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E-File

July 31, 2026

British Columbia Utilities Commission
Suite 410, 900 Howe Street
Vancouver, BC V6Z 2N3

Attention: Registrar

Re: Pacific Northern Gas Ltd.

**Application for Acceptance of Acceptance of Section 44.2 Schedule of Expenditures
Related to Replacement of Metering Infrastructure and Automated Meter Reading
Implementation**

Accompanying, please find the application by Pacific Northern Gas Ltd. (PNG) to the British Columbia Utilities Commission (BCUC) for acceptance, pursuant to section 44.2 of the *Utilities Commission Act*, of a schedule of anticipated capital expenditures in the amount of \$10.7 million associated with replacement of metering infrastructure and the implementation of automated meter reading (AMR) throughout the PNG-West service area.

Request for Confidential Treatment of Certain Information

PNG has filed Appendix B to the Application, the Vendor Price Quote, on a confidential basis pursuant to Section 23 of the BCUC's Rules of Practice and Procedure regarding confidential documents. Specifically, PNG is filing the price quote from its selected supplier as a confidential document. The quotation contains commercially sensitive pricing and procurement information that is not publicly available and the disclosure of which could reasonably be expected to prejudice PNG's commercial interests and future negotiations with suppliers.

Finally, PNG has provided a copy of this submission to interveners that actively participated in the proceedings respecting PNG's PNG-West 2025-2027 Revenue Requirements Application and 2024 Consolidated Resource Plan.

Please direct any questions regarding this letter to my attention.

Yours truly,

Original on file signed by:

Verlon G. Otto

Enclosure

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**PACIFIC NORTHERN GAS LTD.
PNG-WEST SERVICE AREA**

**Application for Acceptance of
Section 44.2 Schedule of Expenditures Related to
Replacement of Metering Infrastructure and
Automated Meter Reading (AMR) Implementation**

July 31, 2026

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1 Application

1.1 Executive Summary

1.1.1 Overview

In this Application Pacific Northern Gas Ltd. (PNG) seeks acceptance by the British Columbia Utilities Commission (BCUC), pursuant to section 44.2 of the *Utilities Commission Act* (UCA), of a schedule of capital expenditures (Project Expenditure Schedule) associated with replacement of metering infrastructure and the implementation of automated meter reading (AMR) throughout the PNG-West service area (Project). The Project has an estimated cost of \$10.7 million (2026 dollars) and will be implemented over a three-year period between 2027 and 2029. The Project will accelerate the replacement of PNG-West's existing residential and small commercial metering infrastructure with ultrasonic meters equipped with AMR capability and will establish the supporting meter data collection infrastructure required to automate meter reading activities.

1.1.2 Background

In 2018, PNG successfully completed an AMR pilot project in the Thornhill area of Terrace, British Columbia. Building on the success of that pilot, Pacific Northern Gas (N.E.) Ltd. (PNG(NE)), PNG's wholly owned subsidiary, subsequently received BCUC approval to deploy AMR infrastructure throughout its service territory in Fort St. John, Dawson Creek and Tumbler Ridge. Pursuant to Order C-3-20,¹ PNG(NE)'s AMR project was completed on schedule and within budget and has provided PNG with several years of operating experience with AMR technology.

Since the approval of the PNG(NE) AMR deployment, the natural gas metering industry has undergone significant technological and market evolution. Meter manufacturers have increasingly shifted away from conventional diaphragm meters in favour of ultrasonic metering technology, resulting in improved availability and increasingly competitive pricing for ultrasonic meters equipped with integrated communications capabilities. Considering these developments, PNG has undertaken a comprehensive review of its meter procurement

¹ See: https://docs.bcuc.com/documents/decisions/2020/doc_59761_decision-order-c-3-20-png-amr-cpcn.pdf

and asset management strategy. That review determined that an accelerated transition to ultrasonic metering technology represents a prudent and forward-looking approach that aligns with both evolving industry standards and PNG's long-term operational objectives, including the adoption of AMR functionality across the PNG-West service area.

1.1.3 Project Justification

The principal rationale for the Project is that the economics and availability of metering technology have fundamentally changed. PNG expects to increasingly deploy ultrasonic meters in the ordinary course regardless of whether the Project proceeds because ultrasonic meters with embedded communications capability are becoming the most readily available and cost-effective replacement option. The Project accelerates an infrastructure transition that would otherwise occur gradually over many years and allows customers to realize the associated operational, customer service and safety benefits of both new metering technologies and AMR sooner and in a more coordinated manner.

Historically, PNG-West has relied upon conventional diaphragm meters and manual meter reading processes. While these systems have performed reliably, they require substantial employee travel, routine access to customer premises, manual data collection activities and administrative effort. The Project modernizes this infrastructure by accelerating the deployment of ultrasonic meters equipped with communications capability and enabling remote collection of meter data. As a result, PNG expects to improve operational efficiency, reduce certain employee safety risks, enhance billing accuracy, improve customer service and create opportunities for future improvements in system planning and customer energy-use information.

PNG submits that the Project is appropriately viewed as an asset modernization initiative designed to accelerate the benefits associated with a metering technology transition that is already underway throughout the natural gas utility industry.

1.1.4 Alternatives Analysis and Recommended Solution

PNG evaluated a range of alternatives, including:

- 1 • Status quo approach of continuing a gradual transition toward ultrasonic meters
2 through normal replacement programs while retaining existing manual meter reading
3 practices;
- 4 • Transition toward ultrasonic meters and implementation of AMR throughout the PNG-
5 West service area over a period of three years;
- 6 • Transition toward ultrasonic meters and implementation of AMR over a longer
7 implementation period; and
- 8 • Implementing a full Advanced Metering Infrastructure (AMI) solution.

9 PNG determined that the status quo approach would significantly delay realization of
10 operational and customer benefits while requiring continued reliance on legacy processes.
11 PNG also concluded that although AMI offers additional functionality through a two-way
12 communications network, the incremental costs associated with that infrastructure are not
13 justified by the incremental benefits available to PNG-West customers at this time.

14 The proposed AMR solution represents the most prudent balance between customer
15 affordability, operational efficiency, project risk and future flexibility. Importantly, the meters
16 proposed for installation as part of the Project are AMI-compatible, preserving PNG's ability
17 to pursue AMI capabilities in the future should it be determined prudent to do so.

18 PNG also evaluated deployment schedules ranging from three to six years. While a variety of
19 approaches were technically feasible, PNG concluded that a three-year deployment schedule
20 provides the optimal balance between implementation cost, execution certainty,
21 procurement strategy and timely realization of project benefits. A longer deployment period
22 would delay benefits, prolong reliance on manual processes and increase the potential for
23 inflationary and supply chain risks.

24 **1.1.5 Project Costs and Customer Impact**

25 The estimated cost of the Project is \$10.7 million in 2026 dollars. The Project will be completed
26 between 2027 and 2029 and includes meter procurement, installation activities,
27 communications technology, project management and associated implementation costs.

PNG's economic analysis demonstrates that the Project will generate ongoing operating benefits through reductions in contractor costs, meter handling activities, meter reading effort, vehicle usage and other operational expenditures. The Project will also create additional capacity within PNG-West's field workforce, enabling resources currently devoted to manual meter reading activities to be redirected toward higher-value operational work and customer service activities.

Based on the analysis presented in this Application, PNG forecasts that the Project will result in favourable long-term customer rate impacts, including an average annual bill reduction over the 20-year evaluation period for a typical residential and small commercial customer. In addition, customers will benefit from more timely and accurate meter data, fewer estimated bills, reduced routine access requirements and improved service quality.

1.1.6 Stakeholder Engagement and Communications

PNG has commenced engagement with local governments and other stakeholders regarding the Project and intends to continue communications throughout implementation. PNG's communications strategy is founded on transparency, customer awareness and proactive engagement. Customers will receive advance notification of meter replacement activities and information regarding the benefits, timeline and practical implications of the Project. PNG also intends to engage Indigenous communities and other local stakeholders as implementation progresses.

1.1.7 British Columbia's Energy Objectives and PNG's Long Term Resource Plan

PNG submits that the Project is consistent with the resource planning principles contained in its 2024 Consolidated Resource Plan² and supports several applicable British Columbia energy objectives. The Project promotes safe and reliable utility operations and supports least-cost service delivery through identified operating cost savings, improved utilization of field

² PNG's most recent resource plan was submitted to the BCUC on June 28, 2024, (2024 Consolidated Resource Plan) and was subsequently accepted by the BCUC in Order G-55-25.

See: <https://www.bcuc.com/OurWork/ViewProceeding?applicationid=1264>.

resources and forecast long-term customer bill reductions, while providing operational and customer service benefits some of which are not fully reflected in the financial analysis.

The Project further advances PNG's objective of maintaining modern, reliable and cost-effective infrastructure while positioning PNG to respond to future developments in metering technology and customer service expectations.

1.1.8 Conclusion

PNG submits that the proposed Project is a prudent and cost-effective asset modernization initiative that is in the public interest. The Project responds to fundamental changes occurring within the metering industry, accelerates a transition toward modern metering technology that PNG expects will occur regardless of whether the Project proceeds, and allows customers to realize associated benefits sooner and more efficiently. The Project supports the economic viability of the utility by modernizing metering infrastructure, reducing ongoing operating costs relative to the base case, and improving the quality and timeliness of meter data used for billing and customer service. These outcomes support efficient utility operations and help maintain affordable service over the long term.

For these reasons, PNG respectfully requests that the BCUC accept the proposed Project Expenditure Schedule pursuant to section 44.2 of the UCA.

1.2 Acceptance Sought and Proposed Regulatory Process

1.2.1 Acceptance Sought

In this Application, PNG seeks BCUC acceptance, pursuant to section 44.2(3)(a) of the UCA, of the Project Expenditure Schedule of anticipated capital expenditures in the amount of \$10.7 million for the PNG-West Project outlined herein, to be expended between 2027 and 2029, to update and replace the current metering inventory in PNG-West with ultrasonic metering infrastructure and to enable the AMR capability embedded in the meters. A Draft Order is provided as Appendix A.

1.2.2 Regulatory Framework

PNG is filing the Project Expenditure Schedule pursuant to section 44.2(1)(b) of the UCA. The Project Expenditure Schedule can be found in Table 5-1, in Section 5.1. PNG is seeking an order

from the BCUC granting acceptance that the expenditures set out in the Project Expenditure Schedule are in the public interest.

PNG submits that acceptance of the Project pursuant to Section 44.2 of the UCA is appropriate because the Project constitutes a capital investment in the replacement and modernization of existing metering infrastructure used in the provision of regulated service. The Project does not expand PNG's service territory, increase system capacity, or establish a new utility undertaking. Rather, it is an asset management initiative designed to enhance operational efficiency, worker safety, billing accuracy, and customer service. Accordingly, the Project is appropriately considered as a schedule of capital expenditures under Section 44.2 rather than through a Certificate of Public Convenience and Necessity proceeding.

1.2.3 The Public Interest Test

As noted above, PNG seeks acceptance of the proposed Project Expenditure Schedule pursuant to section 44.2 of the UCA. Section 44.2(3)(a) of the UCA provides that, subject to certain exceptions, the BCUC must accept an expenditure schedule filed under section 44.2 if it determines that the proposed expenditures are in the public interest.

