were limited to those listed in response to BCUC IR 51.3 and reproduced in the preamble to this 91.0 series of questions. Due to a sharp decline in the demand for fuel gas for compressors and general industrial activity and demand for gas in the Cecil Lake area, the justification for any previously proposed increase in pipeline diameter or system capacity related station modifications was determined to no longer be valid.

The Cecil Lake System continues to be monitored from both system integrity and system capacity perspectives. There are no currently identified system modifications or betterments to be completed within the 2020-2021 test period.

91.2.1 If any modifications or betterments are outstanding, please provide the cost estimates to complete the work.

Response:

Not applicable. Please see the response to Question 91.2.

91.2.2 Please provide the rationale for treating the project expenditures as capital expenditures, with reference to the applicable US GAAP section(s) as it relates to the nature of expenditures.

Response:

PNG(NE) notes that under US GAAP, an expenditure that adds to the productive capacity, extends the useful life of an asset or improves the efficiency of an existing facility can be considered a capital item. US GAAP ASC 360-10-30-1 provides guidance for the costs to be capitalized as "the historical cost of acquiring an asset includes the costs necessarily incurred to bring it to the condition and location necessary for its intended use". The costs incurred, as referenced, to increase the pipeline size and other modifications needed to rectify capacity constraints provide future benefit and meet the capitalization criteria as described.

L. COST OF SERVICE REPORTING – ACTUAL VS DECISION

92.0 Reference: COST OF SERVICE REPORTING – ACTUAL VS DECISION
Exhibit B-2 FSJ/DC, Tab 1, p. 4; Exhibit B-3, BCUC IR 58.1
Account 875 – Mains and Service

In response to BCUC IR 58.1 in Exhibit B-3, PNG(NE) stated:

> PNG(NE) does not have a definitive conclusion to the reasoning for lower than anticipated repairs in 2019. One factor may be the enhanced focus given to contractor engagement for awareness of PNG(NE) assets in recent years. Another factor may be the reduction in economic growth experienced in the area resulting in less excavation works which gives less opportunity for line hits. There is also a potential that this year could be an outlier in the trends for underground leaks.

The following is a BCUC Staff extract from Tab 1, page 4 of the FSJ/DC Amended Application.

Line No.	Account and Description	Test Year 2021	Test Year 2020	Decision 2019	Actual 2019	Actual 2018	Actual 2017	Actual 2016	Actual 2015
7	875 Mains and services	175	171	168	87	103	93	151	85

92.1 Considering the constant fluctuations of actual costs for Account 875, increasing/decreasing every second year, please explain why Test Year 2021 forecast costs are expected to remain consistent to 2020.

Response:

PNG(NE) does not believes that it would be appropriate to budget for repairs using the trend identified. PNG(NE) submits that, due to the unpredictable nature of repairs, it remains appropriate to have a relatively consistent provision from test year to test year. PNG(NE) will monitor the trend identified by the BCUC and will investigate for any underlying causations that are contributing to the fluctuations should they continue.

93.0 Reference: COST OF SERVICE REPORTING – ACTUAL VS DECISION
Exhibit B-4, BCUC IR 13.1;
Account 688 – Other General Operations

In response to BCUC IR 13.1 in Exhibit B-4, PNG(NE) stated:

> In 2020, PNG will be conducting an internal table-top exercise utilizing the Emergency Response Plan across the organization, including the PNG-West and the PNG(NE) divisions and a full-scale exercise in 2021 utilizing external resources and agencies.

93.1 Please provide the forecast cost associated with the Emergency Response Plan for 2020 and 2021 by account and division (PNG-West, FSJ/DC and TR).

Response:

Forecast costs associated with the Emergency Response Plans are provided in the table that follows.

Year	PNG West	PNG(NE)
2020	$35,500	$35,500
2021	$45,500	$67,500

PNG(NE) notes the following:

- The costs identified are external contractor costs only.
- The costs associated with PNG internal resources will vary dependant upon the number of participants in each exercise. However, these costs are accounted for as part of PNG's training budgets.
- The difference in 2021 costs between PNG-West and PNG(NE) can be attributed to PNG(NE) being required to conduct a full-scale exercise in 2021, whereas PNG-West will be conducting a functional exercise.

M. OTHER MATTER TO BE ADDRESSED FROM PRIOR YEAR DECISIONS

94.0 Reference: OTHER MATTER TO BE ADDRESSED FROM PRIOR YEAR DECISIONS
Exhibit B-3, BCUC IR 62.3, 62.6, 62.8.1 and 62.8.2
Reporting on Significant Capital Projects

In response to BCUC IR 62.3 in Exhibit B-3, PNG provided the following table to show the proposed threshold as a percentage of actual capital expenditures.

PNG (NE) FSJ/DC					
($000's)	Actual 2019	Actual 2018	Actual 2017	Actual 2016	Actual 2015
Proposed threshold	500	500	500	500	500
Actual capital expenditures	5,566	4,348	4,641	5,267	6,296
Threshold as % of Actual	9.0%	11.5%	10.8%	9.5%	7.9%

PNG (NE) TR					
($000's)	Actual 2019	Actual 2018	Actual 2017	Actual 2016	Actual 2015
Proposed threshold	500	500	500	500	500
Actual capital expenditures	320	1,662	491	286	169
Threshold as % of Actual	156.3%	30.1%	101.8%	174.8%	295.9%

94.1 Please recast the table above to illustrate the capital expenditures that would be captured based on a $500,000 threshold as a percentage of total capital expenditures for each year between 2015 and 2019.

Response:

PNG(NE) notes that the tables provided in response to BCUC IR 62.5 illustrated projects captured based on a $500,000 threshold as a percentage of total capital expenditures for each year between 2017 and 2019. PNG(NE) submits that it would be more meaningful to recast those tables by including 2015 and 2016 capital project detail and has done so in the tables that follow.

