



May 1, 2020

Sent via email/eFile

PNG WEST 2020-2021 REVENUE REQUIREMENTS EXHIBIT A-6
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Mr. Verlon Otto
Director, Regulatory Affairs
Pacific Northern Gas Ltd.
750 – 888 Dunsmuir Street
Vancouver, BC V6C 3K4
regulatory@png.ca

**Re: Pacific Northern Gas Ltd. – PNG-West Division – 2020–2021 Revenue Requirements Application –
Project Number 1599059 – Information Request No. 2**

Dear Mr. Otto:

Further to your 2020–2021 Revenue Requirements Application dated November 29, 2019, enclosed please find British Columbia Utilities Commission Information Request No. 2. In accordance with the regulatory timetable set out in Order G-95-20, please file your responses on or before Wednesday, May 20, 2020.

Sincerely,

Original signed by:

Patrick Wruck
Commission Secretary

/dg
Enclosure



Pacific Northern Gas Ltd.
2020-2021 Revenue Requirements Application

INFORMATION REQUEST NO. 2 TO PACIFIC NORTHERN GAS LTD.

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A. GENERAL

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

In its responses to BCOAPO information request (IR) series 1.0, Pacific Northern Gas Ltd. – West Division (PNG) provided information regarding the impact of the COVID-19 pandemic on PNG’s forecast cost of service and operations. PNG also noted that it “... has also filed an application to the BCUC for the creation of the COVID-19 deferral account to capture unrecovered revenues and unplanned costs arising from the COVID-19 pandemic.”

90.1 Please provide an update on the impact to-date and the expected future impact of the COVID-19 pandemic on PNG-West and its operations.

90.1.1 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.

- 90.1.2 Please provide an update on the expected impact of the COVID-19 pandemic on forecast demand for all customer classes during the test period.
- 90.2 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.
- 90.3 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.

**91.0 Reference: General
Exhibit B-3, BCUC IR 1.1, 2.1
Cybersecurity**

In response to British Columbia Utilities Commission (BCUC) IR 1.1, PNG stated it "... has been working on documenting its IT disaster recovery plan which includes a section that addresses the recovery from a cyber attack and expects to complete this by the end of 2020."

And in response to BCUC IR 2.1, PNG stated it "... has and will continue to report to the BCUC regularly on its measures taken to protect critical infrastructure and prevent cyber attacks."

- 91.1 Please confirm if PNG plans to submit its IT disaster recovery plan to the BCUC when complete. If not confirmed, please explain why not.

In response to BCUC IR 2.1, PNG stated:

PNG is planning to implement the capability for its technicians to remotely connect to the Company's critical infrastructure utilizing the internet in 2020. The plan is to contract out the design and implementation to consultants specializing in securing industrial control systems (ICS). PNG is cognizant of the potential impact on risk when enabling such capability and will ensure it is implemented using industry best practices.

- 91.2 Please elaborate on the benefits and potential risks of allowing technicians to remotely connect to PNG's critical infrastructure via the internet.

Further, in response to BCUC IR 2.1, PNG stated:

Within the TriSummit Utilities Inc. (TSU, formerly ACI) consolidated group, an analysis is underway to identify opportunities for additional improvements across all the entities, with the intention of implementing a more mature cybersecurity framework across the entire organization.

- 91.3 Please provide the expected date a final report would be available. If within the current Test Period, please discuss the likelihood of implementing any initiatives in 2020 or 2021.

B. DEMAND FORECAST, REVENUE AND MARGIN

**92.0 Reference: DEMAND FORECAST, REVENUE AND MARGIN
Exhibit B-3, BCUC IR 2.1
RECAP**

In response to BCUC IR 2.1, PNG stated: "Due to the many levels of business disruptions resulting from the COVID-19 crisis, PNG has delayed the commencement of the RECAP [Reactivated Capacity Allocation

Process] auction to the end of April 2020 or possibly later.”

92.1 If available, please provide an update on the timing for commencement of the RECAP auction process.

Further, in response to BCUC IR 2.1, PNG stated: “Depending on the volume and delivery point requested, the in-service date for specific projects could be as soon as Q3 2021 or as late as Q4 2024.”

92.2 Please clarify whether the submitted range of in-service dates is driven by the time required for PNG to complete necessary capacity reactivation work or by the time required for prospective shippers to complete their projects. If not, please discuss the drivers.

C. COST OF GAS

**93.0 Reference: COST OF GAS
Exhibit B-3, BCUC IR Series 6.0; Exhibit B-5, BCOAPO IR 2.1
Unaccounted for Gas**

In response to BCUC IR 6.1, PNG stated:

While abnormally large UAF [unaccounted for gas] gains or losses in each month are examined for their cause, often times such deviations are reversed over the next two months, owing to an under- or over-statement of either the residential or small commercial unbilled estimate. Any persistent gain beyond the three months is generally considered to be due to some other underlying cause and such a trend triggers a more in-depth examination of all metered data, data conversion factors and physical changes at custody transfer receipt points. Such an examination is taking place now.

At this time, PNG has not determined the cause or causes for the accumulated UAF volume exceeding 1.0 percent of deliveries during 2019. PNG continues its internal examination of all data and calculations influencing the determination of the monthly UAF volumes. In addition, PNG will be conducting an extensive review of the data and calculations associated with the determination of the monthly UAF. Included in the review is an examination of: (i) the spreadsheets used to calculate the UAF volumes; (ii) PNG’s volume accounting and billing system; (iii) the estimate of unbilled consumption to the end of the calendar month, of the residential and small commercial classes (the “unbilled estimates”); (iv) the gas volumes reporting processes at Enbridge, specifically, the application of unit conversions and heating values in the conversion of metered volumes to units of gigajoules, and the reporting of both volume and energy on Enbridge’s statement of deliveries; and (v) deliveries to the large commercial, industrial and transport customers for any deviations from expected trends.

....

PNG proposes to submit findings from its examination in an update to the BCUC in the third quarter of 2020.

93.1 Please explain the difference between the “examination” and “extensive review of the data and calculations” stated in the first and second paragraph, respectively, of the preamble above.

93.2 Please confirm when PNG will commence the “review” as stated in the preamble above. Please also provide an update as to when the results of the examination and review will be available.

- 93.3 Please provide monthly details of the actual UAF losses, total deliveries, the UAF losses as a percentage of deliveries and the value of UAF losses for the all the months of 2020 that are available.
- 93.4 Please discuss the pros and cons of deferring any changes to the UAF component of the Company use gas and UAF loss cap until the completion of PNG’s review and examination stated in the preamble above.

In response to BCUC IR 6.3, PNG provided the following table:

		2004	2005	2006	2007	2008	2009	2010	2011
Deliveries	GJ	33,705,691	27,703,800	6,982,442	7,624,889	6,645,159	6,178,233	4,197,090	4,121,976
UAF gains/(losses)	GJ	138,224	202,128	(21,946)	(2,233)	(61,996)	11,801	61,377	(93,287)
UAF as a portion of deliveries	%	0.41%	0.73%	-0.31%	-0.03%	-0.93%	0.19%	1.46%	-2.26%
Commodity Cost of Gas	\$/GJ	\$ 5.53	\$ 7.48	\$ 7.39	\$ 7.40	\$ 7.44	\$ 7.40	\$ 7.39	\$ 4.77
Value of UAF gains/(losses)	\$	\$ 764,240	\$ 1,511,310	\$ (162,091)	\$ (16,520)	\$ (460,999)	\$ 87,314	\$ 453,330	\$ (444,981)
		2012	2013	2014	2015	2016	2017	2018	2019
Deliveries	GJ	4,053,583	3,799,510	3,976,663	4,115,752	4,327,115	4,908,506	4,552,276	5,065,215
UAF gains/(losses)	GJ	(4,802)	30,385	47,032	1,647	(226,552)	(20,122)	(75,992)	(107,812)
UAF as a portion of deliveries	%	-0.12%	0.80%	1.18%	0.04%	-5.24%	-0.41%	-1.67%	-2.13%
Commodity Cost of Gas	\$/GJ	\$ 3.65	\$ 3.24	\$ 3.25	\$ 3.57	\$ 1.93	\$ 2.39	\$ 1.53	\$ 1.38
Value of UAF gains/(losses)	\$	\$ (17,508)	\$ 98,508	\$ 152,995	\$ 5,876	\$ (436,565)	\$ (48,052)	\$ (116,191)	\$ (148,457)

- 93.5 Please provide a table to show the actual amount of total losses or gains to the account of shareholders and ratepayers for the period from 2004-2019.

In response to BCUC IR 6.4, PNG stated it “... has not determined a specific cause of the UAF losses in each year of the 2015-2019 period.”

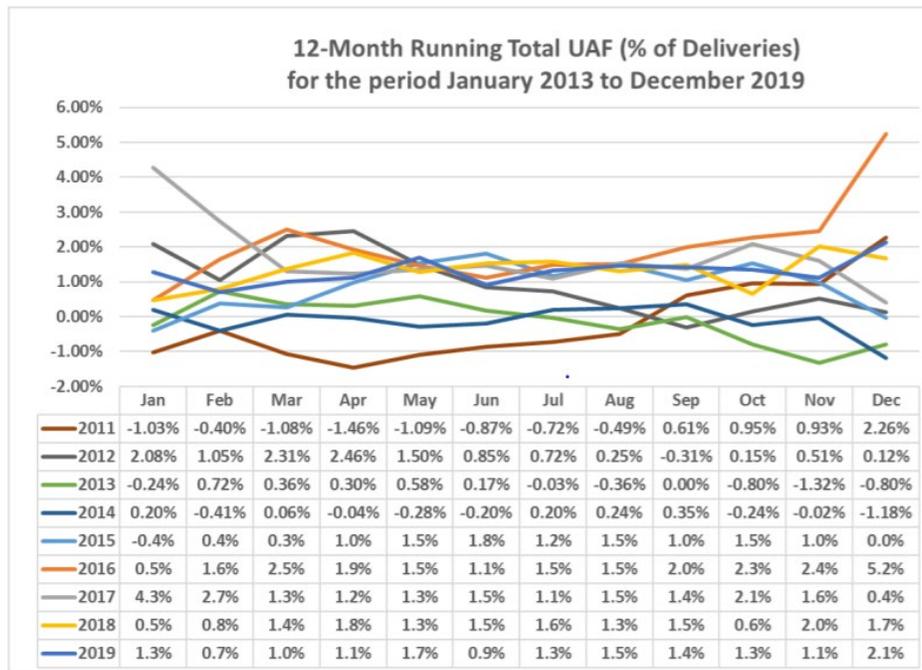
- 93.6 Please explain whether the specific causes of UAF losses for the period 2015-2019 will be examined in PNG’s “extensive review” proposed to be filed with the BCUC. If not, please explain why not.