The UCA does not prescribe a detailed public interest test for applications under section 44.2. PNG therefore submits that the determination of whether proposed expenditures are in the public interest must be informed by the specific circumstances of the utility, the nature of the proposed investment, the alternatives available to the utility, and the costs and benefits expected to arise from the proposed expenditures. Accordingly, PNG has structured this Application to address the considerations typically associated with major utility capital investments, including project need, alternatives, costs, customer impacts, execution risk, stakeholder engagement, and applicable legislative and regulatory objectives. PNG submits that the proposed Project should be viewed principally as an asset modernization initiative rather than a discretionary technology deployment. The natural gas metering industry is transitioning toward ultrasonic metering technology as a result of changing market conditions, product availability and economics. In that context, the primary question is not whether PNG should transition to ultrasonic metering, but whether customers are better served by allowing that transition to occur gradually over many years or by accelerating it through a coordinated deployment program.

The Project is not intended to accelerate meter replacement solely for the purpose of adopting new technology. Rather, it is intended to accelerate the realization of operational, customer service, safety, and procurement benefits that become available only when AMR-capable meters are deployed at sufficient scale. Under a gradual replacement approach, PNG would incur much of the same meter replacement cost over time while continuing to rely on manual meter reading processes and delaying realization of those benefits. PNG submits that the coordinated three-year deployment approach represents the more prudent and cost-effective outcome for customers and is therefore in the public interest.

In PNG's view, assessment of the Project requires consideration of:

- The present evolution in metering technologies;
- The costs, risks and benefits of the proposed Project relative to reasonable alternatives;
- The timing and certainty of customer, operational and safety benefits;
- Customer affordability and rate impacts;
- Project execution considerations and risks; and
- The applicable statutory considerations set out in section 44.2 of the UCA.

PNG submits that the Project satisfies these considerations. The Project responds to changing market conditions affecting metering technology, improves operational efficiency, reduces employee exposure to hazards associated with manual meter reading, enhances billing accuracy and customer service, and preserves flexibility for future advanced metering applications. The Project also avoids the higher costs associated with immediate deployment of a full AMI solution while retaining the ability to pursue such capabilities in the future should they become economically justified.

PNG further submits that the Project appropriately balances the interests of current and future customers. The proposed implementation schedule accelerates the realization of benefits, secures procurement advantages through pricing protection and volume discounts, supports affordability through identified cost savings, and enables PNG to modernize its metering infrastructure in a disciplined and cost-effective manner. The supporting financial

analysis demonstrates that the Project can be undertaken while maintaining affordability for customers and is expected to produce long-term customer benefits through improved operational efficiency and reduced operating costs.

For these reasons, PNG submits that the proposed Project Expenditure Schedule represents a prudent and cost-effective investment in essential utility infrastructure and that the expenditures contemplated by the Project are in the public interest.

1.2.4 Proposed Regulatory Process

PNG proposes a written review process that includes provision for one round of information requests and letters of comment followed by final submissions by PNG and registered interveners and a reply submission by PNG. The table that follows sets out a preliminary regulatory timetable for the review:

Table 1-1: Proposed Regulatory Timetable

Action	Date (2026)
PNG Submits Application	Friday, July 31
PNG Notice of Application	Friday, August 28
Intervener Registration Deadline	Friday, September 4
BCUC Information Request (IR) No. 1 to PNG	Wednesday, September 16
Intervener IR No. 1 to PNG	Wednesday, September 23
PNG responds to BCUC and Intervener IR No. 1	Friday, October 16
Letter of Comment Deadline	Friday, October 16
PNG Final Argument	Thursday, October 29
Intervener Final Arguments	Thursday, November 13
PNG Reply Argument	Thursday, November 27

1.3 Organization of the Application

While they do not expressly apply to capital expenditure applications pursuant to section 44.2 of the UCA, PNG has generally sought to align and structure this Application with the BCUC's

CPCN Guidelines,³ which have been prepared to assist applicants in addressing issues in their regulatory applications for large capital projects. In this regard, the Application is organized into the following sections:

- *Section 2 – Applicant* provides an overview of PNG as the Applicant and provides information on PNG’s financial and technical capabilities to undertake the Project;
- *Section 3 – Project Need, Alternatives and Justification* establishes the context for the Application, alternatives considered and justification for the Project;
- *Section 4 – Project Description* provides a detailed description of the Project, discusses the project management approach and risks identified and their mitigation;
- *Section 5 – Project Costs, Accounting Treatment and Rate Impacts* provides the cost estimate, the assumptions upon which the financial analysis is based and the rate impacts;
- *Section 6 – Stakeholder Engagement and Communication* outlines engagement to date and the communication plan associated with the Project.
- *Section 7 – British Columbia Energy Objectives and Long Term Resource Plan* outlines how the Project supports British Columbia’s energy objectives and its relevance to PNG’s 2024 Consolidated Resource Plan.

1.4 Confidential Information

PNG is filing certain documents supporting this Application on a confidential basis pursuant to Section 23 of the BCUC’s Rules of Practice and Procedure regarding confidential documents. Specifically, PNG is filing the price quote from its selected supplier as a confidential document. The quotation contains commercially sensitive pricing and procurement information that is not publicly available and the disclosure of which could reasonably be expected to prejudice PNG’s commercial interests and future negotiations with suppliers.

³ The BCUC 2015 Certificate of Public Convenience and Necessity Application Guidelines (CPCN Guidelines) can be found at: https://docs.bcuc.com/documents/Guidelines/2015/DOC_25326_G-20-15_BCUC-2015-CPCN-Guidelines.pdf

2 Applicant

2.1 Name, Address and Nature of Business

PACIFIC NORTHERN GAS LTD. (PNG) is a company formed under the laws of British Columbia and is a wholly owned subsidiary of TriSummit Utilities Inc. (TSU), the owner of several Canadian utilities and renewable power infrastructure assets. PNG maintains an operating office at 2900 Kerr Street in Terrace, British Columbia, and its head office is located at Suite 750, 888 Dunsmuir Street, Vancouver, British Columbia.

PNG provides natural gas transmission, distribution and sales services to approximately 20,800 residential, commercial and industrial customers located in communities in northwestern British Columbia via its PNG-West division. The PNG-West division's Western Transmission Gas System connects with Enbridge's Westcoast Energy Inc. pipeline near Summit Lake, British Columbia, and extends 587 kilometres to the west coast of British Columbia at Prince Rupert. The PNG-West division also owns and operates lateral transmission lines extending into the various communities served by PNG, including approximately 950 kilometres of distribution mains and 690 kilometres of service lines. This infrastructure delivers gas from its transmission system to homes and businesses in Prince Rupert, Port Edward, Kitimat, Terrace, Smithers, Telkwa, Houston, Burns Lake, Fraser Lake, Fort St. James and Vanderhoof. In addition, the PNG-West division operates a propane vapour distribution system serving approximately 140 customers in the village of Granisle.

PNG is the parent company of PNG(NE), also a natural gas distribution utility, providing sales and transportation services to approximately 21,800 residential, commercial and industrial customers in the northeastern British Columbia communities of Fort St. John, Dawson Creek, and Tumbler Ridge. PNG and PNG(NE) are both regulated by the BCUC.

The layout of the PNG-West and PNG(NE) transmission and distribution assets are illustrated in Figure 2-1 that follows.

1 **Figure 2-1: Overview of the PNG and PNG(NE) Natural Gas Pipeline Systems**2 **2.2 Financial Capability**

3 PNG has the financial capability to undertake and operate the Project. PNG maintains access
4 to sufficient financial resources, including existing cash flows and available credit facilities, to
5 fund the Project's anticipated capital expenditures and ongoing operating requirements.

6 **2.3 Technical Capability**

7 PNG has the technical capability to oversee the implementation and operation of the Project.
8 PNG has many years of experience with constructing, operating and maintaining natural gas
9 transmission and distribution systems, including metering infrastructure, and providing safe,
10 secure and reliable gas service to its customers. Further, PNG's subsidiary, PNG(NE), has
11 successfully implemented and operated AMR infrastructure since 2020, providing PNG with
12 relevant experience for the proposed Project. Lastly, PNG has an established relationship with
13 its proposed vendor and PNG will have access to vendor expertise and support during project
14 execution.

2.4 Company Contacts

All notices and other communications in connection with this Application should be directed to:

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And copied to PNG's alternate contact:

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3 Project Need, Alternatives and Justification

3.1 Need for Meter Modernization

3.1.1 Industry Transition in Revenue Metering

The natural gas metering industry is currently undergoing a transition away from conventional mechanical diaphragm metering technology toward ultrasonic metering technology. For many decades, diaphragm meters represented the standard metering technology for residential and small commercial customers. While these meters have provided reliable service, changes in manufacturing, technology development, and supplier product offerings have increasingly shifted the industry toward ultrasonic metering technology.

Ultrasonic meters offer several advantages over traditional diaphragm meters, including reduced size and weight, improved accuracy, lower maintenance requirements due to the absence of moving parts, and compatibility with modern communications technologies. As a result, meter manufacturers are increasingly focusing research, development and production efforts on ultrasonic products and associated smart metering capabilities.

The migration toward ultrasonic metering technology is influencing both product availability and procurement economics. PNG has observed a decline in the availability of conventional diaphragm meters and increasing lead times for procurement. In certain cases, suppliers have discontinued diaphragm meter production, while others have announced plans to cease production in the near future. At the same time, ultrasonic metering technology has become increasingly cost competitive.

3.1.2 Implications for PNG

As a result of these developments, PNG has concluded that ultrasonic metering technology represents the most practical and economically prudent meter technology for future residential and small commercial meter replacements.

PNG's procurement experience supports this conclusion. In recent years, PNG has experienced increasing difficulty sourcing conventional diaphragm meters, including materially longer lead times and supplier indications that diaphragm meter production will continue to decline. At the same time, ultrasonic meters equipped with integrated communications capability have

1 become increasingly cost competitive and, in certain circumstances, are now available at a
2 lower cost than conventional diaphragm meters equipped with separate communications
3 modules. These developments support PNG's conclusion that ultrasonic metering is becoming
4 the practical long-term metering standard for residential and small commercial customers and
5 that a transition toward ultrasonic metering will occur regardless of whether the Project
6 proceeds.

7 While the genesis of the Project was the implementation of AMR in the PNG-West service
8 area, the fundamental rationale for the Project is that the economics, availability and long-
9 term viability of conventional diaphragm metering technology has materially changed. PNG
10 expects to increasingly deploy ultrasonic meters regardless of whether the Project proceeds
11 as those meters are becoming the most cost-effective and readily available replacement
12 option. In PNG's view, the relevant question is not whether ultrasonic meters will become the
13 primary residential and small commercial metering technology, but whether customers are
14 better served by a coordinated transition that accelerates the realization of associated
15 operational, customer service and safety benefits.

16 Given this circumstance, the Project is not intended to establish new infrastructure, but rather
17 to expedite an infrastructure transition that would otherwise occur gradually over an
18 extended period through routine replacement programs, while enabling customers to benefit
19 from improved operational efficiencies and service outcomes sooner and in a more
20 coordinated manner, including those associated with AMR.

21 Accordingly, PNG submits that the central issue before the BCUC is whether it is prudent and
22 in the public interest to accelerate a metering transition that PNG expects will occur over time
23 in any event. PNG submits that the evidence supports a coordinated deployment strategy
24 rather than a gradual replacement approach that would extend the transition over many
25 years. Such an approach would delay realization of the benefits associated with modern
26 metering technology and would require PNG to continue operating legacy meter reading
27 processes for an extended period.

28 **3.1.3 AMR Capability and Changing Economics**

29 Historically, utilities implementing automated meter reading technologies generally deployed
30 communication modules separately from the meter itself. However, modern ultrasonic

1 meters increasingly incorporate communications capability directly into the meter
2 architecture. As a result, the cost differential that previously existed between conventional
3 metering and metering equipped with automated reading capability has narrowed
4 considerably. Combined with the declining availability of conventional diaphragm meters, this
5 shift has fundamentally changed the economics of metering replacement and modernization.
6 PNG therefore considers continued investment in conventional metering technology, even
7 where it may offer a modest initial cost advantage, to be neither prudent nor sustainable over
8 the long term.