PNG (NE) FSJ/DC

	Project Type *	Plant in Service Account Number	2019 Actual Expenditure Excluding Overhead	2018 Actual Expenditure Excluding Overhead	2017 Actual Expenditure Excluding Overhead	2016 Actual Expenditure Excluding Overhead	2015 Actual Expenditure Excluding Overhead	Total	> $500,000
Planned - Non-Recurring									
Cecil Lake Aluminum Replacement - FSJ	SB	465	675,879	66,663				742,542	Yes
Geographical Information System	GP	487	345,050	212,884				557,934	Yes
Main Repairs and Assessments	SB	465/475	305,938	33,317				339,256	No
Station Modifications	SB	467	276,655				30,482	307,137	No
Steel Main Replacement - DC	SB	465	150,692	34,987				185,679	No
Baldonnel Line Lowering - Phase 1 - FSJ	SB	465	103,891					103,891	No
Block Valve Installation - DC	SB	465	545,594					545,594	Yes
Structure Improvements	GP	482	128,933	36,123	38,786	179,948		383,790	No
Pennwest Pipeline Replacement FEED Study	SB	465	38,342		(14,909)	14,909		38,342	No
Computer Hardware/Software	GP/GP-I	487	303,922					303,922	No
DC Gate #1 Station Replacement	SB	467		1,468,943	77,406	28,797		1,575,146	Yes
Replace Line Heaters	SB	467		170,036	41,400	55,224	85,270	351,931	No
Electrical and Communications Improvements	SB	467		38,961	20,502	99,938	118,499	277,900	No
New/Replacement Tools and Equipment	GP	486		31,036				31,036	No
Unspecified Other System Betterments	SB	465			95,865	173,883	27,808	297,557	No
Indian Creek Line Relocation	SB	465			848,549	54,657		903,206	Yes
BC Hydro Site C	NB	475				403,315	603,406	1,006,721	Yes
Regional LNG Facility	NB	475				1,086,431	4,188	1,090,620	Yes
Wonowan Unloading Post - FSJ	NB	477				77,631	66,900	144,531	No
Cathodic Protection RMU	SB	465/475					88,056	88,056	No
Aluminum Line Replacement	NB	465					1,121,794	1,121,794	Yes
Total Planned - Non-Recurring Projects			**2,874,896**	**2,092,950**	**1,107,598**	**2,174,735**	**2,146,403**	**10,396,582**	
Total Capital Projects			**5,565,504**	**4,348,482**	**4,640,803**	**6,072,182**	**6,296,152**	**26,923,123**	
Planned - Non-Recurring Projects as % of Total Capital Projects			**51.7%**	**48.1%**	**23.9%**	**35.8%**	**34.1%**	**38.6%**	
Projects Exceeding $500,000 Threshold			**1,566,523**	**1,748,490**	**925,954**	**1,573,201**	**1,729,388**	**7,543,556**	
Projects Exceeding $500,000 Threshold as % of Total Capital Projects			**28.1%**	**40.2%**	**20.0%**	**25.9%**	**27.5%**	**28.0%**	

PNG (NE) TR

	Project Type *	Plant in Service Account Number	2019 Actual Expenditure Excluding Overhead	2018 Actual Expenditure Excluding Overhead	2017 Actual Expenditure Excluding Overhead	2016 Actual Expenditure Excluding Overhead	2015 Actual Expenditure Excluding Overhead	Total	> $500,000
Planned - Non-Recurring									
Processing Plant Improvements	SB	418	25,530			48,983	108,995	183,509	No
Geographical Information System	GP	487	12,243	7,670				19,913	No
Computer Hardware/Software	GP/GP-I	487	18,901					18,901	No
Structure Improvements	GP	482	5,400	57,400		14,972		77,772	No
TR Transmission Mainline Repair	SB	465	258,104	1,411,137	84,562	193,515		1,947,318	Yes
Amine Cooler Bundle Replacement	SB	418		128,316	6,763			135,079	No
Unplanned - Electrofusion Tee Replacements	SB	475			108,000			108,000	No
Line Heater TR Gate Stn	SB	467			122,380	29		122,409	No
Station Modifications	SB	467				18,578		18,578	No
Other Minor System Betterment Projects	SB	various					14,461	14,461	No
Total Planned - Non-Recurring Projects			**320,178**	**1,604,523**	**321,705**	**276,078**	**123,456**	**2,645,941**	
Total Capital Projects			**320,178**	**1,661,507**	**321,705**	**286,269**	**169,101**	**2,758,761**	
Planned - Non-Recurring Projects as % of Total Capital Projects			**100.0%**	**96.6%**	**100.0%**	**96.4%**	**73.0%**	**95.9%**	
Projects Exceeding $500,000 Threshold			**258,104**	**1,411,137**	**84,562**	**193,515**	**-**	**1,947,318**	
Projects Exceeding $500,000 Threshold as % of Total Capital Projects			**80.6%**	**84.9%**	**26.3%**	**67.6%**	**0.0%**	**70.6%**	

In response to BCUC IR 62.6 in Exhibit B-3, PNG stated it "…did not consider other project characteristics beyond a dollar threshold in determining which projects should be included in the proposed reporting."

94.2 For each of the FSJ/DC and TR Divisions please provide the capital expenditure reporting threshold of $250,000, $500,000, and $750,000 as a percentage of total rate base, with supporting calculations.

Response:

Please see the tables that follow.

FSJ/DC ($000's)	Actual 2019	Actual 2018	Actual 2017	Actual 2016	Actual 2015
Total Rate Base (Mid-year) (A)	72,776	69,325	67,384	63,383	59,450
Threshold as % of Ratebase:					
$250 divided by (A)	0.34%	0.36%	0.37%	0.39%	0.42%
$500 divided by (A)	0.69%	0.72%	0.74%	0.79%	0.84%
$750 divided by (A)	1.03%	1.08%	1.11%	1.18%	1.26%

TR ($000's)	Actual 2019	Actual 2018	Actual 2017	Actual 2016	Actual 2015
Total Rate Base (Mid-year) (A)	4,309	3,281	3,202	3,609	3,042
Threshold as % of Ratebase:					
$250 divided by (A)	5.80%	7.62%	7.81%	6.93%	8.22%
$500 divided by (A)	11.60%	15.24%	15.62%	13.85%	16.44%
$750 divided by (A)	17.41%	22.86%	23.42%	20.78%	24.65%

FSJ/DC & TR ($000's)	Actual 2019	Actual 2018	Actual 2017	Actual 2016	Actual 2015
Total Rate Base (Mid-year) (A)	77,085	72,606	70,586	66,992	62,492
Threshold as % of Ratebase:					
$250 divided by (A)	0.32%	0.34%	0.35%	0.37%	0.40%
$500 divided by (A)	0.65%	0.69%	0.71%	0.75%	0.80%
$750 divided by (A)	0.97%	1.03%	1.06%	1.12%	1.20%

94.3 Please discuss the pros and cons of using the following factors to determine the capital expenditure reporting threshold:

- Threshold as a percentage of total rate base;
- Total annual project expenditures captured by the capital expenditure reporting threshold as a percentage of total annual project expenditures; and
- Number of projects per year captured by the threshold.