In response to BCUC IR 6.2, PNG provided the following table comparing UAF loss percentages of selected Canadian natural gas utilities:

	Notes	2015	2016	2017	2018	2019	Average
Heritage Gas					1.02%	1.01%	1.02%
AltaGas Utilities	Rider H	1.28%	0.89%	1.05%	0.96%	1.37%	1.11%
ATCO	Rider D		0.57%	0.83%	1.02%		0.80%
Enbridge Gas Distribution	Forecast				0.99%		0.99%
FortisBC	Average of 2010 - 2015	0.59%					0.59%
Pacific Northern Gas Ltd.		-0.04%	5.24%	0.41%	1.67%	2.13%	1.88%
Pacific Northern Gas (N.E.) Ltd.		1.03%	5.30%	-0.13%	1.41%	2.17%	1.96%

- 93.7 If known, please explain why UAF losses on PNG’s systems are significantly higher compared to the other utilities with similar systems stated in the table above.

In response to BCUC IR 6.6, PNG provided the following table:



93.8 As noted in the table above, from 2011 to 2014 monthly UAF volumes had both gains and losses. However, from 2015 to 2019 there have only been monthly UAF losses. Please discuss any changes since 2015 that have been identified as contributing factors to the monthly UAF losses without any reversals.

93.8.1 Please confirm, or explain otherwise, whether the extensive review and examination proposed to be filed with the BCUC in 2020 will also include findings into why there have only been UAF losses since January 2015.

In response to BCUC IR 6.7, PNG stated:

The value of the UAF losses over the period from 2015 to 2019 total \$743,000. In 2015 and 2017, UAF losses were below the threshold 1.0 percent below which PNG records the UAF loss amount in the UAF volume deferral without having to seek further BCUC approval. In 2016, 2018 and 2019, UAF losses exceeded the threshold 1.0 percent and PNG requested BCUC approval to record the full amount of the actual UAF losses in the UAF volume deferral account.

93.9 Please explain the treatment in cases where PNG experiences UAF gains on its system. Specifically, are overall UAF gains in any given year to the account of the ratepayers or the shareholders?

In response to BCUC IR 6.8, PNG stated:

Aside from implementing a pilot installation of AMR meters in Thornhill, PNG has not implemented any of the measures discussed in the preamble. PNG has not prioritized its limited resources to complete the other initiatives. As stated in the portion of the response to the BCUC information request 55.16 in the PNG-West 2018-2019 Revenue Requirements Application proceeding that was not included in the preamble above, improvements to the unbilled estimate come at additional effort and cost, and the pursuit of these improvements is not expected to result in a significant improvement to the unbilled estimate.

93.10 Please elaborate on whether PNG has performed a cost-benefit analysis of implementing the measures discussed in the preamble above. If available, please provide the details of the same. If not, please discuss why not.

In response to BCOAPO IR 2.1, PNG stated it "... submits that UAF is effectively a theoretical amount embedded in the gas supply of its operations and should be included in these costs."

93.11 Please explain what the statement "theoretical amount embedded in the gas supply of its operations and should be included in these costs" highlighted in the preamble means.

**94.0 Reference: COST OF GAS
Exhibit B-2 (Amended Application), Section 2.2.3, p. 32, Table 15; Exhibit B-3, BCUC IR Series 7.0
Unaccounted for Gas – Unbilled Estimate**

In response to BCUC IR 7.1, PNG stated:

To arrive at the unbilled consumption for the calendar month, the resulting Daily Average Consumption is then multiplied by the number of days between when a customer's meter is read, and the end of the calendar month, aggregated over all customers.

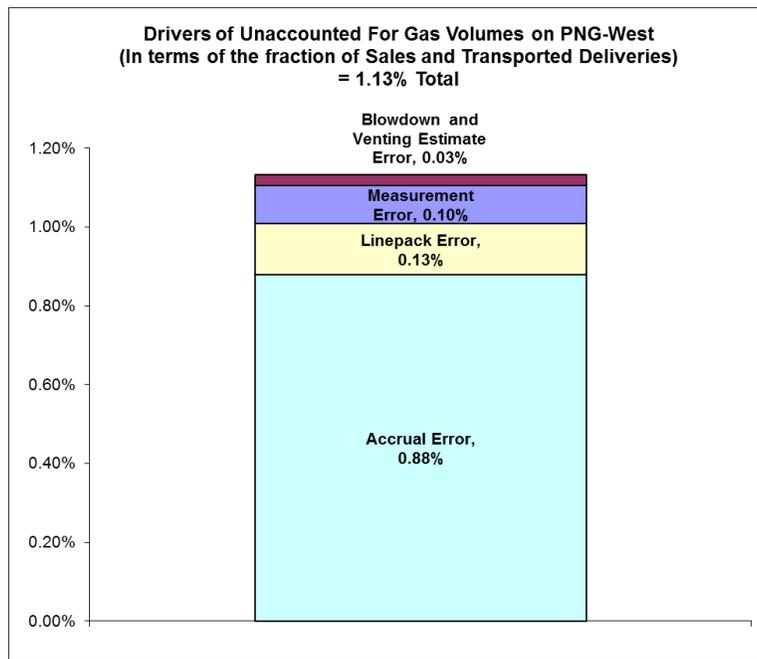
94.1 What are the associated costs and benefits to PNG of accessing more accurate customer information to improve the unbilled estimates? Please provide any financial and/or UAF volume analysis PNG has performed.

94.2 Is PNG likely to implement solutions to access more accurate customer information in the future? If so, how would PNG achieve this and how would associated costs be recovered?

Further, in response to BCUC IR 7.2, PNG stated:

PNG interprets this question to mean what factors could lead to an actual loss of gas during the period between when the meters are read, and the end of the calendar month. Losses of gas due to blown downs of the PNG-West transmission system, venting of gas-actuated devices in compressor and regulating stations, and fugitive emissions from fittings and valves occur as part of PNG's routine operation. PNG estimates the quantity of gas lost through these processes and accounts for them when determining the UAF volumes. Only the difference between PNG's estimate of these emitted volumes, and the actual volumes is reflected in the UAF volume. As shown in Table 15 of the Amended Application, inaccuracies in the estimated blow down and vented volumes comprise a very small portion of the UAF.

On page 32 of the Amended Application, PNG provides the primary drivers of UAF volumes on the PNG system in Table 15:



- 94.3 Please confirm whether the blowdown and venting gas loss discussed in response to BCUC IR 7.2 above are the same as shown in Table 15 (Blowdown and venting estimate error, 0.03 percent) of the Amended Application. If not, please explain the difference between the two.
- 94.4 Please confirm, or explain otherwise, whether blowdown and venting estimates, measurement error and linepack error as discussed in Table 15 of the Amended Application are factors that result in UAF losses of monthly and bi-monthly billed customers. If yes, please explain why the accrual error is separately shown as a driver for UAF.

In response to BCUC IR 7.3, PNG stated:

The unbilled estimate may not accurately reflect consumption during December owing to temperatures that can be at the extreme range of those used to develop the heat load factors, and to customer's consumption patterns that may be different during the holiday period, as compared to the rest of the year.

Further in response to BCUC IR 7.7, PNG stated:

The unbilled estimate added to the residential and small commercial metered demand in each calendar month is reversed in the following month. Since the difference between the actual and estimated demand is reflected in either a UAF gain or loss in each month, the reversal of each estimate in the subsequent month will generate an offsetting UAF loss or gain. Therefore, over a calendar year, the contribution of errors in the unbilled estimate to the UAF volume for the calendar year is determined by the error in the December unbilled estimate, less the error in the unbilled estimate made in December of the previous year.

- 94.5 Please clarify how PNG has determined that unbilled estimate error accounts for approximately 0.88 percent of UAF as a portion of deliveries.
- 94.6 Please clarify whether the December unbilled estimate also reverses in the following month.
- 94.7 Please elaborate on why an accrual error that is subsequently reversed causes significant UAF losses on PNG's system.

In response to BCUC IR 7.8, PNG stated:

PNG wishes to clarify that a change to the “Days of Service” (DOS) report made in Q1 of 2016 was not an error and was in fact an intentional change to the method for determining days of service aggregated across each of the residential and small commercial customer classes. The unbilled estimate is determined from the “Daily Average Consumption”, calculated as described in the response to Question 7.1, multiplied by the DOS for that customer class. A one-time change to the DOS report therefore has an impact on the unbilled estimate that is not completely reversed in the subsequent month and, consequently, has an impact on the UAF volumes recorded in 2016. As stated in the preamble to this question, the impact on the UAF volumes is limited to the UAF volumes recorded in February and March 2016.

94.8 Please confirm whether PNG continues to use the 2016 “DOS” as stated in the preamble above.

Further on page 30 of the Amended Application, PNG states: “As noted previously, for the five-year period from 2015 to 2019, PNG-West has experienced average UAF losses equal to 1.88 percent of deliveries.”

94.9 Please provide the average UAF losses (2015-2019) as a percentage of deliveries after removing the one-time impact of the 2016 UAF losses due to change in the “DOS” highlighted in the preamble above.

D. OPERATING EXPENSES

**95.0 Reference: OPERATING EXPENSES
Exhibit B-2, Section 2.3.5, p. 40; Exhibit B-3, BCUC IR 17.1, 17.4 and 17.5; Exhibit B-5,
BCOAPO IR 4.1
Account 685 – General Operations**

On page 40 of the Amended Application PNG states:

Test Year 2020 expenditures of \$3.229 million [for Account 685 – General Operations] are forecast to increase by approximately \$212,000 or 7.0% over Decision 2019 expenditure of \$3.017 million. ... These cost increases have been offset in part by the absence of costs related to the implementation of the digital data mapping and the geographical information system projects that were incurred in 2019.

In response to BCUC IR 17.4, PNG stated “[f]or Decision 2019, included in Operating costs were \$104,000 for Digital Data Maps and \$200,000 for GIS Contractor Costs... PNG confirms that these costs are not included in Test Year 2020.”