9 Consequently, PNG believes that meter replacement decisions can no longer be evaluated
10 solely on the basis of commodity meter cost. The operational capabilities associated with the
11 embedded communications technology now form an important part of the overall value
12 proposition of the meter itself. The Project therefore represents an opportunity to accelerate
13 an infrastructure transition that PNG expects will occur over time in any event.

14 **3.2 Existing Meter Reading Operations and Limitations**

15 **3.2.1 Current Meter Reading Practices**

16 PNG-West currently relies predominantly on manual meter reading processes. More than 90
17 per cent of residential and small commercial meters continue to be read manually by
18 Customer Service Technicians (CSTs) and Service Group Leaders located throughout PNG-
19 West's service territory. Meter readings are collected in the field and subsequently transferred
20 through various data management systems before being used for customer billing purposes.
21 The manual meter reading process has served PNG-West customers effectively for many
22 years. However, the process requires substantial employee travel, repeated access to
23 customer premises, manual data collection activities, and coordination across multiple
24 operating districts.

25 The geographic characteristics of PNG-West create additional operational complexity. Unlike
26 PNG(NE) where AMR enabled reductions associated with dedicated meter reading resources,
27 PNG-West's service area is geographically dispersed across multiple communities and
28 operating districts (refer to Figure 2-1). Several operating districts have small staffing
29 complements that are required to, and will continue to be required to, maintain emergency
30 response capability, on-call coverage and customer service obligations within their local

1 service areas. Accordingly, PNG does not expect to realize the same reductions in resources
2 as was the case in PNG(NE).

3 **3.2.2 Operational Limitations**

4 Although the current process remains functional, manual meter reading presents several
5 limitations. First, obtaining physical access to customer premises can be challenging in certain
6 circumstances. Access restrictions, weather conditions, customer preferences and other
7 factors can occasionally result in skipped or estimated meter readings. When estimated
8 readings are required, billing accuracy is reduced relative to bills based on actual consumption
9 data. Second, current manual data collection inherently introduces opportunities for human
10 error. While validation systems exist to identify anomalies, manual input errors can still result
11 in additional administrative effort, customer inquiries and occasional billing adjustments.
12 Third, manual meter reading requires considerable vehicle travel and employee time. These
13 activities consume resources that could otherwise be directed toward higher-value work
14 supporting system reliability, customer service and public safety.

15 A further consideration is that manual meter reading provides limited visibility into abnormal
16 conditions such as meter tampering or other events that may affect billing accuracy or
17 customer safety. Modern metering technologies can provide alerts that improve visibility into
18 such events and support more timely investigation and response.

19 **3.2.3 Safety Considerations**

20 Manual meter reading also exposes employees to safety risks associated with entering private
21 property. Such risks may include animal encounters, slips, trips and falls, weather-related
22 hazards and other conditions that may be present when accessing customer premises.
23 Although these risks are managed through established safety procedures, the risks remain
24 inherent in the manual meter reading process.

25 **3.3 Alternatives Considered**

26 **3.3.1 Vendor Selection**

27 For this Project, PNG obtained pricing quotes from two vendors who proposed two different
28 products as metering solutions for PNG. While the products being offered were proprietary to

each vendor, they offered similar features and capabilities and were deemed to be comparable.

PNG-West has selected Itron as the preferred vendor to support the Project. The selection of Itron was based on two primary factors:

- **Working Relationship:** PNG has had a successful working relationship with Itron for more than 15 years, including Itron's role in supporting the PNG(NE) AMR deployment. Further, PNG currently uses Itron's meter reading hardware and software, and interfaces are in place between the Itron system and PNG's billing system.
- **Vendor Terms and Pricing:** Itron offered superior terms and pricing for the metering infrastructure. PNG has secured a volume purchase discount for the Project that it could not achieve if it were to maintain its historical pattern of meter purchase volumes. In addition, PNG has negotiated a fixed price commitment for a period of up to six years, subject to price adjustments that could be triggered by certain changes in economic conditions. A copy of the vendor quotation is appended for reference as Appendix B. The quotation has been submitted on a confidential basis given the commercial sensitivity of pricing information in the quotation.

3.3.2 Implementation Alternatives

PNG evaluated a series of alternatives relating to metering technology, deployment approach and implementation timing.

3.3.2.1 Base Case: Gradual Replacement with Manual Meter Reading

The base case assumes that PNG continues replacing meters through normal replacement programs as existing meters reach the end of their useful lives or seal periods. PNG expects to transition to ultrasonic meters as its go-forward residential and small commercial meter standard because of market availability, pricing and functionality considerations. The base case is therefore a gradual, normal-course replacement of existing meters with ultrasonic meters while continuing to operate PNG-West's manual meter reading processes for an extended period. Under that approach, PNG would incur many of the same meter acquisition costs over time but would delay the operational and customer benefits that become available only when AMR-capable meters are deployed at sufficient scale. As noted previously, the

1 Project is not intended to accelerate replacement solely for the purpose of adopting new
2 technology. Rather, the Project captures benefits that are only available once AMR-capable
3 meters are deployed at sufficient scale.

4 **3.3.2.2 Automated Meter Reading (AMR)**

5 Under the proposed option, PNG would be able to deploy AMR infrastructure throughout the
6 PNG-West service area on a community-by-community basis over a three-year period. This
7 would align PNG-West with the AMR functionality in place for PNG(NE).

8 AMR utilizes one-way communications technology to allow meter information to be collected
9 remotely through mobile collection systems. The technology eliminates many of the
10 inefficiencies associated with manual meter reading while avoiding the cost and complexity
11 of establishing a dedicated two-way communications network associated with AMI.

12 PNG determined that AMR provides a practical and cost-effective means of capturing the
13 majority of benefits associated with automated meter data collection while maintaining
14 affordability for customers.

15 **3.3.2.3 Advanced Metering Infrastructure (AMI)**

16 PNG also evaluated implementation of AMI. AMI provides additional functionality through a
17 two-way communications network and associated information technology systems. Such
18 functionality can include more extensive customer analytics, remote service capabilities and
19 real-time data transfer. However, these capabilities require additional investments in
20 communications systems, information technology infrastructure, operational and process
21 changes and ongoing operating support before the incremental functionality of AMI can be
22 realized.

23 PNG determined that while AMI offers additional capabilities, the incremental benefits
24 currently available to PNG-West customers do not justify the incremental capital and
25 operating costs associated with deployment and operation of the necessary communications
26 network. PNG therefore concluded that AMI is not the preferred alternative at this time.

3.3.2.4 Alternative Deployment Timelines

PNG also evaluated various implementation schedules ranging from approximately three to six years. The six-year option relied more heavily on internal labour resources and delayed realization of project benefits. While technically feasible, the longer implementation schedule postpones the majority of operational benefits and prolonged reliance on parallel manual and automated processes. Further, recognizing that the longer six-year deployment option would not be community based, PNG observes that many of the benefits of converting to AMR-enabled ultrasonic meters cannot be realized until all diaphragm meters in a community are converted.

PNG has concluded that a shorter implementation schedule better balances execution efficiency, benefit realization, customer affordability and procurement certainty.

3.3.3 Preferred Alternative

3.3.3.1 Alternatives Summary

The table that follows provides a summary of the evaluation of alternatives. Discussion on the rationale for the preference to proceed with deployment of AMR over a three-year period follows.

Table 3-1: Alternatives Evaluation Summary

Alternative	Description	Capital / O&M Implications	Benefits	Risks / Limitations	Conclusion
Gradual ultrasonic replacement with manual reads	Replace meters as required, continue manual reading	Lower near-term capital spending, delayed benefits	Maintains current service	Prolongs manual processes, delays safety/customer benefits. Risk of meter price escalation.	Not preferred

Alternative	Description	Capital / O&M Implications	Benefits	Risks / Limitations	Conclusion
Three-year AMR deployment	Accelerated ultrasonic AMR deployment	\$10.7 million over 2027-2029	Earlier operational, safety and customer benefits	Execution risk.	Preferred
Six-year AMR deployment	More gradual deployment	Accelerated, similar to three-year deployment, but slower	Some resourcing flexibility	Delays realization of benefits and prolongs reliance on legacy metering and manual meter reading processes. Risk of meter price escalation.	Not preferred
AMI deployment	Adds two-way communications network and supporting systems	Higher incremental cost	Additional functionality	Additional infrastructure and system integration requirements and higher costs introduce complexity not justified by current operational needs.	Not preferred at this time

1 3.3.3.2 Three-Year Implementation of AMR is Preferred to the Base Case

- 2 PNG's evaluation determined that the proposed Project represents a prudent means of
- 3 accelerating a transition to more modern metering infrastructure that is expected to occur in
- 4 any event through normal asset replacement activities. In addition, PNG has secured pricing

1 protection and volume discounts through a coordinated procurement strategy that would not
2 be available under a more gradual replacement approach.

3 The proposed Project allows PNG to implement AMR in its PNG-West service area and to
4 capture benefits associated with this more modern metering technology sooner, including
5 operational efficiencies, improved customer service, reduced exposure to certain employee
6 safety risks and improved visibility into customer consumption data. In contrast, the base case
7 would delay realization of these benefits for many years.

8 **3.3.3.3 AMR is Preferred to AMI**

9 PNG does not view AMR and AMI as mutually exclusive technology pathways. Rather, the
10 proposed AMR deployment represents a prudent first step in modernizing PNG-West
11 metering infrastructure while preserving optionality. The meters selected for the Project are
12 AMI-compatible. Accordingly, if PNG later develops a business case for a two-way
13 communications network and related systems, the meters installed through this Project would
14 support that future transition. At this time, however, PNG does not consider it prudent to
15 incur the incremental capital, operating and systems costs of AMI where the incremental
16 benefits are not expected to offset those costs for PNG-West customers.

17 PNG therefore considers AMR to represent a low-risk, no-regrets investment that delivers
18 meaningful benefits today while preserving flexibility for future decisions.

19 **3.3.3.4 An Accelerated Deployment is Preferred**

20 PNG determined that a three-year implementation schedule provides the best balance among
21 cost, customer impacts, operational execution and benefit realization. A shorter
22 implementation period accelerates operational benefits, improves procurement certainty and
23 reduces the duration over which PNG must maintain parallel manual and automated
24 processes. PNG also considers the three-year deployment schedule to be operationally
25 efficient as it allows installations to be completed on a community-by-community basis,
26 minimizing travel, reducing installation inefficiencies and improving project execution.

27 For these reasons, PNG concluded that the proposed three-year deployment schedule is the
28 preferred implementation approach.

3.4 Project Benefits

As described below, the Project provides a practical and economic means of advancing the ongoing transition to modern metering technology. By accelerating a transition that is already expected to occur over time, the Project enables PNG and its customers to realize operational, service, and safety benefits sooner while preserving future flexibility with respect to advanced metering capabilities.

3.4.1 Quantified Benefits Included in the Financial Analysis

PNG has identified several benefits that have been incorporated into the Project's economic analysis. These include reductions in meter recall handling costs, meter exchange activities and overtime associated with meter reading, reductions in contractor expenditures associated with ground-truthing activities, and reductions in vehicle replacement and operating costs. Collectively, these benefits contribute directly to lower operating costs over the Project evaluation period. The financial analysis presented in Section 5.4 includes the positive financial impacts that PNG has quantified for these activities.

3.4.2 Customer Benefits

The Project is expected to benefit PNG-West customers in several ways including through cost and affordability benefits, improved billing and customer service outcomes.