Response:

PNG(NE) observes that the BCUC directive for the proposed reporting was in the context of allowing the BCUC an opportunity to assess whether a CPCN process would be in the public interest, in particular for multi-year projects.

Further, as noted in response to BCUC IR 62.6, PNG(NE) indicated it would not anticipate undertaking a CPCN process for a project with a cost less than $500,000.

Further, in response to BCUC IR 62.8, PNG(NE) has indicated it has traditionally made use of an informal minimum threshold of $1,000,000 as a general guideline in deciding on whether to file CPCNs or 44.2 applications. However, a cursory review of other utilities under the BCUC's jurisdiction suggest that this threshold may be on the low side, with PNG(NE) submitting that a CPCN threshold between $1,500,000 to $2,000,000 may be more appropriate.

In response to this question, PNG(NE) provides the comments that follow:

Factor	Pros	Cons
Threshold as a percentage of total rate base	• Provides a rationale and relevant base for a threshold to be applied to a rate base component • Allows for consideration of materiality of capital expenditures to be reported • Once established is anticipated to be reasonably consistent period-over-period	• No concerns noted
Total annual project expenditures captured by the capital expenditure reporting threshold as a percentage of total annual project expenditures	• A consistent percentage of total annual project expenditures would be captured in the reporting	• No clear connection to the objective of identifying projects for which a CPCN may be in the public interest • Due to fluctuations in annual capital spending programs, threshold would be subject to volatility for each reporting period
Number of projects per year captured by the threshold	• A consistent proportion of the number of annual projects would be captured in the reporting	• No clear connection to the objective of identifying projects for which a CPCN may be in the public interest • Due to fluctuations in annual capital spending programs, threshold would be subject to volatility for each reporting period

In response to BCUC IR 62.8.2 in Exhibit B-3, PNG stated:

> As noted in the response to Question 62.8, PNG-West and PNG(NE) have made use of an informal minimum threshold of $1,000,000 as a general guideline in deciding on whether to file CPCNs or 44.2 applications. A cursory review of other utilities under the BCUC's jurisdiction suggest that this threshold may be on the low side.
>
> If a threshold were to be established, PNG(NE) suggests that a greater amount, say between $1,500,000 to $2,000,000, may be more appropriate as it would potentially reduce the regulatory burden on PNG(NE). Based on actual experience for 2017 to 2019, projects at the $1,500,000 to $2,000,000 expenditure level would represent 25.5% of total capital expenditures for FSJ/DC and 78.1% of total capital expenditures for TR during this period. As per the table provided in response to Question 62.5 with data for 2015 to 2019, this higher threshold would have required two CPCN applications during this time period, one for FSJ/DC (DC Gate #1 Station Replacement) and one for TR (TR Transmission Mainline Repair), the same as would be required at a $1,000,000 threshold.

94.4 If the CPCN threshold were to be established at $1,000,000 for the FSJ/DC and TR Divisions, please provide all project expenditures that would be filed as CPCNs as a percentage of total capital expenditures for 2017 to 2019 for each of FSJ/DC and TR.

Response:

As per the tables provided on the page that follows, PNG(NE) has recast the tables provided in response to BCUC IR 62.5 to identify projects with a cost in excess of $1,000,000 and has computed the cost of these projects as a percentage of total capital projects. As computed in the tables, for FSJ/DC identified projects range from nil % of total capital expenditures in 2019 to 33.8% of total capital expenditures in 2018, and average 10.6% of total capital expenditures for the three year period 2017 to 2019. Further, for TR, identified projects range from 26.3% of total capital expenditures in 2017 to 84.9% of total capital expenditures in 2018, and average 76.1% of total capital expenditures for the three year period 2017 to 2019.

PNG(NE) reiterates that the requirement for a CPCN would be determined on a case-by-case basis, depending on the nature, timing and materiality of the project.

PNG (NE) FSJ/DC

	Project Type *	Plant in Service Account Number	2019 Actual Expenditure Excluding Overhead	2018 Actual Expenditure Excluding Overhead	2017 Actual Expenditure Excluding Overhead	Total	> $1,000,000
Planned - Non-Recurring							
Cecil Lake Aluminum Replacement - FSJ	SB	465	675,879	66,663		742,542	No
Geographical Information System	GP	487	345,050	212,884		557,934	No
Main Repairs and Assessments	SB	465/475	305,938	33,317		339,256	No
Station Modifications	SB	467	276,655			276,655	No
Steel Main Replacement - DC	SB	465	150,692	34,987		185,679	No
Baldonnel Line Lowering - Phase 1 - FSJ	SB	465	103,891			103,891	No
Block Valve Installation - DC	SB	465	545,594			545,594	No
Structure Improvements	GP	482	128,933	36,123	38,786	203,842	No
Pennwest Pipeline Replacement FEED Study	SB	465	38,342		(14,909)	23,432	No
Computer Hardware/Software	GP/GP-I	487	303,922			303,922	No
DC Gate #1 Station Replacement	SB	467		1,468,943	77,406	1,546,348	Yes
Replace Line Heaters	SB	467		170,036	41,400	211,436	No
Electrical and Communications Improvements	SB	467		38,961	20,502	59,463	No
New/Replacement Tools and Equipment	GP	486		31,036		31,036	No
Unspecified Other System Betterments	SB	465			95,865	95,865	No
Indian Creek Line Relocation	SB	465			848,549	848,549	No
						-	
Total Planned - Non-Recurring Projects			**2,874,896**	**2,092,950**	**1,107,598**	**6,075,444**	
Total Capital Projects			**5,565,504**	**4,348,482**	**4,640,803**	**14,554,789**	
Planned - Non-Recurring Projects as % of Total Capital Projects			**51.7%**	**48.1%**	**23.9%**	**41.7%**	
Projects Exceeding $1,000,000 CPCN Threshold			**-**	**1,468,943**	**77,406**	**1,546,348**	
Projects Exceeding $1,000,000 Threshold as % of Total Capital Projects			**0.0%**	**33.8%**	**1.7%**	**10.6%**	