In response to BCUC IR 17.5, PNG stated: “[i]n terms of cost savings, PNG has removed six summer students from its budget, saving \$100,000 in operating costs. By reducing reliance on temporary employees, PNG will save another \$264,000 (between capital and O&M). The FTE cost for the four field staff is estimated to be \$412,000.”

In response to BCOAPO IR 4.1, PNG stated:

In 2019, the actual change in overall Operating expenses was actually \$776,000 (or 7.3%) under the Decision 2019 amount. The variance is explained primarily by: sustainment costs of \$200,000 for the GIS system that were not incurred because of a strategic decision to delay the go-live of the GIS system, \$254,000 in Maximo

sustainability costs that were capitalized in compliance with US GAAP, and approximately \$120,000 in training and travel cost savings due in part to the vacancy of the Manager, EH&S and related reduced travel to field sites. Other favourable variances occurring in 2019 were in employee benefits of \$73,000 for negotiated benefits budgeted that employees did not utilize and a variance of \$82,000 for operational supplies that were not purchased because of the increased focus in 2019 on executing a significant capital program.

- 95.1 Further to the explanations provided in the preamble, please provide a breakdown of the increase in Account 685 – General Operations from Actual 2019 to 2020 and 2020 to 2021, quantifying the individual factors contributing to the cost increases and offsetting cost savings.

In response to BCUC IR 17.1, PNG filed in confidence the expected start dates and salaries of the new management positions.

- 95.2 Please discuss whether there are any changes to the expected start dates of the new positions. If so, please comment on any material impacts to the cost of service in the Test Period.

Further in response to BCUC IR 17.5, PNG stated:

With the reduction of summer students, PNG is also reducing the risks associated with young and inexperienced workers from a safety and WorkSafeBC perspective.

PNG further notes that the hiring of these additional full-time employees will address significant demographic and work force challenges, as these employees are part of overall succession planning. PNG currently has a number of employees in the Construction and Maintenance department that are able to retire with unreduced pensions at any time. By hiring these full-time employees now, PNG can ensure continuity and that there is a transfer of knowledge.

- 95.3 Please confirm, or otherwise explain, that there is an incremental cost increase to hiring the four field staff (\$412,000 - \$100,000 - \$264,000 = \$48,000).

95.3.1 Please discuss the saving achieved by reducing the risks associated with student workers from a WorkSafeBC perspective. Please comment on any recent premium increases due to student workplace injuries, and any expected changes to the annual premiums in the Test Period and in future.

**96.0 Reference: OPERATING EXPENSES
Exhibit B-2, Section 2.3.7, p. 44; Exhibit B-3, BCUC IR 18.3, 18.3.2, 18.4 and 18.5
Account 711/713/714 – New CIS System**

In response to BCUC IR 18.3, PNG 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:

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

- 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:

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

- 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.

96.1 Considering costs will be allocated to PNG on a cost recovery basis using customer count, please explain whether and how often the customer counts are reviewed.

In response to BCUC IR 18.5, PNG stated:

With the joint project, the three utilities also harmonized the supplier for bill print and presentment and PNG expects to realize savings of approximately \$100,000 on an annual basis and has reflected the proportionate savings in Test Year 2021.

On page 44 of the Amended Application, PNG states the following regarding Account 711/713/714 – Customer Care:

Test Year 2021 expenditures of \$1.058 million are forecast to increase by approximately \$196,000 or 22.8% over Test Year 2020, primarily due to an increase in customer billing costs.

96.2 Please reconcile the 2021 forecast costs allocated to PNG-West in response to BCUC IR 18.3, as outlined in red above, to the change in Account 713 from 2020 to 2021. As part of the reconciliation, please delineate the expected cost increases and cost savings.

In response to BCUC IR 18.3.2, PNG provided the following table showing a summary of the annual ongoing costs for the new CIS system for Test Year 2021 and the forecast for years 2022, 2023 and 2024:

BCUC 713	Year	PNG Consol [----- Allocation -----]			
		+PST	PNG West	FSJ/DC	TR
CIS shared services charges and direct costs	2021	842,601	412,116	405,881	24,604
CIS shared services charges and direct costs	2022	1,360,450	665,396	655,329	39,725
CIS shared services charges and direct costs	2023	1,335,220	653,056	643,175	38,988
CIS shared services charges and direct costs	2024	1,310,401	640,917	631,220	38,264

96.3 Please explain the expected increase of costs allocated to PNG (consolidated) from 2021 to 2022 for shared CIS support costs and direct costs.

On page 44 of the Amended Application, PNG states the new CIS system is expected to go live in April 2021.

In response to BCUC IR 18.4, PNG stated:

The annual license fee costs to PNG for Test Year 2020 have been categorized as development costs and have been included in capital for Test Year 2020.

96.4 Considering the system is expected to go live in April 2021, please explain why license fee costs are expected to be incurred in Test Year 2020. Please clarify whether other annual fees (i.e. maintenance) are expected to be incurred prior to the CIS system going live. If so, please quantify the annual fee(s) and explain why the fee(s) is incurred prior to going live.

In response to BCUC IR 18.5, PNG stated:

PNG 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 expects that less internal resources will be required with the new system and plans to reduce the CIS technical support group by one headcount.

96.5 Please provide the anticipated cost saving, if any, as a result of one less CIS support technician.

On page 44 of the Amended Application, PNG states that “AUI will allocate and recover the capital costs from PNG and HGL on a cost-recovery basis under the terms of Shared Services Agreements that will be effective at the system go-live date expected in April 2021.”

96.6 Please provide a copy of the executed Shared Services Agreement related to the CIS system. If not yet finalized, please provide the anticipated date the Shared Services Agreement will be executed.

97.0 Reference: OPERATING EXPENSES
Exhibit B-2, Section 2.5.1, pp. 52-53, Table 21; Exhibit B-3, BCUC IR 20.2.2, 20.3.1 and 20.4
Account 721 – JDE Accounting System

On page 53 of the Amended Application, PNG provided a summary of the consolidated JDE system costs for Test Year 2020 and 2021 in Table 21.

In response to BCUC IR 20.2.2, PNG stated:

Phase One started in June 2018 and was completed in May 2019. Phase Two started in May 2019 and was completed at the end of February 2020. Phase Three started in March 2020 and is expected to be completed by the end of June 2021.

In response to BCUC IR 20.3.1, PNG provided a breakdown of the activities in phase three.

97.1 Please provide a breakdown of the total JDE project costs, by phase, activity and year, prior to any allocations to the sister entities.

97.2 Please expand Table 21 on page 53 of the Amended Application to include the actual costs for 2018 and 2019, and the phase to which the costs relate.

On page 52 of the Amended Application, PNG states:

AUI will allocate and recover the capital costs from other entities on a cost-recovery basis under the terms of a Shared Services Agreement that will be effective at the system go-live date, which was completed on February 26, 2020. [*Emphasis Added*]

In response to BCUC IR 20.4, PNG stated:

The Shared Services Agreement related to the JDE system is still being reviewed. PNG will submit a copy of the agreement with the BCUC upon its execution.

97.3 Please provide the anticipated date the Shared Services Agreement will be executed.

97.4 Please discuss whether the new JDE accounting, CIS and HRIS payroll systems are connected or interface with one another or other PNG systems. If so, please specify the other system(s) and describe how the other system(s) complements the JDE accounting, CIS and HRIS payroll system.

**98.0 Reference: OPERATING EXPENSES
Exhibit B-3, BCUC IR 21.2 and 21.5
Account 721 – New Payroll System**

In response to BCUC IR 21.2, 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

98.1 Please provide a table of total actual to date and forecast implementation costs by year and division for the new payroll system.

98.2 Please provide a breakdown of the 2020 and 2021 cost of service impact of the new payroll system by division between prepaid implementation costs, ongoing subscription costs and any other ongoing costs.

In response to BCUC IR 21.5, PNG stated: “[a]t this time, PNG does not anticipate any annual cost savings associated with the new HRIS system.”

98.3 Please explain whether there is any annual incremental cost increase associated with the new HRIS system as compared to PNG’s previous system. If so, please quantify the incremental cost increase.

**99.0 Reference: OPERATING EXPENSES
Exhibit B-2, Section 2.3.1, p. 38; Exhibit B-5, BCOAPO IR 3.3
Account 665 – Pipelines – Right of way clearing**

On page 38 of the Amended Application, PNG states:

Right of Way (ROW) clearing costs for Test Year 2020 are forecast to be \$514,000, an increase of \$222,000 compared to Decision 2019 costs of \$292,000. Costs for Test Year 2021 are forecast to be \$524,000.

In response to BCOAPO IR 3.3, PNG stated:

The estimated incremental cost increase for the 2020/2021 ROW clearing campaigns due to increased ILI inspections and third-party crossing and proximity activity is approximately \$100,000.

99.1 Please confirm, or otherwise explain, that the \$100,000 increase mentioned in response to BCOAPO IR 3.3 is part of the overall \$222,000 increase of Right of Way (ROW) clearing costs from Decision 2019 to Test Year 2020.

99.1.1 If confirmed, please explain the remaining increase of approximately \$122,000.

**100.0 Reference: OPERATING EXPENSES
Exhibit B-2, Section 2.3.2, p. 39; Exhibit B-3, BCUC IR 16.4
Account 666 – Compressors**

On page 39 of the Amended Application, PNG states:

PNG-West has forecast Test Year 2021 costs of \$648,000 to be similar to those for Test Year 2020, with the increase reflecting inflationary pressures. ... Forecast expenditures are for a robotic inspection of the inside of the pipework utilizing a new technology (GRAID) that has been developed in the United Kingdom.

In response to BCUC IR 16.4, PNG stated: “The robotic inspection project is estimated at \$78,000 of a consolidated budget of \$798,000.”

100.1 Please elaborate on the consolidated budget of \$798,000, including a breakdown of the forecast costs by year and divisions (PNG-West, PNG(NE) FSJ/DC and PNG(NE) TR) and confirm whether these costs are included in Account 666 - compressors for all divisions.

**101.0 Reference: OPERATING EXPENSES
Exhibit B-2, Section 2.3.1, p. 38; Exhibit B-3, BCUC IR 10.1.1
Management System**

On page 38 of the Amended Application, PNG states:

Following on activities undertaken in 2018 and 2019, PNG-West has planned further expenditures for Test Year 2020 and Test Year 2021 to perform initial assessments and

to develop a management system that would transition its operation strategy from reactive (emergency response) to proactive (prioritized prevention). PNG-West has forecast approximately \$200,000 for each of Test Year 2020 and 2021 for third party support to execute these activities.”