3.4.2.1 Cost and Affordability Benefits

The Project supports the least-cost modernization of PNG's metering assets by accelerating the transition to AMR-capable ultrasonic meters, a transition that PNG expects would occur in any event given the declining availability of conventional diaphragm meters. By deploying AMR capability at the time of meter replacement, PNG can avoid future retrofit costs and realize the benefits of meter modernization sooner.

The Project is also expected to reduce ongoing operating costs by decreasing manual meter reading requirements and improving field operational efficiencies. Over time, these savings are expected to reduce the cost of providing service and help moderate future revenue requirement growth, benefiting customers through lower costs than would otherwise be incurred.

3.4.2.2 Billing and Customer Service Benefits

The planned implementation of AMR will reduce the need for routine visits to customer properties for meter reading, thereby minimizing customer disruption. The Project will also support more accurate and, with the anticipated move to monthly reading and billing, more timely meter data. This is expected to improve billing accuracy, customer service, and revenue protection. In addition, PNG's operating experience indicates that AMR technology can reduce skipped reads and the resulting reliance on estimated bills. In 2025, approximately 0.93% of scheduled meter reads in PNG-West were skipped compared to approximately 0.26% in PNG(NE), where AMR has already been implemented. While a variety of factors can contribute to skipped reads, PNG considers this experience to be consistent with the improved billing accuracy and customer service outcomes expected from broader deployment of AMR technology.

3.4.3 Safety Benefits

The Project will improve both employee and customer safety. The reduction in routine meter reading activity will significantly reduce the frequency with which employees must enter customer properties, thereby reducing exposure to hazards associated with manual meter reading. PNG's operating experience supports this safety benefit. In recent years, PNG-West has continued to experience recorded safety incidents associated with manual meter reading activities, while PNG(NE), where AMR has already been implemented, has experienced materially fewer incidents. This experience supports PNG's view that reducing routine manual meter reading will reduce employee exposure to hazards associated with accessing customer premises.

In addition, the ultrasonic meters selected for deployment include integrated safety features capable of detecting abnormal high-flow conditions. When defined high-flow conditions are detected, the automated shutoff feature is designed to interrupt gas flow and reduce the risk of potentially hazardous conditions. These features provide an additional layer of protection for customers and their property.

3.4.4 Operational Efficiencies and Workforce Capacity

The Project is also expected to create substantial labour efficiencies through reductions in manual meter reading activities and reductions in meter exchange and sample-retest

activities. Unlike PNG(NE) where AMR enabled staffing reductions associated with dedicated meter reading resources, PNG does not expect these efficiencies to result in employee reductions in PNG-West. This is due to the geographic nature of PNG-West's service territory (refer to Figure 2-1) and the need to maintain staffing levels necessary to support emergency response, customer service and regulatory compliance obligations across the communities served. PNG-West operates across six districts and serves sixteen communities and surrounding rural areas; four of the six smaller districts each have two CSTs, while the larger districts of Smithers and Terrace have three and four, respectively. As a result, the principal labour benefit in PNG-West is not headcount reduction, but the creation of field resource capacity that can be redirected from routine manual meter reading and meter exchange activities to higher-value operational work.

The time currently devoted to meter reading activities is estimated to be equivalent to approximately 4 FTEs. Following implementation of the Project, PNG estimates that the effort required to collect meter reads will decline by approximately 75%, reducing meter reading requirements from the equivalent of approximately 4 FTEs to approximately 1 FTE. This represents the creation of approximately 3 FTEs of field resource capacity.

PNG anticipates that implementation of AMR will support a future transition from bi-monthly to monthly meter reading and billing. Such a transition would require approximately 1 FTE of additional effort, reducing the net capacity created through meter reading efficiencies from approximately 3 FTEs to approximately 2 FTEs.

In addition, the replacement of existing diaphragm meters with new ultrasonic meters is expected to significantly reduce or eliminate the need for meter sample testing and re-test programs for several years and reduce the frequency of meter exchanges over the life of the new meters.⁴ Meter exchange activities currently represent more than 1 FTE of CST effort annually.

⁴ When meters are initially purchased from a meter manufacturer, each meter comes with an initial seal, which certifies that the manufacturer has adhered to Measurement Canada approved processes and therefore has approved the meter for an initial seal period. Initial seal periods for diaphragm meters typically range between seven and ten years. At the end of the initial seal period, utilities can test a representative sample of a group of meters put into service at the same time and if this sample is found to still be recording accurately, the remainder of the meter group has its seal period extended, typically for an additional five to eight years.

Accordingly, the Project is expected to make available approximately 4 FTEs of CST capacity if PNG continues with its current meter reading frequency, or approximately 3 FTEs of field resource capacity if monthly meter reading and billing are implemented.

PNG does not expect these efficiencies to result in employee reductions. Rather, the capacity created is expected to reduce overtime requirements and allow CST resources to be redeployed to higher-value operational activities, including work that is currently performed by contractors or deferred due to resource constraints. As the ultimate allocation of these resources will depend on future operational decisions, PNG has not attributed any labour savings or redeployment benefits to the financial analysis.

3.4.5 Future-Enabled Benefits

In addition to the direct benefits described above, the Project will establish a platform for future operational and customer service enhancements. The availability of daily consumption data creates opportunities that include the possibility of more frequent billing based on actual reads, future customer access to more detailed consumption information, and enhanced customer understanding of natural gas usage. The Project also has the potential to support more detailed consumption analysis, enhanced system planning and forecasting activities, improved line-pack modelling, and more sophisticated gas supply planning.

While many of these benefits have not been included in the Project's economic analysis, PNG believes they represent additional value that may be realized over time as the organization gains experience with the technology and develops supporting business processes.

3.4.6 Summary of Anticipated Benefits

The table below summarizes the benefits anticipated to result from the Project. For clarity, the benefits are categorized based on whether they have been reflected in the financial analysis presented in Section 5.2.

Table 3-2: Anticipated Benefits

Benefit	Quantification	Relevance
Quantified Benefits Included in Financial Analysis		
Reduction in meter recall handling costs	Per Table 5-2	Contributes directly to lower operating costs over the evaluation period.

Benefit	Quantification	Relevance
Reduction in meter reading overtime costs	Per Table 5-2	Contributes directly to lower operating costs over the evaluation period.
Reduction in ground truthing contractor costs	Per Table 5-2	Contributes directly to lower operating costs over the evaluation period.
Reduction in vehicle replacement and operating costs	Per Table 5-2	Contributes directly to lower operating costs over the evaluation period.
Additional Benefits Not Reflected in Financial Analysis		
Customer service and billing benefits	PNG-West skipped reads were approximately 0.93% in 2025 compared to approximately 0.26% in PNG(NE).	Supports improved billing accuracy, fewer estimated bills, more timely meter data and reduced customer disruption associated with property access.
Safety benefits	Not quantifiable.	Reduces employee exposure to property-access hazards from manual meter reading and provides customer safety benefits through ultrasonic meter high-flow detection and shutoff functionality.
Capacity from reduced reliance on manual meter reading	Meter reading effort expected to decline by 75%, from ~4 FTEs to ~1 FTE before allowing for anticipated monthly reading requirements.	Reduces routine manual activity and supports more efficient field operations, but the related staffing impact is not reflected as a direct labour savings in the financial analysis.
Capacity from reduced meter exchange and sample re-test activity	Meter exchanges represent in excess of 1 FTE of CST time each year.	Reduces routine meter exchange and sample re-test workload for several years and reduces the need for meter exchanges over the life of the new meters.

Benefit	Quantification	Relevance
Redeployment of field resource capacity	Approximately 3 FTEs of CST capacity made available when reduced meter reading and meter exchange activities are considered together.	Creates capacity to redirect CST time from routine manual meter reading and meter exchange activities to higher-value operational work. Ground truthing is an example that has already been identified and quantified, as noted above. This is not characterized as labour savings because PNG-West expects to maintain staffing levels required for emergency response, customer service and compliance obligations.
Future-enabled benefits	Not quantifiable.	Establishes a platform for future customer information, consumption analysis, planning, forecasting, line-pack modelling and gas supply planning benefits.

4 Project Description

This section describes the scope of the Project, the metering and data collection infrastructure to be deployed, the proposed execution approach and schedule, the project management structure, and the principal project risks and mitigation measures.

The Project involves the coordinated replacement of existing diaphragm meters used for residential and small commercial customers in the PNG-West service area with ultrasonic meters equipped with AMR capability. The Project will modernize PNG-West's metering infrastructure, enable remote collection of meter data, and support the operational, customer service, safety, and efficiency benefits described in Section 3 of this Application.

4.1 Project Scope

The Project includes the accelerated replacement of existing residential and small commercial diaphragm meters in PNG-West with ultrasonic meters that have integrated AMR capability. PNG has determined that this coordinated replacement program is a prudent approach to modernizing its metering infrastructure, particularly given the declining availability and changing economics of conventional diaphragm meters. By proceeding with a coordinated deployment, PNG will be able to implement AMR across the PNG-West service area and realize the benefits of modern metering technology sooner than would occur through normal-course meter replacement activities.

The Project does not include larger commercial and industrial meter sets. Some industrial customers currently have Electronic Volume Corrector meters equipped with wired or wireless interfaces that allow monthly meter reading to be performed remotely. For commercial and industrial customers that do not currently have this capability, PNG intends to change out or convert those meters in the ordinary course as they reach the end of their current seal periods.

Propane customers in Granisle are also treated differently under the Project. Because ultrasonic metering for propane is not yet commercially available, conventional diaphragm meters will remain the standard for these customers, however they will be equipped with Encoder Receiver Transmitter (ERT) attachments, similar to the approach used for the PNG(NE) AMR project.

1 In addition, approximately 1,750 customer meters in the Thornhill area of Terrace will not be
2 replaced with ultrasonic meters as part of this Project. These customers already have AMR
3 capability as a result of the 2018 Thornhill AMR pilot project, under which ERTs were installed
4 on existing diaphragm meters, also similar to the PNG(NE) AMR project approach. The
5 Thornhill meters will continue to be read using AMR as part of the broader deployment of
6 AMR in Terrace and will be replaced with ultrasonic meters in due course as their meter seals
7 expire.

8 PNG has already begun transitioning to ultrasonic metering in the normal course. During 2025,
9 PNG replaced approximately 150 diaphragm meters in the PNG-West service area with
10 ultrasonic meters and anticipates installing a further 900 residential and small commercial
11 ultrasonic meters during 2026 as part of normal meter recall and replacement activities. To
12 the extent these meters are installed before the Project begins, they will reduce the remaining
13 scope and cost of the Project.

14 **4.2 Proposed Metering Infrastructure**

15 The ultrasonic meters selected for the Project include built-in communications capability. For
16 the proposed deployment, PNG will use an AMR configuration in which meter data is
17 transmitted by radio frequency signal from the meter to a mobile data collection unit. The
18 meters will be configured to collect a daily meter reading and can typically store meter data
19 for approximately 40 days and provide for encryption of meter data before transmission.

20 PNG-West intends to use vehicle-mounted mobile collection units, consistent with the
21 approach used by PNG(NE). This approach allows meter data to be collected remotely by
22 driving a service vehicle equipped with the required collection equipment in the general
23 vicinity of customer meters. In most cases, PNG employees will no longer need to access
24 customer property to obtain routine meter reads.

25 Once collected, meter data will be transferred through PNG's meter data management and
26 billing processes for validation and billing purposes. This approach avoids the need for a fixed
27 two-way communications network, while still enabling PNG to obtain the principal benefits
28 associated with automated meter data collection.

4.3 Project Management and Project Team

PNG's Operations Division will have primary responsibility for the delivery of the Project. The Project will be managed using PNG's standard project management practices, methodologies, templates, and tools.