PNG (NE) TR

	Project Type *	Plant in Service Account Number	2019 Actual Expenditure Excluding Overhead	2018 Actual Expenditure Excluding Overhead	2017 Actual Expenditure Excluding Overhead	Total	> $1,000,000
Planned - Non-Recurring							
Processing Plant Improvements	SB	418	25,530			25,530	No
Geographical Information System	GP	487	12,243	7,670		19,913	No
Computer Hardware/Software	GP/GP-I	487	18,901			18,901	No
Structure Improvements	GP	482	5,400	57,400		62,800	No
TR Transmission Mainline Repair	SB	465	258,104	1,411,137	84,562	1,753,803	Yes
Amine Cooler Bundle Replacement	SB	418		128,316	6,763	135,079	No
Unplanned - Electrofusion Tee Replacements	SB	475			108,000	108,000	No
Line Heater TR Gate Stn	SB	467			122,380	122,380	No
						-	
Total Planned - Non-Recurring Projects			**320,178**	**1,604,523**	**321,705**	**2,246,407**	
Total Capital Projects			**320,178**	**1,661,507**	**321,705**	**2,303,390**	
Planned - Non-Recurring Projects as % of Total Capital Projects			**100.0%**	**96.6%**	**100.0%**	**97.5%**	
Projects Exceeding $1,000,000 CPCN Threshold			**258,104**	**1,411,137**	**84,562**	**1,753,803**	
Projects Exceeding $1,000,000 Threshold as % of Total Capital Projects			**80.6%**	**84.9%**	**26.3%**	**76.1%**	

94.5 For each division (FSJ/DC and TR) please provide the CPCN threshold that would be required to represent 20 to 30 percent of the total capital expenditures for 2017 to 2019.

Response:

The intent of this question is not clear to PNG(NE).

In the case that the question is to determine a CPCN threshold amount that is 20% and 30% of total capital expenditures, please see the information in the table that follows.

	2019 Actual Expenditure Excluding Overhead	2018 Actual Expenditure Excluding Overhead	2017 Actual Expenditure Excluding Overhead
FSJ/DC			
Total Capital Project Expenditures	$ 5,565,504	$ 4,348,482	$ 4,640,803
CPCN Threshold Equivalent to 20% of Total Capital Expenditures	$ 1,113,101	$ 869,696	$ 928,161
CPCN Threshold Equivalent to 30% of Total Capital Expenditures	$ 1,669,651	$ 1,304,545	$ 1,392,241
TR			
Total Capital Project Expenditures	$ 320,178	$ 1,661,507	$ 321,705
CPCN Threshold Equivalent to 20% of Total Capital Expenditures	$ 64,036	$ 332,301	$ 64,341
CPCN Threshold Equivalent to 30% of Total Capital Expenditures	$ 96,053	$ 498,452	$ 96,512
FSJ/DC and TR			
Total Capital Project Expenditures	$ 5,885,682	$ 6,009,989	$ 4,962,508
CPCN Threshold Equivalent to 20% of Total Capital Expenditures	$ 1,177,136	$ 1,201,998	$ 992,502
CPCN Threshold Equivalent to 30% of Total Capital Expenditures	$ 1,765,705	$ 1,802,997	$ 1,488,752

If the intent of the question is to determine a threshold that captures projects that represent 20% to 30% of total capital expenditures, PNG(NE) notes that such a threshold will vary each year. For example, PNG(NE) notes that as per the table provided in response to Question 94.4, for FSJ/DC projects with a cost in excess of $1,000,000 range from nil % of total capital expenditures in 2019 to 33.8% of total capital expenditures in 2018, and average 10.6% of total capital expenditures for the three year period 2017 to 2019. For TR, identified projects range from 26.3% of total capital expenditures in 2017 to 84.9% of total capital expenditures in 2018, and average 76.1% of total capital expenditures for the three year period 2017 to 2019.

In the table that follows, PNG(NE) has recast the table provided for FSJ/DC in response to Question 94.4 to illustrate that a CPCN threshold of $700,000 would have captured projects representing an average of 21.6% of total capital expenditures over the three year period 2017 to 2019, however on an annual basis projects captured would range from a low of 12.1% of total capital expenditures in 2019 to a high of 35.3% of capital expenditures in 2018.