In response to BCUC IR 10.1.1, PNG stated:

...the “management system” described in this Amended Application is a generic, collective, and overarching term to describe the suite of Asset and Integrity Management System improvements, business practices, and management strategies to better manage and prioritize risks...

Further in response to BCC IR 10.1.1, PNG provided information on the types of improvements, business practices, and management strategies to better manage and prioritize risk, which include but are not limited to:

- Segment-by-Segment Risk Assessment
- Management of Change (MoC)
- SCC Management Program
- Geohazards Management Program
- Computerized Maintenance Management Systems (CMMS)
- Contractor Management Plan (CMP)
- Geographical Information System (GIS)
- Security Management Plan
- Emergency Response Plan

101.1 Please confirm that the forecast third party support costs for Test Year 2020 and Test Year 2021 are to (a) perform the initial assessments of PNG’s initiatives to better manage and prioritize risk, and (b) to develop a management system. If not confirmed, please clarify what the forecast third party costs relate to.

101.2 In the scenario where the management system assessment indicates the initiatives undertaken by PNG are insufficient or excessive, please explain how this will impact the initiatives currently underway and forecast costs during the Test Period.

101.3 Please elaborate on the “activities undertaken in 2018 and 2019” that led PNG to develop a Management System and explain whether there are any costs related to the management system in the prior Test Period.

101.4 Please clarify the last time PNG’s operation strategy was evaluated, and the results / recommendations from the evaluation.

102.0 Reference: OPERATING EXPENSES
Exhibit B-3, BCUC IR 13.2, 13.3, 13.3.1, 13.4; PNG-West Division 2018-2019 RRA proceeding, Exhibit B-3, BCUC IR 30.1; 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 Tool Runs

In response to BCUC IR 13.2, PNG stated:

- ILI runs are normally expensed in the year incurred, except for the EMAT ILI tool as noted below. This is in accordance with US GAAP. Variances are recorded in a deferral account to be amortized the following year.

- EMAT runs – this pertains to a fairly new ILI tool for transmission pipelines first introduced in PNG’s 2016-2017 Revenue Requirements Application and further addressed in the 2018-2019 Revenue Requirements Application. Based on Orders G-131-16 and G-151-18, PNG was directed to capitalize these costs and depreciate them over a 10 year period which is in compliance with US GAAP.

102.1 Please explain if the accounting treatment for ILI runs and EMAT ILI runs for PNG’s regulatory purposes, is the same treatment for PNG’s financial statement purposes. If not, please comment on the differences.

In response to BCUC IR 13.3, PNG provided the following table:

	2021	2020	2019		2018		2017		2016		2015	
	Forecast	Forecast	Decision	Actual	Decision	Actual	Decision	Actual	Decision	Actual	Decision	Actual
Number of executed ILI tool runs	3	4		-		2		-		3		2
Total Expensed ILI Tool Runs	196,000	889,000	113,000	238,000	134,000	585,000	160,000	75,000	231,000	204,000	220,000	178,000
Total Capitalized ILI Tool Run Costs	2,893,975	2,174,062	-	334,188	1,232,474	1,270,891	-	-	462,961	484,950	-	-
Number of Executed Investigative Digs				41		36		106		203		211
Total Expensed Investigative Dig Costs	608,000	594,000	521,000	430,000	511,000	148,000	500,000	277,000	489,000	535,000	488,000	467,000
Number of Executed Capitalized Repairs				12		14		9		2		8
Total Capitalized Repair Costs Resulting from Investigative Digs	1,042,475	1,020,905	199,202	583,310	195,700	449,023	370,370	189,245	363,609	43,140	323,657	133,289

102.1.1 Please explain why EMAT ILI runs have a different accounting treatment from other ILI runs. Please identify any specific characteristics of the EMAT and other ILI runs that justify the different accounting treatment.

102.2 Please identify the relevant factors from PNG’s perspective that should be considered in determining the accounting treatment for investigative dig costs in accordance with US GAAP.

102.2.1 Considering that like EMAT ILI runs, investigative digs relate to inspection and maintenance activities to continue servicing contracts to supply gas to customers, please explain why investigative digs have a different accounting treatment from EMAT ILI runs.

In response to BCUC IR 30.1 in the PNG-West 2018-2019 RRA proceeding, PNG stated:

...we note that US GAAP ASC 908-360-25 from the Airlines industry guideline specifically addresses the treatment of overhaul costs and allows for both a direct expensing method and a deferral treatment, in which capitalized costs are amortized to the next major inspection. As the overhaul costs related to aircraft components have both aspects of inspection and maintenance, PNG believes that the EMAT ILI costs are comparable to overhaul costs discussed in the airlines guidance. As such, PNG believes that major inspections and maintenance would qualify for capitalization.

Therefore, both expensing and capitalizing the EMAT ILI costs are allowed under US GAAP.

102.3 Please discuss whether from PNG's perspective ILI costs in general and/or investigative digs are comparable to overhaul costs as specified in US GAAP ASC 908-360-25.

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."

102.4 Does PNG consider that the total expensed ILI tool runs between 2015 and 2021 result in "large and volatile rate impacts"? Please discuss.

In response to BCUC IR 13.3.1, PNG stated "2020/2021 Forecasts: PNG expects a high volume of both inspections and repairs stemming from planned magnetic flux leakage (MFL) and EMAT ILI inspections, as well as to continue work on inspection backlog activities."

In response to BCUC IR 13.4, PNG stated:

Starting with 2018-2019 Revenue Requirements Application, more direct consideration was given for the pipeline sections planned for inspection (length, diameter, run quantity), the ILI tool technologies planned for use, and the prioritized dig quantities expected to be generated from a given ILI run. ... The use of advanced combination MFL tools using both axial and circumferential (or spiral) orientations, as well as EMAT tools, has contributed to forecasted costs increasing considerably.

102.5 Please clarify whether PNG has assessed or plans to assess a pipeline segment using a combination EMAT and MFL inspection tool.

102.5.1 If an EMAT and MFL combination tool has been or will be used, please clarify whether PNG would seek to capitalize or expense the associated costs and explain why.

**103.0 Reference: OPERATING EXPENSES
Exhibit B-3, BCUC IR 11.1.1
Integrity Management**

In response to BCUC IR 11.1.1, PNG 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's transmission system assets. ...

...

Given all of this, PNG'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.

103.1 Please provide any directives, letters or documents from the BCOGC referencing the aged pipeline assessment and audit program.

103.2 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.

E. ADMINISTRATIVE & GENERAL EXPENSES

**104.0 Reference: ADMINISTRATIVE & GENERAL EXPENSES
Exhibit B-2, Section 2.5.1, p. 55; Exhibit B-3, BCUC IR 22.1.1, 22.2 and 23.3
Consulting Fees**

In response to BCUC IR 22.1.1, PNG provided rationale for the increase in consulting fees in Test Year 2020 over 2019 stating:

2020 – Increase of \$774,000 over actual 2019, primarily due to inflation of 2%, JDE costs of \$384,000 as noted on Page 53 of the Amended Application, incremental HRIS costs of \$76,554 as noted on Page 58 of the Amended Application, and Microsoft MSDN subscription costs of \$140,000.

On page 55 of the Amended Application, PNG states:

IT-related contractor costs have increased by \$115,000 in Test Year 2020 from Decision 2019 as a result of PNG transitioning to the Microsoft 365 platform as support for legacy platforms is being phased out. ... Test Year 2021 cost increases are inflationary.

104.1 Please clarify what the Microsoft MSDN subscription costs relate to and explain whether the costs are connected to the Microsoft 365 transition.

104.1.1 If the Microsoft MSDN costs are connected to the Microsoft 365 transition, please reconcile the Microsoft MSDN subscription costs of \$140,000 to the increase in the IT related contractor costs of \$115,000.

In response to BCUC IR 23.3, PNG stated:

PNG notes that \$78,000 of the \$115,000 increase in IT contractor costs are for the annual subscription of the Microsoft 365 licenses. The remaining balance pertains to the contractor costs required to support the platform, backup the data as well as implementing additional security measures.

104.2 Considering \$78,000 are for the annual subscription of the Microsoft 365 licenses and the remaining balance pertains to contractor costs, please explain whether IT contractor costs are only necessary for the Microsoft 365 transition or are required annually.

104.2.1 If only necessary for the transition, please justify why the IT contractor costs in Test Year 2020 have been maintained, with inflationary increases, in Test Year 2021.

104.2.2 If required annually, please discuss any changes in the type of work being completed following transition and how this may impact IT contractor costs beyond the Test Period.

In response to BCUC IR 22.2, PNG stated the following:

The forecast 2020 and 2021 consulting fees for Account 722 were mostly inflated by 2%

over the 2019 Decision amounts, with the exception of the Business Development consulting fees which were forecast at approximately \$130,000 higher than the 2019 Decision amount.

104.3 Please clarify why 2019 Decision is an appropriate basis to forecast consulting fees in Account 722 for the Test Period. Please explain why 2019 Actual costs were not used.

**105.0 Reference: ADMINISTRATIVE & GENERAL EXPENSES
Exhibit B-3, BCUC IR 24.1
Office Rent**

In response to BCUC IR 24.1, 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. As per the Amended Application, PNG reiterates that the base rent at PNG’s previous office was heavily subsidized by its former parent company, AltaGas Ltd., during a time when competitive market rates for office space in downtown Vancouver for similar properties in 2019 ranged between \$50 - \$70 per square foot.