The executive sponsor of the Project will be PNG's Vice-President, Operations and Engineering. The core project leadership team will include:

- Project Director, who will be PNG's Director of Operations;
- Project Sponsor, who will be the Manager of Operations, West; and
- Project Manager, who will be the Superintendent of Sales and Service, PNG-West.

The Project Manager will have primary responsibility for overseeing the execution of the project plan, coordinating internal and external resources, monitoring progress, and supporting delivery of the Project within the approved scope, schedule, and budget.

The Project Manager will be supported by a cross-functional team of PNG employees. Key internal functions expected to support project execution include PNG leadership, Information Technology, Customer Billing, Operations, Sales and Service, and Customer Care.

- PNG leadership will act as internal champions for the Project and will help ensure that project execution remains aligned with PNG's corporate direction, operational priorities, and customer service objectives.
- Information Technology will be responsible for supporting the system architecture, integration points, data transfer, and data management requirements necessary to enable AMR data collection and downstream use of meter data.
- Customer Billing will provide support related to meter reading and billing cycle alignment as communities or areas are converted to AMR. This will include testing, validation, and coordination activities required to support billing accuracy following implementation.
- Operations, Sales and Service will play a key role in ensuring the safe and efficient execution of the deployment across PNG-West's service territory. CSTs will undertake

meter exchanges, field verification activities, customer interactions, and the resolution of site-specific installation issues.

- Customer Care will support customer service, call centre readiness, and customer communications. This will help ensure that customers receive timely and consistent information regarding the purpose of the Project, the installation process, potential service interruptions, and available options such as the radio-off feature.

4.4 Project Execution and Schedule

PNG intends to complete the Project over a three-year implementation period. The deployment will be carried out through a combination of internal resources and contract labour, with installations planned on a community-by-community basis.

4.4.1 Project Execution

Meter exchanges will be performed by PNG CSTs and qualified contract resources. PNG's CSTs regularly perform meter exchanges as part of their normal duties and will support installation activities within their home communities. PNG also expects to use contractors, and where practical, CSTs from other communities, to support the accelerated deployment schedule.

In the normal course, meter exchanges occur as meters reach the end of their seal periods or otherwise require replacement. As a result, normal-course meter exchange work tends to be dispersed across the service territory. By contrast, the proposed Project allows meter exchanges to be organized more efficiently on a house-by-house, street-by-street, neighbourhood-by-neighbourhood, and community-by-community basis.

This coordinated approach offers several execution advantages. It reduces travel time between meter exchanges, supports more efficient use of internal and contract resources, and allows PNG to manage installation, customer communication, appliance relight requirements, and transition to AMR in a more orderly manner. It also allows areas to be converted to AMR as complete communities are transitioned to the new meters.

PNG will schedule meter exchange work to minimize customer inconvenience and to maintain safe and reliable service. Where meter exchanges require temporary interruption of service, PNG will coordinate relights and customer follow-up in a manner that supports safety, operational efficiency, and customer service.

4.4.2 Project Schedule

PNG plans to complete the installation of the new meters over three years. The current deployment plan is as follows:

- 2027: Smithers and Burns Lake;
- 2028: Kitimat and Vanderhoof; and
- 2029: Prince Rupert and Terrace.

This schedule reflects the planned deployment of additional contract labour to the applicable communities, and the year in which the deployment is expected to be complete for each community. The Project Manager, working with Service Group Leaders in each community, will also use available CST resources to advance installations where practical. This will allow PNG to maximize the use of internal labour, support efficient project execution, and complete meter exchanges sooner where operational circumstances permit.

The Operations, Sales and Service team CSTs are responsible for meter exchanges, meter reading, line locates, leak surveys, new customer sales activities, and other operational obligations. Project scheduling will therefore be managed to prioritize meter exchange work while continuing to meet statutory, safety, customer service, and operational requirements.

The timing of meter exchange work will also reflect seasonal conditions. In some communities, such as Prince Rupert, meter exchanges may be performed on a year-round or near year-round basis. In other communities, exchanges may be concentrated between late spring and early fall to reduce the likelihood of customer inconvenience associated with temporary loss of heating capability during colder months.

4.5 Project Risk and Mitigation Strategies

PNG has identified and assessed the principal risks associated with the Project and has developed mitigation strategies to manage those risks. The risk review process includes risk identification, qualitative risk analysis, quantitative risk analysis where required, and selection of appropriate risk response measures.

1 **4.5.1 Project Risks**

2 The principal risks identified by PNG relate to customer acceptance, execution, data transfer,
3 material availability, resource requirements, post-implementation meter performance, cost
4 control, project management, and stakeholder communications. These risks are typical of a
5 coordinated meter replacement and AMR deployment program of this nature and are
6 considered manageable through established project controls, communications, vendor
7 management, and operational oversight.

8 **4.5.2 Risk Identification and Qualitative Analysis**

9 PNG's key project risks and mitigation strategies are summarized in Table 4-1. In general,
10 PNG's mitigation approach includes proactive customer education, use of established
11 installation and quality-control procedures, close coordination with the meter supplier, early
12 procurement planning, use of a combination of internal and contract resources, budgeting for
13 expected meter failure rates, allocation of dedicated project management resources, and
14 implementation of a customer and stakeholder communications plan.

15 PNG also considers the proposed three-year deployment schedule to be an important risk
16 mitigation measure. A shorter coordinated deployment period reduces the duration over
17 which PNG must maintain parallel manual and automated meter reading processes, support
18 procurement and execution certainty, and allows PNG to realize project benefits sooner than
19 under a more gradual implementation approach.

1 Table 4-1: Project Risk Summary

Item	Scope Element	Risk Title	Risk Description	Mitigation Strategy
1	Overall	Customer concerns	Some customers may have concerns regarding AMR technology or may request an alternative to active radio-enabled AMR.	• Education on the risks of radio-frequency wavelengths being used for these technologies, and the limited nature of their use. • Education on advantages of safety features and accuracy of technology. • Deployment of non-AMR enabled technology and provision of manual reads for these customers with associated charges.
3	Execution	Availability of materials	The meter supplier may experience unexpected manufacturing and supply chain delays.	• Close and regular liaison with meter supplier throughout the Project. • Early ordering and delivery of meters for exchange years.
5	Post-implementation	Meter failure rate	Newly installed meters may experience failures after installation.	• PNG is budgeting for a failure rate of 0.5% for the new installed meters based on inherent failure risk.

Item	Scope Element	Risk Title	Risk Description	Mitigation Strategy
6	Cost	Project cost increases	Project costs may increase if supplier pricing adjustment mechanisms are triggered.	- Adequate contingency built into the price adjustment mechanisms, particularly in the context of the 3-year deployment. - If pricing adjustments are triggered PNG has opportunity to negotiate with the supplier and, if appropriate, terminate the arrangements.
8	Overall	Stakeholder communications	Customer and stakeholder communications may not be effective in addressing questions or concerns.	- PNG has anticipated and is prepared to address customer concerns. - PNG has developed a plan with multiple communication streams for the Project.

4.6 Radio Frequency Concerns

PNG recognizes that some customers may have concerns regarding radio frequency signals associated with AMR meters. PNG intends to address these concerns through customer communications and by offering a radio-off option, consistent with the approach approved for PNG(NE).

Under this option, customers may request that the radio function on the AMR meter be turned off. As approved by the BCUC in Order G-156-26, PNG will apply the approved radio-off and Non-AMR Meter Read Charges to customers who elect to have the AMR radio function disabled. These charges include a \$60 fee if a customer requests that the radio on an AMR meter be turned off after installation, or if they later request that the radio be turned back on. Customers who request the radio-off option before the meter is installed will not be charged

- 1 the \$60 fee at the time of installation. However, the fee will apply if those customers later
- 2 request that the AMR radio be turned back on. Further, customers who elect the radio-off
- 3 option will also be charged the approved Non-AMR Meter Read Charge of \$30 each time their
- 4 meter is read manually.

5 Project Costs, Accounting Treatment and Rate Impacts

5.1 Project Expenditure Schedule

PNG has developed an estimated project cost of approximately \$10.7 million (2026 dollars) for the replacement of existing residential and small commercial metering infrastructure and implementation of AMR capability throughout the PNG-West service area. The Project Expenditure Schedule is provided in Table 5-1.

The cost estimate includes the procurement of ultrasonic meters and associated AMR equipment, meter installation activities, project management, information technology integration, overheads, and contingency. The estimate reflects PNG's preferred three-year implementation schedule spanning 2027 through 2029.

Table 5-1: Project Expenditure Schedule (in 2026 \$000s)

Cost Element	2027F	2028F	2029F	Total
			(\$000)	
Meter purchases	\$1,783.2	\$1,918.9	\$2,382.1	\$6,084.2
Data collectors and radios	200.0	0.0	0.0	200.0
Project management costs	100.0	100.0	100.0	300.0
Labour	438.4	441.3	549.2	1,428.9
Provincial Sales Tax	138.8	134.3	166.7	439.9
	2,660.4	2,594.5	3,198.1	8,453.0
Overhead (10%)	266.0	259.4	319.8	845.3
	2,926.5	2,853.9	3,517.9	9,298.3
Contingency (15%)	439.0	428.1	527.7	1,394.7
Total Project Costs	\$3,365.4	\$3,282.0	\$4,045.6	\$10,693.0

PNG considers the Project expenditure estimate to be well defined and reliable. The estimate is based on a detailed understanding of project requirements and implementation planning. In addition, ultrasonic meters, which account for approximately 65% of total Project costs before contingency, are subject to contractual pricing protection, thereby reducing uncertainty associated with a significant portion of the Project budget.

Given the level of scope definition, vendor pricing support and implementation planning achieved to date, PNG considers the estimate to have a high degree of definition for a project of this nature. While the Project is not a traditional EPC undertaking, the estimate has been

developed using principles generally consistent with the Association for the Advancement of Cost Engineering (AACE) cost estimate classification framework, particularly with respect to the major procurement-related cost elements that are supported by supplier pricing.

5.2 Financial Analysis and Assumptions

To evaluate the cost and customer impacts of the Project, PNG undertook a financial analysis over a 20-year period, corresponding to the expected useful life of the proposed metering assets. The analysis incorporates the expected capital expenditures associated with the Project, the resulting additions to rate base, changes in operating costs, and the accounting treatment of existing assets that will be retired from service. This analysis is provided as Appendix C and is supported by the appended Excel file:

The analysis compares the proposed Project against a base case in which PNG continues replacing meters through normal replacement programs while maintaining existing manual meter reading processes. The objective of the analysis is to determine the incremental impact of accelerating the transition to ultrasonic metering and AMR capability relative to that base case.

PNG has taken a conservative approach to the financial analysis by including only those savings that can be reasonably quantified at this time and are sufficiently certain to support the business case. The analysis therefore includes identified savings related to meter recall handling, vehicle use, meter reading overtime and ground-truthing contractor costs, but excludes additional redeployment efficiencies, customer service improvements, revenue protection opportunities and future use cases that may arise from more granular consumption data.

5.2.1 Rate Base Assumptions

The analysis includes incremental additions to rate base associated with new ultrasonic meters, AMR collection equipment, and project implementation costs, including overhead and contingency. It also reflects reductions in future meter replacement expenditures that would otherwise occur under the base case. As noted in Section 4.5 under project risks, an allowance has been included for future meter replacements resulting from equipment failure, using an assumed annual failure rate of 0.5 per cent.

5.2.2 Operating and Maintenance (O&M) Cost Assumptions

The Project is expected to generate ongoing operating cost savings through reduced meter handling costs, lower vehicle utilization, reduced contractor expenditures, and operational efficiencies associated with AMR-enabled meter reading.