PNG (NE) FSJ/DC

	Project Type *	Plant in Service Account Number	2019 Actual Expenditure Excluding Overhead	2018 Actual Expenditure Excluding Overhead	2017 Actual Expenditure Excluding Overhead	Total	> $700,000
Planned - Non-Recurring							
Cecil Lake Aluminum Replacement - FSJ	SB	465	675,879	66,663		742,542	Yes
Geographical Information System	GP	487	345,050	212,884		557,934	No
Main Repairs and Assessments	SB	465/475	305,938	33,317		339,256	No
Station Modifications	SB	467	276,655			276,655	No
Steel Main Replacement - DC	SB	465	150,692	34,987		185,679	No
Baldonnel Line Lowering - Phase 1 - FSJ	SB	465	103,891			103,891	No
Block Valve Installation - DC	SB	465	545,594			545,594	No
Structure Improvements	GP	482	128,933	36,123	38,786	203,842	No
Pennwest Pipeline Replacement FEED Study	SB	465	38,342		(14,909)	23,432	No
Computer Hardware/Software	GP/GP-I	487	303,922			303,922	No
DC Gate #1 Station Replacement	SB	467		1,468,943	77,406	1,546,348	Yes
Replace Line Heaters	SB	467		170,036	41,400	211,436	No
Electrical and Communications Improvements	SB	467		38,961	20,502	59,463	No
New/Replacement Tools and Equipment	GP	486		31,036		31,036	No
Unspecified Other System Betterments	SB	465			95,865	95,865	No
Indian Creek Line Relocation	SB	465			848,549	848,549	Yes
						-	
Total Planned - Non-Recurring Projects			**2,874,896**	**2,092,950**	**1,107,598**	**6,075,444**	
Total Capital Projects			**5,565,504**	**4,348,482**	**4,640,803**	**14,554,789**	
Planned - Non-Recurring Projects as % of Total Capital Projects			**51.7%**	**48.1%**	**23.9%**	**41.7%**	
Projects Exceeding $700,000 CPCN Threshold			**675,879**	**1,535,606**	**925,954**	**3,137,439**	
Projects Exceeding $700,000 Threshold as % of Total Capital Projects			**12.1%**	**35.3%**	**20.0%**	**21.6%**	

For TR, PNG(NE) has replicated the table provided in response to Question 94.4 below to illustrate that a CPCN threshold of $1,700,000 would have captured the same projects as a CPCN threshold of $1,000,000, representing an average of 76.1% of total capital expenditures over the three year period 2017 to 2019, however on an annual basis projects captured would range from a low of 26.3% of total capital expenditures in 2017 to a high of 84.9% of capital expenditures in 2018.

PNG (NE) TR

	Project Type *	Plant in Service Account Number	2019 Actual Expenditure Excluding Overhead	2018 Actual Expenditure Excluding Overhead	2017 Actual Expenditure Excluding Overhead	Total	> $1,700,000
Planned - Non-Recurring							
Processing Plant Improvements	SB	418	25,530			25,530	No
Geographical Information System	GP	487	12,243	7,670		19,913	No
Computer Hardware/Software	GP/GP-I	487	18,901			18,901	No
Structure Improvements	GP	482	5,400	57,400		62,800	No
TR Transmission Mainline Repair	SB	465	258,104	1,411,137	84,562	1,753,803	Yes
Amine Cooler Bundle Replacement	SB	418		128,316	6,763	135,079	No
Unplanned - Electrofusion Tee Replacements	SB	475			108,000	108,000	No
Line Heater TR Gate Stn	SB	467			122,380	122,380	No
						-	
Total Planned - Non-Recurring Projects			**320,178**	**1,604,523**	**321,705**	**2,246,407**	
Total Capital Projects			**320,178**	**1,661,507**	**321,705**	**2,303,390**	
Planned - Non-Recurring Projects as % of Total Capital Projects			**100.0%**	**96.6%**	**100.0%**	**97.5%**	
Projects Exceeding $1,700,000 CPCN Threshold			**258,104**	**1,411,137**	**84,562**	**1,753,803**	
Projects Exceeding $1,700,000 Threshold as % of Total Capital Projects			**80.6%**	**84.9%**	**26.3%**	**76.1%**	

94.6 Please provide the individual CPCN threshold of $750,000, $1,000,000, $1,500,000, $2,000,000 and $2,500,000 as a percentage of total rate base, with supporting calculations for each of the FSJ/DC and TR Divisions.

Response:

Please see the tables that follow.

FSJ/DC ($000's)	Actual 2019	Actual 2018	Actual 2017	Actual 2016	Actual 2015
Total Rate Base (Mid-year) (A)	72,776	69,325	67,384	63,383	59,450
Threshold as % of Ratebase:					
$ 750 divided by (A)	1.03%	1.08%	1.11%	1.18%	1.26%
$1,000 divided by (A)	1.37%	1.44%	1.48%	1.58%	1.68%
$1,500 divided by (A)	2.06%	2.16%	2.23%	2.37%	2.52%
$2,000 divided by (A)	2.75%	2.88%	2.97%	3.16%	3.36%
$2,500 divided by (A)	3.44%	3.61%	3.71%	3.94%	4.21%

TR ($000's)	Actual 2019	Actual 2018	Actual 2017	Actual 2016	Actual 2015
Total Rate Base (Mid-year) (A)	4,309	3,281	3,202	3,609	3,042
Threshold as % of Ratebase:					
$ 750 divided by (A)	17.41%	22.86%	23.42%	20.78%	24.65%
$1,000 divided by (A)	23.21%	30.48%	31.23%	27.71%	32.87%
$1,500 divided by (A)	34.81%	45.72%	46.85%	41.56%	49.31%
$2,000 divided by (A)	46.41%	60.96%	62.46%	55.42%	65.75%
$2,500 divided by (A)	58.02%	76.20%	78.08%	69.27%	82.18%

FSJ/DC & TR ($000's)	Actual 2019	Actual 2018	Actual 2017	Actual 2016	Actual 2015
Total Rate Base (Mid-year) (A)	77,085	72,606	70,586	66,992	62,492
Threshold as % of Ratebase:					
$ 750 divided by (A)	0.97%	1.03%	1.06%	1.12%	1.20%
$1,000 divided by (A)	1.30%	1.38%	1.42%	1.49%	1.60%
$1,500 divided by (A)	1.95%	2.07%	2.13%	2.24%	2.40%
$2,000 divided by (A)	2.59%	2.75%	2.83%	2.99%	3.20%
$2,500 divided by (A)	3.24%	3.44%	3.54%	3.73%	4.00%

94.7 Please discuss the relevance of public interest components of a capital project in setting a CPCN threshold.

Response:

PNG(NE) submits that while project cost in itself is an important public interest consideration, it is not the only public interest consideration, however, it is generally a reasonable proxy for the level of public interest concern. Further, while public interest issues are certainly an important consideration, they may not be easily quantifiable.

On this basis, PNG(NE) is of the view that a threshold based on a value, be it relative to investment in plant or rate base as suggested in response to the BCUC IRs on this matter, would be the most clear and consistent approach to establishing a CPCN threshold.