105.1 Please provide reference for the office space market rates in 2019.

**106.0 Reference: ADMINISTRATIVE & GENERAL EXPENSES
Exhibit B-3, BCUC IR 25.1
Other Administrative Expenses**

In response to BCUC IR 25.1, PNG provides the following revised Table 19 showing the breakdown of factors contributing to the Account 721 variances in the Test Period:

Expenditure Item	Cost Increase (Decrease) (\$)	
	2020 to 2021 Change	2019 to 2020 Change
Shared Corporate Services Costs	37,000	1,092,000
Shared Corporate Services Costs - Shared Services Recovery from PNG(NE)	11,000	(401,000)
Shared Corporate Services Costs - PNG-West	48,000	691,000
Shared Corporate Services Costs - PNG-West Deferred	(25,000)	(675,000)
Shared Corporate Services Costs - PNG-West Cost of Service Impact	23,000	16,000
Finance Contractors - JDE	111,000	384,000
HR Contractors - HRIS	13,000	77,000
IT Contractors	7,000	115,000
Vancouver office rent	-	152,000
Other miscellaneous items	79,000	93,000
Offset by Shared Services G&A recoveries *	(48,000)	(265,000)
	185,000	572,000

* See Section 2.11 - Shared Services Recovery from PNG(NE)

Further in the same response, PNG stated:

The \$93,000 is primarily due to:

- \$50,100 increase in Data Line costs from the upgrading of internet capability at various offices to higher speed bandwidth to provide higher computer response times from servers; and

- \$34,500 increase in travel costs for the Manager EH&S to reflect increased travel to field offices

106.1 Please explain the \$79,000 increase in “Other miscellaneous items” for Test Year 2021 over 2020.

106.2 Please discuss whether the \$50,100 increase in data line costs is a one time expenditure or is required annually. If a one-time expenditure, please explain how the \$50,100 revenue requirement is repurposed in Test Year 2021.

**107.0 Reference: ADMINISTRATIVE & GENERAL EXPENSES
Exhibit B-2, Tab 2, pp. 19-20; Exhibit B-3, BCUC IR 29.2, 32.1, 33.1; PNG-West Division
RRA proceeding, Order G-114-13 with reasons for decision dated August 1, 2013,
Section 6.4, pp. 44-45
Shared Corporate Service Costs - Forecasting**

In response to BCUC IR 29.2, PNG stated:

For annual budgeting purposes, TriSummit Utilities Inc. (TSU, formerly ACI) uses a forecast in the allocation of the Shared Corporate Services costs to its subsidiaries.

...

PNG submits that the forecast costs are a reasonable estimate for the actual Shared Corporate Services costs as the year end adjustment for 2019 was a recovery of \$50,000, a 2.8% variance from the original forecast.

107.1 Considering that TSU uses forecast costs in the allocation of Shared Corporate Services, please elaborate on the measures in place that reduce the risk that actual costs vary from forecast and thus unduly penalize or benefit customers.

107.2 Please clarify whether the \$50,000 recovery represents an under recovery; where actual costs were less than forecast.

In response to BCUC IR 32.1, PNG stated “[t]o PNG’s knowledge, there are no material differences between the current methodology utilized by TriSummit Utilities Inc. (TSU, formerly ACI) to allocate the costs associated with the Corporate Shared Services to PNG and the methodology used by PNG’s former parent, AltaGas Ltd.”

107.3 Please provide the actual and forecast Shared Corporate Service costs allocated to PNG (consolidated) for 2015 to 2019. Please discuss any significant variances and the impact the variance had on customer rates.

In response to BCUC IR 33.1, PNG stated: “The TSU Board of Directors also reviewed and approved the 2020 budget which included the shared service cost pools. TSU will be using actual costs incurred in the allocation of Shared Corporate Service costs in 2020/2021 and TSU’s financial statements are audited by an external auditor. *[Emphasis added]*”

107.4 Please clarify whether TSU uses forecast or actual costs in the allocation of Shared Corporate Services.

On pages 19 and 20, Tab 2, of the Amended Application, PNG presents the continuity of deferred charges for the Test Years 2020 and 2021. Line 31 of each page is the Management Fee Deferral, and it states the interest rate is “STI”.

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.

- 107.5 Please confirm, or explain otherwise, that PNG's short-term interest cost is the rate applied to the Management Fee deferral account and provide a justification for the proposed interest rate.
- 107.6 Please discuss the likelihood that the Management Fee deferral account will be amortized beyond one year.

**108.0 Reference: ADMINISTRATIVE & GENERAL EXPENSES
Exhibit B-3, BCUC IR 2.1, 31.2, 31.5
Shared Corporate Service Costs – Impact of RECAP**

In response to BCUC IR 2.1, PNG stated:

The RECAP [Reactivated Capacity Allocation Process] auction is currently being designed to enable prospective shippers to contract for up to 80 MMCFD of transportation capacity. Depending on the volume and delivery point requested, the in-service date for specific projects could be as soon as Q3 2021 or as late as Q4 2024.

And in response to BCUC IR 31.2, PNG stated:

PNG is hopeful that a successful RECAP will result in incremental large volume industrial transportation revenues and will enable PNG to seek amortization of the deferral account commencing in Year 2022. PNG cannot determine the estimated amortization period as this will be dependent on the outcome of the RECAP.

In response to BCUC IR 31.5, PNG stated:

PNG continues to be very cognizant of the effect on customer rates of increasing the recovery of these charges and believes that with the expected successful outcome of the impending RECAP, it is now appropriate to seek approval of the full amount of the Shared Corporate Services costs through the deferral account proposal as set out in the Amended Application.

- 108.1 Considering PNG's response to BCUC IR 92.1 above regarding the timing of the RECAP, please discuss the likelihood that the amortization of the deferral account will commence in 2022.
- 108.2 Please explain whether the amortization of the deferral account is solely dependent on the outcome of the RECAP and the in-service dates for specific projects that result from the RECAP. If not, please discuss the other factors that will determine the amortization start date and period.
- 108.3 If the RECAP does not proceed or does not result in any incremental large volume industrial transportation volumes, please discuss PNG's proposed plan for the deferral account balance. Specifically, will the balance of the deferral account be recovered from customers? As part of the response please discuss the planned amortization start date and period under this scenario.

**109.0 Reference: ADMINISTRATIVE & GENERAL EXPENSES
Exhibit B-3, BCUC IR 34.1
Shared Corporate Service Costs – KPMG Report**

In response to BCUC IR 34.1, PNG stated:

The variances between the 2011 inflated and adjusted costs at PNG and the PNG estimate of the standalone costs in the KPMG report are mainly due to the salaries and benefits costs of the additional employees (General Counsel, two finance employees) that would be required to operate PNG as a standalone entity with substantial capital market access required for growth.

109.1 Please reconcile PNG's 2011 inflated and adjusted costs (presented in response to Exhibit B-3, BCUC IR 32.4) to the PNG estimate of the standalone costs in the KPMG report (Exhibit B-2, Appendix B, p. 6, Table 2), specifying the costs due to the salaries and benefits costs for the General Counsel position and each of the two finance employees.

**110.0 Reference: ADMINISTRATIVE & GENERAL EXPENSES
Exhibit B-3, BCUC IR 35.4, 76.1
Non-Regulated Services to Affiliates – 2019 Labour Costs**

In response to BCUC IR 35.4, PNG stated:

PNG notes that in the previous Test Periods of 2018 and 2019, PNG had not contemplated any NRS activities. However, for the year 2019, both the President and the Director of Business Development did spend some time on NRS activities. PNG notes that both positions' labour costs were far greater than was embedded in the Test Year 2019 budgets; therefore PNG considers that time spent on these NRS activities were covered by the higher labour costs.

PNG stated in response to BCUC IR 76.1:

As a result of the ownership being transferred from AltaGas Ltd. to TriSummit Utilities Inc. (TSU, formerly ACI), both of PNG's President and PNG's Director of Business Development took on additional roles for affiliated entities. 2019 cost recoveries were charged to the affiliate entities using charge-out rates that were based on the employee's salaries including charges for benefit loadings, corporate overhead and facilities charges.

PNG submits that the impact of these recoveries was neutral to both ratepayers and the shareholder. This is because neither the incremental costs (i.e. additional compensation for the President and Director of Business Development for these expanded roles) nor incremental recoveries were reflected in the cost of service underlying the rates established for 2019.

110.1 Please specify the amount of time the President and Director of Business Development spent on NRS in 2019, including the associated costs for each position.

110.2 Please provide, for both the President and Director of Business Development positions, the 2018 and 2019 forecast compensation included in rates and the 2018 and 2019 actual compensation.

**111.0 Reference: ADMINISTRATIVE & GENERAL EXPENSES
Exhibit B-3, BCUC IR 35.5
Non-Regulated Services to Affiliates – Deferral Account**

In response to BCUC IR 35.5, PNG stated:

PNG is requesting a one-year amortization period. However, given that PNG has been filing two-year revenue requirements applications, PNG would seek immediate amortization in each revenue requirements.

111.1 Please discuss the pros and cons of a one-year and two-year amortization period for this deferral account.

F. TRANSFERS TO CAPITAL (CAPITALIZED OVERHEAD)

**112.0 Reference: TRANSFERS TO CAPITAL (CAPITALIZED OVERHEAD)
Exhibit B-3, BCUC IR 36.3
Transfers to Capital**

In response to BCUC IR 36.3, PNG provided the following breakdown of factors attributing to the increases in Transfers to Capital for the Test Period:

Changes in Transfers to Capital

Factors Contributing to Change in Capitalization (\$s)	Test Year 2021	Test Year 2020
(i) Change in Proportion of Capital Expenditures	79,000	39,000
(ii) Change in Corporate/Field Management Allocation	19,000	158,000
(iii) Change in Support Staff Allocation	21,000	7,000
(iv) Change in Direct Capital Labour Benefit Load	(55,000)	382,000
Increase (Decrease) in Capitalization over Prior Period	64,000	586,000

112.1 Please explain the \$158,000 and \$382,000 increase in capitalization in Test Year 2020 due to a change in Corporate/Field Management Allocation and Direct Capital Labour Benefit Load, respectively.

G. DEFERRAL ACCOUNTS

**113.0 Reference: DEFERRAL ACCOUNTS
Exhibit B-2, Section 2.9, p. 78; Exhibit B-3, BCUC IR 42.2
Amortization – Option Fee Payment**

On page 78 of the Amended Application, PNG states:

This interest bearing deferral account was initially established under Order G-174-08 to track the receipt of option fee payments received from customers to secure future transportation capacity in PNG-West’s system.

...

As at December 31, 2019, the credit balance of this account was \$4.677 million. For Test Year 2020 and Test Year 2021, PNG-West is proposing to drawdown \$0.857 million and \$2.825 million respectively.

In response to BCUC IR 42.2, PNG stated:

In the absence of the proposed amortization of the LNG [liquefied natural gas] Partners Option Fee Payment Deferral account, the revenue deficiency for Test Year 2020 would be higher by approximately \$0.857 million and would result in an additional residential delivery rate increase of 2.5%. For Test Year 2021, the revenue deficiency would be higher by approximately \$1.94 million, reflecting the absence of the proposed 2021 amortization slightly offset by higher margins due to the 2020 rate change, and would result in an additional residential delivery rate increase of 5.2%.