PNG has identified sustained annual operating cost savings of approximately \$232,000 that can be reasonably quantified and incorporated into the business case at this time. These savings relate to reduced meter recall handling costs, reduced vehicle usage, and shifting work related to ground-truthing - from contractors to internal resources. During the project period, there is a reduction in O&M costs associated with normal meter exchange work as the Project will eliminate the need for that work and the time spent by employees working on the Project will be capitalized.

Table 5-2: Annual Operating Cost Savings (2026\$)

Savings Element	2026F	2027F	2028F (\$000)	2029F	2030F
Meter recall handling	\$101.5	\$108.0	\$108.0	\$108.0	\$108.0
Remove/reset meters	0.0	225.8	234.1	300.1	0.0
Meter reading OT reduction	0.0	0.0	0.0	0.0	26.3
Groundtruthing	0.0	0.0	0.0	0.0	60.0
Vehicle replacement savings	0.0	0.0	5.9	11.7	17.6
Vehicle gas costs	0.0	0.0	6.6	13.2	19.8
Estimated Annual Savings	\$101.5	\$333.8	\$354.6	\$433.0	\$231.8

Consistent with PNG's conservative approach to the financial analysis, additional operational efficiencies are expected to be realized through redeployment of field resources following implementation of the Project. While PNG believes these efficiencies represent a meaningful future opportunity, they remain dependent upon future operational decisions and have therefore not been reflected in the economic analysis.

5.2.3 Other Assumptions

The proposed ultrasonic metering infrastructure is depreciated over a 20-year service life, which is consistent with their estimated useful life and the existing depreciation rate used for metering assets.

PNG has utilized a meter price inflation assumption of 4.33% based on historical Producer Price Index data as the meter supplier offered this as the most reasonable forecast of meter price inflation. PNG has also reflected the pricing protections included within its supplier arrangements. Labour costs are assumed to escalate at 3% annually.

5.3 Accounting Treatment

5.3.1 Net Salvage

Given the declining availability of diaphragm meters, PNG believes there may be an opportunity to realize greater salvage proceeds than have historically been achieved. As smaller utilities may transition away from diaphragm metering at a slower pace, PNG expects there may be demand for used diaphragm meters that remain within their seal periods and have remaining service life. To the extent that such opportunities materialize, the resulting proceeds would improve Project economics by reducing the net book value of retired meters requiring amortization under the Project. However, as PNG has not identified or secured any such disposition opportunities, no salvage value has been assumed in the financial analysis.

5.3.2 Net Book Value of Meters No Longer in Service

Implementation of the Project will result in the retirement of existing metering assets before the end of their normal service lives. Consistent with standard utility accounting practices, the remaining net book value of those assets must be addressed as part of the Project. PNG has estimated the net book value of meters to be retired to be approximately \$1.4 million.

Consistent with its established procedures, PNG proposes to record the remaining net book value of retired meters in the existing Plant Gains and Losses deferral account which has a five-year amortization period. PNG had considered a longer amortization period as a potential rate mitigation measure but concluded that any reduction in short-term rate impacts would be largely offset by higher carrying costs over time. For purposes of the financial analysis, PNG has reflected recovery of the remaining net book value of retired meters over a five-year period, consistent with the proposed treatment described above.

5.4 Cost of Service Impacts

The Project is expected to provide long-term customer benefits through lower operating costs and improved operating efficiency. PNG conducted a net present value (NPV) analysis of the

- 1 Project's impact on the cost of service over the evaluation period. This analysis, provided as
 2 Appendix C, is summarized in Table 5-3 below.

3 **Table 5-3: Cost of Service Impacts**

Evaluation Element	(Favourable) Unfavourable Impacts*
Cost of Service Impacts	
Total Project Expenditures	\$ 10,693,024
Cumulative Incremental Capital Cost	\$ (3,113,087)
Cumulative Incremental Cost of Service - Undiscounted	\$ (2,699,528)
Cumulative Incremental Cost of Service - Discounted	\$ 879,105
Average Annual Incremental Rate Base Costs	\$ 196,584
Average Annual Cost Savings	\$ (325,133)
Average Net Annual Cost Impact	\$ (128,549)

* Positive values in this table represent unfavourable cost-of-service impacts, while negative values represent favourable impacts.

- 4 PNG notes that the Project produces different results depending on the metric used. On a
 5 discounted cumulative cost-of-service basis, the Project results in an unfavourable impact of
 6 approximately \$0.9 million over the 20-year evaluation period. However, the Project is not
 7 expected to increase customer bills. The difference arises because the Project accelerates
 8 expenditures that would otherwise be incurred over time while also generating ongoing
 9 operating cost savings and avoiding future meter replacement expenditures. As a result, when
 10 customer rate impacts are evaluated over the analysis period, the Project is forecast to
 11 produce modest average bill reductions despite the increase in cumulative discounted cost of
 12 service.

- 13 PNG has therefore not relied solely on the discounted cost-of-service result in assessing the
 14 prudence of the Project. Rather, PNG has considered that result together with customer rate
 15 impacts, identified operating cost savings, safety improvements, customer service benefits,
 16 and the future flexibility afforded by modern metering infrastructure. In PNG's view, the
 17 Project should be evaluated not only on the basis of its discounted cost-of-service impact, but
 18 also on the timing and realization of customer, operational and safety benefits associated with
 19 accelerating a metering transition that PNG expects would occur in the ordinary course in any
 20 event.

1 The Project economics are also considered conservative because the financial analysis reflects
2 only those benefits that PNG was able to quantify with reasonable confidence. No value has
3 been attributed to several additional anticipated benefits, including CST capacity
4 redeployment, safety improvements, enhanced customer service and billing outcomes, and
5 future-enabled benefits. These benefits are described further in Table 3-2.

6 PNG further notes that approximately \$5.0 million of the anticipated capital expenditures
7 associated with the Project were contemplated within the PNG-West 2025-2027 Revenue
8 Requirements Application.⁵ As a result, a portion of the project-related capital investment has
9 already been reflected in the revenue requirement forecasts underlying currently approved
10 delivery rates. PNG has not attempted to segregate those impacts from the Project analysis.

11 **5.5 Customer Rate Impacts**

12 PNG anticipates that the Project will deliver modest long-term rate benefits to customers.
13 Table 5-4 presents the estimated impact of the Project on customer rates over the evaluation
14 period. Based on PNG's analysis, the Project is expected to result in average annual bill
15 reductions of approximately \$2.83 for a typical residential customer and approximately
16 \$11.00 for a typical small commercial customer.

⁵ See Exhibit B-1, Fiscal 2025 to 2027 Revenue Requirements Application, Section 2.14.1 Plant in Service, Tables 44 and 45 at: <https://www.bcuc.com/OurWork/ViewProceeding?applicationid=1343>.

1 **Table 5-4: Customer Rate Impacts**

Evaluation Element	(Favourable) Unfavourable Impacts
Average Rate Impact for Residential Customers*	
Average Annual Residential Customer Cost Impact (\$)	(51,471)
Incremental Cost of Service (\$/GJ)	(0.04)
Residential Annual Demand (GJ)	64.0
Residential Bill Impact (\$)	(2.83)
Average Rate Impact for Small Commercial Customers*	
Average Annual Small Commercial Customer Cost Impact (\$)	(28,204)
Incremental Cost of Service (\$/GJ)	(0.04)
Small Commercial Annual Demand (GJ)	313.7
Small Commercial Bill Impact (\$)	(11.00)

* Based on metrics from PNG-West 2025-2027 Revenue Requirements Application.

- 2 While the projected annual bill impacts are modest, as described in Section 3.4 the Project
 3 also delivers benefits that are not fully reflected in rate calculations, including reduced
 4 employee exposure to safety risks, improved meter data quality, reduced reliance on manual
 5 processes, enhanced customer service opportunities, and a platform for future metering
 6 capabilities. Accordingly, PNG submits that the Project provides a balanced combination of
 7 customer affordability, operational efficiency, and infrastructure modernization benefits.

6 Stakeholder Engagement and Communication

6.1 Engagement

Given the broad geographic scope of the proposed Project and its interface with customers, local governments and Indigenous communities throughout the PNG-West service area, PNG has undertaken early stakeholder engagement activities to support awareness and understanding of the Project. While the Project does not involve the expansion of utility infrastructure or construction of new facilities, engagement activities have focused on communicating the rationale for the Project, expected customer benefits, implementation timelines and operational impacts. PNG believes early engagement supports effective project execution and provides stakeholders with an opportunity to raise questions and identify issues that may warrant consideration during implementation.

6.1.1 Municipal Governments

In anticipation of the Project, PNG commenced engagement activities with local municipalities. In June 2026 PNG met with the City of Terrace, Town of Smithers, and the Regional District of Bulkley Nechako and provided each municipality with an overview of the Project describing how the Project would modernize metering infrastructure and meter reading operations and bring PNG in line with industry standards. Municipal representatives in these meetings expressed interest in PNG providing additional updates for community awareness as the Project progresses. Initial feedback included questions regarding whether PNG anticipated any changes in staffing levels and whether the Project would have an impact on customer rates.

6.1.2 Indigenous Engagement

The Project consists primarily of replacing existing meters on customer premises and does not involve greenfield construction, land acquisition, new utility corridors or expansion of PNG infrastructure. PNG has determined that the Project is not expected to adversely impact asserted or established Indigenous rights or treaty rights. PNG intends to proactively engage the seven Indigenous communities currently receiving natural gas service from the PNG-West system throughout project implementation, particularly where installations will occur on reserve lands or where Indigenous community representatives have expressed an interest in receiving project information.

6.2 Communication

PNG will implement a comprehensive customer communications plan to support the deployment of AMR technology throughout PNG-West. The communications plan is designed to ensure customers are informed about the project, understand the purpose and benefits of the meter upgrade, and are aware of any actions that may be required if access to their meter is necessary.

The communications strategy is based on the principles of transparency, customer service, and proactive engagement. Core messaging will emphasize that AMR deployment will modernize meter reading operations, improve service efficiency and accuracy, enhance safety, and reduce the need for routine physical meter access. Communications will also reinforce that, for most customers, no action will be required; however, communications will explain when advance notice will be provided, when meter access may be required, and that brief service interruptions may occur during installation.

PNG will use a phased communications approach aligned with a planned multi-year deployment schedule. Activities are expected to include:

- AMR information published on PNG's website, including an overview of the regulatory review process, deployment timeline, benefits, FAQs, and contact information;
- AMR information posted to PNG's Facebook page;
- Customer email messages providing introductory information within 3 months of deployment. Email messages would include project updates, and deployment timelines, including final advance notification of work in specific areas;
- Approximately 20% of PNG's customers have not provided an email address to the company. Letters will be sent shortly before deployment to this customer segment.
- Outreach to Indigenous communities, as appropriate, to support local awareness and coordination related to planned deployment activities;
- General stakeholder and community notification, including coordination with municipalities and Indigenous communities through PNG's regular engagement processes;

- Customer Service Representative training and support materials to ensure consistent responses; and
- Targeted notifications in instances where meter access appointments may be required.

6.3 Anticipated Issues and PNG's Response

PNG will seek to identify and better understand stakeholder interests and potential concerns related to the Project as the Project progresses. The table below summarizes topics of concern raised during the PNG(NE) AMR project and anticipated to arise during engagement activities for the Project, together with PNG's response and proposed approach to addressing each matter.

Table 6-1: Anticipated Stakeholder Concerns

Topic Expected	PNG Response
Staff reductions	The Project is not premised on CST position reductions in PNG-West. Due to PNG-West's geographically dispersed service territory and small district staffing complements, staffing levels must be maintained to support emergency response, on-call coverage, customer service and regulatory compliance. Labour benefits are expected to be realized through redeployment of field capacity to higher-value operational work.
Rate impacts	Analysis forecasts small average bill reductions over evaluation period.
Privacy/property access	AMR reduces routine need to access customer premises.
Installation disruption	Customers will receive advance notice, and brief interruptions may occur during meter exchange. PNG will undertake relighting of customer appliances, as necessary.
Indigenous concerns/activity on-reserve premises	PNG will coordinate with key Indigenous community contacts and keep Nations receiving natural gas service apprised of Project timing and progress.
Radio-frequency concerns	Radio-off option is available, subject to approved fees.