94.8 Please discuss the pros and cons of using the following factors in determining an appropriate CPCN threshold:

- The individual CPCN threshold as a percentage of total rate base;
- Total annual project expenditures captured by the CPCN threshold as a percentage of total annual project expenditures and;
- Number of projects per year captured by a CPCN threshold.

Response:

PNG(NE) submits that, in its view, the second two items identified as "factors" generally have little relevance to establishing a meaningful and relevant CPCN threshold.

In any event, PNG(NE) provides the comments that follow:

Factor	Pros	Cons
CPCN threshold as a percentage of total rate base	• Provides a rationale and relevant base for a threshold to be applied to a rate base component • Allows for consideration of materiality in identifying need for CPCN • Once established is anticipated to be reasonably consistent period-over-period and allows proper consideration to be given to projects subject to regulatory review	• No concerns noted
Total annual project expenditures captured by the CPCN threshold as a percentage of total annual project expenditures	• A consistent percentage of total annual project expenditures would be subject to regulatory review each year	• No clear connection to the objective of identifying projects for which a CPCN may be in the public interest • Due to fluctuations in annual capital spending programs, threshold would be subject to volatility for each reporting period • Difficult to forecast which projects will be subject to review and may impede regulatory efficiency • May result in unnecessary review of low risk, low complexity projects with minimal public interest impacts
Number of projects per year captured by a CPCN threshold	• A consistent proportion of the total number of annual projects would be subject to regulatory review each year	• No clear connection to the objective of identifying projects for which a CPCN may be in the public interest • Due to fluctuations in annual capital spending programs, threshold would be subject to volatility for each reporting period • Difficult to forecast which projects will be subject to review and may impede regulatory efficiency • May result in unnecessary review of low risk, low complexity projects with minimal public interest impacts

In response to BCUC IR 62.8.1 in Exhibit B-3, PNG(NE) stated that the following factors would be relevant to setting a minimum threshold for CPCN or section 44.2 expenditure schedules:

- Materiality of expenditure
- Nature of expenditure (threshold may vary by type of expenditure)
- Timing of expenditure (potentially in between revenue requirements applications)

94.9 Please elaborate on the relevance of each factor, specifically the nature and timing of expenditures in relation to a minimum CPCN or section 44.2 expenditure schedule threshold.

Response:

Please consider the following comments:

Materiality

- PNG(NE) is of the view that a threshold based on a value, be it relative to investment in plant or rate base as suggested in response to the BCUC IRs on this matter, would be the most clear and consistent approach to establishing a CPCN threshold.
- As noted in the response to Question 94.3, PNG(NE) submits that a threshold in the range of $1.5 million to $2 million may be appropriate.
- Once established, a threshold based on a rate-base related value is anticipated to be reasonably consistent period-over-period and allows proper consideration to be given to projects subject to regulatory review.

Nature of Expenditure

- In response to BCUC IR 62.8.1 PNG(NE) identified that different CPCN thresholds may be considered appropriate for different types of expenditures, and observes that different major project thresholds have been established for other utilities under the BCUC's jurisdiction on this basis, for example, separate thresholds for transmission, distribution and information technology projects.

Timing of Expenditure

- In response to BCUC IR 62.8.1 PNG(NE) identified timing of expenditure as a factor to consider in setting a minimum threshold for CPCN or section 44.2 expenditure schedules. In presenting this as a factor, PNG(NE) was giving consideration to the occasional necessity to undertake significant expenditures on an immediate basis.
- On reconsideration, PNG(NE) has assessed that timing in itself is not a relevant factor to setting a minimum threshold. PNG(NE) observes that unplanned, emergency capital expenditures would generally be in connection with capital infrastructure previously approved under a CPCN and thus there would be no requirement for a new CPCN for approval of such expenditures.

94.9.1 Please address how the nature of an expenditure, specifically whether the expenditure is an extension to the existing system, is relevant, if at all, to the decision whether to file a CPCN or a section 44.2 expenditure schedule.

Response:

As per section 45 of the *Utilities Commission Act* (UCA), PNG(NE) submits that there is limited discretion as to whether or not a CPCN is required for expenditures. As indicated in the response to Question 130.9, PNG(NE) understands that capital expenditures for infrastructure previously approved under a CPCN generally would have no requirement to apply for approval of a new CPCN. However, PNG(NE) understands that the BCUC has discretion, under section 45(5) of the UCA, to require application for approval of a separate CPCN for certain expenditures.

PNG(NE) submits that where expenditures are for a capital project that is an extension to the existing system, it would typically require the submission of a CPCN. PNG(NE) notes, however, that the materiality of such expenditures may be considered relevant, as per this series of information requests.

95.0 Reference: OTHER MATTER TO BE ADDRESSED FROM PRIOR YEAR DECISIONS
Exhibit-2 FSJ/DC, Section 3.4.1.4, pp. 124-125; TR, Section 3.4.1.4, pp. 101-102
Automotive Cost Allocation

On page 124 of the FSJ/DC Amended Application and 101 of the TR Amended Application, PNG(NE) states the following with respect to the recommended approach for the capital allocation:

> Based on the forgoing, PNG proposes the following for allocating Automotive costs to capital projects:
>
> - Continue to apply the current budgetary convention for allocating forecast Automotive costs to capital, whereby the divisional percentage of capital labour costs of consolidated labour costs is applied to the consolidated Automotive cost pool; and
> - Continue to apply the current administrative convention of allocating actual Automotive costs to capital, whereby a 15% factor is applied to capital labour costs and capitalized.

95.1 Please explain what the 15 percent factor used in the allocation of actual capital Automotive costs is based on.

Response:

The 15 percent factor is effectively a vehicle overhead capitalization rate. This factor has been in place for many years, however, the genesis is unknown but is believed to be based on a historic study or evaluation of actual experience. In 2013, PNG(NE) reviewed the 15 percent factor applied to capital labour for the allocation of Automotive costs to capital and confirmed that it was a reasonable approximation of actual Automotive costs attributable to capital.