113.1 In a scenario where the revenue requirements and deliveries remain consistent with the current Test Period, please discuss the number of years drawdowns to the LNG Partners Option Fee Payment Deferral account will be able to alleviate pressures on rates beyond the Test Period.

113.1.1 Please provide the rate impact in the first year where no amortization of the LNG Partners Option Fee Payment Deferral account is available.

113.2 Please discuss the factors PNG considered to determine the proposed drawdown of the LNG Partners Option Fee Payment Deferral account for Test Year 2020 and 2021. Please comment on any alternatives that were considered to the proposed drawdown, and why they were ultimately rejected.

113.3 Please provide the delivery rate and overall bill impact for 2020 and 2021 where the amortization of LNG Partners Option Fee Payment Deferral account is:

- (a) reduced by 25% of that proposed
- (b) reduced by 50% of that proposed
- (c) reduced by 75% of that proposed

For each scenario, please include the dollar amount amortized in each Test Year, and the ending balance of the LNG Partners Option Fee Payment Deferral account.

113.3.1 Please discuss the pros and cons of reducing the amortization in the current Test Period such that it is available for future years.

**114.0 Reference: DEFERRAL ACCOUNTS
Exhibit B-3, BCUC IR 45.1
Compressor Engine Overhaul Costs**

In response to BCUC IR 45.1, PNG stated:

PNG acknowledges that an unfortunate error has been made in the Amended Application as PNG applied a ten-year depreciation period instead of a five-year depreciation period for the compressor engine overhaul costs as per Directive 14 of Order G-151-18.

PNG apologizes for this error and proposes to amend the final regulatory schedules to reflect the correct depreciation period in compliance with the noted Order. The impact of changing to a five-year amortization period will result in an increase in the depreciation expense for these assets from \$48,188 to \$96,376 for each of Test Years 2020 and 2021.

114.1 Please discuss how this change in amortization impacts the rates provided in the Amended Application.

H. SHARED SERVICES RECOVERY FROM PNG(NE)

- 115.0 Reference: SHARED SERVICES RECOVERY FROM PNG(NE)
Exhibit B-2, Section 2.11.2, pp. 86 and 88; Exhibit B-3, BCUC IR 46.3
Shared Services Recovery from PNG(NE)**

On page 86 of the Amended Application, PNG states that it "... will be incurring annual sustainment costs" for the Maximo asset management system of approximately \$260,000.

On page 88 of the Amended Application, PNG states the following regarding Account 685 – General Operations in Test Year 2020 over Decision 2019:

Overall cost pool increase of approximately \$277,000 primarily due to costs identified in the preamble related to new operations management staff positions, Maximo sustainment costs, and system integrity support and geohazard identification and management.

In response to BCUC IR 46.3, PNG stated it "... incurred no sustainment costs on the Maximo asset management system in 2019."

- 115.1 Please discuss whether there are offsetting cost increases/decreases attributed to new operations management staff positions, system integrity support and geohazard identification and management and other factors that contribute to the remaining increase of approximately \$17,000 that is not explained by the \$260,000 Maximo sustainment costs. If yes, please provide a breakdown of the \$277,000 overall cost pool increase.

I. RATE BASE

- 116.0 Reference: RATE BASE
Exhibit B-3, BCUC IR 49.3.1, 49.5, 49.6.1
ILI inspections & Pipeline Retrofits**

In response to BCUC IR 49.3.1, PNG stated: "All high-pressure pipelines for which suitable free swimming ILI tools are available have been subject to inline inspection."

Further, in response to BCUC IR 49.5, PNG stated:

...PNG has near future plans to retrofit two transmission pipeline segments that were previously ILI compatible but have not been for many years as a result of a past river washout and pipeline section abandonment. These capital retrofits are proposed for 2021 and 2022. Furthermore, PNG plans to continue reviewing those pipeline segments that are not currently ILI compatible and to find opportunities for improvement.

- 116.1 Please provide the approximate length of high-pressure pipelines which are free-swimming and have been subject to inline inspection relative to the overall total length of high-pressure pipelines in PNG's pipeline network.
- 116.2 Please elaborate on the near future plans to retrofit two transmission pipeline segments by describing the scope, schedule and costs of the project.
- 116.2.1 Please confirm that these costs have been included within the Amended Application. If confirmed, please clarify where the costs have been included.

116.2.2 Please discuss whether PNG has considered seeking approval for this capital project by filing a Certificate of Public Convenience and Necessity (CPCN). If so, please discuss potential timing of the CPCN application.

In response to BCUC IR 49.6.1, PNG stated “[m]ost notably, in 2020, PNG is pursuing a 3-year Master Services Agreement (MSA) with a lone tool vendor for EMAT runs to attempt to further reduce pricing.”

116.3 Please describe the potential reduction in EMAT run pricing that may be achieved by successfully pursuing a 3-year Master Services Agreement (MSA), in either dollar figures or as a percentage.

116.3.1 Please clarify whether any potential savings as a result of a successful MSA have been accounted for in EMAT run costs reported for the current Test Years.

**117.0 Reference: RATE BASE
Exhibit B-3, BCUC IR 50.3, 50.6, 50.7 and 50.7.1
Salvus to Galloway Remediation Project**

In response to BCUC IR 50.3, PNG stated:

The Salvus to Galloway repairs are an extremely high priority for PNG. Given the BCUC’s approved funding in 2018-2019 for the Salvus to Galloway pre-development work, PNG has been able to conduct additional studies and better understand the magnitude of risks.

In response to BCUC IR 50.6, PNG stated:

The following table provides the actual and forecasted costs to an assumed CPCN application approval in early Q2 2021. Due to significant scope growth identified as a result of 2018 and 2019 study, and the ongoing decisions related to final scope definition, PNG is not yet in a position to provide estimated capital cost for full pipeline remediation project. This will be provided in the CPCN application that is intended to be filed in June or July 2020.

\$	2018		2019		2020	2021	Project
	Decision	Actual	Decision	Actual	Forecast	Forecast to CPCN Approval	Forecast to CPCN Approval
Salvus to Galloway Pipeline Remediation	361,700	307,199	566,323	555,815	1,898,690	2,218,500	4,980,204

Further in response to BCUC IR 50.6, PNG stated:

Completed and forecasted scope of work to CPCN approval is as follows:

2018 – Preliminary geohazard identification and risk ranking, significant watercourse surveys, and preliminary environmental constraints cataloguing, inclusive of significant field study.

2019 – Overall remediation project pre-feasibility and FEED study, including options definition and investigation associated with pipeline mechanical repairs, geohazard mitigations, permitting, consultation, and project risk.

2020 – FEED study completion, detailed design and work packages, quantitative project risk assessment, permitting completion, commencement of ILI related repairs and access improvements.

2021 (to CPCN approval) – Completion of detailed geohazard mitigation and line isolation improvement designs based on finalized scope, completion of critical access improvements works, and materials and services procurement.

- 117.1 Please provide a breakdown of the 2018-2019 Actual costs and the 2020-2021 Forecast costs shown in the table provided by PNG in response to BCUC IR 50.6. Please specify the nature of each activity included in the cost breakdown (e.g. PNG internal, engineering, survey, regulatory, inspection, material procurement, construction, etc.).
- 117.2 Please clarify whether the Salvus to Galloway Remediation project Actual and Forecast costs shown in the table provided in response to BCUC IR 50.6 will be included as part of the forthcoming CPCN application. If not, please explain why not.
- 117.3 Please provide a breakdown of the incremental cost of service impact associated with the Salvus to Galloway Remediation capital costs for 2020 and 2021 including depreciation, return of equity and return on debt, AFUDC and other costs.
- 117.3.1 Please clarify whether all of the historical and forecast costs associated with the Salvus to Galloway Remediation will be included in work in progress and attract AFUDC during the Test Period.
- 117.4 Please discuss the rationale for seeking approval to recover costs associated with the Salvus to Galloway Remediation Project in rates as part of the current RRA, given that a CPCN is expected to be filed for the project in the future and a CPCN has not yet been granted.
- 117.4.1 Please discuss whether PNG considered excluding the cost of service impact of the Salvus to Galloway Remediation Project from the current RRA given that a CPCN is expected to be filed for the project in the future and a CPCN has not yet been granted. If yes, please discuss why PNG did not proceed with this approach. If not, please discuss why not.
- 117.5 Please discuss whether PNG considered including the cost of service impact of the Salvus to Galloway Remediation Project in a deferral account, with the disposition of the account to be determined following any BCUC decision regarding the CPCN application. If yes, please discuss why PNG did not proceed with this approach. If not, please discuss why not.

PNG also stated in response to BCUC IR 50.6:

Due to significant scope growth identified as a result of 2018 and 2019 study, and the ongoing decisions related to final scope definition, PNG is not yet in a position to provide estimated capital cost for full pipeline remediation project. This will be provided in the CPCN application that is intended to be filed in June or July 2020.

- 117.6 Please provide an update on the estimated capital cost for the full pipeline remediation project.

In response to BCUC IR 50.7, PNG stated: “[t]he 12 prioritized metal loss features have a Predicted Failure Pressure Ratio (FPR) of 1.25 or less, where FPR is defined as the predicted burst pressure of an anomaly divided by the maximum allowable operating pressure of the pipeline.”

117.7 Please elaborate whether PNG has been required to make any changes to operating conditions (e.g. pressure, flow) as a result of the identified integrity concerns. If so, please describe any impacts to customers downstream.

In response to BCUC IR 50.7.1, PNG stated:

This segment of pipeline is currently subject to a BCOGC mandated risk assessment that must give consideration to both static and dynamic data and give address to the following threats and consequences as outlined in CSA Z662 and ASME B31.85:

- External corrosion
- Weather and outside force (geotechnical and hydrotechnical)
- Mechanical damage
- Safety
- Business continuity
- Environment

Furthermore, this pipeline segment has been selected by the BCOGC for full condition review under their “Aged Pipeline Condition Assessment” project which assesses the overall condition and integrity management sufficiency of operating pipeline assets in BC that are 50 years of age or greater. ...

...

Given information aggregated to date within the Salvus to Galloway Remediation project, PNG believes there is significant risk of further and fairly immediate orders from the BCOGC if it cannot be demonstrated that a fulsome plan is in place for the overall safe and reliable operation of this pipeline.