7 BC Utilities Commission Act and BC Clean Energy Act Considerations

7.1 Introduction

As required by section 44.2(5) of the UCA, the BCUC's evaluation of an Expenditure Schedule must consider:

- (a) the applicable British Columbia energy objectives,
- (b) the most recent long-term resource plan filed by the public utility under section 44.1, and
- (c) the extent to which the application for the schedule is consistent with the applicable requirements under sections 6 and 19 of the *Clean Energy Act* (CEA).
- (d) If the schedule includes expenditures on demand-side measures, whether the demand-side measures are cost-effective within the meaning prescribed by regulation, if any, and
- (e) the interests of persons in British Columbia who receive or may receive service from the public utility.

Sections 6 and 19 of the CEA are related to electricity and are not applicable to the Application. As such, PNG gives no further consideration to requirement (c). The expenditure schedule PNG is seeking acceptance of does not include demand-side measures, and as such, PNG gives no further consideration to requirement (d). British Columbia's energy objectives are also a consideration under PNG's long-term resource plan, so they will be discussed in the appropriate section of that discussion.

7.2 Long Term Resource Plan

Although the Project was not specifically identified within PNG's 2024 Consolidated Resource Plan,⁶ the Project directly supports several of the planning objectives that underpin PNG's

⁶ PNG's most recent resource plan was submitted to the BCUC on June 28, 2024, (2024 Consolidated Resource Plan) and was subsequently accepted by the BCUC in Order G-55-25.

See https://docs.bcuc.com/documents/arguments/2025/doc_80449_g-55-25-png-2024-consolidated-resource-plan-final.pdf.

resource planning framework. To aid in the evaluation of PNG's proposal, PNG provides the following overview of aspects of the Project as they pertain to resource planning objectives identified in the 2024 Consolidated Resource Plan.

7.2.1 Safe, Reliable Service

PNG considers the provision of safe, reliable service as an important guiding principle in its decision-making processes. The Project being advanced by PNG promotes both employee and customer safety. Employee safety is enhanced by significantly reducing the frequency of PNG staff needing to enter onto private property where employees may face elevated safety risks. Customer safety is enhanced by the automated shutoff capability of the meters to be installed. When the meters detect a high flow condition, the automated shutoff is triggered, and a potentially dangerous situation is avoided.

7.2.2 Provision of Least Cost Service

Over the life of the new ultrasonic meters to be installed as part of the Project, PNG's analysis indicates that, when rate impacts are evaluated over the analysis period, the Project is forecast to produce modest average customer bill reductions relative to gradual replacement, while also delivering operational, safety and customer service benefits not fully captured in the financial analysis. As summarized in Table 3-2, there are several additional anticipated Project benefits, including field staff capacity redeployment, safety improvements, enhanced customer service and billing outcomes, and future-enabled benefits that have not been reflected in the economic analysis that may lead to a lower cost of service for PNG-West customers.

7.2.3 Economic Viability of the Utility

AMR will contribute to an improvement in customer service and satisfaction at a lower cost than the alternative. Both factors should contribute to the long-term viability of PNG.

7.2.4 Rate Stability

By implementing the Project over a shorter period, PNG has been able to secure pricing protections and volume discounts from its preferred supplier, reducing customer exposure to future meter price escalation and procurement uncertainty. The Project also contributes to

lower ongoing operating costs, which is expected to help moderate future revenue requirement growth over the long term.

7.2.5 Environmental and Socio-economic Impacts

The Project is expected to provide environmental and socio-economic benefits through reductions in vehicle travel for meter reading activities and potential reductions in fuel consumption. By reducing the need for routine manual meter reading and accelerating the deployment of modern ultrasonic metering technology, the Project will enhance operational efficiency while contributing to PNG's broader environmental stewardship objectives.

PNG has forecast that the Project will contribute to a reduction in vehicle use and kilometres driven for the purpose of meter reading, which may result in lower fuel consumption and associated greenhouse gas (GHG) emissions, while also extending the service life of certain PNG vehicles. There are currently 15 vehicles in PNG-West used by CSTs to support meter reading activities. These vehicles collectively travel approximately 28,000 kilometres each month for meter reading purposes. Following implementation of AMR, PNG expects meter reading-related travel to decline significantly through the use of remote meter data collection. Based on PNG's current operating assumptions, monthly travel associated with meter reading activities is forecast to decrease to approximately 21,000 kilometres. This reduction is expected to result in lower fuel consumption and to reduced vehicle operating costs and wear on PNG's vehicle fleet.

7.2.6 Alignment with B.C. Government's Energy Objectives

In reviewing the applicability of the British Columbia energy objectives, as set out in section 2 of the CEA and as modified by regulation where applicable, PNG has determined that objectives (d), (g) and (i) are relevant to the Project.

Objective (d) is "to use and foster the development in British Columbia of innovative technologies that support energy conservation and efficiency and the use of clean or renewable resources." The meters being installed by PNG in the Project are smart meters capable of collecting consumption data across nearly 100 interval time frames each day. For the purposes of this installation, PNG intends to record and collect consumption information at a daily interval basis. With an eventual coordinated transition to monthly meter reading anticipated, PNG will now have 365 daily consumption records as opposed to the six

consumption records collected currently with manual meter reading. Subject to further evaluation, this data may provide opportunities for PNG to develop enhanced insights into customers' energy consumption which in turn can be used to empower customers with much better information for decision making about their energy use and energy efficiency opportunities. It can also be used to help shape and target energy efficiency opportunities by the utility. Even without additional energy conservation programming, greater consumer awareness of energy use can lead to changed behaviours which in turn may lead to reduced energy consumption and associated reductions in GHG emissions.

Objective (g) is "to reduce British Columbia's greenhouse gas emissions." While the Project is primarily an asset modernization initiative, it is expected to contribute to reductions in greenhouse gas emissions associated with PNG's operations. As discussed in Section 7.2.5, AMR will reduce vehicle travel associated with manual meter reading activities, potentially resulting in lower fuel consumption and associated GHG emissions. While these reductions are not a primary driver of the Project, they represent an additional benefit that supports British Columbia's greenhouse gas reduction objectives.

Objective (i) is "to encourage communities to reduce greenhouse gas emissions and use energy efficiency." The Project will improve PNG's ability to collect more granular consumption data. While PNG does not seek approval in this Application for customer-facing data tools or broader AMI functionality, the availability of more frequent consumption data is an enabling step that may support future customer information, conservation and energy efficiency initiatives if supported by appropriate systems, processes and business cases. With greater data, customers can more easily see the factors that impact energy consumption and are therefore better positioned to make decisions that will improve energy efficiency and reduce GHG emissions.

Lastly, although the Project does not advance the other British Columbia energy objectives, it also does not hamper other projects or initiatives undertaken by PNG or others, from advancing the other energy objectives.

7.3 Interests of Customers and Potential Customers

PNG submits that much of the preceding discussion in Section 7.2 applies equally to consideration of the interest of people who receive service or may receive service from the utility. The investments PNG proposes to make are expected to improve customer service and

1 customer satisfaction.

2 **7.4 Advanced Metering**

3 Also relevant to the BCUC's consideration of this application is section 17(6) of the CEA which
4 requires the BCUC to consider the government's goal of having smart meters, other advanced
5 meters and a smart grid in its review of an application to deploy such technology. The Project
6 is consistent with the advanced metering policy direction because it deploys AMR-capable
7 ultrasonic meters and preserves future AMI optionality.

1 **Appendices**

- 2 Appendix A – Draft BCUC Order
- 3 Appendix B – Supplier Price Quote (Confidential)
- 4 Appendix C – Economic Evaluation

1 Appendix A – Draft BCUC Order



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ORDER NUMBER

G-xx-26

IN THE MATTER OF

the *Utilities Commission Act*, R.S.B.C. 1996, Chapter 473

and

Pacific Northern Gas Ltd.

Application for Approval of an Expenditure Schedule pursuant to Section
44.2 to Related to Replacement of Metering Infrastructure and
Automated Meter Reading (AMR) Implementation

BEFORE:

???????, Commissioner

???????, Commissioner

on December ??, 2026

ORDER

WHEREAS:

- A. On July 31, 2026, Pacific Northern Gas Ltd. (PNG) filed an application (Application) to the British Columbia Utilities Commission (BCUC) under section 44 of the *Utilities Commission Act* (the Act) for approval of an Expenditure Schedule for net capital expenditures of approximately \$10.7 million to accelerate the replacement of PNG-West's existing residential and small commercial metering infrastructure with ultrasonic meters equipped with automated meter reading (AMR) capability and will establish the supporting meter data collection infrastructure required to automate meter reading activities (Project);
- B. By Order G-XX-26 dated XX, the BCUC established a Regulatory Timetable for the proceeding to review the Application including one round of BCUC and Intervener Information Requests to PNG, as well as a timetable for the filing of PNG and Intervener Final Submissions and PNG's Reply Submission; and
- C. The BCUC Panel has considered the Application, the evidence and submissions presented on the Application and has determined that the proposed Expenditure Schedule for the Project is in the public interest.

NOW THEREFORE the BCUC orders as follows:

- 1. Pursuant to section 44 of the UCA, the BCUC approves the Expenditure Schedule for PNG to accelerate the replacement of PNG-West's existing residential and small commercial metering and the supporting meter data collection infrastructure required to automate meter reading activities as described in the Application.

DATED at the City of Vancouver, in the Province of British Columbia, this XX day of December 2026.

BY ORDER

???????

Commissioner

1 **Appendix B – Vendor Price Quote**
(Confidential)