95.2 Please comment on any alternatives that were that were considered with respect to the capital allocation, and why they were ultimately rejected.

Response:

As noted in response to Question 95.1, the 15 percent factor for the capital allocation of Automotive costs has some historic basis. Further, given PNG(NE)'s evaluation that the existing methodology continues to be reasonable based on the five-year average allocations for 2015 to 2019 falling within a reasonably narrow range of ± $7,054 to $11,986, no further alternatives were evaluated.

Further on page 124 of the FSJ/DC Amended Application and page 101 of the TR Amended Application, PNG(NE) states the following with respect to the recommended approach for the operating cost allocation:

> …PNG proposes the following:
>
> - Once the consolidated Automotive cost pool has been established, subtract the costs identified as being attributable to capital in order to arrive at the operating cost pool.
> - Apply the five-year rolling average of each division's actual percentage distribution of operating Automotive costs to the test year operating cost pool.

95.3 Please comment on any alternatives that were considered with respect to the operating cost allocation, and why they were ultimately rejected.

Response:

Given the complexities of the interplay between the capital and operating aspects of Automotive costs, and the foundation provided by PNG(NE) historical allocation methodology, PNG(NE)'s approach to revising its methodology was one of tweaking the existing process rather that undertaking a wholesale change to the Automotive cost allocation approach.

As noted in response to Question 95.2, the methodology for the forecast capital allocation of Automotive costs was found to continue to be reasonable compared to actual results. Consequently, PNG(NE) focused its analysis on the operating allocation of Automotive costs and found, and has proposed, a methodology using a five-year rolling average of each division's actual percentage distribution of operating Automotive costs to the test year operating cost pool, that has demonstrated considerable improvement for the forecast operating allocation of Automotive costs compared to actual results

On page 125 of the FSJ/DC Amended Application and 102 of the TR Amended Application, PNG(NE) presents the following table summarizing its historic and proposed methodology for forecasting the consolidated pool of Automotive costs:

Automotive - Consolidated Cost Pool Over (Under) Budget ($)	2015	2016	2017	2018	2019	Total	Average
Historic Forecast Methodology							
Forecast	929,151	1,063,615	1,085,120	1,034,019	1,053,535	5,165,440	1,033,088
Actual	862,306	884,078	829,604	980,052	995,720	4,551,760	910,352
	66,845	179,537	255,516	53,967	57,815	613,680	122,736
Proposed Methodology							
Forecast	929,151	947,734	966,689	986,022	1,005,743	4,835,339	967,068
Actual	862,306	884,078	829,604	980,052	995,720	4,551,760	910,352
	66,845	63,656	137,085	5,970	10,023	283,579	56,716
Improvement In Forecasting	-	115,881	118,431	47,997	47,792	330,101	66,020

Further on the same pages, PNG(NE) states:

> PNG recommends that the consolidated Automotive cost pool for Test Year 2020 be forecast based on forecast 2019 actual costs with a 2% provision for inflation. PNG has reflected this recommendation in this Amended Application. Test Year 2021 costs have been forecast at the Test Year 2020 amount inflated by 2% for inflation.

95.4 Please explain what is meant by "forecast 2019 actual costs."

Response:

PNG(NE) prepared this analysis using 2019 Actual data to the end of October 2019 and forecast costs for the months of November and December 2019 to come up with a calendar year projection of actual costs for 2019. A more appropriate description would be "forecast 2019 costs."

95.5 Please confirm that PNG(NE) recommends that the consolidated Automotive cost pool for 2020 be forecast based on 2019 forecast costs adjusted for 2 percent inflation.

Response:

Not confirmed. The "forecast 2019 costs" referred to in response to Question 95.4 are a proxy for 2019 actual costs. In the evaluation for the proposed allocation methodology, as 2019 actuals had not yet been finalized, an outlook for 2019 anticipated total automotive costs was utilized (October 2019 actual costs plus an estimate for November and December 2019 costs).

As noted in the last paragraph on page 125 of the FSJ/DC Amended Application and page 102 of the TR Amended Application (and in consideration of the response to Question 95.4 and the preceding paragraph in this response), PNG(NE) proposes to make use of actual 2019 automotive costs inflated by 2%. As indicated, the Amended Application reflects an outlook for 2019 anticipated total costs that was embedded in the Original Application. As the allocation of automotive costs impacts every single capital project, the outlook automotive cost amount was not updated to the true actual automotive cost amount, otherwise there would have been immaterial adjustments required in the Amended Application to the forecast cost for each capital project planned for 2020 and 2021. On this basis, PNG(NE) observes that the Test Year 2020 provision for consolidated Automotive costs included in the Amended Applications of $1,024,000 is $8,000 less than the amount for Actual 2019 costs inflated by 2% of $1,032,000. PNG(NE) does not propose to make an adjustment for this immaterial item, which as it stands is to the benefit of ratepayers.

95.5.1 If not confirmed, please explain the recommended methodology.

Response:

Please see the response to Question 95.5.

95.5.2 If confirmed, please explain why PNG(NE) does not use 2019 actual costs, adjusted for inflation, as the basis to forecast the Automotive cost pool for Test Year 2020.

Response:

Please see the response to Question 95.5.

95.6 Please re-create the table for the consolidated cost pool (illustrated in the preamble above) and adjust the proposed methodology by using the 2015 actual, rather than forecast, as the base and applying the inflation factor to actual costs for subsequent years.

Response:

Please see the table that follows. In the table the proposed methodology uses 2015 Actual costs as the base for 2016 Forecast costs with each year thereafter inflated by 2%. As 2015 is the base year the table has been adjusted to remove the effects of 2015 variances.