117.8 Please confirm the costs associated with completing BCOGC mandated risk and pipeline condition assessments included within the current RRA. Please clarify the schedule to complete both the BCOGC mandated risk assessment and the “Aged Pipeline Condition Assessment” and address whether these items factor into the timing of filing the CPCN application.

**118.0 Reference: RATE BASE
Exhibit B-3, BCUC IR 51.2
Compressor Station Upgrades**

In response to BCUC IR 51.2, PNG stated it “... has developed an initial five-year plan for the works on the compressor stations, which included the activities in 2020 and 2021 and up to 2024.”

118.1 Please describe the compressor station upgrade activities included in the five-year plan for each year in the plan.

**119.0 Reference: RATE BASE
Exhibit B-3, BCUC IR 52.2, 52.6; BCUC IR 52.4, Attachment BCUC 1.52.4a – LDS1 Lauren Scope Options, p. 4; Attachment BCUC 1.52.4b – LDS1 Lauren Design Basis, p. 5; PNG Application for CPCN for the Construction of Kitimat Regulating Station LDS No2 proceeding (LDS2 CPCN Application), Exhibit B-1, Section 2.4.1, p. 9.
LNG Canada Let Down Station #1**

In response to BCUC IR 52.2, PNG stated:

PNG believes there is minimal risk to the timing of planned capital activities for this project. There is an executed backstop agreement in place that is supporting

engineering, permitting, planning, and long lead procurement activities while a long-term commercial agreement is executed to support further works. The commercial agreement is presently in draft status and actively being worked through to completion by both PNG and the prospective customer.

In response to BCUC IR 52.6, PNG stated:

PNG notes that it considered seeking approval for this project under this Amended Application and not filing a CPCN. However, following the BCUC's Decision on PNG's 2018-2019 Revenue Requirements Application (Order G-151-18) whereby the CPCN requirements were addressed, PNG determined that a CPCN application would be filed given the magnitude and scope of the project, as well as the public interest component of the project. The CPCN application will be in line with the approach taken in 2019 with the filing of a CPCN application for the very similar LNG Canada LDS#2 project

- 119.1 Please provide a copy of the executed backstop agreement.
- 119.2 Please provide an update regarding the timing for an executed commercial agreement and its filing with the BCUC.
 - 119.2.1 If available, please provide details of any substantive differences between the draft commercial agreement to serve this customer and the executed gas sales agreement entered into as part of the LDS#2 project.
- 119.3 Please provide the financial evaluation of the proposed LDS#1 commercial agreement.
- 119.4 From PNG's perspective, please clarify if a CPCN is required for the LNG Canada LDS#1 Project or if approval of the costs as part of the RRA is adequate.
- 119.5 Please elaborate on the public interest component of the LNG Canada LDS #1 Project, as referenced in the preamble.
- 119.6 Please provide a breakdown of the incremental cost of service impact associated with the LNG Canada LDS#1 capital costs for 2020 and 2021 including depreciation, return of equity and return on debt, AFUDC and other costs.
 - 119.6.1 Please clarify when the costs associated with the LNG Canada LDS #1 expected to be moved from work in progress to rate base.
- 119.7 Please discuss the rationale for seeking approval to recover costs associated with the LNG Canada LDS#1 Project in rates as part of the current RRA, given that a CPCN is expected to be filed for the project in the future and a CPCN has not yet been granted.
 - 119.7.1 Please discuss whether PNG considered excluding the cost of service impact of the LNG Canada LDS#1 Project from the current RRA given that a CPCN is expected to be filed for the project in the future and a CPCN has not yet been granted. If yes, please discuss why PNG did not proceed with this approach. If not, please discuss why not.
 - 119.7.2 Please discuss whether PNG considered including the cost of service impact of the LNG Canada LDS#1 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 did not proceed with this approach. If not, please discuss why not.

In response to BCUC IR 52.4, PNG provided an attachment BCUC IR 1.52.4a entitled LDS1 Lauren Scope Options which states on page 1:

PNG would like to evaluate the following options for construction of the new Letdown Station #1:

- A. Inspect the existing above ground and below ground 10" yard piping for corrosion. If acceptable, recoat piping, demolish the large coalescing filter that is no longer required, install structural supports for the existing 10" valves that were previously supported by the coalescing filter, and tie-in a new 1.5" to 2" station inlet off a downstream 10" blind flange.
- B. Install a hot tap fitting on the buried 10" piping on the Methanex Station side of the 10"x4" tee that feeds the Alcan Lateral, and complete hot tap and isolation work to facilitate demolition of the 10" piping that has had minimal flow for the last 14 years, and install a new 2" riser to service the new Letdown Station #1.

Further, in response to BCUC IR 52.4, PNG provided an attachment BCUC IR 1.52.4b entitled LDS1 Lauren Design Basis which states on page 5:

The proposed regulating station will be supplied by a new 60mm OD pipeline and riser with below ground tie in to the existing 273.1mm OD high pressure sweet natural gas pipeline at the lease boundary. A hot tap and isolation of the 273.1mm OD pipeline will be required to facilitate demolition and tie-ins.

- 119.8 Please elaborate on the factors which led PNG to select the proposed regulating station design described in the Design Basis.
- 119.9 Please describe any alternatives considered by PNG for this project other than the two alternatives identified in the preamble.
- 119.10 Please provide a total cost estimate for Option A as described in the preamble, as well as any other feasible alternatives considered by PNG for this project.

On page 9 of PNG's LDS2 CPCN Application, PNG stated "LDS#2 has been designed such that it can be used for future purposes at this site or can be relocated to meet needs elsewhere within the PNG system."

- 119.11 Please discuss whether the proposed design for LDS1 will allow for similar future repurposing as the design allowed for LDS2. If not, please explain.

**120.0 Reference: RATE BASE
Exhibit B-3, BCUC IR 54.4
High Voltage Alternating Current Mitigation**

In response to BCUC IR 54.4, PNG stated:

PNG has attempted to obtain compensation and has not been successful, therefore PNG is not expecting to receive any compensation for the purposes of mitigating the induced voltage as a result of this installation.

- 120.1 Please clarify from whom PNG attempted to obtain compensation for the purposes of mitigating the induced voltage as a result of this installation.
- 120.2 Please elaborate on the circumstances of the request for compensation and describe the rationale provided for denying PNG compensation for this induced current mitigation work.
- 120.3 Please explain whether PNG has considered taking legal action to pursue a claim for compensation. If not, why not?

**121.0 Reference: RATE BASE
Exhibit B-3, BCUC IR 58.1
Mobile/Heavy Equipment**

In response to BCUC IR 58.1, PNG provided the following table showing decision and actual mobile/heavy equipment costs from 2015 to 2019, as well as forecast 2020 and 2021 costs:

	2015		2016		2017		2018		2019		2020	2021
	Decision	Actual	Forecast	Forecast								
Mobile	479,000	497,526	351,594	401,472	344,500	323,001	288,660	272,058	246,993	297,828	569,160	821,916
Heavy Equipment	347,000	338,747	400,860	404,952	285,000	314,211	86,653	36,750	-	-	1,329,713	478,584
Total	826,000	836,273	752,454	806,424	629,500	637,212	375,313	308,808	246,993	297,828	1,898,873	1,300,500

121.1 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.

**122.0 Reference: RATE BASE
Exhibit B-3, BCUC IR 71.2
RIPET Project CIAC**

In response to BCUC IR 71.2, PNG stated:

The coincidental activities and requirements of the RIPET project allowed for significant improvements, address of known integrity concerns, while allowing minimization of cost impacts to PNG ratepayers by covering the significant majority of associated costs within the RIPET CIAC recovery.

122.1 Please clarify whether the total costs for the Cathodic Protection, Distribution Pressure Pipeline System and High Pressure Pipeline System Improvements were accounted for in the RIPET Project CIAC recovery amount and if so, how. If not, please clarify what is meant by the statement that “the significant majority of associated costs within the RIPET CIAC recovery” as stated in the preamble.

**123.0 Reference: RATE BASE
Exhibit B-3, BCUC IR 53.1, 53.2; PNG-West Division 2018-2019 RRA proceeding, Exhibit B-6, BCUC IR 91.1; PNG-West 2018-2019 RRA proceeding, Order G-151-18 with reasons for decision dated August 15, 2018, Section 4.2, p. 17.
Geographic Information System (GIS)**

In response to BCUC IR 53.1, PNG provided the following table that breaks down the consolidated GIS costs allocated to each division.

Allocation	2018		2019		2020		Total		
	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.”

123.1 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.

In the 2018-2019 PNG West RRA Decision, it stated “[i]n addition, PNG-West has identified two further projects: Digital Data Mapping (DDM) and Computerized Maintenance Management System (CMMS) that will collectively address the state of its utility asset information.”

123.2 Please list and provide a description of all the systems the GIS project will interface with.

123.3 Please explain if and how the DDM and CMMS systems complement the GIS project. Please include a description of these systems, if not done so above.

In response to BCUC IR 53.2, PNG stated:

PNG estimates the annual cost of maintaining an accurate GIS to be \$250,000, based on the cost of: (i) maintaining software licenses (\$50,000); (ii) maintaining servers and other IT infrastructure (\$40,000); (iii) technical support from AUI’s GIS staff (\$40,000); and (iv) additional system improvements (\$120,000).

123.4 Please categorize the capital and annual costs by account number.

123.5 Please explain why additional system improvements of \$120,000 are required annually.

**124.0 Reference: RATE BASE
Exhibit B-2, Section 2.13.1.1.1, p. 102; Exhibit B-3, BCUC IR 56.2
Information and Data Management Systems – Management of Change**

On page 102 of the Amended Application, PNG states:

PNG has also commenced a management of change (MOC) initiative to further develop and update PNG’s current management of change (MOC) system. In 2020, \$96,000 has been budgeted for project activities that include document and standard development, electronic platform implementation, and company wide training. PNG anticipate that the improved platform will enable it to plan, track, and audit any system changes and to process safety risks with a capability that is aligned with industry best practices and API RP 1173.

In response to BCUC 56.2, PNG stated “[f]uture year sustainment costs are projected to be <\$10,000 and will be incurred under operating expense.”

124.1 Please breakdown the costs by year, account, category (capital and annual operating costs) and division. Please describe the method of allocation to the divisions.