1 **Appendix C – Economic Evaluation**

		2026E	2027E	2028E	2029E	2030E	2031E	2032E	2033E	2034E	2035E	2036E	2037E	2038E	2039E	2040E	2041E	2042E	2043E	2044E	2045E	2046E
Capital Spend (2026 \$)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
477 - Measuring & Regulating Equipment		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
478 - Meters		1,908,045	3,510,567	3,777,695	1,496,717	41,160	41,160	41,160	41,160	41,160	41,160	124,366	124,366	124,366	41,034	41,034	41,034	41,034	41,034	41,034	41,034	
Capital Spend (As Spent\$)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
477 - Measuring & Regulating Equipment		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
478 - Meters		1,908,045	3,510,567	3,777,695	1,496,717	48,765	50,876	53,079	55,378	57,776	60,277	190,017	198,245	206,829	71,198	74,281	77,497	80,853	84,354	88,006	91,817	
AFUDC		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
AFUDC Rate		7.755%	7.755%	7.755%	7.755%	7.755%	7.755%	7.755%	7.755%	7.755%	7.755%	7.755%	7.755%	7.755%	7.755%	7.755%	7.755%	7.755%	7.755%	7.755%	7.755%	
AFUDC on 477 - Measuring & Regulating Equipment		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
AFUDC on 478 - Meters		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Cumulative Capital + AFUDC		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
477 - Measuring & Regulating Equipment		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
478 - Meters		1,908,045	3,510,567	3,777,695	1,496,717	48,765	50,876	53,079	55,378	57,776	60,277	190,017	198,245	206,829	71,198	74,281	77,497	80,853	84,354	88,006	91,817	
Capital Spend to Plant in Service (As Spent\$)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
477 - Measuring & Regulating Equipment		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
478 - Meters		1,908,045	3,510,567	3,777,695	1,496,717	48,765	50,876	53,079	55,378	57,776	60,277	190,017	198,245	206,829	71,198	74,281	77,497	80,853	84,354	88,006	91,817	
Net Salvage Value		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
477 - Measuring & Regulating Equipment		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
478 - Meters		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Net Salvage Balance (bop)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
477 - Additions - Net Salvage Value		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
478 - Additions - Net Salvage Value		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Net Salvage Balance (eop)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Data:		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Labour Inflation	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	
Labour Inflation Index (2026 = base year)	100.0%	100.00%	103.00%	106.09%	109.27%	112.55%	115.93%	119.41%	122.99%	126.68%	130.48%	134.39%	138.42%	142.58%	146.85%	151.26%	155.80%	160.47%	165.28%	170.24%	175.35%	
Meter Cost Inflation	4.33%	4.33%	4.33%	4.33%	4.33%	4.33%	4.33%	4.33%	4.33%	4.33%	4.33%	4.33%	4.33%	4.33%	4.33%	4.33%	4.33%	4.33%	4.33%	4.33%	4.33%	
Meter Cost Inflation Index (2026 = base year)	100.0%	100.00%	104.33%	108.85%	113.56%	118.48%	123.61%	128.96%	134.54%	140.37%	146.45%	152.79%	159.40%	166.31%	173.51%	181.02%	188.86%	197.04%	205.57%	214.47%	223.44%	
Depreciation Rate		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
477 - Measuring & Regulating Equipment		2.86%	2.86%	2.86%	2.86%	2.86%	2.86%	2.86%	2.86%	2.86%	2.86%	2.86%	2.86%	2.86%	2.86%	2.86%	2.86%	2.86%	2.86%	2.86%	2.86%	
478 - Meters		5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	
Marginal Tax Rate		27.00%	27.00%	27.00%	27.00%	27.00%	27.00%	27.00%	27.00%	27.00%	27.00%	27.00%	27.00%	27.00%	27.00%	27.00%	27.00%	27.00%	27.00%	27.00%	27.00%	
Return on ST Debt		3.89%	3.92%	3.92%	3.92%	3.92%	3.92%	3.92%	3.92%	3.92%	3.92%	3.92%	3.92%	3.92%	3.92%	3.92%	3.92%	3.92%	3.92%	3.92%	3.92%	
Return on LT Debt		5.05%	4.91%	4.91%	4.91%	4.91%	4.91%	4.91%	4.91%	4.91%	4.91%	4.91%	4.91%	4.91%	4.91%	4.91%	4.91%	4.91%	4.91%	4.91%	4.91%	
Return on Equity		10.40%	10.40%	10.40%	10.40%	10.40%	10.40%	10.40%	10.40%	10.40%	10.40%	10.40%	10.40%	10.40%	10.40%	10.40%	10.40%	10.40%	10.40%	10.40%	10.40%	
Proportion of ST Debt		1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	
Proportion of LT Debt		47.00%	47.00%	47.00%	47.00%	47.00%	47.00%	47.00%	47.00%	47.00%	47.00%	47.00%	47.00%	47.00%	47.00%	47.00%	47.00%	47.00%	47.00%	47.00%	47.00%	
Proportion of Common Equity		52.00%	52.00%	52.00%	52.00%	52.00%	52.00%	52.00%	52.00%	52.00%	52.00%	52.00%	52.00%	52.00%	52.00%	52.00%	52.00%	52.00%	52.00%	52.00%	52.00%	
AFUDC Rate = After Tax WACC		7.820%	7.755%	7.755%	7.755%	7.755%	7.755%	7.755%	7.755%	7.755%	7.755%	7.755%	7.755%	7.755%	7.755%	7.755%	7.755%	7.755%	7.755%	7.755%	7.755%	
Discount Factor		100%	108%	116%	125%	135%	145%	157%	169%	182%	196%	211%	227%	245%	264%	285%	307%	330%	356%	384%	413%	
Capital Cost Allowance		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Class 51 (BCUC 477 & 478 Regulating Equipment & Meters)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Rate	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	
UCC Beginning Balance		-	1,793,563	4,985,882	8,237,762	9,150,410	8,648,687	8,179,116	7,739,856	7,329,181	6,945,473	6,587,213	6,376,298	6,186,018	6,015,481	5,723,614	5,452,250	5,200,287	4,966,697	4,750,518	4,550,853	
Additions		1,908,045	3,510,567	3,777,695	1,496,717	48,765	50,876	53,079	55,378	57,776	60,277	190,017	198,245	206,829	71,198	74,281	77,497	80,853	84,354	88,006	91,817	
CCA	(114,483)	(318,248)	(525,815)	(584,069)	(550,488)	(520,448)	(492,339)	(466,053)	(441,484)	(418,537)	(400,933)	(388,525)	(377,366)	(363,065)	(345,645)	(329,460)	(314,443)	(300,532)	(287,671)	(275,806)	(264,886)	
UCC Ending Balance		1,793,563	4,985,882	8,237,762	9,150,410	8,648,687	8,179,116	7,739,856	7,329,181	6,945,473	6,587,213	6,376,298	6,186,018	6,015,481	5,723,614	5,452,250	5,200,287	4,966,697	4,750,518	4,550,853	4,366,864	
Total CCA Claimed		(114,483)	(318,248)	(525,815)	(584,069)	(550,488)	(520,448)	(492,339)	(466,053)	(441,484)	(418,537)	(400,933)	(388,525)	(377,366)	(363,065)	(345,645)	(329,460)	(314,443)	(300,532)	(287,671)	(275,806)	
Total Depreciation	-	175,528	364,413	439,249	441,687	444,231	446,885	449,654	452,543	455,556	465,057	474,970	485,311	488,871	492,585	496,460	500,503	504,720	509,121	513,711	518,501	
Negative Salvage Amortization		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total Net Salvage Amortization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
NPV of Cost of Service		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Discounted Cost of Service	3 year	(50,152)	124,857	648,648	871,572	1,081,233	981,679	890,317	728,062	589,982	461,087	430,100	391,547	356,193	306,996	271,034	238,462	208,997	182,380	158,370	136,744	
Sum of Discounted Cost of Service	20 years - discounted	AMR West 9,128,041	Base Case 8,248,937	Difference 879,105																		
	20 years - undiscounted	AMR West 17,439,374	Base Case 20,138,902	Difference (2,699,528)																		

Pacific Northern Gas Ltd.
Section 44.2 Schedule of Expenditures Related to Replacement of Metering Infrastructure and Automated Meter Reading Implementation
Base Case - Normal Course Replacement

	2026E	2027E	2028E	2029E	2030E	2031E	2032E	2033E	2034E	2035E	2036E	2037E	2038E	2039E	2040E	2041E	2042E	2043E	2044E	2045E	2046E
	31-Dec-26	31-Dec-27	31-Dec-28	31-Dec-29	31-Dec-30	31-Dec-31	31-Dec-32	31-Dec-33	31-Dec-34	31-Dec-35	31-Dec-36	31-Dec-37	31-Dec-38	31-Dec-39	31-Dec-40	31-Dec-41	31-Dec-42	31-Dec-43	31-Dec-44	31-Dec-45	31-Dec-46
Cost of Service																					
Depreciation of utility plant	-	37,050	75,703	116,031	158,104	202,000	247,796	295,575	345,423	397,429	451,687	508,295	567,354	577,857	588,815	600,247	612,174	624,618	637,600	651,145	734,046
Tax on depreciation	-	13,703	28,000	42,915	58,477	74,712	91,651	109,322	127,759	146,994	167,062	188,000	209,843	213,728	217,781	222,009	226,421	231,023	235,825	240,835	271,496
Amortization of Net Salvage	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tax on Amortization of Net Salvage	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Interest on utility plant	8,567	24,929	41,373	57,659	73,781	89,731	105,503	121,088	136,478	151,665	166,640	181,395	195,918	198,805	190,151	181,453	172,708	163,915	155,071	146,173	152,554
Return on equity on utility plant	19,205	57,444	95,336	132,864	170,014	206,769	243,112	279,024	314,488	349,485	383,992	417,991	451,457	458,110	438,169	418,125	397,974	377,711	357,332	336,830	351,532
Tax on return on equity	7,103	21,246	35,261	49,142	62,882	76,476	89,918	103,201	116,318	129,261	142,025	154,599	166,977	169,438	162,063	154,649	147,196	139,701	132,164	124,581	130,019
CCA Tax Reduction	(15,761)	(31,260)	(46,540)	(61,646)	(67,284)	(82,325)	(97,290)	(112,219)	(127,151)	(142,125)	(157,179)	(172,352)	(187,679)	(191,855)	(185,107)	(178,969)	(173,415)	(168,418)	(163,956)	(160,005)	(171,808)
Property Tax	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Ratebase Items	19,113	123,113	229,133	336,965	455,974	567,363	680,689	795,992	913,316	1,032,710	1,154,228	1,277,927	1,403,871	1,426,082	1,411,872	1,397,515	1,383,059	1,368,550	1,354,036	1,339,559	1,467,839
Operating Cost Savings																					
Labour	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vehicle Maintenance	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vehicle Gas Costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Remove/Reset Meters	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Meter Reading OT Reduction	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Groundtruthing	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Meter recall handling	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Full Operating Costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL COST OF SERVICE	19,113	123,113	229,133	336,965	455,974	567,363	680,689	795,992	913,316	1,032,710	1,154,228	1,277,927	1,403,871	1,426,082	1,411,872	1,397,515	1,383,059	1,368,550	1,354,036	1,339,559	1,467,839
20,138,902																					
Utility Plant - Additions																					
Balance (loop)	-	710,237	1,451,227	2,224,302	3,030,852	3,872,325	4,750,233	5,666,155	6,621,737	7,618,695	8,658,822	9,743,986	10,876,137	12,057,311	12,267,372	12,486,528	12,715,174	12,953,720	13,202,595	13,462,247	13,733,141
Utility Additions - Measuring and Regulating Equipment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Utility Additions - Meters	710,237	740,990	773,075	806,549	841,473	877,909	915,922	955,582	996,958	1,040,126	1,085,164	1,132,152	1,181,174	210,061	219,156	228,646	238,546	248,875	259,652	270,894	1,658,011
Balance (loop)	710,237	1,451,227	2,224,302	3,030,852	3,872,325	4,750,233	5,666,155	6,621,737	7,618,695	8,658,822	9,743,986	10,876,137	12,057,311	12,267,372	12,486,528	12,715,174	12,953,720	13,202,595	13,462,247	13,733,141	15,391,152
Add: Accumulated Depreciation	-	(37,050)	(112,753)	(228,784)	(386,888)	(588,888)	(836,684)	(1,132,259)	(1,477,682)	(1,875,111)	(2,326,798)	(2,835,093)	(3,402,447)	(3,980,304)	(4,569,118)	(5,169,365)	(5,781,539)	(6,406,157)	(7,043,758)	(7,694,903)	(8,428,948)
Add: Accumulated Amortization of Net Salvage Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Less: Reduction of Net Salvage Value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Average Rate Base	355,119	1,062,207	1,762,864	2,456,809	3,143,752	3,823,391	4,495,409	5,159,475	5,815,246	6,462,362	7,100,449	7,729,116	8,347,954	8,470,966	8,102,239	7,731,609	7,358,995	6,984,309	6,607,464	6,228,364	6,500,221
Ending Net Rate Base	710,237	1,414,178	2,111,550	2,802,068	3,485,437	4,161,346	4,829,472	5,489,478	6,141,014	6,783,711	7,417,187	8,041,044	8,654,864	8,287,068	7,917,410	7,545,809	7,172,181	6,796,438	6,418,489	6,038,238	6,962,204

[illegible]