Automotive - Consolidated Cost Pool Over (Under) Budget ($)	2015	2016	2017	2018	2019	Total (2016-2019)	Average
Historic Forecast Methodology							
Forecast	-	1,063,615	1,085,120	1,034,019	1,053,535	4,236,289	1,059,072
Actual	-	884,078	829,604	980,052	995,720	3,689,454	922,364
	-	179,537	255,516	53,967	57,815	546,835	136,709
Proposed Methodology							
Forecast	862,306	879,552	901,760	846,196	999,653	3,627,161	906,790
Actual	862,306	884,078	829,604	980,052	995,720	3,689,454	922,364
	-	(4,526)	72,156	(133,856)	3,933	(62,293)	(15,573)
Absolute Improvement In Forecasting (net +/-)	n/a	175,011	183,360	(79,889)	61,748	484,542	121,135

PNG(NE) observes that making use of 2015 Actual costs lends further support to using an inflationary approach based on actual costs, and notes that the range of variances under this revised approach Forecast amounts ranged from being $133,856 lower than Actual to $72,156 greater that Actual with an average Forecast amount $15,573 less than Actual, much more appropriate than the average Forecast amount being $136,709 greater than Actual per the historic methodology.

95.6.1 Please explain why 2015 was selected as the base year.

Response:

As a convention for its analysis of the Automotive cost allocation methodology, PNG(NE) selected the period of 2015 to 2019 as the evaluation period. Furthermore, in many of PNG(NE)'s budgeting activities, forecast amounts are based on prior year averages of actual costs, often for the most recent 5-year period.

In this instance, in testing an inflationary approach to forecasting the Automotive cost pool, for consistency PNG(NE) selected the beginning of this test period as the base year.

95.7 Please explain whether PNG(NE) considered creating a forecast Automotive cost for each division based on expected costs. Please comment on the pros and cons of this approach and why it was not selected.

Response:

In the past, PNG(NE) has considered alternatives for forecasting Automotive costs, including divisional forecasts. However, in PNG(NE)'s experience the pooled approach to forecasting Automotive costs was found to be administratively efficient as it aligns with the way PNG(NE) manages it procurement of vehicles and Automotive cost elements – on a consolidated basis.

95.8 Please discuss how using a 5-year rolling average of the actual consolidated cost pool impacts the forecast methodology.

Response:

In the table that follows, the historic forecast methodology is compared to the methodology making use of the average of the 5 previous years' actual Automotive costs for the forecast amount.

Automotive - Consolidated Cost Pool Over (Under) Budget ($)	2015	2016	2017	2018	2019	Total	Average
Historic Forecast Methodology							
Forecast	929,151	1,063,615	1,085,120	1,034,019	1,053,535	5,165,440	1,033,088
Actual	862,306	884,078	829,604	980,052	995,720	4,551,760	910,352
	66,845	179,537	255,516	53,967	57,815	613,680	122,736
5-Year Rolling Average Actual Forecast Methodology							
Forecast	952,819	955,452	955,593	925,129	914,786	4,703,779	940,756
Actual	862,306	884,078	829,604	980,052	995,720	4,551,760	910,352
	90,513	71,374	125,989	(54,923)	(80,934)	152,019	30,404
Absolute Improvement In Forecasting (net +/-)	(23,668)	108,163	129,527	108,890	138,749	461,661	92,332

PNG(NE) has prepared a further table, as below, comparing the results of the 5-year rolling average methodology to the proposed methodology of inflating the prior year amount by 2%, however, for the proposed methodology, PNG(NE) has expanded the analysis to use actual 2014 as the base and applying a 2% inflation factor to arrive at the 2015 forecast and applying a 2% inflation factor to the prior year actuals to establish the forecast for each subsequent year.

Automotive - Consolidated Cost Pool Over (Under) Budget ($)	2015	2016	2017	2018	2019	Total	Average (2015-2019)
Proposed Forecast Methodology							
Forecast	1,038,246	879,552	901,760	846,196	999,653	4,665,407	933,081
Actual	862,306	884,078	829,604	980,052	995,720	4,551,760	910,352
	175,940	(4,526)	72,156	(133,856)	3,933	113,647	22,729
5-Year Rolling Average Actual Forecast Methodology							
Forecast	952,819	955,452	955,593	925,129	914,786	4,703,779	940,756
Actual	862,306	884,078	829,604	980,052	995,720	4,551,760	910,352
	90,513	71,374	125,989	(54,923)	(80,934)	152,019	30,404
Absolute Impact on Forecasting (net +/-)	85,427	(75,900)	(53,833)	(78,933)	84,867	(38,372)	(7,674)

As illustrated, the proposed inflationary approach results in an overall and average over estimation of costs for the period 2016 to 2019 ($113,647 and $22,729, respectively) that is lower than the 5-year rolling average methodology ($152,019 and $30,404, respectively).

PNG(NE) submits that due to the uncertainty inherent in any forecast methodology there will be always be variances in actual costs from those forecast. On this basis, PNG(NE) continues to support the use of prior year actual costs as the forecast base, and to apply an inflationary factor to this base in order to arrive at the subsequent test period forecast amount.

95.9 Please explain how PNG(NE) plans to assess the effectiveness of the revised process for allocating operating and capital forecast costs and forecasting the consolidated Automotive cost pool. Please discuss the planned timing and frequency of the assessment(s).

Response:

To support its recommendations on the Automotive cost allocation presented in the Amended Application, PNG(NE) has undertaken considerable analysis and evaluation of historic results and the implications of changes proposed. PNG(NE) submits that this underlying analysis can be readily updated with future actual results and forecast amounts and provides a platform to assess the effectiveness of process in place, as well as a tool to model the impacts of changes that may be considered.

PNG(NE) notes that the effectiveness of the allocation of Automotive costs is undertaken in the normal course of evaluating its financial results, where actual results are compared to approved budgetary amounts. PNG(NE) will continue to undertake this ongoing analysis and to review the overall methodology for potential improvements in advance of the submission of future revenue requirements applications, which are currently filed on a biannual basis.

95.10 Please comment on the strengths and weaknesses of using historic allocations of Automotive costs as a predictor of future allocations for the operating and consolidated forecast.

Response:

PNG(NE) has proposed to make use of historic actual distributions of Automotive costs as a basis for future cost allocations.

PNG(NE) appreciates that such an approach has weaknesses, particularly in times of rapid change in nature and levels of business activity. However, PNG(NE) observes that as a utility with relatively stable and static (i.e. not very dynamic) operations such an approach has merit in its simplicity both in terms of transparency and administrative requirements.