**125.0 Reference: RATE BASE
Exhibit B-2, Section 2.13.1.1.2, p. 111; Exhibit B-3, BCUC IR 62.1
Information and Data Management Systems – Synergi Gas**

On page 111 of the Amended Application, PNG states:

The remainder of the provision in this category for 2021 is to replace or supplement the existing modelling system with Synergi Gas (or similar) (\$128,000). PNG’s current hydraulic modelling system is aged and seen to be limited in its efficiency and use for future interfacing with PNG’s other system such as GIS and advanced and more completely attributed digital system maps.

125.1 Please confirm that the total costs to replace or supplement the existing modelling system with Synergi Gas (or similar) are \$128,000. If not confirmed, please provide the total project costs.

125.2 Please explain whether any costs are allocated to the PNG(NE) divisions.

125.2.1 If yes, please provide the costs for PNG (consolidated) and costs allocated to PNG-West, PNG(NE) FSJ/DC and PNG(NE) TR divisions by year, operating and capital costs and by account number. Please also describe the allocation methodology.

125.2.2 If not, please explain why not and breakdown the total costs by year, operating and capital costs and by account number.

125.3 Please discuss the timeline to complete this project.

In response to BCUC IR 62.1, PNG stated: "...the current PNG modelling software has significant limitations in its ability to interface with PNG's GIS system, other PNG online operational management platforms, and is very inefficient from a user interface and maintenance perspective."

125.4 Please list and provide a description of all the systems the Synergi Gas system will interface with.

**126.0 Reference: RATE BASE
Exhibit B-3, BCUC IR 57.1; PNG-West Division 2018-2019 RRA proceeding,
Exhibit B-1-1, pp. 87, 94; PNG-West Division 2016-2017 RRA proceeding, Exhibit B-1-1,
pp. 87, 93.
Computer Hardware/Software**

In response to BCUC IR 57.1, PNG provided the following table specifying the forecast computer hardware/software capital expenditures for the test period.

	2020	2021
Terrace Server Replacement	61,200	
Terrace Data Storage Replacement		40,000
Upgrade the AV Equipment in Terrace Meeting Room	20,400	
42" Plotter Printer replacement (Eng. & Drafting)	18,360	
Scanner replacement (Eng. & Drafting)	25,500	
Necessary PNG website upgrades	28,883	
Replacement of iTron meter reading handhelds - end of life		90,000
Non-specific project expenditures	63,954	62,700
Total Computer Hardware and Software	218,297	192,700

In the 2018-2019 PNG-West RRA forecast Computer Hardware/Software capital expenditures were approximately \$128,000 in 2018 and \$144,000 in 2019.

In the 2016-2017 PNG-West RRA forecast Computer Hardware/Software capital expenditures were approximately \$164,000 in 2016 and \$107,000 in 2017.

126.1 Please explain why computer hardware/software costs have increased from prior Test Periods. Please discuss the key drivers.

J. CAPITAL STRUCTURE AND RETURN ON CAPITAL

**127.0 Reference: CAPITAL STRUCTURE AND RETURN ON CAPITAL
Exhibit B-3, BCUC IR 67.4, 67.5, 67.6
Financing Costs**

In response to BCUC IR 67.4, PNG stated:

The resulting impact on the 2020 and 2021 cost of service from the updated 90 day

treasury bill rate on 2020 and 2021 short term debt costs would result in a decrease in costs of \$105,000 and \$143,000, respectively.

The resulting impact on the 2020 and 2021 cost of service from the updated 90 day treasury bill rate on 2020 and 2021 long term debt costs would result in a decrease in costs of \$364,000 and \$447,000, respectively.

- 127.1 Please discuss the impact on delivery rates as a result of the revised 90 day treasury bill interest rate forecast.

In response to BCUC IR 67.5, PNG stated:

As and when PNG's risk profile supports the reduction of its capitalization with common equity without endangering its investment grade credit rating, PNG will be taking the very straightforward steps to achieve this result: (i) incur additional debt; and, (ii) issue a dividend to its shareholder.

In response to BCUC IR 67.6, PNG stated:

By having common equity in its actual capital structure that is in excess of the equity capitalization of rate base, PNG's shareholder effectively earns an after-tax interest rate on the excess equity.

- 127.2 Please discuss whether the recent reorganization has had, or is expected to have, any impact on the actual common equity component required to maintain an investment grade credit rating on PNG's long-term debt.

K. PROPOSED RATE CHANGES

128.0 Reference: PROPOSED RATE CHANGES Exhibit B-3, BCUC IR 70.1 Bill Comparison

In response to BCUC IR 70.1 PNG stated:

However, due to the increase in the RSAM rate rider for Test Year 2020, from a credit rider of \$0.327/GJ to a debit rider of \$1.175/GJ, residential and small commercial customers will see a bundled overall rate increase of 11% and 12.4%. This increase in the RSAM rate rider is primarily due to much warmer weather conditions experienced in both 2018 and 2019. Therefore, PNG collected lower than forecast margin from these two customer classes in both 2018 and 2019, and through the RSAM, PNG will collect these variances from these customer classes in 2020 and 2021.

- 128.1 Please clarify if similar bundled overall rate increases have been experienced by customers in prior Test Periods. If so, please provide the Test Year(s) and the associated amount of rate increases.

L. COST OF SERVICE REPORTING – ACTUAL VS DECISION

**129.0 Reference: COST OF SERVICE REPORTING – ACTUAL VS DECISION
Exhibit B-3, BCUC IR 75.1, 75.1.1, 75.3
Account 685 – General Operations 2019 Variance**

In response to BCUC IR 75.1 PNG stated: “The amount of costs that were previously budgeted as operating costs and subsequently capitalized was \$254,000, specifically the costs related to Maximo.”

And in response to BCUC IR 75.1.1, PNG stated:

PNG confirms that these 2019 costs approved under Decision 2019 for GIS and Maximo were reflected in the cost of service for 2019 and recovered in rates set for that year. PNG further confirms that the Maximo costs capitalized will subsequently be recovered in future rates by virtue of the depreciation of these costs being included in the cost of service for future years.

However, PNG notes that, given the nature of the rate setting process, during the course of each year there are variances, both favourable and unfavourable, from the forecast cost of service for any particular test period. To consider specific unfavourable variances for disallowance is not appropriate as it does not consider the fact that on an overall basis the impact is likely to be marginal.

PNG stated in response to BCUCU IR 75.3:

The reason for the change in accounting treatment can be attributed to the fact that the Maximo system is to be deployed to employees later than the date originally anticipated when the 2018-2019 Revenue Requirements Application was under review. Under US GAAP qualifying license costs and the related software support and other development costs can be capitalized during the application development stage, which is why these costs have been capitalized rather than being expensed.

129.1 Please clarify whether variances from the forecast cost of service related to changes in accounting treatment are typically allowed under the rate setting process and provide any recent examples.

129.2 Please discuss if there have been any similar changes in accounting treatment since the 2018-2019 Test Period.

129.2.1 If so, please provide any changes that may be required to the ratebase or cost of service for the Test Period, and discuss the rate impact.

M. OTHER MATTER TO BE ADDRESSED FROM PRIOR YEAR DECISIONS

**130.0 Reference: OTHER MATTER TO BE ADDRESSED FROM PRIOR YEAR DECISIONS
Exhibit B-3, BCUC IR 79.2, 79.5, 79.7.1 and 79.7.2
Reporting on Significant Capital Projects**

In response to BCUC IR 79.2, PNG provided the following table to show the proposed threshold as a percentage of actual capital expenditures.

(\$000's)	Actual 2019	Actual 2018	Actual 2017	Actual 2016	Actual 2015
Proposed threshold	500	500	500	500	500
Actual capital expenditures	11,497	17,860	4,272	4,609	3,868
Threshold as % of Actual	4.3%	2.8%	11.7%	10.8%	12.9%

130.1 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.

In response to BCUC IR 79.5, PNG stated it "...did not consider other project characteristics beyond a dollar threshold in determining which projects should be included in the proposed reporting."

130.2 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.

130.3 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.

In response to BCUC IR 79.7.2, PNG stated:

As noted in the response to Question 79.7, PNG has 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 suggests that a greater amount, say between \$1,500,000 to \$2,000,000, may be more appropriate. Based on actual experience for 2017 to 2019, projects at the \$1,500,000 to \$2,000,000 expenditure level would represent 13.4% to 17.8% of average total capital expenditures during this period. As per the table provided in response to Question 79.7.3 with data for 2015 to 2019, this higher threshold would reduce the regulatory burden on PNG, effectively requiring six to seven CPCNs during this time period compared to nine CPCNs required at the \$1,000,000 threshold.

130.4 If the CPCN threshold were to be established at \$1,000,000, please provide all projects that would be filed as CPCNs as a percentage of total capital expenditures for 2017 to 2019.

130.5 Please provide the CPCN threshold that would be required to represent 20 to 30 percent of the total capital expenditures for 2017 to 2019.

130.6 Please provide the individual CPCN threshold of \$1,000,000, \$1,500,000, \$2,000,000 and \$2,500,000 as a percentage of total rate base, with supporting calculations.

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

130.8 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.

In response to BCUC IR 79.7.1 PNG 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)

130.9 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.

130.9.1 Please address how the nature of an expenditure, specifically whether the expenditure is an extension to the existing system, is relevant to the decision whether to file a CPCN.

**131.0 Reference: OTHER MATTER TO BE ADDRESSED FROM PRIOR YEAR DECISIONS
Exhibit B-2, Section 3.4.1.7, p. 174, Exhibit B-3, BCUC IR 88.2, 88.3
Automotive Cost Allocation – Consolidated Automotive Cost Pool**

On page 174 of the Amended Application, PNG states it "... 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." [*Emphasis added*]

In response to BCUC IR 88.3, PNG stated:

PNG 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 the calendar year projection of actual costs for 2019. A more appropriate description would be "forecast 2019 costs." [*Emphasis added*]

And in response to BCUC IR 88.2, PNG stated:

PNG observes that making use of 2015 Actual costs lends further supports 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 \$64,966 lower than Actual to \$67,539 greater than Actual with an average Forecast amount \$16,071 less than Actual, much more appropriate than the average Forecast amount being \$136,709 greater than Actual per the historic methodology.

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

131.1.1 If not confirmed, please explain the recommended methodology.

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

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

131.3 Please explain how PNG 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).